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JOURNAL

OF

FRANCIS BUCHANAN

(KEPT) DURING THE SURVEY OF THE DISTRICT

(OF

BHAGALPUR

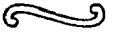
IN

1810-1811

Edited with Notes and Introduction

BY

C. E. A. W. OLDHAM, C.S.I.,
I.S.C. (Retired).



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PREFACE.

THE typewritten copy of this Journal was received by me from the late Mr. V. H. Jackson, who had intended to edit it himself, but was prevented from carrying out the task by the heavy additional duties devolving upon him in connexion with the establishment of the new Science College and the new University buildings at Patna This pressure of work and his final break-down in 1927, followed by his sad and untimely death in January 1928, prevented him from sending me any notes except a few remarks on the hot springs visited by Buchanan, pencilled on the type-script, which I have incorporated in the foot-notes to the Journal under the dates 21st March and 8th April, 1811.

For some twenty years Mr. Jackson had, among other subjects of research to which he devoted attention, made a close investigation of the hot springs in south Bihār He had made a deep study of the whole subject of such phenomena, had examined all available accounts of these thermal springs, and had himself visited all the more important springs in the Patna, Gaya and Monghyr districts in different years and at different seasons, carefully registering on each occasion the temperatures and the conditions likely to affect the rate of flow and volume of water. It was his intention, I understood, to embody these records and observations in a self-contained monograph, which, having regard to his special qualifications for such work—his thoroughly scientific methods and

scrupulous attention to accuracy in detail—would have been of the utmost scientific value. By his premature death the Bihar and Orissa Research Society has lost one of its most gifted and most active vice-presidents and one of its staunchest supporters

I take this opportunity of expressing my thanks to Mr. H. Ll. Allanson, I C.S , for examining the portion of the Journal relating to the Sontāl Parganas and making many useful comments thereon, and to Messrs P W. Murphy, I C S , J F W James, I C S., and E. O Lee, I C S., for their prompt response to inquiries made

The type-written copy of Buchanan's Ms , from which the text of the *Journal* has been printed, was made by Miss I. M Anstey with her characteristic accuracy

C E A W OLDHAM

21, Courtfield Road, S W 7

28*th February*, 1929

EXPLANATIONS.

Martin's *E I* —*The History, Antiquities, Topography, and Statistics of Eastern India*, by Robert Montgomery Martin 3 vols, London, 1838.

Rennell's *B.A* —*A Bengal Atlas: containing Maps of the Theatre of War and Commerce on that Side of Hindoostan*, by James Rennell, late Major of Engineers, and Surveyor-General in Bengal 21 plates, folio, 1781.

S S —The latest editions procurable at the time of the one inch to the mile topographical maps published by the Survey of India have been referred to

Square brackets —These have been used where any word or letter, not in the original manuscript, has been added to elucidate the text.

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I.—INTRODUCTION.

THE present volume contains the Journal kept by Dr Francis Buchanan (afterwards Hamilton) from October 1810 to April 1811, the fourth field season of his work on the statistical survey of the old Bengal Presidency It is essential to bear in mind the distinction between his Journals and his Reports The original records containing the results of Buchanan's survey work, as we learn from the preface to the *Account of Dinājpur* published in Calcutta in 1833, comprised 25 folio volumes of manuscript, which were transmitted home to the Court of Directors, a copy being kept in Calcutta of all, except the drawings and maps Whether the original records were all in Buchanan's own handwriting or not, we do not know. Of the MSS now in the India Office library, three of the volumes contain Journals kept by Buchanan, as detailed on p ii of the late Mr V H. Jackson's

Introduction to his edition of the *Patna-Gaya Journal*. These three Journals are in Buchanan's own handwriting.(1) The great bulk of the MSS. consists of his Reports, with appendices and tabular statements, which are in a copyist's handwriting, besides which there are the volumes containing drawings and plans, etc. Most unfortunately, none of the MSS was published during Buchanan's lifetime. When R. M. Martin received the permission of the Court of Directors to collate the material in their possession, he published such portions of the Reports as he considered of interest in his *Eastern India* (3 vols , 1838). He did not print any of the three Journals. These latter are of the nature of official diaries kept by Buchanan, recording his movements from day to day, with the distances travelled, the features of the country passed through, the sites and objects of interest examined, the inquiries made on subjects of archæological, historical, ethnological, geological, etc., interest. He rarely refers in them to the zoology or botany of the areas traversed, though he frequently mentions the crops grown; but, as we know that he was specially interested in these subjects, it is probable that he kept separate notes thereon. Most noticeable perhaps is the very large proportion of the Journals that is devoted to the record of geological and mineralogical detail The statistical *information collected, e g , as to population, castes, professions, numbers of towns and villages, education,* soils and methods of cultivation, livestock, manufactures, exports and imports, etc , all of which are dealt with at length in the Reports and appendices thereto, is not referred to in the Journals All this information was doubtless recorded by his Indian assistant; while the drawings and copies of inscriptions, etc., were made by a draftsman who accompanied

(1) As doubt has been expressed on this point, it may be noted here that Sir William Foster, C.I.E , whose acquaintance with the records at the India Office is unique, informs me that, in order to satisfy himself in the matter, he got out an original letter written by Buchanan to the Directors and compared it with the writing of the Shāhābād Journal, with the result that he was quite convinced that both were written by the same hand

him. The Journals, then, are merely supplementary to the Reports, but they were utilized largely by Buchanan when writing his Reports. For example, the detailed descriptions of the buildings at Rohtāsgaṛh, Shergaṛh and Sāsarām in the Shāhābād Journal, and that of the buildings at Rājmahāl in this Journal have been reproduced largely verbatim in the Reports. The Journals, on the other hand, have a greater personal interest: in them we get a view of the man, his tireless energy, his wide scientific interests, his topographical acumen, his powers of observation and of accurately recording what he saw and heard, and his most methodical system of work. During the cold season of 1809-10 Buchanan was occupied with the field work of his survey of the district of Purneā, which included the present district of Purneā as well as a large part of what is now the Mālda district. When working up the material collected and writing his Report on that district he made his temporary headquarters at the then large and important village of Nāthpur, in the extreme north-west corner of the district, on the west side(2) of the Kosī River near the frontier of Nepāl, and passed the hot season and rains of 1810 at that place. While there he also took the opportunity—in fact it is probable that it was chiefly with this object that the site was selected—to make further organized inquiry regarding Nepāl, in order to supplement the information already obtained in 1802-3, during his visit with the embassy sent under Captain Knox to the Court of that State. Buchanan's researches in connexion with Nepāl were still further pursued during his survey of the district of Gorakhpur in 1813-14, and the final results were embodied in his work published afterwards (1819) in Edinburgh under the title *An account of the Kingdom of Nepal and of the territories annexed to this dominion by the house of Gorkha*. This book, like all Buchanan's work, is a mine of useful information, which has been largely drawn upon by subsequent writers.

(2) The Kosī has since shifted its channel westwards, and the site of Nāthpur is now to the east of the river.

THE AREA UNDER SURVEY.—Buchanan left Nāthpur on the 17th October 1810, going south by road to Lālgola on the Ganges, which he crossed on the 26th to Paintī (the modern Pīrpaintī) in the Bhāgalpur district, the survey of which he then commenced The district of Bhāgalpur at that time, as will be seen from the reproduction of Buchanan's own map, comprised not only more than half of the present district of that name, but the greater part of the modern districts of Monghyr and the Sontāl Parganas as well, with an area, as computed by Buchanan, of 8,225 square miles. Omitting a few minor differences, the following areas now included within the three districts named lay beyond the limits of the then Bhāgalpur district :—

Bhāgalpur district —The *parganas* now forming the Supaul subdivision and the northern part of the Madhipura subdivision (which were then in the Tirhut and Purneā districts)

Monghyr district —*Parganas* Balhā, Bhusārhī, Naipur, Imādpur and Mulkī, now forming the Begusarāī subdivision (then in Tirhut); *paraanas* Bīsthazārī, Amarthū and Māldah (now in Jamūī subdivision), and *pargana* Salīmābād (now in the Sadr subdivision), which were then included in the district of Bihār.

Sontāl Parganas district —The large *pargana* of Sarath-Deoghar, now forming the Deoghar subdivision, and the two *parganas*, Kundabit Karaya and Pabbia, now comprising the Jamtārā subdivision (then in Bīrbhūm)

On the other hand, the tract falling within Buchanan's 'Divisions' Pratāpganj, Aurangābād and Furrokhābād, then included in the district, now lies mostly in the Murshidābād district of Bengal.

The boundaries in this area have undergone frequent changes owing to the shifting of the channels of the Ganges and its tributaries

Omitting the purely hill tracts to the south, of which we have little or no mention in ancient times(3) the *jhārkhaṇḍ* of early Muhammadan days, the country which Buchanan had now to survey was the ancient Aṅgadeśa, the land of the Angas of the *Atharvaveda*, the territory of King Lomapāda of the *Rāmāyana*, of King Karṇa of the *Mahābhārata*, the Aṅga so frequently mentioned in the oldest Buddhist and Jaina texts, and so full of associations with the great leaders of those religions, with its capital at Champā, Champāpuri or Champānagara (also called Mālinī in certain of the old Brāhmanical texts)(4), the Aṅga of all the old Hindu geographers down to Rājaśekhara (circa 880-920 A D), and the Aṅga of Pāla and Sena times This ancient Aṅga lay between Magadha and Vaṅga Later on we find the country adjoining Aṅga on the east called Gauda Roughly speaking, it comprised the country south of the Ganges, between the Kiul river and the Rājmahāl hills Next in importance to the capital, Champānagara, was the town of Modāgiri (*Mahābhārata*) or Mudgagiri, the modern Munger, which has been anglicised as Monghyr. When we find this country coming into prominence again under the early Muhammadan rulers, we see the centre of gravity shifting from the Champānagara site to Munger, the reason for which is obvious, when the important strategic position of the latter place is considered, commanding, as it did, the only practicable military route from west to east or east to west at the narrow neck between the Kharakpur hills and the Ganges Thereafter we

(3) The people of these hills—the Male or Maler folk—are evidently the Malli or Malloi of Megasthenes and Pliny, the Mallas of the *Matsya-purāna*, which places them between the Tāmraliptakas and Māgadhas, and of the *Harivamśa purāṇa*, which mentions them between the Suhmas and Videhas; and their country is perhaps the Malada of Rājaśekhara (*Kāvyamīmāṁsā*, Chap 17)

(4) e.g *Matsya-purāṇa*, *Vayu-p*, *Harivamśa-p*, and *Mahābhārata*.

find Munger the headquarters, protected by strong fortifications: and the *sarkār*, or district, took its name from this town.

Shortly after the disintegration of the Pāla dynasty, within whose empire Aṅga was included, there followed that flood of Muhammadan invasion that swept at the close of the 12th century right across the plains of northern India, which was destined to shake to its roots the whole fabric of its ancient civilization. We see the famous Muḥammad bin Bakhtyār Khaljī sallying from his fief in Mīrzāpur district, swooping down upon Bihār and passing on whirlwind-like to snatch western Bengal from the feeble grasp of the expiring Sena dynasty The old Buddhist culture, so widespread and paramount under the Pālas, is obliterated; the exercise of the Brāhmanical religion is repressed, and its architectural development strangled; the very nomenclature of places and things undergoes change. The curtain drops as it were upon the old order of things When it rises again we find eastern India involved in the struggles of contending Muhammadan dynasties From this time onwards until the defeat of the last Afghan King, Dāūd Khān, near Rājmahāl in 1576, the history of these areas is one of constant vicissitude. Order is restored to great extent under the strong hand of a great soldier-administrator, Mān Singh: and thenceforth these districts form part of the *ṣuba* Bihār under the emperors of Delhi. The *sarkār* of Munger, with its 31 *maḥals* (which developed into the revenue *parganas* of later times), as described in the *Āīn-i-Akbarī* from the details given in Ṭoḍar Mal's rent-roll of *circa* 1582, practically covered the ancient Kingdom of Aṅga, that is to say, it extended from the Kiul river on the western boundary of *maḥal* Sūrajgaṛhā to the " strong wall. . .....extending from the Ganges to the hills..... .. the boundary of Bengal ",(5) i.e., to the pass of Gaṛhī (the modern Teliyāgaṛhī). It was still *sarkār* Mungër

(5) *Ain-i-Akbari*, Vol. II (Jarrett's translation), p. 152

when the E. I. Company assumed the *dīwānī* in 1765, and it was not till 1773 that the Collectorship of this *sarkār* was abolished (to be re-established over a much reduced area in 1832), the great bulk of the then district being assigned to the Collectorship of Bhagalpur, and a small portion placed under the *huzūr tahsīl* of the Revenue Council of Patna.

Of this long period, from the 12th to the 18th century, it must suffice to note that many sites in the plains portion of the area surveyed by Buchanan are associated with important events that mark its history For instance, two crucial battles were fought within a few miles of Sūrajgaṛhā and one at Udhuā nālā; Monghyr was exposed to several investments; and the Teliyāgaṛhī and Sakrīgalī defiles were the scene of many severe struggles

Throughout these centuries, however, we rarely find even mention of the hill country on the south. This was included in what was known as Jhārkhand, i.e , the ' jungle division ' or ' territory ', which lay beyond the pale. Sher Shāh was one of the very few Muhammadan rulers who knew anything of these hills. He, in fact, had marched through them to Rohtāsgaṛh in 1538, laden with the treasures of Gaur, while Humāyūn was held up by his son Jalāl at Teliyāgaṛhī But the imperial armies never penetrated the hills of the Sontāl Parganas. Afghan fief-holders long occupied estates on the fringes of the highlands in southern Bihār and western Bengal, right round to Orissa; but the interior of the hills and the plateaus had from time immemorial been occupied by the so-called aboriginal races. Meanwhile however, another kind of infiltration had been in operation. The devastations wrought in north-western India by the frequent raids of Maḥmūd of Ghazna and his fanatical soldiery had started a movement that received fresh impetus from the far-reaching incursions of Shihābu'd-dīn Ghorī and his victorious generals a century and three-quarters later.

It has hitherto perhaps been insufficiently realized to what extent the martial Kṣatriyas of north-western and western Hindūstān moved eastwards under the pressure of these continued shocks, to seek their fortunes in new lands Many of the oldest Rājpūt families in Bihār owe their local establishment to such migration. Scores of cases might be cited. It is enough here to instance the cases of the two most important families in the old Bhāgalpur district of Buchanan's day, namely Kharakpur and Gidhaur Soldiers of fortune many of them, they brought in their train others, and with them the Brāhmanical religion and culture of their original homes Attaining control of large areas, these influences became widely disseminated and soon commenced to act as a solvent upon the religious and social customs of the primitive aboriginal inhabitants, conducing to the gradual disintegration of the old tribal organizations. We find these in-comers first establishing themselves at convenient and pleasant sites in the immediate vicinity of the hills, extending their spheres of authority as opportunity offered Within these spheres the aboriginal folk either accepted their suzerainty and control or else retired deeper into the hills. Those that remained would tend in the course of time to imitate, and eventually adopt, many of the practices of their overlords, the more conservative abstaining from contact and secluding themselves in the more inaccessible portions of the hills. Later on, when more settled government supervened under British auspices, infiltration from the Hinduized population of the plains around would increase in volume and pace Thus we arrive at the stage of which Buchanan was a witness, and of which he has given us so many valuable records.

The region, then, with which Buchanan had to deal in 1810-11 was one of peculiar interest, not only because of the diversity of natural features that it presented and of its historical associations, but also from an ethnological and linguistic point of view. It contained, besides the mixed, so-called Aryan

population of the plain areas, representatives of two important peoples, who, if not distinct in race, are distinct at least in speech, namely, the Muṇḍā and Dravidian families The Muṇḍā family of languages is represented chiefly by Sontālī, the language of the Sontāls, who are now spread over greater part of the district that has been called after them. The Dravidian family is represented by Malto, or Maler, the tongue spoken by the Maler,(6) or Sauriā Maler, in the north-eastern part of the same district Buchanan's accounts of both these people are of the greatest value His notice of the Sontāls is important also as furnishing the earliest reliable evidence we have of their arriving so far north and east as the neighbourhood of Dumka It is rarely realized how obscure is the origin of these people and even of their name, and how very recently they overran the district, which has been called after them since 1855 only On the other hand, the Pahāriās, or ' hill-people ' as they have generally been called, have lived in these parts from prehistoric times It was these people whose raids upon the adjacent plains and general lawlessness gave such trouble towards the end of the 18th century, and necessitated, during the government of Warren Hastings, the deputation of a military officer with a contingent of troops to punish the offenders and maintain order in the " Jungleterry Districts "—a name then loosely applied to the whole country extending from the Kharakpur hills on the west to the Rājmahāl hills on the east, and from the Bhāgalpur plains on the north to Rāmgarh, Pachet and Bīrbhūm on the south. Captain Robert Brooke was appointed to the command at the end of 1772 and to him is due the credit of having first introduced a large measure of order.(7) On his resignation in July 1774, Captain James Browne succeeded to the charge, which he held, undivided, until 1778, when

(6) The very name is Dravidian (cf Tamil, *malai*, ' a hill '), meaning ' hillmen '

(7) See H. (now Sir H.) McPherson, *Final Report, Survey and Settlement, Santhal Parganas*, 1909, p 27, where the work performed by Captains Brooke and Browne is suitably acknowledged.

he received a " harsh and unexpected command " to " deliver over charge of the Jungle Terry of Bauglepoor, Colgong, and Curruckpoor to the Collector of Bauglepoor ".(8) The charge of the area from that time devolved first upon Mr. Barton and then, from 1780 till the end of 1783, upon Augustus Cleveland, who was destined to win such high fame for the pacification of the hill people. It is to the credit of Buchanan, whose strong sense of truth and honour revolted at any injustice, that he forcibly drew attention in his Report (in a passage cut out by Martin!) to the large degree in which the success attributed to, and undoubtedly achieved by, Cleveland was primarily due to the work and to the suggestions of James Browne.(9) It will be seen that Buchanan divides the hill people into two branches, namely, (*a*) the " Northern Mountaineers ", who then occupied the whole of the hilly portion of the present Rājmahāl subdivision, the eastern part of the Goddā subdivision and the northern portion of the Pākaur subdivision, and (*b*) the " Southern Mountaineers ", who occupied the eastern portion of the present sadr subdivision and the adjoining parts of the Pākaur and Goddā subdivisions to the north thereof It will be seen from an examination of his map that the hill folk in his time covered a much wider extent of country than they do now, and that the tendency has been for the incoming Sontāls and surrounding plainsmen to push them back northwards and eastwards, that is, into the more hilly tracts. Even in Buchanan's time there was a broad and clear distinction between the southern and northern sections of these people, between the Mal Pahāṛiās and the Sauriā Maler, respectively, as they are now usually called. He felt, however, and in this he was no doubt right, that they had originally come of the same stock, the nature of the country held by the southerners exposing them more to influences from without, which had gradually

(8) See Major J Browne, *India Tracts*, 1788, Introduction, p. vii He remained in charge of the south-western tracts for some two years longer

(9) See Appendix I.

affected their customs and modified their speech. The original language has been preserved in its greatest purity by the so-called Sauriā Maler of the hills west of Rājmahāl—the people whom Buchanan found so very shy of intercourse when he first went among them. Linguistic research has shown that it is closely allied to Kurukh (the speech of the Orāons of Chutiā Nāgpur) and belongs to the 'Intermediate Group' of Dravidian languages.(10) Buchanan's descriptions of these people are particularly valuable, as indicating not only the wider distribution of these tribes in earlier times, but also their ultimate connexion with the Nat Pahāriās and with the Bhuiyās, who are now found dispersed over southern Bihār, Chutiā Nāgpur, south Mīrzāpur and the Jashpur and Sargujā States.

The earliest map worth the name that we have of this area is Rennell's *Map of the south-east part of Bahar*, drawn in 1773 on the scale of 5 miles to the inch, and based upon the rapidly executed surveys of his assistants, Richards, de Gloss and Carter, between 1766 and 1770. With the aid of this map (which discloses better than any written description the very meagre knowledge possessed of the hilly tracts prior to Buchanan's survey) Rennell prepared his smaller scale map of the *Jungleterry District*, etc., published in 1779 as Plate II of his *Bengal Atlas*. Let us compare for a moment this latter map with that drawn on the same scale by Buchanan. Along with the map, however, must be read Rennell's statistics of "Area of the Bengal Provinces" printed at p. 27 of the letterpress preceding his plates. There "Monghir" is shown as containing 8,270 square miles, viz.—

(*a*) Boglipour ...	..	2,817	sq. m.
(*b*) Curruckpour and Hendooah .		2,696	,, ,,
(*c*) Curruckdea, etc. ...	...	2,757	,, ,,
Total ...	...	8,270	

(10) Sir G. Grierson, *Linguistic Survey of India*, Vol. I., Pt. I, p. 91.

while "Rajemal", marked as a separate district and as including certain areas on the left bank of the Ganges, now in the Purneā and Mālda districts, is shown as comprising 2,217 sq. miles The greater part of Rennell's Curruckdea, etc., has to be omitted, and most of his Rajemal, together with the Ambar and Sultanābād *parganas* and the Police Divisions of Aurangābād and Pratāpganj have to be added to (*a*) and (*b*) above in order to form the district of Bhāgalpur as Buchanan found it in 1810. Changes continued to be made. In 1832 a separate (small) district of Monghyr was established. Sherwill, in his report, dated 31st October 1852, gives the following figures for the district of Bhāgalpur as he and Pemberton found it in 1845—50 :—

Area south of the Ganges	6,102.07 sq miles
Area north of the Ganges	1,698.97 ,, ,,
Total .	7,801.04 ,, ,,

Within a few years, owing to the constitution of the Sontāl Parganas as a separate non-regulation district and other changes, these areas became 1,898.98, 2,399 94 and (total) 4,298 92 sq. miles respectively Subsequent changes have reduced this last figure to about 4,226 sq. miles I refrain from going more fully into the question of reconciling Buchanan's names and areas with present conditions: this would be done more appropriately in an introduction to the Report. It will suffice here to state that there are numerous difficulties to be met in this connexion. One instance may be given, as typical of most:— Buchanan's Lokmanpur. The name itself is a puzzle. I have been unable to find it used elsewhere. The area represents roughly the old Chhai *mahal* of the *Āīn-i-Akbarī*, the Chye *pargana* of our first revenue survey. Pemberton, in the report dated 1852 of his revenue survey, gives the area of this *pargana* as 292 sq. miles; while the last Survey and Settlement Report (1912) gives it as 404 sq. miles. Buchanan gives 481

sq. miles as the area of Lokmanpur Division: so it probably included not only *pargana* Chhai, but also part of *pargana* Nisankhpur Kurhā.

Apart, however, from the enormous extent of country to be dealt with, it must be remembered that a very large portion of it consisted of hills and jungle, without any road communications, and unvisited hitherto by any European. The territories of the Northern and Southern Mountaineers, as Buchanan called them, or the Dāman-i-koh, as it is now (inappropriately) called, was practically a *terra ignota;* the southern portions of the present Bhāgalpur district were scarcely known beyond a few main routes traversed by Rennell's assistants, by a few military officers and in one direction by Colonel Francklin; the country between Bāṅkā and Jamdāhā on one side and Jamūī and Chakai on the other was almost wholly unsurveyed and mostly quite unknown; while even of the Kharakpur hills area little more than its approximate boundaries had been established It may be said, in fact, that in respect of almost half of the whole area the only map(11) which Buchanan had to work upon was more or less useless.

BUCHANAN'S ITINERARY.—Leaving Pīrpāintī on the 27th October 1810, Buchanan proceeded westwards, along the main road by the south of the Ganges, to the headquarters station of Bhāgalpur, where he arrived on the 29th and remained for a week, apparently at the house of the judge. It is noticeable that Buchanan rarely tells us anything in his journals about the local officials. The only officer, besides Colonel Francklin, at Bhāgalpur whom he names is Mr. John Glass, who appears to have been the local surgeon for some twenty years,

(11) This was Plate II of the *Bengal Atlas*. The fact that Buchanan had only the *Bengal Atlas* maps to work with has already been suggested in the introductions to the Patna-Gaya and Shahabad Journals. Corroboration of this is afforded by the names given by Rennell which Buchanan refers to under date 13th December 1810, viz., Dunyamara, Barandee, Colego, Tillyapara, Gagur, Luckersura and Denga, all of which are marked on the *B.A.* plate, but three of which are not marked on the larger scale 1773 sheet, thus showing that Buchanan was not working with the earlier and much larger scale map.

and this only because he accompanied Buchanan to the caves near Barārī, and was interested in indigo cultivation, having a couple of factories in the district. He does not mention the Collector (Sir Frederick Hamilton, Bt.), nor does he tell us the name of the judge. We know, however, that it must have been John Sanford, who was judge and magistrate of Bhāgalpur from 1807 to 1814.(12) The description of his house, as being close to the zamīndārs' monument to Cleveland, shows that it was the one now used as the station club house Buchanan condemns the building as "of considerable size, but the most tasteless mass imaginable", and the monument as "totally destitute of taste, a Hindu pyramid surrounded by a kind of Grecian gallery". The monument erected to Cleveland by the Government he describes as "small but neat", adding that it was "fast approaching to ruin, the Pipal having lodged in the joinings of the roof".

From Bhāgalpur Buchanan moved, on the 6th November, southwards to Bāṅkā, whence he visited an iron mine, at Pahirīḍihī in the hills to the south-west, recording a detailed account of the smelting process followed. In the course of his journey he visited Shāh Shujā'ś shooting lodge near Banharā, and met, at Jaṭaur, Rāja Qādir 'Alī of Kharakpur, who seems to have been touring in his estates. From the two cases described by Buchanan as having come under his notice in this vicinity, it appears that murderers were at that period gibbeted in public near the scenes of their crimes. From Bāṅkā, Buchanan went eastwards, to examine the remains of archæological interest at Mandār hill. The account of these (with the drawings made) is the earliest we have of scientific value. He then marched into the present Sontāl Parganas, to a place east of Goddā, apparently with the object of visiting the then boundary between the Kharakpur estates and the territory of the hill

(12) He died on the 23rd February 1827, and is buried in the South Park Street Cemetery, Calcutta.

tribes, after which he turned south by west to Nūnīhāṭ, inspecting *en route*, a site where antimony had been found. From Nūnīhāṭ he visited another iron mine near Pokhariā, and then went on to Lakṛādīwānī, where he examined the hot spring, which registered 148° Fahr. Dumkā, where he next halted, must then have been a very small village. Buchanan tells us there were less than 50 houses, though it was said to have formerly contained 400. From the information given in his *Index to the Map*, it appears to have contained but one shop, that of a *modi*, or retailer of provisions, and no market was held there. Near by, at Dighī Pahāṛ, lived "Rāja" Sumar Singh, a headman, of the hill folk, whom Buchanan closely questioned; and he takes the opportunity of recording the information he elicited about the various sections of the hill people and their customs. It is interesting to compare this account with the description of the "Inhabitants of the Hills near Rājamahal" communicated to the Asiatic Society of Bengal in 1795(15) by Lieut. T. Shaw.

From Dumkā Buchanan went south-east to Pratāppur, visiting iron mines at Gāmra on the way, and then turned east to Chandrapur in the Bīrbhūm district, from which place he visited the important chalk and clay pits at Khairī Pahāṛ. Thence he marched due east to Ganpur, where he turned northwards through part of Bīrbhūm, halting at Nārāyaṇpur, which he describes as a very large iron mart, and on to Bīrkhetī in the Sultānābād *pargana*. From Bīrkhetī, he went on to Kālikāpur, then the headquarters of the Police Division, but now a small eastern suburb of Pākaur. From here he made a long day's excursion westwards, into the heart of *pargana* Ambar. He next went to Aurangābād, now in the Murshidābād district. In the *Index to the Map* he calls the town "Hāṭ Mangalpur or Herbertgunj (so-called after the late Mr. Herbert

(15) *Asiatick Researches*, Vol. IV (1795), p. 45.

Haris)(14)". Neither Hāṭ Mangalpur nor Herbertgunj nor Aurangabad is marked on the modern Survey sheet(15) Hāṭ Mangalpur appears to correspond with Haut Etaleepara of the old sheets. The place is shown as Aurangabad on Rennell's maps and as Aurungabad on Tassin's map of 1841. Here Buchanan was detained for four or five days, owing chiefly to illness among his men, of whom three, a porter, a sepoy and a lascar, died from some ailment contracted in the country below the hills between Chandrapur and Bīrkhetī.(16) After inspecting some sites in the vicinity, he then pushed on northwards through Dhuliān, Farakkā, Phudkīpur and Udhuānālā to Rājmahāl, diverging at two points on the way to the hills at Bilābāṛī and Gadāi Tāṅgi. Of the fortifications constructed at Udhuānālā by Qāsim 'Alī Khan, which were finally stormed by the troops under Major Thomas Adams on the 5th September 1763, Buchanan tells us that the Ganges had obliterated practically all but one bastion. The plan of the site published by Rennell in his *Bengal Atlas*,(17) which shows the conditions as they were a few years after the battle, is therefore of special value.

At Rājmahāl Buchanan devoted three days to the examination of the various sites of interest, and he records a very full description of the scanty remains then left of the palace buildings of Shāh Shujā', who made Rājmahāl his capital for many years during his viceroyalty of Bengal under his father Shāh Jahān. The first European who has left us any account of Rājmahāl is Sebastien Manrique, who landed there in 1640 on his way up to Lahore, in the first year of Shujā's first term as viceroy, so that the palace buildings were not then standing. The next traveller whose account is

(14) This was Herbert Harris, who, after 45 years' service in the H.E.I.C.S. died in 1810, and is buried in the North Park Street Cemetery, Calcutta. In 1809 he was Salt Agent at Boalia.

(15) Sheet 78 $\frac{D}{2}$.

(16) See entries under dates 8th and 9th December.

(17) *B.A.*, Pl. XIX.

extant is John Marshall, who spent three days there in April 1670, and gives a brief description of the palace and garden. Next we have the much more detailed account of Nicholas de Graaf, the Dutch surgeon, who stopped there for eight days some five months later (in September 1670), and drew a plan of the "Palace and Gardens of the Prince at Ragimohol". I have not been able to discover any other account of these buildings with any useful detail until Buchanan visited the site 140 years later, when most of the buildings, which had been badly damaged even by de Graaf's time, had either perished by decay or from sapping by the river, or else had been pulled down in order to utilize the material elsewhere It has not been found possible to reconcile the plan drawn by de Graaf with Buchanan's account. This could only be done by local inquiry and examination of the site I have thought it worth while, therefore, to reproduce de Graaf's plan (from a photograph of the plate in the Dutch edition), and also to give an English version of his description, and an extract from Marshall's diary, as these may assist any person interested in the matter to pursue the investigation.(18)

On the 6th January Buchanan made another excursion into the hills to the south-west of Rājmahāl, with the object of tracing the route by which Bālājī Rāo passed through the hills, when invading Bengal in March 1742-3, in order to avoid having to force the Teliyāgaṛhī pass defences He came to the conclusion that the Marāthās had followed a route down the Gumānī valley to near Borio and then past the Chamdi hill, entering the plains, presumably, near Tīnpahāṛ. Buchanan's view apparently corresponds with Holwell's information,(19) or at least with the statement of Holwell's opinion given by Major James Browne in his *India Tracts*.(20) In

(18) See Appendix 2, and the plate facing p 237

(19) J. Z Holwell, *Interesting Historical Events*, 2nd edn., 1766, Pt. I, p. 138 f.

(20) Major J. Browne, *India Tracts*, 1788, pp. 12-13.

view of certain obscurities the subject is dealt with in an appendix.(21) Buchanan next moved on northwards and round the extremity of the hills, via Musahā, Sakrīgalī, Gaṅgā Prasād and Teliyāgaṛhī to Piyālāpur in the east of the Bhāgalpur district. On this journey Buchanan followed the old military road used so frequently by the Company's troops in the last half of the 18th century, which is marked with all its stages on Rennell's *Bengal Atlas*, plate XV. At Gaṅgā Prasād he gave a feast to a number of the hill folk, utilizing the occasion to acquire further information about their traditions and customs. Had Colonel Dalton had an opportunity of reading this Journal, he would not have written(22) that Buchanan refers us to Lieut. Shaw's paper, "instead of giving us his own observation", nor would he, it may be added, have stated(23) that Buchanan "makes no mention of Santāls". Buchanan's description of Sakrīgalī (which he, more correctly, spells "Sikrigari"), and more particularly of Teliyāgaṛhī—the "Gate of Bengal", and the scene of so many a desperate fight—is meagre and disappointing. From Piyālāpur, instead of following the direct route to Colgong, he turned north to Pāintī, where he had already been in October. His account of the caves in the rocky hills, which Bishop Heber explored in 1824,(24) is the earliest we have From Pāintī he marched on the 16th January to Patthargaṭā and made a careful examination of the remains of archæological interest. About a mile or perhaps more to the south-east of the Patthargaṭā hill Buchanan found "what is called the Dorohor, and is supposed to have been a Rajah's house. It appears to me", he adds, "to have been always a round hill perhaps fifty feet in perpendicular height..... ...If it had been a building, it in all probability has been a solid temple, no. house in decay being capable of

(21) See Appendix 8.
(22) E. T. Dalton, *Descriptive Ethnology of Bengal*, p. 264.
(23) *Ibid.*, p. 207.
(24) *Narrative of a Journey through the Upper Provinces of India*, 1828, Vol. I, pp. 264–8.

leaving such a ruin. There are traces of a square fortification round it, and the surface of the earth within that is covered with broken bricks. Many squared stones, one very long, are lying in various parts of the vicinity". The expression "solid temple" is used elsewhere by Buchanan to mean a Buddhist *stūpa*. As far as I can find, no archæologist has hitherto made any exploratory excavation at the site indicated here by Buchanan; and having regard to the suggested identification of the famous Vikramaśilā Buddhist monastery with a site at Patthargha̱tā, it seems desirable that such exploration should be made.

Buchanan next proceeded through Badluganj to Śrīpur in the north of the Goddā subdivision, whence he paid a flying visit to Majhuā in the valley of the Maral or Gumānī, in the midst of the Dāman-i-koh. Though, as usual, he gives a full description, with names, of the hills and streams passed, the details on the Survey sheet are not sufficient to trace his path with any certainty. From his description and from a hand sketch plan in the margin of the Journal, however, it is clear that the Majhuā he visited is now represented by Borio and Borio Bāzār on the latest edition of S.S $72\frac{0}{1/2}$. From Śrīpur, he toured on through Pratāppur and Patsunda, visiting mines as he went, to Bārkūp, an ancient site and the headquarters of the old Kṣetauri *tappa* of that name. It was in the course of this trip that Buchanan thought he had discovered evidence of volcanic activity at the "Kariswarika Tok", a small hill (not marked on the Survey sheet) near Patsundā, on top of which he found a circular cavity, sinking down to a great depth. After discussing the geological features, he notes that he had never seen any place that seemed to agree better with the descriptions of the craters of extinct volcanoes (24th January).

On the 27th January Buchanan left the Sontāl Parganas district, moving his camp to Bhuriā in the Colgong thānā, and thence to Kodwār, the headquarters of the then Police Division. The latter site

seems to have been diluviated: it lay just under two miles north by west of the present Ghoghā railway station. From Kodwār he went by boat down the Ganges, to visit the well-known Colgong rocks, returning by road. The position of these rocks (not indicated on the 1 in. = 1 mile S.S.) will be seen from Rennell's *B A.*, pl. XV. He then returned to Bhāgalpur by the road previously followed, and on the 4th February crossed the Ganges to make a tour through *parganas* Chhai and Pharkiyá. In this area, which is intersected by a network of rivers and their deserted channels, he penetrated as far as Simrī-Bakhtyārpur, and then turned south through Chautham to Gogrī. Owing to the extensive annual floods, these tracts then, as now, were ill cultivated. His caustic criticism of the want of cultivation leads to the suspicion that he scarcely realized to what an extent this country lies under water during the rainy reason. He left Gogrī on the 19th, going south-east, and, crossing the Ganges to Kamarganj, visited Jahāngīrā, Sultānganj, Karnagarh and other sites of interest in that locality It is curious that Buchanan should not have noticed the traces of Buddhist remains[25] near Sultānganj. On the 24th he moved camp to Tārāpur, about 8 miles east of Kharakpur and a place of some importance in the old days before the glory of the Kharakpur Rāj departed. From here he made two long expeditions. The first was to Kojhī in the north-west of the Bāṅkā subdivision, about 15½ miles south-east of Tārāpur and 9 miles north-west of Bāṅkā, where the Belasī Nadī issues from the end of the hills that run in an ENE. direction from the Parbatpārā *pargana*. This trip was made to examine the minerals in the hills. Buchanan found some mica, but it was too much shattered to be of commercial value. The other journey was made to Kasba Kherhī, to see the remains "attributed to Sasangka Raja, the last chief of the Kshetauris",[26]

[25] See Rajendralala Mitra's article *On the Buddhist Remains of Sultanganj* in *J A S B.*, 1864, p 360 f, and *A.S.I.*, XV, p. 24 f.

[26] Martin's *E.I.*, II, 57.

and the antiquity of which Buchanan seems to have overestimated. However, he was again the first to direct attention to this site, which has not yet been thoroughly explored.

On the 1st March he moved to Kharakpur, to pay a visit to the Rāja, at the latter's request This was Qadir 'Alī, to whom the estates had been restored by Warren Hastings in 1781 Buchanan describes him as " an exceedingly civil man, but seems to have very little intellect . already secured in the clutches of his Dewan ", and adds that " the estate will probably be ruined " So it actually happened some thirty years later and this is only one of many instances of Buchanan's shrewd insight.

The next two trips are in some respects the most remarkable of those recorded in the Journal. On the 2nd March he left Kharakpur, at first going south and then south east, marching *via* Unchānāth and Gaurīpur, the Tribūrnagar ghāṭ through the hills and Gangṭī-Lodhan to Jamdāhā in the south of the Bāṅkā subdivision, by a route rarely, if ever, followed by a European officer. Leaving Jamdāhā on the 8th, he took an equally unknown and difficult route through the hilly country (only quite recently surveyed) via Bhorisimar, Chāndan and Kharnā to Ghoṛāmārā, and then followed the valley of the Ulai river to Gaṅgrā (near Nawāḍih) and so on to Jamūī. It is impracticable to trace exactly parts of the routes taken by Buchanan on these occasions, as so many of the places and rivers mentioned by him are not named on the Survey sheets It is all the more remarkable that Buchanan should have adopted these routes, as Rennell's map, with which he worked, is either blank or quite inaccurate in respect of this area. Jamūī, though unknown to Rennell or his surveyors,(27) must have become a large village by Buchanan's time, as in his *Index to the*

(27) On his large scale map of 1773 (5 mi =1 in.) the tract between Naulakhāgaṛh or Kasha Gidhaur (Rennell's " Ghidore " and Malepur) is shown as covered by woods.

Map he notes there were two market days in the week, and he gives a list of over a hundred shops. The rapid growth of the place was probably due to the fact that both branches of the Gidhaur family (Gidhaur and Khairā) had established their zamīndārī offices there. From Jamūī Buchanan visited the old fort (ascribed to Sher Shāh, but, as Buchanan suggests, possibly of still earlier date) called Naulakhāgaṛh and the ruins at Indarpe or Indpegaṛh. He was the first to draw attention to the importance of this latter site, which has since been examined more than once by officers of the Archæological Department.(28)

Buchanan then turned northwards to Malepur and eastwards to Gordih, taking the Bhīmbāndh track into the heart of the Kharakpur hills. At Bhīmbāndh and at Janam Kund at the foot of Malnīpahāṛ he made careful and valuable records of the temperature of the water in the several hot springs. He then followed the Āñjan river southwards, examining the so-called *asurhāṛ* ('Giants' bones') at Asurnī, which he decided was merely a porous calcareous tufa, and so out of the hills again to Malepur. From there he went NW to Baṭṭā Rāmpur, where Mr. John Christian, a Polish merchant settled at Monghyr, then had an indigo factory. Thence he skirted round the NW corner of the Kharakpur hills and, passing by the old 'invalid thānā'(29) at Alinagar, camped at Sūrajgaṛhā From this place Buchanan made the only abortive trip recorded in the whole Journal. He wished to visit the well known hot spring at Śṛingirikh, which is situated within the hills, on the south side of the Morwe valley that is separated from the plain country to the north by a long ridge of hill rising to over 500 feet above sea level. The climb over this ridge, "as the day was becoming intensely hot" (as it assuredly

(28) See Cunningham in *A.S.I.*, III, 162; Beglar in *A.S.I.*, VIII, 120 f.; and Bloch in *A. S. Ben. Cir.*, 1902-3, p. 11.

(29) See Appendix 3 for an explanation of this term.

would be at the very end of March) evidently exhausted him, as when he reached the valley below, though within a mile of the site, he resolved to turn back. He consoled himself with the feeling that he had "seen the nature of the strata". After all Buchanan did not miss much, as the Śṛingirikh springs,(30) though copious, are comparatively cool, ranging from about 85° to 87°, and so bearing no comparison with many he had examined elsewhere.

From Sūrajgaṛhā Buchanan also made a thorough examination of the slate quarries near Lahetā and Amrāsanī, which have, since 1864, been so largely developed by Mr. C. Taafe Ambler and his sons Buchanan was the first European to indicate the importance of these slate strata. He was of opinion that they would provide a very fine stone for building. Though he noticed some black slate in Amrāsanī Kol, from which skilful workmen "would procure very good slates for roofing houses", he clearly foresaw that, on the whole, owing to the great difficulty of splitting it sufficiently thin, the material would not be adapted for general use on sloping roofs—a view which experience had since confirmed. On the 31st March he made a long march to Ārāmnagar, another of the old 'invalid thānās', situated a couple of miles to the south of Monghyr fort. Darkness falling while on the way, he witnessed a sight so often seen at the beginning of the hot weather in such localities—the hills to the south ablaze with jungle fires. Two days later he went into Monghyr, to arrange for suitable house accommodation for himself and his staff, wherein to pass the remainder of the hot weather and the rainy season. On the 7th April he started off on his final tour, visiting the hot springs at Sītākuṇḍ, Ṛishikuṇḍ and Buṛkā, crossing the hills by the Amjhar ghāṭ to Māsūmganj and again visiting the slate quarry area, this time entering the hills by the Karailī gap. He returned to Monghyr

(30) *Patna College Magazine*, III, p. 54.

on the 13th April by the Basaunī—Dharharā—Ḍakṛānālā route. With the remains of the famous old brick-built bridge(31) over the Ḍakṛā Nālā he was not favourably impressed, noting that " it has been a very rude pile as usual, but is the largest I have yet seen in the course of the survey ".

Since the 17th October, when he left Nāthpur, Buchanan had thus been continuously on tour for 179 days, or practically six months, marching even on Christmas Day. He had halted on 47—at least the Journal contains no reference to trips made on those days—or, say, on an average of one day in four. Reckoning up the distances travelled each day from the figures supplied by him, and checking the distances from the Survey sheets, and adding approximate figures for the shorter trips in respect of which he does not record the distance, I have calculated that in the course of his tour Buchanan covered more than 1,330 miles, that is to say, on ' marching ' days he did an average of 10 miles per diem, and, including halts, he averaged close on 7½ miles a day throughout the period. Considering that he travelled either in a pālkī or on an elephant or on foot; that he had to take his tents and baggage along with him, as well as his staff; that so many of his routes lay through unmapped and often unexplored country; that in addition to the actual travelling involved he was all the while occupied in collecting a mass of information and statistics (not referred to in the Journal) under the numerous heads prescribed for his guidance by the Governor-General in Council under the orders of the 11th Sept. 1807, besides writing up each day the detailed journal now published; and that he was 49 years of age, this can only be regarded as a very remarkable feat.

In the above brief résumé of Buchanan's tours some instances have been cited of the difficulty experienced in tracing the exact route followed by him.

(31) See Appendix 4.

All available maps have been consulted, from Rennell's earlier large scale sheets (1773, etc.,) and *Bengal Atlas*, Tassin's maps and the maps prepared at the time of the first Revenue Surveys down to the latest editions procurable of the 1 inch=1 mile Survey sheets. In many cases the old Revenue Survey maps have helped towards identification, and in other cases Buchanan's own map, and, particularly, some hand sketches drawn by him in the margin of his Journal have been of the greatest use. The following trips have given most trouble:—(1) From Dumkā to Chandrapur (1—3 Decr.); (2) from Ganpur to Kālikāpur (6—11 Decr.); (3) from Kālikāpur to "Deoguriya" (13 Decr.), (4) from Tārāpur to Kojhī (26 Feb.) and to Kheṛhī (28 Feb.), and (5) from Tuhūrnagar to Gaṅgṭī—Lodhan (5 Mar.) The route (6) followed from Kharakpur to Gaurīpur (2-3 Mar.) cannot be traced on the Survey sheet as neither Raṅgānāth nor Unchhānāth nor other names of hills and streams referred to by Buchanan are marked thereon. Similarly, most of the route between Kharnā and Ghoṛāmārā (13th Mar.) can only be conjectured. The difficulty of following Buchanan on his way from Kālikāpur to Aurangābād and to the sites in the vicinity of the latter is due to the extensive changes that have taken place in the configuration of that area by the shifting of the river channels since his time. In many ways the most unexpected difficulty has been found in tracing the sites visited at and around Rājmahāl, owing to the non-existence, at all events in London, of any map on which all these sites are marked. The old double sheets based on the Revenue Survey have in several parts been of use; but the double sheet of this area (no. 254) appears never to have been published: at least there is no copy of it at the India Office, the British Museum or the Royal Geographical Society's map store, all of which have been carefully searched. The modern Survey sheet 72 has been of no help. More than three-quarters of this sheet is blank

(apparently the area liable to Gangetic action having been omitted) and many, if not most, of the old sites mentioned by Buchanan are not indicated.

BUCHANAN'S MAP.—The reproduction of Buchanan's map (after p. 259) has been made in the following way. In the Map Room at the India Office there is Buchanan's original hand sketch map, marked "Bhagalpur", drawn to the same scale as Rennell's *Bengal Atlas*, Plate II, that is to say, on a scale of about 11.8 miles(32) to the inch. On this are marked the boundaries of the 'Divisions', or police jurisdictions, and of the *tappas* and *tarafs* in the territory of the hill people, the hills and rivers and the sites of towns and villages. The names of rivers only are entered. Owing to the smallness of the scale it was impracticable to enter all the other names. The different Divisions were indicated by Roman numerals, and the towns and villages by little circles with Arabic numerals against them, a fresh serial being used for each Division. These numbers correspond to the numbers given, under each Division, in the *Index to the Map* which accompanied the Report on each district. In this *Index* Buchanan gives a list, arranged by Divisions, of all towns and of the principal villages, with detailed information as to the markets held, the number and kinds of shops contained, the numbers of different artisans, fishermen, etc., adding the vernacular names within brackets, e.g., *halwāī*, *telī*, *dhuniyā*, and so on. The different *tappas* and *tarafs* in the "Territories of the Mountaineers" are distinguished by Arabic numerals. The hills are indicated approximately by light hatching; but neither names nor numbers are added in respect of them. This original sketch map was first enlarged by photography to a size representing a scale of approximately 8 miles to the inch. Of this a careful tracing was made, and, in place of the numerals, the names of Divisions, towns and villages were filled in from the *Index to the Map*. The names

(32) See Mr. Jackson's *Patna-Gaya Journal*, Introduction, p. xiv.

of the rivers were inserted from the sketch map. The names of the *ṭappas* are not given in the *Index to the Map*, nor are the names of the hills: but there is amongst the MSS. a separate list of hills, drawn up by Divisions and *ṭappas*. This list contains no less than 1,180 names of hills, of which 465 fall within the 20 Divisions, and 715 within the Territories of the Northern and Southern Mountaineers. From it I have been able to fill in the names of the *tappas* and *tarafs*, which have been numbered as on the sketch map. It has not been possible, however, to enter the names of the hills,(33) as there is nothing to show to which hill hatched on the map each name refers Only one place named in the Index—No. 5 in Division IX (Mallepur)—namely Khorma, cannot be identified: its position is not indicated upon Buchanan's map, and no such place is traceable on the modern maps.

Buchanan's own spelling of names has been retained. His diacritical marks indicating long vowels and cerebral letters have been reproduced; the short vowel mark (˘), also used by Buchanan, has been omitted as unnecessary. In many cases Buchanan marks the *u* in the termination *pur* as long, though he generally marks it short (as it properly is, though it be nearly always pronounced long by Europeans and often by uneducated Indians). The long sign, where given, has been omitted. It will be understood from the above description that the preparation of this map has involved much labour; but it is hoped that it will serve to give a better idea of the extreme value of Buchanan's geographical work, which will be found of similar character in all the districts surveyed by him, and the extent of which would never be conceived from a perusal of the exiguous and defective maps published with Martin's *Eastern India*.

(33) In the list of papers, etc, transmitted to the Bengal Government bound up with the MS of the Report is an item.—"4 plans by a native assistant of the hills, etc, in the district of Bhagalpur" In his "additions" to Book 1 of the Report, Buchanan refers more specifically to these plans and tells us the name of the assistant who drew them I searched for these in the volumes of Maps and Plans and Drawings, but did not find them.

Over large areas which had not been surveyed by Rennell or his assistants Buchanan's maps reveal an enormous advance upon the *Bengal Atlas* plates published in 1779-80; and had they been drawn and engraved, on a larger scale, by an expert cartographer under Buchanan's supervision, with the names of places and hills added, they would have been of the greatest use to the local officers for some forty to fifty years, i.e., until the maps prepared from the Revenue Survey were printed and made available.(34) Previous to the appearance of the R S maps, the only other attempt worth the name to map these districts was made by J. B. Tassin, in his, now forgotten but very valuable, *New and Improved Map of the Provinces of Bengal and Behar* published at Calcutta in 1841. This map is on the scale of 8 mi. to 1 in. and so may readily be compared with the reproduction of Buchanan's map now given. If such comparison be made, the value of Buchanan's work will at once strike the eye in the details of rivers and hills and territorial subdivisions not to be found on Tassin's map. Again, if Buchanan's map be carefully compared with a modern map of the Bhagalpur Division on the 8 mi. = 1 in. scale, the accuracy of Buchanan's delineation, having regard to the means and time at his disposal, will be found to be quite remarkable.(35)

In some respects the most interesting feature of Buchanan's maps is the evidence they afford for the study of the vast changes in the configuration of the alluvial areas that have been caused by the constant shifting of the channels of the big rivers. Take, for instance, the Kosī. According to ancient tradition this river once flowed, on issuing from the Tarāī, south-eastwards past Tājpur (a site some 26 miles E. by N.

(34) The Revenue Survey of the old Bhāgalpur district was carried out between the years 1846 and 1850. W. S. Sherwill's map of district *Bhaugulpoor*, on the 4 mi. = 1 in. scale, was published in 1852, and his map of the *Rajmuhal Hills or Damin-i-koh*, on a scale of 2 mi. = 1 in., was published in 1855.

(35) It may be noted that the same accuracy characterized Buchanan's important geographical work carried out during his deputation with Captain Symes to the Court of Ava in 1795—work that earned the commendation of one of our greatest geographers, Sir Henry Yule.

of Purnea town) and, instead of joining the Ganges, discharged its waters into the Lauhitya, or Brahmaputra, being joined *en route* by the Mahānandā and other rivers from the north. Later on, it has been supposed, as Buchanan thought not unlikely,(36) that this river, which must have contained an enormous volume of water, was diverted in its mid-course towards the south, meeting the Ganges, and the combined waters opened out the new channel now known as the Padma, the old exit of the Ganges (now the Bhāgīrathī or Hūglī) being in great measure deserted, and so gradually dwindling down into the present tortuous stream that flows past Murshidābād, Hūglī and Calcutta to the sea. The far-seeing suggestions of Buchanan in this connexion merit greater attention than has been directed to them hitherto. That some great change of this nature took place in the courses of the rivers issuing from the Eastern Himālaya is evident from certain topographical features of northern Bengal and from old references to this part of the country that have puzzled geographers and historians However this may be, we have much definite evidence of the westward trend of the Kosī within even comparatively modern times In Thomas Jefferys' map of 1768, this river is shown as passing by the town of Purneā, Rennell's map of 1779 shows it as flowing 15 or 16 miles west of Purneā; by Buchanan's time (1810) it had moved another couple of miles to the west; while at present the main channel is some 30 miles to the west of Purneā.

Or take the case of the Ganges itself A study of Buchanan's maps shows that marked changes have taken place since his time to the north of Bhojpur in the Shāhābād district; to the north and east of Monghyr; in the neighbourhood of Bhāgalpur; between Kārāgola and Pīrpāintī; and, more especially, to the south and east of Rājmahāl, between the Sakrīgalī

(36) See Buchanan's important account of the Kosī and its branches in his Report on the Purnea district; also F C. Hirst in *J.A.S B.*, 1903. p. 488 f., on the Kosi river.

bend and Godāgiri. In this latter area we can, with the aid of Rennell's and Buchanan's maps, trace evidence of that general westward and southward trend of the rivers that in earlier times had led to the abandonment of Paṇḍuā, Gaur and Tāṇḍā as capitals, and that also explains the way in which the *sarkārs* and *mahals* of Ṭodar Mal's roll have become cut up and distributed over different districts as now composed.

Character and value of Buchanan's work — As regards the importance and value of Buchanan's work in the various fields of investigation to which he directed his attention, I can only record that the further experience acquired during the editing of this Journal has more than confirmed the views already expressed in the Introduction to the *Shāhābād Journal*. The more closely one follows him, the more one appreciates the outstanding qualities of this indefatigable inquirer and accurate observer He was one of the greatest, perhaps, among that group of great Scotchmen who rendered distinguished service to the East India Company towards the close of the 18th and the early part of the 19th century. It was due to some extent to the great variety of scientific interests that engrossed Buchanan's attention that his name has not occupied a more prominent place on the roll of fame. Botanist, zoologist, geologist, mineralogist and geographer—not to speak of his own calling of the science of medicine—had he been free to concentrate attention upon any one of these subjects, he might, in any single sphere, have made a name for himself second to none; but the nature of the special duties to which he was deputed from the very first years of his service under the East India Company precluded such concentration. To realize the great variety of subjects to which he devoted his mind in the course of his twenty years' service in the East, it is sufficient to read through the long list of publications from his pen on pages lxiii—

lxviii of Sir David Prain's invaluable Memoir.(37) It was indeed a cruel irony of fate that consigned to such long oblivion the greatest in many respects of all his achievements, the masterpiece to which he had devoted his rare abilities for seven years on end, only to emerge, a quarter of a century later, maimed and mutilated at the hands of a compiler unfitted for the task.

The general remarks made under other headings in my Introduction to the *Shāhābād Journal* apply, *mutatis mutandis*, to this Journal. Although so much of the record is devoted to geological and mineralogical questions, there is no list of specimens collected, as in the case of Shāhābād, nor does Buchanan in this Journal make anv regular references to such specimens,(38) as he does in his *Patnā-Gayā Journal*. The same principles have been followed in reproducing the text of this Journal On the whole there are perhaps fewer idiosvncrasies of spelling; and very few words have been found to be illegible, or even doubtful

A word should perhaps be said here as to the spelling of the name Sontāl This form has been used throughout the notes, etc , as being more correct than Santāl, which is misleading. The people themselves pronounce the name more like Sauṅtār. Buchanan, it will be observed, seeks to reproduce the local pronunciation in his " Sontar " and " Saungtar " The *r* and *l* sounds being interchangeable in the vernacular (*cf.* Gaharwār and Gaharwāl), Sauṅtār becomes Sauṅtāl. The origin of the name has not yet been satisfactorily determined.

C. E. A W OLDHAM.

(37) *A Sketch of the Life of Francis Hamilton (once Buchanan)*, Calcutta, 1905

(38) In two or three places he refers to a " specimen ", indicating that he had kept samples of rocks and minerals.

II.—BHAGALPUR JOURNAL.

On the 17th October(1) I left Nathpur(2) and proceeded by land to the Ganges at Lal Gola,(3) where I arrived on the 25th. On the day following I crossed the Ganges to Paintı.(4)

27th October —I went about twelve or thirteen miles to Bader Choki (5) After crossing a narrow level on the bank of the Ganges, I came to Paingtı,(6) a miserable village on the declivity of a low hill, leaving on my left a little mountain, and on my right the cape on which the monument of Pır Kamal is situated. From the plain on the side of the left of the river, I went among low hills or rather swelling land about $2\frac{4}{5}$ miles. For about $2\frac{1}{5}$ miles more I went through a plain country, although not level, but the declivities are very small Then through an uneven country for three miles, to the Baramasiya,(6) a small rivulet so called from its stream continuing throughout the year. So far the road had been exceedingly bad,

(1) i e 17th October, 1810.

(2) A large village, or rather aggregate of villages, then on the west of the Kosī river in the N W corner of the Purnea district, near the frontier of Nepal The Kosī has since passed over the site in its westward movement (see Introduction, p m) In Buchanan's time it contained 380 houses Many improvements had been effected by a Mr Smith, a merchant then settled there This gentleman had also "induced workmen in brick to come from Nepal and several of the natives were persuaded to erect brick dwellings" (W Hamilton *Description of Hindostan*, I 258) Buchanan was probably influenced, therefore in selecting this site for his recess, by two considerations, namely, (1) the proximity to Nepal, in respect of which he wished to complete the investigations made in 1802-03, and (2) the comparative amenities of the place du to Mr Smith's local influence In saying that he proceeded by land, Buchanan means that he travelled by road, instead of descending the Kosī by boat

(3) The site of this place has been diluviated It lay SW of Kāṇṭnagar and NNW of Pāntī, some 3 or 4 miles from the latter It is marked as Lay Gola on Van den Broucke's map (circa 1658—64)

(4) **Pirpaintı.** For Buchanan's description of the *mazār* of Pīr Saiyid Shāh Kamāl, see *Martin's E I*, II 65

(5) **Bhader.** The Baidur Chokey of Rennell's *B A*, Pl XV

(6) Not named on S S The Bermussya N. of Rennell, *B A*, Pl XV A name often given to a stream that usually contains water all twelve (*bārah*) months (*māsa*) of the year.

but a little before I came to the Baramasiya I joined the great road(7) from Murshedabad, which is tolerably good; and some of the bridges are built of brick. For one-fifth of a mile beyond the Baramasiya the country is uneven. I then had a plainish tract of more than a mile. Then a swelling ridge more than half a mile, and a plain country of about half a mile. Then another swelling ridge of about a mile, and on this to my left the small hill(8) named Badeshwarnath, on which there is said to be a temple of Siva. From thence is a plainish country to my stage,(5) where there is a comfortable small bungalow for the reception of European travellers, and the accommodation of the officer superintending the invalids The country is naturally very beautiful, being fine swelling land, finely wooded, with several fine hills interspersed, and occasional views of the Ganges. The crops seem thriving, but the cultivation is very slovenly, and the huts wretched. On the whole way there is not one building nearly so good as a common labourer's cottage in England. The houses are huddled together without gardens or shade, and are very slovenly. Many have mud walls, which they do not even attempt to make smooth. Some of the beehive fashion, but most Bangali roofs.

From the Bungalow the hill of Kahal Gang(9) bears west. On this is the Dorga of Kumari Sahid.(10) No inscription. The small hill Gungul Dei(11) north by west. On it is a temple of a Sakti of this name, with an image of stone. No inscription.

(7) The old highway up country before the 'New Military Road' of Warren Hastings and the still later 'Grand Trunk Road' were constructed.

(8) Marked, but not named, on both the S S and Rennell's Pl. XV.

(9) Kahalgāṅv, the **Colgong** of the S S and all our maps, an example of the care taken by Buchanan to try to reproduce the vernacular pronunciation of names

(10) i e the *dargāh*, or shrine, of the martyr (*shahid*) Kumari. This latter name is possibly intended for Qamar.

(11) The little hill about 2 miles NE. of Colgong, near which was Mr. Simon Murchison's indigo factory. *Gaṅgāā* means land subject to inundation by the Ganges. Dei = *devī*, "goddess."

The larger hill of Paturghat(12) named Kaseli or Modiram, bears north by east On this is the brick temple of Durga Saha, a Sakti with an image. On the hill is a quarry or mine of Khari or chalk. Beyond this, to the north, is Bateswor Nath, where there is a temple lately built by the Dewan of the Collector. Badeswor bears east by south. On the hill is a Siva Linga, and at the bottom is a temple of his sister Rajil Dayi

28th October —I went about five coses to the Goga(13) river. Rather more than a mile and a quarter from my last night's quarters, I came to the hill called Kahalgong, and passed between it and a small hill looking over the Ganges, on which a European has built a good house which, however, has not for a long time been regularly inhabited Both hills have large stones on their surface, but I saw no rocks Beyond the smaller in the river are three immense rocks,(14) rising into little hills, and forming a very picturesque scenery On descending the hill I entered an extensive plain, and on advancing about four-fifths of a mile, I came to the Kuya(15) river, now containing much water, but in a short time hence it will be nearly dry The channel is a stiff sinking clay, very difficult of passage for elephants About $2\frac{1}{3}$ miles farther, crossed a similar river named Trimuhani(16) from whence onwards my road led very near the Ganges. About $3\frac{4}{5}$ miles farther, I came to Thana Sunkurpur Koduyar,(17) having passed a serai built by Col Hutcheson,(18) a convenient but small

(12) i e Patthargh*ā*t, usually pronounced Patthargha*ṭ*ā, 'the *ghāt* of the rocks'. The Pattergotta of Rennell's *B A*, Pl XV The name does not appear on the modern 4 mi = 1 in district map, nor even on the 1 in =1 mi S S , nor are the well known rocks in the river shown

(13) **Ghogha N.**, which falls into the Ganges near Colgong

(14) The famous "Colgong rocks", but these also are not marked on either the 4 mi. or 1 mi modern Survey maps, and it is necessary to refer to Rennell's plate of 1780 to see where they lie!

(15) **Koa N.**

(16) The Termahony N of Rennell's *B A*, Pl. XV, the **Gerua N.** of the S S Trimuhāni means 'having three mouths'

(17) The site has been obliviated since Buchanan's time; but the name survives in the **Ramnagar Arazi Shankarpur-kodwar** of the S S.

(18) Colonel Hutchinson, mentioned several times later. **See Appendix 3 on Invalid Thānās.**

building containing nine small apartments, each opening by one door to a passage between it and the chamber adjacent, with two windows towards the sides. The whole has a terraced roof. From the Thana to the Goga is about 1¼ mile The Goga is a gentle dirty stream, but just above the ferry it receives the Lauri,(19) which is narrow but falls into the Goga with a rapid current. The channel is not so bad for elephants as the other two rivers, especially the Trimuhani, which is very dangerous in the rainy season. The country is very bare, and after passing Kahalgang rather dismal. The huts are mostly built of clay, but very unseemly. The road excellent, and the ferry boats exceedingly good. Temporary bridges are erected when the rivers dry somewhat more At present one small nullah, where there is no ferry, is a great nuisance, and the fords for elephants at the other places are very bad Such miry places I observe, both here and near Goyalpara,(20) are usual at the mouths of small rivers falling into great bodies of water from hills at a distance.

29th October.—I went about nine miles to the house of the judge(21) of the district. The road near a branch of the Ganges called the Jomuni (22) The country low and naked, until about 3½ miles of the judge's house, where it rises into very gentle swells finely cultivated with numerous plantations of Mango and Palmira. The villages are mostly occupied by Invalids,(23) whose huts are good, and tolerably neat The road at present is good, but in some of the low places it is not raised, and in the rainy season is deeply inundated. There are some small bridges of brick. The judge's house is near a monument erected

(19) Marked, but not named, on the S S

(20) Goālpārā in Assam

(21) John Sanford was "Judge and Magistrate of Zillah Bhaugulpore" from September 1807 to April 1814; and Sir Frederick Hamilton, Bt., was Collector from May 1805 to March 1816. A district official in those days had an opportunity of becoming thoroughly acquainted with his district

(22) **Jamunia N.** Buchanan's own map shows it as an important branch of the Ganges, the main stream flowing well to the north.

(23) See Appendix 3.

by the zamindars to the memory of Mr. Cleveland. It is of considerable size, but the most tasteless mass imaginable.

3rd November.—I visited some of the curiosities in the vicinity. At Champanagar(24) is a small mosque, and the monument of a tolerable great saint, who was nine cubits long There is also a temple of Porusnath, which has been entirely built by Jogot Seit's family There are two mots quite close together, and nearly in the same style. One was rebuilt a few years ago, and the other is now finishing. The images are in the former, and are of white marble in the exact form of Gautoma, but the Pujaris call themselves Jain, and Oshoyal (25) They are quite illiterate, and none of the sect, themselves excepted, live near. The buildings are square with two storeys. In the centre of each storey is an apartment, which is surrounded by a narrow open gallery The upper apartment is covered by a dome The stairs as usual are exceedingly bad. The view from the roof admirable. The plaster work rudely figured

From Champanagar I went to Kornoghur,(26) now occupied by the Hill rangers (27) It seems originally to have been a low hill, round which a square ditch

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(24) Champanagara or Champāpuri, supposed to represent the perhaps more ancient Mālini or Champāmālini, one of the most interesting sites in the province, situated at the confluence of the Chāndan with the Ganges It was the capital of the ancient Kingdom of Anga, and is said to have been named after Champa, great-grandson of the famous Rāja Lomapāda It is mentioned as a place of Hindu pilgrimage in the *Mahābhārata* (*vana p* ch 85) At the time of the Great War it was the capital of Karna, who fought with his own (Anga) troops on the side of the Kauravas (*Mbh*, VIII, 863, 877 f) and from whom Karnagarh, near by, probably takes its name It is sacred to the Jainas as the birth place of Vāsupūjya, their 12th Tīrthankara. It was a famous city in the time of the Buddha (*v*, *mt al*, *Mahāparinibbāna sutta*), and is constantly mentioned in the Buddhist books It was visited by Fa-hsien (399—414 A D) and by Hsüan Tsang (*circa* 638 A D) The word "mot" four lines below represents *math*, 'monastery'

(25) Osavāla, or Oswāl, a trading class and sect of Jainas, one of the two sects or 'tribes' (Srīmāli and Oswāl) to whom tradition ascribes a Kṣatriya origin For a good account of them, see W Crooke, *T. & C. of the N W P.*, IV, 97 f.

(26) Karṇagaṛh, the 'fort of Karna', which occupied part of the site of ancient Champānagara

(27) For Cleveland's Hill-rangers, see *Gazetteer*, p 29, Hodges' *Travels in India*, pp. 89—90.

and rampart has been drawn, and then the hill levelled so as only to leave a parapet, the whole land within being as high as the rampart. There are no outworks, and the place has entirely the appearance of an old Hindu place.

The quarters of the corps are tolerably neat huts, and the hill soldiers have with them many of their women, tolerably clean and neat.

From thence I went to what is called in the neighbourhood Vishnu Paduka.(28) Here I found some tolerably intelligent Jain[s], but men of no learning. There are two brick pillars of considerable dimensions called Manistham,(29) each has a stair leading to the top Between them is a small building, in which the Paduka was kept; but it has been removed, in order to repair the building I have sent to procure a drawing of it and a copy of its inscription. From thence I went to visit Pir Saha Jungi, a small rude brick building on the top of a small hill of earth.

On my return I received a visit from the Padre, a very good-looking Milanese.(30) He says that here are in all about fifty Christians, one-half, converted natives. In Puroniya he has about forty disciples. He is employed by the Societas de Propaganda fide, and has been four years in India

I was also visited by the Kazi and his brother, Seyuds of a very respectable family, among the members of which are all the Moulavis He says that they alone are acquainted with Arabic lore, but that in the district there are many good Persian scholars. He admits that all converts from among the Brahmons are received among the Seyuds, many of whom have no pretensions to be descended from the prophet.

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(28) i e. Viṣṇupada, but probably representing the foot-print of Vāsupūjya (see Report, and *Martin's E. I*, *II*, 29—30).

(29) Maṇistambha, ' jewel-pillar ', applied to a pillar inlaid with jewels

(30) Buchanan does not tell us his name. In his Report he writes : " The Roman Catholics have at Bhagalpur a small Church " This was probably the chapel, the construction of which was commenced in 1779. See H. Josson, *La Mission du Bengale Occidental*, I, 140—41.

Except this family, very few Moslems observe the regular time of prayers. He said that there were four great founders of the order of Fakirs. These again branch out into fourteen sects, and these have subdivided almost ad infinitum, so that no one can tell the number, but everyone belongs to some one of the fourteen sects, and to some one of the four great divisions. No Fakir should marry. Two residents only adhere to this rule

4th November.—Visited some more of the curiosities The cave at Mahinagar(31) is situated among some small clay hills filled with calcareous nodules, which are dug for making lime It is a small low-roofed chamber supported by a pillar of clay, not six feet high. The whole very rude. In this is an image of Siv Two small openings conduct to mines or galleries leading to small chambers at a considerable distance One was opened by some European gentlemen about fifteen years ago, and a skeleton was found. Mr. Glass,(32) who was present, thought that the person had died in the chamber The people of the vicinity attributed the cave to . (33) a hermit, who lived one hundred and fifty, or two hundred years ago. They say that until the English came, all these little hills were covered with thick jungle, into which no one went Probably some hermit made the grave and retired there at night from the banks of the Ganges, which are very near, and where he might remain all day to beg, but the narrow passages and small subterraneous chambers look like places for the concealment of robbers, and their effects, and very probably they may have been leagued with the hermit. The skeleton may have been that of a wounded robber,

(31) Mayagunj in the Report, where traditions relating to the cave are recorded. (See *Martin's E I.*, II, 31) These caves are not far from the waterworks at Barārī Dr T Bloch did not consider that much antiquarian interest was attached to them (See *Arch Survey, Bengal Circle, Report*, 1902-03, p. 7.)

(32) John Glass, " the surgeon of the station " (Report), was appointed an Assistant Surgeon in 1781 He was at Bhagalpur in Buchanan's time and remained there till August 1815, after which his name disappears from the *East India Register*.

(33) Blank in the MS.

who retired into the chamber, and there died, or it may have been that of a murdered person.

The monument near Konjorpur is a handsome square building with five small domes, and in a far better style than any Muhammadan structure that I have seen in the three northern districts of Bengal. It is not encumbered with any minute ornaments, but is a neat well-formed edifice of brick covered with plaster. It is in a remarkably fine situation, and has been repaired by a gentlemen who occupied a house adjacent The family of the founder has been buried near.

The monument erected to Mr. Cleveland by the zemindars [is] totally destitute of taste, a Hindu pyramid surrounded by a kind of Grecian gallery. In good repair. The one erected by Government in front of his house is of stone, small but neat It is fast approaching to ruin, the Pipal having lodged in the joinings of the roof. The hill house where he lived is not convenient, and far from elegant, but is showy from a distance It swarms with snakes The hill probably artificial The town very much scattered, and irregular The buildings are very poor

6th November.—I went about six coses to Ruttungunj,(34) having pitched my tents about half a mile beyond the Thanah The country all the way level and very beautiful The houses very poor, and generally huddled together Many small tanks. The road in some places good, in others very bad, yet many carts pass through the mud About two miles from the Hill house, where I had pitched my tents while at Bhagulpur, I saw on my right a Munt(35) named Gunguniya, not large and ruinous, but in a neat style borrowed from the Moslems, with a dome in the centre. For about a mile farther the road lead along a poor ridge, and was very good. I then came to a broken embankment, where the road was very bad About

(34) Ruttungunge, *B.A.*, Pl. II, now **Ratanpur**, about 10 mi S by W of Bhāgalpur, on the road to Bānkā.

(35) i.e. *maṭh* a 'monastery'. Gaṅganiyā is not marked on the S.S.

three miles farther, I came to the Maimuda,(36) a small river which, about 6½ miles from Bhagulpur and a little above where I crossed, sends off the Kankaiti (37) This is by much the larger stream, and formerly joined the Maimuda much farther north Rather less than nine miles from Bhagulpur, I crossed the Undra,(38) a miserable rivulet now almost dry, but its channel is considerable These rivers might readily be employed to water the fields, but this, so far as I saw, is neglected Some water drains from a tank near Ruttungunj, and is conducted to the fields. I saw no machines for irrigation.

8th November —I went rather more than two coses south-west to Bonahor(39) to view the hunting seat of Suja(40) Padshah The country exceedingly fine and beautifully wooded and cultivated. About four miles on, I came to Padshahgunj,(41) a small village ghat The tank is of no great size, and seems to have been surrounded by a ditch and rampart on the outside of the mound One-half of the building of brick on the mound has fallen The people call it a Tukht or throne, but it seems to me to have been a small mosque consisting of three apartments, each perhaps twenty feet square, and communicating by arched doors, too high for those of a dwelling house. The two lateral apartments seem to have had no communication with the external air except through that in the centre. There is an inscription over the door, but it is in the Togara character The building has never been either magnificent or possessed of taste.

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(36) The **Mahananda** of the S S

(37) Not named on the S S

(38) **Anhari** of S S Buchanan's Undra (i e Andhra) the 'blind' stream

(39) **Banhara,** part of **Amarpur.**

(40) See *Martin's E I*, II 33—34, where Buchanan describes the traces of the old fort between Dumrāwān (B 's Dumariya) and Amarpur, said to have been destroyed by Sultān Shujā who had a hunting box erected there The village of Sultānpur, 2½ mi. N of Amarpur, was doubtless named after that prince.

(41) Not marked on the S S. There is no reference to these sites in the *Gazetteer*

From the Tukht, Jetaurnath(42) hill bore south. It may be a mile in diameter. Bhimsen,(43) a smaller hill, is west from it. Both are entirely in this Thana. Burun,(44) the highest part of a considerable range of hills, bore south-south-west. It belongs entirely to Kurukpur,(45) but this Thanah extends to its root.

From the building I went rather more than half a mile south to a large village divided into two parts called Amarpur and Bonhara. Here is a hat(46) sometimes called Bonhara, sometimes Amerpur, sometimes Puin hat. I then turned north-east, and rather more than half a mile afterwards came to the south-west corner of the fort of Dewai Raja,(47) through which I passed for about a mile and a quarter. It consists of a low rampart of mud, and a narrow ditch without outworks, and contains no traces of buildings, but the north end, which is highest, is separated by another rampart and ditch, and is said to have been the part where the Rajah dwelt There is nothing in the appearance of the works that could render it worth while to trace their whole extent and form; but we must have only a low opinion of the Mogol government, when we find so near the residence of the Imperial viceroy of Behar and Bengal, an independent prince, even in the greatest period of its strength. It may, however, be alleged, although the Hindus assert the contrary, that Dewai was a mere refractory Raja; but this will not give us the higher opinion of the Mogol vigour Dewai, by the Hindus, is supposed to have been of the low tribes called Chandal, now fishermen,(48) but on account of his power, his family have been received within the limits of purity and are

(42) **Jataur** hill (840 ft.)
(43) The small hill (553 ft.) NE of Bhimsen hamlet
(44) **Bharam** hill (1,168 ft.)
(45) i.e. to the estates of the Rāja of Kharakpur
(46) *Hāt* a market or market place, here used for a village where a market is held
(47) In *J A S B*, 1870, p 232 f Babu Rashbihari Bose, then Subdivisional Officer of Bāṅkā, gives some account of the traditions of this neighbourhood
(48) *Candāla*, properly a person of mixed caste, sprung from a Śūdra father and a Brāhman or Vaiśya mother; a term applied to all low caste or out-caste tribes, and not specially to fishermen.

called Khyetoriyas.(49) They pretend to trace their origin from a Chandal contemporary with Ram Sonkor; but I have not been able to learn the name of any one of Dewai Rajah's ancestors

In the fort I found a Hindu decently clothed lying on the road in the most beastly state of intoxication The only thing of the kind that I have yet seen. I then returned by the Banka road to Rattangunj, passing through a village named Dumuriya or Dumraia (50) The roads all the way good

11th November —I went to Jetaur, and halted on the banks of the Chandini (51) Ratangunj is a poor village, without a single shop, but it is pleasantly situated among fine Mango groves The water is hard and ill-tasted About three miles from Ratanganj is Dumraia, a larger village with a small indigo factory Near Dumraia, a Hindu Dhanuk had been gibbeted for the murder of a child About half a mile beyond it is the commencement of Dewai Rajah's fort. Rather more than four miles from Ratanganj is Amerpur, a large village with many shops A Hat is held at its north end, on the banks of an old watercourse called Puin jhil About 7½ miles from Ratanganj is Nurganj,(52) a village where the Commissioner for Ratanganj and Banka resides. It is but a poor place I halted about a mile beyond it, near Jetaur hill The country all the way very beautiful, and finely wooded with Mangoes, Palmiras and Kejhur (53) I saw in one place that the people had had the sense to cut down an old mango garden and bring it into cultivation Near Jetaur the country rises, and some poor swelling lands are overrun with bushes, but the fields between are well cultivated, which shows the absurdity of the usual cry against the wild beasts. The scenery there becomes very fine, the hills being well wooded, and the summit

(49) The "Khatauris" of Risley, *T. & C.*, I, 477

(50) **Dumrawan.** The Dumrya of Rennell's 1773 sheet

(51) **Chandan R.**

(52) Noorgunge of Rennell, *B.A.*, Pl II, apparently the **Ghogha** of the S.S The "Commissioner" was perhaps an officer of the Jāgīrdārī institution.

(53) ***Khajūr*, the date palm (*Phoenix sylvestris*).**

of Jetauri rises into a fine rock, divided by perpendicular rents like whin.(54) The houses all of clay and close huddled together. The people much cleaner than in Puraniya At Jetaur I was visited by Kadir Ali,(55) the zemindar of Korukpur, a civil fat Moslem, but descended of a family of Rajputs He rode on an elephant, had about twenty horse-men, and many foot attendants Had two silver sticks in waiting. In the night a tiger prowled round the tents

12th November I went to Banka (56) Rather less than a mile from where I had halted, I came to the temple of Jetaurnath, where there are two small square temples of Siv, very rude and mean, but in good repair. No one lives at them, the Pujari residing in the village The temple stands at the east end of the hill, on the bank of the Chandan river, across the channel of which a ledge of rocks runs from south-west by west to north-east by east by the compass The lower part of the hill seems composed of this rock, which in every part, from whence I could procure it, is in a state of decay, but seems to have been a reddish granite In its state of decay it breaks into rhomboidal masses, with plain surfaces, generally covered with a white powder. At the river side it is evidently disposed in strata nearly vertical, and running north and south, and the same would seem to give an imperfect columnar appearance to the face of the rocks on the summit of the hill, the strata terminating abruptly towards the north, but that rock consists almost entirely of a whitish quartz broken into similar rhomboidal fragments, the facies of which are often covered with small crystals of the same. About 1½ miles from the temple, ascending the bank of the Chandan through woods consisting of deserted plantations, I came to the boundary of Korakpur and of

(54) Whin or whinstone, a term used in Scotland as synonymous with greenstone, applied by miners and quarrymen to any hard resisting rock (Stormouth's Dictionary)

(55) Qādir ' Ali Khān, the rāja to whom Warren Hastings restored the estate in 1781. He was the son of Fazl Ali and grandson of Muzaffar Ali

(56) Rennell in his 1773 sheet marks -Bogaryah, and in the *B.A* Bogariah, a village about half a mile S W of Bānkā Bogaria of S S.

Thana Rotongunj. The land from Nurganj to the boundary, belonging to Ghatuyals, seems to be the reason of its being waste : I saw two of them, fine old Rajputs They hold the Bhuiyas in great contempt, but say that Rup Narayan has compelled the Hindus of his territory to admit his purity. All the Bhuiyas, so far as they knew, speak the Hindi language At the boundary I met the agent of a Ghatuyal of Korokpur, where there was some more cultivation. Here another murderer had been gibbeted a Moslem who killed a man, of whom he was jealous A little above the boundary I crossed the channel of the Chandan very obliquely The sand inclining to sink under the elephants' feet The opposite bank, half a mile from the boundary on the west side, belongs to Rotongunj and Bhagulpur, and continues to do so for a mile farther The country there well cultivated A mile from the boundary of Banka, on the east side of the river, I came to its bank again, and crossed it, the channel being about five hundred yards wide, but the stream at this season is inconsiderable In Spring it dries entirely like the rivers of Karnata, but water may always be procured by digging a very little way into the sand In the rainy season the channel is in general filled; and sometimes for two or three days at a time it is not fordable, but it is totally unfit for navigation or commerce Some few years its floods have injured the crops, but in general, it is highly advantageous to the farmer Its banks are rather sandy, but in from them a few hundred yards, the soil is excellent. I passed then through the town to Banka, and halted in a mango grove, rather more than a mile from the river Banka is not quite four coses from where I set out in the morning, but is nearly eight coses road distance from Rotangunj Many Hanumans(57) in the woods, they make a hollow cry like ow, ow

14th November I went south-westerly about five coses to visit an iron mine at a village called Pahiri-

(57) The *langūr* (Hin.) monkey, *Semnopithecus entellus*.

dihi,(58) belonging to the Kurakpur Raja, and said to be the farthest north place in this vicinity where iron is found, and the mines extend from thence to Chandan, distance about eight coses. My road led nearly by the banks of the Urni(59) river, which I crossed six times in the space of the first five miles. The country so far was level, very beautiful, and pretty well cultivated, with fine plantations of mangoes and palms The waste ground was overrun with bushes extremely showy from the flowers of the Porema cordifolia(60) and young leaves of the Combretum decandrum,(61) which resemble bracts of the Musaenda frondosa.(62) About four miles from Banka I saw a ledge of rocks crossing the Urni. There are two low hills on both sides at a little distance After leaving the Urni, I entered the forest, which has a great resemblance to many parts of Mysore, but there is very little cultivation, although it is in very few places too steep for the plough, and the soil in most places is good and not so rocky as in Mysore. Some places, however, consist almost entirely of gravel, and small stones, mostly quartz. In one place the naked rock shows itself to a considerable extent, and is an aggregate rock, consisting of white quartz and black plates with a strong lustre. In the direction in which the stone splits easiest, these plates are the most predominant part, but make less figure when the stone is broken across the grain as in shistose mica Where this stone is in a state of decay, it divides into strata nearly vertical and running about south-south-east by north-north-west.

(58) This village is not marked on the S S, but the site appears to have been in the vicinity of the villages Titiharan and Kaithartukur shown on sheet 72 L/13, as it appears from a reference to the Rev Sur map.

(59) **Orni N.**

(60) This is the *Premna cordifolia* (Porema in the MS), which does not appear to have been recorded elsewhere from the Santāl Parganas or Chutiā Nāgpur areas Beddome refers to it as found in the Dekkan, Carnatic and Ceylon Other species of *Premna* are however, not uncommon

(61) A large climbing shrub, very familiar to all who have wandered in the hilly tracts, where it is conspicuous by the large creamy white bracts on the inflorescence. In S. Bihār it is generally called *ratenā* by the jungle folk—apparently a Kherwārī word

(62) *Mussaenda frondosa*, another large climber, a species rarely seen in these parts I think.

About three miles beyond this rock I came to the Dobin,(63) a dry wide channel, which falls into the Uṛni in floods On its south side is the village of Kol,(64) who are the miners Near the road the trees are small, being much cut, but at a little distance, they seem to be of a moderate size Asan, Khoir, Sondar, Khend, Adyospyros, Palas, Naucleas parvifolia and cordifolia, with some small bamboos are the most common trees that I observed

The furnace of the Kol is very rude and placed in the open air (65) It is built entirely of unbaked clay, and has usually some rents The top is about a cubit in diameter, perforated with a hole of about two inches wide, and concave Below this is a kind of neck, and then the body swells out like a bottle, little behind and towards the sides, but a good deal towards the front where at the bottom there is a semi-circular opening When going to work, some charcoal is put in the cavity by this opening, in which is then laid a pipe of baked clay for receiving the muzzles of the bellows The remainder of the opening is then shut with moist clay The bellows are now applied, and fire put in through the pipe So soon as the fire is kindled, some charcoal is placed on the top of the furnace and as it kindles some powdered ore is thrown upon it As it kindles, it is thrust through the aperture at the top and this is repeated until all the ore designed for one smelting has been introduced. Some iron dross is then put in, and the fire is kept up, until the workmen judge that the operation is finished, when they remove the clay from the front opening,

(63) Not named on the S S

(64) i e inhabited by Kols

The trees named by Buchanan two lines below are –

Asan (*Terminalia tomentosa*) *Khair* (*Acacia Catechu*), *Kend* or *tend* (*Diospyros tomentosa*) *Palas* (*Butea frondosa*), *Karam* (*Vauclea cordifolia*) *Kadam* (*N parvifolia*) I know of no tree called *Sondar* in these parts, and cannot trace it in the standard works on forest flora

(65) This account of iron smelting by the Kol lohārs agrees very closely with that given by V Ball in his *Jungle Life in India*, pp 668—69, of smelting by Agariahs in the Palamau district In the MS Buchanan gives a rough hand sketch of the furnace as described, which shows that it resembled that photographed by Mr Peppe (reproduced by Ball *ibid*, p. 668).

take out the mass, which is very porous, and then cut it in two, and wrap it in clay, part of which adheres and adds to the weight. In this state it is always sold by the smelters. They are vastly less skilful than those of Mysore, but their bellows are better. Two are employed, each consisting of a piece of hollow wood, about the shape of a Cheshire cheese, thirteen inches in diameter, and six inches deep A raw hide is stretched loosely over this, and tied round the mouth so as to be air tight. The muzzle is a bamboo, about four feet long, passing through the side of the wooden cylinder In the middle of each skin is a hole about an inch in diameter, through which a cord is passed and tied to a batton [*sic*] of wood, that prevents it from passing through the hole which it does not shut. This cord is tied by the other end to a bamboo bent like the spring of a turner's lathe, which draws the skin up, so as to be very convex. The two bellows are placed close together, and the workman placing a heel on each hole, stops it, while his weight forces the air through the muzzle. He then alternately presses his weight on one foot, and then on the other, which keeps up a constant blast Occasionally another man stands behind, rests his heels on the edge of the bellows, and presses the leather down with his toes at the same time with the other man These bellows give a good deal of wind, perhaps as much almost as those in a common blacksmith's shop, as it is expelled by the force of at least one man's weight and part of that of another To compare great things with small, it is exactly on the same plan with the bellows of Carron The metal is never, however, brought into a liquid state, nor is anything vitrified, as the ore seems to contain no earthy matter It is collected after the rainy season in the channels of small torrents, where it is found mixed with gravel and sand The workmen took me to a channel near the village, scraped off a few inches from the surface, and then collected the sand, throwing away the gravel with their hands. The sand was put into a fan like that used by the natives for winnowing corn, and in a very

short time most of the sand was thrown out. In doing this the people showed great dexterity. In this state the ore is in small grains, like barley, which are beaten smaller between two stones and again winnowed, when it is fit for the furnace The sand and gravel in which it was found was quartsoze. The adjacent soil was red clay with many lumps of quartz. A rock near it was small-grained white granite with angular black small masses in place of mica. In decay it separates into strata disposed south-west and north-east nearly, and inclined at a great angle to the horizon, sinking towards the north-west

In all the woods, through which I passed, small detached masses of stone are occasionally found on the surface, the greater part are quartz, or reddish granite I saw no rock resembling them, nor are the transverse veins of quartz in any of the rocks so large as to have given origin to the quartz, nor as usual in Mysore, but there are many of these veins, and they are often disposed in a waved manner

Banka is a poor village, as is the case with Bogariya, about half a mile south-west from it They contain, however, many people The houses are neat enough, with walls of interwoven bamboos but they are very small and too flat in the roof They have little yards round them, but no gardens nor plantations contiguous All the people very civil, and not much afraid The women more timid than in Bengal, but not more so than in Puraniya

17th November I went to Sumalpur,(66) distant not quite five coses, but I was taken by a very circuitous route to Bausi, in order to avoid the cultivation, the whole country in a direct line being one sheet of rice fields, without a road, so at this season I could not have passed without much injury to the crops.

I first went south and east, less than half a mile to the Chandan and proceeded up its banks, until I came

(66) **Sabalpur**; Simalpour of Rennell

'opposite to Luknauri,(67) to which I crossed. This is a open hat about two miles from Banka. About a quarter of a mile beyond it, I left the fine level land. and entered upon a tract of swelling land, which continued most of the way, but intermixed there are many fine valleys fit for the cultivation of rice, and probably occupying one-fourth of the country. The high lands, although of an excellent soil, are much neglected About seven miles from Banka, I crossed a ledge of rock even with the surface, and only a few yards wide, but running in a straight line in both directions, as far as I could see, from east by north, to west by south It is a fine grained granite of yellow or reddish felspar, according to the degree of decay, white quartz, and black mica I, of course, could only procure it from the surface About 1½ mile farther I crossed another ledge running in the same direction, but extending only the breadth of the road. About 9½ miles from Banka came to a temple of Vishnu, built of brick with some stones, at Bausi village Many Brahmans, most impudent beggars, are about it They dress like those of the south with a red nightcap cut with flaps to cover the ears The buildings are very mean, and rude, although they occupy some extent. About two miles from the Mant(68) I came to Papahurni(69) tank at the foot of Mundar Pahar,(70) an immense rock like one of the hill forts in Mysore It is very abrupt and naked towards the east, and slopes towards the west, and on its declivity there are several natural reservoirs of water, called kunds, but they are so high up, and difficult of access, that I did not think it worth while

(67) **Lakhnauri.**

(68) *Math* see note (35) above.

(69) **Pāpaharanī**, 'sin-removing' the Pouphur of Colonel Francklin Dr T Bloch, in *Arch Sur Bengal Circle, Report* for 1902 03 describes the tank as dug out from the solid rock, and as "half way up the hill" Francklin writes "a short distance up the rock"

(70) **Mandargiri**; the Mundar or Mussodin of Rennell Mussodin **Madhusūdan**, an epithet of Viṣṇu, there being a temple there dedicated to Viṣnu as Madhusūdan For accounts of the Mandāra hill and the remains at the site, see Lt -Colonel W. Francklin, *Inquiry concerning the Site of Ancient Palibothra*, Pt II, pp 14—26; W S. Sherwill in *JASB*, 1851, p. 2—72, and his *General Remarks* on the Revenue Survey of the Bhaugulpur district, 1852; T. Bloch, Arch *Sur., Ben. Cir , Report* for 1902-03, pp. 8—9.

to visit them, as I had seen many such in Mysore, and at the time I understood that they were the only objects of curiosity The rock is a granite of moderate-sized grains of reddish white felspar, glassy quartz and a little dark mica It has no appearance of stratification, but decays in scales like an onion parallel to the surface in all directions, and from one to five or six feet thick See end of this day's journal

The whole way from the Mant to the tank I observed stones lying by the road They are squared, many of them part of mouldings, or columns, or of images, all extremely rude The tank seems to be a small natural pond, and is overgrown with waterlilies At the east end has been a stair of stone, built of ruins of a more ancient structure Here is lying the image of Papahurni, a small female figure cut on a stone in relievo, very rude, and much defaced About half a mile from thence, several old foundations intervening, is a building entirely of stone called Antikanath,(71) and said to have been the abode of a deified saint as it is now of some Dosnami Sannyasis It would appear to be very modern from the freshness of the work, and is the rudest building of cut stone that I ever beheld both design and execution are to the last degree miserable Near it are several ruins and ruinous buildings, one of which, on which there is an inscription in Devanagri, is still in use, the image at Modasudnath(72) being brought to it on the Jatra, and there is a small Rath for the purpose Rather more than three quarters of a mile from Antikanath, I came to a small temple of stone, in which is the image of a quadruped standing It is of granite, and is said to be meant to represent a cow, but it is so rude, ad has lost so much of the head, that it is impossible to say what animal may have been intended It looks towards the east, where there has been a temple of greater size, among the stones of which is lying a stone of black hornblend, on which many figures have been engraved in relievo. The chief figure is so much

(71) Apparently the name of a *dasnámi sannyási*, see below

(72) i.e. Madhusúdanansátha

mutilated, that I cannot say what it represented; but has probably been a female, and is called Jagoma.(73) Beyond this is a tank and wood extending about a quarter of a mile to a fine plain on the banks of the Chirpi,(74) where I found my tents near Sumulpur, as I conjecture about fourteen miles from Banka by the route which I came.

The rock at Mundar Pahar at the east end may be about three hundred feet perpendicular height, but it is not abrupt, it descends with a smooth curve; on this face are several white marks, as if the rock had been recently struck with cannon shot, but the natives could not account for them, and they are quite inaccessible. On the summit of the hill is a small temple, and another surrounded by mango trees, about half way up the western declivity.

Modusudonath, according to the zemindar of Mundar, was built by Rudro Mohundas, a Kaiasth, a writer of Maianath gos(75) the Kanongoe at Bhagulpur The Pujari says the image was made by Ram Cundro It represents Vishnu. The stone broken Delan(76) west from Antikanath and where Modusudon first resided after he came down from the hill, was built by Chaterputi Raj, Zamindar of Mundar, seventh ancestor to the present owner The same person built the small mant, where the inscription remains, in the year of Saka 1521 Antikanath was a Dosnami Sannyasi, when he died, he was buried there, and the building was erected by Achintogiri, his pupil, about one hundred and fifty years ago. Kamdenu,(77) where the image of the cow is, is supposed to have been built by Chotor Sen, who erected the original buildings and stair on the hill He was a Raja of the Chol(78) caste, who governed before the Khetauri and Not,(79)

(73) Perhaps a corruption of *Jagadambā*, 'world mother', also known as **Mahāmāi**, 'great mother'

(74) **Chir N.**; the Cherea nalla of Rennell

(75) ? Mayanāth Ghosh.

(76) i.e. *dālān* (Pers.), a 'hall'.

(77) **Kāmadhenu**, the cow of plenty produced at the churning of the ocean, the tradition being that the **Mandāra** hill was used in the process.

(78) i.e. a Chola from southern India. Possibly B. meant to write Kol

(79) **Nat**.

who immediately preceded the Rajputs in the government of Mandar. He is supposed to have lived before the Moslem, and all the old ruins near the place, which are numerous, are attributed to him. Where the Not lived I cannot learn, but the zamindar says that the whole of Bhagalpur and Korokpur belonged to the Khetauri, who were destroyed by Suja Sha.(80) A book which gives an account of this place is called Mundar Mahatum and is supposed to be extracted from the Skanda Puran (81) It is disputed by whom. A pondit, who accompanied the zemindar of the vicinity, says it was told to Siv by Kartik Siv told it to Raja Arikchet,(82) who told it to Chapila Moni,(83) who divulged it in writing

Sumulpur is a village finely situated, but the huts are very mean They are, however in general clean. The zamindar says that much land has of late been brought into cultivation

18th November -I went to Chilauna,(84) and in order to avoid the rice fields, my route was very circuitous I first went down the left bank of the Chiri, for about $2\frac{1}{2}$ miles in a north-east direction Crossing the river there I came to the ruin of a small mud fort, named Tansiya gori,(85) which was built by the father of the present zamindar of Mundar, but has long been useless Proceeding easterly about three miles from the Chiri through a swelling country, I came to Mutiya (86) a large bare poor village Three hovels or sheds occupied by Not were near it A man of them brought out a girl, about eight years old, with an immense serpent twisting round its neck and body. The child, however, held it by the throat and seemed to have the mastery, although one might have imagined she was in danger from its twisting round

(80) Shāh Shuja' son of Shāhjahan
(81) i.e. the *Mandāra Mahātmya* a patt of the *Skanda purāna*
(82) ? Parikṣit
(83) Kapila Muni.
(84) Chilona.
(85) i.e. *garhi*, the place is not marked on the S S
(86) Motia.

her. About a mile farther on, I came to the Nilji,(87) a sandy channel still smaller than the Chiri, which is not so large as the Urni, but gives off many channels for irrigation. The Nilji at present contains no stream. For above a mile I then passed through woods applied to little use, except pasture, among them, however, had been some rice fields, now fallow. I then came to some of the lands occupied by the Ghatwals of Pukoriya(88) and his ten men, who attended with bows or swords or targets, and one man with a matchlock The place is called a Chat,(89) for what reason I know not, as the whole country for miles is plain, in some places level, in others rising into gentle swells, and the woods are nowhere thick. By the way I crossed a ledge of rocks like those I saw yesterday, a fine-grained yellowish granite.

From these cleared lands belonging to Pukoriya to the Kaziya(90) river is about three miles The country much neglected The Kaziya is rather smaller than the Chiri, but has a small stream, from whence some canals for irrigation are taken From thence to my tents near Chilauna, about a mile, the country is clear, but badly cultivated I had been led to expect that the whole way would have been one immense forest, but I am persuaded, had not great pains been taken to bring me round in directions where the country was least cultivated, that at least one-half is in cultivation, and of this half three quarters are rice The roads in the woods are very good, and might be made in any direction through them with little trouble, as the soil is even and hard, and the trees distant, so that by clearing away a few bushes, and levelling some watercourses, carriages might everywhere pass. Chilauna is a very poor village, inhabited chiefly by Bhuiyas. Much land round it, now waste, would seem formerly to have been cultivated. It is now covered with long coarse grass,

(87) **Biharjori N.**
(88) **Pakria.**
(89) Perhaps this should read Chhat, from Sans. *kṣetra*, 'field' 'place' 'shelter', etc.
(90) **Kajhia N.** The woods referred to have since disappeared.

which cattle cannot eat, but it is burned in Spring, and the young shoots are eatable throughout the rainy season.

19th November. I went to Kurariya (91) said to be three coses distant, but I think the distance is under five miles. The whole way, the country is almost level, the swells being very gentle, and the soil has everywhere the appearance of extraordinary fertility, and probably has been mostly cultivated, as the greater part is like that near Chilauna, being overgrown with long grass thinly scattered with trees. Much seems fit for rice, and some, that has been lately cultivated with that grain, has been deserted, owing, it is said, to the incursions of elephants Not above 11/69 of the whole are covered with thick forests, that retain no traces of cultivation No bamboos No Sukuya (92) I have hitherto indeed seen very little in the forests of this district Near Kurariya I crossed the Upravia(93) three times It is a small channel, but contains as large a stream as the Chiri. The woods consist mostly of Asan, Palas, and Kend. In rocky and hilly soils this abounds more, and it is there alone, where it produces Abnus or ebony I saw only two miserable villages, both Gatwali, and one of them at a distance.

20th November —I went to the frontier, where a stone called Nilamata is set up to mark the boundary between the zamindar, Khadirali, and the hill people. It seems to be about two miles east from Kororiya, and the people admitted, that it was half way to the hills, which, however, did not appear to me to be half the distance. They called the hills from Kororiya four coses, and said that the road was very bad, evidently with a view of deterring a visit, as the road became better the farther I advanced. The country is covered by a thick wood, but even within the Company's boundary, I saw three places that the hill people had cultivated within these few years.

(91) **Karharia**; Curarya of Rennell
(92) Sakwā, the *sāl* tree (*Shorea robusta*)
(93) Apparently the southern **Narna N.** of the S S.

Kororiya is a miserable village containing about ten houses of Goyalas, ten Bhuiyas, and one Brahman, with very little cultivation.

21st November.—I went to Kaduya.(94) I first returned about a mile by the way that I had come to Kororiya. I then struck off to the south, and proceeded about 2½ miles to the Jomuni,(95) which I crossed. It is a small river, but has a stream at this season. About a mile farther on, came to a low ledge of rocks without any evident strata It is a small-grained granite with reddish felspar, with quartz and black mica. About half a mile farther, I came to another river(96) like the Jumni, where it receives a small torrent from the east, but did not cross it, leaving it to my left. By my guide it was called Koduya. More than half a mile from thence, I came to another rock not stratified, and consisting of very fine-grained granite with yellowish felspar, whitish quartz, and black mica From thence to Kaduya is about 4¼ miles During the whole way, from where I left the former road until close to Kaduya, there is not the smallest cultivation. At the Jumni I saw one uninhabited hut, which probably had belonged to cowherds, but there evidently had been a village at the place, and another on the banks of the Koduya, where I approached it. I also saw two or three places where the woods had been cleared for cultivation with the hoe (after the jungle temporary fashion) but at present they are fallow, except near Kaduya. Very few places are unfit for the plough, and the soil in most parts seems to be excellent, and in almost every part would produce one grain or other. By far the greater part of the country, 104/142, is swelling land, of which 93 parts are covered with thick forests in which there is no trace of cultivation (97) Towards the north the trees are small, but towards Kaduya

(94) **Kadua.**

(95) The **Kajhia N.** of the S S In **Jamni Ghat**, the name of a hamlet on the north bank, we have the local name of the stream

(96) **Jatajor N.**

(97) Mr. H Ll. Allanson informs me that all this area has since been cleared by the Santals

they are of a tolerable size. There is little underwood, and few prickly trees, so that the woods are quite permeable in all directions. No bamboos In some places sal, but it is generally stunted, the bark being cut round to procure resin, so soon as the tree is as thick as the leg The most common tree is the Asan, entirely neglected Eleven parts of the forest would appear to have been cultivated, being thinly scattered trees, with some palmiras, Pipal and Bot(98) among them 24/142 parts of the land are low, fit for the cultivation of rice, and overgrown with harsh grass, among which are a few scattered trees, chiefly of the Gardenia uliginosa (99)

Kaduya is a poor village with a small river at a little distance towards its east The grounds very swelling but the soil fertile The people are Mar(100) and Sontar, who use the plough, but seldom stay more than seven or eight years in one place The Mars may be said to be of the same tribe with the Kumra hill people, as the two tribes intermarry, and originally spoke the same language, but the Hindi prevails more among the Mar, as they occupy the plains Their customs are nearly the same, only the Mar have adopted the plough.

22nd November I went to Gunjuriya,(101) returning about three quarters of a mile to get into the proper road, which passes the whole way through a thick forest From the cleared land at Kaduya for about six miles, the country, although rising into considerable swells, is almost everywhere fit for the plough, and the soil is good About four miles from the cleared land at Kaduya, I crossed a small torrent called Aura.(102) Its channel was rocky, consisting of a fine-grained granite, white felspar, glassy quartz, and black mica or hornblend, which is the most predominant part. Although the rock had no

(98) The "banyan" tree (*vaṭa*), *Ficus indica*

(99) B. refers to *Randia uliginosa* (sometime known as *Gardenia u.*), the *piṇḍāra* of the vernacular

(100) i.e. the Mal Pahāṛiās. By Kumra hill people, Buchanan apparently means the Kumarpali section of these "Southern Mountaineers"

(101) Ganjuria.

(102) Not named on S S.

appearance of strata, the parts are disposed in a flakey manner, that is, certain portions in one direction, consist more of one part of the ingredients than others. About a mile beyond the Aura, on approaching the Gunjoriya hill,(103) which I crossed, the country becomes rocky and much broken with ravines, which continue for about [?] miles, to the cleared lands of Gunjoriya The hills not high, but consist of grand masses of rock with trees growing from the fissures The rock is of the same structure with that just now described, but its grain is larger, and the proportion of black matter smaller When large rocks are exposed to the air, they break into immense masses, separated by rents altogether irregular, such as is supposed to be peculiar to granite, but when the masses are on a level with the surface, so that the water lies on them, and acts in their dissolution, they assume in decay a shistose structure, with vertical plates The woods are like those I saw yesterday, but much stunted, wherever they consist of sal, by the operation of extracting Damar.(104)

Gunjuriya is just sufficiently cultivated to show what a glorious country this might be made I think its beauty and riches might be made equal to almost any in the universe From the cleared land at Kaduya to my tents at Gunjoriya is about six or seven miles. Gunjoriya is an old-established village, inhabited chiefly by Bhuiyas of the Angwar tribe, and belonging to Rup Narayan. They have very good huts, uncommonly clean, but they look ill at a distance, being surrounded by a high fence of dry branches, which altogether conceals the hut. They seem very jealous, as none of their women ventured to gratify their curiosity, except by peeping through hidden places, while the men flocked from all quarters. The soil, although rocky, is uncommonly fine. I have nowhere seen finer tobacco nor mustard. The cultivation slovenly. The granite rocks preserve the water,

(103) Ganjuria Pahar.

(104) राल (Hin.) rosin, especially the resinous exudation from the *sál* tree, which is used as pitch.

and the little bottoms are full of springs, and cultivated with rice. The soil to-day mostly red clay.* Many Sontars came to us. They are a colony originally, I believe, from Palomo and Ramghur,(105) and came about ten years ago.

They are very clever in clearing new lands, but live meanly Their huts have no fence, and the walls are made of small sticks placed up-right, close together, and plastered within with clay. They are small and slovenly, and too flat roofed, with very little arch. The men have faces inclining to the Chinese, that is, have little noses and high cheek bones, with well formed mouths, but their eyes have not the obliquity of the Chinese, and are of a good size The Sontars speak a peculiar language, and seem to be very jealous, as none of their women appeared The original inhabitants of Goda(106) pargana, in which Gunjoriya stands, would appear to be Mar, a tribe who have also a peculiar language, and who intermarry with the Kumra of the hills All the Pujaris in Goda are of this caste, not only for their own gods, but for the Siv of deodand [*sic*].(107) the only Idol of the Brahmans that is to be found in the district. Here I could scarcely prevent the Agents of Kadir Ali and Rup Narayan from coming to blows, as the former pretends to a right over all the lands of the latter, as superior Lord, and the latter is in actual possession and refuses all acknowledgment of vassalage

23rd November.—I went to Chitbesura,(108) about twelve miles from Gunjoriya, but the road is circuitous About three miles from Gunjoriya, I came

(105) Palāmau and Rāmgarh As will be seen from Rennell's maps the old Rāmgarh district in his time roughly corresponded with the modern district of Hāzāribāgh Buchanan's statement here is very important as fixing approximately the date of the Santāl immigration into these parts of the district Local conditions have, however, greatly changed since Buchanan's day The villages are kept clean and the houses swept and tidy; and the women are no longer shy, but quite ready to talk and laugh. Buchanan pays a just tribute to the natural beauty of this country, where the deep ravines, now reclaimed, are covered with paddy plots.

(106) **Godda.**

(107) **Buchanan had at first spelt this word with a capital D, but altered it to a small *d* He means the village Deodanr, about 6 mi ESE. from Ganjuria.**

(108) **Chitbesra.**

to the Akasi,(109) a small stream, running from east to west. I descended its bank about half a mile, and crossed just a little above where it receives the Terta,(110) a branch separating at a little distance above, which I crossed immediately afterwards. The Akasi is alleged by Jevon Sing of Harave to be the boundary of Rup Narayon, while that person alleges that the boundary is at a small torrent, called Dobayi,(111) $4\frac{1}{4}$ miles farther south. So long as the whole country was waste, this produced no dispute, but as each party has settled some tenants within the disputed grounds, the parties have come to an open rupture, and even their dependents, whom their civility towards me had brought to a meeting, squabbled and worried each other, notwithstanding all I could do, nothing indeed but a salutary fear of the gallows seems to prevent them from going to extremities

Near the lands occupied by the tenants of Rup Narayan, I was taken to a place(112) where Antimony had been discovered, and which is about a mile east from Panch pahar, on a ground sloping down to the abrupt bank of a torrent which passes about twenty yards east from the mine. It was discovered by a Mar, pujari to a village god, who accompanied me to the spot He had dug an irregular trench from east to west, about twelve feet long, from four to two feet

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(109) The upper stream of the **Sakri R.**, so named from a village there

(110) Not named on the S S

(111) **Bhobi R.**

(112) Near **Akasi** village, east of **Panch Pahar.** This was a lode of galena, or lead ore, with which antimony is often confounded (Report, in *Martin's E I* II, 188) See also V Ball. *Economic Geology of India* pp 286—88, where this very site (called Akasee) is mentioned. The Pāñch Pahār hill, rising to a height of 1229 ft above S, is a striking landmark for many miles around

The Rūpa Nārāyaṇa referred to under this and the previous date was the son of Jagannāthadeva, the nephew (and adopted son) of Lakṣmaṇadeva eponymous founder of Lachmipur, now in the south of the Bhāgalpur district. All were members of one of the most famous of the ghaṭwāl families tributary to Kharakpur Jagannātha and his son Rūpa Nārāyaṇa long defied the military and Civil authority of the Company. See Browne, *India Tracts*, p. 45 *f.*; Murphy, *Final Report, Sur. & Set., Bhāgalpur District*, 1902-10, p. 15.

By "Mar" Buchanan means a Mal (Pahāṛiā).

wide, and from one to two feet deep, in which space he had found three ox load of the ore, in masses from the size of a nut to that of the fist, and had desisted on finding only small bits. He found it intermixed with the mouldering gangue;[113] but whether in a continued vein, or in detached fragments, he speaks so confusedly, it would be difficult to say The Gangue is an aggregate rock of a pale greenish rusty colour, and small grains It is in general in such a state of decay that I cannot venture to guess at the nature of its component parts. In some places it is little harder than sand, in others it is a rotten stone. In almost every part, small detached bits of ore may be found, and on digging and clearing away a part, I found a vein about a quarter of an inch thick inclining from north to south, at about an angle with the horizon of 50°, and apparently running east and west The extent of the Gangue I cannot say, as it appears on the surface only at the place dug About fifteen yards from it towards the south-east is a rock of a very fine grained aggregate stone, with a white opaque ground, and some greenish micaceous matter, and probably a composition of quartz, chlorite, and felspar In the torrent east from the mine, and perhaps thirty feet perpendicular below it, are two decaying rocks, one a fine-grained whitish granite with black micaceous matter, and I believe some small garnets. The other in great decay consists entirely of small black shorlaceous masses aggregated into one body. The hill at Panch pahar is evidently composed of immense masses of granite, and the rocks where I passed its south-east corner, about a mile from the mine, are of a granite similar in component parts to that near the mine, but the grains are much larger, and the felspar inclines more to red. Without digging at some expense, it is impossible to say whether or not the mine might be worth working, but there is no favourable appearance. A vein diminishing so suddenly, on sinking, is a very bad sign. Nor is

(113) Gang or gangue (Ger. *gang*, a vein or lode), the matrix in which an ore is embedded.

there any appearance of the stratum of gangue being considerable. The rocks near it have no appearance of stratification.

The soil to-day was mostly fine red land, such as in Mysore is thought best for the Corocanus.[114] There is also some of a brown colour. At least nine-tenths of the whole fit for the plough. The Sukuya everywhere stunted, owing to the extraction of Damar, but the Asan is the prevailing tree. No Tessor[115] nor lac

Chitheswara is a village belonging to Jevon Sing of Harewe and much like Gunjoriya, but its inhabitants are Khyetauris, whose manner of living, however, entirely resembles that of the Onwar[116] Bhuiyas. Their houses are good and clean, surrounded by similar unsightly fences, and they seem to be equally jealous of their women The country very beautiful Much of what is cleared is not cultivated, because the principal attention is bestowed on rice, and no more people reside than can cultivate the small bottoms fit for the grain, which do not amount to one quarter of the country The farmers near their huts have a few fields of high land which they manure, and clear a good deal round them to improve the air and pasture They leave, however, a good many large trees, which preserve moisture, and have a fine effect Some of these trees are Mowas,[117] a very beautiful plant, but many of them are entirely useless. A few mangoes, palmiras, and more Baniyans have been planted near the villages, but the increase of the

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[114] Buchanan evidently refers to *Eleusine Coracana* (Gaertn.), the *Cynosurus Corocanus* of Linnaeus, known in Hindī as *maruā*, and in the Dekhan and southern India as *rāgī* See Buchanan's *Journey through Mysore and Coorg*, I, 100 f

[115] The *tasar silk-worm*, *Antheraea paphia*.

[116] This name, which Buchanan spells in a variety of ways, has been a puzzle There appears to be no such sect recognized among the Bhuiyās nowadays, and Col. Dalton does not mention such a section of the tribe Curiously, in Risley's *Tribes and Castes* (I, 21) there is mention of an Angwār section of the Turi or Dakhinā Doms in Bihār I suspect that the word is Aṅgawār (*Aṅgavāla*), i.e. pertaining to Aṅga, the old name of the country (*deśa*) adjoining Magadha on the east, just as we still find a section of the Bhūiyās called Magahiyā, i.e belonging to Magadha

[117] *Mahuā* (*Bassia latifolia*).

Mowa and Palmira is very desirable. The view of the country is exceedingly fine, the cultivation, especially the narrow valleys of rice winding in all directions, the cleared lands with scattered trees, and the rocky hills are in perfection; all that is wanted is some appearance of progress in the arts, and a vastly extended and improved cultivation, of which the country is highly susceptible. Plantations of Asan and Palas, for Tessar and Lac, should occupy the place of woods to as great an extent as the demand will admit; the remainder might be all cleared, and the greater part cultivated, while what is not fit for that purpose, might rear palmira and Mowa. Neither of these, indeed, when moderately scattered, seem at all to injure most of the crops that are reared on high lands.

24th November —I went to Nuni,(118) distant about six miles About midway I passed through among hills, but Pangch pahar seems to be the high[es]t of the land Two small torrents, which I passed on their north side, the Koya and Hurdiya,(119) run towards the Dobayi,(120) which passes Nuni, and [the] Murko,(121) which I passed on their south side does the same. These hills consists of granite in large masses without any appearance of stratification. A vast rock generally occupies the top, but the crevices on the sides are beautifully fringed with wood. Their height is not considerable, from one to three hundred feet, and almost every one forms a peak or at least a short ridge very much broken into peaks. By far the greatest in sight is Teuri(122) in the Bhirbhum

(118) **Nunihat;** the Noony of Rennell, the residence of the Zamindār of Handwe.

(119) **Koa N.** and **Hardia N.**

(120) **Dhobhi N.**

(121) **Murko N.**

(122) **Trikut Parvat** or **Tiur Pahar,** 7 or 8 miles east of Deoghar, marked on the 1 mi = 1 in sheet as 2470 ft, (but on the 4 mi = 1 in. district map as 1505 ft. ') In Rennell's time these hills lay within the estates of the Kharakpur Rāj, which formed part of Monghyr *sarkār* or district. In Buchanan's time they lay within an angle of the Birbhūm district The changes of jurisdiction affecting this area are not explained in the modern *Gazetteers* On Rennell's 1773 sheet the group is named "**Tuar Hills.**"

district, which seems to be a great mass. The rock at the highest part, where I crossed, consists of fine grains of yellowish felspar, and glassy quartz, with much black micaceous matter, and a few larger masses of reddish felspar and white quartz intermixed, and some small garnets.

26th November.—I went to visit some mines.[123] The Kol say that they discover the ore by observing some of it on the surface, and then follow the veins or beds which seem to be nearly horizontal The veins are from one to five cubits thick, and never seem to extend far in one direction. It has never been known to extend more than a bigha in length and seldom so much. They are often interrupted by water, and below the ore they find masses of rotten rock, mostly quartzose, and clay containing no ore The veins are from 1 to 1½ cubit wide, and are crooked, but often send off branches It is always found under clay generally red or yellow, and never on the hills nor very near rocks. Mogormati,[124] or a white shistose mica in decay, is often found in the iron mines, but never in large masses, seldom above two or three mans[125] in a nest. Nor did they ever find it on the surface, nor any where else except at the iron mines of which it is by the Kol said to be always a sign. But I am told by others that this is not exact and that it is dug in many places where there is no iron and where it is found in great quantities. The mines are becoming scarce, as the same ground, after being dug, has not been known to give more iron. The sides of the mine are usually stiff clay. The ore is of two

(123) At **Pokharia**, about 7½ miles NW of Nūnī Hāṭ, as explained in the Report The site now lies in the Santāl Parganas, about 3 miles from the Bhāgalpur boundary.

(124) In his Report Buchanan describes this clay, found near Lakṛādiwānī, as a product of the decay of the gneissose rocks, and says it "consists of grains of white quartz, mixed with a white powder, which appears to me to be the felspar and mica reduced to one powdery substance. This is washed from the quartz, and makes a whitewash for the walls of the houses it is most commonly found in iron mines, and its whiteness seems to be owing to the abstraction of the ferruginous particles when these united in the form of ore." The derivation of the term 'makar' is not clear.

(125) Here Buchanan uses the correct Hindī word, *anglice* "maund."

kinds; Asul(126) Bel in large concretions and Dusura(126) Bel, a blackish granular matter containing much clay. The Asula is most commonly intermixed with stiff clay and Mokar mati.(124) The Dusura is mixed with stiff clay alone. The men take out the ore, and make the charcoal, the women prepare the ore, both blow he bellows. The Asula is much easiest cleaned, and besides gives most iron. The prepared ore is never weighed, but the people put a fan full in each furnace They think it may weigh nine sers (forty SW a ser) (127) and the Asula gives from four to five sers of iron A half more of the Dusura is required to give the same quantity They only work in Asin, Kartik, and Aghron; in Pouse they cut rice In Magh, Phalgun, and Choit they amuse themselves with marriages and entertainments. All the rest of the year they cultivate the land A family of one man and his wife manages one furnace, and pays one rupee a year rent for ore and fuel. The man says, that he smelts fifteen times a month, although the smelting is finished in one pahar,(128) and, as the average produce is about 4½ sers a smelting, he makes only about 1½ man a month, worth 1½ rupees. He has five bighas of land, four of it rice, for which in all he pays twelve annas a year, and does no other work He has three children. He sells his iron for ready money

Having ascended the Doba(129) more than a mile, I crossed this river, which has a wide sandy channel with a very small stream in this season, but gives water by digging at all times. Much raised by the jant(130) for watering the sugar cane. I then passed through a rising country badly cultivated for about

(126) *Asl*, meaning 'original', 'pure', here 'of first quality.' *Dūsrā*, 'second', 'of second quality' "Bel" is of doubtful origin.

(127) Thus in the MS If 'SW' stands for "*sikkā* weight", the *ser* used was a very light one

(128) i.e. in three hours A *pahar* (Sans पहर) is a division of time, a 'watch', of which there are eight in the 24 hours.

(129) **Dhobi N.**

(130) *Jānt*, a lever used in raising water, a word the use of which in this sense appears to be confined to south Bhāgalpur. Elsewhere in Bihār it is generally known as *lāṭh, laṭhā or laṭṭhā.*

a mile, and for about 1½ mile through a wood; beyond this the lands of a village named Jumjuri(131) occupied the banks of a torrent (132) for about a mile in width. The houses are beyond the torrent, and near them are a good many stones rudely carved, which seem to have belonged to a square building, perhaps twenty feet in diameter. The people suppose it to have been a temple, but have no tradition by whom it was founded, or to what God it was dedicated They say that they found it in its present state when they cleared the country Immediately beyond the cleared lands of this village, in a wood, I passed a torrent,(132) and about 1½ mile beyond that I crossed the Hurhuriya,(133) a small river which at present has no stream, but good water may at all seasons be had by digging into the sand. A little beyond it I found an iron mine. It occupied a space of about thirty feet square, perforated by many small pits, about four feet from each other, and six feet deep Whenever the workmen have dug five or six feet of the vein, they make a new pit at its end, and then advance again. The clay and soil may be four feet thick, and the vein little more than a cubit The matter in the vein is hard, and requires to be cut with a stick pointed with iron like a chisel The small fragments are then taken out in baskets. In this mine most of the ore is Asula, small irregular smooth concretions, which however, contain much extraneous matter, and must be broken and winnowed before the ore is fit for being put into the furnace Intermixed, however, with the clay and quartz matter, in which the Asula nestles, is much of the Dusura ore, and some masses of a ferruginous matter which are considered as unripe. The ore, when fully prepared, is called Bichun(134) or seed. I then went to Kukoriya,(135) where the miners reside, almost two miles from the Hurhariya. The forges are exactly on the same plan as in Banka.

(131) **Jamjuri.**
(132) Neither of these stream is named on the S S
(133) **Harharia N.**
(134) From the Sanskrit word *bijan* (*Hindi, bij, bihan*), seed
(135) **Pokharia.**

The people complain much of their poverty, which is unavoidable from their own account of their idleness.

From Pukoriya I turned towards the south, and about a mile from it recrossed the Harhariya About two miles from thence I came to a small ruined mud fort at the village of Kaduya,[136] where the zamindars formerly resided The country near it is well cultivated, and very beautiful It is situated at the foot of a small rocky hill west-northerly from the hill of Lagoya,[137] where the family at present resides, about two coses distant, in a still finer situation From the fort I went about four miles south to a village called Chandu Bathan,[138] in the Mauza of Pandoriya,[138] where I found some other forges of the same structure, and a mine consisting entirely of the Dusura or second quality of ore. The people say that they very seldom find any ore in the torrents In several parts I observed small quantities of black ferruginous sand, lying on the sand It seems exactly such as is usually smelted in Mysore

From this mine I returned to Num, distant rather more than five miles The roads all the way frequented by carts. All the rocks I saw to-day are granite, and except at Num I saw not the smallest appearance of stratification There a granitic rock in decay has assumed a schistose vertical structure, everywhere else it was in very irregular masses, and in decay scales off concentrically, or where on a plain surface, horizontally, in layers from one to two feet thick.

27th.—I went about three miles towards the eastern hills to see a place, where I was told that the people collected Gangot[139] for making lime. After leaving the low lands near the river, the country is exceedingly broken with ravines, and not more than half of it is fit for the plough The soil is red clay

(136) **Kendua.**
(137) **Lagwa Pahar.**
(138) Neither of these is marked on the S S.
(139) *Gañgaṭ*, the calcareous nodular limestone used for making lime and for road-metalling, more widely known as *kaṅkar*.

much intermixed with rocks of granite in decay. All the little torrents contain the black ferruginous sand, which, it is said, might in the rainy season be collected in considerable quantities. This kind of broken ground occupies all the interstices between the hills called Mukurkund, Moyana, Garuduma, Baskop and Nundunakop,(140) which form one group. On Moyana I perceived some cultivation said to be carried on by the Neiyas(141) who pay no rent.

On arriving at the expected place, I found that no lime had been burned since the time of the zemindar's father, I found an old kiln about four feet in diameter, and three high, built of clay. Near it was some of the Gangot, which exactly resembles the small nodules of calcareous tufa common in Mysore, but has involved small pebbles chiefly of quartz, such being everywhere common in the soil. From some traces of digging it would appear that the Gangot had been collected from a small hill of yellowish clay adjacent to the kiln, and probably was scattered among the soil near the surface. I see nothing essentially different in its nature or origin from the similar nodules found in the clay hills near Bhagulpur, and called Kongkar,(142) but its lime is said to be much whiter

Nuni is a pretty large but irregular village, which does not contain anything like a house, but the huts

(140) It is doubtful which of the hills is meant by Moyana (probably the **Pokhuria Pahar**) the others named are, in order, **Makarkenda, Carduma, Basko** and **Nandana** of the S S

(141) The Naiyás are a most interesting tribe, that have been wholly inadequately dealt with in Risley's *Tribes and Castes* (s v Naiyá and Kádar) Buchanan refers more than once to the Naiyas or Laiyas, who where formerly the priests of the Mal or Maler In his Report (MS. p. 197) he writes of the "Naiyás, formerly their gurus and purohits" The very fact that they were in his day still admitted to have been originally the "gurus and purohits" of the mountaineers, indicates, as will be recognized by such as have devoted attention to the study of the survival of ancient customs in India, the antiquity of these people and the important position they once held We have several references in old accounts to their connexion with the ancient iron-smelting industry in the "Rajmahal" and Kharakpur hills We still find them in more than one locality in the hilly tracts . and some of the best trackers in the *jangal* that I ever followed were Naiyás These people deserve the attention of a competent Indian ethnologist.

(142) *Kankar.* See note (139) above.

are tolerably neat, and many of them have their walls painted with ruddle and Mokor mati, which gives them a neat appearance. A good many Bengalese traders have settled in it, and the neighbouring villages.

28th November—I went to Lakardewani(143) through a romantic country, very much neglected. I crossed the Doba twice This river does not increase in size, as it advances, although it receives several small streams from the hills Lakerdewany is called five coses from Nuni, but does not appear to me to be above nine miles It is a fine situation, and the idea of its being more unhealthy than usual is in all probability without foundation To this cause is attributed the removal of the Thanah to Nuni; but the real reason in all probability was, that Nuni had a comfortable bazar for the Daroga, while Lakerdewani is a mere hamlet, around which however there is a good deal of cultivation, its cleared land extending about a mile

In the evening I went about a mile north-east, to visit a hot spring named Tapni, (144) which signifies merely the hot place, Tap (145) in the provincial dialect meaning heat, while in the more polished dialect it is usually applied to signify fever. The hot spring is situated at a little distance beyond the Gurguri, (146) a fine little river, that comes from the north-east to join the Duba, (147) and which contains the greatest quantity of running water of any of the torrents that I have seen in these hilly parts; but its channel is not very wide, and in Spring it becomes entirely dry. The spring arises on a field sloping

(143) **Lakra Dewani.**

(144) Marked 'Hot Springs' on the S.S This is number (2)—Tatlor—of the hot springs named on p 11 of the *Gazetteer* (1910)—not by any means an exhaustive list

(145) *Tap* is a Sanskrit root, meaning to 'shine', 'be hot', from which is derived *tapta* 'warm', *tapana*, 'warming', &c The feminine form *tapani* is used of a warm spring or flow of water. The same root is found in the first part of the name in the *Gazetteer*, *tapta* becoming *tāt* in the vernacular

(146) **Shurburi N.** Both names (onomatopæic words) have the same meaning, viz, 'bubbling', 'rippling', or as we should say, the 'babbling brook.'

(147) At this point, named **Matihara N.** on the S.S **The stream is one of the two principal headwaters of the Mor river.**

gently towards the river, by the side of a rock, which does not rise high above the soil, and in decay consists of thin or slately strata, disposed vertically, and running easterly and westerly. The stone is a fine grained aggregate consisting of white quartz and felspar, and a black micaceous matter, which, like that of all the granite in the district which I have seen yet, appears to me to be iron ore, rather than hornblend. The materials are disposed in a laminated manner, that is certain layers contain more, and certain other layers contain less of the micaceous matter alternately, without rendering the real structure of the stone slatey. The ground by the side of this rock is sandy and spouty for about ten feet wide. The water does not issue from any one part in particular, but oozes from the whole surface of the sand, until it forms a stream, which never dries The upper end of the sand from whence the water begins to ooze is not hot, but about twenty or thirty feet from its upper extremity the sand, for the whole width of the channel, becomes hot and continues so for perhaps twelve or fifteen feet. In the middle it is hottest, and there, many air bubbles issue from the sand, not in very great numbers nor very regularly, but they are pretty large. Where most of these issued, the thermometer placed in the water, but not sunk into the sand, rose from 72°F. to 148°.(148) The natives could not bear the heat with their naked feet. A constant vapour proceeds from the surface of the hot space, but it seems to me to be merely that of the evaporating water condensed by the external cold I perceived no uncommon smell about the place, and a lighted candle held over the place, from whence most of the air bubbles proceeded, was in no manner affected. I presume, however, that the air is the heated matter, and affects the sand, as it passes through, and this again communicates heat to the water A fine bath might no doubt be erected at the place, which somehow has escaped the fangs of superstition.

(148) A high temperature for a spring in South Bihār, comparable with that of the Janam Kuṇḍ and Bhīmbāndh springs in the Kharakpur hills.

29th November 1810.—I went about nine miles to Dumka. About two miles from Lakerdewani I crossed the Gurguri, and about a mile farther came to the boundary between Haruya perganah and that of Belpata (149) The former is the south part of the Hendooa R. the northern part of which, together with the adjacent part of Boglipour R are now considered as belonging to Korokpur. Indeed the Rajah of that country claims Haruya also About five miles from Lakerdewani I crossed the Kusaru, (150) a small river like the Gurguri Owing to the vicinity of the hills and springs they contain more water at present than the Doba or Chandun, but their channels are small, and in floods they are comparatively trifling.

Sumar Singh is called a Rajah, but is one of the Sirdars of the hill people who receive ten rupees a month. He lives at Digir Pahar (151) about two coses north and east from Dumka on the plain where he has a large free estate: but has subject to him a considerable extent of hills He is not acquainted with the term Dungareeah (152) given to the lower order of hill people by Capt Brown,(153) but calls them Projahs(154) or Raiyots, two low country names The whole tribe in this vicinity call themselves Mal.

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(149) Handwe and Belpatta The former is now one of the *parganas* of the headquarters (Dumkā) subdivision In Rennell's and Captain Browne's times it was a *ghatwāli* tenure held by a Kshetauri family included in the Kharakpur Raja's estates and, as will be seen from the text it was still claimed by that Raja in 1810 W S Sherwill who carried out the revenue survey in 1846-50, wrote that Madho Singh held greater part of the *pargana* from the Rāja of Darbhanga (who had purchased part of the Kharakpur estates in 1845) It is marked Herwoe on Rennell's 1773 sheet, and Hendooa in the *B A* Browne writes Handway

Belpattā is now a *tappa* in the south of the Dumkā subdivision When Rennell's assistants surveyed south Bihār in 1766-70 it was included in Bīrbhūm, by the Rājas of which it was then held It was transferred to Bhāgalpur either in 1781 on the recommendation of Cleveland or in 1795 at the request of Mr Fombelle, it is not clear which (See *Gazetteer S P* 1910, pp. 44, 245)

(150) Not named on S S

(151) **Dighi Pahar.**

(152) Dhāngar vul Dhaṅgariyā, originally meaning 'hillman' (Hindī dhāng, a 'hill'), now recorded as a separate caste. See Risley, *T & C*, i, 219

(153) Captain, afterwards Lt Colonel, James Browne, who for several years held charge of the "Jungleterry" See Appendix 1

(154) *Prajā*, a Sanskrit word meaning literally 'offspring' and then 'subject', and so often used in the same sense as *raiyat*

The natives of the low country speak of three kinds of hill people, Mar Poil(155) called also Kumar Poil, Sumar Pal, and Dhar Pail. The Sumar Pail are the Northern tribe. The other titles belong to the Mal. The Dhar are the Rajahs of whom there are three, Sumar Sing, Hori Sing, and Roton Sing and all their children and descendants. The Kumar Poil are supposed to be descended from brothers of the first Rajahs The Mar Poil have the same descent, but originally came from a different district. Their rank is considered as equal The Dhar Poil also came from another district No persons reckoned Mal except these three tribes. The Dhar Poil are most numerous. Next the Mar Poil There are Sirdars, Naibs, and Manjis of each kind, and all live intermixed, all speak the same language, and all intermarry They cannot marry in the same family in the male line The Rajahs are all called Singh, and cannot marry the daughters of a Singh There are four other real distinctions of rank Girhi,(156) Majhi,(157) Aharas(158) and Neva,(159) which last are the lowest, as having been Pujuris(160) It must be observed that among the Bhuiyas and other tribes these people are in general all called Neyas, which is applied to the whole of the tribe The Ahari were hunters The Majhis were chiefs of villages. The Grihi were originally rich, and lived with hospitality. Now all follow the same kinds of professions, and a Grihi can marry with a Grihi, or with any of the others, the rank being hereditary in the male line. All in this Rajah's territory who are pensioned by the Company are either Singhs or Majhis; none of the Grihis, although higher than the Majhis, have a

(155) Buchanan spells this word *pal* in a great variety of ways, as will be noticed It is possible connected with the Prākṛta (and Hindī) word *pāli*, meaning a 'boundary' or 'limit', but it may be of Dravidian origin

(156) *Gṛhi* (Sans गृहिन्), a 'householder'

(157) *Mānjhī*, 'headman', the village headman among the Santāls,

(158) *Aheri*, vul. *aheriyā* (fr Sans. आखेटक;), a 'hunter.

(159) See Note 141 above.

(160) *Pūjāri*, a 'priest'.

share in the government. and the two lower ranks would not be admitted He does not know what may be in the other two Rajahs' countries One of his Naibs is a Sing, the other and all the Majhis are of the Majhi rank The Mal call the other hill people Chet,(161) and the two tribes do not live together The languages are different There are very few of the Mal in the battalion, my informants know only of four men Formerly there were many; but they do not like such a clear country as Bhagulpur. They have no tradition of having come from any other country, nor of any of their caste being settled in any other part They know nothing of the Mar, but have no knowledge of Godda Perganah, where these are settled, and are considered as of the same race with the Kumra,(162) and intermarry with that tribe. Mar and Mal are indeed different pronunciations of the same word(163) Before Mr Cleveland's settlement the Rajah had much power. He appointed a Manjhi for each village, from among the persons of a certain family, but could not dismiss him without an assembly of all the nation, from which no rank was excluded He also appointed a Phaujdar to command the troops, and could dismiss him at pleasure He had also a Dewan Each raiat gave some share of their crops, a goat, a pot of honey, and a bundle of ropes to the Majhi, who again gave a share to the Rajah The same custom continues The land seems to be fixed property On the hills a field is cultivated two years, and then lies fallow five or six; but a man may prevent any other from occupaying his fallow land.

(161) This has been supposed to be a corruption of the Hindī word *chit*, meaning 'lying on the back', 'supine' (see *Gazetteer*, 1910 p 82), but this is improbable In his Report (MS, p 190,) Buchanan writes that the southern tribe "usually call the northern tribe chet", distinctly making the *t* as cerebral The Revd Ernest Droese, in his *Malto Vocabulary*, gives

"Chete, one of the lower races of the aborigines of India," so it appears to be a Malto word We may, however, compare the Sanskrit word *cheta*, meaning a 'servant', 'menial' At all events it has no connexion with the Hindī word *chit*.

(162) This is undoubtedly so, *r* and *l* being so commonly interchanged The name probably meant simply 'mountaineer' Cf Oppert, *The Original Inhabitants of Bharatavarsa or India*, pp. 18—21, 37—38, &c But see also Dalton, *Ethnology of Bengal*, p. 138

In Sraubon and Assavi,(163) they cut all the trees, and burn them in Choit and Bysak. Then with stick one or two cubits long, and armed with a pointed iron, three fingers broad, they dig (after the rains in Spring) holes, in which they put seeds of Goronri (Maize) Jonola (Sorghum)(164) Kolayi (Bora)(165). They then sow on the surface Kheri(166) and Kaungni(167). Some times they sow there first, and then plant the other articles. They sow no cotton, and have no hill rice Next year they only plant the maize and sorghum A field of this kind is called Bari(168). They always move their hut with their field Round their house they have a few plantains, chili, sag, and Tarkari(169) They collect wild yams In the hills some men, but not all, have cows for their milk. They have goats, fowls swine, and pigeons for eating They use Bakor(170) to ferment both maize and Sorghum, and usually use it without distilling, but they can distil They make no clothes They cannot make iron. They buy all their salt, iron and clothes They have no oil on the hills Merchants who supply them are repaid in Kolayi and nothing else. (I afterwards found that charcoal is their great resource) In their possessions in the low country they have regular rice fields, which they cultivate with the plough, but they also cultivate baris (168) there, and often cultivate these with the plough, and rear Sirsoo and Til(171) besides the abovementioned articles, living always near their rice fields, but changing their huts with the Vari(168).

(163) The Hindi months referred to here, as will be obvious, are Srāvaṇa, Āśvina, Chaitra and Vaiśākha, corresponding to July-August, September-October, March-April and April-May, respectively

(164) *Sorghum vulgare*, the *juār* millet

(165) It is not clear what plant is meant *Kalāi* is pulse (*Phaseolus sp.*), while *bora* is the cow pea (*Vigna Catjang*)

(166) Kidney bean (*Phaseolus aconitifolius*)

(167) The Italian millet (*Setaria italica*)

(168) i.e. 'homestead' (Hindi *bāṛi*)

(169) Red pepper, green potherbs and vegetables

(170) *Bakhār*, a ferment containing a diastase enzyme, made from the roots and leaves of several plants

(171) *Sarson*, Indian colza (*Brassica campestrics*), and *til*, gingelly (*Sesamum indicum*)

The system of cultivation indicated by Buchanan is the wasteful *kurão* or *jhûm* method still practised by the Sauria Maler in the Rājmahāl hills.

Every one has land; but some not enough, and these work in their spare time for others who give them food and clothing. No slaves.

Their chief gods are Sirkum, a male, Lukima his wife, and Bosomoti(172) their son. They know of no other gods. The great sacrifices (Pujas) are performed at two seasons.—In Agron,(173) when the Sorghum and Kalayi are ripe. They then offer these fruits, hogs, goats and fowls to Sirkum and Lokima. At their national feasts every man makes his own offerings, they have no priests nor set form of prayers, but pray for favour and success and thank the gods for the harvest. The family dances and sings, then feasts and drinks, as much as it can afford. There is another sacrifice of the same kind to Bosomoti in Magh, when the maize is ripe. They have Nagara, Pakuaj, Dhol, gul Sanayi and Bansi(174) for music. The Rajahs and some rich men have fallen under the authority of the Vorno(175) Brahmans, and Dosnami Sannyasis The former have instructed them to perform the Dosohorra,(176) and to repeat montros before a Bel tree They also repeat montros for all in commemoration of their departed parents and at funerals. The Sannyasi performs Jog for them, that is, prays over a fire, in which ghi has been thrown,

(172) I do not find such names in any of the other accounts of the religion of the hill people It is a pity that the history, religion, customs and language of both branches of these hill men have not been more thoroughly investigated on scientific lines

(173) Agrahāyana (vulg Aghan), corresponding with November-December

(174) These names represent *naqāra* (Ar), a kettle drum; *pakhāvaj* (H) a kind of drum; *dhol* (H)¶, a large drum, *shāhnāy* (Pers), a trumpet, and *bansi* (H.), a flute

The word *gul* is not used in Bihār for any kind of musical instrument; but Sir George Grierson has drawn my attention to the word *gal* (which appears to be derived from the Sanskrit गल: ,which also means a kind of musical instrument) given by J N Das in his *Bengali Dictionary* as meaning " a kind of musical instrument ". This may be the word heard by Buchanan Sir G Grierson also points out that the Santāli root *gol* means to ' whistle '

(175) Buchanan probably means *varna-samkara*, i e of mixed caste, or origin.

(176) *Daśahra*, here the 10th of *Āśvina* (*śukla pakṣa*), the occasion of the well-known festival in honour of Durgā

and gives them Upades.(177) They burn the dead on the same day that they die, and the great procure a Purohit. They mourn for five days, and then give a feast, eating and drinking. The Neya pujaris have been totally discarded, which accounts for their disgrace. The Pujari at marriages always repeats montros.(178) Premature marriages are in use among the rich; but the poor often wait until the girl is twenty. Their inclinations are in no case consulted. The girl's father always gets some money, but not equal to his expense on the occasion. A man may marry several wives. A widow may live as a concubine (Sumud)(179) without religious ceremony; but the connection is permanent. Adulteresses are turned away, but may become Sumuds(179) with another man. If a man gets an unmarried girl with child, he must marry her They inoculate for the small-pox. They have Dewasis(180) among themselves, who are appointed by the other Dewasis to worship Masan,(181) who is called also Gosaign They are instructed in some prayers and ceremonies, which are employed, when any one is sick or has been bitten by serpents, or is possessed by devils Masan is a malevolent spirit, but of greater power than Sirkum, who is the domestic god, and very good-natured. He has no images, nor temples. The Dewasi is paid for his trouble. The eldest son succeeds to all dignities and to all the land, but he gives his brothers a share to cultivate, and the movables are divided equally. The women are left to the charge of the sons, until provided for by marriage or concubinage. Even the Rajahs live very miserably. Sumar Singh is a very

(177) *Upadeśa*, instruction

(178) *Mantras*, prayers, mystical or magical formulae

(179) The second marriage of a Hindu widow is generally called *sagāi* The term *samadh* (from Sans *sambandha*, in the sense of 'matrimonial alliance') is also used in some parts

(180) This word does not seem to be used by other writers; but I find that in his Report (MS.) Buchanan explains the *dewans* of the Southern Mountaineers as "kind of priests that seem analogous to the Demanus of the northern tribe".

(181) *Masān* (H.) from Sans *śmaśāna*, a place where the dead are burnt, here, as frequently, applied to the spirit, male or female, that haunts the site. Cf. Crooke, *Folklore of Northern India*, I, 133, 259 (1896 edn.).

poor creature. A relation with him has some sense. From them and their attendants I took the foregoing account.(182) The relation accompanied me to give the vocabulary.(183)

30th November.—I went to visit the iron mines near Dumka. The occupied lands of this village extend almost a mile in diameter, and rise towards the centre from all sides with a very gentle ascent. Towards the east at a little distance there are some low hills, which apparently consist of irregular masses of granite. Between these and the occupied land of the village is some ground broken with many ravines, and so far as I saw, of a reddish clay, containing in some parts many angular masses of quartz. The lands of the village consist of a good clay soil, inclining to yellow, and mixed with small pebbles of quartz. The mine has been opened at the south-east side of the cultivated lands, and seems to terminate, where the broken ground commences The people have there evidently dug among the fragments of quartz, and say, that it was without success; but the mine is immediately adjacent under the soil of yellow clay, which there, is not above two feet thick. In this, for about a space of forty feet square they have made small excavations, and taken out the ore to the depth of about a cubit On the upper surface it forms angular nodules from the size of the fist to that of the head, which are compacted together, and the interstices filled with soil. This renders it easily wrought, and the pieces are taken out with the miserable stick pointed with iron used as a pickaxe or spade. Below this depth the mine becomes more solid, and the natives neglect it as too expensive.

(182) Had Col Dalton seen this account, or Buchanan's Report, unmutilated by Martin, he would not have written that Buchanan only referred to Lt Shaw's monograph (*As Res*, IV) "instead of giving us his own observation" (see *Ethnology of Bengal*, p 264) One of Buchanan's most striking characteristics was the care he took to record first-hand information

(183) I have since discovered this Vocabulary among the records at the I.O., where it appears to have lain unknown all these years, and am taking steps to examine it with a view to publication, in whole or part, as may be desirable.

How far it extends either in depth or horizontal distance is not known. Some has been dug on the side of a tank about a hundred yards east from the mine lately wrought, and there can be little doubt that it extends so far, and probably may reach over the whole lands of the village. Its depth also is probably considerable, as it becomes more compact as it descends. At Nuni I had been told, that most of the miners had retired to Dumka. Here I am told that last Spring all the miners had retired to some other place. I suspect, that at both places the numbers are concealed. At the mine here I observed heaps of the ore lying, as if recently dug out. The ore is first washed to separate the clay. It is then powdered by the pickaxe and a stick, a violent labour, and then is winnowed to separate the earthy matter.

Some men of the families of the Thakurs, Thakoits,(184) and Baboos, whom in Capt. Brown's time every one called Bhuiyas, and are now commonly called such by other tribes, said that nobody called them so; that they were Surji Bongs,(185) and knew nothing of Bhuiyas or Onwars (186) They would only acknowledge, that, before they obtained zemindaries, they were called Rai. They have now pure Brahmans as Purohits, and Sannyasis or Bhrahmacharis for spiritual guides, and may form two annas of the population of Belpatah. They follow the same rule in eating, etc., as the Rajputs.

One of the Bhuiyas, not of the blood of the Tekoits, says that both they and he are Bhuiyas, and descended from the stock; but that the Tekoits and their kindred are of higher rank, and greater purity. He says the proper name of the tribe is Raj Bhuiyas. Those who are rich have Brahman Purohits, but the poor content themselves with Purohits of their own who pray to the sun and to Bosomati. They have no communion with the Mal. They eat fowls, goats,

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(184) *Ṭekait*, or *ṭikait*, so called from the *ṭikā*, or mark, placed upon the forehead of a subordinate or feudatory chief.

(185) i.e. *sūryavaṁśi* (of the solar race).

swine, but not beef, and drink spirituous liquors. Their Gurus are Sannyasis. They have a different or bad dialect of the Bengali like the Mal, which has a strong affinity to the dialect of Birbhum. He knows nothing of Unwar(186) Bhuiyas, nor of Bherbhuiyas. (186). Most of the Rai Bhuiyas live to the west of Dumka. They are all cultivators with the plough. They gather wax, and cultivate Tessor (187)

Dumka is a poor village. Formerly, it is said, it contained four hundred houses, but now less than a quarter of the number. This is attributed to the depredations of elephants, but is more probably owing to the low assessment.

1st December.—I went about nine miles to Simla.(188) About two miles from Dumka I crossed a torrent called Lukhissin(189) from the name of an adjacent village. About 1½ mile farther I crossed a fine little stream called Bevar.(190) Three miles farther I turned off to the left, and went northerly for about 1½ miles to visit the iron mines of Gamra.(191) The furnaces are managed by Kol exactly on the same plan as those already described The ore is found in small nodules like Kongkar near the huts. It is in a thin stratum, not above one foot thick, and crossed with from one foot to eighteen inches of a red clay soil. The Kol say that they find it in a great many places, and have no occasion to dig deeper. It is beaten to small pieces, and cleaned, before it is put

(186) See note (116) above Risley in his *Tribes and castes* (I, 13) mentions "Ber or Bhar-Bhuiyā" as a subcaste of Bhuiyā in the Santāl Parganas, but the trouble is that Buchanan in his *Index of Native Words* has वेहड़े भुइंया , and in his Report (MS BK. 2, p 188 f) he writes this word "Beher" several times I have been unable to trace the meaning It *may possibly* be a word of Dravidian origin I suspect, however, that the term orginally meant simply 'without plough' (cf. वेहड़ used of land, as meaning unploughed, and so unploughable, rough, etc, the soft *r* becoming cerebralized as so often occurs in the dialects. Rāi Bhuiyā is, of course, the same as Rāj Bhuiyā

(187) See note (115) above.

(188) **Parsimla.**

(189) Not named on S S

(190) This seems to be **Gandar N.** of the S S Mr H. Ll Allanson, upon reading this portion of the Journal, was inclined to think Buchanan had camped at Purāṇā Dumkā, though his description of the occupied land tallies with the situation of Nayā Dumkā The 2 kos distance to Dighī also seems to indicate Purāṇā Dumkā.

(191) **Gamra.**

in the furnace, and seems very different from the ore at Dumka. Mr. Farquhar[192] formerly made advances to these people An agent of the zemindar now does the same, and gives from 1¼ to 1½ R. a man for the iron, as it comes from the furnace. Having returned to the road, I went about 1½ mile to the Dauna[193] river, a considerable torrent but now almost dry. From thence to Simla is about a mile. The women here do not seem so shy as towards the north, the influence of the customs of Bengal beginning to operate. At Dumka most of the people speak a kind of Bengalese, but being chiefly Bhuiyas and Santars the men are vastly jealous.

(See notes to the agriculture, December 1st, page 9)

The Brahman Pujaris never offer the worship to the three gods of the Santal. Each man offers for himself. The Pujari attends at funerals, and sometimes at marriages, but they are often entirely managed by themselves in a meeting of the heads of families. The Santal play on a flute of Bamboo with six holes, a soft enough sound, but their tunes are very monotonous They often sing and play the tune alternately. They also have two kinds of drums.

Simla is a miserable place inhabited by Bhuiyas, who call themselves Surjo bangs and Singhs, but acknowledge that they are Ghatwal Bhuiyas, which the Surjobang in general refuse to do. They call the other Bhuiyas, Rai Bhuiyas, and the still more impure tribe, Bher Bhuiyas. They know nothing of the Unwars.

2nd December.—I went to Protappur[194] in the district of Birbhum, there being no direct road to Thanah Chandrapur.[195] My road led very much towards the east over a ridge of hills, which seem to go nearly south and north and which rises into peaks

(192) It is not known who this Mr Farquhar was, perhaps Walter Farquhar, who was Commercial Resident at Boalia in 1808-12.

(193) **Dauna N.**

(194) **Partabpur.**

(195) **Chandrapur,** now a small village on the south bank of the **Dwārkā** N. in the north of the **Bīrbhūm** district.

not very rugged, nor was the ascent or descent where I passed very great, as the road winds between the peaks The ridge seems to be called Dulkata,(196) and I began to ascend it about 1½ mile from Simla, having about midway crossed a small stream called Jugudi (196) About four miles farther on I came to what was shown to me as the boundary of the two districts, having passed another small stream called the Tanada,(196) which runs to the south, and having seen a road passing towards my left, which is said to be frequented by the carts of the Nevas or hill people who carry charcoal for sale to the iron works at Dyoucha (197) This I think is the road that I should have followed The hills on the left or north-east of the road were here called Rungalea (198) Proceeding among the hills about three miles farther, I descended to the plain and about half a mile from thence I came to the Dobada,(196) a considerable torrent running south-west, from whence it is about 2½ miles to Protap'pur, all the way through stunted woods containing much Mimosa Cattechu, of which there is very little in the Lakardewani division Many allege that the whole of these woods belong to Bhagalpur, and Belpatah. The ridge of hills, over which I passed, is by no means so rugged as the detached peaks towards the north, and many parts are fit for the plough. The woods on it are the largest and thickest of any that I have yet seen in the district, and contain a few small bamboos, but Sukuya(199) is the most common tree I saw no appearance of stratification. The rocks are mostly granite, but on the highest part of the ridge I observed large rocks of a kind of red hornstone, that is a hard stone of a very fine granular earthy substance, of great hardness, and having splintery fragments. It contains, however, many black points, and in decay assumes a white sandy appearance, and perhaps may

(196) None of these names are to be found on the S S

(197) Possibly the **Dudhichua** of the S S

(198) A village **Rangalia** is marked on the S S

(199) i.e. *sakwā*, the *sāl* tree (*Shorea robusta*).

be considered as a very fine grained aggregate. Besides this I found glassy quartz in mass; and this substance indeed forms the greater part of the rocks on the plain, on the Birbhum side of the hill. I observed there a heap of about twenty feet diameter, consisting of the calcareous nodules called Gangot, mixed with yellowish clay. On all sides they were surrounded by decayed quartz. In many places there, as well as in all the hilly parts of Banka and Lakardewani, I observed the surface of sandy places covered with dark brown nodules of an irregular rounded shape, and from the size of a pea to that of a hazel nut. They are covered with a kind of shining enamel.

3rd December.—I went rather less than five coses to Thana Chandrapura, passing through the Birbhum district, until I came close to the Thanah. The country level I observed a considerable space covered with Gangot.

4th December.—I went to visit some quarries of Khori,(200) which are on a hill of the same name,(201) the southernmost of the Rajmahal range. Having crossed the Duyarka,(202) about halfway, I reached the hill, about three coses from the Thanah. The country is tolerably level, but rises into swells towards the hill and in many parts the soil is very poor, but probably $\frac{3}{4}$ of the whole is fit for cultivation. At present after leaving the Thanah a mile, all is waste, and even near it nothing is cultivated except low spots fit for rice. The woods are stunted, partly for tessar, and partly by the makers of charcoal The barren parts consist either of land covered with Gangot, which lies on the surface in a great many parts, but nowhere to any great extent, and is very seldom mixed with any other stone. Other parts much more extensive are covered with small masses of quartz, among which are some smaller pieces of felspar, and some fragments of stones from the hills, but the quartz

(200) i.e. *khaṛī*, chalk; marked "Clay pits" on the S. S.
(201) Khairi Pahar.
(202) Dwarka R.

is by far the grand component part, and seems evidently to be the remains of a granite in decay, many of the masses still retaining the appearance of rock, but crumbling to pieces on a slight stroke of a hammer. The pieces are cuboidal and angular, and have no appearance of being water-worn. Among this quartsoze soil, but not in continued rocks, are large masses of a fine middle-sized grained granite of a reddish felspar, white quartz and a black micaceous matter. The only other rock that I observed there, was in the bed of the Dwarka, where there was no appearance of stratification The stone black with black shining specks, and white quartz, all very fine-grained, and probably containing much iron, as it is very heavy. Among the fragments of quartz, I observed lying on the surface many nodules with a glazed outer appearance, such as I mentioned yesterday, only they are larger, like walnuts or eggs In some parts the surface of the ground was entirely covered with these enamelled concretions, but then they are always small The soil in most places is light-coloured, but in some red, both with angular small masses of quartz intermixed, and I have no doubt that the whole is granite in decay. On beginning to ascend the hill the rock consists of grains of white quartz-like coarse sand loosely conjoined together by a rusty coloured substance, and has intermixed some larger patches of a brick colour. It is either a granite in a state of decay, or a stone now a second time forming from the debris of granite; but is nothing like what is called regenerated granite It more resembles filter stone and by digging, masses for that purpose might probably be found. Farther up, the rock assumed a more decided appearance of being a reunion of debris, containing many fragments of quartz apparently water worn, and immersed in a friable mass of quartzy grains, and a powdery white matter, which stains the fingers, and appears to me to be felspar in decay. Towards the top of the hill I could perceive little that I could ascertain to be rock; most was in fragments quite irregularly

scattered, though often of considerable size. On breaking them, they appeared mostly to consist of parallel layers, not separated by fissures, but closely united like the layers of some whet stonnes and often undulated like the veins of timber. These layers were of Khori, of a hard reddle called Geri,(208) of an ochraceous coloured stone of a similar substance, and of an aggregate stone consisting of small pieces of quartz immersed in one or more of the above matters. Some pieces showed the transitions of all these layers into one another. From the summit of the hill I walked about ¾ of a mile over plainish land to one of the quarries, from whence the Khori is taken. It is covered by a horizontal layer of the last-mentioned aggregate stone, from two to four feet thick, and entirely separated from the Khori by a fissure. Under this the Khori extends to an unknown depth and width. It is disposed in vertical plates running north and south, and from one to three inches thick separated by fissures containing reddish ochre. The plates are of very various shades of white. The whitest are selected and freed from the ferruginous matter of the fissures, and thus exported There is another quarry about a cose farther on, upon the hill called Purganj.(204) (see page 57A) From the quarry I had a fine view of the country. Patuni(205) or Rangaliya(206) hill, between which and Khori pahar the Dwarka flows, extended from west by south to west by north, and is said to be two coses in length from north to south. Its width one cose. Beyond its south end I saw Kolong.(207)

Jogotpur,(208) the residence of a Mal chief named Kanaiya, is four coses north from the quarry on the southern bank of the Brahmani. The road leads first between two hills. That called Jigriya(207) bore

(203) i.e. *geru*, red earth or red ochre.

(204) Apparently the **Por Pahar** of the S.S , 2 mi. N. by E. of Khairi Pahār. The reference within brackets is to the account given in the next but one paragraph below.

(205) **Patua Pahar.**

(206) **Rangalia** is marked as a village at the eastern foot of the hills.

(207) Not named on the S. S.

(208) **Jagatpur.**

north-north-west distant half a cose from the mine which is at the west end of Khori pahar. Jigriya extends from east to west about two coses, but is narrow On the left of the road to Jogotpur is first Purgang,(204) which bore north-north-west, 1½ cose distant, and extends two coses from north to south, but is narrow. Between Purgang and Jogotpur is another hill named Kajur Pahar (209) on which lives Chingra, a Patur(210) or Naib of the Mal. On its east side below is Ramghur,(211) the residence of another Mal chief named Sam Rai. Ramghur is one cose south from Jogotpur; and east from the two places is a hill named Ranayi Pahar.(212) East from the quarry two coses is Gosaign Pahar (213) at the west side of which resides Dherma, another Patar(210) of the Mal. Down the valley between Khori and Jigriya I had a fine view of the plain towards the Bagirati,(214) as far as the eye could reach, there being no hills in that direction.

I then visited the villages of Mal on Khori pahar. I saw five or six huts tolerably large, but very miserable. The ridge is straight, one end is fenced by a wall of poles placed close upright, and in this the family sleep The other end is open at the sides, and serve as a kitchen, and for the cattle. They have no furniture, and very little clothing, and everything about them is miserable and dirty They have, however, some sows, goats, and fowls, and their huts seem to be permanent. I saw two plantain trees, but no other attempt at a garden. They cultivate the field two years, and allow four years fallow. Many of the trees on a field that had been only two years fallow were twenty feet high, yet most are cut when the field is cultivated. They have nothing for sale but

(209) Possibly **Karakata Pahar,** NW. of **Khejuria** village

(210) Apparently this is the Sans word *pātraṁ*, 'receptacle', in the sense of a fit or worthy person, used here for an 'agent' or deputy.

(211) **Ramgarh.**

(212) **Ranaipahari,** hamlet, (S S.).

(213) **Cosainpahari,** village, (S.S).

(214) **Bhāgirathī.**

charcoal, and the Khari, and are far behind the Garus,(215) and other eastern hill tribes in neatness, comfort, and skill.

The Geri, which seems to me a much fitter substance for paint than the Khori is never found in large masses, and is in general so much intermixed with other matter, to which it firmly adheres, that it is never wrought. Small fragments that are found scattered on the surface, separated from other matters by the progress of decay, and of a good quality, are sometimes gathered, but it is not in much request. Gaur Khund, a dealer in iron, has taken the quarry of Khori at Purgang, and has wrought it for six months, during which he has exported five hundred mans 58/10/10 S. W (216) It was never wrought before. He gives 2½ ser of rice of the same weight for each bullock load, about three mans, at the place where it is dug, to the hill people who dig it. He sends it to Murshedabad, where and at Calcutta, it is used as a paint. It sells for about 8 anas a man at Murshedabad The dealer, on the discovery of the mine, went to the Rani of Birbhum, and took a lease at seven R [upees] a year. When he began to dig Lala Gaur Hari, a person who had purchased part of Nuni,(217) the pergunah immediately adjacent on the south to the hills, pretended that the property was his, and prevented the people from digging. The dealer then applied to Rada Chorn, another person, who had purchased the Banhar and Gopmahal(218) of the forests of Nuni. He got a lease from him, but, I believe, pays no rent. He then began to dig, when the hill chief, the real proprietor, interfered, and he took a lease from him, paying 12 rupees a year.

The quarry of Khori pahar, although situated on the hills which belong to the Mal, and which pay

(215) i.e the Garos of Assam.

(216) The figures are doubtful in the MS. By "SW". Buchanan apparently means *Sikka* Weight, i e. the *ser* being of so many *sikkas*, of 179 656 grains each (see Prinsep's *Useful Tables*)

(217) Nonee *pargana*, marked on Sherwill's revenue survey (1849-52) map of the Birbhûm district, due north of Sûrî.

(218) i e rights of collecting forest produce and pasturage.

no tribute, has been long wrought, and was considered as the property of the Birbhum Rajahs. It was sold as a separate lot to Lala Gaur Hari above mentioned. He sometimes works it himself, and sometimes lets it, paying 29 R. a year to the company. They dig about one thousand mans annually, paying the same price to the hill people who dig it. Khori I take to be Petunse (219)

5th December.—There being no practicable road from Chandrapur to Kalkapur,(220) the nearest Thana, passing through Bhagulpur district, I was obliged to proceed through the Virbhum territory to Gunpura (221) an iron aurung (222) About three miles from the Thanah I crossed the Dwarka at Doucha,(223) a large iron aurung standing on both banks of the river. Gunpura(221) is about eight miles farther on, the country mostly overgrown with brushwood, kept down by the demand for charcoal A copse is not reserved, until of a proper size, and then cut, but every man cuts a bush here and there, as he pleases In one part it has been preserved, and the sal timbers are of a tolerable size, fit for small beams and planks.

6th December.—I went to Narayanpur,(224) a very large iron aurung distant about eight coses by the direct road, that I came, through the copse. About three miles north from Gunpura I came to Damra,(225) another iron aurung in the Nankar(226) district. About a mile farther I came to a small torrent coming from the west and named Kuriyagati.(227) About a mile beyond that, I came to another aurung named

(219) Also petuntse, from the Chinese *pai-tun-tze*, a white earth composed of felspar and kaolin, used in China for the manufacture of porcelain.

(220) **Kalikapur,** now a suburb of Pākaur, on its eastern side

(221) **Ganpur.**

(222) *Aurang*, a mart where an article of trade is manufactured or collected for sale or export wholesale

(223) **Deocha,** on the south bank of the Dwārkā N , about 3 mi SE of Chandrapur.

(224) **Narayanpur,** about 11 mi SW of Nalhaṭi station (E.I.R Loop Line).

(225) **Damra.**

(226) *Nānkar* means an estate, &c., assigned for subsistence (Pers *nān*-bread).

(227) **The Ghagar N.** of the S S

Massara(228) situated in the same territory. About two miles farther I came to Mollotti(229) another aurung in the same district. Its supply of iron comes from Maurola(230) and Amri(231) situated in the woods north from it. Between the two last aurungs I crossed a small torrent named Sargna (232) About half a mile beyond Mollotti I crossed another torrent the Chauriya.(233) About 3 miles from Mollotti I had on my right a high ridge rather than a hill, which is named Dumuriya.(234) It extends east and west for a little way. In the copse here I saw many tracks of wild elephants, of whom about forty are said to frequent the neighbourhood. About half a mile on I came to the northern boundary of the Nankar, formed by a road leading west to Jogotpur About four miles north from Mollotti it was said that the mines of Amri and Maurola were at no great distance to the east. From thence about 2½ miles I came to the iron aurung called Behya,(235) and passed 1½ mile through that and the town of Narayanpur, to where I expected my tents; but owing to the circuitous route that they had taken to avoid the woods, they did not arrive until an hour after me, although they had set out on the preceding evening The people and cattle were worn out with fatigue, having found no road We had been assured at the Thanah that the distance was only six coses, and the people at Gunpura told us that the good road for carts was indeed six coses, but that the short road through the wood, which I took, was only five. I took four hours to go it on a good elephant, and my people assured me that their fine road was at least twelve coses, and consisted of paddy fields, through the banks of which they had to cut their way. My people have been so sickly, since I came into the low country, that I have been under

(228) **Masra.**
(229) **Maluti.**
(230) **Manduia,** some 4 mi. SE of Nārāyanpur
(231) Not on the S.S
(232) The **Chila N.** of the S S.
(233) Marked, but not named, on the S S
(234) On the east side of village **Dupuria.**
(235) **Balla.**

the necessity of giving up the baggage elephants for their conveyance, and to put my tents on the little country carts,(236) no adequate number of bearers being procurable.

Narayanpur is close to the Brahmani on its south side; so that several strange errors concerning this river have crept into Major Rennell's map.(237)

Having procured some of the people belonging to the zemindar of Sultanabad, they said that a passage through that territory towards the north, was impracticable for any kind of cattle, so that in order to reach Kalkapur I must proceed by Nelhati,(238) situated about a cose north from the Brahmani where it receives the Tripatiya,(239) and by the side of a rocky hill of small elevation.

8th December.—The Daroga of police here, probably not knowing exactly in what light to consider me, was exceedingly unaccommodating. He is said to be a near relation of the seristadar of the Court at Bhirbhum, on which account he considers himself as a great personage. I was therefore under the necessity of leaving behind a part of my sick, and many of them who were very unfit for enduring fatigue, came on without assistance, for being left behind is by all the natives considered as being left to perish. I went to Bilkati,(240) about thirteen miles distance, but rather circuitous in order to avoid the rice fields. About seven miles from Nelhati I crossed a small channel called Ramgati,(241) and about two miles farther on, crossed the boundary of the Bhagulpur district, very near which my route has all along been. From thence I proceeded through the lands of a village belonging to Sultanabad, for about

(236) Here we obtain information as to how Buchanan travelled.

(237) Buchanan refers to the *B* 1 map, and rightly notes that this area has been incorrectly delineated. A large portion of it had not been surveyed at all, as will be seen from Rennell's 5 mi – 1 in sheet.

(238) **Nalhati.**

(239) **Tripita N.**

(240) **Birkheti.** The Berkati of the Revenue Survey map.

(241) Not named on the S S., but it is the Ramghatee N of the Revenue Survey map.

a mile, crossing a torrent named Pagla,(242) which winds very much, and destroys much land. From thence I was led about two miles through a village belonging to Rajshhai [*sic*], in the Bhirbhum district, my guides belonging to Sultanabad, and taking me in a direction to avoid their rice fields, although I should have done them no harm, but I rode on an elephant, and they receive so much injury from wild ones, that they were afraid. In the lands of this village I re-crossed the Pagla, and then went more than a mile through the lands of Bilkati on a high stony ridge most wonderfully excavated with small tanks, and having a fine rice country on both sides By the way I passed the Dorga(243) of a Pir in very neat order, but of small size It stands in the centre of a small citadel surrounded by an outer fort, which is square with bastions at the corners. The houses in Bilkati resemble those of Rajeshayi that is have a very short ridge with a pent all round. The walls in general of mud, the soil being a very stiff clay. They are comparatively very comfortable, are tolerably clean, but have few trees or gardens as shelter. A vast number of small tanks round them, the banks often planted with palmiras, and occupying a great part of the high land, which is seldom cultivated, except where the tanks have been filled up, as is often the case, when they are cultivated with rice. Most of them very dirty, and offensive, and the water excessively muddy The native consider this as much better than the pure mountain streams, and attribute all their sickness to the water they drank in the hills, although it has been since our rescending into the plains, that they have been sick, and the inhabitants of the low country are now extremely unhealthy, and almost every family in lamentation for their departed kindred. The dirty tanks I look upon as one of the principal causes of this sickliness.

(242) **Pagla, N.**, a name applied to many rivers and streams that follow a very winding course, or are constantly changing their channels.

(243) i e *dargāh*, shrine.

9th December.—I was under the necessity of halting at Bilkati in order to send for the sick. The sickness is much severer this year than usual, probably owing to the three preceding years of scarcity. the crops this year are good, but have only just begun to come into use. Rice here is in the proportion of eighty to twenty-five for the same money with what it was in Belpata ten days ago. The distance not above thirty miles, but there is little or no intercourse between the places I intended to go to Pachuari, (244) and from thence to Kalkapur by the way indicated in Major Rennell's map, but was told, that the road to Pachuari is alone practicable, and that I should be under the necessity of returning by the same route. Half a cose beyond Mohispur(245) there is no more cultivation, nor is there a single house at Pachuari. A Mal chief resides on the hill above The country to Pachuari level Towards the south there is a level country beyond the low hill called Molong,(246) but it is entirely waste A village was formerly at Pukoriya(247) but it has been deserted on account of the elephants. Bilkati is a considerable village, and several of the farmers seem to be wealthy, distinguishing themselves like those of Dinajpur by digging tanks, and keeping small brick places of worship in neat order. Formerly iron mines were wrought on a stony ridge, where the old fort is; but they have long been deserted The stone has a very singular appearance, resembling the brick stone of Malabar, and without the least appearance of stratification On the ridge extending west from the stony rising, a vast number of tanks have been dug, as if there had been there a city, but there is no trace of buildings, nor any tradition of the place ever having been of note. In the clay thrown out from these tanks is some Gangot, and some of the enamelled nodules,

(244) **Pachuari,** on the north side of the Bānsloi N Long 87°—32′ E, Lt. 24°—30′ N Patchwarry of the *B A*

(245) **Maheshpur.**

(246) Not named on the S.S

(247) Pokharia is a common village name (the ' place of the tank '), but we are not told where the village was.

besides others of a quartzose nature. The intention of the people here was to send me to Kalkapur by a circuitous route through the Bhirbhum district, in order to avoid approaching their crops; for there are no roads from village to village, and although all the rice is ripe, yet the greater part will not be cut for a long time, and is laid down to prevent it from shaking. As I should have done more harm by passing through Bhirbhum, I persuaded in appearance the people to acquiesce in my passing through their lands, by the way of Askunda,(248) and sent notice of my intention to pass that way so that they might reap a passage where the fields were not cut, and where the little banks that separate the plots were too narrow for cattle

10th December — Setting out early in the morning I observed that my precautions were totally vain, no track was reaped, yet I almost everywhere was able to pass without injury The natives seem to be uncommonly shy, as men from every village were sent out to lead me round, in order to avoid my seeing their houses, although I should be obliged to go double the distance through their crops, while there was a fair road through the village. After having proceeded rather less than three miles I came to a dirty stagnant creek called Bindoha,(249) which I crossed, and about half a mile farther I crossed the Bangsnayi,(250) a pretty considerable sandy channel with a fine small stream of clear water. Soon after I learned that I was not to be taken to Askunda, but that the tents, which I had sent on had been pitched at Burunga(251) in the Bhirbhum district, where accordingly I was obliged to go. It is about seven miles from Bilkati, and joins immediately with Jaipura(252) belonging to Bhagalpur, which was not fifty yards from my tent At Jaipura is a swelling ground like that near Bilkati, and consisting of a

(248) **Askanda,** just within the Pakaur subdivision
(249) Not named on the S S
(250) **Bansloi N.**
(251) Not marked on the S.S.
(252) **Jaipur.**

rock without any appearance of stratification which has a strong resemblance to the brick stone of Malabar. when hardened by exposure to air, and seems to be composed of clay and red ochre of iron I call it a rock because in many places the masses are contiguous, and occupy a large space, but there is reason to suspect, that they nowhere compose a solid body. In one place the natives have, towards a side, made a long excavation, in order to dig out a red clay, which is intermixed with more or fewer of the masses of stone; to the greatest depth they have gone, which may be twelve or fourteen feet, the clay is evidently composed of the same materials with the stone, but whether it is the stone softened, or whether the stone is the clay hardened, I have yet to learn I have however cut a brick of the clay, in order to try the experiment At any rate this substance differs from that of Malabar, in so far, that beneath the surface and far excluded from the air, masses of it are interspersed, that have assumed or retained a stony form The appearance of these masses, however, differs a little from that of the clay and superficial masses having somewhat more the appearance of aggregate rock in decay At the west end of the hill, immediately under the surface, is a mass of what I take to be iron ore disposed in parallel plates, which are separated from each other by considerable quantities of red ochraceous clay The natives dig clay from both places, in order to paint or rather redwash the walls of their huts

11th December —I went to Thanah Kalkapur. For about five miles I passed through Bhirbhum, leaving Sultangunj(253) to my left Part of the road over a low ridge with a fine soil totally neglected, and covered with brushwood. I then passed two-thirds of a mile through a village of Amar(254) on the south

(253) Read Sultānābād, the southern *pargana* of the present Pākaur subdivision. There were no roads from north to south in this pargana till some were made by Mr McLeod Smith in comparatively recent times

(254) By "of Amar" Buchanan means pertaining to the *pargana* of Ambar, the northern *pargana* of the present Pākaur subdivision, the "Awmore" of Rennell. The village in question was probably Hamrol.

side of the Sibgunj nulla,(255) just where it becomes navigable in floods. Merchants were here collecting fire-wood to be floated down to Murshedabad next year. The quantity now pretty large, by the season it will probably be great The nullah is a dirty puddle. I then passed for two-thirds of a mile through a fine rice plain, of which ten bigas belong to Rajshayi, and ten to Amar I then went through the latter district for $1\frac{3}{4}$ miles, when I entered the division of Thana Shumshergunj,(256) a part of Aurunggabad(257) also being near About $1\frac{1}{2}$ mile farther on, I came to Amar and the boundary of Kalikapur, and from thence to the Thanah is about an equal distance The huts as in Birbhum all of clay with four sides thatch, and short ridges.

13th December.—I went about twelve(258) miles west, and then returned, in order to have a view of the hills, and waste country, as all the people belonging to the Sezawul declined coming to see me. Passing west about a mile from the Thanah, I came to Pokori,(259) where the zemindar of Amar, Prithi Chund Sahi, resides He is a stout sensible and obliging man, who not only visited me, a civility that very few deign to show, but invited me to visit him. His house is decent, and is gradually enlarging He said that the expense of clearing the wastes would exceed the profit, but in this I have no doubt he is entirely mistaken. Pokori is a good village, surrounded as usual by many wretched tanks, and very unhealthy. All beyond it towards the west, is nearly a desert, that is on the plain, for the hills on both sides seem as much cultivated as the manner adopted will admit. These however, occupy but a small part of the country, for about fourteen miles in a direct line west from the zemindar's house. So far they probably do not exceed one-sixteenth or one-twelfth

(255) The **Machna R.** of the S.S
(256) **Shamshergani,** near **Dhulian.**
(257) i.e of thanā Aurangābād Buchanan seems to have followed a circuitous route.
(258) But the details given make it 14 miles.
(259) **Pakaur.**

of the country. In many places I saw old tanks, the traces of former cultivation; but the period must have been remote, as all traces of rice-fields are obliterated, which in a soil remarkably stiff, would require a lapse of several ages. About five miles beyond Pokori, I came to Horipur ghat, a passage over the Patergota or Duapara,(260) a small stream, which has sunk a very deep channel, in a black rich deep soil. About 1½ mile beyond that, I came to a village inhabited by Bhuias, who seem to have many cattle. It belongs to the zemindar, about 6½ miles farther I came to Deoguriya,(261) where the Kacheri of the Sezawul's Naib of Amar is situated in a village inhabited by his peons, all of whom have lands free of rent for a support. They are Muslems, Bhuias, Rajputs, etc. and most extraordinary miserable. Their lands almost totally neglected, and they sickly and wretched. They seem to rear nothing more than will absolutely keep them alive. They are probably squeezed by the Naib, who was absent, nor had I any intercourse with the hill people. The people said that they subsist chiefly by cutting timber, and in fact I saw near the village many small posts, twelve or fourteen feet long and four or five inches in diameter, and many small planks about five feet long, one wide, and two inches thick, and I met a good many of them going on oxen to the market at Kalkapur.

The low hills near my route, on both sides, seem not to be stony, and consist of red soil. I saw no rock by the way, but several of the eminences are stony. The stone is a kind of hornstone (Lapis corneus, Wall), that is, has an earthy grain, flinty fragments, is not hard, as a knife scratches it leaving a white mark, but it is extremely tough. I saw

(260) None of these names are traceable on the S S.

(261) Buchanan writes Deoguriya, but there is no such place marked on any of the maps. It is just possible, judging from the distances and direction given, that he went to the Domureea of Sherwill's 1848-50 sheet (the **Dumria** of the S S.). It is also possible that this was the Dunyamarrah of Rennell and the Dumamara of Tassin (1841); but it is not possible, with the maps available, to follow Buchanan's route on this day.

one deer to-day. The only one yet observed in the district. I only had a glance of it, so as to be unable to determine the species.

All the hills to the south of my route are occupied by the Mal. Those to the north by the Moller. The people here have no intercourse with Jumni Horina pahar(262) near Kurariya;(263) but frequently go to Deagor,(264) making the following stages, Dosaugora, Pakorikuta, Surmi, Kenduya (265) The road in some parts over hills, but practicable for loaded oxen of the hill breed, which are much stronger than those bred on the plains. I cannot trace among them Dunyamara, Barandee, Colego, Denga, Lukersura, Gagur, or Tiliyjapara(266) of Major Rennell

A Bhuiya, who is interpreter at Deoguriya and very well acquainted with the country, knows nothing of the Beor or Onwars (267) He calls himself a Ghatwal Bhuiya, says he has a kind of Brahman for Parohit He has no communion with the Hill people, and abstains from beef His wife and children speak Bengalese He can eat with the Kumar, but not with the Desi Bhuiyas, who speak the Moller language, and eat beef They seem to be the same with Beor Bhuiyas, but are called by a different name The Ghatwal Bhuiyas intermarry with the Kumar pali, and in fact are the same caste only settled in the low country.

15th December—I went to Aurangabad(268) about twelve miles All people agreed in calling it five coses, but on setting out I soon learned, that a

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(262) Near **Jamnipaharpur.**

(263) **Karharia.**

(264) **Deoghar.**

(265) i e due west to Dasgara and thence west by south through Surmi and Kendua

(266) All these names are marked on Rennell's *B A* Pl II, but three of them (Denga, Lukersura and Gagur) are not marked on his earlier, larger scale, sheet, which shows that Buchanan was using the *B A* plate

(267) See notes (116) and (186) above

(268) Once a place of considerable importance, and prior to 1856 the headquarters of the subdivision, now at Jangipur It was the principal centre of the blanket weaving industry carried on by up-country Gareris. The name, however, does not appear on the 1 in. = 1 mi S S., and Rennell's and Tassin's maps have to be referred to!

route had been prepared for us, that would be at least sixteen miles, and the loaded cattle and people were under the necessity of following that, there being no vestige of a road. I went by the straightest line I could follow, and certainly went at least twelve miles from [i.e. between] the two Thanahs. For about two miles from Kalikapur the country continues high. Afterwards it becomes very low, with swells at a great distance from each other On these the villages are situated They are large and tolerably comfortable for this country, and are finely shaded with trees and bamboos, as is usual in Bengal The intermediate spaces are bare, and look ill, owing to the extreme negligence with which they are cultivated, but seem capable of great improvement as the soil is uncommonly strong Rather less than three miles from Kalikapur I crossed a small creek separating from the Kama,(269) and about 3½ miles from the Thanah I came to its principal branch, which is a dirty stagnant nullah of considerable size and muddy bottom It forms the boundary between Lakerdewani and Shumshirgunj, the latter of which in a great measure surrounds Aurungabad About eight miles from Lakerdewani,(270) I came to another nulla named Madooh Jani, more dirty but not so large as the Kama. The sick had been sent on yesterday, in order that the bearers might return for my principal people On my arrival I found that one of them, a porter, had died this morning after three days' illness. He had from the first been speechless Two others, a Seapoy and a Lascar, extremely ill.

17th December.—I went one cose south to see Mohisali(271) tank It extends east and west, but by the people of the vicinity is said to have been dug by Mohes Raja, a Tiur,(272) who governed these parts, and the Tiur Rajbongsis, numerous in these parts,

(269) Apparently the **Machna N.** of the S S ; but it is not possible to trace the "Madooh Jani" mentioned further on

(270) i e. the Division of Lakaṛdīwānī

(271) **Mahisal.**

(272) Tiyar, a boating and fishing caste found chiefly in Bengal and Bihār. Risley called them "Dravidian" (*T & C*, II, 328).

are descended from his connections. A sib on the south side of the tank receives two pujas from the adjactent zemindar.

18th December.—I went first about a cose to see Mongolpur.(273) The ruins consist merely of a number of small tanks and broken ground, such as are usual about towns in Bengal. The extent pretty considerable, but not like that of a city. The tank at Basdiopur(274) is about one cose west from Jivat Lokhor.(275) It extends north and south. The people near it say that it and the tank at Mahasali were dug in one night by Vasukurma (276) The country in the direction of these tanks very fine, and tolerably high. Much sugar-cane, orrhur, and mulberry. The sugar mill short, seven earthen and one iron boiler in the furnace.

During my stay at this place three men have died, but they were past all hope of recovery, before I arrived. The other sick seem to be recovering.

21st December, 1810.—It rained most of the time I was at Aurungabad, and on the 19th very heavily and incessantly, so as to impede my business greatly. This morning I went to Thana Shumshirgunj, (277) which is about six miles from Aurangabad. I followed the great road for rather more than four miles, until a little beyond Sibpur, where a native has a neat indigo factory of eight pair of small vats. They are open above, but the boiling house and a curing house are of brick. He has built near it a very neat brick house of one storey after the European fashion, small but in good proportions. For about 2½ miles I kept near the nullah, which passes Aurangabad. Having crossed this, I then followed the course of the Kalapani, a large nullah, until I left the great road. Near the Thanah of Shumshirgunj I recrossed the

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(273), (274) and (275). Not marked on the S.S. The features of this part of the country have been greatly altered since Buchanan's time, owing to the shifting of the rivers.

(276) Viśvakarma, the architect of the gods, to whom so many wondrous works are attributed.

(277) **Shamsherganj**, now a southern suburb of Dhaliān.

same nullah, which I had before passed(278). It was called by two names at the two places, neither probably right.

Shumshirgunj is a large straggling place; a part of the town though called by a different name belongs to Aurungabad.

25th December.—I went to Thanah Furukabad(279) having to my right a creek almost the whole way, at no considerable distance. About a mile and a half from Shumshirgunj I came to Kornpara(280), where there is a small tank, but no other remain of antiquity that I saw. A little beyond it is Deonahat(281), a market place partly in three Thanahs, although the number of houses is very inconsiderable. The houses for the accommodation of strangers are like those at Aurungabad Here I rejoined the great road, which is not raised, and is very bad even at this season. Some pains are taken to make bridges or banks on the water courses, with sticks and earth, but they are incapable of supporting an elephant. About four miles from Deonahat I crossed the Banivagong(282) nullah at an indigo work It is a small stagnant channel, but deep and miry. The river into which it falls is even now navigable for small boats, and much fire-wood is lying on its bank, ready for exportation. Faruka is situated on its bank above three miles above the junction with the Beniyagong nulla. In all about nine miles from Shumshirgunj.

29th December.—I went to Beloyari(283) in order to have a view of the hills My route west, but the

(278) A reference to Rennell's *B A* Pl XV, where Callapanny Jeel is Buchanan's Kālapani, will help to explain Buchanan's route. The configuration of the area has vastly changed since.

(279) **Farakka,** the Furruckabad of Rennell, and possibly the Ferrandus of Lavanha's map (c 1550)

(280) Not on the S S the site has been diluviated

(281) The Deonāhāṭ (and Deonāpur) of Buchanan—the Downapoor of Rennell and other early maps and records—lay some two miles north of the modern Dhulian The site has since been diluviated in the course of the shifting of the main stream of the Ganges

(282) **Beniagram** see Rennell's *B A* , Pl. XV for this nālā and the river into which it fell—an old branch of the Ganges, which has again filled it since

(283) **Bilabari,** on the spur of the hills (Gādā Bhita Pahār of S.S.) nearest to Farakkā, and about 2 mi NW of Barharwā.

road rather circuitous. I went in all about twelve miles near the Guman Merden(284) river. About 2½ miles from Feruka, I came to the place where the nullah that passes Baniyagunj separates from the Guman Merden. To the boundary (285) of the Rajmahal Thanah is about 3½ miles. About six miles from Faruka I crossed the Guman Merden, a deep narrow channel navigable in the rainy season. Furukabad is but a small village, and is chiefly inhabited by Betiaris (286) On the way I passed several large villages, but Beloyari is only a small place and has no shops Each house has a very large shed for cattle. The people two nights ago were much alarmed by a male and two female elephants, which broke down a hut, and ate up the grain contained in a Kuthi.(287)

The Sirdar of the neighbouring hills came with the native most conversant in these parts, but both were uncommonly stupid. Formerly there was on the banks of the Gumon Merden, where it leaves the hills a fine cultivated country, belonging to the Monihary(288) zemindar near Bhagalpur, and between the Rajmahal Perganah and the hills It is now deserted, and only one village of Ghatwals in a miserable state remains Almost the whole way between Beloyari and the boundary of Amar has already been deserted The hills, on the contrary, are as fully occupied as the nature of their cultivation will admit Those near are not broken nor rocky, nor are they of considerable elevation, but they are very steep.

30th December —The wild elephants alarmed the people of the village at night. The men had taken refuge in the trees and the women in the cow houses. I went first about eight miles to Atapur(289) through a country very indifferently cultivated and which is probably kept waste by the Nawab's elephants.

(284) **Gumani,** also called the Gumāni Mardan
(285) Farrukhābād was then in Rājshāhi district
(286) i e *bhatiyāris*, inn-keepers.
(287) i e *kothi* diminutive form of *kothā* a granary
(288) The Manihāri zamīndāri is marked on Buchanan's *map* (q.v)
(289) **Atapur;** the Hautapour of Rennell.

Atapur is a large poor-looking village. A little beyond it, the ground rises into little hills, which extend from the mountains near Uduya nulla(290) to a large jhil or lake, and, where I crossed them, perhaps 1½ mile wide. They are mostly fit for cultivation, but almost entirely neglected, and are of very inconsiderable elevation. The highest part rising into a rocky peak is named Munsachondi(291) from the deity supposed to reside on its summit, which may be about a mile from Atapur. The rock has no appearance of stratification, and has a strong resemblance to that at Thanah Moniyari in Puroniya, and to the indurated clay which I saw between Bilkuti and Kalikapur It does not effervesce with the nitrous acid In the face of the hill a deep pit had been dug, and the people said that about forty years ago Kori(292) mati, for writing with, had been dug from the pit, but the operation had been supposed offensive to the deity of the hill, and the miners had gone among the infidels of the mountains, who had no gods that were troublesome, and they continue to dig the Khori from Gudayi Tunga,(293) north-west from Munsa Chondi about 1¼ cose This hill belongs to Guiya Majhi, also the proprietor of Chilpahar,(294) 1½ cose west from Munsa Chundi From this sacred hill I went across hilly ground for about 1¾ miles, when I came to a plain covered with long grass In August when Uduya nullah was taken, it is covered with water, but at this season is a firm clay overgrown with long coarse grass, although very much fitted for the cultivation of rice. The only water remaining is in a few scattered holes in what Major Rennell calls the lake,(295) which is three or four hundred yards wide, and about eighteen inches deep, covered with floating weeds formed into

(290) **Udhua Nullah**, the scene of Major Thomas Adams' victory over the forces of Qāsim 'Alī Khān on the 4th/5th September 1763

(291) ? Manasā Chandi, not named on the S S, but it is the small isolated hill adjoining village Birāmpur on the north

(292) i e. *khari*, chalk

(293) **Gadai Tangi Pahar.** It was from this neighbourhood that the stone for the bridge across the Ganges between Damukdia and Sārā was quarried.

(294) **Chilpahar** (hamlet) is marked on top of the hill (S S.).

(295) See *B.A.*, Pl. XIX.

a mat. It seems to run parallel to the low ridge of hills which I crossed from Uduanala to the large jhil at their south end. From this ridge to Futkipur is about two miles

1st January 1811 —I went to visit the hill called Gudoya Tongi, which is the residence of Guyiya Sirdar, a chief of the hill tribes, and where there is a mine of the Khori mati. The foot of the hill is about seven miles from the Thanah of Futkipur,(296) which stands near where the right wing of the British camp was stationed during the attack of Uduya nullah. I first went west over a deserted plain for about two miles, when I came to the boundary of the Rajmahal division In this direction the lake laid down by Major Rennel has totally dried up A very little beyond the boundary I crossed over the skirts of a low ridge extending south from the hill that was stormed, to Munsa Chandi, in some places high, in others low, but about a mile wide where narrowest and lowest, as where I crossed it The soil is a red clay intermixed with many stones, and these in some places are closely compacted in large masses, like a rock in a state of decay. They consist of a kind of breccia composed of rounded pebbles of various sorts united by a pale bluish cement Beyond this ridge is a fine rice country extending to Atapur. Guyiya Sirdar rents a farm on this,(297) and from thence I was joined by his eldest son, a fine young man, who said that his father was away from home Rather more than a mile from the bottom of the hill, the land rises into swells, covered with low coppice wood. The soil rich and mixed with the calcareous concretions, called Gangot The hill is exceedingly steep of ascent but the whole is cultivated after fallows of about four years, and gives about three crops before the next fallow The

(296) **Phudkipur**; but Gadāi Tāngi hill is under 5 mi from the present site of Phudkipur, so the Ganges has probably encroached here also.

(297) It is very interesting to read that one of the Sauriā sardārs at that time rented cultivation on the plains. Mr. Allanson thinks they are too improvident nowadays to be able to do this *Sabai* grass is now extensively grown on these hills, and this industry at present forms the chief support of the Sauriā Malers.

soil is strong, but perfectly filled with stones, and in some parts the rock comes to the surface. The great crops Sorghum, maize and cotton. The latter is now in seed, and remarkably luxuriant, even among the crevices of the rock intermixed with a little soil. In some places are a few bamboo trees scattered with plantains and bamboos, but nothing else like a garden I ascended the hill between a part projecting towards the north-east, and the highest hummock of Gudayi Tongi. The rocks here, and on the greater part of the hill have no appearance of stratification, but appear to me to be what is called Trap, whin, or basalt in irregular masses very tough, fracture imperfect conchoidal, earthy gray blackish colour with some small fragments of quartz interspersed. Among the broken fragments of this rock, towards the foot of the hill, I found some pieces, all sporadic, apparently, in different stages of change towards the nature of agate, and some of them were encrusted on the surface with irregular crystals Among these also I found some sporadic pieces of badly-formed whitish Chalcedony, approaching to that brought from near Hyderabad, and their surface pitted in the same singular manner.

Having reached the summit of the hill, I went about a mile round the highest hummock to see the mine, leaving the village to my right. A rock, or large mass, I am not certain which, near the mine differs much from the others that I saw on the hill, and consists of a reddish, slaggy matter, internally containing many cavities, some of which are enamelled within and lined with what I take to be iron ore. It has much resemblance to the rock near Birkuti &c. The mine is situated on the west side of the high hummock, and seems to occupy a considerable space. The workmen sink an oblique descent perhaps four feet wide, until they come to the vein or stratum of Khori Mati, which they say may be four or five cubits thick, and as much wide, but I cannot be certain of understanding them right, for they are now only beginning to dig, and have not formed their mine more than twelve feet deep, and they do not expect to reach

the Khori until they are as deep again. They then work as much of the Khori as is required often going underground ten or twelve yards. Nothing is found above the Khori but a rich red soil from twenty to thirty feet thick. In the following rainy season the mine fills with water, and the roof falls in so that a new mine is made every year. A merchant hires the hill people to work, and gives them four annas a day. The Kori mati here is different from that near Chanderpur,(208) and more resembles the coloured matter found on the south face of the hill, some of it consisting of parallel layers of various shades of red and yellow curiously twisted, while much is reddish, like the Gheri mati of Chanderpur; but the whole is softer, being nearly like chalk. It seems to be an indurated clay, having a greasy feel, and polishes by rubbing it with the nail One piece had on its side the appearance of a bivalve shell, but, if really such, so much decayed as not entirely to satisfy my mind concerning its being an animal exuvia I searched in vain for any other similar appearance. This Khori mati is eaten by the women of the neighbouring districts, just as baked clay is used by those near Calcutta, and some of it is sent even to that place. Having examined the mine, I went to the village, where I found about twenty families, their houses disposed in two rows. I walked through the lane to the end, from whence I had a most noble view commanding Rajmahal due north with a large lake between, &c , &c. I was accompanied by the young chief and a mountain guide employed by the post office, and had only two servants with me totally unarmer, so that I could be no object of fear; but all the men staid in the house, and most shut their doors. The women and children came out to look at me, but declined any conversation. although the young chief said that they all spoke the low country language. I endeavoured to go towards two or three parties, but they all retired on my approach, except one young woman, who had a good deal of

(208) i. e. at Khairi Pahāṛ, which Buchanan visited from Chandrapur, see above, under date 4th December.

reason to be satisfied with her appearance, being very well looked. She allowed me to approach, and to pass her, standing with a becoming but modest confidence, but declined conversation. I then went to the chief's hut, in hopes that he would show some marks of hospitality, being very thirsty from my walk in a hot sun; but I was quite disappointed. He had three huts, I sat down on a stone near the chief hall, the doors of which were open. After waiting for some time, and talking with him on indifferent subjects, in hopes of an invitation I looked in, and saw that the hall was about thirty feet long by twenty wide. The roof well thatched, and supported by wooden posts. The walls of reeds without plaster, but very neatly secured by split bamboos, and much superior to any hut of a wealthy farmer, or small zemindar of the low country. There was a tolerable neat place for cooking near one end. The furniture consisted of several coarse cots, without mattresses or curtains. A hammock of net, probably the bed-place(299) of the master, and some earthen pots. There was a door at each of the sides of the hut, one leading to a yard neatly enclosed with reeds Several other houses seemed to be nearly as good as that of the chief, and none of them bad. Their store houses are oblong huts raised on wooden posts Four or five serve for the whole village. The pig-styes occupy the rear of the village, and are well occupied. Their cows and oxen are fed in the woods below, and a considerable space on both sides of the hill is claimed as property by these mountaineers, but it is not at all cultivated. The

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(299) At p 43 of his Revenue Survey Report, under date 22 January 1851 (see also *JASB*, 1851, p 572), W S Sherwill, describing the interior of a house at village Jola (the Jolo of his map and the Jallo Paharia of S S 72 P/6) writes

" Across the hut was slung a grass hammock, in which the hill people sleep during the rainy and hot seasons."

From such inquiry as I have been able to make, it seems that this practice is no longer common Hammocks are not used for this purpose by the plains folk in Bihār

Mr H. Ll Allanson notes in regard to Buchanan's description of this hill chief's house . " The superiority of the sardār's house over those of well-to-do persons in the plains is no longer the case. It is just the reverse. 'It is clear form the whole description of these people that they have deteriorated since."

children are nearly naked, and very dirty. The women fully as well dressed, and as clean as the peasantry below, and they had many more ornaments of tin and brass. Finding the people totally inhospitable, I returned by the same way I came.

2nd January.—I went to the Singgi Delan(300) in Rajmahal. From my tents to the bridge across the Uduya nullah(301) is about $1\frac{3}{4}$ miles. Since 1763, when the lines built by Kasimali were forced by the British troops, the river has carried away all the old fort except the bastion towards the south-west. Since that, the river has retired again, and this bastion is now at least two miles from the bank. The new works of Kasimali make now a very sorry figure, and the plan as represented by Major Rennell can only be traced in some parts. The bridge is but a very sorry work, although the largest that I have seen in Bengal. It consists of three small clumsy gothic arches; over the middle one, on each side of the parapet, is a narrow open gallery with a turret at each corner. This would have had a tolerable good effect had the structure been tolerable. The galleries, although built of brick, are supported by wooden beams The road on the bridge is wide, but steep, and the pavement is exceedingly rude.

From Uduya to the Singghi delan is a very dismal country. For about $2\frac{1}{2}$ miles the country is totally waste, and overgrown with reeds, although the soil seems very rich. For the remainder of the way (almost two miles) the road is through suburbs of Rajmahal, that is mango plantations, half wild, with

(300) Sangī dālān, or 'stone hall', said to have been built (about 1592) by Mān Singh, who transferred the capital of the province (Bengal) from Tāndā to Āgmahal, as it was then called, changing the name to Rājmahal, and afterwards to Akbarnagar in honour of the emperor See also Appendix 2.

(301) For a view of the old bridge, drawn probably in 1781, see William Hodges, *Select Views in India*, 1786. In the *S P Gazetteer* (1910) it is stated that one arch of the bridge was still standing. Buchanan, in his *Index of Native Words*, spells the name उधयानाला The meaning of the first part (Udhvā) has not been satisfactorily determined

For the best account of the battle, see A Broome, *History of the Bengal Army*, 1850, pp. 380—86; and for a plan of the battle field Rennell's *B.A.* Pl. XIX (reproduced by Broome).

huts on each side of the road, rather miserable, and very little cultivation.

3rd January.—I went to see Nageswar vagh,(302) which is about four miles south-west from Singhi Delan: passing through a bazar for about half a mile, I came to plantations very much neglected, which extend for near two miles Among them there are many scattered houses, especially of those who sell palm wine. About a mile within the wood is a mosque of some size, named Abdulla Musjid, built by Gonesyam the zemindar, who on his conversion, took the name of Abdulla Near it is a market place called Imamgunj and the house of Imam Bakhs, one of his descendants, which is not at all respectable From thence, onwards for a mile, I had a lake to my right overgrown with aquatic plants Much of it cultivated with Spring rice On the south side of this are the ruins of a country seat called Phulbagh (303) It has consisted of several brick houses of no great size, and at a considerable distance from each other, with a large mango plantation near it On the whole it has been a place becoming a man of rank, each of the houses being about the size of such as are usually occupied by our zillah judges No vestige of elegance The people with me said it was built by Sultan Sujah, but others say it belonged to Hussain Ali khan, who was Phaujdar since his time. A little beyond the Phulbag, and at the end of the plantations is the tomb (Mokbera)(304) of the widow Begum of Mohabut Jung. Others say the lady belonged to a Nawab of Dakha (305) On more full enquiry I find, that the lady was Bukht homa,(306) widow of Amirulumra

(302) Nāgesvara Bāgh "in which the only remains of a garden are a few mango trees and two wells, which supply excellent drinking water to the people of the locality" (*Gazetteer*, 1910, p 275)

(303) **Phulbag,** correctly Phūl bāgh, 'flower garden', called "the Phulbāri and the zanāna buildings of Shah Shujā" in the *Gazetteer* of 1910 p 275) Buchanan, with greater probability, describes it as a "country seat."

(304) i.e *maqbara*, a 'burial-place'.

(305) Dhākā, *anglice* Dacca

(306) *Bakht-i-humā*, one 'whose good fortune has been conferred by the lucky phœnix' Shayista Khān was the son of 'Asaf Khan, and so brother of Mumtāz Mahal, 'the Lady of the Tāj', and uncle of Aurangzeb. He succeeded Mīr Jumla as Governor of Bengal

Shayesta Khan, a Musaef(307) of the king in the reign of Aurungzebe. It has been a handsome building. A square space of about three acres is surrounded by a fine brick wall, built as usual with many arched doors filled up. At each corner is an octagon building, with eight windows in an upper storey, and covered by a dome. In the middle of the south side is a fine gate covered with a dome. In the centre is the tomb, a square building with a gallery of three arches towards each front, and a small chamber at each corner. There is a small minaret at each corner, and the centre hall, in which the grave stands is covered by a brick dome. At each corner is a smaller dome of wood, above a small chamber of the same materials with eight windows The cornice, upper part of the minarets, and the four wooden domes are painted with very bright colours The cornice in particular is ornamented with a row of paintings of a fine blue iris done exceedingly stiff The garden overhanging the lake is quite slovenly, as everything about the place is, and is fast going to ruin, although there is a Khadim,(308) who has an endowment. From thence a close-built village named Gudagunj(309) extends about three quarters of a mile to the (Mokbara) monument of Mirza Muhammad Beg, Suba of Bengal,(310) and father of Mohabut Jung, or Alaverdi Khan. That is according to its keeper, but no exact traditions remain The wall is like that of the Begum's monument, but the buildings within have not been so splendid The village extends about half a mile farther; and from thence to Nageswor bagh is about half a mile, fine high open fields This palace was built by orders of Kasim Ali,(311) but was not quite finished when he was

(307) Though clearly written musaef in the MS, this is probably intended for *muṣāḥib*, 'companion', 'favourite'. The word *musā 'if*, 'neighbouring', is not used in this sense

(308) *Khādim*, a 'keeper', literally 'servant'

(309) **Gadaganj.**

(310) There is some confusion here. The words "Suba of Bengal" ought to follow after Mohabut Jung" The MS text has been corrected by Buchanan as now printed; but Mīrzā Muhammad, the father of 'Alī Vardī Khān, was never *ṣūbadār* of Bengal.

(311) Qāsim 'Alī Khān, Nawāb Nāẓim of Bengal, 1760—63.

obliged to abandon the government. It has been a great building, but very destitute of taste or convenience, and seems to have been intended entirely as a seraglio or place of retirement for him and his women It consists of a wall of brick, perhaps thirty feet high, and five hundred feet square. The gate was at a corner where there was an outer oblong space surrounded with a wall and containing some appartments for guards. Within the wall was a row of miserable small courts surrounded by still more miserable dark hovels for the women and their attendants This row went round the four sides of the wall. In the centre of the area was the painted hall (Rung Mahal),(312) a square building supported by wooden pillars, much like Hyder's garden palace at Seringapatam, but much smaller There seems to have been a walk round the terrace, by which the female appartments were covered, and there are many small irregular windows or loopholes near the top of the wall, through which the women walking on the terrace might see the country The outside of the wall has been surrounded by a row of sheds or low buildings now totally fallen, which served for the male attendants. The Durbar and public offices were to have been built at some distance Although it is only fifty seven years since this palace was built, the whole is now a most complete ruin; most of the roof fallen, and many of the walls It was never inhabited, nor any care taken of it The officers of a battalion of sepoys quartered in it for some time. It was then in good condition, but on their leaving it, the Rajmahal Nawab, Rukonath Dowlah.(313) removed many of the materials for his buildings The situation is very fine indeed, the whole land between the two lakes being very high The palace occupies a slope descending towards the southern lake, which in the rains comes within twenty-five bighas of the wall. Beyond the lake are some fine woods and plains and then the hills In the dry season the water retires

(312) *Rang mahal*, 'pleasure apartment'. The original meaning of *rang* is 'colour'; a secondary meaning is 'mirth', 'pleasure': and such apartments were specially decorated.

(313) Ruknu'd-daula.

far, but the water has not much Dam or Dhol, (314) and the land which it leaves is cultivated with Boro rice.

4th January.—I examined some of the ruins in Rajmahal. The Singgi delan(315) or stone hall, was built by Sultan Suja, brother of Aurungzebe, while that prince governed Behar and Bengal. In the early part of his government he seems to have resided at Gaur. In the ruinous state to which it has been reduced, no adequate notion can be formed of what this palace has been, part has been undermined by the river, and fallen into its channel, and also part has been entirely removed and is now occupied by the town; for there is not the smallest trace of the wall by which the whole was undoubtedly surrounded, total exclusion from view being the principal object in all native houses. Still however, enough remains to show, that the palace has been of very great size, and in that respect suitable to the high rank of the prince. by whom it was occupied. It seems to have consisted of a number of houses appropriated for different purposes, sometimes totally unconnected with any other building and sometimes joined by open galleries or arched ways These houses seem to have been narrow, but most of them consisted of two storeys, the lower very low in the roof and divided into many very small apartments probably for servants Each of the larger buildings in the upper storey in general consisted of three rooms. A large hall in the middle and a smaller room at the end. In most places these appartments seem to have been well ventilated with two rows of windows, one descending to the floor, and the other above that, small The appartments of the under storey seem to have been not only low and small, but very dark. The Dewan Khana(316) was perhaps the place of greatest state, and is the most entire,

(314) These words are quite clearly written thus in the MS What Buchanan meant, is a matter for speculation

(315) Buchanan gives a similar account of these ruins, with a plan and drawings, in his Report See *Martin's E I.*, II, 70 f Bihār was really a separate *sūba* at that time Cf *Bādshāhnāma*, II, 136

(316) *Diwān khāna*, royal court', or 'hall of audience'.

having been roofed in by Mr Dickson,(317) and still serves as a treasury It stood on the back part of a terrace, two hundred and ten feet ten inches by one hundred and seven feet five inches, and elevated about four feet The hall in front, where the Prince sat to give audience, is eighty-six feet eleven inches long by twenty-five wide, and about twenty feet high in the roof In front are five arched doors ten feet seven wide, and at each end is another of the same size This house is double, but only one storey high The hinder part was twenty-three feet two inches wide and divided into three apartments That in the centre, forty-nine feet four long with one low but wide-arched door, and four smaller ones with small windows over them towards the front hall A wide but low-arched door (six feet) towards the river, and a small door and windows over it towards each end room The end rooms were fifteen feet nine inches from east to west, with a small door and window over it on three sides The plaster work and ornaments of the whole very rude The drawing(318) will represent it. Enough remains on the front to make out every part but the cornice That of one of the smaller inner rooms is entire Although the whole palace is called the Marble(319) hall, very little of that material seems to have been in it A band of stone seems to have run along the foundation of the principal parts and was rudely carved with flowers Other bands seem also to have gone round at different heights, each of one stone Many of the doors and windows seem also to have had lintels of stone, but not the sides All this I conclude from the cavities formed in the brick work by taking out these stones, which it is said were removed to Murshedabad to build the Motijhil The great house(320) probably was the most splendid, and the entire ruin of the upper storey of the central part is

(317) I have failed to trace who this particular Mr Dickson was

(318) See plan, reproduced with sufficient accuracy in *Martin's E. I.* II, 71 Compare also Bishop Heber's *Narrative*, I, 255

(319) *Sang* does not mean 'marble', but 'stone' Marble would be *sang-i-marmar*

(320) The "great house" is that lettered NN on the plan in *Martin's E. I*

probably owing to its having more than usual marble in its composition. This great house, one hundred and eighteen feet long by thirty-nine feet seven on the outside was above divided into three appartments, the central one totally fallen or removed. The under storey of each wing divided into two, that of the centre into six. The height of the upper storey perhaps thirty feet from the terrace with a wreathed cornice. All along the three sides of this square, stones with a hole in them surrounded the cornice for stretching out awnings. A covered gallery run[s] between the lower storey and the river And between that again and the river seems to have been a terrace defended by a wall and semi-circular towers, now undermined and fallen down. There are no traces of this terrace between the east end of the Dewan Khana and the Sunamusjid,(321) there having been there no gallery and no lower storey, but between the terrace of the Dewan Khana and the river was a walk about twenty-four feet wide, which extended to the Suna Musjid or oratory, the door of which faced this walk, and was sixty feet beyond the range of buildings by which the terrace of the Dewan Khana was bounded on the west The Suna Musjid seems to have been the private chapel or oratory of the prince, and is one of the most entire parts of the whole, but is so hid and altered by additions made by Mr. Cleveland,(322) that little notion can be formed of its effect when entire. In the first place the front which was faced with white marble as far as the cornice, is destroyed by a room built before it The room, it is true, is rather handsome, and the front of the mosque forms one of its ends, but then the marble minarets at the corner have been built into the wall of the room, and cornice removed. An open gallery has been built round the new room, and a small bath reared up against the south side of the oratory The oratory within is entire. It is eighteen feet long by twelve

(321) *Sonā masjid*, the 'golden mosque'; *sonā* (H.) means 'gold'.

(322) Augustus Cleveland was Assistant to the Collector at Rājmahāl in 1773; Assistant at Bhāgalpur, 1776-80, and Collector of Bhāgalpur, 1780-83 See Appendix 1.

wide, and about the same height. What kind of a ceiling it had, cannot be ascertained as the roof has been removed, and a terrace, after the Anglo-Indian style, substituted, with its abominable naked beams and burghars.(323) The sides of the oratory within are lined, to the spring of the arches four feet high, for the marble is everywhere cut in smooth slabs with very few mouldings like those on the wainscoating of an old room, and these rudely cut. Whenever any higher degree of ornament is attempted, the natives had recourse to plaster. The marble on the front reaches about twelve feet high, and on the different slabs have [*sc.* has] been very neatly cut and inlaid with black marble, various pious sentences, and the names of holy persons, in a very handsome Arabic character The outside of the building on the other three sides or at least on the cornice, has been gilded and painted This had been whitewashed by Mr. Cleveland, but part of the whitewashing has disappeared, and restored the bright colours to view.

Immediately west from the oratory, and contiguous to the river, is a small building where it is said the prince retired to pious studies, after he had prayed It consisted of three chambers. The width within the walls, eleven feet ten inches. The two end ones were thirty-one feet six inches long, and had a plain coach-roofed ceiling, plastered very indifferently. Each had three doors and some small windows like port-holes. The middle room, twenty-five feet six inches long, had at each side three doors supported and divided by two double pilasters and two double columns of black marble The columns including base, shaft and capital, are only six feet high and very rudely shaped, from whence an idea of their miserable effect may be formed. The ceiling is rather neat, consisting of an oval, arched cavity joining two semi circles and neatly divided into small compartments. A verandah

(323) This is a Hindī word, *bargā*, meaning a squared piece of timber, a beam or rafter Yule and Burnell, in *Hobson-Jobson*, *s v.* 'burgher' simply give the meaning and derivation, without citing instances of the use of the term, which was probably confined to northern and eastern India, as it is not found in Dalgado's *Glossario*

has been added to the whole south front of this building by Mr Cleveland, which totally destroys all means of ascertaining what its effect might have been. He has also enlarged most of the windows by cutting them down to the floor and putting venetians in them. In the palace I suppose there were few doors, or window shutters of any kind Curtains or screens were probably used everywhere, except where wooden doors in passages or outer gates were considered as necessary to exclude or confine those with evil intentions.

I presume that the principal entrance was from the east by the gate A into a square surrounded by buildings, now removed to make room for the serayi,(324) and occupied by guards In its centre has been an octagon reservoir, which received water by a canal seventy-two feet long Passing round this reservoir to the opposite gate B the visitor had on his right another gate shutting the passage along the canal, which leads along the middle of a high terrace laid with plaster. This canal seems to have pas ed north from this gate to another smaller octagon reservoir, and probably through a court surrounded merely by walls This second reservoir had on each side a large building of two storeys, and containing in its upper floor three fine appartments In the same line with these were two very long but narrow and lower ranges of buildings, but also of two storeys. Their subdivisions I did not trace Between these two ranges was the principal building(325) already mentioned, and it was connected to these ranges by a low wing on each side, but also of two storeys In front of the principal building was a terrace, in the centre of which was a square reservoir from which a canal lead to the other two In each of these there were probably Jetd'eaus [*sic*].(326).

On passing the gate B the visitor came to another court, merely surrounded by a wall except on the

(324) i e *sardi*, 'inn'.
(325) The "great house" above
(326) Read *jets d'eau*, jets of water.

north, where there was a gate called Mozura gha.(327) The gate passed through a building about thirty feet square, and was small It is immediately in front of the Dewan Khana. At this place, the inner door of which is about one hundred and ninety-three feet from the terrace, all those admitted to an audience began their bowings and prostrations, which were repeated as they advanced towards the Dewan Khana On their right, in front of the large building C common to the two courts, is a small elevation of brick D, on which, some say, the principal officers of the court sat.

East(328) from the terrace of the Dewan Khana and extending one hundred and ten feet five inches farther south, was a long range of buildings so much ruined that little can be made of the structure, but it seems to have been lower than the range on the east side of this court It terminated in a large building of two storeys, and three chambers on the upper, thirty-five feet ten inches long The wall of this towards the court of Dewan Khana is perfectly entire, and does not contain a single aperture, except one door, by which the upper storey communicated with a gallery, leading to a small square building near the Mozura gha, and under which were some recesses as if for the accommodation of a guard I have no doubt that this square building was a guard room occupied by eunuchs, while the Mozura gha, and the recesses under the gallery were occupied by male guards, and that this gallery was the proper entrance into the women's appartments Of these, the building twenty-five feet long and another of the same dimensions west from it at the distance of about two hundred and twenty-three feet, seem to have been the chief places, while the oratory and adjacent building formed the boundary towards the river. The court was probably completed by a set of low appartments surrounding a corridor as usual

(327) Martin printed "Mojragah" It is intended for *mujrā gāh*, obeisance' or 'audience place', an unusual expression nowadays.

(328) This is slip for "West".

West from the Singi Delan at a little distance is a neat mosque of no great dimensions but ruinous, said to have been built by Futeh Jung Khan,(329) and called Akberabad, after the Moslem name of the place. About half a mile from this, and just beyond the point of the river, is the Mokbara or monument(330) of the same personage, who is said to have governed the place in the reign of Akber It has been a considerable building, but is very ruinous. The eastern face of the outer wall has had many stones. South from his monument are the remains of his living abode, which seems to have been large One gate of very considerable dimensions remains, and another building of brick called the twelve doors (331)

5th January.—I passed in farther examination of Rajmahal The oratory at Singgi Delan stands on a bank of the river projecting far to the north, and the channel of the Ganges under it contains a good many large masses of stone, but I saw no entire rock The stone is a dark grey whin, excessively tough, and of a conchoidal fracture It contains many dark shining points seemingly of a shorlaceous nature

I went to visit the Jumma Musjid,(332) distant about four miles from the Singi Delan What is called the town extends about 2½ miles to a nulla over which there was a bridge named Bandur pul. The town has always in this direction been very narrow, as it was built on a rising ground from two hundred to five hundred yards wide between the old bank of the river, and first a jhil, and then a fine low cultivated piece of ground. Remnants of the town still remain all this length, consisting of scattered brick houses intermixed with thatched hovels, but by no means occupying the whole space. The only large

(329) See *Martin's E I* , II, 63—69, but Fateh Jang Khān is described as " a rich Muhammadan Zamindār " in the *Gazetteer* (p. 275).

(330) *Maqbara* properly means a burial place or sepulchre

(331) This is the Bārahdarī, in the compound of Mr Hennessy's bungalow. (*Gazetteer*, p. 276).

(332) The *Jāmi'masjid* erected by *Mān Singh* (see *Gazetteer*, 1910, p. 276) Presumbly this is the " Mosque at Ragemahel " drawn and painted by William Hodges R. A (see Appendix 2, note 7).

houses are that of the Nabob, which is but a sorry place and one belonging to a merchant, who lately died. Jogot Seit's(333) factory has been a handsome native house, but is now in ruins. There is another large house also in ruins, the lower part built of rudely squared stones There are near the road four or five mosques of some size, and that have been handsome. They are all ruinous. Among the ruins is the Mokbara of Miran, the son of Jaffir Ali, who was killed by thunder (334) It is in a very slovenly condition, but not so bad as the others, as some part is cultivated as a garden, and part of it occupied by flowers A very large Dira (335) has formed opposite and is increasing fast It is well cultivated. From Bandur Pul to Jumma Musjid is a high tract of land overgrown with ruinous plantations, intermixed with a few huts Jumma Musjid stands on the southernmost of two small stony hills near the old bank of the river. It has been the finest building(336) that I have seen in Bengal, although not much ornamented, but the parts are tolerably large It consists of a central nave arched above, and very high, in the back of which there were three niches, and a Mimber.(337) It communicated on each side by two lofty arches with two ails [aisles] consisting each of four domes Each at the back had three niches, but the niche next each end

(333) The "Pathargarh" of the *Gazetteer*, 1910, p 276 Jagat Seth, the great banker of Murshidābād, who was put to death, along with his brother, by order of Qāsim 'Alī Khān near Bārh in August 1763 (see *Siyar ul mutākharin*)

(334) Mīran, son of Mīr Ja'far 'Alī, then aged 21, was struck by lightning in his tent to the north of Bettia (in Champāran) during a heavy storm on the 2nd July 1760, when accompanying Colonel Caillaud in his pursuit of Khādim Husain Khān The cause of his death has frequently been disputed, but there can be no doubt whatever about it, as we have contemporary records still extant See for instance, *A Narrative of what happened in Bengal in the year MDCCLX*, (published anonymously, but probably written by Caillaud himself), *Original Papers relative to the Disturbances in Bengal* (1759-64), 1765 I, 16, *Swinton Family Records and Portraits*, 1908, p 31, in which portions of Archibald Swinton's diaries of the time are printed, *Asiatic Annual Register*, 1800, *Misc Tracts*, p 17 (Col Gilbert Ironside's *Narrative of the Campaign in Bengal in 1760*).

(335) i e *diārā*, alluvial deposit formed by a river

(336) This comment is noteworthy, as it should be remembered, Buchanan had already completed his survey of Gaur and Panduā For elevation and plan, see *Martin's E I*, II, 70

(337) *Mimbar*, an Arabic word meaning a 'pulpit'.

formed a small door. The total length on the inside fifty-two yards, width within, seventeen yards. The roof very high, at least forty feet to the centre of the domes, and more to that of the arch. There were thus in front five great gates Another arch, at each end, of the same size, was walled up, and divided into four small obscure miserable hovels, with a stair leading up to an equal number above The stairs are so ruinous and bad that I did not ascend But none of the building has fallen It has a high square pediment in front, from whence the wings slope gradually down a very little No minarets Some of the lower parts stone, but very rude A square area with three gates, and surrounded by a brick wall is in front of the mosque, and the space between it and the two lateral gates is elevated into a terrace twenty-nine yards wide, and equal to the total length of the mosque which is sixty-nine yards.

In one of the cells I found lying a wretched idiot covered with filth, and a few rags, which did not prevent him shivering with cold He said he was by birth a washerman, and that his father, if he had one, took no care of him. He procured food by begging in the neighbouring villages, and was in tolerable condition

6th January.—I set out with a view of tracing part of the route by which the Marattahs entered Bengal, endeavouring to trace it by the description given by Captain Browne,(338) for the natives have no sort of remembrance or tradition concerning the event. I was informed after much enquiry that Chunakhali(339) was at the foot of the hills distant five coses. That from thence to Behasi(340) was three coses over some low hills, and that part of the road I should be obliged to walk, but that an empty Palankeen could follow, and carry me the remainder.

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(338) Buchanan probably refers to Browne's *India Tracts*, 1788, p. 12–13; but see also Appendix 8

(339) **Chunakhalighat**; but Buchanan's Chunakhali must have been further west, probably where Chunkuli is shown on the old Rev. Sur. map

(340) **Beansi.**

That from Behasi to Madjuya,(341) and from thence to Mowarra,(342) the residence of Gujer Raj, all was a good level road I accordingly sent on bearers, and proceeded to Chunakhali, by the road to Nageswor bagh already described Rather more than two miles from the Singhi Delan, I turned off the road and proceeded rather more than a mile to Hema Nudi(343) a dry channel, which comes from the north and falls into the Great Jhil It forms the boundary of the territory of Gujeraj towards the east, and from it to Chunakhali is rather more than two miles The country so far is tolerably cultivated, but that of Gujeraj much worse than the property of the other zemindars Chuna Khali is a guard belonging to the Ghatwals under Abdul Rusul,(344) and the only cultivation beyond it consists of the lands belonging to his men None of these cultivate themselves. They give their lands to Adhiyars,(345) and are themselves sunk in sloth, a poor, spiritless, enervated race. Their bows are always bent, because I believe in general they have not strength singly to perform the operation The whole distance I had come being little more than $5\frac{1}{2}$ miles, or than one half of the distance I had been informed, unhinged my belief, and the agent of Gujeraj, who I know had been at Rajmahal, and had probably given the information, or at least had been present when it was given, now told me that I had been taken totally out of the way to Majhuya, which led over the hill Chaundi,(346) and

(341) **Majhua** (near **Borio**).

(342) **Mandro Bazar.**

(343) Not named on S S

(344) The well known *sazāwal*, 'Abdu'l Rasūl Khān, still remembered in these parts Mr (now Sir) H McPherson, in his *Final Report on the Survey and Settlement Operations in the Sonthal Parganas* (1898-1907) makes the following remarks

" After Mr Fombelle's time, the administration of the hills was left with very inadequate supervision in the hands of the native suzawal. Abdul Rasul Khan, whose name still survives in the memories of the hill people as ' Con Sahib ' He was an officer of Captain Browne's partizan corps, who distinguished himself by his services and was selected as suzawal by Mr Cleveland Later he abused the trust reposed in him and his misdeeds attracted the attention of the authorities "

(345) i.e *adhiār*, " a man who spends half his time in one village, half in another, cultivating lands in both, is said *Adhiārkarna* " (Wilson, *Glossary*, p 6)

(346) **Chamdi.**

was six coses distant. That the road was hilly, but constantly frequented by loaded cattle, and that a gentleman had passed it some years ago on an elephant His people constantly went that way to the zemindar's house The Ghatwals denied all knowledge of the country Taking their chief and the agent of the Gujeraj with me, I proceeded to Chaundi I returned for about a quarter of a mile by the same way I came and then went about half a mile north, along the skirts of the cultivation, when I came to the direct road between Rajmahal and Chaundi, and then went west almost four miles, through a level country of a very fine soil, but covered with reeds and bushes. In most places I could perceive the traces of former cultivation No stones but in one place I saw a few calcareous nodules (Gangot) I advanced about three quarters of a mile farther through coppice wood, and a country abundantly level for the plough, but in some places the soil is stony, although I saw no rocks. The stones resemble those at the foot of Gudayi Tongi and among them I here also found small masses of a sort of chalcedony or white cornelian, often in parallel zones. On the side of one piece was adhering a mass of crystallised matter Much Gangot intermixed.

I then went over a tract of low hills, not at all steep, but much broken with ravines, for about two miles, having on my right a hill named Horiya,(347) which belongs to Mohisa Naib, and on my left at some (one mile) distance, Borsi,(347) belonging to Sundra Majhi I was a good deal surprised that the road I had come, although so far frequented by carts, was by no means so much beaten as that to Chunakhali; and still more so, when instead of proceeding through among the low hills between Chaundi and Borsi, I was directed to follow the road up the former, which seems to adjoin Singhi Dalan to Horiya without any considerable descent, but is much higher, being in

(347) Not marked on the S S.; but there is a hamlet Butsi, which may possibly represent Borsi

fact one of the highest hills in the range. It now became evident that I could proceed no farther in the palanquin, and I ascended the hill on foot, not to the summit but to where the highest part of the road was said to be The road is not worse, nor more steep than some of the ghats leading up to Karnata, and the whole ascent is not nearly so considerable. I do not think it more than three hundred feet perpendicular; but it is a very fatiguing and narrow passage and any sort of resistance must have been a bar to cavalry. The agent of the zemindar now informed me, that a place called Bichpura,(348) a village belonging to his master, was six coses farther on, and bore west by south by the compass It is situated on the west side of the Morung(349) river, which arises with a vast many heads from the south side of the Sikliguly hills, and in the lower part of its course is called Guman merdan. From Bichpura to Mangjuya is one cose north So far as I could judge there seemed to be no necessity for ascending Chaundi to go in that direction. The low hilly space nowhere rising above fifty feet perpendicular above the plain, seemed to wind everywhere between Chaundi and Borsi, distant south-east about a mile, and then between Chaundi and Goyali(350) distant still farther south and the residence of Kundiya Mujhi It also seemed to widen much farther towards Dagora(351) bearing south by west, and the residence of Lukma Naib. This, from where I saw it, with many other hills appeared to form a continued ridge, so far as I could see towards the west and east, but such appearances are entirely fallacious The natives acknowledged that there was no high hill in the direction, but that no one attempted to penetrate that way, the woods were so thick, and the ground so broken by ravines and holes. This may be true, but roads might no doubt be easily made. The rock on Chaundi hill

(348) **Bichpara.**
(349) **Morang N.** called **Marai N.** a little further south, a tributary of the **Gumani N.** or Gumāni Mardan
(350) **Coalipahar.**
(351) Evidently the **Dhaugorapahar** of the S S.

resembles entirely the whin of Gudayi tongi, and on its surface are many blocks and nodules of a slag similar to what I observed on that hill. Finding it impracticable to reach the villages on the other side and to return before night, I was under the necessity of going back to my tents, where my attendants, who had come from Rajmahal, and followed me all the way, were quite knocked up, and their feet swollen. Chaundi pahar belongs to Chandu Majhi, whose village was so near where we halted, that we heard the people speaking We called to them, but they kept aloof, having been probably alarmed in order to keep them out of the way. As I returned I met Rupa Majhi of Gurra Pahar(352) in Tuppa Majhuya, and took him with me to my tents Taking him in there and making a sepoy, his countryman, give him comfort, he was at his ease He says that some years ago his allowance was stopped, under pretence that he had no people, but that on his hill there are about fifty houses, each occupied by one man, his wife and children, on an average four or five persons A man separates from his parents whenever he marries, so that the families are not numerous Every man who receives a pension from the Company gives a part to the Sezawul(353) for fear of his illwill, which might get their allowance struck off. In Tuppa Majhuya under Bika sirdar are nine Majhis who receive nothing Three of them had allowances formerly Even these, he says, give the sezawul a trifle. He says that all the hill people give a present of grain to Gujeraj once a year. Each family gives some, which is collected by the Majhis This was in use before Mr. Cleveland's settlement He says that from the village of Chaundi to that of Bindur Kola(354) is about one cose with a descent and ascent between; from Bandur Kola to Majhuya is a descent of half a cose This being mentioned to the agent of the zemindar, he says that the Majhi has no idea

(352) **Currapahar**, about 5 mi NE of Majhuā

(353) *Sazāwal* (possibly a Turkī word), a 'rent-collector', 'land-steward', and also used in the more general sense of 'superintendent'.

(354) **Bandarkola Pahar.**

of distances The Majhi also says, that although Chaundi is the most usual road, there is another by Behasi,(355) and he mentioned the same distances that I had heard at Rajmahal, but acknowledged that he had never gone that way I had then intentions of trying that way, but sending to look after a guide, a man was brought who seemed to be an honest-looking person, but he was a servant of the zemindar's, and probably was instructed to say what he did Panuk (356) hill, according to him, is three coses from Chuna Khali all the way passable in a palankeen and level, but not cultivated The ascent of Panuk, short but steep Then there is a level of almost three coses.(357) but the road bad, and another short descent brings you to Behasi, a small guard From thence to Majhuya three coses, a very narrow road but not steep. The trees would prevent the passage of a palankeen Cross the Morang near Behasi From Majuya to Mowarra six or seven coses a tolerable road He says that from Chaundi to Madjuya is three coses, a narrow road, but after descending Chaundi it is not steep, as Bindurkola may be left on the right After all I think it was by this Chaundi road that the Marattahs came, for I saw near it many heaps of stones, and on asking the Majhi what they meant, he said that long ago an army came that way, and had ordered the stones to be thrown off the road in heaps He could not tell what the army was The total uncertainty of these reports determined me to proceed to my tents at Mosaha.(358) It appears evident to me, that both zemindar and sezawul are totally unwilling that I should visit the hills, or form any acquaintance either with Ghatwals or hill people, and have probably alarmed both, as they evidently shun me.

(355) **Beansi.**

(356) **Tulme (Panek)** of S S

(357) From those stated by him it seems the guide had as little notion of distances as the Mānjhī

(358) The Mussahaur of John Marshall (1670), the Mussaw of Rennell the Musaha of the old Revenue Survey maps but the modern Survey sheets omits this area altogether.

7th January.—I went to Mosaha. I first returned about three miles to near the monument of Mirza Muhammed,(359) and from thence struck north about a mile to the Nawab's house. The Jhil here is very narrow, and at this season quite dry, but in the rainy season boats can pass to the jhil, which now contains water from another behind the Jumma Musjid, and that I believe communicates with others at the foot of the hills all the way to Mosaha, and these are probably an old channel of the Ganges (360) I then proceeded to the Jumma Mosjid, and from thence passing behind the two hills, along a narrow space of high land to an old bridge, fast hastening to destruction, but the arches are still entire. These are of brick, but some of the ornamental parts have been made of stone. The bridge is about a quarter of a mile from the Jumma Mosjid, and rather more than a mile from Pirpahar,(361) where there is a handsome brick Dorga in tolerable repair, but everything near it is slovenly Pir pahar is a curious hill of no great size, but communicates with another extending toward the mountains Whether or not there was a passage for the Ganges behind that in the line of the jhils above-mentioned, I cannot say. If there was not, Pir pahar and the adjacent hill must at one time have formed a very curious promontory, as all the land between it and the hills of Jumma Mosjid are evidently a chor, and that not of very long standing, as a single tree has not yet grown on it This hill consists of a white rock, which crumbles on the slightest stroke of the hammer, and consists of grains of fat quartz united by a white powdery matter Even the quartz is so far decayed that it breaks by a slight blow. I cannot perceive in this rock the slightest trace of

(359) The father of 'Alī Vardī Khān (Mahābat Jang)

(360) Buchanan's view is borne out by the accounts of old travellers and the oldest maps This channel is what John Marshall called "the little River", up which he sailed from Rājmahāl in 1670 The old bridge described by Buchanan, is, I am told, still in existence

(361) See Rennell's *B A*, Pl XV on which Jumma Musjid and Peer Pahar are both marked. The earliest map on which Pīr Pahār is shown is that of John Thonton (1703), on which it appears as "Phier Phear". The modern S S is useless for this part of Buchanan's tour.

stratification In some places there are a kind of horizontal streaks, but this is entirely external, the action of water or air, for they entirely disappear on scraping the surface The east end of the hill terminates in a bluff point, where the river has evidently washed away the mouldering rock for about six feet in height, and formed in it various cavities and holes. Above this is a perpendicular mass from twenty to thirty feet (I speak by conjecture), in which no sort of fissure or stratification is observable I have no doubt that this is a granite in a state of decay; and if any conglutinating power should give firmness to its parts, we should then have a complete sandstone A most curious circumstance is, that the surface of the hill to the top is covered with fragments of stones totally different in nature The most common is the same slaggy stone that I found on the hills towards the south Some of the masses, as the specimen, are covered with a kind of enamel, but many are not I have no doubt of this being lava Along with this are many large masses consisting of small fragments of semi-diaphanous quartz united by a black earthy substance, and very hard In some places part of the same stone consists of this conglutination, and of an iron shot quartz or hornstone, both closely united without any intermediate fissure, and connected with the stratum above the Khori at Khori pahar showing the transition of the hornstone into Khori From Pir pahar to Mosaha, about five miles, is a chor near the Ganges, now well cultivated, but there are no trees, until you reach the vicinity of the hills Under the hills belonging to the mountaineers, and straight west from Mosaha, is a low hill, perhaps a mile in length Between it and the great hills is a large jhil, the principal haunt of the wild rhinoceros (362) The great hills here seem tolerably cultivated A servant, who went up, saw much orrohor.(363) Opposite to Mosaha is a cultivated chor, separated by a narrow nulla from the

(362) See Appendix 7

(363) *Arhar*, vulgo *rahar*, the 'Pigeon pea' (*Cajanus indicus*).

main.(364) The hills are about three cose from Mosaha. of which one may be cultivated.

8th January —I went about 8½ miles to Sikirigari,(365) along a plain from two to six miles wide Towards Sikirigari the hills are but poorly occupied, some of them seem totally deserted, and the others are chiefly cultivated towards the lower part Beyond Mosaha all near the road is almost quite waste Between three and four miles on there are indeed some villages, partly inhabited by invalids. Maharajpur(366) is the most considerable, but there is very little cultivation near them; some have not even the slightest vestige of even a garden. The people seem to live entirely by their cattle, of which they have great numbers, and I saw many carts I presume they deal in grass and wood For about a quarter of a mile I kept near the nullah which then goes to the right to join the great Ganges For rather more than a quarter of a mile more, I was on the bank of an old channel From thence, until passing the village near Maharajpur was about three miles Here I came to the bank of the great river, near which I continued most of the way At about 4¾ miles from Mosaha I came to the narrowest part of the plain where perhaps to the hills from the river is about two miles (367) The land here high and woody Near Sikri gari is some cultivation, and both there, and wherever else cultivation has been attempted, the richness of the crops evinces the goodness of the land

At Sikrigari I found that the zemindar had run off, and the shopkeepers, of whom there were ten or twelve, have shut their houses. They alleged that they had been plundered and beaten by the servants

(364) i.e. the mainland

(365) It is important to note how Buchanan spells this name,—Sikirigari and Sikrigari—which points to an original Śikharigaṛhī See Appendix 4.

(366) **Maharajpur,** where there is a station on the Loop Line.

(367) The course of the river just at this point, near Saraughori and Maheshpur, has not changed much in the last 250 years

of Mr Pattle,(368) and by the people of the 2nd R N I The zemindar had fled on Mr. Pattle's approach, and nothing in all probability could be procured All complain loudly of travellers, and they threaten to desert the place, yet it is evident that they are in the habit of receiving constant presents, as there was no end to the number of people who came to offer trifles, and under that pretext to beg. The Jamadar of the Thana had brought a mudi(369) with a few sers of provisions, for which he asked about three times the usual price, so that I was under the necessity of desiring the Jamadar to fix a price, who allowed them about 50 per cent advance on the Rajmahal prices, and these were intolerably high. The people most loud in their complaints were those of the Serayi They said that since Colonel Hutchison's(370) death no one protected them. Every Burkondaj,(371) piadah and petty officer of police or belonging to a zemindar, came and did as they pleased. That everyone drove in his horse into their best brick apartments, and that the zemindar instead of furnishing either coolies or provisions, compelled them to serve, and to run after supplies; yet beside the six chambers of brick, which they have from the company, they have built several of straw

From the beginning of the hill on the east side, that is where Colonel Hutchison's bungalow stands, to some way on the higher part of the hill, near the river side, the stones and rocks are whin, like that

(368) James Pattle was 3rd Judge of the Provincial Court of Appeal at Murshidābād from January 1810 to December 1812 This is probably the gentlemen referred to

(369) i e *modi*, a grocer

(370) Lt -Colonel John Hutchinson, who was " Regulating Officer in charge of the Jaghirdar Invalid Institution ", and who died at Bhāgalpur on 18 May 1801 See Appendix 3

The bungalow referred to is probably that depicted on Thomas Daniell's delightful view of " Siccra Gulley on the Ganges " in his *Views in Hindoostan*, generally called *Daniell's Oriental Scenery*, 4th Series, Plate IX, which he describes in his (rare) letterpress as " belonging to the British resident of the Bhagalpur district ".

(371) *Barqandāz*, from *barq* ' lighting ', ' thunderbolt ' and *andāz*, ' throwing ' or ' hurling ', originally meant a matchlockman, and then a guard (formerly armed with a matchlock gun) *Piyāda*, literally a ' footman ', *anglice* ' peon '.

at Rajmahal, but darker It has no appearance of stratification Some parts are rotten, and converted into a kind of bluish crumbling nodules, as if penetrated with manganese or iron. Immediately beyond that, and adjacent, are horizontal strata extending along the bank of the river, so far as the hill is high In the most perfect opening made by the precipice I observed as follows From the waters edge for about twelve feet, nearly the height of the floods, a rotten sandstone, in various layers. Above that a layer, about a foot thick of an excessively hard hornstone containing vegetable impressions and divided into rhomboidal masses, six to twelve inches diameter, by fissures. Above this a kind of rotten clay, apparently the same stone in a state of decay 1½ foot thick Above that rotten sandstone two feet thick, above that, red earth twenty feet. This is towards the west end farther east, between the hard hornstone, which runs the whole way very regularly, a little way below high water mark, and the indurated clay, there is another stratum of rotten sandstone, and above the indurated clay, which also goes regularly the whole way, there is a great thickness of the rotten sandstone, which in the highest part reaches to the top of the hill, perhaps forty feet.

Farther towards the west, beyond the hill and horizontal layers of sandstone, &c , there is a steep bank of reddish earth, which contains calcareous nodules of a most irregular shape. These are partly dispersed through the soil, which rises into gentle swells, but in this they are not very numerous. About the level of high water mark, there is a horizontal bed of clay containing great quantities of the nodules closely compacted, and the workmen have often dug into this, when the river has been high, but in general they are deterred from a fear of the bank giving way, which has sometimes proved fatal. In the dry season abundance of the Kongkar[372] is found by digging in the mud, and sand left by the retiring of the

[372] *Kankar*, see note (139) above.

river, which seems to wash out from the bank, as much as has been taken away in any year Perhaps indeed the whole side of the river to an unknown depth generates these nodules, as in digging the compact bed no one has penetrated to its bottom Whenever the sandstone begins, no more nodules are to be found It is said that these Konkgar banks are to be found in many places between this and Paingti (373) It is burned into lime both here and at the next stage The kilns are about ten feet deep, eight feet in diameter at the base, and twelve feet at the edge, built of baked clay with four perforations from the bottom to the edge, to give air They are heaped full with timber and Kongker, and then burnt out Each burning gives five hundred to eight hundred mans The Kongkar is dug and brought to the kiln by men, women, and children It is sent to Calcutta, Murshedabad, Purneah, &c , constantly. The Pir's tomb here on the top of the hill is very ruinous It has several inscriptions in the Toghara (374) character The Kadim(375) says that he has only fifteen bigas, and that he is the eighth in descent, who has enjoyed the office The pir was of the church militant. His head was cut off here, in battle with the infidels, but his body clung to the horse, until he reached the hill near Jumma Musjid. The Kadim is a very austere-looking man, but not void of civility nor understanding

9th January.—I went to the hills, which are distant about two miles from the river The whole way is swelling ground, nowhere too steep for the plough, and of an excellent soil, but except in the

(373) **Pirpainti.**

(374) *Tughrā*, a very ornamental style of writing Steingass writes in his Persian dictionary " The imperial signature, the royal titles prefixed to letters which are generally written in a fine ornamented hand, a sort of writing "

(375) i e the *khādim*, or caretaker The " Jumma Musjid " referred to is, of course, Mān Singh's mosque, about 4 mi west of Rājmahāl Ives, in his *Voyage* (p 160), when describing Coote's pursuit of Monsieur Law, refers to the tomb as that of Seid Ahmad Mahdoom (? Saiyid Ahmad Makhdūm), and adds that it was built by Shareshe Khan (? Shayista Khān, uncle of Aurangzeb) otherwise nothing appears to be known, of this saint.

immediate vicinity of the village, totally neglected and overgrown with low coppice, kept down by constant cutting for firewood. No stones in the soil until you enter between the hills. The northern face of these has been entirely deserted. It has formerly been cultivated, traces of the fields being evident. The inhabitants seem to have retired into the deep recesses of the hills, or to their southern side. The nearest village of them, that I saw, was above a mile within the northern face in a deep recess I sent Kamol(376) to the top of the hills. The people were much alarmed at his appearance, but one of their countrymen with him reconciled them He returned by the Moti Jorna, (377) a spring considered sacred. The water forms a lofty cascade, but at this season the quantity is so inconsiderable, that I did not think it worth a visit. I was afterwards informed by Mr. Glas,(378) that in the rock at the cascade there is a stratum of charcoal.

10th January.—I went eight miles to Gonga Prosad.(379) The high or swelling country, extending from the river to the hills, at Sikri gali is about one and a half miles from east to west, and two miles from north to south. There seems to have been a fortification extending from the river to the hills near its eastern side, and consisting of two ramparts of earth with a very wide ditch between, but it is very much obliterated. From this high tract there is a plain for about two miles not very low, and from three to four miles between the river and the hills.(380) From thence is another high tract of about one and a quarter

(376) Apparently one of Buchanan's Indian Assistants' Kamala.

(377) *Motijharnā*, the 'pearl cascade'. Visited in 1781 by William Hodges, the artist, who describes the double falls as measuring 105 ft., and writes that in the cave at the bottom "the base appears to be a mixture of rock and charcoal; that is the interstices of the rock appear filled with charcoal, and many fragments broken off are composed equally of the two materials". Hodges probably drew the falls, but no picture of them appears in his *Select Views in India* (1786). See his *Travels in India*, p. 23—24.

(378) The then Civil Surgeon of Bhāgalpur, see note (32) above.

(379) **Ganga Parshad,** constantly mentioned as a stage on the old military road up country.

(380) The Ganges must have flowed in a more northerly course in Buchanan's day. See Rennell's *B.A.*, Plate XV, and also the modern Survey sheet.

mile extending also from the river to the hills. Here is an appearance of an old fort(381) with a wide ditch apparently much more recent than the other. At the east side of this high land near the river is a village without cultivation, and inhabited by petty traders, who deal with the hill people Then there is a plain of about half a mile in width, and then high land for the same extent From thence to Gonga Prosad is a plain of about $2\frac{1}{2}$ miles

At Gonga Prosad, being visited by many of the hill people, who were induced to come to a feast, I took the following accounts of their customs. They call themselves simply Moler,(382) and call the low country people Goler I cannot discover any meaning in their name, it is not mountaineers, Pahar being the name of a hill in their language They have nothing like caste, and would have no objection to eat or intermarry with any other tribe The Kumar and Mar they consider as Moler, but they have no remembrance of these having had the same customs with themselves The Khetauris they do not consider as Moler, nor the Bhuyias, not even those who eat beef; but there are none such here On many occasions usually held sacred by other people, they use no priest, every man praying and offering sacrifice for himself When sick, they give herbs, and apply to low country Chassa(383) doctors, but not to Ojas Some of them have learned from these last to repeat muntros(384) for the bites of snakes, but for no other cause. They are not troubled with Devils They seem to have two

(381) This is not the modern Sakrīgarh, which adjoins Gangā Prasād It may be the site of the original *garhī* from which Śikharī garhī took its name The orographical features of this area not being shown on the latest Survey sheet (1 in=1 mi) it is not possible to locate the "high land" referred to by Buchanan

(382) *Mala*, or *malai*, is a Dravidian word meaning hill The name Maler is probably derived from this I can not suggest what "Goler" means, unless it be connected with Kol

(383) *Chāsā* means a cultivator, by Chassa doctors Buchanan means Chāsā Baidyas, a title sometimes applied to the Vaidyas or Baidyas of Bengal by outsiders Ojhā, a corruption of *Upādhyāya*, means here a 'sorcerer.

(384) *mantras*, 'spells', 'incantations'.

deities, Rakisi and Chaldai, both are called Gosaign. (385) Some say that the former is male and the latter female, but more seem to think more rationally that both are stones, as in fact they appear to be. Certain stones under large trees are called Rakisi, and others are called Chaldai, and have been objects of worship from time immemorial. Each village has one god of each kind, and no more. The two great festivals Erebas(386) are in Aghron and Bhadur,(387) when sacrifices are made to both deities on account of the harvest. Oxen, buffaloes, goats, swine, fowls and pigeons are offered indiscriminately to both. The festival lasts one day. All the men of the village go together, and every man offers according to his abilities, animals, grain, liquor, &c The women do not attend. All the offerings and sacrifices are made by a person called Erebu,(388) whose office is hereditary, by primogeniture in the male line There is one Erebu and no more in each village. If the Erebu dies without children, his office goes to a collateral branch. They have not known any family to become extinct. The collateral branches, and even the Erebus, work like other people; and the Erebu seems to have no sort of emolument The whole offerings are consumed on the spot. The Erebu is respected, but not so much as the Majhi. All the Erebus are of the same rank, and intermarry with the vulgar. In Maag(387) each Majhi sacrifices (Ereba) a buffalo (Managa) to the earth, which is attended by all the men of the village, who all partake on the spot The Erebu attends, but the Majhi offers the sacrifice. No other great sacrifices. Before they went to war they were wont to

(385) The Raxie and Chal of Lieut. Shaw, and the Raksi Gosain and Chal Naddu of Bainbridge (*Mem JASB*, Vol II, no 4, p. 80 and p. 75, respectively) *Gosāin*, a term now applied to a religious mendicant, is derived from *gosvāmin*, one who is master (*svamin*) of his senses (*go*). Among the hill people the term is applied to a godling or deity.

(386) The Rev. Ernest Droese, in his *Malto Vocabulary* (*Introduction to the Malto Language*, *Agra*, 1886) gives *eṛwe*, to sacrifice, propitiate, worship. From this are derived the words mentioned by Buchanan.

(387) *Agrahāyaṇa* and *Bhādra* (*vulgo Aghan* and *Bhādon*), corresponding with November—December and August—September. Maag is *Māgha*, January—February.

(388) Eṛwu or Erebu, the performer of the sacrifice, i.e. the priest.

offer sacrifices of goats to Rakisi by the Erebu. They bury the dead. All the men of the village attend the funeral of the poor. Those of ten or twelve villages assemble to the funerals of the great. Five days after, the family gives an entertainment. The people return home in the interval and reassemble for the feast. The corpse buried on the day the person died. No sacrifice nor religious ceremony. The women do not attend. They seem to have no belief in a future state of existence, though some say that all good or bad go to heaven, where the sun lives, for they look upon the sun (Ber)(389) as the chief god, but never pray nor make offerings to him. The moon (Bilho) (390) is also called Gosaign, but not the stars. If people are wicked, they are punished in this life by Rakisi and Chaldayi with disease, death, want, and dangers. Their form of oath is to take salt and water from the administrator and drink it, or to touch his arm (sword) saying—May I die if I speak false. They never swear by the Gods. Children of both sexes are usually married between ten and fifteen years of age. The parents consult the boy's inclination, and then consult the parents of the girl, who is not at all consulted in the matter. Her parents get money or effects, perhaps ten or twelve rupees, but their expense on the occasion amounts to more in clothes and an entertainment. The relations and friends of both sexes of both parties assemble. The boy and his party go for the girl, and after being entertained, both parties conduct her home, and are entertained. No religious ceremony. The boy presents the girl with some ornaments. The men cannot divorce a woman for any fault, but a woman, whose husband beats and starves her, may leave him, and marry another, and widows may marry again without disgrace. Rich men marry three or four wives, who are all of the same rank, and the children all equal. No

(389) The *Bedo* of Lt Shaw; the *Ber* or *Beru Gosain* of Bainbridge (*loc. cit*). Roberts (*Asiatic Researches*, V, 129) gives *beer* as meaning 'sunshine', and *beelah* as 'moonshine' (see next note).

(390) The *Bilp Gosain* of Bainbridge (*loc. cit.*, p. 65).

prostitutes. When a man dies the women are left entirely dependent on the sons, who share equally in his effects, but his honours and consequent power go to the eldest alone.(391)

They are all cultivators, and have no artists, but build their own houses. Their arms, and every utensil, cloth, and ornament, they purchase from below. Some of them, as in this vicinity, have neither buffaloes nor oxen, but towards the south they have many cattle. They rear a few goats, many swine, fowls, and pigeons.

Here the poeple acknowledge that formerly they were subject to the zemindar of Tiliyagori,(392) and made him presents of grain and honey, but since the estate has been mostly sold, they decline any interference of the new men, and give no presents. The lotdars(393) have taken some of their lands on the plain, which they had lent to low country cultivators, for here they will not cultivate the plain. The sepoys come chiefly from Tiliagori, Monihari, Barkope, Parsunda, Horina Jomna,(394) and amount to perhaps one-fourth or one-fifth of the men able to serve. Very few from other quarters. Every territory under a Mandiya is called Kepo, and its chief Mandiya Moko.(395) A number of Kepos formed a district under a Bodo (396) Mandiya, but it would not appear that they have any name for the territory under such a chief; they use the Hindostani words Pergunnah, tupa(397) and zila indiscriminately. The under Mandiyas paid no regular rent, but made presents to their chief, and never went to fight without his orders or consent, for everything was done by a general council: no person had any authority to punish even murder. That was left to the kindred, and the efforts of the Mandiyas

(391) This account of the customs of the hill people may be compared with that of Mr. R. B. Bainbridge in *JASB Memoirs*, 1907, already quoted

(392) **Teliyagarhi.**

(393) *Loṭdār*, holder of a lot, or area of land.

(394) Teliyāgarhi, Manihāri, Bārkūp, Patsunda, and Harina Jamuni.

(395) I do not find these words in Drosse's Vocabulary.

(396) Bodo = *baṛa*, 'big', 'great'.

(397) i.e. *tappā*, a territorial division, generally smaller than a *pargana*.

were directed to persuade the people to forgiveness. No one went to war by compulsion. The common people (Loker) commonly called Prijus,(398) make presents to the Mandiya, but pay no regular rent. All the land in fact belongs to the Mandiya, or rather community. The chief gives to each family a share in proportion to its strength, but if the family is not able to cultivate the whole, he gives a part to the families that have too little Families that are too numerous, when there is no spare land, must emigrate to another village They cultivate the field three years, and then allow it to remain fallow for eight or ten years On the first year they sow Mukai, Janera, Bora, and Rahar.(399) On the second, the same; on the third year they sow cotton alone, and then leave the field to a fallow The men cut the timber, both men and women burn, and sow, or plant with a small hoe, both work at harvest. The Pochuyi(400) is made of Janera and maize First they boil it, and cool it on a mat Then they mix bakur,(401) and put it in a large earthen pot for eight or nine days. Then they add warm water It is ready in a few hours, and will keep two or three days It is called Pochuyi Todi. Some can distil it, and make Putka Todi.(402)

They sell to the merchants firewood, posts, ploughs, mortars, planks, Jonera, Makayi, cotton, Bora, Orohor, charcoal, Sabe,(403) honey, wax; They bring these all down to the markets on their heads, receiving in general advances They buy rice, cloth, tobacco, salt, beads, brass ornaments, cattle, milk, ghi, oil,

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(398) Loker is from the Sans *loka*, 'people'. Priju (thus distinctly written by Buchanan) is probably meant for *prajā*, lit. offspring, but ordinarily applied to 'subjects' *raiyats*

Mr H Ll Allanson informs me that until the settlement of 1912-16 the Pahāriās paid no rent to Government Now they pay a very small rent in return for their rights in their holdings being recorded

(399) i e maize or Indian corn, Jowār millet, beans and Pigeon pea, respectively

(400) *Pachuāi*, beer or malted liquor made from grain

(401) *Bakhār*, a ferment (see note no 170 above).

(402) *Pachuāi tārī;* and, possibly, *phūṭkā tārī*, from *phūṭnā*, to 'boil'.

(403) The reference to *sābe or sābai grass* (*Ischæmum angustifolium*) is interesting, as the cultivation of this perennial grass is now practically the sole source of livelihood to the northern Pahāriās.

fish, dry and fresh, pepper and other seasoning, and iron implements.

The hills are warmer than the lower country, and contain springs. A few are subject to the Geg.(404)

Gonga Presaud is a miserable village, with scarcely any cultivation, but it has several shops, and some Bhetiyars.(405) The people loud in their complaints against European travellers, apparently with a view to enhance the price of everything. The zemindar's agent had run away, and every article was scarce.

11th January.—I went to Piyalapur,(406) the road to Paingti by the side of the river being impracticable for loaded cattle. The distance is said to be seven coses, but it seems to me to be rather less. The high land west from Gongaprosad, between the little hill at the river's side and the great hills, may be a mile in that direction, and 1½ mile by the road: a fine soil without a single stone. There is then a fine low plain, about two miles long and one wide, to Tiliyagori. Here the hills descend to the river's side for about a mile, and their roots(407) have been occupied by a fort, the outer gates of which, partly built of stone, are

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(404) I do not find this word in 'Droese's Vocabularly, and I have no doubt that it is intended for the Hindī word *ghengā*, or *gheṅghā*, 'goitre'

(405) *Bhaṭiyārā*,—*in*, a man, or woman, who cooks food for travellers at an inn, an 'inn keeper', from *bhaṭṭī*, a 'furnace', 'fire-place'.

(406) **Pealapur.** Had Buchanan been able to follow the direct road from Shāhābād to Pīrpāintī, instead of going round by Piālapur, he would have saved a day.

(407) Buchanan's description of the site is significant, and the situation of this fort, in my opinion, explains the name, which was probably originally Taliāgaṛhī or Taliyāgaṛhī, meaning "the little fortress at the base" of the hills. (See Appendix 4) For earlier descriptions of the site by Ives and Hājī Musta'fa (Raymond), see *Gazetteer* (1910) pp. 284—85. John Marshall, when going up to Patna by road in May 1671, records the following entry in his diary

"To Sasujas Castle or house under the side of a high hill . . I went into it, in which are 3 little Courts and many little roomes, and a good Delaun [*dālān*] in the middle, and at each end a round Turret with 3 windowes in each for Cannon. Above is roome enough for 70 or 80 Cannon, and twice so many small Gunns or Musquets. This Castle stands upon the side of the Hills very pleasantly."

It is possible that it was the remains of this building that Buchanan conjectured to mark the commandant's house. About ¼ mile further west Marshall "passed under a gate", probably the gate through the western line of fortification.

about that distance from each other. Within have been several buildings of brick. One of them probably the Commandant's house, and an adjacent chapel are pretty considerable. An iron gun of extreme rudeness lies on the ground at the western gate. There is no rock apparent, but the soil of the hill consists of masses of whin embedded in a little earth. It entirely resembles that at Rajmahal. I observed no other stone mixed with it. West from Tiliyagori a very large Dira has formed adjacent to the south bank. There is a narrow low plain between that and the hills for about two miles, after which the whole way to Piyalapur is a fine high swelling land covered with woods, that are evidently deserted fields and plantations About 3½ miles from Tiliyagori is a place called Shahabad,(408) once considerable, but now there is only one hut for the post. There is a pretty large ruinous mosque. About 2½ miles beyond this is the bridge(409) of Pita Waleh, built of brick over a small creek, and in tolerable repair. It is said to have been built by a woman, who retailed flour, in this country one of the most miserable of professions. The hills in sight are rather better cultivated, than those I saw between Mosaha and Gongaprosad, but not near so well as those towards the south. The road to Shahabad bad From thence to Piyalapur very good

Piyalapur is a wretched place, with scarcely two acres of cultivation, belonging to the inhabitants. A well and bungalow built by Colonel Hutchinson, I presume at the expense of the Government, denote the lavish of public money, that has been wasted in vain on this district The people, as usual, clamorous against European travellers. About fifty hill people from Sikrigori, who had there shunned all intercourse,

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(408) **Shahabad,** a halting stage on the old road, often named in the itineraries, probably named after "Shāh" Shujā'

(409) This bridge is marked by Rennell (*B.A.*, Pl XV) on the Kunderpol Nulla, the **Moni N.** of the S S. John Marshall writes that "a new bridge was building" here in May 1671. If the builder were a woman who retailed flour, it looks as if the name should have read **Pīsnewālī!**

came after me here, having heard that I had entertained those near Gongaprosad. As they came too late to give any information, and had declined intercourse when it was in their power to be of use, I sent them away empty.

12th January.—I went about seven miles to Paingti,(410) through a fine swelling country, rising into small hills near the above-mentioned place. From thence to Kahalgang(411) and Shahabad is certainly by nature the finest country I have seen in India, wonderfully rich and beautiful, but almost totally neglected. About two-thirds of a mile from Piyalapur I passed an indigo work belonging to Mr. Glas, and soon after left the great road. About 2½ miles from Paingti I joined the road by which I had gone from that place to Bader.(412) The whole road has been lately repaired, and is pretty tolerable.

13th January.—A Naib of Moli(413) with all the people of his village, young and old, men and women, came from the neighbouring hill to make me a visit. The Naib had been in the service of Mr. Hastings and Mr. Cleveland, but still had the appearance of a young man. The women not so clean as those towards the south, and more hard-featured. The people are subject to the leprosy of both kinds, to the Geg, and Fisplen,(414) just as the natives of the plains. I gave the whole party a dinner, but they were so impatient for drink, that I could scarcely restrain them from the liquor, until the cook had performed his office, and when it was ready, they gobbled their food as quick as possible, in order to get at the flask. They then began to drink, dance, and sing, accompained by a drum. They all stood in a crowd, even the women

(410) **Pirpainti.**

(411) The Colgong of our maps. The real name is Kahalgāṅv, once famous, according to a current proverb, for its *thags* (robbers).

(412) **Bhader.**

(413) No village of this name is marked on the S.S.

(414) An explanation of "Geg" has been suggested above (note 404); but "Fisplen", written perfectly clearly by Buchanan, has been a complete puzzle: and local correspondents have failed to identify the word. It is not given by Droese, nor in Buchanan's *Index of Native Words*. Can it be intended for *filpāoṅ*, 'elephantiasis'? I think so.

who carried infants, and made a very awkward hobbling dance without any form. The Naib brandished a battle-axe, but as he became very drunk, I took it from him. He was very sensible of the propriety of this, and made no efforts to retain it. All the women, men, and children sang a very monotonous rude air. The sirdar constantly went round with a pot of liquor, giving each person in his turn a drink, he holding the pot to their heads and not trusting it in their hands. The men before they drank salaamed or bowed to all the principal persons, both spectators and dancers, and the women generally went down on their knees, or at least touched the ground with their hands. When the Naib had gone round the party, a man took the pot and gave the chief a drink. The drinkers probably never are trusted to hold the pot, lest they should take the whole at once. In about an hour most of the men were very far gone, and one of the women, who had an infant, could scarcely stand. I therefore desired them to go home, which they did with great good humour.

The mineral productions of the vicinity of Paingti are very curious. At the upper end of the village two hilly promontories reach the bank of the Ganges, towards which they are abrupt, towards the interior they communicate with the swelling ground that extends to Kahalgang and Tiliyagari. On the one nearest Paingti is the monument of Pír Kamal sha, a plain building without a roof, but in good repair. The Kadim has an endowment of five hundred bigas. On the ascent to the Dorga,(415) you pass two brick buildings of some size, and that have been neat. On the right is a mosque, not yet fallen, although in very bad repair; large additions were made(416) in front to enable it to accommodate two companies of sepoys during the commotions of the hill people. The Moslems have had the sense not to consider their place of worship defiled by the infidels, and still continue

(415) The *dargâh*, or shrine of Pír Kamál Shâh, a saint of local fame.
(416) By Captain Brooke, in military command of the hill tracts in 1772-74 (see Appendix 1), as we learn from the Report.

to frequent it to offer their prayers to God. On the left is a Madrissa,(417) or public school, where a Maulavi formerly instructed youth in Arabic science. The roof has fallen, the Maulavi has gone and the only inhabitant is a most wretched hermit, to the last degree miserable, who inhabits a cave, (418) that communicates with the Madrissa. This cave is said to have extended a great way, and served the troops as a magazine. When they went away, the passage into the farther part was shut up with stones and bricks, leaving only a small chamber, probably in order to prevent it from being a harbour for thieves. It is cut without the least regard to symmetry or neatness, in very soft materials, but is perfectly dry. No tradition remains concerning the use of this cave. The Madrissa has consisted of three chambers with a large open gallery in front. On the abrupt face of this first promontory towards the river, but at a considerable height above high water mark, is another cave facing the river. It is nearly in the form of a quarter sphere with a low recess leading from behind but to no great distance. It is pretty large and dry, but totally divested of symmetry or neatness. The materials very soft. This is said to have been the habitation of Deo, that is a Hindu God, but Deo was killed and cast forth by Pir Kamal shah who, as usual with the Pirs, was of the order of the church militant. In the abrupt face of the second promontory is another similar cave, which is said to have been the residence of a Hindu hermit, from whence this promontory is called(419)—as the first is called Pir Paingti from the Moslem saint. Between the two is a small level bay. Having given this explanation of the Topography, I proceed to describe the minerals, which may be reduced to three

(417) *Madrasa* (from a root meaning to 'read'), a school, college, collegiate mosque.

(418) Bishop Heber (*Narrative*, I, 266 *f.*) devoted some time to the exploration of these caves. Besides him, Buchanan is the only person who gives any detailed description of the site. John Marshall, who calls the place Pente, under date 19th September 1670 noted the "Muskeet" (*masjid*) on the hill, and adds that there was "at the side next the River a pleasant Bungelah" (i.e., bungalow)

(419) Left blank in the MS.

heads. The face of the promontory at Pir Paingti shows the whole. From low water mark to about six or eight feet above the height of the floods, is a very soft kind of sandstone, or rather indurated earth, the particles of sand being very small, and mixed with much argillaceous matter. It would seem to be in thin horizontal strata, but is so much intersected by vertical fissures, that this is not very certainly ascertainable. The air does not seem to act strongly on it, as the angles of the masses are sharp, but it is too soft and too much broken by fissures to be a useful material for building, nor does its appearance offer any encouragement for supposing that by digging deep its quality might improve. It does not appear to contain any extraneous matter.

Above this, and of various thicknesses, is a mass of hornblend, as it is called, which is far gone in a state of decay, and may be considered as a dead rock There is not in it the smallest appearance of stratification. The greater part has become so soft that it crumbles under a slight stroke of the hammer, yet in the cave of the Deo, certainly made very long ago, the angles are perfectly sharp, and the marks of the instruments, by which it has been cut, are quite distinct and well defined. Immersed in this soft substance are many rounded nodules, from the size of an apple to three or four feet in diameter. The smallest ones are also in a state of decay, but the larger are very fine hornblend with many crystallized parts, and are used for making the stones with which the natives grind the materials for curry. These nodules are called Teliya[420] stone by some, but others allege that Sang Khara[421] is the proper name. I have said that in the promontory of Pir Paingti this stone is incumbent upon the soft sandstone. In the promontory of[422]—Tek it reaches the low water

[420] i.e., pertaining to, or like, oil (*tel*), and so 'oily', and also of the colour of oil, 'bay', 'dark', etc.

[421] *Sang-i-khārā* (Pers.), 'hard stone' (like flint, etc.).

[422] A blank was left in the MS. for insertion of the name, which was never added. *Tek* means (1) a 'prop' or 'pillar'; and (2), as here, a 'heap', a 'hillock'.

mark, and rises a few feet above the height of the floods. There is no reason to believe that in any part it might be found entirely undecayed, and these two places seem to be where it is most entire; for in the plain between the promontories, and in many places in the interior, are found many of the nodules of Tiliya imbedded merely in earth, which seem to be the softer parts of the rock reduced to a substance of earthy nature. These nodules are also collected by the workmen. On the whole I conclude that the mass of these hilly parts originally consisted of this hornblend, which so far as I have seen, approaches very near to whin or basalt, and is never stratified. The most curious circumstance is that unstratified matter covers stratified indurated earth, which I can only acoount for by supposing it to be a leva, as I have no doubt all whin is.

Above the hornblend on both promontories is a mass of calcareous tufa, of various thicknesses. Its upper surface, often projecting above the soil is generally mamillated(423) like many corals, as if it were still in the act of growing, but its interior shows, that it is a conglutinate stone, the calcareous matter, which is very hard, serving as a cement for many nodules of different natures. I observe two essential differences in the component parts. Some masses resemble a porphyry changed into calcareous matter, like the stone of Monihari. In this are involved many nodules, large and small, of the hornblend or Tiliya(424) in perfect preservation. The other is a kind of breccia containing in a tufaceous cement many pebbles of various natures and sizes. The most common are the indurated reddle, called Geru by the natives; but I observed others that appear to be hematites, the two substances being nearly allied. In this I have never seen any nodules of hornblend, nor have I seen any sporadic masses of the Geru or hematites in the vicinity, still less any rocks. In the interior also the

(423) i.e., having small protuberances, like nipples (Lat. *mamilla*, a teat, nipple).

(424) The *taliya* above (note 420).

tufa is very common, and in many places has been dug for making lime. In general there it is found in very small rounded nodules, mixed with the earth. Wherever these nodules are of any considerable size, such as that of the fist, they are covered with mamillary processes like corals. In the cave at the Madrissa, although the surface is covered with the tufa in mass, containing nodules of hornblend, the sides consist of small knots of Tufa slightly united by a crumbling calcareous crust, a form in which I have nowhere else seen this substance.

15th January.—I went to Taruva(425) hill to return the visit of Katku Naib, who has learned to write the Hindi character. His village is not so large as that of Guiya Sirdar, but contains at least one hundred people. He has a son, a lad, a daughter married, and ten boys and girls. He has built a mud hut, the only one of the kind among the hills, but it is not so large as that of the Sirdar I saw no furniture except a number of cots without bedding. As a principal ornament he had preserved the under jaws of all the wild hogs that he had killed, which were very numerous, perhaps a hundred; few of them had large teeth. Also the horns of all the deer, ten or twelve axis,(426) and four or five Murgosh.(427) He had also the jaws of twenty or thirty porcupines, that had been killed by his son These are numerous and are eaten. They reject snakes, guanas, and few will eat sheep. The village is fixed, but they cultivate only three years, and then give a fallow of six or seven. He claims much of the territory between his hill and Teliyagori. The great crop is Mukayi which is the common food of the hill people. They have no remembrance of its having come from any other country, though until its propagation they must

(425) This appears to be the little hill adjoining **Mundwa** *or* **Tundwa** village of the S.S Buchanan's Taruva possibly represents an original Tuṇḍwā from *tuṇḍā*, 'broken off at the top', 'like a stump', having much the same meaning as muṇḍā, 'shaven-headed'.

(426) *Cervus axis*, the spotted deer, *chital or chitara* in the vernacular.

(427) This word has not been identified. Possibly the barking deer is meant.

have been badly off. Here they raise no cotton, and chiefly a little orrhor and ricinus(428) among the maize. Snakes are very numerous among the hills They showed me a hollow place, in which they said one of a vast size dwelt in a hole. They said it might be four or five feet round, and eighteen or twenty cubits long.(429) All the cold season it lives in the hole. In the hot season it comes out, and lies, near its mouth, in a hollow place shaded by trees. It feeds on wild hogs and deer, and the people conceive that any person who molested it would incur the heavy displeasure of God: or rather that the serpent is a God. They imagine that it will do no injury to them, and that a child may tread on it, without its taking any notice or being irritated. This they attribute to its understanding their language. Such serpents are said to be pretty numerous among the hills. That is, one may be found in every two or three villages. I enquired, however, afterwards at several villages and could not hear of any such. The hill people were formerly employed at the indigo work,(430) but a new colony has come from the Nagpur hills, who are acknowledged to be more active and laborious, and these have a just preference The hill is everywhere covered with detached blocks and masses of a fine-grained whin, approaching to hornstone; but the interior of the hill consists of a continued rock of hornblend in mass, with large crystals. A great deal has been quarried, and left in a large cavity. This is supposed to have been done in the Mogul government.

About three years ago some wild elephants(431) came upon the hill. The people attacked them with

(428) *Ricinus communis*, 'Castor-oil plant' (vernacular, *rendi*, *erandi*, etc.).

(429) Compare with this T. Motte's account of the great snake, "Naik Buns", near Sambalpur (*Asiatic Annual Register*, 1799. *Misc. Tracts*, p. 79).

(430) A factory belonging to Mr. Glass, surgeon of Bhāgalpur.

(431) Further details as to wild elephants are given in the Report. See *Martin's E. I.*, II, 145, and Appendix 7.

their poisoned arrows; but these produced no effect. If they had muskets, they say that they would kill these destructive animals.

16th January.—I went to Paterghat(432) rather more than twelve miles. For almost a mile I followed the old road by which I went from Paîngti to Bhagalpur. Paingti is a much more considerable village than I supposed when I visited it first. I then crossed only its breadth. It has a street closely occupied, mostly by shops, and extending almost half a mile in length. The district adjacent is not above three quarters of a mile square My road led for about 1¼ mile along the hilly ground near the river. I then came to a low plain intersected by a small nullah, called the Penguya,(433) which I crossed about two miles from Paingti but had it towards my left for some way My road afterwards led along the plain, which is not wide, and most of the way I had on my right an old stagnant channel of the river, in some places containing water, in others almost obliterated. The plain, for about four miles, is very low, with few trees, being inundated. Afterwards it rises, and is finally mixed with plantations Scarcely any bamboos. The villages bare and miserable, but large. The people dirty.

Paterghata, or the stone landing-place, is properly a rocky promontory, that projects into the Ganges, but communicates its name to a small hill that is adjacent. Immediately contiguous to this hill is a smaller named Uriup.(434) The rocky promontory consists of a fine large grained granite, white felspar and quartz, black mica with certain flakes of red felspar intermixed. It extends across a branch of the Ganges, and at this season a mass of it appears there

(432) Pattharghāṭ, from *patthar*, 'rock', and *ghāṭ*, a 'landing place'. Strange to say, the name of this well-known site does not appear on the 1 in.=1 mi. Survey sheet (1910), nor on the latest 4 mi.=1 in. map of the district.

(433) Not marked on the S.S.; but the courses of the channels in this area between Pattharghāṭ and Pāntī have greatly changed since Buchanans time.

(434) The small hill marked to the west of village **Ortap** on the S.S.

above water. At the ghat the granite is alive, in fine masses, from whence large stones might be cut for buildings. It continues for some way east to form the basis of the hill, but gradually, as it advances towards the east, becomes more and more decayed, until at length it becomes a white crumbling substance. In some parts this has a vertical shistose appearance, in others there is a kind of confused tendency to the appearance of horizontal strata, but no one can doubt, by tracing it from the cape, that the whole has once been the most rude and solid granite. Under the temple of Bateswor(435) it is in the greatest state of decay, and cannot be traced much farther. Higher up the hill, at and above the temple of Bateswornath, and extending from thence to the eastern end of the hill, is a rock more evidently disposed in horizontal strata. It consists of grains like a sandstone, but is very friable, and in some parts porous It does not, however, seem to decay fast on exposure to the air; and, as some of the strata are large, masses for building might be perhaps readily procured, while by digging to some depth, the quality might improve. It may perhaps be decaying granite and is of various colours from red to white, and the extremes of these colours often are found on different sides of the same mass. Higher up the hill the strata are most decidedly horizontal, and many of them near the surface are very thin, from half to two inches thick, but others are considerably thicker, and one mass on which many images are carved, is about three feet thick, and very compact. This stone is granular, harsh and brownish. The grains are small of various natures, and I would call it a regenerated granite. It seems, when the strata are thick, to cut well, and to resist the weather remarkably, as the images have stood entire for some ages.

Immediately adjacent to the surface, and often exposed to the air for considerable spaces, is calcareous

(435) The 'lord of the fig-tree' (*vaṭa*, the Banyan, *Ficus indica*). Just below we have Vaṭeśvaranātha, the addition *nātha*, also meaning 'lord', being redundant: but such redundancy is quite common. Śiva is worshipped under innumerable local names.

tufa, often adhering to the regenerated granite, and penetrating its fissures. It is sometimes merely a thin crust, as in the specimen; but in others it is a foot, or even two feet thick, branching out like coral, and sometimes involving various pebbles; at others it is without any mixture, and is exceedingly hard.

On the promontory of granite are some small carvings in relievo, but so rude, that it would be difficult to say what is meant. One seems to represent Ram with Sita(436) sitting on his knee. East some hundred yards from the promontory, and on the face of the hill is the temple of Bateswornath, built of brick, and newly repaired, but a small and rude edifice. Returning from thence west, and thus winding to the top of the hill, you come to an Idgayi(437) built of brick, and as usual ruinous. By the way you pass several cells cut in the mouldering sandstone, and occupied by penitents (Topisiya).(438), Descending from the summit considerably, towards the west, you come to(439) . ..., where a great many figures are cut on a perpendicular mass of regenerated granite about thirty feet long and three feet high. The engravings represent Vishnu riding on the bird guror,(440) Rama, Sita, Hanuman, and a vast number of attendants and partisans of the sect of Vaishnav. The images are exceedingly rude, and have gone through the hands of Kalapahar.(441) West from

(436) More probably Śiva and Pārvaṭī (Haragaurī).

(437) i e. '*idgāh*, *the place* (*gāh*) where a solemn festival ('*id*) is held.

(438) i. e. *tapasyā*, the vulgar form of *tapasi* (Sans. *tapasvin*), an 'ascetic'.

(439) Blank in the MS.

(440) Garuḍa, chief of the feathered race, the vehicle of Viṣnu.

(441) Kālāpahār. For this notorious man, first a general of Sulaiman Kararānī and afterwards of Dāūd Khān (the Afghan Kings of Bengal), who conquered Orissa in 1567, where, after 3½ centuries, his name is still held in terror, see *Riyāzu's Salāṭin* (trans by Abdu's-Salām), pp. 15—18, 163, 165: *Ain-i-Akbari* (trans. Blochmann and Jarrett) I, 370, II, 128, etc. Buchanan's allusion will be better understood from what Ghulām Husain (author of the *Riyāzu's-Salāṭin*) writes in connexion with the subjugation of Orissa, namely:

"Of the miracles of Kālāpahār, one was this, that wherever in that country the sound of his drum reached, the hands and tee feet, the ears and the noses of te idols worshipped by the Hindus fell off their stone figures."

Kālāpahār ended his days somewhere in this neighbourhood, between Kahalgāon and Rājmahāl, in a fight with 'Asis Koka in 1582.

thence some way, is a cave, which many of the natives suppose to extend to Dorhora(442) half a cose distant, but this is extremely doubtful. It seems rather to have been a cell or set of cells, which some hermits had formed by digging the earth or clay from under the regenerated granite, and which was interposed between that and the friable sandstone. The roof, at any rate, has in many places fallen in, and if there was any subterraneous passage, it has been choked.

17th January.—I went first about two miles in an easterly direction and partly by the way I came yesterday. to a place where a saline earth nemed Kharwa(443) is found, a little west from Diabati(444) tank. About a mile from Patarghata I passed a tank, at the east end of which is a large monument of brick called the Kazi's Dorga. It has become ruinous, but has an endowment. The space occupied by saline earth may be two hundred yards long, but is narrow. It is situated on a plain, mostly cultivated, and the crops on the saline earth are very good Washermen use it in place of soap, and people from Purneah are said to come and scrape the surface to give to their cattle. The cattle here are said to lick the surface. These are all " says ". I saw nothing on the spot to indicate that any was collected, or that anv saline matter existed. I then went about half a mile south-west to what is called the Dorohor,(442) and is supposed to have been a Rajah's house. It appears to me to have been always a round hill perhaps fifty feet in perpendicular height; but without digging it would

(442) Not marked on the S.S. I can find no reference to this site by any archæologist. The famous Vikramaśilā Buddhist monastery, founded by King Dharmapāla, and described by Tārānātha, the Tibetan historian, is thought to have been situated at, or near, Patthargha†ā. Buchanan's description of the remains he saw, especially what might have been a " solid temple " (i.e. a *stūpa*) and the " square fortification " (possibly the enclosure walls) makes it clearly desirable that exploration trenches should be dug.

(443) i.e. *khāri miṭṭi*, ' saline earth '. It is noticeable that Buchanan, in his account of Patthargha†ā, makes no mention of the pottery clay, of which the supply, according to Dr. V. Ball, is practically inexhaustible. Ball also tells us that " pottery works have from time to time been in operation at Patharghata for the manufacture of drainage pipes, etc. " [*Geology of India*, Pt. III, *Economic Geology* (1881), p. 565.]

(444) Not marked on the S.S.

be impossible to determine positively whether or not it may not have been a building. If it has been a building, it, in all probability, has been a solid temple, no house in decay being capable of leaving such a ruin. There are traces of a square fortification round it, and the surface of the earth within that is covered with broken bricks. Many squared stones, one very long, are lying in various parts of the vicinity.

From Dorohor I proceeded west, between Murli and Paterghata, for about a mile and a half, until I came near the river, and turned south between that and the ridge of hills consisting of Murli Chondipur and Modiram,(445) having before me Gongoldei(446) and Kahalgong. The situation is remarkably fine At the south or upper end of this ridge I came to a large village named Kasdi,(447) leaving on my right the indigo factory of Gongoldei, belonging to Mr. Murchieson,(448) in a most delightful situation near a branch of the Ganges. From Kasdei(447) I went to the southend of Madiram, in order to examine a quarry of the Khori(449) mati that is used in instructing children to write. The root of the hill, for perhaps eighty feet, consists of a rotten rock disposed in strata nearly vertical. Some of them consist of a reddish brown stone with many plates of mica, and evidently of the same nature with what I have called regenerated granite at Patarghata. It comes nearer shistose mica than any other stone I know. Intermixed with these are other strata of imperfect Khori, partly reddish, partly white, but

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(445) These are the names, as told to Buchanan, in order from north to south, of the three peaks of the ridge of hills shown (but not named) on the S.S. about 4 mi. NE. of Colgong

(446) Not marked on the S S ; but Gungledeeh [indigo] Factory is shown on Sherwill's Rev. Sur map. of 1852, 1½ mi. NE. of Colgong Gonguldee is also shown as an indigo factory on Tassin's map of 1841. *Gaṅgālā* means land subject to inundation by the Ganges; *diā* is a Hindī word for a 'village' or 'village site'.

(447) **Kasri.** This is the Caushdee of John Marshall (1670) and the Cossee of Rennell (1773 sheet).

(448) "Simon Murchison, indigo manufacturer, Bhaugulpore" (*East India Register*, corrected to 18th December 1810).

(449) i.e. *khaṛi*, chalk: not to be confounded with *khāri mitti* above (note 443).

I have no doubt, that it is the former stone in a farther state of decay. Above this, for about one hundred and fifty feet, the hill consists of horizontal strata, mostly of imperfect Khori, of various tinges of white, red, and purple. Some of it fine-grained and compact, but many portions, and these contiguous to the most perfect, are granular and friable, like the sandstone of Patarghat, and retain evident traces of a granitic origin. The Khori has been dug out in two places, one about forty feet above the other. The stratum in each has been from three to four feet thick, perfectly horizontal, and extending into the hill to an unknown length. The roof and floor of both are imperfect Khori The natives dug into the lower one without leaving any pillars to support the roof, until that fell and choked the quarry. About three years ago they went to the upper, and have already made a large excavation, perhaps twenty feet each way, and will continue to enlarge it, until the roof falls, when they will look out for some other place. The precaution of leaving pillars cannot be expected in their present state. The Khori in these strata is perfectly unmixed, and of a uniform pale ash colour. Above the upper quarry is a horizontal stratum of a few feet in thickness, which entirely resembles what I called regenerated granite yesterday, but which differs only from some shistose micas in having horizontal layers. Some of it, as at Patarghata, seem to be more impregnated with iron, or to be iron shot, as it is called. Under the lower quarry, but having imperfect Khori both above and below it, is a stratum, about a foot thick, of the same substance with the shistose mica above and below, but having inbedded in its substance many small fragments of white quartz. This shows the transition of the same materials to Ghera[450] mati, as two pieces of this rubbed together leave a bright red stain. It strongly approaches the stone incumbent on the Khori at Khalipahar, the southernmost point of this range of hills. The mass of granite

[450] i.e. *gerā*, red ochre; ruddle or reddle. Buchanan spells this word in a variety of ways.

at Patarghata is the only one that I have seen in the whole extent of this range, and projects under its northern end, just as the granites towards Chandrapur do from the south. The most singular thing in the quarry at Moderam is that materials, which I have no doubt are the same, and coeval, should in the lower part be disposed in vertical, and in the upper part, horizontal strata. I suspect, that the nature of stratification will in fact be found as often to depend on the cause of dissolution in stones, as in the causes of their aggregation.

Above the quarries the hill rises to a considerable height, which I did not ascend, because its surface appeared to be covered with soil.

From Kasdi I went to Mr. Glases [*sic*] factory of Bader,(451) very near three coses,(452) crossing near Kasdi a small rivulet named Bagaiya,(453) which is said to have come from the hills of Moniyari. I had on my right, Gongoldai,(454) on which there appears to be blocks of granite. From the factory I returned east by the great road from Paingti to Kahulgang until I passed the hill of Bader, about two miles. I then turned to the right, and went over a swelling country for about 4½ miles to Buddlegunj.(455)

The road from Bader to Budlegunj is good, and seems much frequented. By the way I met an invalid sepoy, and two sepoys' widows begging.

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(451) **Bhader**; the Baidur Chokey of Rennell.

(452) Apparently a slip for " miles ".

(453) Marked (but not named) on the S S as only some two miles in length It looks as if this was an old outlet channel of the Koā Nālā (see Rennell's *B A.*, Pl. II; Tassin's map of 1841, Sherwill's map of 1852).

(454) The factory was situated to the SW. of this little hill, close by.

(455) **Badluganj.** It is a curious thing that Faizullāhganj, from which the police Division of Buchanan's time took its name, is not to be found on the modern maps. It is marked on Tassin's map of 1841 about 2 mi. S. by E. of Badluganj. Buchanan, in his *Index to the Map*, does not mention it as one of the towns or villages in the Division of the name. Badluganj, nearly, evidently outgrew it and superseded it. This area from the time of Todar Mal lay in Kahalgāñv *mahal* or *pargana*, and why the name Faizullāhganj was ever given to the Division is a mystery. The name does not appear on Rennell's maps.

Specimens of the rock from Bader were brought to me. They are a fine large-grained granite, white or reddish felspar, white quartz, and much black mica.

A village of hill people is at the root of Bader. They formerly cultivated the hill, but of late have desisted. It is alleged that their crops failed for two or three years, and that they were persuaded that this arose from the wrath of the deity, offended at beef-eaters approaching her temple.

The Sirdar of Monihari(456) and his Majhis say that the native title of Sirdar is Mula,(457) and that for time immemorial the Mula settled disputes among his dependent Majis. The office of Mula was seldom properly hereditary, the most powerful and able Majhi usually seizing the authority. The Majhis were always hereditary. Among the hill people merchants (Grihi) bear a distinguished rank, and there may be two or three in each Tapa, who buy up grain and other commodities at harvest and lend them to the necessitous, who pay double at harvest. These are often merely Prijas.(458) The whole land seems to be the common property of the tribe, each man may cultivate any land that is waste on his own hill When there are many people, and little land, some go and attach themselves to a Majhi, who has few men and much land. They cultivate maize chiefly, next Janera,(459) then Bora, then Orrhor, but all together in the same field. These they cultivate two years.

(456) i.e. of *tappa* Manihāri (not the zamindāri portion); the Minniharry of Browne; now forming the northern part of the Goddā subdivision Buchanan gives an interesting account of the history of this *tappa* in his Report. The town of Manihāri, which gave its name to the *tappa*, was originally the headquarters of an important Kṣetauri family. It is marked as Munheearee on the old Rev Sur. maps; but the name does not appear on the modern S.S (72½)' The old land-marks are disappearing in many directions.

(457) This is evidently the Sanskrit word *mūla*, 'root', 'basis', which in composition means 'prime' 'chief', etc.

(458) i.e. *prajā* see note 398 above.

(459) By *janerā*, Buchanan means *juār* (*Sorghum vulgare*), the Indian or Great Millet, often called *jonhari* in Bihār. The name *janerā* is also applied to Indian Corn or maize (*Zea mays*), ordinarily called *makāi* in Hindi

on the third they sow cotton, and then leave the field waste. A fallow of eight to twelve years. The children always separate from their family when married, so that there can only in general be one man in each family. In some villages are only two houses and still a Majhi. In none more than sixty. In each Tapa one or two such. The usual rate ten or twelve houses, and fifty or sixty people. Each man and woman may cultivate five or six bigas. They think in Monihari that there may be two thousand houses. Although there is much plain land among the hills that they do not touch, there is much more hill than these families can cultivate. They begin to work at eight. The women never pray nor make any offerings, nor are they allowed to be present at sacrifices, nor to partake in the offering, but they join in the feasts after the sacrifices that are given at funerals and marriages. In the sacrifice to Chaldei, when the priest (Erwa)(460) is returning home from the sacred place with the men, they are met half-way by the women, who surround the priest's wife, who is naked except a very narrow cloth round her waist. The other women sprinkle her with water and turmeric.

19th January.—I went four coses or rather more to Hobipur,(461) about five coses west from Paingti, in order to see a place where Kurwa(462) mati is scraped by the washermen. It is on the beginning of the plain, just below where the swelling land terminates, in a rather low place, about fifty yards in length and twenty wide. Between it and a creek which joins the Ganges are some fields rather higher than the saline space, but the floods rise over the whole three or four days in the year, covering the saline space from knee to waist deep, and of course washing away every saline particle. In the month of October, however, the saline matter begins to effloresce on the surface which is covered with short grass. The washermen

(460) The Erebu above (see notes 386 and 388).

(461) **Hobipur**, about 3 mi. ESE. of Patthargha**ṭ**ā. Buchanan might have visited the site more easily from the latter place.

(462) The Kharwa earth of the diary of 17th January (see note 442 above).

then scrape the surface, and beat the saline matter from the roots of the grass. This may be done at any time throughout the dry season, but none is procurable during the rains. The most singular thing is, that near the middle of the field I found a small well, apparently lately dug. It was not more than three feet deep, and contained about one foot of clear water, which is sweet, and is used for drink. I was assured by the inhabitants that similar water may be procured in every part of the saline space, and that every year those who labour the adjacent fields, dig a well, such as above-mentioned, which gives them a supply for the dry season, but is filled up by the subsequent floods. The saline matter is therefore constantly forming, and that entirely at the surface, but I shall not take upon myself to say whether or not entirely from the atmosphere, or risen from terrestial vapours containing the basis of soda, which will instantly become soda on exposure to the air.

I saw three antelopes bounding past, but they do not go very fast. The bounding seems to be superfluous, as they were running on clear land, free of long grass or bushes.

The people as usual very clamorous against the indigo planters. They said that formerly it gave very great crops, but then it was weeded thoroughly and manured. Eight carts at half a rupee each, the bundle of 3½ cubits valued at one-thirteenth of a rupee, was a common crop from a biga of six cubits(468). Now three carts may be a usual crop. One half is reserved for seed, and not cut. It gives about two mans a bigah, for which they get at the rate of three rupees. The raiyats are terribly in debt, especially to Mr. Murchieson, which keeps them in great subjection.

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(468) A *bighā contains* 20 *kaṭṭhas*, and each *kaṭṭhā* contains 20 *dhūrs*. A *dhūr* is the square of a *laggi*, or measuring rod. So the size of a *bighā* varies according to the length of the *laggi*, which is different in different parts of the country. Here the *laggi* was about 9 ft. long.

Badalgunj is a pretty considerable village near a small hill, from whence there is a very fine view, and it rises from the village with a very gentle acclivity.

20th January.—I went about 14½ miles to Sripur,(464) and was delayed until late by rain, which fell in the night and morning, accompanied by much thunder. Towards the hills it seems to have been very heavy The swelling ground, on which Badulgunj stands extends from thence almost six miles, and seems to have been once well cultivated. About five miles from Badulgunj is a hat named Dighi (465) a poor place From thence there is a fine low country, much intersected with water-courses, for rather more than seven miles Some of the villages are very large but poor. Mowara,(466) the residence of Gujeraj, was a little to my left, in a prodigious fine situation. His house consists of sundry huts, larger than common, and is surrounded by a fine grove. It stands south from a considerable detached hill. Most of the plantations ruinous, and the villages naked The remainder of the way was through a country inclined to be hilly, like Banka, etc , and mostly covered with woods. The principal nullas that I crossed, in the same order, were Nurariya,(467) about 7½ miles from Badalgunj, Jumariya,(468) about two miles farther This alone contained a stream, which runs towards the right. The Koya(469) about two miles farther

21st January.—I went and returned to and from Manjuya,(470) distant about 7½ coses, but the route winds very much In going I intended to note the appearance of the country, and in coming back to take specimens of the stones; but about half way back

(464) **Sripur Bazar** of S S

(465) **Dighi.** *Hāṭ* means 'market place', 'mart'

(466) **Mandro Bazar** and **Marro** of S S Gajrāj Singh was the *sardār* of *tappā Mankārī* in Buchanan's time (See also under date 18th January)

(467) Further west, called **Leharia N.** and **Lohra N.** on the SS

(468) The **Pindai N.** of the S.S

(469) **Koa N.**

(470) **Majhua.** Here also " coses " is a slip for " miles ", as Majhuā is some 7½ miles from Sripur From Buchanan's description and from a rough sketch map of his route inserted in the MS., it seems practically certain that his **Majuya** was the **Berlo,** and his **Chupgong** the **Majhua** of the S.S.

a tremendous storm of wind and rain prevented me from taking any specimens of those on the western part. I must therefore speak of them from a transient view. From Sripur, for about 2¼ miles. the ground is swelling, and free of stones. It seems to have been formerly cultivated. About a quarter of a mile farther there is a short and steep stony ascent. Potor Choti,(471) a conical hill, the first of northern ridge. The southern ridge not in view from thence. This however may be considered as the commencement of the valley. Some way farther on, the valley narrows much, between Duseri(471) on the north, and Gosayi(471) on the south, where at the west end of these hills it is not above two miles wide. It is very stony and uneven, but the road is not deep. The rocks have no appearance of stratification, but break into cuboidal masses, which are soon rounded by the action of the air. I took them to be whin, but did not break them. These two hills, as they advance east, recede, and the valley becomes much wider. Where it begins to widen, the rock is an immature Khori or rather a stone not decayed into Khori. It splits into oblong quadrangular pieces of small size by natural fissures, and has rather the appearance of vertical strata. About six miles from Sripur a small stream comes from the hills to the north, and runs south to join the Morar.(472) From thence onwards to the Kumeri,(473) another similar rivulet, but larger, there are few stones, and the soil is a red clay. Until the first stream the soil is brown, and not stiff. At the Kumeri the rock is a whin containing felspar and quartz, with no appearance of strata. It is in a state of decay. Beyond the Kumeri, rather more than a mile, is another rivulet, and rather less than half a mile farther, is the Bunmasiya,(474) another stream. Between these and near them the rocks are evidently

(471) Unfortunately, no hills are marked on the S.S , so the exact road followed cannot be traced.

(472) Maral R. (S.S.).

(473) Not named on the S.S.

(474) Probably this should read Bāramasiyā, as there is a village of this name near Buchanan's route.

horizontal, and consist of the unripe Khori, in plates, under a foot thick. In one place I found it changing into a kind of rotten sandstone, one part of the same mass being in one state, and the other in the other. The sandstone therefore on the banks of the Ganges at Sakrigali is probably Khori in a state of change. Some way farther are many blocks of whin, in a different state of decay, exactly in external appearance like those I supposed to be whin at the western end of the valley. The land here is much broken, and the soil resembles somewhat dark ashes About ten miles from Sripur is another rock of unripe Khori, with a vertical appearance. A little west from it and apparently under it, is a whin in decay; no stratification. About eleven miles from Sripur the hill called Dumara(475) comes close to the road on the north side, and forms the angle to the valley of Manjuya; between that and Banspahar,(476) on the opposite side of the valley, may be five miles About a mile from this I came to Chupgong,(475) about half a mile before which the stones entirely cease, and the whole way from thence to Manjuya, is a very deep dark friable soil The rocks from Dumara to Chupgong are all whin Chupgong, formerly a large village, now contains one hut From thence is about 1½ mile, through a fine country formerly cultivated, to a deep stagnant channel named Dakuja,(475) and a little beyond that is another named the Gordoya (475) Immediately beyond that commences the ditches of Manjuya, which extend to the east about a quarter of a mile From the south-west corner I proceeded up the east side to the north gate, about half a mile. On the whole, the only rocks that I examined, and I believe the whole that I saw, are of two kinds One whin, that is a lapis corneus of Wallerius, containing shorlaceous crystals, and small masses of quartz, and I believe some of felspar. It is in various states of decay. In one place it appeared to me disposed in

(475) None of these names appear on the S S ; but Dumara may be Banwara. If so, Buchanan must have taken a roundabout route.

(476) Banspahari (village)

horizontal strata, but so broken by fissures, that I cannot be positive. I have in no other country seen any such. The other rock which I have called imperfect Khori, seems to me a Petrosilex(477) beginning to decay. It is separated by fissures into small portions; but these when broken, have the conchoidal fracture, which even the Khori, although very soft, retains. Some parts retain the horny colour, others have become white, and others finally are coloured in parallel stripes, like some of the mature Khori. In some places, instead of assuming the soft grain of Khori, it takes the appearance of a soft sandstone. In decay, and exposed to the air, it retains its angles much longer than the whin, all detached masses of which become immediately rounded. In the fissures of neither rock could I perceive the smallest appearance of venigenous fossils, nor of the exuviæ of animated matter.

Three substances, in detached nodules, or masses, are very common over every part of the stony extent of the road.

The first is the Gangot, or small white calcareous nodules. In general it is found in soil that is deep and contains no other stone, but this is not universal. It is however so common, that the intermixture may be perhaps considered as accidental.

The second kind of detached nodules are of a flinty nature, some opaque, some pellucid, and of various colours, white, hyaline,(478) horny, uniform, and in layers, partly parallel, partly concentric. Some of the pieces are flat, as if detached from a shistose rock, others are cylindrical. In one or two of those that are opaque, I thought that I could perceive traces of vegetable impression, and on one that was diaphanous, somewhat like the pores of a coral. One of the most common appearances which these nodules assume, is a flint-shaped mass five or six inches in diameter, of a smooth red external coat, but within

(477) Rock-flint, or horastone.
(478) Glassy, or transparent.

white, and approaching very near in appearance to the petrosilex in decay. Many of the diaphanous pieces, like chalcedony, have their surface covered with crystals. These may be fragments of the petrosilex, but, if so, they must have undergone great changes, especially those which are cylindrical and diaphanous.

The third kind of sporadic fossil is generally in pretty large masses, but all detached. In one part, however, the masses are almost contiguous to each other, and may be the fragments of a rock in decay. This very evidently is the same slaggy substance that I have seen on every part of the hills, and I have no doubt is a lava, probably fused whin.

These two last kind of nodules, and many detached lumps of whin are often covered with the kind of enamel that I have before mentioned, while many are free from such a coating; but wherever one stone is enamelled, the same extends over all for a certain space.

Majhuya is now a miserable village, occupied by a few Ghatwals and their Paiks, who carry on some cultivation, but a mere trifle. It was the residence of the ancestors of Gujeraj Singh, who had a brick house surrounded by a wide ditch, and south from thence, a place for recreation surrounded by the same ditch, but separated by a transverse cut. It is about half a mile west from the Morar, a small river, which receives the springs of all the hills towards the north, and rises from a hill named Sislari,[479] eight coses north from Manjuya. It passes south through a fine plain, and a district called Tapa Dihar,[479] that was cultivated with the plough. From thence it proceeds south through Tapa Majhuya, which between Dumara and Bandurkola[480] may be four miles wide, and I believe the width increases towards the south. Tapa Maghuya extended south to Behasi[481] at least, and that is four coses From Behasi to the hill called

(479) None of these names appear on the S S
(480) Bandarkola.
(481) Beansi.

Panuk(482) is four coses, from Panuk to Chuna Khali(483) four coses. The road to Behasi is now almost choked, and Panuk is more difficult of ascent than Chaundi.(484) Between Chaundi and Bandurkola, the residence of Bika Sirdar, is a wide valley, and a river called Chukrado,(479) a branch of the Morar, but this valley was never occupied. The road to Chaundi goes round the south end of Bandurkola, through the plain, which renders the distance six coses Bika Sirdar's village contains about fifty houses, and from two hundred to two hundred and fifty people. Most of the men came to see me, with his brother Rupa The Morar flowing through a very deep soil without a single stone in it, has cut a very deep but narrow channel It always contains water, which, though nearly stagnant, is not navigable About eight or ten coses south from Manjuva it receives the Jauna,(479) which rises from a hill of Parsunda,(485) called Puro,(479) belonging to Dulo Majhi, and joins the Morar at Babupur.(486) where there are some Ghatwals. Babupur is in Tapa Payir Puchkuliya,(479) which was formerly cultivated with the plough. The united stream is called Guman Merden, is navigable in the rainy season, and, before it leaves the hills, has on the banks another Tapa, named Kunjela,(487) now waste. These four Tapas are not considered as belonging to any Thanah, and belong entirely to Gujeraj Singh; but I believe he has no profit from them. I do not think he has one raiat in them. He pays no revenue. They were no doubt depopulated in consequence of the disputes with the hill people, who were first set on to plunder by his father. Some allege the elephants as the cause of the continuance of the depopulation, others, the want of

(479) None of these names appear on the S.S.
(482) **Tulme (Panek).**
(483) **Chunakhaligħat.**
(484) **Chamdi.**
(485) i.e. *ṭappa Pātsundā* (*see Gazetteer*)
(486) **Babupur.**
(487) The Kunjeeala *pargana* of Sherwill; the Kāngjiyālā *ṭappa* of Buchanan's Report See also Buchanan's map. The name represents the *Ka-chu-wên-k'i-lo* of Hsuan Tsang, and survives in the modern Kānkjol village, occupying an ancient site on the south bank of the Gumāni mardan R., some 6½ miles W by S from Farakkā.

barbers and washermen, without whom the higher classes will not go. Both seem to admit of an easy remedy.

At Sripur I was visited by Gujeraj,(488) a thin emaciated man, equally weak in body and mind, but perfectly tractable. His brother is in a state equally deplorable. He was accompanied by a Dewan, a servant of the family for fifty years, and in his seventieth year, a sensible, active man. He remembers the family residing at Majhuya. The zemindary is managed by an Izaradar,(489) appointed by the Collector; the Jaghir by a Tahsildar, both, especially the latter, seem totally inattentive to their duty. Sripur is a station of the Ghatwals,(490) where there are two or three wretched huts. It stands on the north side of a small hill of the same name, just where the soil becomes stony The stone approaches near to whin, but is more evidently an aggregate, consisting of black angular masses, perhaps horn-blend, and micaceous iron ore, intermixed with white quartz; but it is in a state of decay, and like the lapis corneus, is very tough.

22nd January.—I went about 9½ miles to Protappur,(491) through a very fine level country, of a rich soil, occupied by Ghatwals. The cultivation very bad, and their houses wretched. Here, however, they are active, good-looking lads, Not pahariyas, the same with Beor Bhuiyas, Bonwars,(492) etc. Almost all armed with bows, in the use of which they have little dexterity. The hills to the south take a large sweep

(488) Gajrāj Singh, son of Sujan Singh, a descendant of the Kṣetauri Rūpakaran, who is said to have assisted Mān Singh in Akbar's time (see *Gazetteer*, 1910, p. 269).

(489) *Ijāradār*, a 'lessee' or 'farmer' of land revenue

(490) Ghaṭwāl literally means a person holding charge of a pass through the hills. For a description of these tenures in the Sontal Parganas, see *Gazetteer* (1910), pp. 219—21.

(491) **Pratabpur Causi.**

(492) "A small caste, probably of Dravidian descent, found in the Santāl Parganas" (Risley, *T & C*, *I*, 61). The name, however, is used elsewhere in South Bihār in an occupational sense—people who work for a daily wage of grain (*ban*), and also, loosely of *jangal* folk (*ban*, forest, woods, etc.).

towards Parsunda,(493) leaving an opening there between them and the cluster near Protappur, which angle, and is the only zemindary lands I saw to-day. About two miles from Sripur I crossed the Kumba,(494) a deep but narrow channel; and three miles farther. I crossed another called the Duliya.(495) My people who went direct from Buddlegunj to Protappur, had also had the terrible squall, which had injured most of my tents. At Budalgunj there was hail like apples.(496)

By the way I saw five spotted deer and an antelope. This seems the most abundant place for game in the district.

23rd January.—I went to Parsunda. About two miles from Protappur, I struck off towards the left to visit an old mine of iron, that is on the western face of the hill next Protappur, but there it is called by another name, Ram Koh.(497) About half a mile from the road, I came to where the ascent becomes considerable, and for about two hundred yards found, on a moderate ascent, the soil mixed with small calcareous nodules (Gangot), among which were scattered many silicious nodules, such as I have before described. On the ascent becoming steep, the Gangot ceases, and the surface is scattered with rounded masses of whin, among which also the silicious nodules abound, and there are also scattered fragments of the unripe Khori, which have assumed entirely its appearance, but still retain a great part

(493) *Ṭappa* Pātsundā of the *Gazetteer* The approximate position of this once important *ṭappa* may be seen from a reference to Buchanan's map, but the name will not be found on any modern map In his *Index of Native Words*, Buchanan gives "Parsandā, परशुंडा" as the spelling As his Bengali assistant generally used the palatal for the dental *s*, this would represent परसण्डा, Parsaṇḍā; and I have little doubt that this was the original name of the *ṭappa*

(494) A tributary of the Koā nadī, but not named on the S S

(495) An important tributary of the Koā, but not named on the 1 in = 1 mi, Survey sheet.

(496) Hailstones as large as this are of fairly common occurrence; but it is very unusual for such hailstorms to occur so early in the year as January.

(497) Not marked on the S.S.

of the hardness of Petrosilex. On one portion may be traced the concentric layers, common on the flinty, stands less than a mile from their north-west nodules, which makes me suspect that in fact these are portions of the Petrosilex, that have changed their nature by some sort of external agency. One piece, however, that I procured is singular. It consists, as many others do, of two parallel diaphanous plates joined by irregular crystals, and seems to involve extraneous matter, which will perhaps serve to show that these silicious nodules are of a tufaceous nature. In the fissures of the whin there is not the slightest appearance of venigenous matter. Ascending some way, I came to a whin rock with many loose masses of the same, which continues to the mine, perhaps one hundred feet perpendicular from the bottom of the hill. No appearance of stratification. In this part there are neither detached masses of Khori, nor silicious nodules. The mine ran in horizontally between the above-mentioned whin rock and another, scarcely, if at all, different, in which also there is no appearance of stratification. The fissures detaching masses of a cuboidal form. As, however, the mine evidently formed a horizontal stratum, the whin, above and below, may be also considered as horizontal strata, although of no great thickness. The ore is said to have been about seven or eight feet thick, and to have been wrought for about eighty yards into the hill, and as much in width, without leaving any pillars, when the roof gave way, and has choked up the cavity. Between the ore and whin above was a mass of dead rock, as the natives justly speak, about two feet thick. On the wholè I saw no appearance of the slaggy volcanic-like masses. The mine was of two kinds, differing chiefly in hardness. The uppermost part was softest, as if in a state of decay, and was called Loliya ore ললিয়া বিচ Laliya bich. The under part was reckoned best, and called Ghoriya করিয়া বিচ Kariya-Bich.(498)

(498) Red and black ore, respectively, *laliyā* and *kariyā* being used in the vulgar speech for *lāl* (red) and *kālā* (black) Buchanan has written "ghoriya" by mistake for "koriya".

Having examined the mine, I returned to where I left the road to Parsonda, and then proceeded south about 1½ miles to a dry small channel named Rajban.(499) Beyond this the lands of Beliya,(500) a beautiful village belonging to the Ghatwals, extend to the boundary of Banka, rather more than two miles. The houses in Beliya are very poor, but have some plantations. South from Beliya a low ridge extends from east to west and forms the boundary between the two thanahs. From Beliya an opening between the cluster of hills at Protappur and those to the south-east is distinctly visible. From the boundary to Parsonda is about five miles. Parsunda stands about a mile west from the end of another small ridge of hills, which like the former runs east and west and terminates towards Parsunda in two peaks, or what seamen call Asses' ears. Neither of these low ridges are occupied by hill people.

Jubro Naib of Chuprama(501) hill says that he is a Mollay Moller. The Not Pahariyas will eat their food, but are not allowed to marry their girls. The people whom I have formerly called Deoysi,(502) in the proper language are called Demanu (503) They are dreamers, who allege that the Gods appear to them occasionally in dreams, and order them to make such and such offerings, which they do from their own means. The people assemble to eat the sacrifice, and contribute drink and grain. The Erebu makes the offering, both he and the Demanu pray In each village is one Demanu, sometimes two They are much respected. The custom seems to be universal.

(499) Not named on the S.S.

(500) **Balia.**

(501) The hills are unfortunately not marked on the S.S (1925 edn.).

(502) In the MS. Buchanan had half deleted the *y* in this word, evidently intending to correct the spelling. Above he has called these people Dewasi See note (180)

(503) Mr. Bainbridge spells this word *demno*, and from his *Memoir* (*Mem., JASB.*, Vol II, No 4) it seems that the functions of the *demnu* are those of a diviner or soothsayer, and perhaps more than this, as their presence appears to be essential at most ceremonies and sacrifices. The functions of the Erebu or *etwu* have not been explained : it would seem that he is the officiating priest It is to be hoped, however, that fuller research will be carried out on scientific lines into the social and religious customs and rites of this interesting people before it is too late.

The sick apply to the Demanus, and give them presents for their assistance with mental prayer. This is called Jupe.(504) The Not Pahariyas that I saw at Mahjuya said that they are the same with the Bhuiyas, and that they eat and intermarry with the Moler; but the latter here is denied. Many of the men speak the Moler language, but the women use the Hindi. They no doubt eat beef. They have chiefs called Majhis. They are very numerous in Monihari, Barkop, Parsunda and Goda. In the last I did not hear of them, because, I believe, they are there called Beor Bhuiyas Here the people are totally ignorant of that name. They plough At Manjhuya the hill people and Not Pahariyas agreed that the two tribes eat together and intermarry.(505)

24th January —Being detained by rain, I went to visit the hill to the west named Kariswarika tok.(506) In the evening some stones of a very slaggy appearance had been brought from it, which together with its shape made me anxious to examine it. I proceeded along level ground for about a mile and a half, when I came near its highest peak, towards which I ascended for some way by a gentle acclivity, containing calcareous nodules (Gangot), among which were some small fragments of unripe Khori, become entirely white Above this in ascending towards the peak, the ground became stony. The stones had mostly much of a slaggy appearance. Among these detached masses were however many white fragments of imperfect Khori, and

(504) i.e. *jap* (Sans.), muttering or repeating prayers

(505) Note the connexion which Buchanan here indicates as existing between the Maler, the Nat Pahāṛiās and the Bhuiyās. While at Majhuā, in the midst of the Saurīā area, it was admitted that the latter two tribes were originally the same people, and also that the Nāṭ Pahāṛiās intermarried and ate with the Maler; but when Buchanan reached Pātsundā, which lies outside the hill area proper, and where external influences had long been at work, he finds that consanguinity with the mountaineers is no longer admitted. This process of fission, observable in the case of many races, has developed further since Buchanan's time, and his record is all the more valuable on this account

(506) Not marked on the S.S., but there is a hamlet, Kāndesvāri (asc) Kita shown about 3 mi W. by S from Mahāgama, which is suggestive of Buchanan's name. *Thok*, or *ṭhok*, means a 'lump' or 'mass', and so, as here, a 'knoll'. *Thok* also means a 'holding' or 'tenure'. But it is possible that 'tok' is a slip of the pen for 'tek' (*ṭek*). See note (422) above

some that retained a very high degree of hardness, and consisted of different coloured parallel zones, on one of which I perceived the impression of a moss. On coming to where the ascent became very steep, the number of loose stones increased, but the Khori was little if at all observable. The stones in general retained a slaggy appearance. Everything in confusion without any approach to regular disposition. The largest mass, and what seemed to me to be a part of the solid rock, had every appearance of having undergone the action of fire. Adjacent to this was a detached mass of very great hardness, with little of the slaggy appearance, but very curiously intermixed of [*sic*] black flinty-like portions and a horn-coloured substance of a fine earthy fracture. Ascending the hill considerably, I came to a portion consisting of a rotten sandstone, sometimes disposed in parallel flakes, sometimes most singularly eroded, and sometimes having very much the appearance of a decaying granite. In general it is found only in masses, but some were so large, that they were perhaps part of a solid rock. Above this to the very summit of the peak the stone is very hard, and of a reddish colour, more or less intense. It has an earthy fracture; but contains, imbedded in it, many small masses of felspar, in general red, but sometimes white. Until I reached the summit these stones were only in detached masses; but on reaching the top, I perceived a circular cavity, sinking down to a great depth, and only surrounded by a narrow ledge of hills, of various heights in different places, and the descent exceedingly steep, especially towards the higher parts of the ledge, where the naked perpendicular rock of this red stone occupied considerable spaces, but without any appearance of stratification. From the summit, owing partly to the rain and haziness of the weather, and partly to the trees and grass, which was higher than my head, I had little or no view of the country. On descending to the bottom of the cavity, which from edge to edge of the ledge of hills may be four hundred yards in diameter, I found the same succession of stony matters as without; but,

after I reached below the highest parts of the ledge, all was in confused broken masses. The white decayed Khori extended higher than on the outside. Some of it had become very soft, while other portions retained a great degree of hardness. At the bottom I found a small channel that conveys the rain water from this cavity through a gap in the northern side of the ledge, by which it is surrounded. The steep banks of this watercourse consist of various small masses of all the above-mentioned matters thickly imbedded in a soil that has much the appearance of dark ashes Among these is a good deal of the red softish stone called Gheru mati by the natives, and also some dark red harder masses containing black concretions. The gap by which the rivulet passes out through the ledge of hills, may be thirty yards wide, and has a very gentle declivity to the plain It is strewed with stones, which appear to me most evidently to have undergone the action of fire. Here are lying a few small fragments of white fat quartz, a substance very rare in these eastern hills, so far as I have seen. Here, however, the flinty diaphanous nodules are very rare, and I saw none that had any crystals. On the whole, I have never seen any place that seems to agree better with the descriptions of the craters of extinguished volcanoes(507) than this cavity in Khoriswarika tok.

The watercourse which comes from the cavity, on entering the plain, from the gap, has on its east side a granular rotten rock very like conglutinated ashes, and contains small fragments of white quartz. On the west side of the rivulet is an extensive space, in which the rock of imperfect white Khori comes in many parts to the surface. In neither of these rocks is there any appearance of regular stratification. A little farther west is the place, from whence I began

(507) W S Sherwill, whose knowledge of geology was also considerable, visited this neighbourhood in 1851, and writes of the Gandeśwari (sc. Kāndeśvarī) hills as terminating in "several peaks of sandstone and ironstone curiously jumbled together, which gave Dr Buchanan the idea of the spot having been a volcano The rocks are a heavy ferruginous red sandstone." (*General Remarks*, p. 50.) He does not, however, appear to have examined the crater = like cavity described so fully by Buchanan.

the ascent. A low ridge of hills extends a considerable way to the east from Khoriswarika Tok, and another comes from the north at right angles towards that, but does not join it. Beyond that, towards the high hills, that are inhabited, is some plain land occupied by Ghatwals.

The Sezawul's nephew says that about five years ago he heard that a smoke issued from a hill named Chupur Beta,(508) about seven coses south-east from Korariya. He visited the place The space was not hollow, and consisted of earth and stones mixed. It was not red hot, but a thin smoke issued continually from a space about eight or ten cubits square. He heard that in the night it was luminous, but he did not see it then. Upon throwing wood upon the hot place, it took fire in a few minutes. In fact, this seems to have been like the hot place which I saw, but, there being no water, the heat became more considerable. It continued in this state for three years and then stopped.

The paharias of Modubon(509) say that their crops are as follows. *First*, Mukayi sown in Asar, if Desi, the fruit is gathered in Badur, if Pahari it is gathered in Aghron Maize in their language is called Tekalo; both kinds are sown mixed. *Second*, Jonera is called, Naitu. It is the same with the Gohama Jonera(510) of the plains. Sown along with the maize, gathered in Paus. *Fourth*. Two kinds of Meruya;(511) Paharia gathered in Aghron, and Desila(512) gathered in Badur, they call them Kodome. *Fifth*. Kaungni(513) called by them Petaga, is gathered in Badur. *Sixth*

(508) **Chuparbhita** (coalfield) (S S)
(509) **Madhuban.**
(510) *Gehũn* vulg *gohũn*, is wheat; *gohumā janerā*, i e 'wheat-like *janerā*', is a name for the Great Millet, generally known as *juār*, *janhari*, etc. The exclusive name for Indian Corn or maize in South Bihār is *makāi*, that for the Great Millet is *juār* The name *janerā*, though generally applied to the millet, is also frequently used of maize: hence some confusion arises, and hence the expression *gohumā janerā*, to make it clear that the millet is meant
(511) *Maṛuā* (*Eleusine coracana*), the Rāgī of South India.
(512) i.e. *deśi*, of the (plains) country, as distinguished from the hills.
(513) *Kāngni* (*Setaria italica*), the Italian millet.

Cytisus Cajan(514), called by them Mallahari, is gathered in Paus and Mag; another kind, called Gol Lahari, is gathered in Chovet. *Third.* Bora,(515) called Kusora, gathered in Agron. All these are sown together, in proportion greater as above-mentioned. Their smallest crop is cotton, and it is sown by itself, when two crops have been taken from the land. A few plantains at the bottoms of the hills. They eat few vegetables. From two to ten people in each house. Rich men occasionally hire people to sow and reap. They do not hoe, but make holes with a sharp stick, between the stones, two or three fingers deep, and put in each ten or twelve seeds taken from a promiscuous mixture They only work from morning until noon, and get two paisas, or the value in maize In harvest they work all day, and will gather from forty to sixty baskets of ears, each of which will give three seers of grain (104 S.W.) They get one for their labour It is the women who reap and sow most. The men hunt, clear the fields, and cut timber and charcoal

25th January —Detained by rain The Parsonda rajah, as he is called, is now absent at Bhagalpur His house consists of some mud buildings, one or two of which have two storeys. It is surrounded by the huts of his tenantry forming a pretty large village, but it has neither shops nor market Although commonly called Parsunda, its proper name is.. . . . . (516). The situation very fine, there being much rice land near it, with swelling ground of a very rich soil for the village

26th January.—I went about 9½ miles to Barkop.(517) I intended to visit the two small hills(518) south from the village, and was told that the road passed by them, but I left them far to the east

(514) Now known as *Cajanus indicus*, the Pigeon pea, which Buchanan generally calls " orrhor " (i.e *arhar*)

(515) Buchanan appears to mean here, as elsewhere, by *borā* the Cow pea or Cow gram (*Vigna Catjang*), called *borā, barbatī, lobiā*, etc The trouble is, that this pulse is not usually harvested in Aghan

(516) Left blank in the MS See note (495) above

(517) Barkup.

(518) Not marked on the S.S.

I have little doubt but that they are granitic, a larger naked rock occupying the summit of the larger. Not quite three miles on, I came to Durgapur,(519) where the Rajahs formerly dwelt. It is now totally deserted, except one small field of mustard seed. I then passed two Ghats but they were at a little distance, and the whole country adjacent to the road is deserted to the Sundor(520) river. This is a wide deep channel, with a sandy bottom, and a small clear stream, and separates Parsunda from Barkop, from which place it is about three miles distant. Between the river and Barkop I passed through a Ghatwal village, with a good deal of cultivation About 2½ miles from the Sundar, I passed a dry channel named the Sapin.(521) From thence to my tent at Barkop was among the rugged peaks of that place These peaks consist of a fine large-grained granite, reddish felspar, white quartz and much black micaceous matter. One of them is excessively steep, and on its summit is supposed to contain an image of Jugni,(522) but no person has ascended to see. At the bottom is a small temple of the same deity, represented by a Linga shaped stone. The Pujari is of the impure tribe.. (523) The Rajah in the evening made me a visit. He is very near as bad as Gujeraj Singh, and seems to be in the hands of sharks. The interpreter tribe is here called Desi Moler(524) and Desi Bhuiyas, and are acknowledged to be the same with the Bher Bhuiyas, of Kurariya, but say they are different from the Not Pahariyas of Monihari. Their customs however are the same. Many of them speak the Muler language, and they eat and can intermarry with the Muler of the hills. They of course eat beef The hill people of Parsunda, and the Not

(519) **Durgapur.**

(520) **Sundar N.**

(521) **Sapti N.**

(522) Probably Yoginī (female devotee)

(523) Left blank in the MS.

(524) This record is of special importance We have a people calling themselves Desī Maler (i.e. Maler of the plains country) admittedly closely connected with the local Bhuiyās and Bher (or "Beher") Bhuiyās of Karhariā. And here we find Bhuiyās still speaking the Maler or Malto language.

Pahariyas or Desi Muler there both acknowledge that they eat in common and might intermarry.

Barkop is in a very fine situation. A beautiful rich plain surrounded by seven rocks covered with wood. The zemindar's house is like that of his kinsman at Parsunda.

27th January.—I went to Buriya,(525) taking as straight a direction as possible, without minding a road. For almost nine miles the way led through woods with scattered villages; but all the woods seem formerly to have been occupied. For the next six miles the country was quite clear, but the greater part waste, although it once has been cultivated. The boundary of Barkop is about three miles from Buriya Between the boundary and Buriya are two small rivers.(526) I passed two male antelopes Each had some females, and one of them some young under his protection. The males differed from that brought at Badalgunj, which was called Bareta.(527) This, called Goraiya, has much longer horns, and is much darker in colour. Both bound in the same manner. Buriya is a pretty large village, but its houses poor. Its zemindar, of an old scribe family, resides. He is a plain unaffected man, but has nothing about him like a man of any rank. The country was, he says, depopulated by the famine, and hill people. He thinks that within these ten or twelve years it has begun to recover.

28th January —I went to Thanah Kodoyar,(528) almost twelve miles, but called five coses The country very bare, most of the trees being palmiras, which convey little appearance of shelter. No bamboos on

(525) **Bhuria,** 14 mi S by W of Colgong

(526) Both named **Gerua N.** on the S S.

(527) A name used in south Bhāgalpur for the Indian Antelope, or "Black Buck" (*Antilope cervicapra*). Goraiya really means 'of fair hue' (from *gorā*) · the term is sometimes applied to the doe, but not to the buck.

(528) **Kodwar,** the headquarters of a thānā or police "division" in Buchanan's time. The actual site has, it seems, been diluviated; but the name survives in that of a village called **Ramnagar Arazi Shankarpur-kodwar** on the S.S., on the south bank of the **Margang N.**, which represents an old channel of the Ganges, about 6 mi. W by S. from Colgong.

this side of Tiliyaghori. The houses close huddled and very poor. For 6½ miles almost all waste, short grass abounding with antelopes. They go in families of from three to seven. Usually one adult male with several females and their young. I only saw one herd in which there were two males, but I saw two males quite by themselves. It is probable that in rutting season they fight until one is either killed or banished. The small numbers of males in proportion to females renders it probable, that the former event frequently happens. They are far from being swift, and their bounding is awkward. These antelopes were of the same kind that I saw yesterday, but to-day they are called Borata Borati.(529) The last part finely cultivated. All swelling land. About a quarter of a mile from Buriya I crossed a small river with a little stream called Gairan (530)

29th January.—I went in a boat(531) to Kahalgang in order to examine the three rocks, which are surrounded by the river. By the way I noticed calcareous nodules in some parts of the bank, where the land is low The rocks are of fine granite, black mica, white quartz, and large masses of white or pale red felspar. Masses very large and irregular. Some have been split by wedges. Many wild pigeons frequent these rocks. On my way back by land I observed a large mass of granite projecting from the soil, a little south from the road, at the 16 milestone from Bhagalpur It is one of the lowest parts of the country, and is a solid rock of considerable size.

2nd February —I went to Bhagalpur by a road already travelled.(532) The whole [of the] natives there are so deeply engaged in the celebration of the Muhurem, that no business was practicable. The Hindus seem fully as much engaged as the Moslems.

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(529) See note (527) above. Bareṭā and Bareṭī (feminine form, used of the doe).

(530) Gahira M.

(531) Buchanan must have gone down the old channel: the main channel is now 3 or 4 mi. north of the site of the old Kodwār *thāna*.

(532) On the 28th and 29th October (*supra*).

4th February.—I crossed the Ganges at Naia-ghat,(533) where at this season it is about half a mile in width. The water comes close to the hills of Bhagalpur, which consist of red clay mixed with calcareous nodules. The ghat is just below the mouth of the Jomuni,(534) which since last year has been navigable throughout the dry season. The pure sand on the north side of the river is about half a mile wide. From its side there is a space of new land, more than three miles wide to Sibgunj(535) occupied by villages, but very bare. From Sibgunj to Bihipur,(535) the Thana, is about five miles, by the side of an old water-course, which contains a good deal of water. The country to the right is finely wooded, beyond the water-course is bare, but well cultivated. The road very good. From the sands of the river the boundary of Kotwali extends about 1¼ mile towards Sibganj.

5th February.—Visited by the zemindar of the Chor(536) towards the west, a good-looking man of the Kurwar(537) caste, and of an old family. His people say that the tribe is very numerous all the way from this to Gaur near the river, but that they originally came from Chota Nagpur, where they, the Khyetauris,

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(533) Not marked on the S S

(534) **Jamunia N.**

(535) **Sivaganj and Bihpur.**

(536) *Char* (from a root meaning to 'move') is an island of alluvium deposited by a river, generally of a shifting character, owing to the changes in the course of the main current

(537) Kharwār, Khairwār, or Kherwār The tradition is very interesting The Kharwars ranged over a wide area at one time The name is found as Khayaravāla in an old (undated) inscription on the Rohtāsgarh plateau which seems to point to its having been a professional title originally, meaning the people who dealt in *khayara*, mod. Hindī *khair* (*Acacia Catechu*), the tree that furnishes the astringent extract known as *kath* or 'Cutch', besides a gum and valuable timber But there is also the possibility that the name is derived from that of the place (Khairā) they originally came from.

The name Kherwārī has been assigned in the *Linguistic Survey of India* to denote the principal language of the Mundā Branch of the Austro Asiatic Sub-Family, with its several dialects, namely, Santālī, Mundārī, Ho, Bhumij, Korwā, Asurī, Kodā Tūrī, etc.

and the Dangor(538) (who work at Paingti) are the prevailing castes. In their original country they have a peculiar language, but those here have forgotten it and speak the Hindi.

9th February.—Bihipur is a very large irregular village finely situated. It has four akaras,(539) and each has some buildings of brick. The agents of the zeminadrs vastly superior to those of the other side. I went to Philout.(540) The first four miles to the Tiljugi(541) a very beautiful country, with innumerable plantations The Tiljugi a very wide channel, with a small clear stream From thence to the Gagri(542) is about $2\frac{3}{4}$ miles. The Gagri is a very large channel, and contains much deep water, almost stagnant, perhaps one hundred and fifty yards wide. Many stagnant pools in other parts of the channel communicate with the main stream, and seem to abound in fish From the Gagri to Phulout is about two miles. The whole country near the Gagri is bare and dismal, a few scattered fields amidst a waste of coarse grass. It is deeply inundated, but the soil seems tolerable. Phulout is a pretty considerable village, partly belonging to the invalids, and partly to the zemindar. As no new invalids have been sent for twenty years, most of them have died out. They and their widows cultivate very little. Some keep shops, or trade, and live by their pension The village, of course, is on the decay.

10th February.—I went about five miles through a very dismal country to Alumnagar,(543) a considerable

(538) Dhāṅgar (see Risley, *T. & C.*, *I*, 219, Buchanan's *Shāhābād Journal*, p 55, n 4) The name probably means 'hill man' Many suggestions have been made as to the derivation of this name, including the untenable one, that they received the bulk of their wages in *dhān* (paddy). The original name was probably *ḍāṅgara*, *from ḍāṅg* (Mar), *ḍāṅg*, also *ḍhaṅg* (Hin) a 'hill' meaning 'hill folk', and also 'rough', 'rude' folk.

(539) *Akhāṛā* (Hin), literally a 'place of assemblage', a place for wrestling or games; also used of a monastery or place where religious mendicants live.

(540) **Phulaut**

(541) **Tiljuga R.**

(542) **Ghaghri R.**

(543) **Alamnagar.**

village, where the Rajah of Choy(544) resides. He is a civil young man, of tolerable understanding, and he and his two younger brothers are keen sportsmen, on which account they prefer this wild country to the beautiful lands near the Ganges, although these are more healthy. His house is mean, consisting of a number of mud huts, and a small chapel of brick, surrounded by a ruinous mud wall. Part was burned last year, and the family is too poor to rebuild, having last year also been deeply involved by the funeral of his father. He has a flower garden and orangery, but the latter does not thrive, and the fruit is wretched In the garden is a stunted tree of the Pinus longifolia (545)

11th February.—I went about 12½ miles to Mahinathnagar,(546) through a low country filled with swamps. Many villages and plantations, but little cultivation. I presume that the people live much by their cattle Mynatnagar is in Furkiya, and not in Choy as represented by Rennell, the river forming the boundary. The Rajah says that his boundary with Tirahut is seven or eight coses north from Alemnagar, and that towards the north and east his district is well cultivated. The Katnayi(547) is a pretty considerable stream, deep clear and rapid, but full of weeds, as it passes through a marsh The huts mostly mud People very poor and dirty, but tolerably clothed, as in Puraniya. About a mile from Alemnagar passed a market place named Ladangwa,(548) held under a tree near a village.

Mahinathnagar is a poor naked village, opposite to an invalid Thanah established twelve years ago. The invalids are quite tired of their situation, cannot

(544) Chhai *pargana*, named as a *mahal* of *sarkār* Munger in Todar Mal's roll. See also J Beames *On the Geography of India in the Reign of Akbar JASB.*, 1885, p 170, 172, and map facing p 182

(545) This is the *chīr* or *chil* the long—leaved pine, not found on the plains of Bihār.

(546) **Mahinath Nagar.** See Rennell, *B A*, Pl II. It lies just within *pargana* Pharkiyā.

(547) **Kadai R.**

(548) **Ladma.**

procure people to cultivate their grounds, and are desirous of retiring on their pensions to some more healthy and agreeable place. I was here informed by two Burkandaj belonging to Gogri,(549) that to that Thanah the direct distance is eleven coses, but that to Chautum,(550) six coses, the road was impracticable owing to marshes. I was directed to proceed to Simri,(551) six coses, Chautum five coses, and Gogri four.

12th February.—I went to Simri, which is at least thirteen miles from Mahinathnugar. About three miles from Mahinath I came to an old watercourse of considerable width, and containing much water, but overgrown with weeds. It is called Tilawi,(552) and is said to be navigable in the rainy season. It forms the boundary with Tirahut. I followed its course for about 1½ mile to Sugowa(553) village, which must be the Sogniah of Rennell Until within about half a mile of this place the country is low and bare of trees. It then continues high to Simli or Simree, and is well wooded in plantations of mangoes, palmiras, and a few bamboos, but the villages are quite bare, the houses close huddled together, and very miserable. The people very dirty, as usual in Mithila (554) Simri is a poor village surrounded by fine groves. Visited by two Muhammadan zemindars, formerly Melek,(555) very civil men, and not without sense. They said that the cultivation has diminished considerably since the perpetual settlement. China(556) is raised everywhere

(549) **Gogri.**
(550) **Chautham.**
(551) **Simri** near **Bakhtiarpur,** a very roundabout route!
(552) **Tilabeh N.**
(553) **Sugma.** The Sogniah of Rennell
(554) Mithilā. The ancient name of the country north of the Ganges and south of the Himālaya, extending roughly from the Gogrā on the west to the Kosī on the east, was Videha. Mithilā was the capital city of Videha, as we learn from the Buddhist Jātakas and the Epics. The name Mithilā was later applied to the country, afterwards, and more restricted in area, to be known as Tirabhukti, from which we get the name Tirhut. Tirhut was a *sarkār* of ṣūbā Bihār in Akbar's time, and until 1875 a district under the British administration. For extent, see A. Wyatt's Revenue Survey (1845-48) map.
(555) For an account of the Chaudhurī family, still established there, see *Gazetteer* (1909), p. 192-93.
(556) *China*, the Common Millet, *Panicum miliaceum.*

being considered necessary at both marriages and funerals. Higher priced grains are used on these occasions.

13th February.—Went sixteen miles to Chautom, about south-east. The Gai(557) rivulet now stagnant seems to inundate a wide country, which by the spiritless natives is on that account considered as nearly useless. It is about nine miles from Simri, and two from the Tiljuga,(558) down the left bank of which I proceeded to the Ghat, and crossed to Chautom standing on its south side. Its banks on both sides are high, and have been formerly cultivated The houses to-day uncommonly wretched Two men followed me a mile bawling out for justice against the zemindars.

Chautom is a small village on the south side of the Tiljugi, which is the same river with the Gagri and Kamala.(558) It is a considerable river navigable at this season, but is not wide, and its banks on both sides are high and steep. It cannot, therefore, be a violent torrent that sweeps away much of the soil, as the people pretend. I saw in it two Gorivals.(559) and it abounds in fish. Monawar Sing, his brother and nephew reside at Chautom, near the centre of their estate,(560) which, they say, extends about seven coses in diameter each way. Their houses are very miserable, and everything about them bespeaks their being in poverty. They told me that they paid nineteen hundred Rupees a year, and that by far the greater part of their land is waste. That Mr Clevland(561) and afterwards Mr. Hay, an Indigo planter, had brought some of their land into cultivation, otherwise the whole would have been in that condition, as they

(557) Not named on the S.S.

(558) It is known as the Ghaghrī in its lower reaches, and as the Tiljugā and Kamlā higher up. Its channels and names are equally variable.

(559) The Gangetic alligator, or *ghaṛiyāl* (*Gavialis Gangeticus*); but the freshwater crocodile, or *boch* (*Crocodilus palustris*) is also fairly common in the rivers of these parts.

(560) For a short account of this family, see *Gazetteer* (1926 edn, p. 208).

(561) For this spelling of the name, that used by Cleveland himself in his Writer's Petition, see Appendix 1.

were exceedingly poor, and could not advance stock, without which no one would commence cultivation, although they offered the land for one or two annas a bigah They also said that they were only enabled to pay their revenue, and prevent their lands from being sold, by money lent them by an Indigo planter; yet they spoke so very inconsiderately, that at first they joined in the usual cry against that class of people, although they changed their tune when they were asked why they were displeased at receiving money to keep their lands from being sold. In fact, I do not believe that the planter assists them to any considerable extent, as I saw very little plant on their lands, and it is at too great a distance from his works. The assertion was made to raise my commiseration for their poverty: yet they wished to entertain my whole people, and Manawar attempted to fall at my feet in order to obtain permission, when I declined the offer They have also made large and useless plantations of mangoes, and I suspect the fact is, that they lavish their whole means on such useless pieces of ostentation, and cannot spare a cowrie for the improvement of their estate, while they vex every tenant that has any stock, until he runs away, for many tenants have gone to Choyi,(562) where they pay above a rupee a biga on an average When I exhorted them to economy for a few years, and to lay out their savings on the cultivation of their land, they said that the whole was so deeply inundated that nothing would grow on it except a winter crop, which was not worth the taking, the soil was so poor. Now both these assertions are without foundation. I do not think from what I have seen in travelling from north to south the whole length, that half is inundated, and all that is so will give annually a crop of wheat, mustard or pulse. The remainder is sufficiently high to give a summer and winter crop. In a few parts, that have been cultivated, the crops are uncommonly rich, especially the orohor and mustard. The real cause of the misery of both them and their people is

(562) i.e. into the Chhai *pargana*, or across the boundary into the Bhāgalpur district.

the lowness of taxes.(563) The soil in almost every part, rich dark ash-coloured clay, not very stiff.

14th February.—I went five coses to Thana Gogri, near which I passed through a village of Invalids, the whole of whose lands was cultivated. A village had been attempted near Chautom, but entirely failed. I presume no cultivator could be procured, where the zemindar let his lands so low.

The invalids from the neighbouring Thanahs came to visit me. They are very much satisfied with their condition, receive their allowances regularly, once in the six months, at their own houses, and an officer visits them every year to receive their complaints. Most of their lands here are in cultivation. Those from Chautom say that they deserted it because the country swarmed with mosquitoes, and the river with alligators, Boach.(564) They also complained of the inundation.

16th February —I went to visit the Dira(565) adjacent to the Thanah, which is undoubtedly entirely inundated, but it is tolerably cultivated and populous, although not a single tree will live on it, owing to the depth of the floods. It seems to be newly taken in by Dular Chawduri. The Dira between it and the Ganges is disputed property, and mostly waste Gogri is a very large village extending at least two-thirds of a mile from north to south, but not close built It is hid in a grove of trees, as the villages of Bengal usually are. I have nowhere seen the ricinus(566) so luxuriant Besides mangoes and Jacks, many tal and Kejhur,(567) and a few bamboos. The

(563) Buchanan elsewhere also refers to low rents as inducive to neglect of cultivation, and there is undoubtedly force in the contention Buchanan, however saw this area in the dry season in the rains most of it is deeply flooded, so that the cultivation of *aghani* crops is not practicable

(564) *Boch*, the 'snub-nosed', fresh-water crocodile [see note (559) above]

(565) *Diārā*, an area of alluvial deposit formed by a river

(566) *Ricinus communis*, the castor-oil plant.

(567) *Tāṛ* (*Borassus flabellifer*), the palmyra or "toddy" palm; *khajūr* (*Phœnix sylvestris*), the date palm.

old mosque in its middle, built by Alawadin,(568) the son of Husseyn Shah, has not been large but very neat, being entirely built of cut bricks neatly carved. Two bands of a singular stone, reddish waved with white, give it solidity. The east front had fallen, and has been rebuilt with the common coarse brick. The inscription is in this part. The roof has now fallen. A small neat mosque in complete repair a little south from it. The people here uncommonly stupid, and there are immense swarms of beggars, especially of blind people The Daroga, a Bengalese, is of considerable understanding.

19th February.—I went to Kummargunj.(569) About two miles from the Thanah I came to an old sandy channel of the Ganges, very wide but in most places dry, and not at all navigable in this season I followed its banks for about $2\frac{3}{4}$ miles, when I came to a large branch of the river navigable at all seasons, and where a good many boats seven or eight (7 or 8) were lying, taking in a cargo of reeds, grass, and firewood. The chor beyond both channels seems to be about half cultivated, but quite bare of trees. I followed the bank of this branch for about three miles, when I came opposite to the mouth of another arm, which separates this Thanah of Gogri from that of Monggir. The chor belonging to Monggir seems mostly waste, and is not large. I then went down the bank of this, the chief branch of the Ganges, for about $1\frac{1}{4}$ mile, when I turned to the left, and went through fields, mostly belonging to Korokpur,(570) for rather more than five miles, when I came to the side of the Ganges opposite to Kumargunj. The river may be there about fourteen hundred yards wide, of which the half on the north side, at this season, is mere sand. The southern shore, high red clay. No islands.

(568) Probably 'Alāu'd-dīn, a son-in-law (not son) of Ḥusain Shāh. See *Riyāzu's-salātīn*, Bibl. In Series, trans by Abdu's-salām, p 134 The mosque and inscription are not mentioned in the *Gazetteer*

(569) **Kamarganj**, 1 mi W. of Jahāngīrā

(570) Most of the large Bindā *diārā* was included within the Kharakpur *pargana*, which indicates that from very early times the main stream of the Ganges flowed by the northern channel, as it did in 1766-67 and as it has often done since.

21st February.—I went about 2½ miles to see the two hills(571) at Sultanganj. I first passed almost a mile through the village of Kumargunj, chiefly occupied by Invalids, shopkeepers and retailers of Tari, who live by supplying passengers. Immense numbers of pilgrims flocking to and from Bhaidyonath.(572) Many have brought water from Prag,(573) others take it from Utor Bahini.(574) At the end of the town three or four most wretched huts belonging to a kind of Goalas from Katak, who play with snakes, and dance to a kind of bagpipe They also pretend to be struck stupid, and their pipe to be rendered mute by anything thrown at them, one of the most silly pieces of grimace that I have seen. Near Sultangunj is an

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(571) Bishop Heber (*Narrative* I 289) writes "We passed at Jangheira two pretty rocks projecting into the river, with a mosque on the one, and a pagoda on the other" These, as will be seen from what follows, are Buchanan's "two hills", the one on the mainland, surmounted by a mosque, the other forming the rocky island in the river Neither is marked on the S S

(572) The temple of Vaidyanātha at Deoghar

(573) Prayāg, modern Allāhābād The Sanskrit word *prayāga* meant a 'sacrifice', then a place of sacrifice and of pilgrimage The tradition is that the sacred Sarasvatī also joined the Ganges and Yamunā where they meet at Allahabad and it is thought that the Sarasvatī still joins them there underground, thus forming a *triveni*, or junction of 'three streams'—always a holy site This was the *prayāga par excellence* The term *prayāg* is now applied, on the analogy of the junction of the Ganges and Yamunā, to other confluences of two rivers

(574) i e *uttar-bahini*, 'north flowing' The reference is to the Ganges near the Jahāngīrā rock, where the river used to curve round, deflected by the rock there, towards the north, or rather north-east The river has cut in since round the south of the rock-island, and the main channel here now flows more or less from west to east, but indications of the old northernly trend of the stream may be seen in the many deserted channels to the north of the present river, e g , that which passes Udaipur (8 mi NE by N. of Jahāngīrā) and Mathurāpur (8½ mi NNE of Sultānganj) In fact, in John Marshall's time (1670) the Ganges appear to have followed this very channel, as he passed Gaura, a place which lay between Udaipur and Mathurāpur, but has since been diluviated, on his trip up the river to Patna in that year It must be noted, however, that the Ganges had already cut in round the rock island at Jahāngīra, as de Graaf (in the same year) describes the island and refers to the violence of the current in the passage between it and the mainland (*la Pointe de Jangira*), owing to which "many boats had capsized" there.

old fort of Korno Rajah,(575) a square like that at Bhagalpur, but not near so large, being scarcely more than four or five acres. No cavity within, nor any traces of a ditch. In one place a small part of the outer facing of brick remains. The whole filled with bricks and fragments. Sultangunj is a large village with some trade. I saw many small timbers and bamboos lying for exportation. The two hills are very curious, both consist of a fine granite, reddish felspar, little white quartz, much black mica. The one in the river is called the Fakir's rock.(576) It is not so large as any of the three at Kahalgong, and a very large proportion is occupied by the buildings of a Mahant of the Dasnami Sannyasis, which are in good repair, but it is the most mis-shapen rude inconvenient mass that I have ever seen The Mahant acknowledges no Superior nor Guru. He says that he is the ninth or tenth in succession, and that he was born a Brahman in Gorokpur (577) He has about 20 Chelas, and the community have five or six servants. Owing to the rapidity of the current in the floods, they have then little or no communication with the shore, but at other seasons almost every Hindu, of any sort of note, who passes up or down, makes offerings, and at the Mela they receive great abundance, so that they lay in ample stores They are very poor-looking creatures and appear to live a life of listless mortification. The Guru fairly said that they had no knowledge

(575) Now known as Karangarh, the 'fort of Rāja Karna' The site should *not* be confounded with that described in detail by Rājendralāla Mitra in *JASB*, Vol 33 (1864) p 360 f In his Report (see *Martin's E I*, II, 38) Buchanan writes "Some traces of the brick wall by which the outer side was faced are still observable, and it is said a good deal remained pretty entire until it was pulled down by Colonel Hutchinson to erect a set of indigo works" Some of the indigo vats were still *in situ* 18 years ago, when I saw them, and they are perhaps still to be seen. In the *Bengal Obituary* (Holmes & Co 1848) the inscription on a monument at Sultānganj factory is quoted —"To the memory of John Hutchinson, Esqr who departed this life on the 12th September 1829, aged 58 years, 40 of which were spent at this factory", so that he must have been manufacturing indigo at Sultānganj while Col Hutchinson was Regulating Officer of the Jāgīrdār Institution (see Appendix 32, and was, if not a son, possibly a brother of the Colonel

(576) i e the rocky island, but "Fakir's rock" is a misnomer, as the [illegible] is Hindū. For description see *A.S.I.*, Vol. XV, pp. 21—24, and Plates VII-XI.

(577) Gorakhpur.

but the art of begging, and their utmost stretch of science is to be able to read some forms of prayer, which they do not understand. Of course, as followers of Sankara Acharji, their buildings are all dedicated to Siva Below these, towards the south, is a small old building, which was dedicated to Porusnath,(578) the God of the Jain The image has been removed, but the back wall of the temple is ornamented with a bas relievo of Anonta(579) lying on a serpent, with the goose of Brahma flying over him. The Sannyasis say, that Bhaidyonath has given orders that Jain should be no longer worshipped on this sacred hill; which is as much as to say that they, as the servants of Siva, have put a stop to the heretical worship Some Jain however occasionally come The Mahant says that he has no knowledge of who possessed the hill before the first of his predecessors in office. That it was previously a place of worship, there can be no doubt, as vast numbers of engravings in bas relief, apparently of great antiquity are cut on various parts of the rock They are all exceedingly rude No one can say to what sect they belonged, as all the sects admit the same personages to exist, and use them indiscriminately as ornaments None of the carvings appear intended as objects of worship, nor is any of them very indecent They belong to all sects. I observed Porusram, Narayon, and Lakshmi, Anonta, Krishna, and Rada, Narsinga, Ganes, Hanuman, Siv, and many others, besides one of Jain

I then went to the hill(580) on the continent, which is the largest. Its bottom consists of rocks, on which many figures are carved, although not of such great diversity as on the island The most remarkable is that of a female in a reclining posture, with several heads carved near her. It is said to represent a Rakisi(581) with the heads of her daughters. There

(578) Pārśvanātha, the 23rd Tīrthankara of the Jainas.
(579) *Ananta*, 'endless', 'eternal'; applied to Viṣṇu, and also to the serpent, Śesa, that forms the couch of Viṣṇu.
(580) Generally known as Baiskaran.
(581) Rākṣasī

are many Lingas, one of them supported by Naikas(582) or nymphs. On the top of the hill is some earth, and the tombs of a saint and his descendants. There is a little mosque, still in tolerable repair, but the houses in which the Muzairs(583) were accommodated have gone to ruin. The present possessor said that the Pir, on his arrival here, found the place in the possession of a Kanphata(584) Yogi, which infidel he put to death, and performed several miracles on the Rajahs, who came to revenge his death. He at one time shut himself up in a small chamber adjoining to the mosque, where he spent forty days in prayer and total abstinence, so that he became a very peculiar favourite of heaven. In a corner of the area in which the tombs are placed is a flag of stone on which this saint kneeled when at prayers. According to the Muzair a gentleman, many years ago, struck it with the point of a spear, when blood immediately issued from the stone; and he shows a small mark as the impression of the spear, and a reddish stain as the remains of the miraculous blood. Immediately above this hill is the part of the Ganges called Utor bahini, a very celebrated Tirta or place for bathing.(585) The water taken from this place is considered as peculiarly agreeable to Siva, and two reasons are assigned. One is that the river runs here towards the north, instead of towards the south, which is the usual tendency of the course. This northern course however at present is so little observable and so much inferior to what happens where the water is no better than usual, as at Paterghata, that some sceptics might cavil. The

(582) Nāyikā, "a sort of goddess, an inferior form of Durgā, and attendant upon her: there are eight Nāyikās" (H H Wilson, *Sanskrit Dict.*).

(583) i.e *mujāwir*, the 'attendant' or custodian of a Muhammadan mosque or mausoleum.

(584) A Kanphatā or Kanphaṭī (from *Kān*, 'ear', and *phaṭā*, 'torn') is a member of a sect of *yogis*, or Hindu ascetics, who may generally be recognized by their wearing ear-rings, often very large, made of jade or glass or even wood. They are described sometimes as founded by Gorakṣanātha.

(585) A *tīrtha* is a place of pilgrimage, not necessarily a bathing-place, though the word is specially used of such a place on or near the bank of a sacred river: in fact this was the original meaning.

other reason seems more unexceptionable. The God is said here to have treated the Ganga in a manner not uncommon for the Gods to behave towards other fair nymphs, and which may naturally be supposed to bring agreeable recollections to a deity, who chooses only to be addressed under the form of the Linga. On this rock I found a Gymnosophist from the west, who came up and said, in by no means a conciliatory tone. This is a vile country, at home I could get a rupee and piece of cloth from everyone I met, here no one gives anything. This rhetoric was not at all suited to find access to my pockets, and I advised him by all means to return home, lest the police should lay hold of him; for he was an exceeding indecent fellow. He did not go entirely naked, as many that I have seen, for he had a good rug on his back and shoulders to keep him warm; but his middle parts, before, were totally naked, and besmeared with ashes to render them more conspicuous.

22nd February.—I went almost four miles to visit Munsardihi,(586) said to have been the residence of a Khyetauri Rajah. The first 1½ mile was on the Sultangunj road. At a canal, which crosses the road about 16½ miles from Bhagalpur, I turned south for

(586) There is no such place on the S S , but the direction and distance point to **Nonsar** of the S S I suspect that Buchanan wrote Munsardihi by a slip for Nunsardihi (*Non-sar-dih*, the 'salt-tank-village')

It is noticeable that, in his description of this neighbourhood, Buchanan does not mention the name Jahāngīrā, the name of the village between Masdi and Kamarganj. The usual explanation of this name is that it was called after Jahnu Muni, being a corruption of Jahnugiri, or the 'hill of Jahnu', but there has also been a tradition connecting the site with the name of the Mughal Emperor Jahāngīr. Nicolas de Graaf (*Voyages*) records that when going up to Paṭnā in 1670 he walked from "Jangira" to "Gorgatte", i.e., from Jahāngīra to Gorghāṭ, and on the way he saw "the ruined palace of Jahāngīr, after whom the promontory of which I have just spoken is called this palace was almost entirely destroyed during the civil wars, but one can well judge from what still remains of the walls and of the arcades and pillars, which were very tall, that it had been a very fine building" In "Baṛā Jahāngīrā" there is an old *masjid* ascribed to Jahāngīr, said to have been repaired by Rāja Rahmat 'Alī Khān of Kharakpur, to the south of the main road there is a site said to have been that of a building erected under the orders of that emperor, and to the north of the village, now in the river Ganges, there are the remains of a tower-like structure called by some the *Kachahri* of Jahāngīr. I can find no record of Jahāngīr himself having ever visited this vicinity : and I mention the above traditions for what they are worth.

about a quarter of a mile through plantations that occupy the high banks of the river; after which I went about $1\frac{2}{3}$ miles over a low plain totally waste, and which is deeply inundated for about two months in the year. Towards its southern side is Munsardihi, an elevated space for about four hundred yards in diameter and surrounded by small tanks, from which probably the earth has been taken, that has raised the situation. In the earth thus taken out, I observe some Gangot. Many fragments of bricks remain on the elevated ground, and the ruins of a small temple. There is no appearance of the place having been fortified.

24th February.—I went in the first place to see Dolpahari(587) distant almost four miles. The country is very bare and flat. Dolpahari is a large rock of granite, extending north and south, and towards the latter ending in a conical peak, on which a monument has been erected. The building is small but in good repair, and being white-washed looks well, in a country where there is so little appearance of art. At the east side of the hill, under the temple, is a brick house of decent size for the accommodation of the Mahant, a Dusnami Sannyasi, and his disciples. I have nowhere seen [a] place in such a slovenly condition. The rock, of which this hill consists, is a small grained granite, white or reddish felspar, white quartz, and much black micaceous matter, which is generally disposed in flakes, but the stone is very compact, and excellently fitted for building. When viewed from the south the rock appears to be disposed in very irregular great strata, nearly vertical, but inclining somewhat towards the east. When viewed again from the west there is an appearance of horizontal strata, but very irregular. On the east again the rock is scaling off in thick layers parallel to the surface of the masses. The whole of these appearances seem to me to arise from accidental circumstances in the decay of the rock, which I imagine was at one time a solid uninterrupted mass. In one

(587) The little hill near **Dholpahari Hills**, about 3 mi. S by E. of Ghorghāt.

part I observed a large irregular bed of fat white quartz. The Mahant said that the buildings were erected by the ancestors of the Raja (Muhammedans), and that he was the thirteenth person in succession to his office.

From Dolpahari I went about three miles to Tanah Tarapur.(588) The country for the first three miles, rather low and bare; but here and there are small swellings, that might admit of villages, and some are thus occupied, and are planted. Farther on the country is mostly high, although quite level, and is very well planted, and exceedingly populous. The huts tolerable but not sheltered. Those towards Dol pahari very miserable.

26th February.—I went to visit the minerals towards Koji Ghat.(589) The Baruya(590) river in that direction is about two-thirds of a mile from the Thanah. It is a small sandy channel, without any stream at this season, but water is found at a very little distance below the surface A little beyond it, I crossed a small branch of the same. Rather more than three miles from the Thanah, I came to the north-east end of a small hill, named Kajhuri,(591) which runs north 60° east and south 60° west by the compass, for about one mile, but is very narrow. It is divided into two portions, of which that towards the south-west is the highest. I ascended that towards the north-east, where there are many bricks, and some foundations of buildings, which are said to have been the house of a Khyatauri Rajah. It is probable, however, that these were temples, and that the abode of the chief was on an elevated space at the east end of the hill, which is covered with fragments of brick and

(588) **Tarapur.** In giving the distance from Dholpahārī as "about three miles", Buchanan has made a slip, as he writes of the country "for the first three miles" and then of the country "farther on" The actual distance is between 7 and 8 miles.

(589) **Kojhi,** 8 mi. in a straight line due NW of Bāṅkā The position is incorrectly marked on the 4 mi =1 in map of Bhāgalpur district prepared in the B. & O Drawing Office.

(590) **Badua R.**

(591) The hill appears to be more than a mile to the south of **Khajuri village** (S.S.) and about 2½ miles S.E of Tārāpur.

probably consists of that material. North from this end of the hill are five small tanks, where there probably has been a town. The people do not pretend to know the Rajah's name. The hill is not so rugged as those consisting of granite, but the surface is covered with stones, and the rock appears in many parts running in vertical strata, nearly in the direction of the hill. The strata are thin and shattered, and have a very slight inclination towards the north-west. The strata are not only tabular, but their structure is schistose. A great portion consists of fat white quartz generally more or less granulated, and in some portions formed into irregular crystals. Along with this, in the same plate or stratum, are intermixed parallel layers of a fine-grained compact aggregate, of a dark colour, and often much impregnated with iron.

To this hill the country is in a fine state, and the villages tolerably good, at least the huts are hid by arbours, ricinus, and such like plants, that conceal their misery, and there are fine plantations separate from the villages. About five miles beyond the north-east angle of Kajhuri some very large masses of granite, perfectly irregular rise into a low ridge named Chautea pahar.(592) The granite near the surface is in a state of decay, but consists of middle-sized grains of white quartz, white or reddish felspar, and black micaceous matter, with some rust-coloured powdery matter. From Chutea to Khajuri, and a little beyond it, the country belonging to Korokpur is mostly occupied by Goyalas, and is in a very bad state of cultivation, most of the rice fields being deserted: but near a small rivulet I passed for about two-thirds of a mile through a corner of Bhagalpur, belonging to a small Malek zemindar, whose lands were entirely in cultivation. He is probably highly assessed. About half a mile beyond Kajhuri I observed calcareous nodules in the soil, and these are to be found occasionally in different parts towards the hills. From thence there are many scattered and stunted woods to Koji ghat,

(592) Near Chutia.

which by the road I took, by Itari(593) and Tiliya,(594) may be 8¾ miles; but in the direct road, by which I returned, it is only about eight, that is, it is rather less than eight coses road distance from Tarapur. The country for this space is chiefly inhabited by Kol Kadar(595) and other rude tribes, and their houses not being sheltered by arbours, or shrubs, look very wretched. Some are sheltered by dry branches, as in Banka. About a mile from the ghat, and extending a great part of the way towards it, are many bricks scattered in the woods They are said to be the remains of a house of a Khyetauri Rajah, named Bharmayi. The ghat is formed by a narrow passage between Kaphri(596) on the east, and Kharighati(597) on the west, and a small channel fills the greater part of the passage. From this ghat four roads branch off. One to Tarapur, by which I came; one to Bhagalpur, by which timber and charcoal are sent; both of these pass clear of the hills; a third goes to Banka through another pass between Bharum(597) and Barai,(598) and a fourth to Kasmu(599) between Phoki(600) and Barai by a passage through which the channel comes. I went by this from the ghat about five hundred yards to a village(601) occupied by Kol, and where a trader in timber resides. At this village I found that the Kol had three forges, such as those I had seen before. They collect the ore, which is in the form of coarse sand, by winnowing the sand brought down from Barai and Bharum by torrents. In the place where

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(593) **Itahri.**

(594) **Telia Pahar.**

(595) Kādar, an aboriginal caste allied to the Naiyās, practically confined to the Bhāgalpur and Sontāl Parganas districts (see Risley, *T. & C.*, I, 367).

(596) Not named on the S S, but from a sketch inserted by Buchanan in his journal, it seems they are the peaks to the N W. of Bharam, at the easternmost extremity of Khāwāpokhar Pahār, down the narrow gap between which the Belasī Nadī flows

(597) **Bharam** (1168 ft.) (S.S.).

(598) **Sara Pahar.**

(599) **The Kasmoh of the S.S.**

(600) **This is the small hill by the south side of Siradih.**

(601) **The Kohhl of the S.S.**

I saw them perform the operation, on the west side of Bharai,(602) I found the pebbles of the torrent chiefly of a quartzose nature, but some of them consisted of quartz mixed with a black micaceous matter, which is probably the ore. I found no such rock, for that which I found at the Ghat, and which, judging from a distant view is the same with that on Bharum, is almost entirely quartz. At the Ghat it is divided into many irregular masses by fissures running in all directions, nor has it any appearance of either stratification, or of a shistose structure. It is there in general fat and white; but some parts are stained of a dirty red, and contain irregular flakes of a reddish matter. On the north-east face of Tarha(603) hill, adjoining to Karighati, which consists of the above-mentioned white quartz, I found a very large mass, but whether a rock or detached stone I could not determine. It had no appearance of stratification, but in some parts showed a tendency to a shistose structure, and consisted of aggregate grains of a clear and brownish diaphanous quartz Between the Ghat and the Kol village, there is a rock of shistose mica, so much shattered that it is of no use; nor could I determine any regular position of strata; but about 1½ miles south-westerly from thence, and adjacent to the west side of Borai, is a quarry of shistose mica which is wrought for the stones of hand mills. It is divided into irregular trapezoidal flags by fissures which run east and west at from two to four feet distance from each other; by others, which cross these at right angles, generally at greater distances, and finally by horizontal fissures at from one foot to six inches; but these flags are so much shattered, that solid masses even for making the stones of a hand-mill cannot everywhere be procured. If it were not for that circumstance, this would be a fine stone for building, as it cuts well, and does not tarnish much in the air. All the granites obtain, immediately on exposure to the air, a very ugly black coat, a kind of

(602) The Barai above, i.e. **Bara Pahar** of S.S.
(603) One of the central peaks of the **Khawapokhar Pahar.**

mould, I believe; but this has a fine light greenish hue. In some parts it is stained red The layers of which its masses consist, are horizontal in the quarry.

28*th February*.—I went to visit Kheri(604) hill. I went first to Lokhyonpur,(605) a considerable village on the Sultangunj road, where there is a neat but small dorga of brick. It is rather less than three miles from Tarapur. About a mile farther I came to Asorufgunj,(606) a very large village and market place. Here I left the great road. Near this were eight or ten wretched huts or sheds of the.....(607) who catch birds. They are most clamorous beggars, men and women, but healthy good-looking people, almost naked About 2½ miles from thence I crossed the Buriya,(608) which passes close to Tarapur. It has a wide sandy channel, in which water is found by digging, but the water is stagnant, and at this season cannot be conducted by canals. It serves, however, for irrigation, but it is not much easier procured, than water anywhere else, as in great many places here the water may be had by digging to a very few cubits About 3½ miles from thence I crossed a very narrow channel, called the Bela,(609) which contained a small stream. I am not sure, but it may be a canal from the river next to be mentioned, the Izara,(609) which is narrow, and breaks a good deal of ground by its windings, but contains much water, where I saw it quite stagnant, but that was probably owing to its being dammed to send off water for irrigation. I crossed it about a mile from the Bela. About 2½ miles farther, being near Kheri hill, I began to find bricks in the soil, and these were observable

(604) The hills indicated near **Kasba Kheri** on S.S

(605) This would appear to be the village marked **Shahabad** on the S.S

(606) **Asarganj**, adjoining Jalalabad Buchanan first wrote **Asorgunj**, and afterwards added the *r*

(607) Blank in the MS

(608) **Barua N.**

(609) These names do not appear on the S.S., but on examining Sherwill's old Revenue Survey map it is clear that the streams in this vicinity have been shifting their channels. Buchanan seems to have gone via Nayāgāon and Ratanpur to Purānī Kherhi.

till I reached Khyeri bazar,(610) at the northern end of the hill of the same name, which runs north and south, instead of east and west as represented by Major Rennell who was probably misled by having seen it and the adjacent small hills from the river. It consists of seven small hills united as in the plan of which the three northern are the largest. It is surrounded by four small hills as in the plan. I only visited the three northern and higher parts of Khyeri which consist of a vertical rock running north-east and south-west by the compass, and composed of thin parallel strata, approaching, where most entire, more nearly to Petrosilex or rather Jasper, than to any other substance, but consisting of many very small grains forming an aggregate. In some parts the petrosilex is mixed with very irregular layers of white quartz forming one compact stone. In many more it has a decided shistose texture, to which the whole has some tendency. Where the shistose texture is most decided, the stone has somewhat of a granular fracture, and assumes an appearance approaching to that of a very fine grained shistose mica. Kheri, the people say, is three coses long, but that seems to me to be much exaggerated. Kheri was the chief seat of the Khetauri Rajahs, and many small tanks with scattered bricks all round the northern end of the hill, to a very considerable distance, show that they have been chiefs of no small power. All the three higher eminences of the hill contain ruins, which I shall now describe. From the bazar a road slopes up the eastern face of the first hill to where it joins with the second. This road is formed of flags, cut from the mountain, and, where the hill is steep, forms a kind of stair; and where more level, a kind of pavement, both very rude. Having reached the summit, the road divides into two branches, one extends north-east to the edge of the hill that overhangs the bazar, where the foundations of a small brick building may be traced; but bricks are scattered

(610) **Kasba Kheri.** No mention of this interesting old site is to be found in the *Gazetteer*. See *A.S.I.*, Vol. VIII, pp. 129—39.

the whole way, there probably having been many small chapels. On a rude flag, lying by the side of the road, are engraved one short line consisting of seven letters, but some have probably been broken from the beginning. No person can tell in what character they are written.(611) See Facsimile. near the small chamber is another flag with some rude carving on it, in——the accompanying form.(612) This place, the people of the village say,——was the Rajah's Hawa khana,(613) but that is exceedingly doubtful. The other branch of the road, ascending the second hill a very little way, divides into two arms, the lower of which goes for a few yards to a very fine well, lined with brick, and at least sixteen feet in diameter. A wild fig has been allowed to take root, and has thrown down the walls, so as to choke the well entirely. The other arm of the road leads up the hill for thirty or forty yards, to a Linga made of stone, and more resembling the object it is intended to represent than any other that I have seen. Immediately south from thence is a great heap of bricks, which is commonly called the Rajah's house; but appears evidently to me to have been a temple; for the situation from the steepness of the hill would have been exceedingly inconvenient, unless intended as a place of strength, and there is not the slightest trace of fortifications.(614) This heap consists of two parts; one between the linga and the summit of the hill, and the other on the summit. The walls of the former seem in some measure to remain but the roof has fallen in, leaving an irregular mass of bricks with

(611) Beglar, in *A S.I*, VIII, 129, writes of numerous inscriptions "almost all in the shell characters" The site has not been very thoroughly examined yet.

(612) Buchanan inserts a hand-sketch of what is evidently a conventional, ornamental design, a quatrefoil with diagonal cross-lines enclosed within a circle.

(613) Literally 'air house', a place in which to sit and enjoy the fresh air or breeze.

(614) Yet Beglar, in an account (*loc. cit*) which otherwise also reads as if he had not made a very close examination of the site, writes of "the fort on the hill" as "an irregular enclosure of rough large blocks of stone laid on each other without cement, occupying the whole of the tolerably level top of the easternmost hill"; of a "citadel"; "outer fort", etc.

a cavity in the centre. Near the linga in this building, is a pillar of granite, the top projecting from among the bricks three or four feet. The natives imagine this was the place where the Rajah's elephant was tied, just as if his stable would be adjacent to his god. The building on the summit is immediately adjacent, and some of its foundations remain made of cut granite. The walls have fallen down the hill, where many stones remain They are of granite, like that of Dol pahari, and [there] have been doors. windows, &c., rudely carved. A Ganesa on one of them is very plainly distinguishable; and there are other figures, but so much defaced as to be no longer recognisable. This building has been a square of twenty or thirty feet. Small buildings have extended from this all the way to the third summit of the hill, and end towards its southern declivity in a chamber of brick about nine feet square, with exceeding thick walls, and one door towards the north-east The walls remain to about four or five feet in height. The people call this the women's apartment, but we can scarcely suppose that even a Hindu lady could endure to be smothered in such a hovel. It looks more like the den of a hermit.

1st March.—I went to Khorokpur,(615) the Rajah, who has been vastly civil, wishing for a visit. About half a mile from Tarapur I came to the Chara,(616) which is said to be an artificial canal taken from the Buriya. Its channel which is sandy, is smaller than that of the river, but at this season it seems to contain more water, as a canal taken from its sand affords

(615) **Khargpur.** The correct spelling of this name is doubtful Though perhaps generally pronounced Kharagpur by the illiterate folk, I have frequently heard it pronounced Kharakpur With illiterate rustics, moreover, a *k* is not infrequently slurred into a *g*. Kharagpur would mean 'sword town'; and there is the usual legend explaining why it is so called The story is not a very plausible one, and I have always suspected that the name was derived from Kharak (খরক), meaning a 'cattle-shed'. In the old days, when the hills were covered with forest and grass, they would be much used for pasturing cattle. These would be collected before nightfall and kept in pens just below the *ghāts*. The entrance to this important *ghāt* would be just the place for such cattle-pens.

(616) A branch of the **Badua R.**, not named on the S.S.

even now a fine stream for irrigation. Having followed the course for about a quarter of a mile, I went about two miles to the Sakri,(617) a deep channel in a stunted wood, with some stagnant dirty water. About 2¾ miles farther I crossed the Mohana(617) and Aura(617) at their junction, two small streams containing a little water, but their channels narrow. From thence to the Mon,(618) which passes through Khorokpur, is not quite two miles Tarapur is very pleasantly situated It swarms with beggars, among which were two dwarfs. One three feet 9½ inches, tolerably well formed. The other less, but distorted about the legs; both men. Khorokpur is eight miles from Tarapur. I was met by the Rajah about 3½ miles from his house, at two tanks and two small Hindu temples, which had been built before the conversion of the family The temples are ruinous and when I asked to what gods they belonged, the Rajah said that they contained no images. These, I suppose, the Rajahs on their conversion had thrown out. Heavy complaints both at Tarapur and on the road against the Izaradar; the people say that they must run away. They cannot pay the expense of a suit.

Khorokpur is a large village situated on both sides of the Mon, the Rajah's house and Mosque being on the right, and the Imamvarı(619) on the left. The Rajahs had formerly a very large house of brick, but in the disturbances, during the time of the present occupant's grand-father,(620) it went to ruin, and the present buildings are but mean, although of great size. A part is of brick, and some is tiled; but the greater part consists of mud houses thatched. The

(617) Buchanan's Sakrı appears to be the **Belharna N.** of the S.S.; and his Mohana the **Sakrl N.** of the S.S. The **Aura** is not named on the S.S.

(618) **Manl N.:** the name is Man, not Manı.

(619) i.e *imāmbārā*, the place to which the *ta'zıya*, or shrine of Ḥasan and Ḥusaın is conveyed during the Muḥarram, being there kept.

(620) i.e Rāja Muzaffar ' Alī. The Rāja in Buchanan's time was Qādir ' Alī, son of Faẓl ' Alī, according to a MS. history of the family in my possession (not Faiz Alī, as stated in the *Gazetteer*).' Faẓl ' Alī was the second son of Muẓaffar 'Alī.

Rajah moves about in great state, but his other expenses, I presume, are moderate. Two sons,(621) now lads, are taught at home, from whence they have never been sent. The father has been at Bhagalpur and Monggir, and is an exceedingly civil man, but seems to have very little intellect. However, he looks more after his affairs than most other zemindars; but his law suits with Rup Narayan have involved him in debt to his Dewan, in whose clutches he is now secured, and the estate will probably be ruined.(622) The Mosque is a small but very neat building of three domes, in the best style that I have seen. The Imamvari was formerly thatched, but the Rajah is now occupied in building one of brick, which promises to be a handsome work.

2nd March.—In the first place I went two coses to a hill named Murla,(623) on the east side of the Monggir cluster. About three miles from Korokpur a considerable rock appears on the surface, broken into rhomboidal fractures in all directions, and consisting entirely of white fat quartz. Some of the masses have a shistose appearance, others have not, which I look upon as accidental, from a difference of position in decay. I cannot say positively whether or not the solid mass anywhere appears on the surface. About two hundred yards farther on is another similar rock. These I left on my left hand. Where I reached Morla is the appearance of an old wall of stone, called Murcha, and said to extend to Mongger. Morla is a considerable hill of quartz, perhaps a mile long and three hundred feet high, with great masses of bare

(621) Perhaps Iqbāl ' Alī and Rahmat ' Alī, sons by the first wife, who succeeded to the estates in about 1819 and 1826, respectively

(622) And so it happened some thirty years later, when the estates fell into arrears of revenue, generally thought to have been due to the rascality and intrigues of the rāja's subordinates, and were sold. The main portion of the properties was purchased by the Banaili family, till then little known. The headquarters *pargana*, Haveli Kharagpur, was bought by the Mahārāja of Darbhanga, since when it has been much developed.

(623) Not named on the S.S. The latest editions that I have been able to obtain of the 1 mi. = 1 inch sheets and of the 4 mi. = 1 inch district map have been of little use as far as hills are concerned in the Monghyr district. Even the large reservoir, or "Kharakpur Lake" formed more than fifty years ago (see below) is not shown on either of these maps!

rock. At the Murcha it is reddish and somewhat granular, like what for the last few days I have called Petrosilex; but I am now convinced that the whole is quartz or Jasper, as it has not the proper conchoidal fracture of Petrosilex. At the north end of the hill it is white, and less granular, and the rock on the opposite side of the river, on the large hill Dewa,(623) is of the same nature On the west side of the hill again, at Haha,(623) this rock is most decidedly granular, white intermixed with reddish and greenish spots. In all the places, although I saw vast masses of the naked rock fairly exposed, nothing like strata can be observed. It is divided into rhomboidal masses very irregularly by fissures in all directions. The only extraneous matter observed in this rock was at Haha, where a large nest, about ten feet each way, is exposed by the wearing away of the river. It is of a soft miscaceous black or iron-grey substance with a silky lustre, and remarkable waved foliated texture and very heavy. I have no doubt that once it was entirely embedded in the quartz, which has been worn away by the Mon. Alighting at the Murcha, I walked about half a mile to where the Mon forces its passage between two great rocks, one on Murla and the other on Dawa. This is called Sunduyar Ghat.(624) Immediately above this the Mon is joined by a smaller rivulet the Panch-Kumar,(625) which comes from a hill of the same name, and has a course of about two miles, through a swelling valley, entirely covered with trees, but of a fine soil. From this gap I went about half a mile to the west side of Morla, where there is a small waterfall called Haha,(625) and a deep pool above it, owing to the Mon being confined by a ledge of rocks. The Mon rises at Bhim Ban (626) about

(624) The gap through which the **Sindhwari N.** issues from the hills Inside this gap, to the south-west, now lies the important irrigation reservoir formed by damming the Man river A description of the scheme will be found in the *Gazetteer*, (1926 edn., pp 96—98)

(625) *Hāhā* is an onomatopœic word, signifying a laughing sound, hence the name of the waterfall. The name will recall to many a peon by Longfellow.

(626) Bhīmbāndh would be 9 mi. distant in a straight line, but much further by any practicable path.

three coses southerly from Haha. It is a rivulet which contains a considerable run of water at all seasons. The water at Haha has a lurid ash colour, which does not promise any salubrious effects. At Korokpur indeed it is clear at this season, and is considered by the people there as wholesome; but they admit that it will kill all new-come Mogols, and that no animal from the Mogol country, especially the ass and camel, will live if they drink the water. In fact, I suspect that it is very unwholesome to every person who has not been inured to it from youth.

Having returned to the Murcha, I proceeded towards Ronganath,(625) and passed on the other side of the quartzose ridge, which is named Picheli and Kurnakumar(625) or the young buffalo. It is long but of inconsiderable height. Near the south end and about two miles from Morla, a large rock of granite projects from the forest; but cannot be said to form a hill. From thence to Rongonath is about $3\frac{1}{4}$ miles. On the whole Ronganath from Morla is about $5\frac{1}{2}$ miles. A mile from the Murcha I crossed a small dry torrent called the Putgagar,(625) and about half a mile from Runganath. I crossed another called Sawarni.(627) Runganath is a narrow ridge rising with a moderate ascent from the south, and ending abruptly towards the north. On the summit is a small rude brick temple of Siv; but the view is remarkably fine. At the south extremity of the hill the rock is of white quartz, without any appearance of strata. The rest of the hill consists of very fine-grained shistose mica, in a state of decay. It runs from north-north-east to south-south-west, and is inclined from the perpendicular to 30° towards the west. Amongst the strata are many irregular masses of white fat quartz, sometimes as wide beds, one to two feet thick, at others in narrow parallel veins.

(625) None of these are to be found on the S.S

(627) Not named on the S.S. It is the Subarni of Buchanan's map.

From Ronganath I went rather less than two coses to the west side of Ungchanath,(628) passing a dry small channel, called Bagara,(628) about a mile from the former, and another named Kutiya(628) about 1½ miles farther on.

Almost the whole country through which I passed to-day consists of stunted woods or bushes, in which are a few small scattered spots of cultivation, with most wretched huts. Unchanath is a very irregular hill of granite sending up from its highest part a very narrow peak of rock, on the summit of which a small math(629) of —— has been built, but the image has been for some time removed. The Math is accessible only by means of several ladders, which are placed upon the most sloping part of the rock, towards the west. None of my Hindus would venture up, although very desirous, and encouraged by the example of a Muhammadan Laskar. There are some small temples, particularly one of Siva, on more accessible parts of the rock. The Panda is a Rajput.

3rd March —I went rather less than five coses to Gauripur (630) About 1½ miles from Unchanath I passed the north corner of a small hill of granite, named Gusi pahar,(631) both west and east from it several rocks are exposed on the surface. About half a mile farther, I passed about half a mile north from another small hill called Koira.(631) About half a mile beyond that I crossed the Sakri,(632) a pretty large sandy channel, in which water may at all times be found by digging. Less than a mile from thence is a very inconsiderable torrent.(633) About 2¼ miles

(628) None of these names are to be found on the S.S. Unchhānāth may possibly be the hill marked near **Nonaji** and **Debghara.** The Khutiya is shown on Buchanan's map (but not the Bagara)

(629) A monastery (*maṭh*) A blank has been left in the MS for the name.

(630) **Jogibara** (Gauripur) on the S S

(631) Neither named on the S.S

(632) **Sakri N.**, and three miles upstream marked **Mahani N.**, on the S.S.

(633) **The Belharna N.** of the S S., the Bela or Belhar of Buchanan's map.

from Gauripur I crossed the Boruya,(634) a wide channel, and even now it contains a little water above the sand, but only in pools. People whom I had sent on to clear the road from Tarapur, had wasted their whole time in clearing a jungle here, and this was totally superfluous as the road which they cleared was so circuitous, that I did not follow it, and came straight through the woods without any difficulty. They had done the same between Korokpur and Ungchanath, and my baggage was brought five coses in place of three. Gauripur is a wretched village of a few huts, near a small tank dug by the lady of one of the first Rajahs, before their conversion. A little west from the tank is a small brick Math of Parwati, still entire, and one of Siva in ruins. South from this is a vast rock of granite, forming a small hill. The crevices of the rock are filled with trees. It is said to harbour tigers, bears, hyænas and porcupines. At its east side is a smaller rock, on one stone of which is a short inscription in the common Nagri and on two others are some rude lines [?] representing solid temples of Bouddh, which seem to be of great antiquity, and I think traces of writing may be perceived on one of the mouldings of each; but so much defaced that my painter does not think the marks have been letters. Some of the village people say that they remember them entire, but little dependence can be placed on what they say. The owner of a neighbouring small estate is a Hindu of the Rajah's family. He assumes the title of Babu. I had been led to expect that the inscription was very long.

Jomdoho(635) being too distant for two days' journey, I intended to have divided the road into three equal shares, but was told that would be impracticable, as after entering the great wood, two coses distant, the nearest place would be Kasmow,(636) distant eight coses. I therefore determined to make

(634) Badua R.
(635) Jamdaha.
(636) Kasmoh.

a halt at Tauhurnagar, (637) the only place where water is procurable.

4th March—I accordingly went to that place, and halted on the south side of a considerable tank, in a stunted wood, about 4¼ miles from Gauripur. About three miles from that place I crossed the Lohagor,(638) a sandy channel now dry, and thirty or forty yards wide. Here and at the last stage, the chief population consists of Musahar and Bhuiyas, both most wretchedly stupid, and helpless The latter now pretend to be Surja Bongsi.

People whom I sent to Rata Pahar(639) brought me specimens of all the rocks which they observed there. These were mostly quartz as near Koji ghat, some pure white and simple, others like that at the bottom of Tarrha(640) hill, others again with various admixtures of mica, forming from what I formerly called hornstone, until they gradually become shistose mica. From thence was also brought a specimen of the rocks of black schorl and quartz, of which I had only seen fragments at Kojhi. The only different stone is an aggregate of Chlorite and white quartz.

5th March.—I went to Gunti Lodun.(241) Dreadful accounts were given of the difficulty of the road, and I therefore had sent on people to clear it, which I found they readily did, by once in two or three hundred yards cutting down a few bamboos or branches, that hung over the road, which is far from bad, and is daily frequented by carts. Even this precaution was not absolutely necessary, as owing to stupidity or perversity in my guide, or perhaps, to both, he led me for about four miles out of the direct road, which had been cleared, and took me a circuitous route, to which nothing had been done. I found

(637) Not on the S.S., but it lay near **Sanbarsa**. It is marked as Tuhur Nugur on the old R. S. map.
(638) **Lohagara N.**
(639) The hill to the E. and SE. of the village **Rata.**
(640) See under date 26th February, note (603) above.
(641) **Gangti** and **Lodhan**, two small villages on opposite sides of the **Orni N.**

some inconvenience in forcing through among the branches, but not very great. About half a mile from the tank I came to a low ridge of quartz, running west, southerly, and east, northerly, between the south end of Rata and a small hill on my right, which seems also to be quartz. About two-thirds of a mile farther, having had the Soruyi,(642) a dry torrent on my left, I came to Tauhurnagar Ghat, between two small hills, that consist of shistose mica, which like all the rocks that I saw this day, in which stratification can be observed, runs west, southerly, and east, northerly, in a vertical position. As I crossed their direction nearly at right angles, only inclining a little towards the east, the whole rocks may be considered as alternate strata. About two miles farther I came to a small torrent,(643) where also the strata were quartzose, and all the way from the ghat to that place the loose stones were of that nature. Here I ascended a low ridge, on which were many projecting masses of granite in decay, evidently running in the same direction with the other strata, but having no appearance of a shistose structure. About a mile from the last-mentioned torrent, and on the opposite side of the ridge which is very low, I came to another dry torrent named the Bindera.(643) The rock there is exactly of the same kind of granite, but the structure is evidently shistose, another instance to show that this structure is often owing to accidental circumstances in decay. A very little, three hundred yards, beyond that is a ridge of quartz, and about four-fifths of a mile farther, large masses of naked granite on a level with the surface, in which there is no appearance of stratification. From this a hill called Nara Pahar(644) bore south-west. The granite continued for more than half a mile, when the north and highest end of Underkot hill(645) bore about east from me. About four-fifths of a mile farther I had

(642) **Sahroi R.**
(643) These streams are not named on the S.S
(644) **Narha Pahar.**
(645) Evidently **Malui Pahar** of the S.S

the above hill called Nara on my right, and the higher parts of Underkot on my left, the former near; and both from the stones on the road and its appearance, I have no doubt that it is granite. About two-thirds of a mile farther, I came to another rock of shistose granite, and saw a high hill named Beharu(646) to the south-west, at a considerable distance. About two-thirds of a mile farther, I came to the summit of a low ridge, which extends from Underkot, and consists of white quartz, in which are deseminated grains of yellow mica. About a mile and a half beyond this I came to a rock of solid granite. About $1\frac{1}{4}$ mile farther I came to the torrent called Chandon Turi,(647) where there is a rock of beautiful shistose mica, white quartz, and large scales of black mica. About four-fifths of a mile further, on the highest part of a ridge extending from the Kasmau hills on my left, I found a rock of quartz evidently in vertical strata. About half a mile farther at Kasmau,(648) a miserable village, the rock is granite. Rather more than a mile farther on I came to a small dry torrent named Dhuma Jhar,(649) beyond which is a small ridge of the same name, and about a quarter mile wide, beyond which is the boundary between Tarapur and Banka. About a mile and a half farther, I came to Gunti Lodon, a village on the banks of a large sandy channel, in which, even now, there is a small stream, running from the west. Gunti is on the north and Lodon on the south side of the river, and there I halted in a very beautiful situation capable of high improvement. Paradi(650) where I went to visit the

(646) **Biharu Pahar** (1324 ft), a name which, as the " Beharow Hills " Rennell applied to the whole range.

(647) The headstream of the **Belasi N.** There is a village Chandanthāra close to where Buchanan crossed it

(648) **Kasmoh.**

(649) Perhaps the **Kharuajor N.** of the S.S

(650) i.e. Pahāṛiḍih; not marked on the S.S., but shown as Puhareedeeh on the old Rev Sur. sheet. In the margin of the MS. Buchanan has written the name again in Bengali characters and in English as Pāhiriḍihī!

NOTE.—It was in the case of these journeys of the 5th and 6th March, between Tuhūrnagar and Jamdāhā, that Buchanan entered in the margin of his journal the " Minutes road journey " that furnished the late Mr. V. H. Jackson with a clue to the method followed by him in calculating the distances recorded. (See *Patna-Gaya Journal*, Introduction, pp. xix—xxii).

first iron mines from Banka, is said to be one cose east from this, and four coses north-west by west from Jomdoho.

6th March.—I went to Jumdoho.(651) At Lodon the rock is granite. The rocks are stratified in the same manner as yesterday, only they incline more to the north and south, so that I crossed them more nearly at right angles. Less than a mile from Lodon [I] came to a rock of granular white quartz. About one and a half mile farther, in a small torrent names Humuri,(652) the rock was a fine-grained rotten shistose mica granite About 2½ miles farther I came to a considerable torrent named the Amera,(652) at the boundary between Khadirali and Rup Narayon.(653) The rock here also is fine grained rotten shistose mica. About half a mile farther, in a small torrent named the Sugabara,(652) the rock was a granite in a state of decay, evidently running in vertical strata, but not shistose. Beyond this I crossed a steep ridge, rather more than a quarter of mile wide to the Butuyariya.(652) About 1½ mile farther on I crossed again the Amera. The rock a small grained granite of two kinds, one reddish brown felspar, white quartz black mica. In some places this was sound, without any appearance of parallel layers; in others it was in decay, and had become shistose. The other was quite sound dark grey felspar, or rather hornblend and white quartz, and black mica, both in very small quantities. This stone approaches to a lapis corneus, but is too hard. About two-thirds of a mile farther I crossed the Amera a third time, where it enters the valley watered by the Kurar,(654) to the bank of which was about an equal distance. The Kurar is a very wide sandy channel (120 yards) from which water is taken for irrigation. The cultivation extended about half a mile on its northern bank. The valley would

(651) **Jamdaha,** 10 mi. south of Bāṅkā, on the Chāudan river.
(652) None of these are named on the S.S.
(653) For an account of the dispute between the Kharakpur rāja and his ghaṭwāl of Lachmīpur, see Murphy, *Final Report, Sur. and Set., Bhāgalpur Dist.*, 1912, p. 14, para. 33.
(654) **Kudar R.**

be exceedingly beautiful, were the state of the people better.(655) They are a very poor sickly-looking people, mostly armed with swords. From this I crossed a ridge, about two-thirds of a mile wide, on which I observed many stones of white quartz, but no rocks of that substance I then went about half a mile through the valley of the Chandon to Jomdoho which stands on the bank The road passable in a cart the whole way, only some difficulties in the richer vallevs Many roads in all directions through the woods. In the afternoon I was visited by Rup Narayon, who came with a good many armed men, very meanly attired He rode on a tatoo, and a palanquin followed He is a little man, stout but very ill-made, with a vulgar murderous-looking countenance, and his manners are as rustic as his appearance. He is not uncivil; but has no one thing about his appearance like a gentleman He probably imagines, that on account of the civilities of Khadir Ali, I have become his enemy, as in place of the kindness with which his people formerly supplied me. I here find a difficulty in getting anything. I asked him in the most civil manner for his genealogy, promising that I understood he was of a very ancient family, on which he talked of some of the legends about the Surjo bongs, which he had learned from his Purohit, but declined giving me any account of his immediate ancestors, asking me very bluntly, what I wanted with his genealogy. I told him, that in the account which I must give to the Governor General, I wanted to give an account of all the old and distinguished families in the country; and, if I could not procure any account of his, I must conclude that none existed, which I believe is the case.(656) The chief muhurir, so far as I can learn, knows only the names of three generations, before whom the family

(655) A remark characteristic of Buchanan, who associated beauty of natural scenery with well-tilled fields and neatly-kept cottages.

(656) He was the son of Jagannāthadeva, and the nephew of Lakṣmaṇadeva, the eponymous founder of Lachmipur. The fullest account of Jagannāthadeva's activities is given by Browne (*India Tracts*, 1788, pp. 46—61).

were probably infidels, and had barbarous names. The Muhurir acknowledges that they were all notorious thieves, of which therefore they are not ashamed, as he certainly would not say anything that would give offence to his master. I then asked the chief to assist me in procuring some wild animals. He said that so many fellows with carts and bullocks now went through all parts of the woods, that no animal could remain in them. He then asked me in a very blunt manner, why I had come into the country; I told him that I had come to see what kind of a country it was, and in what state the people lived. He said that it was a poor forest, to which I replied that I was surprised it was not better cultivated, considering that the Company had fixed the revenue, and that all the profit must accrue to the zemindars. He said, who would cultivate such a jungle, where rice would not grow. I told him it would produce Maize, Janera, Meruya, Sirsoo, Cotton, Kulti and til. He then said there was no water in most parts, and who could make tanks or wells. Seeing that nothing could be made of him, I requested that he would retire to take some refreshments after his journey. He then asked if he should go home, to which I said by all means, whenever he pleased. He still keeps up a large armed rabble, to whom he gives lands in the woods, reserving the good lands near the rivers, to enable him to pay his rent. His followers are stout little men, but have rather a sickly appearance, and seem to be very poor. It is said that he has collected a thousand muskets, and is perhaps meditating some scheme of outrage, as he is discontented with the decision of the court in favour of Khadir Ali and probably thinks himself a person of no small consequence.

7th March.—I went to the corner formed by the junction of the Kurar with the torrent called Tupsateri,(657) in order to see a quarry of what is

(657) The Chitkára R. of the S.S., but marked Tapsitari on Buchanan's map.

called Osurhur,(658) or giants' bone, a substance from which line is prepared, and in hopes, from the name, of finding something curious.

The quarry is about 3¾ miles west from Jomdoho, in the angle between the two torrents. The Karar (659) is a very wide sandy channel with a little clear water in shallow pools, and its sands are quick. It comes from a great distance from the south-west, but here its course is north and south. The Tupsateri comes from a place called Katgori(660) three coses south from the quarry. It is on the west or left side of the Kurar, and is a much smaller channel, but it contains some deep pools of dirty stagnant water. On its banks the rock is in such a state of decay that it is impossible to judge of what has been its contents, but it has been an aggregate, of which the quartz only remains The Ossurhur is procured by digging about a cubit in the soil, when it is found mixed with white quartz Sometimes it is interposed loose between the masses of that substance, sometimes it envelopes them, and in general the two substances adhere. They do not form a continuous mass; and, so far as I could dig with a hatchet, had some earth intermixed The natives say that the deeper you go, the more perfect the Osorhor is found; but they do not seem ever to have made the experiment to any extent, as I found no hole more than three feet deep. It supplies the neighbourhood with lime, but very little is required, the common demand being only for chewing. Some maths, however, have been constructed with it, and I saw the remains of three small kilns, in which it had been burned. In the Kurar the rock consists of black foliated micaceous matter disposed with white quartz after the manner of shistose mica, that is, all the micaceous plates are parallel, and run in the same direction, which here is vertical.

(658) Buchanan writes the word in Bengali characters in the margin of his journal as *asŭrhaṛ*. The correct word is *asurhāṛ* (from *asura* and *hāṛ*, 'Asuras' bones'). See below, under date 22nd March. The site visited here by Buchanan was in the vicinity of **Maupatha.**

(659) **Kudar N.**

(660) **Not marked on the S.S.**

Certain layers running in the same direction consist entirely of white quartz, forming as it were, parallel strata. Where the rock is entire, these strata occasion no discontinuation of substance, nor is there any appearance of a shistose structure, farther than the parallel disposition of the component parts; but in decay the stone divides into thin parallel layers, and assumes a shistose structure. The quartz decays last, or rather remains entire after the micaceous matter has entirely disappeared, and the stone often retains its form, when it no longer is any more than a friable sand, which crumbles between the fingers. The parallel strata of quartz are from a quarter to three inches wide, those of the granitel interposed are from two inches to several feet. From the banks of the Kurar to within about half a mile of Jomdoho, I observed the rock in eight places, and it uniformly consists of the same materials, that is of a black micaceous matter, and white or glassy quartz. At the first place, nearest the Kurar, it was fine-grained granitel, without any shistose disposition in its micaceous matter, which is irregularly scattered It was perfect, and had no appearance of strata. 2nd. Same rock with less white quartz, where entire, no appearance of strata; where decayed, and where much of the black mica had disappeared, it was disposed in thin vertical strata running north-west and south-east. This decaying part was about four feet wide, while the entire unstratified matter extended many feet on both sides of it, and came contiguous to it. 3rd. The rock was rather in decay. Its texture somewhat acerose. 4th. Same granitel as no. 2. 5th. A coarse grained granitel with little quartz. 6th. A fine-grained granitel in no manner shistose. but with alternate layers of quartz, and in vertical strata. In a state of decay it is almost white, having lost most of its mica. Its fissures are as often in the granitel, as in the quartz, and seldom at the junction of the two substances. 7th. A shistose granitel, as in the channel of the Khurar. 8th. A coarse-grained granitel with much quartz. At Jomdoho on the banks

of the Chandon, south from the village, is a small hill called Gheruya,(661) which is entirely different from the above. Its strata evidently run about south-west and north-east, and have a great inclination from the perpendicular towards the north-west. The strata are much divided by fissures in all directions. They may be all considered as a silicious stone of conchoidal fracture with more or less quartz in veins or nodules, and some other substances in nodules like porphyry. The substance is not uniform, but is often clouded of different colours like Jasper. The uppermost stratum is decayed into a granular substance, still however extremely hard, which, if I remember right, is similar to what I took at Jetaurnath(662) for decayed granite. Under that is a stratum which has a very slaggy appearance. The one most perfectly conchoidal, and uniform in its substance, which cuts smoothish with a knife, and is rather moist, although on the face of an arid hill. It is of a fine white, veined and spotted like the others, from which it undoubtedly derives its origin It is called Khori by the natives, and is used for that substance for instructing boys to write Under this is the stratum most resembling Jasper from a mixture of colours in the ground. Still under that is an exceeding heavy dark red coloured stone, with veins and masses of quartz. I observed nothing below this. A little way north from the hill a mass of white quartz rises to the surface.

8th March.—I went to Burhi Simar.(663) Jomdho is a small market place, with some shops, most pleasantly situated on the Chandon, a very wide channel, with a small stream of clear water. It is a vast thoroughfare for pilgrims, both to Badyonath and Jogarnath, probably two hundred pass every day, many of them are most distressed objects, especially on their return, worn out with want and disease.

(661) Marked, but not named, on the S S.

(662) Jataur. See also under date 11th November 1810.

(663) Bherkimar, on the Dakwari N., 9¾ mi. in a direct line S.W. of Jamdkha.

About seven miles from Jomdoho I came to Sejuya,(664) a wretched village inhabited by Kol, who make iron. Their huts are very bad, and they are miserably poor and dirty, but they have sheds over their forges, which I saw nowhere else. Their features exactly like those of the hill people, but much coarser I went with them to visit their present mine. It is on a tolerably smooth piece of ground, of a red soil, with rocks of quartz towards the west, and beyond these, rocks of fine-grained granitel The ore is in small grains, found mixed with earth and pebbles in veins running under the surface, at the depth of three or four feet, and from one to two feet wide and deep. It is wrought, as I have before described, and such mines seem to be numerous. About two miles from Sejuya, I came to the place where the Taljhor(665) joins the Khurar, and crossed the former torrent. Both are considerable channels, with much sand in their bottom, but rocky banks, and both contain small streams of clear water. Between Kejuya and these I had crossed a small dry torrent, named the Gairajhor.(666) About four miles farther I came to the Taljhor again, and went a little way in the channel without crossing it, my route continuing by its left bank for about a mile I then crossed it, and went up about half a mile to Burhi Simar.

I did not examine every rock by the way, but noticed the following 1st A fine-grained black and white granitel, quite solid, but its mica disposed in layers. 2nd. A fine-grained granite white quartz and felspar, much black mica, perfectly sound but stratified. The mica somewhat in layers, parallel to which are bands entirely of quartz and felspar. 3rd. Fat white quartz. 4th. A stone in decay consisting of white quartz, silver mica, and black micaceous matter. 5th. Quartz. 6th. Fine-grained black and white granitel, somewhat decayed. 7th. White

(664) Sejwa; but as it is only about 4 miles from Jamdāhā, Buchanan must have taken a circuitous route.
(665) Evidently the Dakwari R. of the S.S.
(666) Not named on the S.S.

quartz. 8th. A fine solid granitel of the same nature. 9th. A similar stone in decay, and almost white, the greater part of the black micaceous matter having been washed out. 10th. A very minute-grained black and white granitel, evidently stratified. Some of these aggregate stones were stratified, others not, which I look upon as a mere accidental circumstance. The strata, of which I noticed the direction, ran about south-east and north-west. This country, were it cultivated, exactly resembles Mysore, and might become still more valuable, as Maize seems to thrive everywhere. The people complain of the want of water, and say that the country can only be occupied near torrents that afford water at all seasons. They have not, however, attempted to make either wells or tanks. I was here visited by two Babus of the family of Rup Narayon, who hold this part of the country of their kinsman, by Military tenure. They are good-looking young men, but have no sort of equipage or state. They complain of encroachments from the Ghatwals of Khadir Ali. Bhuri Simar is a small village of cultivators and Kol. The rock at it is a fine-grained granitel, black and white, and although in parallel layers, quite compact.

9th March.—I went almost seven coses to the banks of the Chandon, about 1½ miles above a considerable village. It was my intention to have halted at that place, but unfortunately it is new, and Chandon,(667) where my tents were pitched, is almost deserted, which proved exceedingly inconvenient. As I approach the sources of the torrents, of which I this day crossed twelve, they contain more water, as all, except the Sarpiya, contain water at all seasons, that is water may be found by digging a little into their sand. Most of them contain a small stream, or at least pools among the sand, but the water is seldom good; that procured by digging the sand is excellent. The country is no doubt better cultivated than towards the south, where the torrents at this season are in

(667) **Chandan.** The considerable village "which was new" was apparently Nawādih (the 'new village'), about 1 mile S.W. of Chāndan.

general quite dry, but wells or reservoirs would no doubt give a supply. The country is much less rocky, but in most parts contains many masses of white quartz among the soil, and the quartz in mass comes to the surface in many parts. The only rock that I examined was about 3¼ miles from Burhi Simar. It is a granite consisting of small grains of quartz, of black micaceous matter, and garnets.

About a quarter of a mile from Buri Simar crossed the Dhiba jhor,(668) and at about an equal distance came to the junction of the Ardha(668) and Taljhor, the former being nearest to me. About a quarter of a mile farther I crossed the Ardha, having ascended its right bank so far. At about an equal distance I came to a place where the Kol of Buri Simar extract iron ore from small pits, the ore here, instead of earth, is mixed with a white quartzose sand, which is the substratum under the soil in most parts of the vicinity. At about a similar distance crossed the Bola jhor,(668) and about three quarters of a mile farther, the Kharwa jhor.(668) About 1¾ miles farther from a high situation I had a fine view of the lofty and rugged peak of Tiyur(669) at a distance, with two hills much nearer, namely Ghutghuti(670) towards the left of Tiyur, and Bahengga(671) towards its left. About three quarters of a mile farther passed a similar iron mine. Rather less than two miles farther I crossed the Megha jhor,(672) which forms the boundary between Rup Narayon and the Ghatwals dependent on Khadir Ali. About three quarters of a mile farther crossed the Bhongra badar(673) jhor, deriving its appellation from a village of the same name. About three quarters of a mile farther I crossed the Khungtuya jhor,(674) and two miles farther the Sarpiya jhor(672) which is dry.

(668) None of these names are traceable on the S S.
(669) **Trikut** or **Tiur Pahar.**
(670) **Ghutghutia Pahar.**
(671) Name not found on the S.S.
(672) Not named on the S.S.
(673) A village **Bhorabadar** is marked on the S.S.
(674) A village **Khutwa** is marked on the S.S.

Less than a quarter of a mile from thence I came to the bank of the Chandon, which I ascended a little way to the mouth of the Belahariya jhor,(675) which enters the left bank of the Chandon. I then crossed the latter obliquely, for a quarter of a mile, to the mouth of the Nima jhor,(672) which enters from the right. I ascended this for rather more than a mile to Chandon village, at a little distance from the river, where the people have dug wells, and proceeded about as much more to the bank of the river above the village, where I found my tents.

I remained at Chandon two days, in order to give my Hindu followers an opportunity of visiting Baidyonath on the festival called Huli,(676) which was this year celebrated on the 10th and 11th of March.

12th March —I went to Karana (677) Having crossed the Chandon, here considerably diminished, I left some low hills to my right, and about half a mile from Chandon crossed a torrent named Narabangk,(672) at which the rock was a black and white granitel, much decayed About 1½ mile from Chandon, crossed another torrent named the Dawa,(678) and saw on my right another named the Bajauni dumar,(672) which I did not cross About 3¼ miles from Chandon crossed the torrent named Sirsiya ghat (672) Between these two passed a fine village named Paharpur,(679) but I did not enter its fields About four miles from Chandon crossed the torrent named Baraghat,(672) just above where it receives the Kasanti.(672) Between the Sirsiya and Baraghat has been a fine village deserted. I ascended the Kasauti for about a third of a mile, through the lands of Tiarper(680) village, mostly deserted, and then crossed the torrent About six miles from Chandon, came to Boroduyari(672) hill,

(675) A village **Belharia** is marked on the S S

(676) The *Holi* festival, well known in northern India

(677) **Karna**, 2½ mi due E. of Simultālā Railway Station *not* **Karna** (2¼ mi. S.W. of Lababon block-hut)

(678) **Dhawa** village is marked on the S S.

(679) **Paharpur.**

(680) **Gadi Piarpher.** The *T* in Buchanan's name is evidently a slip for *P*.

which comes from the north-east, and sends out a long rock towards the south-west, in which direction the rocks, so far as I could observe to-day, seem to run, and they appear to be quite vertical. In the last-mentioned place, until approaching the hills, the rock seems everywhere to be composed of fine grains of quartz, among which are some irregular black grains. Where the rock is living, the quartz is partly fat and white, partly glassy; but in many parts where the stone is dead it has become mealy. At the hill the same materials, in larger grains, form a rock, in which the black matter is much more predominant, but certain parallel flakes contain comparatively little, and are almost white; while the others are of a dark grey. About seven miles from Chandon crossed the Asan ghatiya(681) torrent where the rock again is a rotten black and white granitel. About 7½ miles I had Chupridanga,(682) a small hill, east at a little distance. From thence to Karana is about 4½ miles, without anything remarkable.

The Tikayit here is an exceedingly stupid-looking man, and all his people seem to have very little knowledge of the regulations. One village he calls revenue land, and all the rest he calls Jaghir, and has divided it among his armed men, thinking, that should he be deprived of his revenue land, the other would be allowed to remain with him. The old military habits accordingly are kept up, and the country neglected. In the territory belonging to his brother-in-law at Chandon, all notion of military tenure is abandoned, the country is more cultivated, and the huts are much better, and much progress is made in the arts, and in comfort. At Korana is no shop. I had to procure supplies from Tarapur and Chakai.

13th March.—I went to Goramara,(683) in the midst of the forests of Ghidore, distant rather more

(681) A village **Asanghatia** is marked on the S.S., 5 mi. N.W. of Chāndan.

(682) Not named on the S.S. It is impossible to trace Buchanan's exact route this day from the maps available.

(683) **Ghormara**, a hamlet by the side of the Ulai N., about 5 mi. W. of Simultala.

than twelve miles.(684) Having crossed the Boruya,(685) which here contains a small stream, I went much westerly to a village of Ghatwals, more than a mile from Garana, very poor, and little cultivation. About two miles from Karana, having on the way crossed a dry torrent, I came to the first ridge of hills towards Karana. It consists of quartz very little mixed with mica, so far as I observed. About half a mile beyond these, in swelling and broken land between the first and second range of hills, I passed the Topkani,(686) a torrent containing water in its channel. The rock here was in a state of decay, and disposed in thin strata, with a dip of between 30° and 40° towards the north-west. It consists of small grains of white quartz intermixed with still smaller of a black substance, evidently disposed in flakes parallel to the fissures, which last contain whitish mica. Here were many masses of white quartz running in a line west-south-west by north-north-east, between the strata of the decayed granitel. I think it formed a stratum, but without digging, could not be positive. It may have been a vein. Beyond this torrent is another wretched village of Ghatwals. Proceeding through lands that appear to have been once cultivated, between the first and second range of hills, I came to the Mon(686) river or torrent, a little less than five miles from Karana. This is a large channel containing a little water in some places, and winds through among the hills of the second range, which are small and detached. In less than half a mile in the passage among these hills I crossed it three times. I am told that Mon is not the name of the river, but of the ghat, and that I crossed two branches. On these hills also the rock is quartz with some admixture of mica. In the channel of the Mon, immediately beyond the hills the quartz and mica form an aggregate, which,

(684) As the crow flies, Ghormāra is about 7¼ mi. W. of Kharna, but even now there is no road across, and the intervening country is very hilly Buchanan must have followed a winding path. By Ghidore is meant the *pargana* of Gidhaur.

(685) Badua R.

(686) These names do not appear on the S.S., but it looks as if the "Mon" was the upper reach of the Ulai.

although disposed in vertical strata running east-north-east and west-south-west, cannot be called shistose mica, as the particles are disposed in all directions, and there is no appearance of shistose fracture. In some specimens the masses of mica are pretty large, and separate into thin plates, but too small for use. The mica has a silvery appearance, and both it and the quartz are white. Near this is a very fine stone, quite compact without any appearance of stratification. It is granitel consisting of large grains of black shorl, with less white quartz disposed in very small grains, quite irregularly. Beyond this second range there is no cultivation, and the forests are much more stately. They consist chiefly of bamboos of a good size, but many fine trees are intermixed. I continued going westerly along the north side of this range of hills for about three miles, having a ridge apparently higher towards my right. On leaving this part of the second range, which I believe is the extremity seen from Karana, I went about half a mile to a hill on my right. This I believe is the end of the ridge I had seen in that direction, but am not certain. It consists of quartz and mica intermixed, like the others. In some parts to-day the quartz is pure, in others one half of the aggregate is shining white mica in plates. From this hill I went through a broken rocky country for almost two miles. In the greater part, if not the whole of this, the rock is a granite; a few large masses, white felspar, much small-grained quartz, and a good deal of small black shorlaceous matter. The two latter disposed in irregular but parallel layers, often waved, the first scattered through the mass In some parts it is in vertical strata west-south-west and east-north-east; in others I saw vast masses without the smallest fissure. This led me to a range of hills connected with Gunda.(687) The first, through which I passed south of Ghoramara, is small, extending about two-thirds of a mile in width, and consisting, as most of the others seen to-day, of quartz intermixed with more or less mica. I then passed

(687) Apparently the Gado Pahar of the S.S.

over a fine swelling land of a good soil for about half a mile, and passed for about an equal distance down the banks of the Ulayi, on a fine level fit for rice, wheat, sugarcane, &c. I halted on this, where it is very narrow, between the river and the hill called Kariya,(688) which is one of the highest in the range, and may be two hundred and fifty feet in perpendicular height. It consists of white quartz containing a little foliated silvery mica, irregularly disposed, and placed vertically west-south-west and east-north-east. As usual it is much shattered I am told that there is a place, about 1½ cose east from this, called Abarak(688) or Mica, but the people never heard that any of that substance was ever dug there. Some of my people, however, on the road, about one cose from where we halted, found some plates, about three or four inches square, and of a good quality. By a proper search good mica might probably be found. On the opposite bank of the river is a smaller hill named Patpahari (688)

14th March.—I went to Gangra.(689) Having crossed the Ulayi, which is about one hundred and twenty yards wide, and contains a greater stream than any of the hill torrents or rivers that I have seen, I passed over a part of the fine plain, and about a quarter of a mile on came to a pass called Harhar,(690) where rocks come down, on both sides, to the very bank of the river; but its channel affords a very good road. The rock is quartz and silver mica disposed in strata nearly vertical, of very various widths, but shattered into small pieces by transverse fissures Descending the river about a quarter of a mile, I returned to its right bank, down which I went for about 1½ miles, when I crossed it again. There is a small hill(691) on the left bank about half a mile above where I crossed. Immediately beyond where I passed, were many scattered heaps like tumuli, but they were said to be

(688) Not traceable on the S S

(689) **Gangra**, 2 mi S E of Gidhaur

(690) Not named on the S S ; but it is clearly the narrow pass through the hills, about 6½ mi. W by N. of Simultālā, through which the Ulai flows.

(691) Evidently the **Tumba Pahar** of the S.S.

the work of white ants. This I think doubtful. In the first place they were smooth and hemispherical, and covered with grass, showing no appearance of holes where cut; and, secondly, their size was enormous, being about twenty feet in diameter. About 1¾ miles on, I came to Mahapur,(692) a very poor place in the Ghatwali style. Rather more than a mile below that, I recrossed the Ulayi, opposite to a hill called Mega,(693) which is part of a chain running west from Gundu.(694) Gangra is about six miles farther on, and is a well cultivated and planted village, as is another about half a mile before I reached it.

On the banks of the Ulayi or Ular, above 1½ cose above where I halted last night, at the foot of a hill is a rock of what is called Neruya or Leruya,(695) a kind of white limestone. I suppose it will admit of a marble polish as it is spathoze. It contains mica and must be considered as an aggregate. The mass from which the specimen was taken is said to be about the size of a table; about half a cose higher up the river, at Keyal,(696) are the concretions called gangot mixed with the soil.

15th March.—I went to Jamui(697) through a very pretty country, with many old-established and regular villages, having fine plantations of Mango trees. The houses pretty tolerable, with bamboo walls, and carefully concealed with fences of bamboos or branches. The women much concealed. I first crossed the ,(698) on which Gangra stands. It is a small sandy channel with a stream of water. I then proceeded rather less than five miles to the Ulayi, which here is wider than farther up, but most of its water is absorbed by the sand, so that here it has no stream, but water may everywhere be had by digging. On its left bank

(692) **Mahapur.**
(693) Not named on the S.S
(694) **? Gado Pahar,** see above (note 687).
(695) In the *Index of Native Words* the word is written सेकया : the term is unknown to me.
(696) **Keyal,** 5 mi. S.W. of Simultalá.
(697) **Jámui,** now the headquarters of a subdivision.
(698) Blank in the MS. The **Nagi R.** is meant.

I found some Gangot. About 2½ miles beyond the Ulai, I came to the Kiyul,(699) a very wide channel, but still dryer than the Ulayi. It, however, contains plenty of water below the surface At Jamui, the Rajas of Ghidor(700) have their offices for collecting their rents. Both branches of the family reside at some distance and one of them in Ramghur;(701) but I was visited by the head of one branch, with his two sons and a brother; and by a brother and son and nephew of the head of the other, all very civil men, and some of them rather rational. The family is in a good deal of pecuniary difficulty, owing in some measure probably to the number of its members, and an unwillingness to the retrenchment which such a circumstance necessarily requires. They have fallen into arrears of revenue, and have been warned that their estate will be sold, but this, they say, is of little importance, having often before been in similar circumstances, and always been able to borrow money. They have dealt with one indigo planter, who in fact manages a part of their estate, which they say he has very much improved by extending the cultivation; but they look upon it as idle to lay out any money on such schemes.

16th March.—I went to visit two old forts. I first proceeded to Inderpe,(702) which is rather less than three miles from Jamui It is a work of considerable magnitude, and probably of considerable antiquity. It is a square surrounded by a strong rampart of brick, totally ruinous, and the ditch in many places obliterated; nor does the ditch appear ever to have been very wide. On the east face has

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(699) **Kiul R.** Buchanan must have crossed the Ulai N near Thegua.

(700) i.e. of the Gidhaur and Khaira branches.

(701) The old Rāmgarh district, which adjoined *parganas* Gidhaur and Chakai on the south as will be seen from Rennell's *B.A.*, Pl. VIII, and Sherwill's Rev. Sur. (1845—47) map.

(702) Now generally called Indpe, or Indpegarh. Buchanan's spelling is more in accord with the tradition that the site is called after Rāja Indradyumna (or Indardavan), the last Hindu ruler of western and southern Monghyr, who was driven out of the country at the time of the Muhammadan invasion about the end of the 12th century. See also *A.S.I.*, III, 102; VIII, 120; *A.S. Ben. Cir. Report* for 1902-03, p. 11.

'been a gate, without which, towards the north, has been a pretty large tank, and towards the south two large buildings, that have been left heaps of bricks. Within this outer fort is a square citadel, not placed in the centre, but near the eastern face of the outer wall. In the north-east corner of the space between the citadel and outer wall, are five heaps of bricks, two of which are of considerable size. In the south-east corner are two heaps of a large size, that next the gate is said to have been a temple of Siva. Adjacent to the north face of the citadel is a small tank. Towards the west is a fine village, the cultivation and gardens of which conceal any ruins that may have been in that quarter of the city. I observed only one gate in the citadel defended, as usual, by outworks. A little within this gate has been a large square building, which has probably been the Rajah's house. It communicates with the rampart of the south side of the citadel by a mound, which has probably been a fortified passage. East from this building is a very high conical mound with some brick walls on its summit. This is called the Chandini,(703) or terrace, where the Raja sat to enjoy cool air in the evening; but this seems somewhat doubtful, for this is no doubt the chief and largest member of the whole work, and is more likely to have been a temple. There is an appearance of two small tanks to the north of these two last-mentioned buildings. This fort is said to have belonged to a Raja Inderdovon,(704) a Rajput, who fled to Jaganath on the approach of the Muhammadans. The people do not think that this is the Inderdovon, who built the great temple of that place, but this seems doubtful. At any rate he must have

(703) *Chāndnī* does not mean terrace. The original meaning is 'moonlight'; then anything bright or shining, a white ceiling, an awning. In Shāhābād the term is also applied to a house built of stone. The sense in which the term is used here is not clear: it may refer to the use of the elevated position for sitting out in the moonlight.

(704) Indardavan, or Indradyumna. Up to date no inscription has been found to establish this ruler's indentity. There is a Muhammadan tradition that he and his family were driven out by Saiyid warriors despatched eastwards by Shihābu'd-dīn Ghori, and that they fled to Vaidyanātha (Deoghar) and Jagannātha (Puri).

been a considerable prince, and is said to have had another fortress(705) in Behar.

From this fortress to Gidor(706) is not quite four miles, through a very fine country. By the way I passed a house(707) of one of the Rajas, consisting of many good substantial huts, surrounded by a fence of bamboos interwoven. Ghidor is universally attributed to Shir Shah,(708) and is an exceeding rude castle four hundred and seventy-four feet from north to south inside, by four hundred and forty-six feet from east to west. The walls at the doors are twenty-three or twenty-four feet thick at the bottom, and about seventeen at the top. In the middle, between the doors and the corners, the wall is seven feet narrower, as stairs of that thickness led up from the middle towards the angle on one hand, and towards the gate on the other, for there was a gate on each front. These eight weaker parts have been strengthened by semi-eliptical towers, except to the west side of the northern face on the left of the great gate, the outwork before which was probably considered as a sufficient security. The outwork is square, and the entrance into it is commanded by the tower on the right of the gate. There is also a tower at each angle of the fort. The towers do not appear to have been higher than the curtain, that is, between twenty-nine and thirty feet, exclusive of the parapet, of which few traces remain. It seems to have been exceedingly rude, without embrasures, and having only small openings for musketry or missile weapons. There is no trace of a ditch, nor are there any outworks before the smaller gates. The

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(705) i.e at Jainagar, near Lakhī Sarāi. See *A S I.*, III, 159; Buchanan's *Patna-Gaya Journal* (ed Jackson) pp. 82—86; *Gazetteer* (1926) pp. 218—219.

(706) i.e. Naulakhagarh fort, at **Kasba Gidhaur** (S.S) usually ascribed in local tradition to Sher Shāh, but, as surmised by Buchanan (see below), the original fort was probably much older. For the late Dr. T. Bloch's views, see *A.S., Ben. Cir., Report* for 1902-03, p. 11. See also *Gazetteer* (1926), p. 250, where the dimensions stated differ those given by Buchanan.

(707) i.e. at **Khaira**, from which one branch of the family still takes its name.

(708) **Sher Shāh**, see note (706) above.

great gate is called the elephant,(709) and is a wide and lofty arch, with two arched recesses in the passage to serve as a guard room, and each capable of sheltering ten or twelve men. The east gate is called Mahadeva, and an image of Siva, in the usual form, is in the immediate front of the passage. This also has arched recesses in the passage, but only fit to accommodate two or three guards. The south gate is called the Camel, and is of the same structure. The west gate is called the Horse, and has probably been of the same structure, but it is very ruinous. The arches are of stone, in the Gothic style. The walls are entirely built of rude uncut masses of quartz from the adjacent hill. The masses in general are not large, and the larger are laid with their greater length outwards, whereas, for strength, the ends should have been exposed to the blow. The outer row, without and within, is strengthened by mortar; but the inside is filled up with loose stones, mostly small, and not built, but thrown in without mortar. The unsightliness of the rude masonry was probably concealed by plaster, at least some part remains entire near the southern gate, but it must always have had as miserable appearance, when compared with the castles of the barbarous chiefs of Europe in the fourteenth and fifteenth centuries, as it is inferior to those rude but grand works in the means of defence. There is not the smallest trace of any building within, and the garrison was probably lodged in huts. The supposition of this castle having been built by Sheer Shah, or any Moslem, is exceedingly doubtful, from the image of Siva at one of the gates. It probably, however, may have been occupied by that prince, during his struggles with Humayun for empire, especially when the latter had joined the kings of Bengal. It appears also evident that the fort after having been in decay, has been again repaired, some parts of the wall appearing to have fallen, and to have been rebuilt in a very hurried manner. Besides the

(709) Elephant gate, or *hāthipaur* (vulgo *hāthipol*), a common feature of old palace forts, *cf.* those at Delhi, Agra, Māṇḍū, Gwalior, Monghyr, Rohtāsgarh, etc. (See *Manrique's Travels*, Hakluyt Socty. edn., Vol. II., pp. 165—66) 'Camel' and 'Horse' gates are, however only local names.

two smaller gates, that remain entire, have been narrowed by placing at each side the fragment of a column of cut granite, about eight feet high, and by placing another fragment of a similar column across the top of these, just where the arch begins to spring. That these are not contemporary with the fort is pretty clear. Had the architect been at leisure, he would have undoubtedly cut them into the form of a gateway, and have connected them with the building in the closest manner, in order to give additional strength. I strongly suspect that this was a stronghold of Inderdovon, to which he might retire as to a place of greater strength than his usual residence. and where he might keep up a communication with the fastnesses on the range of hills, which extends west from Ghor Ghidor to an unknown length. I presume that there are many gaps in it; at any rate. the hill next Ghidor is totally detached(710) from the one next adjacent. I am told that the natives have no general name for this range, nor no proper appellation for each of its component parts; but give the name of each village to the part that is nearest it. I had several fragments of the rock brought down from the hill, and find them exactly the same with the stones of the fort, which are quartz, in some places pure white fat and solid: but in most other consist of various aggregate particles, partly glassy, partly white, and more or less mixed with mica, but this is chiefly confined to fissures. The masses in general consist of many parallel strata conglutinated together, but others are of a uniform substance. In fact, this chain seems to consist of the same materials with that which extends west from

(710) Had Buchanan gone round the corner he would have seen that the hill was connected by a saddle with the higher range behind He is correct in noting that there is no general name for this range, or rather series of ranges that extend westwards from Naulakhagarh for more than twenty miles into the Gaya district, and which have never as yet been accurately surveyed, or even completely explored Though some of the more conspicuous hills have got distinctive names, Buchanan correctly observes that hills are usually called by the name of an adjoining village . this custom is observed all over south Bihār by the plains folk On the other hand, the more aborignal tribes, who frequent the hills to collect jungle produce or fire-wood or to graze their cattle, call the different hills by names unknown to the ordinary inhabitants of the plains villages.

Jetaurnath by Usla(711) &c., and it is said to join with the continuation of that chain which passes north from Chakayi.(712)

17th March.—I went to Mallipur(713) through a fine country. About three miles from Jamui I came to the Kiyul river, which here is a very wide channel, at least five hundred yards across. It contains a little water, but that is nearly stagnant. Immediately south from the passage, on the east side of the river, is a woody hill named Kurwang.(714) About half a mile from thence, I halted in a Mango grove, on the bank of the Onjona,(715) opposite to Mallipur.

19th March.—I went a little south to the west end of Katauna(716) hill, to a place of worship, where Ram is said to have dedicated a Linga to Siva. The Linga is in the ruin of a small temple, is called Putoneswar or Pindeswor,(717) but is probably of recent date. There have been two small temples on the hill, but only the foundations remain. Near and in them are lying several broken images and fragments of such as have been completely defaced. I suspect that these were broken by the zealots who erected the Siva, as being heretical. One is a small representation of the human feet, like that near Bhagalpore; and one

(711) For Jataur, see diary of 11th November. Usla is marked by Rennell (*B.A.*, Pl. II) in a position that corresponds more or less with that of the present Saṅgrāmpur, about 13 mi S by E. of Kharakpur. The "Usla Ghat" of Rennell seems to represent the gap through which the Baduā N flows through the northern range of hills; but Rennell's map is inaccurate in these parts, which were not surveyed by his assistants This name is a corruption of Wasila, the name of a *pargana* lying between *parganas* Parbatpārā (on the N.) and Chāndan Katoria (on the S.), which is named in Todar Mal's roll as one of the *mahals* of *sarkār* Munger, and is transliterated as Osla in Jarrett's translation (Āīn-i-Akbarī, II, 154). On the 4 mi. to the inch map of the Bhāgalpur district compiled in the B. & O. Drawing Office, will be seen marked as a village "Kasba Wosila", about 4 mi south of Belhar Though no such name appears on the 1 mi. = 1 in. S S., there is evidently still a *mauza* there preserving the old name of the *pargana*

(712) **Chakai.**

(713) **Malepur.**

(714) The hill on the right bank of the Kiul R., opposite village **Khairwa.**

(715) **The Nakti N.** of the S.S , but the united stream (of the Anjan and Nakṭī) is always known as the Anjan at this place.

(716) **The little hill near Katauna.**

(717) **Patanesvara, or Pindeśvara.**

appears to me to be a Bouddh or Jain in Nirbán,(718) inspiring two avatars below, who are sitting above the heads of the people; two others are totally entire, but I do not know what they represent. The rock at the top of the hill is of a kind I have never seen before. It consists of a red silicious matter, intermixed in a sub-shistose manner with white quartz, and besides, contains large veins of that substance. It appears to be stratified, and the strata seems to run east and west. At the foot of the hill the rock has no appearance of stratification, and consists of the same reddish matter, more compact, with various substances embedded in it, and containing many cavities, the surface of which are curiously frosted, as it were, with minute crystallisations. I had specimens of the same red substance brought me from other parts of the hill, variously intermixed with quartz, and of various degrees of compactness. The view from this hill uncommonly fine.

20th March.—I went about 9¼ miles to Gordi.(719) Mallipur is a large irregular village chiefly occupied by Bheparis,(720) and finely situated on the right bank of the Onjon. This is a pretty wide sandy channel, which at all seasons affords water. That on the surface of the sand, or that even has been exposed in the little wells for a few hours, is turbid and bad. Every woman therefore digs a little cavity, about a foot deep, throws away the first water that rises, and then fills her pitcher with a small cup. About 2¾ miles from the garden, where I had halted, I crossed the Onjon again, as it comes from the north. It is there a narrow deep channel, with a little dirty water, between high banks of clay. About a quarter of a mile farther on, I came to the south side of Dunsir(721) (called to me Gundauriya) hill, where I found the rock to be a mealy

(718) i.e. *nirvāṇa* (the figure being in a recumbent position).
(719) **Gordih**, locally pronounced Guḍḍih, 9 mi. E. by N. from Malepur, on the high road to Kharakpur.
(720) i.e. *bepāri* (Sans. *vyāpārin*), a 'trader'; generally applied to the travelling trader who transports grain or goods by pack bullock or cart.
(721) **Dhansir Hill.** The correct local name is Dhansir.

reddish quartz, much intersected by fissures, but showing no very decided marks of stratification. About a mile farther, I passed another hill, called to me Dunsir, but its real name Parara.(722) About four-fifths of a mile farther crossed a small dry torrent named Korwa, beyond which was a fine village;(723) but the houses very poor. About seven miles from Mallipur, crossed another small dry torrent named Bojher.(724) Rather less than nine miles from the same place, I passed the Kaseyi, a small river, rather less than Onjon, and like it, where crossed last, confined between high banks of clay. Many small calcareous concretions by the way.

In the grove, where I halted, near Mallipur, were many Hanumans and some Morkots.(725) I also heard the Hannumans by the way, which is natural enough, as the Hannuman deity is supposed to have been the son of the nymph Onjon by the God of the winds. Except the two small hills mentioned above, the country between Mallipur and Gordi is flat. Gordi is a poor village, on a rocky eminence, with, however, a good deal of cultivation round it. No hills are visible from thence towards the east, and none towards the south are near.

21st March.—The rock at Gordi is a reddish powdery quartz, in a state of decay, approaching to the shistose On my way to the village called Bhimban,(726) distant about 5½ miles, I first, for about four miles, passed over a swelling country, in which many large rocks of the same reddish powdery quartz project from the surface, as rugged as granite, and without the smallest appearance of stratification. Two of these are so large as to have obtained names, Seraunchi and Dudanta, the former one mile, the

(722) The smaller hill to the SE of Dhansir

(723) Bishunpur.

(724) The Kairwar N. of the S S. The other two streams are not named on the S S.

(725) The *hanumān* is the *langūr*, or "Hanumān Monkey", *Semnopithecus entellus;* the *markaṭ* is the "Bengal monkey", *Macacus rhesus.* Hanumat (Hanumān) was supposed to be a son of Afijanā by the wind god, Vāyu

(726) Bhimband. The correct name is Bhīmbāndh; a beautiful site: in fact the whole vicinity of these springs is most attractive.

latter almost two miles from Gordi. The quartz of Seraunchi is exactly similar to what I collected yesterday. Not quite four miles from Gordi, in a north-east direction, I came to a place of ravines and broken ground, at the foot of Manik Than,(727) which forms the south-east extremity of a chain of hills running north and east from Mallipur. The rock of this hill is exceedingly rugged, without any appearance of strata, and consists of a powdery quartz, inclined to be livid, with layers of white quartz interspersed and many reddish minute points like garnet in a state of decay. The same broken ground continues until approaching the village of Bhimban, with a low country towards the east, bounded at no great distance by the hills south-west of Korukpur. In this space I crossed the Adwara,(727) a dry torrent, about 4½ miles from Gordi. Bimban contains a few wretched huts with few fields. About a quarter of a mile from these huts, I came to the Mon,(728) containing a dirty stream with pools full of fish, and steep rocky banks as at Haha.(729) Beyond it the road crosses three fine little streams of limpid hot water, all within one mile of the village of Bhimban, and all arising from the east side of a rocky hill, at a little distance west from the road Here I halted to examine the warm sources, which at the road rose to 114° Fahrenheit, and was disagreeably hot to the feeling, the thermometer in the sun being then at 74°. The water at each place issues from various crevices in the rock, and from under loose blocks, is quite clear and tasteless, and flows in very considerable quantity. I have nowhere in India seen such fine springs,(730) except in Nepal; and I think, that the third stream surpasses even Bari Nilkhant,(731) the finest in that country. The water

(727) Not named on the S S

(728) The Man river, here incorrectly marked **Main N.** on the S S

(729) At the waterfall of this name described above, under date 2nd March.

(730) Captain S R. Sherwill recorded on the 5th September 1847 a temperature of 147°; and Colonel L A Waddell recorded 146°.2 in 1890. Mr. V. H. Jackson recorded temperatures of 148° to 148 8° in the Mahadeva group of springs between the years 1912 and 1919.

(731) See *An Account of the Kingdom of Nepal*, etc., 1819, pp 192—94, 141—43, 208.

as it issues was in general about 144°, but the thermometer, thrust under the stones, especially where air bubbles arose, rose to 150°. The rivulets are filled with the green conferva usual in springs, which adhered to the stones, and in some places these are covered with a green ulva[732] or tremella,[733] consisting of gelatinous masses, about the size of a filbert, and adhering by fibrous roots. The water is evidently impregnated with stony matter, which on contact with the air is deposited in a crust like Gangot, which covers the adjacent stones. This is only found near the very hottest parts, where the water issues, and its quantity is very small, notwithstanding that the deposition has been probably going on for ages. The stones and earth near the springs are hot, but the heat is quite tolerable to the hand, and far inferior to that of the water, and seems to be merely communicated to them by the water, which probably receives its heat in the interior of the mountain. The rock, from which the first stream issues, is a kind of brownish livid quartz, or petrosilex, not quite either one or [the] other. It has no appearance of stratification. The rock from which the second, and part of the third stream issues, for the latter rises from two collections of springs at a considerable distance from each other, has an appearance of vertical strata running east and west. The masses consist of parallel layers, variously dispossed, and of various thicknesses, but parallel also to the strata of white quartz, of red powdery quartz, and of the livid brownish petrosilex. These layers are not, however, separated by any interruption of substance. The rock at the fourth source, one of those which forms the third stream, is a white quartz, still, however, tending somewhat towards a petrosilex. It is in a more decided state of decay than the other, and many parts of it are assuming a shistose appearance. The rock some way up the hill, above the source nearest

(732) The Confervales and Ulvaceæ come under the Green Algæ group of Cryptogams.

(733) One of the fungi. The Tremellinaceæ belong to the class Basidiales.

Bhimban, is of a similar nature with this last, but is intermixed with a black powdery matter, in some parts interspersed in irregular clots, in others disposed in alternate layers. Returning to the Mon to inspect the strata, I found that its water also was somewhat hotter than the atmosphere. The thermometer in the sun had now risen to 76°, and in the Mon it rose to about 82°. In one place I observed air bubbles rising from the bottom, and found that the thermometer there rose to 98°. The rocks on the steep banks of the Mon are vertical, and consist of vertical layers like those of wood, but have an obscure appearance of running in strata, east and west. In some places they have become quite shistose, and may be scratched with the nail, but in others they are still very hard, and retain enough of their primitive character to show that they were once like the stone between the second and third sources above mentioned. In fact the stones here have no more stratification, when alive, than granite has; but, as they decay, they assume an appearance of strata and even of shistose structure. Near the sources I observed the calcareous tufa called Gangot, on the surface, and on the left bank of the third torrent it is dug from the earth for the purpose of making lime.

From Bhimban village to Molinpahar,(734) my road led through a narrow and uneven valley, towards the west, for about 6¼ miles. At the end of the first mile,

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(734) Buchanan gives the name of the hill also to the little hamlet of Naiyās at its foot. The hill described in the *Gazetteer* (1926) as Malnipahār is not marked on any of the maps It would appear to be the hill, marked as being 1422 ft. above s l., to the north of the hamlet **Bhorbhandari** on the S.S.; but it may be that marked **Bhor Bharari** (1402), which is further from the hot springs. The site of these springs in importance second only to those at Bhīmbāndh, is not marked on the S.S They lie about 1¼ mi W. by N. from Bhorbhandāri, the " Bhoondh Bhuraree " of S R Sherwill, a name which doubtless represents *bhur bhandāri*, the little store house (*bhaṇḍāri*) of ' springs ' (*bhuṛ*). The word *bhuṛ* in some of the local dialects is pronounced *bhūṇṛ;* hence Sherwill's spelling The springs are now known as Janam Kuṇḍ, the ' birth ' or ' source pool '. For the fullest description of these springs, see the late Mr. V H. Jackson's account in the *Patna College Magazine*, Vol III, pp 54—58. In October 1909 Jackson registered a temperature of 149° Fahr. in these springs, i.e. higher than in any of this Bhīmbāndh springs (which he had previously visited).

as I have said, is the third(735) warm stream, which even at this season, would turn a small corn mill. This would form fine baths, but I suspect that, without cultivation, the situaion would be unhealthy. About 1.4/5 mile further, I came to a dry torrent named the Kimjol. About 1.1/5 mile farther, I came to the highest and narrowest part of the valley, where there is a narrow pass called Maudondi, between two hills, Chamra and Gopurna.(736) The rock there is very hard, with an imperfect conchoidal fracture, and consists of very fine grains, mostly of a bluish black, but interspersed with some that are white, which gives it a grey colour. It has no appearance of stratification. A dry torrent descends also towards the west from this pass, and about $1\frac{1}{4}$ mile from it. I crossed the Onjon, here a fine little clear stream, about 4/5 of a mile farther on I recrossed the Onjon, where its water is somewhat warm, and halted near Malinpahar, a little from its bank. Malinpahar consists of a few huts occupied by Neyas, who have a few fields, but live chiefly by burning lime, cutting timber, and collecting damar.(737). Lohita,(738) the nearest village towards the north, is eight coses distant. Marok(739) on the right of the road at some distance Kadera,(740) the nearest village to the west, is six or seven coses distant, some hills between.

22nd March.—I went first about $1\frac{1}{4}$ mile to see the source of the Unjon, which consists of copious springs of hot water, exactly like those I saw yesterday; which unite to form a stream, not so large as the one farthest from Bhimban, but finer than the other two. It issues from the root of Malinpahar, where a space of

(735) Apparently the northernmost of the three springs marked on the S.S.

(736) Neither this nor any of the three preceding names appear on the S S.

(737) Resin See p 26, above, Note 104.

(738) **Lahota,** about 4 mi. S. of Dharharā.

(739) **Mārak,** a conspicuous flat-topped hill (1528 ft.), $6\frac{1}{2}$ mi. NW. of Kharakpur, that dominates the northern ranges of the Kharakpur hills: it is the second highest hill in the whole group. Incorrectly marked as **Mairs** on the S.S

(740) There is no village of this name on the west side of the hills. Possibly **Kairs,** some 2 mi. SW. of Usan, is meant.

perhaps twenty yards in length, and twenty feet in width, is covered with fragments of rock, and the water may be heard running under these, and in some places seen through crevices, until it comes to the outer side and unites in little streams that soon join. At sunrise, the thermometer in the sun being at 62°, on being laid on these stones, it rose to 80°, and on being immersed in the water, it rose [to] 146°; but where the finest spring is, and the water issues immediately from the foot of the hill, without running any way under the stones, and is accompanied by many air bubbles, the thermometer arises to 150°.(741) The stone from among which the water issues, is a kind of intermedium between petrosilex and quartz of a horny colour, with some tinge of red A little higher up the hill it is whiter, and has a more powdery appearance, as was also the case at Bhimban In neither is there the smallest appearance of stratification On the stones, where the water issues, is a very small quantity of tophaceous(742) matter, but still less than at Bhimban.

About twenty yards from the hot springs, and nearly on the same level, is a place where the natives dig Osorhur,(743) for making lime. It is found in a stratum about a foot thick, and about as much under the surface; but the natives mangle the ground so much

(741) In September 1847 S. R Sherwill recorded 145°. In October 1909 V H Jackson recorded 149°, and on the 16th March 1910, that is, at the same time of year as Buchanan, but 99 years later, he recorded 147.2°, or 2 8° degrees less than Buchanan's temperature In this connexion Mr Jackson wrote

" a reference to Buchanan Hamilton's account suggests that at the time of my visit the springs were unusally low, on account of the scanty rainfall in 1907 and 1908 This, as shall show later on, would make the temperature abnormally low, so that I am inclined to think that, though the springs have certainly cooled since Buchanan Hamilton saw them, the cooling has not been as much as 2 8 degrees."

I may add perhaps that the late Mr Jackson once informed me that, as a result of repeated temperature tests made by him in the course of some twenty years at numerous hot springs in South Bihār that had been visited by Buchanan, he was inclined to think that Buchanan's thermometer had probably read about one degree too high, which might have been due to the age of the instrument or to inaccurate graduation or to a combination of both these causes.

(742) i e. consisting of tufa.

(743) See note (658) above, under date 7th March, and particularly note (747) below.

in working it, that its extent or dimensions are not easily ascertained. Over it are fragments of the same rock exactly as that at the hot springs, under it are fragments of the same, to the surface of which it adheres. On digging out one of these, I perceived that it was warm, and the thermometer thrust into the cavity that was formed rose to 90° This, I think, will show that the water, although heated in the interior of the mountain, derives its temperature from gases, coming from below; for the quarry of Osohor, being pervious for these gases, receives a portion of heat, although it is quite dry. The Osohor of this place is a very porous calcareous tufa. I then returned to the tents. This upper part of the valley of the Onjon is finely watered, as between the village and the warm springs, the north hill sends six fine cold springs to join the Onjon. I know not how many join it from the south, but at the houses it contains a very pretty stream and still retains some heat, although thus increased by cool water. Having crossed the Onjon at my tents, I proceeded south through a narrow valley, which it waters. About half a mile from the Onjon, I crossed a small running stream. About 3¼ miles from Malinpahar, I crossed the Onjon again. Its banks here are very high and consist of red clay. The water here is dirty. A little beyond them are three or four huts(744) of Neyas, with some tolerable timbers near them, ready for exportation. About 4¼ miles from Molinpahar, I passed a dry torrent, called the Darhaya.(745) Five miles from Molinpahar [I] recrossed the Onjon, where it seems enlarged, and has a rapid course among stones. About a mile farther I came to another dry torrent, which was filled with fragments of stones, from the south-east end of the rugged hills, on the right, named Siuri.(746) They consist of small grains of dark glassy quartz with some white intermixed. The hill on the right is one of the most rugged, that I have ever seen. It is a mere

(744) Probably the site of the present village of Gurmahá.

(745) Richia R. of S.S.

(746) Not named on the S.S.

lump of broken rocks with a few stunted trees issuing from among the fissures. It has no appearance of stratification. On the left, although not so rugged, there are some high abrupt rocks, that put on the appearance of vertical strata truncated at right angles towards the west, which gives them somewhat of a columnar appearance. So far from its source the valley of the Onjon is of a deep red clay, and contains much land fit for the plough. Beyond the torrent, my course lay more towards the right, over very uneven gravelly ground, which continued to Asurni,(747) about 3¼ miles. On the whole, I reckon Asorni from Molinpahar village about 9½ miles. There are at present no inhabitants at Asorni, but some sheds remain, that were occupied by the workmen employed by Mr. Christian(748) to dig and burn the Osohor for which purpose

(747) **Asurni.** Many sites in the hilly parts of South Bihār are associated in tradition with the ancient Asuras Here we have also the tradition of their gigantic bones being found in fossilized condition The idea of such calcareous tufa being the fossilized bones of giants is not confined to the Kharakpur hills Buchanan records the use of the name in other places. Markham Kittoe, in his account of a journey through the Forests of Orissa, published in *J A S B*, 1839 (p 477), describes how he went to see the falls on the Jurritoora river, where he was told there were many "*Assura ka hār*", or giant's bones, "a denomination generally applied to fossils". He found that the said bones were "nothing more than large masses of stalactite in which were fantastic caves".

In *J.A S B*, 1835 (p 707 f) Captain H Tanner, in an article strangely entitled *Note on the Asurhār of the Rajmahāl Hills*, describes a visit to this very place Asurni in November 1819, when he encamped for 12 days in the valley He had heard "from natives that Captain (later General) Garstin had procured lime from that place to build the Government Granary at Patna" He found men who had actually worked for Garstin and later for the Mr. Christian to whom Buchanan refers. "I found", he writes "a superior sort of tufa at various places in the valley, and remarked that each lump formed invariably, as if from percolation, round the roots of the *sal-hur* tree, thickest near the tree and thin towards the edges, and in many places extending along the thin roots, assuming a cylindrical form, but not perfectly round · these were also called *asurhār*.

"The lime from this species of tufa was considered so good, that the Superintendent wished for a large quantity, for the purpose of white washing, but the cost of transit across the hills was too great".

The Government Granary referred to here is none other than the "Gola" at Bānkipur, which was built by (then) Captain John Garstin in 1784-86. Buchanan's Reports (or Journals) not having been published, it is possible that Tanner was unaware of Buchanan's examination of the site, only 8 years previously

(748) From the Report we learn that this Mr Christian was a Polish Merchant of Monghyr In the *East India Register* for 1810 he is described as "John Christian, Trader, Moughyr', and in the 1811 and subsequent volumes as an "indigo manufacturer, Monghyr", where he had first settled in 1791.

they had erected several kilns. The work has of late been given up, it is said on account of the deficiency of material. This branch of the valley running up from the valley of the Onjon, by a cul de sac towards the west, terminates a little beyond the huts, which stand on a rising ground in the middle of this recess. A torrent passes down each side and in the channel of that towards the south is a scanty spring, which at all seasons gives some water. The Osohor was found on the surface of the mountain bounding the recess on the south, extending down to the bottom, and up the side of the hill from ten to forty yards, and perhaps fifty or sixty yards in length Like that at Mollinpahar, it seems to have formed a crust from two to three feet thick, and covered with a mass of soil and stones from one to two feet thick. Most part has been removed, but some masses remain, which are too much intermixed with fragments of stone, or too much soiled by earthy matter to be worth the working. I saw no solid rock near the quarry but the fragments on the surface, those intermixed with the Osohor, and those under it, some of which are large, are all of a dark-coloured petrosilex, inclined to quartz. The fragments enveloped by the Osohor, are of various sizes, from that of the head to that of a walnut. The Osohor does not adhere very firmly to them, so that in breaking a mass they usually separate, but they are completely involved in its substance. In the other places I observed no appearance of animal exuviae, but here I found a few shells, all of one kind, involved in the tufa, which is very porous, but hard I also saw some appearances that seem to justify the appellation of tyrants' bones.(749) One piece which I procured, having very much the appearance of a flat bone, with a process at one end. One impression was also curious. It was a semi-cylinder about three inches in diameter, and eighteen inches long, not quite straight, and

(749) Such "appearances" account for the tradition preserved in the name *Asura* had always been interpreted as 'demon', 'evil spirit', etc., but it is now being realized that these so-called 'demons' were a highly cultured people of ancient and prehistoric times. Tradition frequently ascribes to them supernatural powers, and also supernatural size.

exposed to the air, as if, by breaking away the rock, the other side of the cylinder had been carried away. This I consider as an impression. The inner smooth side of the cavity was wrinkled with transverse folds, like the inside of an intestine, but may have been possibly the bark of a tree, although I have seen no bark with such transverse wrinkles I rather take it to have been some marine animal I could only break this off in fragments, but the one that I have taken is sufficient to show the structure

23rd March.—I returned to Mallipur not quite nine miles. Rather more than a mile from the sheds, where I halted, I came to the Onjon and crossed it Near the river there is some good land with a red soil. Descending the left bank about half a mile, I came to a narrow gap between two rocky hills through which the Onjon passes. This gap is exceedingly narrow and broken, and continues rather less than half a mile, during which I crossed the Onjon The rock on the left is most alive, and is a horn-coloured petrosilex with a tinge of red. It has no appearance of strata, but its masses in some parts are striated vertically. On the right of the pass the rock is far advanced in decay, and has acquired a white powdery nature, while the strata are more distinct and form it into an appearance somewhat resembling logs of fibrous wood. These are nearly vertical, separated by fissures running north and south, which gives the south end of the hill, where it is abrupt, the appearance of columns two or three feet wide, but it is also cut by fissures nearly horizontal and distant about six to eight feet. The great masses intersected by these larger fissures, are again subdivided by others, that are parallel and that are seen when the masses are struck with a hammer, as will appear from the specimens. I now proceeded through a very narrow broken valley for about 1½ miles, crossing the Onjon four times. The next mile was through a wider valley, but still very rough, and in this I crossed the Onjon again. Having now cleared the hills, I went about 1½ mile on swelling land of a red soil, broken by ravines. From thence to the Onjon

at Mallipur, is not quite 3½ miles on smooth land. The road all the way from Malinpahar is practicable with the small sogor,(750) but is very bad. From Molinpahar to Bhimban and from thence to Mallipur is tolerable.

24th March.—I went to the Indigo factory at Butarampur(751) about ten miles. Having crossed to the Thanah, about a mile south(752) from thence, I crossed a torrent by means of an old brick bridge. About 3¾ miles from the Thanah, I crossed the Kiyul to Behar(753), and passed through it for about two miles. It is considerably better cultivated than Chandon and Buka(754) which are on the Bhagalpur side of the river, to which Korokpur does not approach. I crossed the Kiyul again and proceeded through Chandon and Buka about 4½ miles to my tents. Here, I was met by Elias, a Maronite of Aleppo, who manages affairs for Mr. Christian, and for his female friend. He complains much of the raiats, on the score of sloth, and disinclination to pay, but he says that they are very ill-treated by the zamindars, who totally disregard all agreements, and always squeeze as much as they can. When Chandon and Buka came under Mr. Christian, it was almost entirely waste. The soil is exceedingly productive. He works one hundred ploughs, and makes but little advances. He usually gets four mans of seed a biga; last year sold it at twelve rupees a man. He gave me some crystallised specimens of Osohor, from Asorni, which do not resemble any calcareous spar, that I have seen.

(750) The *sagaṛ* (also *saggaṛ* and *sagaṛh*) is a small, low-built country cart, generally used in the hill areas. The typical *sagaṛ*, *gāṛī*, for use on rough, rocky tracks in the jungle, has very small, *solid* wheels.

(751) **Satta** and **Sampur**, two separate villages, about 1 mi. SW. of Mananpur Railway Station.

(752) For 'south' here we should read 'west'. The torrent is the Vagdhar of Buchanan's map, not named on the S.S.

(753) i.e. the old district of Bihār, which in Buchanan's time included the Bisthazārī *pargana*, the Kiul R. forming the boundary from this point almost to its mouth, i.e., to near Nawābganj

(754) i.e. the Chāndanbhuka *pargana*. Whether there were originally two separate tracts, or whether the name was given to distinguish this *pargana* from that of Chāndan Katoria (further east) I can not say. It included the area on the west of the Khamkpur hills, between them and the Kiul R., from near Malepur up to Ghoṣkuṇḍī. The name does not occur in Toḍar Mal's list of *maḥals*.

25th March.—I went to Surjagorra(755) about 15½ miles. About four miles from Batarampur, I came to a large torrent, very deep in the soil It is named Moruya,(756) and does not appear to contain any water. About 4¼ miles from Batarampur, I came to the south end of a considerable hill(757) on my left. It is uncommonly smooth, and I did not see a stone or rock on it within reach. It extends more than two-thirds of a mile to the north, where a narrow rugged low ridge approaches near it from the east; but between, there is a considerable level of good soil, not in the least broken. The rock on the rugged ridge is a horn-coloured petrosilex, stained with red and vertically striated, exactly as in the pass on the Onjon near Asorni. From this pass to the boundary of Buka Perganah and of Thanah Mallipur, is about 1¼ miles. From thence I went along a fine level for about 2½ miles, when I came to a steep bank, to which in the rainy season boats come to take in a load. I went from thence almost 2½ miles to Alinogor,(758) the road leading along the bank. On my right, a fine level country, with beautiful groves of mangoes, and a few palmiras; on my left, a low bare country, but which looked well, being one uninterrupted sheet of wheat and barley, now ripe, as far as the eye could see. Alinogor is an invalid Thanah, with a wretched bungalo, built by Colonel Hutchinson The invalids very thankful, but the widows and heirs do not like the new assessment.

I halted at the bungalo all day, to avoid the heat, which in the day is now intense, and in the evening went to Surajgorra. My road led along the same bank for about 3½ miles, with a similar country on either side. Near Alinogor, I had on my left a large piece of shallow stagnant water. About two miles from

(755) **Surajgarha.**
(756) **Murwa,** also **Morwe.**
(757) Not named on any of the maps, but if I remember aright, it is known as **Bhuiñkā pahār,** from a village of that name near by. It is a conspicuous landmark at the north-west corner of the **Kharakpur hills,** standing apart therefrom.
(758) **Alinagar.**

the same place I came to a large channel(759) containing stagnant water in pools, and called the Gundri. It comes from the south, and here joins a small branch of the Ganges, which comes through the middle of the fine wheat fields, and contains a small stream, in which I saw people fishing by merely groping with hands. I descended along this branch, with its rejunction with the great Ganges, for about a mile, passing through Jukurpura, the chief gunj in Surjagorra, and then went about a mile to a fine grove, in which my tents were pitched

28th March.—I went down the river about three miles to see the ruins of Abkil.(760) I found nothing, except one very small poor mosque of brick. It is said that the situation of the town has almost entirely been swept away by the river.

29th March.—I went south into Korokpur, with an intention of viewing a fine spring,(761) which I understood was about four coses from Surajagorra, at the foot of the northern face of the hills. I first proceeded through a beautiful plain, for about 1¾ miles, to the bank of the same old channel that on the 25th was called Gundri, but which to-day was called Gorkai,(759) and having proceeded up its channel about

(759) **Garkha N.** At one time the Ganges flowed in a more southernly channel in this vicinity, as may also be inferred from the trend of the Dewā, the Harohar and the lowest reaches of the Kiul and Morwe. From Saidpura, near Ahnagar, to the hills may still be seen the remains of a very old embankment, some four miles in length, probably the remnant of a line of fortification, and very likely indicating the position of the earthen embankment or entrenchment thrown up by Sher Shāh in his war with the King of Bengal (1533-34). See Abbās Khān's account in Elliot, *H of I*, IV, 339—42; Ni'āmat-ullāh's account in Dorn, *Hist. of the Afghans*, Pt. I, 98—99; *Akbarnama*, trans by Beveridge, I, 328. Ādil Shāh, the last of the Sur emperors, was also defeated near here by Sulaimān and Bahādur in 1557. There used to be a village called Fathpur (the 'town of victory') close to Nawābganj (north thereof) which appears to have been diluviated by the Ganges in the last century; but it is still shown as a permanently settled estate (Tauzi No 939) in the Monghyr Collectorate records (I am indebted for this information to M. Shāh Muhammad Bashīr, S.D.C.). This name probably preserved the memory of one of these victories.

(760) **Abgil Chak.**

(761) **Buchanan started with the intention of examining the Sringi Rikh springs, for a description of which see the *Patna College Magazine*, October 1909 and January 1910, and the *Gazetteer* (1926) p. 262**

half a mile, crossed to its west side. It is wide and deep, and contains a good deal of water in pools, but in some places is dry. About 3½ miles from Surjagorra came to the boundary of Korokpur,(762) which here projects far to the south. This estate has never been planted with fine groves, like Surjagorra, and is now almost entirely waste, whereas Surjogorra is like a garden. The greater part of Korokpur is fit for transplanted rice, and has been once cultivated with that grain. It is now almost entirely deserted, except by a few wretched Musahors, who skulk among the woods at the foot of the hills. I took one as a guide, and, on his leaving the village, his wife and children set up a howl, as if they had parted for ever. He was the most stupid creature I ever met, and could not tell the name of any one hill or tree. About 5¼ miles from the boundary, I came to the south side of a long hill(763) on my left, and proceeded for about a mile along its west end, when I came to the place where it is joined by a lower hill from the west. This being very near five coses from my tents, I expected that I had come to the end of my journey, and ascended the hill on foot, it being too steep and rocky for any other conveyance. On the first part of the ascent, the rock is a very dark grey petrosilex, with a good deal of the conchoidal fracture, and many veins of white fat quartz, some eighteen inches wide, and not separated by fissures from the petrosilex. Farther up, the rock is in a state of decay, but retains the same fracture. It is of a white powdery substance intermixed with brown dust, partly in irregular spots, partly in parallel layers. This is a most decided step towards the khori of Gheruya, 7th March. At the summit the rock is a very light grey petrosilex, very conchoidal. Beyond this, on the south face, the petrosilex is again dark grey. All these rocks are

(762) Buchanan would here reach the boundary of *pargana* Kajra, which in his time was included within the Kharakpur estates. The boundary of Kharakpur *pargana* proper was about 10 mi. distant from Sūrajgarhā It is strange that Buchanan did not visit the interesting remains at Uren, as he must have passed within 4½ miles of that village.

(763) **Sen bans.** The 'lower hill' farther on was the long straight ridge that bounds the Morwe valley on the north.

divided by fissures running north and south, east and west, and horizontal, but have no appearance of real stratification. On descending to the valley(764) south from the ghat, I found a man belonging to the Raja who occupied a hut, where he collected duties from those who cut wood and bamboos. He said that the place I sought was near, but having walked about a mile west, he showed me a hill(765) about a mile south from me, and said that the spring was there. As there was nothing extraordinary in the place, but a copious spring, and as the day was becoming intensely hot, I did not choose to proceed, having seen the nature of the strata, which was my principal object.

30th March.—I went to Loheta,(766) which is only six coses by the proper road, but I was taken round the east end of a hill, and obliged to return almost a cose towards the west, which made the distance almost eight coses. I first went about four miles to a watercourse, containing some stagnant water, and called Piharjan.(767) I then passed through a low part of Korokpur, for rather less than three miles, when I came to the old fort called Kakara,(768) which is just within the boundary of Surjogorra This is exactly on the plan of Asorgur in Puroniya, or Kornogur, near Bhagalpur, that is, it is a large elevated space, without any cavity in the centre, and contains many bricks, so that it must have been rather a great castle or palace than a fort. It is about five hundred yards square. On its east side is a lower space, about four hundred yards square, which, however, contains many bricks, but the surface is very uneven, as if the buildings on it had been detached.

(764) The valley of the Morwe.

(765) The Śringirikh hill on the opposite (south) side of the valley, on the lower (northern) slope of which are the springs. This is the only instance recorded in the Journal of Buchanan having failed—here owing to the great heat—to reach his objective. The springs are of no special interest, as the temperatures are comparatively low, ranging around 86°—87° Fahr.

(766) **Loheta**, about 2 mi. SE. of Basaṭṭi.

(767) Perhaps the **Sonajan R.** of the S.S.

(768) No such place is marked on any of the maps; nor is any account of this large old fort available. The site must be close to Rājpur, and Ghaṭṭi, and it should be examined.

East from this again, are five or six old tanks, the spaces between which contain bricks and some small elevations. These were probably occupied by domestics, and the tanks were formed in making the bricks. About nine miles from Surjogorra I came to lands exempt from inundation, near a detached hill which here forms the boundary between Kurokpur and Surgorra. I proceeded north-east, skiting this hill(769) for about five miles, when I came into a pretty wide opening between it and the mountains on the east, which are higher. Passing south between them, and leaving a small branch from the detached hill to my right, I went about two miles to Loheta in a fine plain, apparently surrounded by hills on all sides. In the evening I went about 1½ miles to the east, southerly, to see a quarry of mill stones on a small hill(770) named Kamuya, or working place. This is separated from the hill, which bounds the plain of Loheta on the south, by a narrow passage, by which there is a road to Marok,(771) the great hill which forms the centre of this cluster. The quarry is on the southern declivity of the hill, and runs nearly east and west, and has been opened in different places for a considerable extent, each partnership of stone-cutters having a separate opening. Having been wrought for ages, the cavities formed are now pretty considerable. One of them, the largest that I saw, might be two hundred feet long, twenty wide, and twelve deep, but so irregularly and unskilfully wrought, and so clogged with rubbish, that the proper extent of the stratum is not readily determinable. The workmen take out a piece suitable for their purpose, wherever they can find it most easily, cut it into shape on the spot, and then look for another, until the whole quarry is so filled with rubbish that

(769) **Abhainath** hill. Buchanan seems to have gone from Sūrajgarhā to the western end of this hill passing round its northern and eastern flanks, and then going between it and the small outlying hill to Laheṭā.

(770) The long low hill to the north of **Raunakabad.** As to Kamuya, this probably, and in accordance with Buchanan's practice in transliteration, represents *kamawā*, the vulgar corruption of the Hindī word *kām*, 'work'.

(771) **Mārak** hill. See above, note (739)

they can procure no more, and then pioneers are employed to clear away. The quarry is also choked with large pieces, which are as much as possible avoided, as being too troublesome to cut; for the stones required are only for handmills, but stones of a good size might be readily procured. The stone is disposed in vertical strata running east and west, having an inclination towards the north, and is divided by fissures parallel to itself into flags from four to five inches to one cubit thick, and again intersected by fissures at right angles to the above, and by others that are horizontal; but there is nothing of a shistose fracture in it. The substance is a uniform aggregate, the component parts of which are placed without the least order, and are glassy quartz united with a greenish-grey micaceous matter, the foliated nature of which may in many parts be traced, but all has lost its lustre, and most of it has acquired a powdery appearance. Intermixed with these are spots of a reddish powdery matter. The masses which have the finest grain are those preferred, but some are wrought. the grains of quartz in which are as large as small peas. The strata that are wrought, are bounded on each side by strata of the same materials, but which are considered as useless, and this may be the case with that towards the south or towards the plain, and which is called Bujeri(772) or hard, by the workmen, and contains too great a proportion of quartz, and is very much intersected by fissures in all directions. The stratum on the north or above the quarry, is much freer from fissures than the millstones, and very fine masses are procurable. It wants the reddish spots, but in other respects has an entire resemblance to the coarser-grained millstones, but is hard, on which account it is called Kurra.(773) It no doubt, however, would form a very fine stone for building, and those who are accustomed to granite would work it with ease. The stonecutters, farmers and native officers have so little curiosity here, that they do not know

(772) From *bajjar*, 'adamantine', 'hard' (Sans. *vajra*).
(773) i.e. *karā* (Hin.), 'hard'.

the names of one of the hills by which they are surrounded. This is only known by those who cut bamboos, planks, and small posts, which seems to be a considerable occupation, and is followed by the Musahor and Bonawar.(774) All the people here are most excessively stupid and timid, and will give no account, on which any reliance can be placed.

31st March.—In the morning I went to see a quarry of what the natives call Siya(775) or black stone, which they use for making thin flags, like tiles, with which the floors of some wealthy persons are formed. I afterwards learned that it is used for making platters I went rather more than 1½ miles south-west, until I came to an opening in the hills,(776) by which the plain of Loheta is bounded on the south, and which I found to consist of granular petrosilex or a very fine-grained aggregate of quartz and hornstone with large conchoidal fracture. Through an opening comes a large torrent, Goriya kol,(777) at present dry, and its channel is filled with fragments of the Siya. I ascended the banks of this torrent about half a mile, finding the road all the way good and level; but the hills approached there so near, that the only way of advancing was in the channel, stepping from one large mass of stone to another Here the rock is granular, consisting of small grains of glassy quartz

(774) Musahar, literally 'rat-catcher', one of the most interesting of the non-Aryan tribes, closely connected with the Bhuiyās of the east-central highlands See J C Nesfield's monograph in the *Calcutta Review* January 1888, Crooke, *T & C N W.P & Oudh*, IV, 12 f

Banwār, literally 'wood-man', the professional wood-cutter The name is also used of a people who are regarded as forming a distinct caste in the Sontāl Parganas (see Risley, *T & C*, s v) Buchanan's experience recorded here has been that of every person who has prosecuted inquiry into the natural products of the country its animal and insect life, etc It is only the jungle folk, for instance, who, can tell the names of all the trees and plants, animals and insects found among the hills Such details do not come within the ken or interest of the plains-dweller, though he may live within a few miles of the hills

(775) i.e. *siyāh* (Pers), 'dark' or 'black'.

(776) No doubt the Amrāsanī Kol. For an account of the slate bands in these hills, see V Ball, *Economic Geology* of I p 552: and for the local quarries, the development of which is wholly due to the enterprise and perseverance of Mr. C. Taafe Ambler, see the *Gazetteer* (1909) p 137—39.

(777) Not named on the S S

united by a white substance. Both this and the more perfect petrosilex are called Bajeri by the workmen, although different somewhat from the stone so called on Kamuya hill, but the granular stone here shows the steps of transition. Here both these stones are cut into small cuboid mass[es] by fissures vertical and horizontal. I saw some masses that were almost perfect cubes. The air seems to act very slowly on it, as scarcely any fragments are contained in the torrent, which is filled with those of the Siya. On ascending over these for a considerable way, and to a considerable height, in constant expectation of coming to the quarry, I came to where the torrent in the rainy season falls over a great rock of this Siya. On asking if this was the quarry, the workmen laughed, and said that it was the hill, to break which was quite impossible, that they contented themselves with selecting from the channel flat pieces of a good nature and proper thickness, which were free from rents, and required only to be cut square; and not one piece in five thousand possess these qualities. Where the mass, however, is in other respects good, and is only too thick, they so far exert themselves as to split it into two or three with wedges, a very easy operation, for the stone is a black slate. The pieces that they prefer are of a somewhat silky lustre, and acerose structure. (I afterwards learned that they have a quarry which they concealed.) On breaking the rock, which externally has not the smallest appearance of fissure or strata, I found that it consisted of similar black layers, but contained some fine white powdery matter in the interstices, and had nothing acerose in the structure. This is very heavy, owing probably to an admixture of martial pyrites, which indeed in some places is scattered in conspicuous small clusters. Having mounted this rock, where a little water trickles down the surface, and having passed some pools of water, I came to another rock of the Siya, where that stone is more perfect, although not of such a quality as the workmen generally choose, because it divides into slates too thin for their purpose,

but it has a fine silky gloss, and is not acerose. The rocks on the hills on either side are very much shattered by fissures, but consist of parallel layers running east and west, as do those of the Siya. They are in a state of great decay, and show a transition from petrosilex or Jasper, to slate This Siya is undoubtedly a slate or schistus, but whether or not an Argillite, I shall not say. It has exactly the clear sound of a good slate, but its silky lustre and colour with many shining particles seem to point it out as rather of the nature of hornblend or potstone, and it has also the great toughness of that substance. It is soft and leaves a grey or white scratch. I have little doubt but that skilful workmen would here procure very good slates for roofing houses, and also slates for accomptants. Where the pyrites abounds, I have no doubt that it would serve for making Coperas, and the other parts have such a resemblance to the *gentle* sclate of Baldernoc and Campsie,(778) that in all probability they would produce Alum The woods as usual swarm with Hanumans

In the evening I went to the Invalid Thanah near Monghir, named Aramnagar.(779) I returned about 1½ mile by the same way that I had come from Surjagorra and passed through the strait between two hills, crossing two watercourses, one of which gives a small supply for the lever. On the hill towards the west, Dosduyar,(780) the rock is a livid greyish aggregate of quartz and petrosilex On the east the hill Mohila(780) is exceedingly rugged, projecting high shattered rocks rising into peaks and divided by vertical fissures. This shows the transition from the petrosilex to the millstone, as it consists of the petrosilex with concretions of glassy quartz immersed. I continued to skirt this eastern hill for about a mile,

(778) Baldernock and Campsie, in Stirlingshire, Scotland

(779) This invalid depot, which is not marked on the maps, seems to have been situated about two miles to the south of the Monghyr fort.

(780) Neither of these names appears on the S S. Mohila seems to be the big hill (835 ft.) east of Basauni. Dosduyar may be the little detached hill, S. by E. of Basauni, but the name—the hill of the 'ten gates'—makes it probable that the bigger hill to the west of this is intended.

when I came to its corner towards the north-west, and proceeded east about two miles to Dorhara,(781) a large village at its north-east corner, where it assumes another name. I went about 1¼ mile farther near the hills, until I came to the country subject to inundation, which was indeed near my route all the way after passing the strait between Dosduyar and Mohila. About a quarter of a mile within this low land, I came to the boundary of the division of Mongger, and crossed the extensive sheet of wheat, for 4½ miles, to Porran(782) village on the banks of the Ganges. Not the smallest trace remains of the lake laid down by Major Rennell.(783) The whole is cultivated. It had now been long dark, and all the hills appear[ed] on a blaze.(784) In fact, at this season, they burn continually, night and day, but in the latter the flame is not visible. The crackling noise of the fire, however, may be heard passing, and during the first day I was at Loheta, the whole valley was involved in clouds of smoke. The natives of the villages imagine that the fire is spontaneous, and commences from one stone striking against another. It certainly is often not intentional, and renders the wood stunted, but I have no doubt that it owes its origin to the carelessness of the cowherds and woodcutters, who kindle fires on the ground thickly covered with leaves, dry as tinder, and the fire runs along these consuming also all dead trees, branches, and grass, until the whole has been consumed. Some cowherds acknowledge that they kindle it on purpose to clear the country.

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(781) **Dharhara.**

(782) **Parham.** Parham is now quite two miles from the nearest channel of the Ganges.

(783) Rennell, on his 1773 sheet and in his *B.A.* Plates II and XV shows a lake, extending some 4 miles from N. to S., about 1½ miles E. of Dharharā. Captain L F. de Gloss, who surveyed this area for Rennell, passed over the ground in July 1767, i.e. in the rainy season; and this may account for the lake shown. This tract still goes under water sometimes when the Ganges is in very high flood.

(784) From the end of March, when all vegetation becomes parched, jungle fires are of frequent occurrence and often of wide extent on these hills.

At Porran I joined the road from Bhagalpur to Patna, and went about four miles to Aramnagar, having crossed a watercourse,(785) on which has been a pretty large bridge, which is said to have been broken down by Kasim Ali.

2nd April.—I went to Mongger in order to procure quarters for the rainy season.(786) The weather for ten or twelve days has been exceedingly sultry with a hot dry wind from the west. But this has now abated, and the winds have become easterly and cold at night.

7th April —I set out with an intention of going to Rishikund.(787) Having passed rather more than half a mile through the fort to the Bazar gate, I went through the town, and not quite 1½ mile from the gate, came to a passage lying between two rocky hills That on the right is low, but very rugged That on the left is pretty high, I believe it is that on which the hill house(788) is situated, but the morning was foggy. About a mile farther, I came to another low rocky hill, and rather more than a quarter of a mile from thence, to Sitakund,(787) which I reckon four miles from the Bazar gate It is situated in a fine plain, but there are a good many small rocky hills north, south, and west from it, and in the latter direction is a small marshy lake Towards the east is level. The kund is a fine square reservoir, partly dug in the rock, and is surrounded by a wall and steps of brick in good condition, but very rude. The air bubbles up from the bottom in many parts but the spring is not considerable, the run being very trifling, far inferior to any of the three at Bhimban. The

(785) i.e Ḍakrā nāla See Appendix 5

(786) This means that Buchanan worked up the material he had collected, and wrote his Report on the survey of the then Bhāgalpur district at Monghyr during the hot weather and rains of 1811. We do not know where Buchanan's quarters were, but from his reference to the distance "through the fort to the Bazar gate", I suspect they were just outside the Patna Gate, in the vicinity of the old 'Mosque House'. By Bazar gate, is meant the East Gate, over which now stands Mr. Dear's clock tower.

(787) For Rishikund, the site of which is not marked on the S.S., see *Gazetteer* (1926), p. 255; for Sītākund, *ibid*, p. 259-62.

(788) The big house on Pīr Pahār hill. See Appendix 6.

thermometer in the open air was at 68°. In the hottest part of the reservoir, where most air bubbles rose, the heat was 130°. The people say that the heat began to diminish about the first or second of April, and will be still lower. In about four months it will return to the highest pitch, and the quantity of water will increase. The pool may be twenty feet square, and four or five deep. Near it are several other pools of cold water, but all dirty and inconsiderable, as none sends forth a stream. The Pujari Brahmans are very squalid and clamorous for money, but not uncivil, when this is refused. About a quarter of a mile south of Sitakund is the nearest hill. A vast mass of whitish quartz, the crevices of which support a few bushes. It is intersected by horizontal and vertical fissures, the latter crossing each other at right angles. The masses are longest in the direction of east and west, and the rock may therefore be considered as forming vertical strata in this direction. The rocks of all the other hills seem to be of the same nature. In many parts, in decay, they split into shistose fragments. Rather more than 2½ miles south from Sitakund, I came to another great rock of quartz or jasper, but the greatest length of its fragments extends from north to south, and in decay it splits in the same direction. The quartz is curiously mixed white and dark reddish brown, the latter occupying large irregular spots. About two miles from thence, on coming near a small detached hill, I met a man who asked me, whether I intended to go to Rishikund, or to my tents, which were pitched at Ubayi Nullah,(789) about one cose distant from that place. I went to the tents, passing to the east of the hills, and found my tent about ten miles from the river side at Mongger, a little east from another small detached hill called Bisusinggi.(790) I could learn nothing satisfactory concerning the reason why my tents had

(789) Not named on the S.S.

(790) Not named on the S.S., but the late Mr. V. H. Jackson has noted against this name,—"Prominent small conical hill."

not been taken to Rishikund,(791) the guides throwing the blame on my people, and these recriminating, and it is difficult to say which are the most perverse and stupid.

8th April.—In the morning I went first to visit Rishikund. I first crossed the nullah called Ubayi at my tents, where it is a dirty stagnant puddle, but contains a good deal of water. Passing between Bisusinggi on my right, and Boluyar(792) on my left and south, I came into a fine valley bounded by these hills on the east and by a higher chain on the west. In this I crossed the Ubayi three times. It is there a small stream, not so large as the Onjon near its source, but not much inferior About 2½ miles from my tents, I came to the north side of Rishikund, immediately at the foot of the western hills, and near the south-east corner of that called Buidorni,(793) which consists of quartz or Jasper The khund is very ruinous and dirty, but it has been faced with a brick wall about 140 feet square. The whole is filled with water, but in many parts it is overgrown with weeds and bushes, the heat, especially on the side most remote from the hill, being so moderate as to encourage vegetation. The bottom is in some parts sandy, and in others rocky, and most of the water seems to issue from different crevices in the rock, all along the west side of the pool. The air bubbles, probably the source of the heat, rise from the whole extent near the hill, and come mostly from the bottom for a space perhaps thirty feet wide, and one hundred

(791) Mr Jackson has left the following note in reference to this remark :—

" Rishikund has a very bad reputation for fever (1912 and 1917), which is probably the reason There is a temple, built about 1877 by the Maharaja of Darbhanga. The *panda* (priest) told me he does not sleep there, but goes to Galimpur, and gets sick of going over the same road every day."

(792) Mr. Jackson has noted on this name,—" called to me Bhāluhār ".

(793) Not named on the S.S. From a little sketch inserted in the MS. it appears that Bisusinggi is the little hill due east of the spring; Boluyar is the long hill to the south of Bisusinggi and south-east of the spring; and Buidorni the hill above the spring on the west, which forms a portion the main range.

and forty feet long. Had the pool been judiciously constructed, as at Nilkunt(794) in Nepal, it ought to have contained only this space, and the walls having been built to a proper height, a paved area might have been constructed below, the water allowed to fall on it from various spouts for shower bathing, and under this might have been delightful baths. The heat and depth of the water would thus have been sufficient to keep the pool clean. On the south side of the tank are some wretched huts, one of them a temple of Siva. I saw none of the people attached, who are seldom visited.* Where the air bubbles issue from the sand, they occasion a curious appearance; they form a small kind of cavity like a crater, in the centre of which is a small rising with sundry perforations, through which the air always rises in small bubbles, but every now and then a kind of explosion takes place, an accumulation of air bursts through the small rising, forces its sand up to the surface of the water, and when it subsides, adds to the size of the little circular mound, by which the crater is surrounded. The thermometer, when I came to the kund, stood at 72°. Immersed in the water, where it issues from the rocks, it rose to 110° and in one of the craters it rose to 114°.(795)

From thence I went south-west, some way, to Champa-kol,(796) a torrent, from whence stones for making platters are taken I could not ascertain the distance, the roads are so bad, and I made so many halts. The natives content themselves at present with picking up flags from the channel: but formerly they have quarried from the living rock, which is of a

(794) See above, note (731).

(795) Mr Jackson recorded the following temperatures (Fahr.) on the dates specified :—

* (a) Spring to N. of the temple, issuing direct from the rock.—
17th October 1912 . 113 1°.
6th November 1917 ... 113.3° (hottest place).
(b) Big pool near western edge, close to the hill.—
17th October 1912 . 113.5° (thermometer pushed into gravel).
6th November 1917 . 113.3° (in small pool).

shistose structure, but the masses are intersected by fissures, vertical and horizontal, exactly as in the surrounding Jasper. The shistose Lamellæ are vertical and run north and south. They are of a fibrous fracture, and shining iron-grey colour, inclining a little to blue, like slate.

From thence I went through a very bad road in a narrow valley between the great hills on my right, and the detached hills named Boluyar and Duarba(796) on the left. Both are exceedingly rugged, and towards the valley at least, consist entirely of Jasper On the top of the great ridge, immediately south from Champa-kol, is a quarry, from whence Khori is dug. The distance was too great for me to visit it. It is vastly softer and smoother than the Khori of Rajmahal, and communicates its name to the hill, on which it is found, which is the highest of the ridge, and is called Khorikan(797) Maira At the south end of Duarba, I entered a narrower and rougher valley, between a most rugged hill on the east, named Mayin pahar, (798) and a part of the great ridge named Dima pahar(799) and proceeded up between these, not quite half a mile, to a narrow gap called a Murcha,(800) where there has been a wall to defend the pass The stone here is a kind of aggregate consisting of white dry quartz, and glassy quartz most intimately combined without order. Beyond this I entered into a broken valley within a torrent dividing into several branches. The chief branch leads to Jhalkhund,(801) where there is in the channel of the torrent a deep pool filled with water, and a small rill falls into it

(796) Not named on the S.S. From the sketch referred to above (note 793), Duarba is the small detached hill to the south of Boluyar.

(797) Mr. Jackson has noted,—"called to me Khalika Marā" This appears to be the hill marked **Ghorakhor** (1316 ft.) on the S S

(798) From Buchanan's sketch, this is the hill to the south of Duarba, separated from the main range by a narrow defile, across which the *morcha*, or fortification wall, had been made.

(799) A part of the main range, marked on the S S. **Rishikund** (1088)'

(800) i.e. *morcha* (Pers.) 'entrenchment' or 'fortification wall'.

(801) **Jalkund N.**

from the rocks above, but this is so inconsiderable that it does not occasion the pool to overflow. The water, being stagnant, and very dirty from rotten leaves, was reckoned good by the natives. In this channel there were many fragments of jasper, white, grey, and grey and red mixed, but I saw no rock of that substance. On the contrary, all the rocks were of a fibrous silky texture. That on the right of the pool resembled entirely the slate of Champa Kol, only it had nothing shistose in its fracture. I presume it may be an Amiantus rudis.(802) In many parts veins of white quartz pass through this rock in a very irregular manner, and on the hill which bounds the torrent on the left, the stone is formed of thin parallel layers distinguished by various shades of colour, and in some places most curiously waved, and intermixed with quartz. All the fragments in this torrent are irregular cuboidal masses. The torrent which joins it below the pool, is called Sitakober.(803) And its channel is filled with slates exactly like those at Champakol, but on its left side may be traced a quarry, that has been wrought to a very considerable extent, and with more skill than is usual among the natives. A very fine face has been formed on the side of the hill, the rubbish has been thrown to each side in two heaps, leaving a passage for the water to drain off. The rock, I would call a shistose Amianthus rudis. It may be divided into parallel vertical lamellæ of a striated texture, which run north and south, but the rock is divided by vertical fissures running east and west into layers from twelve to eighteen inches thick. This is rather singular, the lamellæ of shistose stones being usually parallel to the most remarkable fissures. It would appear that the workmen formerly lived in the fork between these two torrents, where there are many heaps of chips and

(802) Amianthus is a name applied to the finer kinds of asbestos, but is more properly applicable, writes V. Ball, to fibrous varieties of hornblende

(803) Jackson notes,—" Sitakobir ". Buchanan's sketch shows it to be the little stream that issues from the north-west corner of the valley out of which the Jalkund nālā flows.

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broken platters, which were probably the chief manufacture. The stone, although fissile, does not break with that smooth surface, which slate does, and would therefore be unfit for roofs

From this fork I returned to the Murcha, and from thence to the south end of Duarba Then along its west side for about three quarters of a mile. I then passed between it and Boluyar, which is about a mile long. From thence to Bisusinghi may be about half a mile. My tents were a little east from the last-mentioned hill.

9th April.—I went over the hills to Masungunge,(804) and can form little estimate of the distance, as I walked most part of the way and made many stops, in order to give my palanquin time to come up, which it did with great difficulty, owing to the steepness and rockiness of the road From my tents to Bisusinghi was rather more than half a mile From Bisusinghi I went west to a hot spring called Burka,(805) which rises from the foot of the same hill, that supplies Rishikund, from which it is a little way north It does not send forth so much water as Rishikund, but perhaps as much as Sitakund, and its water, like that of the others, is neglected for cultivation. There are in fact three springs, two come from the rock, and unite in the same pool These are accompanied by no air bubbles, which probably unite with the water in the interior of the mountain The third rises at a little distance in some spouty ground, occupying a considerable space, in which the water oozes up in different spots, and forms a little

(804) **Masumganj,** a little more than a mile due south of Jamālpur.

(805) **Jackson** notes (under date 6th November 1917). " Burka due west of Bisusinghi, only 3 or 4 minutes walk by road (Waddell, *J.A.S.B.*, LIX, 1890, pp. 224—35, absurdly indentifies Buchanan's Burka with a spring which he calls Bhaduria bhur—temperature only 98 5°—on the other side of the Jamalpur ridge). General resemblance to Rishikund. All the springs rise from beneath the surface of the water in the dammed-up pool Three patches—hottest centre along hill side, where the temperature of a small patch, in which bubbles occasionally rise, close to the surface of the water was 110.3°. Many stones are tied by pieces of cloth to a horizontal branch of a tree (smeared with red pigment) above the water near the centre of the western face ' for fulfilment of wishes' ".

stream. Air bubbles rise in many parts of this, not regularly, but at short intervals. The whole collected by a proper reservoir would form a very fine bath. The heat in all the three springs was 112°. The stone here was a red and grey jasper. The masses much stattered, but not shistose.

From Burka I went north, along the foot of the hill, for about a quarter of a mile, and then began to ascend on foot. I took rather more than three quarters of an hour to reach the summit, but the road was exceedingly steep and rugged. I do not think the distance exceeds half a mile, and allowing an ascent of three feet in five,(806) the height of the pass will be 1,575 feet, and this is one of the lowest parts of the ridge. For the first part of the way the rocks were red and white jasper, rather in a state of decay, the white especially having acquired a powdery harsh substance. The rock is marked by incipient vertical fissures showing the commencement of a shistose fracture. These fissures sun north and east. but the blocks, so far as I observed, had no appearance of stratification. Above this, to the summit of the hill, the rock was whitish inclining to a livid jasper or quartz, without the least tendency to shistose fracture, but wherever it was decaying, it was separated into irregular thin flags, standing vertically and running north and south. Where the rock was most entire, it had nothing of this appearance, being cut into cubical masses by fissures, vertical and horizontal. The passage over the hill is called Amjhor(807) Ghat, from a spring at the foot of the hill on the west side, which is shaded by a mango tree. On the summit is a heap of stones, to which most passengers add one, and I observed two others on the western descent My guides could assign no other reason but custom for

(806) An over-estimate : the vertical height would be more like half that suggested.

(807) Amjhar.

the practice.(808) The descent took me forty-two minutes, but I made fewer halts, the road being less broken, and I did not wait for the palankin. On the descent I had a most beautiful and magnificent view, for my way being on the side of a rocky ravine, I had a view down this of a fine small plain, bounded on the west by two immense rocks named Mogal Mara, and Puthorkankar Chur; and through the gap between these, I had a magnificent opening towards the wheat fields and mango groves on the banks of the Ganges. All the hils, where not bare rocks, are finely wooded, and in many parts were glowing with the Butea superba.(809) On descending a little way I came again to the red and white jasper, here quite entire, and having somewhat the granular structure of an aggregate stone. Farther down, the rock, also entire, was of jasper, almost entirely red, but rather granular. Fracture strongly conchoidal Here I observed a small excavation in the soil, and was told that it had been formed in order to dig out a soft kind of stone, called Parori mati,(810) which both men

(808) How familiar the answer given to Buchanan sounds! *Aisā hi ravāj hai, Sāḥib!* Such piles of stones are commonly found in all parts of the Vindhyas and their offshoots by the side of the path through or over a pass, sometimes on the summit, but more often at the beginning or end of what is regarded as the most 'dangerous' part I have often seen travellers and jungle folk dropping stones on one of these cairns, and the explanations given in response to inquiries generally fell under two heads, namely, that it was done either (*a*) to ensure a safe passage through the pass, or (*b*) as a thank-offering for having passed through safely. Such heaps, accordingly, will frequently be seen at both ends of a ghāṭ There are two chief dangers in such places, namely (1) the local deities or spirits that are invariably supposed to haunt such localities, and (2) dangerous wild animals, both of which call for propitiation Occasionally such a cairn marks the site where some person has actually been killed by a wild animal, e.g , the case of a *baghāut*, where the ghost of a person killed by a tiger haunts the vicinity; and must be propitiated [cf W. Crooke, *Folk-lore of Northern India* (1896 ed.), I, 267].

(809) A tree allied to the *palāśa* or *ḍhāk* ("Flame of the Forest"), sometimes called *parasbel*, but generally known in S Bihār as *chiḥūnt*. The bright orange-scarlet flowers bloom in March-April.

(810) The expression is unknown to me. *Paror* or *parorā* is the common form used in the S. Bihār dialects for *palwal* (*Trichosanthes dioica*), a climbing cucumber extensively eaten as a vegetable and reputed to have valuable medical qualities. It is possible that the earth is so called from its resemblance, or fancied resemblance, in properties, taste or colour to this cucumber (which, when ripe, is yellow or orange). Or the word may be a corruption of *parwari*, which would mean 'nourishing'.

and women eat. It is soft, in small masses mixed with earth, and has somewhat of an unctuous feel and reddish colour. It is undoubtedly the red jasper in a state of decay, just as the khori mati is white jasper decayed.

While waiting for my palankin, I went a little way up the ravine, along the torrent which rushes down its bottom, to see Amjhor. I first came to a pool exactly like Jhalakhund, but not quite so large. The natives admire its water, as it is exceedingly dirty. It is shaded by a mango tree Clambering up the rocks, I came to a second pool, as dirty, but it receives a supply of water from a small spring issuing from a crevice in the rock, and which supplies both pools. This is very fine water, but the crevice was so narrow, and the water so soon fell into the pool, that I could not procure a drink The thermometer in the shade stood here at 70°. In the spring it rose to 80°, which I presume is the medium heat of the country, although in a country so abounding with subterraneous heat, no great reliance can be placed on that inference. At this spring the stone is of the same nature with the quarry which will be afterwards described, and runs pretty evidently in vertical strata north and south, because it is somewhat decayed. In some parts it is composed of parallel layers distinguished by different shades of colour, placed vertically and running north and south without abating in the least from the toughness of the stone, which is excessive. In one place I observed a vertical stratum of fat white quartz, about one foot thick, passing north and south along with the potstone. The whole hill north from the pools consists of this stone, and several quarries are wrought in it. I examined that at its north end, which is the most easy of access, and to which I proceeded as follows:—Returning to my palankin at the foot of the pass, I proceeded west to the corner of Mogol Mara, about three quarters of a mile distant, over a plain covered with stunted trees. The west face of this hill shows a bare rock

of great extent. It is divided into small shattered fragments by fissures nearly vertical, and others nearly horizontal, and extending for great lengths, but without any very regular order. I can not call it stratified, or approaching to that in any degree It consists of a fine-grained aggregate of quartz glassy and white, with some black specks. From thence I proceeded north about half a mile to the south end of Puthurkanka Chur, a hill rocky and precipitous towards the east, exactly like Mogol Mari. It also consists of exactly the same stone, but in some parts it is stained red. I went north between this rock and the hill of potstone for about half a mile, and then walked up to the quarry A very considerable excavation has been made, and the stone is cut by wedges. I cannot call it stratified, as the fissures exactly resemble those of Mogol Mari and Putharkanka Chur The only thing in request seems to be the Linga, and many rude blocks were now lying in the process of shaping, some were very large When rudely blocked out, they are taken to Mongger to be polished. Excellent stones for building might be procured, but I doubt whether large columns could be procured, on account of fissures It is an indurated potstone, very fine grained, with small black crystals of hornblend, and in fact is hornblend in mass, as it is called, the two stones running into one another, so as to be scarcely capable of distinction.

Having returned to the corner of Putharkanka Chor, I went about two-thirds of a mile to my tents, rather more than a quarter of a mile from the western foot of the hills. The hills here, from the western face to the springs at Burka, I should take to be about three miles wide, the natives reckon two coses, but they judge by the time taken to walk over them.

10th April.—I went about ten miles to Kareli Kol,(811) nearly south from Masungunj (812) I kept at about half a mile distance from the hills to my left,

(811) The little valley (*kol*) to the south of **Karaili,** a village about 5 mi. S.E. of Dharharā.

(812) **Masumganj,** as above.

from whence three remarkable promontories project towards the west. The first I reckon to be about $1\frac{3}{4}$ mile from Masungunj, the second I reckon $4\frac{1}{4}$ miles, the third about six miles. About nine miles from Masungunj, I came near the hill by which this valley is bounded on the south, and turned east into a recess for about a mile, where at its bottom are two or three wretched sheds, in which the quarriers reside. The little recess here divides into two branches, down which two torrents come. The most considerable enters the north corner of the recess from the east, and is the proper Kareli kol. Its upper part contains a small stream, in which I found two species of fish, but the water is absorbed before it reaches the little valley. The other torrent is called Norhor,(813) and at this season is quite dry. It comes from the south On the east side of this is the quarry, a little up the hill which forms the bottom of the recess. It approaches nearer to roofing slate than any I have yet seen, the grain being fine and the fissures smooth. It runs north and south, and is inclined towards the west, about forty five degrees. The workmen have managed it more judiciously than anywhere else, except Sitakober. Many parts of the rock have decayed into a reddish substance, which they have cut down perpendicularly, until they formed a smooth surface on the undecayed part, which they then split off with wedges. The trench runs north and south. The same substance runs north to the torrent called Kareli, which it crosses, but there it becomes more solid, more shining and striated, and no doubt continues all the way to Masungunj. To the west of it, on both sides of the valley, the rock is a fine-grained aggregate of quartz, with black specks and flakes of a reddish colour, which do not run parallel with the fissures. These are very irregular. It would thus appear that the potstone in its various forms runs north and south through this range with silicious rocks on either side, both towards the east and west.

(813) Not named on the S.S.

11th April.—I went to Loheta.(814) In the first place I returned by the way I came yesterday, first 11/15 mile west to the end of the hill on the right of the valley, and then north-west two miles until I passed the third of the promontories that I had seen yesterday. I then left the old road and turned south-west having on my right a small detached rocky hill Proceeding south-west about 2¼ miles I came to the entrance of Marok,(815) where a deep recess is formed in the mountain of that name. The narrowest passage between the hills in the entrance has been fortified with a double rampart of loose stones. The hills, by which this entrance is formed, are narrow and very rocky. The rock is split, vertically and horizontally, into cuboid masses, and consists of fine grains of whitish and glassy quartz, in some parts stained red, and containing small black specks. Within these outer hills is another range, also running east and west, and immediately contiguous, but they are vastly rugged and broken. Passing these, I went south-east to a third range, which is separated from the middle one by a narrow valley, in which is a dry torrent, but the two hills unite towards the west and the people who were with me called the whole Marok A little way up his narrow valley, are some sheds for those who cut timber and bamboos, and gather stones Walking up the valley some way, I saw a prodigious perpendicular rock, on the middle hill, which shows its structure admirably. It is formed into[a] kind of quadrangular pillars, perhaps two hundred feet high and eight or ten wide, by fissures running east and west slightly inclined to the north, and by others running north and south slightly inclined to the east. The pillars are jointed by horizontal fissures. The stone is of the same nature with that of the outer range, but is mostly red. On these rocks breed vast numbers of the stock Dove, common all over the ancient world in such situations; and under projecting

(814) Laheta, already visited by Buchanan on the 30th March.
(815) i.e. the entrance to the deep, magnificent gorge that leads south-eastwards to the flank of Marak hill.

parts hung many large nests of bees, which the people have not enterprise to take. The inner hill consists entirely of slate, exactly such as at Kareli, only it runs east and west, and is more inclined from the vertical position towards the north than the other is towards the east. I went west along its face for some way, until I came to a small recess, in which there is a torrent, which in its upper part contains a small stream, but is dry where it enters the plain. Having returned to the entrance and remeasured by the old road a hundred yards or two,(816) I turned to the north-west for about 1½ mile, when I approached near a rocky hill on my right, and continued to keep near it, while I proceeded about two miles east.(817) There were hills also on my left, but at some distance, nor do I know that they are a continued ridge. I now entered the wider plain of Loheta, having hills on my left only, those to the right receding towards the north. Two-thirds of a mile from them I crossed a dry torrent, and at an equal distance farther I came to the village where I had formerly halted.

12th April.—I went in the first place to visit a quarry of the shistose hornblend at Amarakol.(818) Proceeding west a little southerly, I came to two small hills, between which I passed, and then went south through a stony plain for about half a mile, in which space I crossed the torrent which comes to Amarakol. Having thus come to the root of the hills, I found those which form the outer gap, exceedingly broken and rugged. The stone is broken into cuboid masses by fissures, running east and west with an inclination towards the north, of about 20°, by others running north and south nearly vertical, and by others almost horizontal, with a dip, however, towards the north. The stone is a dark grey very fine-grained aggregate. When entire the particles are little distinguishable,

(816) The object of such measurement is not explained. Possibly Buchanan estimated distances travelled on foot by paces.

(817) So in the MS., a slip for 'west'.

(818) Amrasani of the S.S., which should read Amrāsani.

and the stone resembles a jasper, but in decay its nature becomes evident, and the crust consists of grains of quartz, like poppy seed, united by a white mealy substance, which has lost its black colour. This stone, in some parts, contains red dots Within these rocks is a litle valley, with a recess running both to the east and west, between the outer hills and those which are next to them. Here is a little fine land, but the extent is trifling. Following the torrent into the second range of hills, I found their northern face to consist of a similar aggregate, but in most places it had a reddish hue. These hills are less rugged. The channel here is entirely filled with fragments of the hornblend, and advancing a little way up, without any separation of the hills, I came to where it formed the rock in the channel, and on both sides. Immediately on reaching this, I found a fine little purling stream of clear water, in the pools of which were many fishes of the two kinds found at Kareli, but the stream here is more copious. It is, however, absorbed the moment it reaches the quartzose rocks, as is also the case at all the other kols that I have seen, where the water is found only on the hornblend. At the hot springs again the rock is quartzose, but then it is above the water, which I suspect, is turned out to the surface by a stratum of some other nature. The hornblend seems here of exactly the same nature with that at Kareli, and is only collected in detached pieces, brought out by the torrent; but I have nowhere seen larger rocks of it. They run east and west with some inclination to the north, in some parts perhaps 40°, in others not 10°. In the channel of the revulet here, I found many detatched masses, exactly like the solid rock at Amjhor, from whence I could not break a good specimen. It consists of parallel alternate layers of different shades of black. Along with these were masses of a similar structure, but the layers are of various shades of red and white, and resembling much the Kori of the Rajmahal hills, but having somewhat of the hornblende lustre. It had immersed in it small cuboidal masses; but in such a state of decay that I

shall not venture to say whether they were felspar or pyrites or galena. Having thus examined the strata, I returned to Loheta, and proceeded thence to Dorhora, by the same route that I before went to Mongger. The stone at Dorhora is exactly similar to that which I have described as being found at the western extremity of the same hill, *see* 1st April.

13th April.—I returned to Mongger by a road that I formerly came. Dekra Nullah is about 2½ miles from the Patna gate. The bridge over it has been a very rude(819) pile as usual, but is the largest I have yet seen in the course of the survey. About one-third of a mile from it towards Mongger, are lines(820) of little strength or importance. The ditch towards the west.

[*End of Bhagalpur Journal.*]

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(819) Ḍakrā nalā, see Appendix 5

(820) The 'lines' noticed by Buchanan were the remains of lines of entrenchments that ran from the foot of the rocky hills to the north of Jamālpur across the plain to the Ganges near the mouth of the Ḍakrā nālā forming an advanced line of defence to the Monghyr fort from attack from the west Entrenchments had probably been constructed here from the earliest times Like the Teliyāgaṛhī and Sakrīgalī passes further east, this narrow gap between the hills (that were quite impracticable for the passage of armies in olden days) and the Ganges was a position of the greatest strategical importance There is reason for thinking that entrenchments had been thrown across here in Sher Shāh's time when he and the forces of the Bengal King were contending for the possession of Monghyr Early in 1658, after his defeat at Bahādurpur, being pursued by Sulaimān Shikoh, Shāh Shujā' retreated to Monghyr, and is said to have constructed a rampart some two miles long from the hills to the Ganges, strengthening it with trenches and bastions, and so checked his pursuer Whether he built an entirely new line of fortifications, or repaired or rebuilt an existing line, is not clear. Next year again, after his defeat at Khajuhā, Shujā once more retreated to Monghyr and strengthened these lines against Mīr Jumla, who was following him. (See J. N. Sarkār. *History of Aurangzeb*, II, 239—40) Mīr Jumla, however, bought over his ally Rāja Bihrūz of Kharakpur, and under his guidance went round through the hilly country (a feat even then regarded as wonderful), thus threatening shujā' in the rear, in fact 'turning his position. So Shujā' hastily abandoned Monghyr and fled to Teliyāgaṛhī and Sakrigalī, in the hope of holding these passes against his opponents. Traces of the lines of entrenchment may still be seen to the south of Safiābād, close to the main road from Monghyr to Jamālpur.

APPENDIX 1.

(*See Introduction, page X.*)

Augustus Cleveland.

The name of Augustus Cleveland (as the name is ordinarily spelt) is familiar to most students of Indian history Eulogies on his work among the mountaineers of the Rājmahāl hills, or "Jungleterry" area, have been engraven upon his tomb in the South Park Street Cemetery, Calcutta, and (penned by Warren Hastings himself) upon the monument erected to his memory at Bhāgalpur Full descriptions of these inscriptions will be found in Holmes and Co.'s *Bengal Obituary* (1848), page 72, and in Sir W W Hunter's *Statistical Account of the Bhagalpur District* (1877), page 84. A contemporary account of Cleveland, while Collector of Bhāgalpur, is given by William Hodges,(1) the artist, who accompanied him on one of his tours among the hills in the beginning of 1782. Hodges went with him to Bārkūp and Deoghar and back, and he gives a very interesting account of a buffalo sacrifice witnessed, and of Cleveland's treatment of the hill folk and their demeanour towards him.

To Sir William Foster, C I E , lately Historiographer to His Majesty's Secretary of State for India, I am indebted for a copy of the original "Writer's Petition" submitted by Cleveland, which is preserved among the records at the India Office. From this document we learn that he spelled his name Clevland; that he was the son of J Clevland and Sarah; was born on the 19th September 1754, and baptized at St Martins-in-the Fields in the 16th October 1754. He was appointed a Writer on the 16th November 1770; arrived in India on the 22nd July 1771; was appointed Assistant to the Collector of Rājmahāl in 1773, Assistant to the Council or Revenue at Murshidābād in 1774, Assistant Factor at Bhāgalpur in 1776, Junior Merchant and Collector of the district in 1780, and also Judge of the Adālat in 1782. Hodges, on his return from up country towards the end of 1783, found him ill in bed. With a view to the recovery of his health, he started on a voyage to the Cape in the *Atlas*

(1) *Travels in India*, London 1793, pp. 86–87; 151.

Indiaman, the vessel in which Mrs. Hastings (who had been Cleveland's guest at Bhāgalpur in 1781) was sailing to England; but he died near the mouth of the Hūglī on the 13th January 1784, his body being brought back to Calcutta in the pilot sloop. When, therefore, Captain Browne was ordered, in 1778, to make over charge of the three northern jungleterry divisions to the Collector of Bhāgalpur, Cleveland was only 24 years of age and much his junior in years, and does not appear yet to have received charge of the Collectorship.(3)

Admirable as undoubtedly were Cleveland's many qualities, we must not allow the glamour that surrounds his name to blind us to the merits of the men who had preceded him in authority over the hill areas, and who had paved the way for his success. These were Captain Robert Brooke (1772-74) and Captain James Browne (1774-1778). Brooke, while sternly repressing marauders and rebels, was the first to employ conciliatory measures. "He first won the confidence of the hill people by his kind treatment of prisoners and his consideration towards their children and women folk. He then induced some of them to come down and settle in the more culturable lands below the hills. In 1774 he reported that he had thus founded no less than 283 villages between Udwa and Barkop. When the later achievements of Mr. Cleveland are considered it should not be forgotten that Captain Brooke was the pioneer of civilization in the jungleterry "(4). Even Warren Hastings, in a minute, claimed that the jungleterry had been "reduced to Government and the inhabitants civilized" as a result of Brooke's measures—an over sanguine view, no doubt. Of Captain Browne's work we fortunately have his own account,(5) a perusal of which will show to what extent he had inaugurated the system that was afterwards continued and further developed by Cleveland. He was faced from time to time with some troublesome outbreaks, which he had to suppress, but "not content with the mere suppression of disorder, he made a careful study of their [the hill people's] past history and their indigenous system of organization, and early in 1778 he submitted an elaborate plan for their administration, which met with the entire approval of the Council and drew a warm

(2) Sir William Foster has very kindly verified this date (sometimes given as the 12th January) from the leg of the slip.

(3) Mr. James Barton was then the Collector.

(4) H. (now Sir H.) McPherson, *Final Settlement Report, Sonthal Parganas*, pp. 26—27.

(5) *India Tracts*, London, 1788.

'etter of commendation from Warren Hastings." His proposals " were distinguished from the latter measures of Mr. Cleveland by their economy rather than by the spirit which pervaded them • Great as were the later achievements of Mr. Cleveland amongst the hill people, much of the credit that has fallen to him was really due to Captains Brooke and Browne, and more especially to the latter who initiated many of the reforms which the civil officer afterwards elaborated ".(6)

In this connexion the following extract from Buchanan's Manuscript Report(7) on the Bhagalpur district will be read with much interest The passage does not appear in Martin's *Eastern India* · it is one of the many portions suppressed by him.

" The concessions made by Captain Browne, as connected with views of a tempor [ar] y military nature, were in all probability highly proper, but the vast credit which Mr Cleveland obtained for adopting them, in what was called a spirit of conciliation, seems to have influnced the gentlemen who had afterwards the management of the district, and has produced a ruinous settlement and establishment, which, so far as I can learn, has been very far from conciliating the goodwill of the natives, and especially of the zamindars I have nowhere heard so much complaining, and I have reason to believe that when Amir Khan penetrated into the Dwab, some of them anxiously wished for his arrival in these parts, and were eager to join him, in order to have an opportunity of murdering the Europeans."

(6) H McPherson, *op cit*, p 27
(7) *Buchanan MSS* (India Office Library), Bhāgalpur *Report*, p 116

APPENDIX 2.

Shah Shuja's Palace at Rajmahal.

Though Sher Shāh had, some fifty years earlier, recognized that the Rājmahāl site must supersede that of Gaur or other sites on the east of the shifting Ganges, it was Mān Singh who first made it the capital of the eastern provinces, after his conquest of Orissa in 1592. Stewart tells us that Mān Singh "built a palace" there, and "constructed a rampart of brick, strengthened with bastions, all round the town." When Shāh Shujā' was appointed by his father, Shāhjahān, to the Government of Bengal in 1639, he established his capital at Rājmahāl. Though he resided for considerable periods at Monghyr (where he also had a palace erected) his headquarters were, at least during his first viceroyalty, at Rājmahāl. He seems to have started almost at once to build himself a suitable palace there, and strengthen the fortifications erected by Mān Singh. Stewart says that about the same time the Ganges, changing its course, poured against the walls of the new capital, "washing away many of the stately edifices." Shujā' was withdrawn from Bengal in 1647, but reappointed to that province in 1649, charge of which he held until, in the course of the war with his younger brother, Aurangzeb, he was finally driven out of the province by Mīr Jumla in 1659. Shujā' evacuated, Rājmahāl on the 4th April 1659, never to return. Aurangzeb's adherents occupied the town on the 13th. It is probable that during the struggle in this neighbourhood the town had been subjected to artillery fire and to damage in other ways, which would account for the destruction which de Graaf says had been wrought during the civil war between the brothers. Having regard to Buchanan's description of the *Sangī dālān*, which he(1) ascribes to Shāh Shujā', and his plan(2) of the remains left of it, it is interesting to note that we possess two accounts of the palace buildings as seen some eleven years after Shāh Shujā' abandoned them, written by John Marshall and Nicolas de Graaf.

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(1) In the *Gazetteer* (1910), p 274, however, it is ascribed to Mān Singh.

(2) Reproduced with sufficient accuracy on p. 71 of Martin's *Eastern India*, Vol. II

John Marshall arrived in India as a Factor of the old Company in 1668, and, after some service at Masulipatam and Balasore, was posted in 1670 to Patnā as subordinate to Job Charnock. From Hūglī he travelled by river, and on the 8th April reached Rājmahāl, where he halted three days. In his diary(3) he writes as follows :—

" The house in which the King's sonn some years since lived is very long. There is a Garden belongs to the house which is about ½ Course out of Towne South ..... . The Garden consists of 4 Quadrangles, 2 of them built and walled with stone round about, each side being at least 200 yards long.

" Cross the Quadrangle are two walks paved with large freestone. In the middle of each walk is a channell paved, about 2 yards broad and a foot deep, into which are very many leaden pipes, through which water is carried and runs through the Garden. The walk[s] with the channell are about 8 yards broad . . . .

" In the middle of each side of the Quadrangle is a large and stately Banqueting house 2 stories high, adorned with much marble marked neatly, and in the middle of [the] Quadrangle a neat Banquiting house. The South West and North West sides lie against a great Tank. At the outside of [the] Garden South is a place behind the King's sonns seat to convey up water into a Cestern, from which all the Pipes are supplyed with water, which in some Banquiting Roomes is conveyed to the Second Story high . . ..

" The Garden is now much ruined, but hath been a very stately one. In the lodgings and rooms about it is accommodation for 1000 men."

In the following year, when again travelling up to Patna, on this occasion by road, Marshall makes the following note in his diary under date 13th May 1671 :—

" . ..I went in the Morning to Sasujas garden, in which are 5 Quadrangles, each (except the 4th) inclosed with brick and stone wall and houses, in which are some very pleasant and coole roomes, the bigest Quadrangle about 200 yards long and 80 yards broad; the 2d 130 long and 80 broad, which is the Maul [*Mahal*] for women; the 4th 100 long and 80 broad. This is not walled at the furthest end, but theres a great poole of water; the other for women stands also by ditto poole. The 5th is at the entrance in, and is about 50 yards long and 50 broad."

Nicolas de Graaf was a surgeon in the service of the Dutch Wast India Company, who on his third voyage visited Java, Ceylon and Bengal. He reached Hūglī in October 1669. Next year he was deputed to Patna, to treat the Director of the Dutch factory there, Joseph Sanderus, who had been long ill. He travelled by boat, reaching Rājmahāl in September 1670; and there he spent eight days looking at the sights,

(3) *John Marshall in India*, Oxford, 1927, p. 70—71.

and drawing, with the special permission of the Muhammadān commandant, a plan of the Palace and Gardens of Cha Sousa, or Saseasa (as it is spelt on the original plan). This plan I have had reproduced (on an enlarged scale) from the plan in an early Dutch edition of his travels. Comparing this plan with Marshall's description, certain discrepancies will at once be noticed. Though de Graaf apparently had the reputation among his Dutch associates of being a good draftsman, I may warn the reader that he seems to have had very little idea of drawing to scale. This defect was established beyond the least doubt when dealing some years ago with a plan of the fort at Monghyr, which he drew later on in the same year, and which also appeared as a plate in his book. Though he professed to have carefully measured and recorded the dimensions of the fort, I found his plan to be very inaccurate and the several parts out of due proportion. Similar defects possibly occur in this plan. Along with the plan I give an English rendering of his explanations referring to the lettering thereon. In order further to elucidate his plan, I give below a translation of such passages in his account of Rājmahāl as bear upon these remains.

" The town, fortifications and bastions of Ragi—mohol extend along the banks of the Ganges, which at this place is very broad and is divided into different small rivers. It has several rather remarkable buildings. ....by the water's side a fine palace and a set of apartments for the ladies.

" .....the Dutch have a factory and a warehouse there ..... .Behind the factory are seen the palace and the gardens of Cha Sousa, brother of Orang—Czeb, who is the Great Mogol of today, and several other buildings and mosques of the Muhammadans, which have been almost completely ruined during the war of 1657 and 1658. I have delineated the whole extent of the Prince's palace, with its buildings and the gardens as shown.

[Then follows his explanation, or key, to the plan.]

" This garden is nearly quadrangular. Two of the sides abut on the river, and the others face the country side. Each side is about 500 ordinary paces in length. It is surrounded by a high wall, ornamented with several little, pleasing towers, and is divided into five large sections by high, thick walls. There are some very charming buildings to be seen, in which are different kinds of rooms with very well constructed arches and arcades, of which some are painted or gilded, and others made of wood that has been carved, all being supported upon thick octagonal or round pillars, some of wood, others of stone and even of copper. Each separate garden has its fountains, from which water flows through pipes, which are skilfully arranged to cross each other. These (i.e., fountains) are made of marble or alabaster or blue and white stone, ornamented with a variety of figures cast in bronze, such as lions, dragons and other animals. In short, these gardens are a wonder and are well worth seeing."

The chief discrepancy between Marshall's and de Graaf's account is that, while Marshall says two sides of the garden faced a "great tank" (possibly the *jhīl*), de Graaf says two sides looked on to the river and the other two faced the country side: and this is what his plan also seems to show. Otherwise they were evidently describing the same site When, however, we come to compare with these two accounts Buchanan's plan and detailed description of what he calls the *Sangī dālān*, it seems as if we were dealing with a different site altogether. These difficulties can only be properly investigated on the spot.

William Hodges, the artist, who accompanied Warren Hastings on his journey to Benares in July—August, 1781, appears to have made no drawing of the ruins of Shujā's palace He writes, however, in his *Travels*(4):—

> There yet remains a part of the palace which was supported by vast octagonal piers, raised from the edge of the river. The great hall(5) yet remains, with some lesser apartments, as well as the principal gate(6) leading to the palace these are surrounded by immense masses of ruins. This palace, in the time of Sultan Sujah, was nearly destroyed by fire the zananah, or that part inhabited by the females of his family, was totally destroyed.
>
> ".. ....At a little distance from Rajemahel are the ruins of a zananah,(7) which I went from curiosity to inspect, as they are when inhabited sacred places."

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(4) *Travels in India*, London, 1793, pp 21—22. His *Select Views in India*, published in 1786, contains pictures of

(1) The Gate of the Carvan Serai at Ragemahel

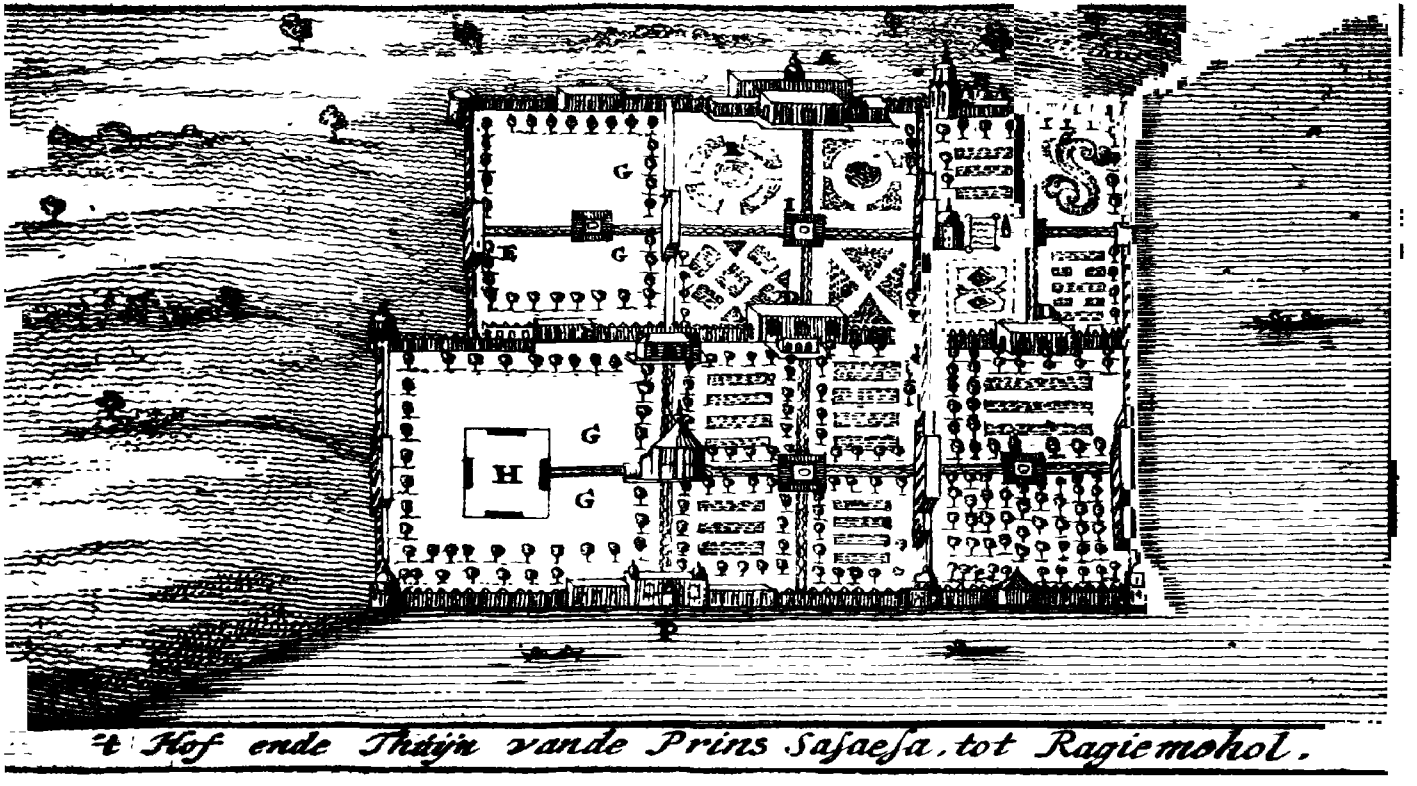
(2) Mosque at Ragemahel [? The Jāmi' Masjid of Mān Singh];

(3) Bridge over Oodooanulla,

(4) Pass of Sicrigully.

(5) (6) Possibly Buchanan's "great house" and "gate A," respectively

(7) Was this the Phūlbārī?



PALACE AND GARDENS OF SHAH SHUJA' AT RAJMAHAL,
AS DRAWN BY NICOLAS DE GRAAF
(Reproduced from the Dutch edition of his *Travels*)

EXPLANATION TO PLAN:

(AS GIVEN BY DE GRAAF)

A Building on the back wall, with pumps and a raised reservoir from which water flows to the fountains

B. Octagonal tower, which the Prince ascends when he makes the elephants fight.

C Bath-house with three towers where he goes to bathe

D. Large halls, with their fountains, along the middle wall.

E The hall of audience, where he goes to receive obeisance in the morning

F The women's apartments, which are on the side of the town and the Dutch factory

G Large empty spaces planted around with trees and ornamented with pleasure-houses on all sides

H Large tank, to which stone stairs descend on the four sides

I Reservoirs, with water-channels in the form of a cross that carry water through the garden.

K. The central garden, which is ten feet higher than the others, and is vaulted and full of water-channels underneath

NOTE The "P" on the plan should apparently read "F"

APPENDIX 3.

Invalid Thanas.

In his three still extant Journals Buchanan often mentions "invalid thanas", usually associating with them the name of Colonel Hutchinson As these institutions have long since been abolished and their history is not generally known, a brief account of them may be given.

Early in 1778 Captain James Browne, who had been incharge of the "Jungleterry districts" since 1774, submitted to the Board specific suggestions(1) for improving the system of control over the hill areas Towards the end of his recommendations he wrote as follows :—

"Most of the Sepoys in the Company's service have originally been husbandmen, and their families still follow that method of life, in and beyond the Company's territories, I beg to submit it to your consideration, whether it would not be for the advantage of Government, to publish through the invalid corps of Sepoys, that whoever among them will settle on the lands between the Hills and the Sudder, shall have small Jaghiers given for that purpose, for the subsistence of themselves and families, who are to be brought thither —This would afford the prospect of a comfortable maintenance to old soldiers worn out in our service, and would establish a kind of militia, whose possessions being interspersed among those of the Malguzarry tenants, would keep the whole in safety from the Mountaineers; feodal service might also be enjoined from them if approved of."

In a letter dated the 10th March 1778, the Supreme Council expressed their warm approval of this proposal in these words :

"We are much pleased with the plan which you recommended of granting Jaghier lands to the invalid Sepoys, and desire you will carry it into immediate and effectual execution"

Here we have the genesis of the invalid thānās, or jāgīrdārī institution, as the organization was also called; and let us remember that the system, so excellent in its original conception and so suited to the area in which only he intended to apply it, was initiated by James Browne, whose important services were so largely forgotten after Augustus Cleveland came on to the stage.

(1) See his *India Tracts*, 1788, where these proposals are printed in the *Supplement* at pp 73—88

In the following year (1779) the Collector of Bhagalpur, then Mr. Barton, was directed by Warren Hastings to introduce the proposed system, and he proceeded to take up lands for the purpose, an allowance (*rasūm*) being subsequently made to the zamīndār responsible for the Government revenue In 1782 fuller directions were issued to the Collector, now Mr Cleveland He was instructed to select healthy sites for the settlements, and the quantity of land to be granted to each Indian officer and sepoy was laid down on a fixed scale In the case of the infantry the areas varied from 200 bīghās for a subadār to 40 bīghās for a sepoy, and in the case of the cavalry, from 300 bīghās for a risāladār to 50 bīghās for a trooper. The scale appears to have been altered later, as Patna records(2) mention 600 bighas as given to risāladār, 400 to subadār, down to 80 bīghās granted to a sepoy, under a Regulation of 1789 Gratuities were also granted to enable the grantees to meet the initial cost of bringing the lands under cultivation In fact as the system became extended various changes of practice were introduced which need not be detailed here

As will be clear from Captain Browne's original proposal, the intention at first was to take up lands on the outskirts of the hill country, to the south of the Ganges, but subsequently settlements were established to the north of that river, and later on the system was extended into the Monghyr, Patnā, Shāhābād, Tirhut and Sāran districts The system had expanded far beyond its original scope; increasing difficulty was felt in finding lands that could be appropriated to such settlements; and the question arose of calling a halt Besides the dearth of suitable lands in healthy localities, it was contended that the invalid men had not proved successful as cultivators Moreover, as conditions became more settled, the state of affairs that had suggested the arrangement was fast disappearing · the plains people were no longer in constant dread of raids by the mountaineers. A Regulation of 1821 put an end to further grants. Thereafter resumption proceedings dragged on for many years Traces of these old 'invalid thānās' may still be found all over the alluvial tracts in South Bihār, in the name *Inglis*, i.e , English, added to the names of hamlets or blocks of lands. In the settlement records such lands are frequently found entered as *jāgīr inglīs* In the last Survey and Settlement Report a list is given of 25 such thānās in the Bhāgalpur district.

(2) See J. F W. James' *Final Report, Survey and Settlement, Patna District* (1907-12), p. 33.

The supervision of this widespread organization required the services of an experienced officer, who was known as the "Regulating Officer of the Jāgīrdār Institution"; and this office continued to be in existence till the middle of last century. For many years the incumbent was John Hutchinson, who is frequently referred to by Buchanan in his Journals as Colonel Hutchinson. Born in 1751-52 he entered the Company's Bengal Army as a "country cadet" in 1770,(3) but did not attain the rank of Lt. Colonel till 1800 He died at Bhāgalpur in 1807 He appears to have been succeeded in the charge of the Jāgīrdār Institution, if not directly, at least very shortly afterwards, by Colonel Hugh Stafford, who had joined the Bengal army in the same year as Hutchinson, but outlived him, attaining the rank of Lt. General in 1814, and dying in Calcutta in 1819.

(3) According to Dodwell and Miles, 1771, according to Major Hodson (II, 513)

APPENDIX 4.

Sakrigali and Teliyagarhi.

As in other cases, I have retained in the notes the spelling of these names adopted on the Survey sheets It is a question whether the current spelling is not incorrect in both these cases Taking the case of Sakrigalī first. Ives(1) in his description of Eyre Cootes' pursuit of Law and his troops after the battle of Plassey, spells the name " Sicarigully." Rennell, on his maps " Siclygully.' Sherwill, the Revenue Surveyor, spells it Sikree Gullee, Buchanan, in his Journal, writes Sikrigarı ", and in his *Index of Native Words* he gives Śikri—शिक्कि (*sic*). In old correspondence dating back over a century the name is sometimes written Sikree Gurhee. The original name was very likely Śikharīgaṛhī (शिखरी गढ़ी), meaning the ' little fort on the hillock.' The word *Śikharī* means a small hill . it is the same word that we find in Fathpur Śikharī (' Fatehpur Sicri '), Akbar's town near Agra It is perfectly clear from the way the name has been transliterated by scores of old travellers that the first vowel in the first part of the name, as locally pronounced, was a short *i* If this be so, the suggested derivation of the name from *sakṛā*, ' narrow ' and galī, 'lane ' *or* ' *defile* ', would seem to be fairly ruled out That there were fortifications at this corner of the hills (as well as at Teliyāgarhī) we know from John Marshall's diary : " Here are the ruins of old Forts and bulwarks "(2). In 1781, Hodges saw the remains of " a strong wall and gate "(3).

In the case of Teliyāgaṛhī, the second part of the name is admitted on all hands to be गढ़ी , meaning a ' small fort ', although in the old accounts, records and maps we constantly find it also spelt " gully " (e.g. " Terriagully ", on Rennell's maps). The explanation of the name generally accepted is that which was given in Hunter's *Imperial Gazetteer* (and repeated in the 1908 edition), namely, that

(1) *John Marshall in India, Oxford*, 1927, p 118, under date 14th May 1671.

(2) William Hodges, *Travel in India, London*, 1793, p 22

(3) Edward Ives, *A Voyage from England to India*, London, 1773, p. 160. The account given by Ives must have been based on some original diary.

the fort which seemed never to have been completed, was constructed in the 18th century by a Telī zamīndār, who was forcibly converted by the Muhammadans. This explanation seems to have been founded upon a statement made by Buchanan. But it was in the time of Mān Singh, at the end of the 16th century, that the area including the site of the fort is supposed to have been confiscated from the Naṭ Pahāṛiā chief who opposed his advance, and made over to two Telīs who rendered him assistance. The fortifications at this pass, however, date from a period long anterior to Mān Singh. There was a fortress at this site, then known as Gaṛhī, as early as 1536 (and doubtless still earlier) which is referred to by the Muhammadan and Portuguese historians. When Sher Shāh advanced against Maḥmūd, king of Bengal in that year, his troops were held up at Telıyāgaṛhī by the Bengal forces assisted by some Portuguese. He turned the position by marching through the hills to the south, just as Mīr Jumla did in 1659, and Bālājī Rāo, the Marāṭhā did in 1742/3. Two years later, when Humāyūn advanced against Sher Shāh, who was then in Gauṛ, the latter sent his son, Jalāl, with some 10,000 troops to hold " the defile of Gaṛhī, which is the only passage to the countries of Gauṛ and Bengal, there being no possibility of penetrating into those countries by another road." Guns were posted on the hills and the " gate " held After a daring sally, in which he surprised the Mughal army, threw them into confusion and looted their camp, Jalāl " closed the gate, and resisted the numerous army of Humāyūn for the space of one month "(4).

De Barros (1496-1570), in his *Asia*, tells us that the king of Bengal had a fortress there, in the narrow passage through which the Ganges issued, " as a defence against the people who inhabit those hilly tracts, so that they are not able to enter [the Kingdom of Bengal] either by land or river." In Lavanha's map that was published with de Barros' history and is the earliest map (*circa* 1550-52) of Bengal extant, the site is marked as Gorij, which represents the Portuguese pronunciation of the name.

Next, we have the account of Gṛhī in the *Āīn-i-Akbarī*, where it is described as the western limit of the *ṣūba* of Bangala; and the old *pargana* of Gaṛhī is named as one of the *maḥals* of *sarkār* Lakhnauti in Ṭoḍar Mal's rent roll (1582)(5).

(4) A full and interesting account of those operations is given by Ni'mat-ullāh in his *Makẖzan-i-afaghana.* (See Dorn's translation, I, 113—115.)

(5) *Ain*, II, (Jarrett's translation), p. 152.

Strange as it appears at first sight, under *sarkār* Munger we are told that in that *sarkār* " a stone wall has been built extending from the Ganges to the hills, which they consider as demarcating the boundary of Bengal." This can only refer to the fortifications at Telıyāgaṛhī, which lay at the boundary between *sarkār* Lakhnautı ın *ṣūba* Bengal and *sarkār* Munger ın *ṣūba* Bıhār. If Abul-faẓl had wrıtten " on the eastern boundary of the *sarkār* (of Munger), there could have been no questıon of the sıte referred to.

Again, ın 1659, Shāh Shujā' when being pursued by Mīr Jumla, made a stand for some time ın thıs neıghbourhood, and, we are told, built a wall from the rıver to the southern hill; which possıbly only means that he rebuılt or strengthened the old defences. Mr. J. N. Sarkar,(6) taking the descriptıon, namely " Rangamatī, 33 *kos* from Mungīr and 15 kos from Rājmahāl ", gıven ın the ' *Ālamgīrnāmā*, thınks that the place meant was " undoubtedly *Lālmatı*, half a mile south of the Sāhıbganj statıon." But there are places called *Lālmaṭṭī*, or *Lālmatıyā* (a common name in areas where red soil ıs found) near Telıyāgaṛhī also, e g., some 2 mıles south-west, and about 2 mıles south-east thereof. " Āqıl Khān, however, gıves the name Gaṛhī, ı.e., Telıyāgaṛhī.(7) Moreover, the dıstances given ın the " Alamgīrnāma fit thc Telıyāgaṛhī sıte better than a sıte further east, ıt being just about 30 miles, or 15 *kos*, by the old road from Rājmahāl. In addıtion to these reasons for regardıng the Telıyāgaṛhī pass as the sıte defended by Shujā' we have the ınvarıable local tradıtion associatıng hıs name with the fort there, a tradıtion that Buchanan also records(8); and, finally, there are the obvious strategical arguments that must point to this site as the one that would be defended first by any force retreating eastwards by the side of the Ganges, round these hills. Furthermore, we have no record that I can dıscover of the traces of a ' wall ' or fortificatıon from the hills to the Ganges at Sāhıbganj.

The story, then, of the fort having been built by a Telī zamīndār in the 18th century appears to be, like so many local explanations of names, a concoction by some person ignorant of the history of the neighbourhood. The suggestion to derive the name from the Hindī word *teliyā*, meaning dark

(6) *History of Aurangzib*, II, 241.

(7) Not Sakrıgali, as thought by Dowson (see Elliot, *History of India*, IV, 367, note (2).

(8) In his Report he writes definitely that Shujā built a footress there

(लि. 'oily') is not compatible with the genius of the language, and may be omitted from consideration It seems more reasonable, on the other hand, to interpret the name as describing the situation of the fort, which at once strikes the observer, "at the foot of the hill", for, as Buchanan graphically puts it, "here the hills descend to the river's side for about a mile, and their roots have been occupied by a fort." *Taliyā* is the common vulgar pronunciation of *talā* (Sans. तल:), also *tarā*, the 'lowest part', 'base', &c. Taliyāgaṛhī would thus mean 'the little fortress at the foot' (of the hill)—just what it is. The spelling of the name as "Terriagully" "Terreeagurhee", &c , also tends to support this explanation, as *tarā* and *tare* are forms commonly heard for *talā* and *tale* ('at the foot of', 'below'), *r* and *l* being so constantly interchangeable. Terī, on the other hand, is a form never used for Telī, an oilman So, if Śikharīgaṛhī be the original form of the name of the site at the eastern end of the narrows, meaning 'the little fort on the knoll", Taliyāgaṛhī was probably the original name of the 'fort at the base' of the hills at the western end

APPENDIX 5.

Dakra Nala.

The ruins still standing of the old bridge over the Dakrā nālā, in spite of Buchanan's somewhat disparaging comment, present one of the most picturesque sights in the district(1) As they have been the subject of some misconceptions it seems desirable to record the following details The bridge was built entirely of bricks laid in a tenacious mortar, and not of stone, as has sometimes been supposed But the commonest error, which appears in nearly all accounts of the bridge, is that it was destroyed by Qāsim 'Alī Khān when being pursued by Major Thomas Adams in 1763

Arthur Broome, who is generally so accurate, writes(2) of "the bridge over the Dakra Nullah, which had been broken down by Meer Kossim Khan's order to retard the pursuit". The *Gazetter* repeats Broome's version Caraccioli, when describing the capture of Monghyr by Adams, (3) writes that Captain Stibbert was sent forward "to throw a bridge over Shinga nulla [i.e, Singhiyā N., three miles beyond Ḍakṛā N]; and in the meantime people were sent to repair the bridge at Dura-nulla [i e., Ḍakrā N], that had been cut by the enemy to retard our march" Captain John Williams, who, there is good reason for believing, was at the time serving as a private in the "Marines", as Wedderburn's Volunteers were called, gives the following account:—(4) "Cossim Ally having broken down an arch of the bridge over the Daccra Nulla, he [Major Adams] was detained one day in laying planks for the army to cross." Adams, in his Army Order Book of this campaign, from which Caraccioli's account was possibly taken, under date 11th Oct. 1763, wrote:(5) "People to be sent immediately to repair the bridge at Dacra Nulla. The engineer to set

(1) For a clear photograph of the ruins as they stood in 1910, see *Bengal Past and Present*, Vol. VI, p. 130.

(2) *History of the Rise and Progress of the Bengal Army*, 1850, p. 390 Broome quotes as his authority the *Siyar-ul-mutākharīn* of Ghulām Husain.

(3) *Life of Lord Clive*, 1777, Vol. I, p. 329.

(4) *Historical Account of the Bengal Native Infantry*, 1817, p. 17.

(5) I. O. *Orme MSS., India*, VII.

people to repair the breach and to get the gun up that is fallen in." In his *Journal*, under date 30th Sept. 1763, Adams notes that Mr. Swinton [i.e. Lieut. Archibald Swinton], who had gone ahead to reconnoitre the Monghyr fort, was informed that Qāsim ʿAlī Khān and his troops were at Sūrajgaṛā, and that "the bridge over Dacry Nulla was broke down for certain." Archibald Swinton in his diaries, so far as these are yet available,(6) does not refer to the subject of the bridge It will be noticed that neither in his Order Book nor in his Journal does Adams mention that the bridge was intentionally destroyed by Qāsim ʿAlī. By doing so he would have cut off the retreat of the large force left in the fort to defend Monghyr, which was at the time his capital. Though he had himself decamped from Monghyr at the approach of Adams' force, he had left Arab ʿAli Khān with a numerous garrison to hold out there.

But, most important of all in this connexion, is the record contained in Major Caillaud's diary(7)' kept during his campaign of 1760-61. Describing the march from Ghorghāṭ to Ḍakrā nālā, under date 13th Feb. 1760, he writes. "The troops passed 4 nullahs Over the two first are good brick bridges; over the 3rd one of branches, etc., and over the 4th at Deckria Nullah [i.e. Ḍakrā nālā] is one of brick, but so much broke in many parts as to render it quite useless for carriages, but still fit for foot passengers. The artillery and heavy baggage obliged to pass the nullah at the Ford a little to the right of the bridge." From this account it is perfectly clear that the old bridge had been broken, and "in many parts" before Qāsim ʿAlī's time, and that in Feb. 1760 Caillaud was unable to use it for carts, let alone guns. It had probably been repaired again before Qāsim ʿAlī fled from Monghyr to Patna at the end of September, 1763. It may have been damaged during its use on that occasion; but Adams' order of the 11th Oct. reads as if his guns were also being taken over it, when one broke through and fell into the river. At all events it is pretty clear that Qāsim ʿAlī had not had it "blown up", and that it had been in a broken down condition at least 3½ years earlier.

By whom this fine old bridge was originally built, we have no record to show. Judging from the kind of bricks used and the peculiarly strong mortar employed, both of which recall the fabric of the old *Damdamā Koṭhī* in the fort

(6) *Swinton Family Records and Portraits*, 1908 (privately printed.)
(7) I. O. *Orme MSS., India*, VI, *Caillaud's Journal in Bengal.*

(where the Collector's house now stands) I am inclined to the view that it dates from the time of Shāh Shujā's vice-royalty (1639-59). *Ḍākar*, in Hindī, means a stiff dark clay soil. The detritus from the neighbouring hills carried down into the river bed has no doubt caused a deposit of such clay. The word *ḍakar*, in accordance with a general rule, becomes *ḍakarā* in the vulgar tongue and this is the origin of the name, which is locally pronounced *Ḍakarā nālā*.

APPENDIX 6.

Monghyr Sites.

THE HILL HOUSE.—Looking up from the road below at the house so picturesquely poised upon the south-eastern spur of the Pīr Pahār hill, the architecture.—for example the central dome and the light columns that support the verandah roofs—at once suggests Muhammadan influence When Nawāb Qāsim 'Alī Khān made up his mind to consolidate his power and make himself independent of the English Company, one of his first measures was to move his headquarters from Murshidābād to Monghyr, regarding the latter as a site better suited to his plans. Here he established himself in 1761-63. The most remarkable man in his service at the time was an Armenian named Khojah (i.e. Khwāja) Gregory, brother of Khojah Petrus, who also played an important part in the history of the period. These two men were the sons of Khalanthar Arratoon, an Armenian merchant of Julfa, the suburb of Ispāhān. Khojah Gregory became Qāsim 'Alī's right hand man, his chief minister and also his commander-in-chief. The name Gregory was corrupted in pronunciation into Gurgīn, and in the histories of the time we find him nearly always referred to as Gurgīn Khān He was a man of great ability and power of organization, as well as of high character, as we know from the warm tribute of esteem paid him by J. B J. Gentil, the French officer, who served under him and won his friendship(1). The fort defences were repaired and an arsenal established at Monghyr; cannon cast, small arms of superior quality and ammunition manufactured(2); the troops were armed, trained and disciplined on the lines of the Company's forces, European officers and men being enlisted. in fact it was due to him that Qāsim 'Alī's army was by far the most formidable opponent that the Company's troops had till then encountered There has never been any local tradition at Monghyr as to where he lived. In the *Siyar-ul-mutākharīn*, however, Ghulām Husain tells us that when

(1) For Gentil's opinion, see my article on *The Murder of Gurgin Khān* in *Bengal, Past and Present, Vol* xxix (1925) pp 219—22

(2) Thus was established the gun making industry for which Monghyr has ever since been noted.

Henry Vansittart went to visit Qāsim ' Alī towards the end of 1762, the Nawāb went out 3 *kos* to Kodarkana (Rennell's ' Coodracutta ') to welcome him, and assigned him for his residence the building which Gurgīn Khān had constructed on a hill at Sītakuṇḍ, and then taking leave went to his own quarters in the fort.(3) In a letter to the Council, dated Monghyr the 1st Dec. 1762, Vansittart writes that he had arrived the previous day at the quarters prepared for him by the Nawāb " about Two Miles from the Fort of Mungeer ", thus clearly corroborating Ghulām Ḥusain's account—his " hill at Sītākuṇḍ " being obviously the Pīr Pahār hill It may be regarded as established, then, that this ' Hill House ' was built by Gurgīn Khān in 1761-62 . and thus its architectural features are explained After that time the house appears to have been generally occupied by the senior military officer commanding the brigade, the headquarters of which, under Clive's arrangement, was Monghyr. We know, for instance, that Col. Peach lived on " the Hill " in 1770. It is marked as the " Hill House " in Rennell's large scale sheet of 1773, and on Plate XV (1780) of his *Bengal Atlas* When Thomas Twining visited Monghyr, in the suite of Sir Robert Abercrombie, in 1794, it appears to have been known as the " Belvedere " (4) house

This is the " Hill House " referred to by Buchanan, but that name has long since been dropped it is now always known as the Pīr Pahār house. On the other hand, the name ' hill house ' has often been applied to the fine house built on the rocky eminence in the NE corner of the fort, known as Karṇachaurā (' Karṇa's platform ') This house, which Buchanan, in his Report, describes as " by far the handsomest building " he had seen in the course of his survey, was built by the famous General Thomas Goddard, the hero of the march across India (1778-79) against the Marāthās. Goddard had, previous to that campaign, been commandant at Monghyr It was in this house that Warren Hastings left his wife when he started on his fateful journey to Benares in 1781.(5) It was Goddard also who gave his name to one of the *mahallas*, or wards, of the town, which Buchanan correctly spells Gārar bāzār, known now as Garden bāzār, the origin of the name being forgotten The

(3) *Siyar-ul-mutākharin*, Lucknow edition, pp 715—16.

(4) *Travels in India a hundred Years ago* (1893), p 130

(5) The occasion of Chait Singh's rebellion.

Indian pronunciation of Goddard's name was Gārar or Gaurd; and the old 17th Battalion (afterwards 13th N. I.) raised by him in 1764(6) was always known as *Gārad* (anglice "Gaurud") *kā paltan.*

Another of the Monghyr mahallas, namely, Betman bāzār, mentioned by Buchanan,(7) is called after Nathaniel Bateman, who was appointed "Supervisor" of the then district of Monghyr in 1769, one of the earliest civil officers deputed to this charge.

Buchanan's "Chook or Wesly bāzār" is the modern Chauk or Wosli (चौमली) bāzār. A local officer has suggested that the original name was probably Worsley, but I can find no record of any person of this name having been at Monghyr before Buchanan's time, and suspect that it is a corruption of Wellesley.

A full account of de Graaf's description and plan of the Monghyr fort has been given by me in *Bengal, Past and Present*, Vol. XXVII (1924), pp. 154—63.

(6) Williams, *Bengal Native Infantry*, p. 101
(7) See list of *mahallas* on Buchanan's map.

APPENDIX 7.

Rhinoceros and wild Elephants.

After leaving Rājmahāl, under date 7th January 1811, Buchanan refers to a low hill about a mile in length lying due west of Musahā, and adds . " Between it and the great hills is a large jhil, the principal haunt of the wild rhinoceros." This hill is not shown on the 1 in =1 mi. Survey map just as Buchanan describes it, and the line showing the " boundary of the Gangetic inundation " indicates the origin of the *jhīl* that existed there. In his Report he has stated that in most of the wild parts of the district the rhinoceros was " occasionally, but very rarely, seen "; that formerly there were many in the marshes at the foot of the hills between Rājmahāl and Sakrīgalī, and even in his time there were some there, but they had been much disturbed by sportsmen and had become scarce and exceedingly shy

Captain W. S. Sherwill, in his General Remarks on the Revenue Survey of the then Bhāgalpur district (1846-50) mentions both rhinoceros and wild elephant as still to be found. Mr. E. G. Man, who had served several years in the Sontāl Parganas, wrote in 1867 (1) " Tradition says that wild elephants and rhinoceros were abundant some twenty years ago; now the latter are quite extinct " In the *Statistical Account* of the Bhāgalpur district, published in 1877, it is recorded (2) that " rhinoceros were formerly numerous in *pargana* Nāthpur, whither they used to wonder from the neighbourhood of Jalpāigurī. One or two are still sometimes seen, but very rarely." These animals are no longer found in any part of the Bhāgalpur area surveyed by Buchanan.

As regards wild elephants, these were comparatively numerous in Buchanan's time. He refers to them in many localities, e.g , near Karhariā, near Dumkā, between Nalhaṭī and Bīrkhetī, in the hills near Bilābāṛī (to the west of Farakkā), near Rājmahāl, and to the south of Pīrpāintī. He tells of a village between Bīrkhetī and Pānchūāṅ being abandoned owing to their frequent depredations In his

(1) *Sonthalia and the Sonthals*, Calcutta, 1867, p 183
(2) *Statistical Account of Bengal, Bhagalpur District*, 1877, p 43.

Report he refers to a " colony " of them to the north of the Ganges. These had probably roamed in from the Tarāi jungle, as we know they did into the Purneā district. In fact Mr. J. Beames mentions(3) that up to 1866 a large estate in the Sultānpur *pargana* of the Purneā district was held revenue free on the tenure of maintaining an establishment for the capture of wild elephants.

W. S. Sherwill, in his account of the Sultānābād *pargana* (now in the Sontāl Parganas) writes : (4)

" The jungles were formerly well stocked with wild elephants, five of which alone remain at the present day (1850), having been either captured or killed. These animals create much alarm in the villages lying along their beat, which extends for fifty miles in a westerly direction along the base of the Rajmahal Hills and the base of their out-liers in Zillah Beerbhoom. Several villages in Tuppeh Kunditkarayeh, Zillah Beerbhoom, have been lately deserted on account of these animals, who, though they do not take lite, take great liberties with the Sonthals' huts, which being probably covered with leguminous or cucurbitaceous creepers, tempt the animals to destroy the fragile huts for the sake of their verdant covering, which they devour with great avidity. These animals are also said to devour any store of grain they may find in the destroyed huts.'

Mr. E. G. Man, in the work already quoted, referring to wild elephants in the Sontāl Parganas, writes :—

' . but three specimens remain—the last remnants of the many herds of days gone by. One of these three is, by common report, a magnificent animal While riding through the jungle at the beginning of this year [? 1866], I came across his tracks, and measured the size of their marks in the mud with a pocket handkerchief. The circumference of the print of one footstep measured was over four and a half feet, which would make him about nine feet high, for twice round the foot is a sure standard of the height. The neighbouring villagers informed me that the three were inseparable, and had contracted a liking for parched grain. They used, therefore, to enter a village at one end, which was the signal for the inhabitants to vanish at the other, and after inspecting the shops for any delicacies that might tempt them, they would finish up by pulling down a house or two for recreation, and then quietly retire."

Mr. Browne Wood notes in connexion with his settlement operations carried out between 1873 and 1879 that several villages had been abandoned owing to the depredations of elephants.

Was Man's " magnificent animal " the last wild elephant in the district, which was shot in 1893(5)? In his Report

(3) *JRAS*, 1896, p. 91

(4) *General Remarks upon the District of Bhagalpoor*, p 24.

(5) *Gazetteer, Santal Parganas* (1910), p. 17.

Buchanan writes that " the stock is said to have been some that made their escape from the Nawab's stud " But such a story is unnecessary to explain the survival of wild elephants in these parts We know that they were at one time numerous in the forests of the eastern and south-eastern outlines of the Vindhyas, and they are still to be found in parts of Orissa and the States to the south and west of Chutiā Nāgpur : and there is no reason why their range should not have once extended into the hills of the Sontāl Parganas.

In his Report, Buchanan also mentions the *gaur* (Indian bison) as being occasionally seen in the wilder parts of the south of the district. This animal, too, has since retreated further to the south-west, into the wilder areas, where it is still found in diminishing numbers in some of the States

APPENDIX 8.

Balaji Rao's Route through the Hills.

Though the question of the route by which Bālājī Rāo's Mahāṭhā army passed through the hills is of no great importance, as Buchanan devoted a day's trip (6th January) to its solution, and as his reference to Captain Browne's "description" is somewhat obscure, it is desirable to add some details in elucidation of the views recorded by that officer and also of these expressed at an earlier date by Mr. J Z Holwell

Buchanan tells us he endeavoured to trace the route taken by the Marāthās by "the description given by Captain Browne." With this object he went to a hill village called Chaundi (Chamdi, on S S. 72/0-12), which lies inside the Rājmahāl hills about 10 miles W. by S. from Rājmahāl Railway Station; and, after making such inquiries as he could from the local people, who were anything but satisfactory witnesses according to his account of them, he was disposed to think it was by the Chamdi route that the Marāthās had come. He seems to have been led to this conclusion largely by the fact that near this road he saw "many heaps of stones, and on asking the Majhi what they meant, he said that long ago an army came that way, and had ordered the stones to be thrown off the road in heaps," but he could not tell what the army was

By Browne's description is evidently meant that contained in his *India Tracts*, published in 1788 Browne states (p. 12), that one Marāṭhā army at least went by the route "called Morrison's pass, which leads from Jumnee, and enters the south-west angle of the cluster of hills, called the Rajahmahl hills, near a village called Dowdaund. about thirteen coss, E. N E. of Luchmipoor; this pass leads to Patchwarrah in Sultanabad, which is twenty-one coss distant only, and is the road by which the Mahrattahs once entered Bengal."

Further on he writes:—"The pass, by which Mr. Holwell says that the Mahrattah Chief Balaje Row, entered Bengal from the plains of Colgong, is situated in the Toppah of Minneharry; it is called Choonveah, and enters the hills near the village of Movrarrah, from hence to Mudguah,

which lies in the valley between the Minneharry and Rajahmahal Hills, is nine coss: at Mudguah is a lake of water; from thence after passing the remainder of that valley, you ascend by a very good road the Rajahmahal Hills, and come into the plains west of Nagarsarbang by the pass called Chowndy; the nearest village is called Nowgyh." He then adds :—" Mr. Holwell's speaking of this march as a difficult achievement is matter of surprise to me; as by the accounts of many people with whom I have conversed, and who were residents on the spot at the time of the passage of Balajee Row's troops, the road was then so well known and frequented, that the Biparries used to drive their loaded bullocks through it, to avoid the duties paid at Tilleagurry [which road is meant here, whether that via Jumnee and Dowdaund, or that via Mowarrah and Chowndy, is not clear probably the latter is intended] —They further say, that the man who conducted the Mahrattahs from Colgong through the hills, was one of the Chokeydars of Minneharry, and that his name was Dudunsing.—Mr. Holwell says he was a peasant of Colgong, and that Balajee Row gave him a lack of rupees reward; this is not confirmed by the people in this quarter, for they say the man died sometime after very poor near Oudwa Nullah "

Browne then expresses regret at having to correct " so respectable an authority as Mr. Holwell," pleading his " minute local knowledge " of the parts concerned It will be obvious from the above that Buchanan went to Chamdi, not because Browne thought the Marāṭhās had gone that way, but because Holwell (according to Browne's version) was of that opinion I shall refer to Browne's own view, which is not clearly expressed, later

From what source Browne ascertained the views which he ascribes to Holwell, I have hitherto been unable to trace. Holwell refers to the subject at some length in his *Interesting Historical Events*, etc., published in 1766 (see First Part, p 138 f. and the map no. 2). Briefly put, he there says that Bālājī, when " in the neighbourhood of Boglypore " (i.e., Bhāgalpur, the exact place not being specified), made inquiry about a passage through the hills, and " an old peasant an inhabitant of Colgong hills " undertook for a reward of one lakh to guide the army through the hills. The route followed is thus described :—

" ....at first Westward, a point or two Southerly; until he found a pass, which he sought for about the center of the range of

the Colgong hills This pass being found, it was his mark for the remainder of the expedition; and he carried them through it by very practicable roads with much facility, until the mouth of it opened upon the level country between the Colgong and Tellhagurry hills. From hence his course was due South, which led to the second pass through the last mentioned hills: the pass be accomplished with equal ease; and from hence for two days he crossed the level country, that lies between the Tellhagurry and Rajamhol mountains, shaping his course about South-East at night he told the General he must halt until the morning sun appeared —In the morning he led them due South; and in the evening of the same day entered a pass which guided them through the Rajamhol mountains, and landed. . . the whole army, without the loss either of man or horse, in Bengal, on the plains, West of the-city of Rajamhol, at a little town called Banian Gang Having performed his obligation in six days, from leaving Bogulpore (more commonly by the English called Boglypore) through ways until this period deemed totally impassible "

It will be noticed that there is here no mention of Choonteah, Mowarrah, Mudguah, Chowndy, Nagarsarbang or Nowgyh. Holwell in fact, in this account, gives no names of towns, except Boglypore and Banian Gang At first sight it might appear that his Banian Gang was Rennell's Banniagong, the modern Beniagrām, but this place was, and is, twenty miles south by east of Rājmahāl, and Holwell distinctly states that his " little town " Banian Gang lay *west* of Rājmahāl There is no Baniyāgāon, or Beniagrām to the west of Rājmahāl near the foot of the hills, but there is a village called Bhamungaon on the old Rev Sur map, and Bāmangawān on the modern S.S. (72 $\frac{0}{1}\frac{0}{2}$) about one mile to the north-west of Tīnpahār junction on the Loop Line, and about seven miles west by south from Rājmahāl This village lies about three and a half miles east-south-east from Chamdi, on the plains below the hills, and on the existing road from Majhuā and Borio past Chamdi, which most likely follows the old route. There can be little doubt then that this is the place Holwell meant by Banian Gang. On the other hand, a reference to Holwell's map would lead one to suppose that quite a different locality was intended. Holwell, however, had no idea of map-drawing All his maps are hopelessly out of scale and orientation. Browne was evidently guided by his " minute local knowledge " in interpreting the route which Holwell meant to describe and I think we may take it that he interpreted it correctly. As regards the places named by Browne, Choonteah is not marked on any of the maps It was in *tappa* Manihārī that is to say, in the north-west corner of the present Godda subdivision (for the position of this *tappa*, see reproduction of Buchanan's map). It was near Mowarrah, that is

Mahuara, two miles west of **Mandro.** By Mudguah is meant **Majhua**, two miles west-by-south of **Borio Bazar.** (As noted elsewhere, the old village of Majhuā in Buchanan's time, and before, probably occupied the site of the modern **Borio**). Chowndy is Buchanan's Chaundi the **Chamdi** of the S. S. Nagarsarbang is most probably the **Sagarbhanga** of the S.S., rather more than a mile to the south-west of **Tinpahar** R.S. Nowgyh is no doubt **Nawgaon** of the S S., about a mile or so to the east of **Bamangawan** (referred to above) and the same distance north by east of Tīnpahār station

Now let us revert to Browne's own opinion as to the route by which "the Mahrattahs once entered Bengal" (above, 3rd para) Jumnee and Dowdaund are both marked on Rennell's B A Pl II Owing to the inaccuracy of Rennell's maps of these parts, it has been no easy task to identify these places It may, however, be taken for certain that they are the Jumounee and Ghatdeodand of the old Rev Sur. map, and the **Jamnipaharpur** and **Deodanr** of the modern Sur Sheets (72 $\frac{P}{5}$ and $\frac{P}{6}$), which lie four miles south-east and 14 miles south-by-east, respectively, from Goddā. From Deodāṇr onwards the route would follow the valley of the Bānsloi river, via the Pachuārī pass and thence past Maheshpur on to the plains In fact the route here indicated by Browne appears to be clearly that marked as "Morrison's Route in 1767" on Rennell's 1773 sheet—*A Map of the south-east part of Bahar*, scale 5 mi = 1 in

Taking Bhāgalpur to have been the starting point, the route via Mahuārā, Majhuā and Chamdi would be roughly sixty miles, while that via Deodānr would be upwards of ninety miles. Either distance could have been accomplished in six days by the Marāthā troops, whose rapidity of movement was famous Whether Browne, in the passage quoted above, intended to express the opinion that Bālājī Rāo had followed the Deodānr route is not clear. In saying that it was "a road by which the Mahrattahs once entered Bengal", he may have been referring to the invasion of Bhāskara Paṇḍit; and his dissent from Holwell's views may only have been in respect of the alleged difficulty of the Mahuārā—Majhuā—Chamdi route, which Browne himself knew to be easily practicable for the Marāṭhās. On the whole it seems probable that Bālājī came through the hills by the latter road, as Buchanan thought

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TO THE

JOURNAL OF FRANCIS BUCHANAN

KEPT DURING THE SURVEY OF THE DISTRICT

OF

BHAGALPUR

IN

1810-1811.

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