

THURSDAY, SEPTEMBER 14, 1871

THE ANCIENT GEOGRAPHY OF INDIA

The Ancient Geography of India. I. The Buddhist Period, including the Campaigns of Alexander, and the Travels of Hwen-Thsang. By Alexander Cunningham, Major-General, R.E. With thirteen maps. (London : Trübner and Co., 1871.)

THE principal difficulty in the study of Indian antiquities has always been the absence of a chronological framework. The Indians themselves had no idea of what we mean by history. They possessed a vague regard for antiquity, but for an antiquity measured by millions of years; while an attempt to find out whether a certain event had happened fifty or a hundred years sooner or later, seemed to possess in their eyes no interest whatever. The result has been that even at present, after Sanskrit literature has been studied for nearly a hundred years, we are still completely in the dark as to the chronology of ancient Indian history. We have a date here and there, as, for instance, the date of Buddha, the great reformer, or of Pāṇini, the great grammarian; but even these are dates which rest to a certain extent on the good will of Sanskrit scholars, and which it would be difficult to defend against the attacks of uncompromising sceptics. Some people still speak of the Laws of Manu as an ancient authority dating from the eighth century B.C.; others would hesitate to assign that compilation in its present form to an ante-Christian era. The dates of the Mahābhārata and Rāmāyana, the two great epic poems, the dates again of the six systems of Hindu philosophy, are equally uncertain, and the Purāṇas which were at one time quoted as co-equal with the most ancient literary monuments of the world, are now assigned to the age of Charlemagne rather than to that of Moses.

It may easily be imagined therefore how gratefully Sanskrit scholars would receive any kind of authentic information that should enable them to draw a line somewhere, and to vindicate for certain events and certain works of literature a date that could no longer be called in question. The contact between India and Alexander the Great enabled scholars to fix the date of King Kāndragupta as the contemporary of Alexander, and through him the date of another king, Asoka, who had raised Buddhism to be the state religion of his realm, and had left besides some important inscriptions which we possess, and which are written in a language that is no longer Sanskrit. Unfortunately the Greek accounts of India are so meagre that they did not yield much help for determining the literary state of India, and it is a curious fact that no native writer ever mentioned the name of Alexander as the invader of India.

The next contact between India and the outer world was through Buddhism. Buddhism was a proselytising religion, and even before the beginning of the Christian era Buddhist missionaries had reached Tibet and China to preach there the doctrines of Buddha. Thus it happened that after Buddhism had been established in China, pilgrims from that country travelled to India as the Holy Land of their religion, and spent years in the country collecting relics and manuscripts, and learning the lan-

guage in which the sacred books of Buddhism were written.* Some of them wrote descriptions of their travels in India, and the two most important of them, the travels of Fa-hian and Hiouen-thsang, have been preserved. It is true that Fa-hian belongs to the beginning of the fifth century A.D., while Hiouen-thsang travelled through India from 629 to 645. But even such late witnesses were not to be despised, and it is well known that the publication of Hiouen-thsang's travels by M. Stanislas Julien marked quite a new epoch in the history of Sanskrit scholarship. Here was at all events *terra firma* where historians might take their stand to look forward and backward. Cities which he had visited, buildings which he had described, kings whom he had seen, books which he had read, stood out like landmarks in the desert of Indian history; and though their date might hereafter have to be fixed as much anterior to Hiouen-thsang or Fa-hian, yet it was something to be convinced of their historical reality even at the late date of these Chinese travellers. With regard to the history of Sanskrit literature, the gain was less considerable than might have been expected; for although both Fa-hian and Hiouen-thsang learned Sanskrit, they learned it for the sake of Buddhist literature only, and cared but little for the ancient literature of the Brahmans. Yet from time to time we gain a few valuable grains. We must not forget that the time when the whole of Sanskrit literature was regarded as a forgery and the ancient language of India as a mere invention is not so very distant; and that the fact of a Chinese traveller of the seventh century giving a paradigm of the Sanskrit verb *bhū*, "to be," would have been extremely useful in silencing Dugald Stewart's scepticism. It is equally interesting that the Chinese pilgrim mentions at least one archaic form as peculiar to the grammar of the Veda—viz., *bhavāmasi*, "we are," instead of the common *bhavāmas*. The mention also of some technical grammatical terms, such as *tinanta*, verb, *subanta*, noun, *Unādi*, and possibly *Nirukta*, are curious as showing that Hiouen-thsang still learned Sanskrit according to the system of Pāṇini, and not of some later grammarians.

The most important evidence, however, that could be gathered from the works of these Chinese pilgrims was geographical. M. Vivien de Saint-Martin, in France, and Prof. Lassen, in Germany, have fully availed themselves of that evidence in their works on the Geography and Antiquities of India; and General Cunningham's new work on the "Ancient Geography of India" is, in fact, a running commentary on the travels of these Chinese priests. General Cunningham's name is well known in England as an indefatigable explorer of Indian antiquities, and he brings to his task accomplishments in which few scholars could excel him. We may quote his own words:

"My own travels," the General says in his Preface, "have been very extensive throughout the length and breadth of Northern India, from Peshawer and Multan, near the Indus, to Rangoon and Prome on the Irawadi, and from Kashmir and Ladāk to the mouth of the Indus and the banks of the Narbada. Of Southern India I have seen nothing, and of Western India I have seen only Bombay, with the celebrated caves of Elephanta and Kanhari. But during a long service of more than thirty years in India, its early history and geography have formed

* "Buddhist Pilgrims," in M. M.'s "Chips from a German Workshop," vol. i. p. 236.

the chief study of my leisure hours; while, for the last four years of my residence, these subjects were my sole occupation, as I was then employed by the Government of India as archaeological surveyor to examine and report upon the antiquities of the country."

General Cunningham has divided the geography of India according to the same system which is generally adopted in the history of India, viz., into the Brahmanical, the Buddhist, and the Mohammedan periods; and he has selected the second or Buddhist period as the principal subject of his first volume. The first or Brahmanical period traces the gradual extension of the Aryan race over Northern India, and comprises that early section of their history during which the religion of the Vedas was the prevalent belief of the country. The geography of that period, as far as it can be worked out from the Vedic writings, has been treated by M. Vivien de Saint-Martin, and by Prof. Lassen in his "Indische Alterthumskunde."

The second or Buddhist period embraces the rise, extension, and decline of the Buddhist faith, from the time when Buddhism became the state religion of India to the conquests of Mahmud of Ghazni. As the beginning of the political influence of Buddhism coincides in time with the invasion of India by Alexander and the subsequent establishment of Greek dynasties on the Indian frontier, the historian of this period has, in the beginning, the advantage of the Greek accounts, while further on, from 400 to 700, he has to depend mainly on the accounts furnished by Chinese pilgrims. This period, too, has been ably treated by M. Vivien de Saint-Martin in several *mémoires*, and by Prof. Lassen in his "Indische Alterthumskunde," yet there was room left for new inquiries; and the results of these inquiries have been published by General Cunningham in the volume now before us.

The third or Mohammedan period has not yet been treated as a whole, though there are ample materials for it in the works of Reinaud, Elliot, Erskine, and others.

The chief merit of General Cunningham's work consists in his description of spots of which he can speak as an eye-witness. Here his knowledge of the actual localities has enabled him either to confirm the identifications of his predecessors, or to fix by more correct evidence the real site of the places described by Greek or Chinese geographers. He furnishes himself, at the end of his Preface, a list of the more important of his own identifications. Whenever his identifications are based on local peculiarities, his arguments seem always powerful and convincing. It is when he bases his views on the evidence of mere names that one feels occasionally inclined to withhold one's assent. The changes in local names are, no doubt, most capricious, and amenable to hardly any rules. Everything is possible here; but for that very reason nothing should be assumed that cannot be proved by historical evidence. Hiouen-thsang calls Ceylon *Seng-kialo*, which is the Chinese rendering of the Sanskrit name *Sinhāḍa*. The fuller Sanskrit name is *Sinhāla-dvīpa*. This passes through a chain of changes, all of which can be traced historically, from *Singal-dib* to *Sirindib* to *Zilan* and *Ceylon*.

These changes may seem violent; but they are not half so objectionable as, for instance, the simple change *Sālātura* to *Hālātura*, *Alātur*, and finally to *Lahor*, pro-

posed by General Cunningham (pp. 57, 58). It is true that the *s* of *Sindhu* is changed to *h* in *Hindu*, and afterwards elided in *India*, but the *s* of *Sindhu* is different from the palatal *s* of *Sālātura*. Besides, that dental *s* was changed into *h* in Persia, not in India, and dropped at last only in the mouths of Greeks, who first heard the name from the mouths of the Persians. The same objection applies to the proposed change of *Svetavāsa* into *Khetds* (p. 125). The *sv* of *Sveta*, "white," would not become *Kh* in the western countries; it could do so only if the *s* were a dental *s*, which it is not.

Again General Cunningham admits occasionally formations of Sanskrit names, which are entirely against the genius of the language. On page 29, in explaining the name of *Begrām*, he says:—"Masson derives the appellation from the Turki *be* or *bi*, 'chief,' and the Hindu *grām* or 'city,' that is, the 'capital.' But a more simple derivation would be from the Sanskrit *vi*, implying 'certainty,' 'ascertainment,' as in *vijaya*, 'victory,' which is only an emphatic form of *jaya*, with the prefix *vi*. *Vi-grāma* would, therefore, mean emphatically 'the city,' that is, 'the capital,' and *Bigrām* would be the Hindu form of the name." A Sanskrit scholar would say at once that such a compound of *grāma*, "village," with the preposition *vi* is impossible. The preposition *vi* may be joined to a verb or verbal noun, like *jaya*, "victory," but not to a noun like *grāma*. I had, myself, derived the name of *Begrām* from *bhaga-ārāma*, the abode of the god Bhaga, or of the gods in general; taking *bhaga* either in the sense of the Sun god, or like the Zend *bagha*, the old Persian *baga*, in the sense of gods in general, and *ārāma* as abode. *Bhagārāma* changed to *Begrām* would be a sort of synonym of *Behistān*, τὸ Βαγιάτανον ὄρος, the place of the *Bhagas*, or of *Bhaga*, the Lord. In this conjecture I have since been confirmed by finding that Albyruny mentioned *Bhagapura*, town of Bhaga, as one of the names of Multān (Reinaud, *Mémoire*, p. 98).

It is well known that the name of the Kabul river, *Κωφνῆ*, occurs in the hymns of the Rig Veda as *Kuthā*, but I cannot understand on what ground General Cunningham declares that name to be non-Aryan. The etymology of proper names is never very easy, but there would be no difficulty in connecting *Kubhā* either with *Kumbhā*, "vessel," Greek *κύβος*, or with *κνφῆ* an old Cretan word for "head" (Sk. *ka-kubh*), or with *κνφός*, "bent, crooked." *Kutīlā*, "crooked," is the name of a river, and *Kampanā*, "the trembling," is the name of one of the rivers of Kabulistan, it may be of the Kabul river itself. As *Kubhā*, the Kabul river, is mentioned but twice in the Rig Veda, I shall give the two passages:

Mā vah Rasā anitabhā Kubhā Krumuḥ mā vah Sindhuḥ ni vīramat, Mā vah pari sthāt Sarayuh purishini asme it sunnam astu vah. ("O ye Storm-gods, let not the Rasā with infinite splendour (amitabhā), let not the Krumu, or the Sindhu delay you; let not the misty Sarayu surround you:—with us alone be your delight!") (Rv. v. 53, 9.)

Trishāmāyā prathamam yātave sagūh Susartvā Rasayā Svetyā tyā Tvam Sindho Kubhayā Gomatīm Krumum Mehatnā karatham yabhih īyase. ("First joined together with the Trishāmā for thy course, with the Susartu, the Rasā, the Sveti, thou O Sindhu (goest), with the Kubhā to the Gomatī, the Krumu, with whom thou proceedest together with the Mehatnu.") Rv. x. 75, 6.

This verse is not free from difficulties, and in some parts my translation may be questioned. But it is clear in the main that the poet in praising the Sindhu (the river Indus), mentions its tributaries. The first tributaries which join the Indus before its meeting with the *Kubhâ* or the Kabul river cannot be determined. All travellers in these northern countries complain of the continual changes in the names of the rivers, and we can hardly hope to find traces of the Vedic names in existence there after the lapse of three or four thousand years. The rivers intended may be the Shauyook, Ladak, Abba Seen, and Burrindoo, but one of the four rivers, the Rasâ, has assumed an almost fabulous character in the Veda. After the Indus has joined the *Kubhâ* or the Kabul river, two names occur, the *Gomati* and *Krumu*, which I believe I was the first to identify with the modern rivers the *Gomal* and *Kurram*. (Roth, Nirukta, Erläuterungen, p. 43, Anm.) The *Gomal* falls into the Indus, between Dera Ismael Khan and Paharpore, and although Elphinstone calls it a river only during the rainy season, Klaproth (Foe. koue ki, p. 23) describes its upper course as far more considerable, and adds: Un peu à l'est de Sirmâgha, le Gomal traverse la chaîne de montagnes de Solimân, passe devant Raghzi, et fertilise le pays habité par les tribus de Dauletkhail et de Gandehpour. Il se dessèche au défilé de Pezou, et son lit ne se remplit plus d'eau que dans la saison des pluies; alors seulement il rejoint la droite de l'Indus, au sud-est du bourg de Paharpour." The *Kurram* falls into the Indus North of the *Gomal*, while, according to the poet, we should expect it South. It might be urged that poets are not bound by the same rules as geographers, as we see, for instance, in the verse immediately preceding. But if it should be taken as a serious objection, it will be better to give up the *Gomati* than the *Krumu*, the latter being the larger of the two, and we might then take *Gomati*, "rich in cattle," as an adjective belonging to *Krumu*.

I have dwelt longer on this point in order to show how much has to be considered before we decide on the Aryan or non-Aryan character of local names in India. General Cunningham writes:—

"The name of Kophes is as old as the time of the Vedas, in which the *Kubhâ* river is mentioned as an affluent of the Indus; and as it is not an Arian word, I infer that the name must have been applied to the Kabul river before the Arian occupation, or, at least, as early as B.C. 2500. In the classical writers we find the Khoes, Kophes, and Khoaspes rivers, to the west of the Indus, and at the present day we have the Kunar, the Kuram, and the Gomal rivers to the west, and the Kunhar river to the east of the Indus, all of which are derived from the Scythian *Ku* 'water.' It is the guttural form of the Assyrian *ku* in Euphrates and Eulæus, and of the Turki *su* and the Tibetan *chu*, all of which mean water or river."

The *Ku* in *Kubhâ* admits, as we saw, of a far easier interpretation. The *Go* of *Gomal* is the Sanskrit *go*, "cow," and the *Ku* of *Kuram* or *Kurram* is the first syllable of *Krumu*, which is derived from "*kram*," to stride.

Although on minor points like these, and particularly on linguistic questions, some of General Cunningham's statements are open to criticism, the book as a whole is a valuable contribution to our knowledge of the ancient geography of India, and we hope that this first volume will soon be followed by others.

MAX MÜLLER

OUR BOOK SHELF

Epilogo della Briologia Italiana. Del Dottore G. de Notaris, Professore di Botanica e Direttore dell'Orto Botanico della R. Università di Geneva. (Geneva, 1869; London: Williams and Norgate.)

DR. DE NOTARIS is so well known in this country by his numerous works on mosses and microscopic fungi, as well as by his liberality to correspondents, that it was with great pleasure that we received the noble volume before us, published at the request and expense of the Commonalty of Geneva. It was not to be expected that a country like Italy, where the borders of the Mediterranean are not rich in mosses, should present much novelty, the more Alpine parts yielding very much the same species as the Alpine or more temperate parts of the European districts. It is, however, always interesting to compare the floras of different countries, even where species are so widely spread as the lower Cryptogams, and it is no matter of surprise to find that there are here very few genera which are not amply represented in our own flora. The only genera which have not at present occurred in this country are *Lescuræa*, *Habrodon*, *Anacamprodon*, *Fabronia*, which is essentially a genus of warmer climates, *Dubyelia*, *Oreas*, *Pyramidium*, *Conomitrium*, *Oreoweisia*, *Septodontium*, *Angstromia*, *Trematodon*, *Braunia*, *Coscudon*, *Bruchia*. Most of these are genera either containing one or very few species. The following European genera, excluding those found in the British Isles, seem not to occur in Italy: *Voitia*, *Sporckera*, *Pharomitrium*, *Eusichium*, *Pyramidula*, *Psilopium*, *Anisodon*, *Platygyrium*, *Thedenia*, most of which contain only a single species. The only genera of the British Isles which do not occur in Italy, are *Daltonia*, the single species, *D. splachnoides*, being confined to one or two localities in Ireland, *Cedipodium*, *Discelium*, *Bartramidula*, *Anomobryum*, *Tetradontium*, *Glyphomitrium*, *Hedwigium*, *Anodus*, which again are genera for the most part of one species only, so that Italian muscology cannot be considered as essentially different from that of other European districts. There are undoubtedly many good species which do not occur in this country, but it is probable that the number of these will be much reduced, one of the most curious, *Buxbaumia indusiata*, having been found by Dr. Dickie at Aboyne in Aberdeenshire. It is much to be wished that some Italian botanist would give a similar work on Italian fungi. The truffles and puffballs of Italy have been admirably worked out by Vittadini, and something has been done for the more noble fungi by Viviani and others, but we ought to look to Italian mycologists for the identification of the fungi of Micheli. There is no doubt that any skilled mycologist would be well rewarded by the investigation of the Italian woods, which doubtless contain numerous interesting species. We must, however, look to the Italians themselves for information, as many difficulties would stand in the way of a person not intimately acquainted with the language of the peasantry. We see no reason why as perfect an enumeration of the fungi should not be given, as that of the Italian mosses now before us.

M. J. BERKELEY

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his Correspondents. No notice is taken of anonymous communications.]

Thickness of the Crust of the Earth

ARCHDEACON PRATT has given just the answer I expected to my remarks on his defence of Mr. Hopkins. As I said at the time, I scarcely thought it possible that he could have fallen into the mistake of supposing that the disturbing forces to which precision and nutation are due act by fits and starts. But note what follows from this. His whole defence of Mr. Hopkins's method