IMPERIAL GAZETTEER OF INDIA

٠

PROVINCIAL SERIES

EASTERN BENGAL AND ASSAM

SUPERINTENDENT OF GOVERNMENT PRINTING CALCUTTA

1909

.

Price Rs. 4, or 6s.]

Digitized by Google

Original from MICHIGAN STATE UNIVERSITY enormous thickness of sandstones, the upper series of which are topped with conglomerates and clay. The Himālayas north of the Brahmaputra have never been properly explored, but there is reason to suppose that they are composed of great thicknesses of soft massive sandstones, of Tertiary age and fresh-water origin. The economic aspect of the geology of the Province is referred to in the section on Mines and Minerals.

Botany,

The uncultivated portions of the Assam Valley are usually covered with forest, or with grass and reeds which are sometimes nearly 20 feet in height. The three commonest varieties are ikra (Saccharum arundinaceum), nal (Phragmites Roxburghii), and khagari (Saccharum spontaneum). At the western end the prevalent tree is sal (Shorea robusta); but farther east the forests are evergreen, the chief constituents being species of Amoora, Michelia, Magnolia, Stereospermum, Quercus, Castanopsis, Ficus, and Mesua. Various kinds of palms, canes, treeferns, bamboos, and plantains are common. The vegetation of Sylhet and Cāchār does not differ materially from that of Eastern Bengal. There is comparatively little forest, but in the swampy parts many species of reeds and aquatic plants are found. The greater part of the Assam Range is covered with dense tree forest or bamboo jungle, but the Khāsi plateau is a fine succession of rolling downs dotted with groves of oak and pine. The flora of this tract is extremely rich, and upwards of 2,000 flowering plants were collected by Dr. Hooker within ten miles of Cherrapunji, while various kinds of orchids and balsams, rhododendrons, azaleas, and wild roses are found on every side. The Naga and Manipur Hills have a flora in many respects similar to that of the Khāsi Hills, but in addition possess a distinct Sikkim element, while the Lushai Hills are botanically part of the Burmese system.

Fauna.

The most noteworthy wild animals are elephants, rhinoceros, tigers, leopards, bears, wild dogs, wild hog, deer, buffaloes, and bison (Bos gaurus). The mithan or gayāl (Bos frontalis) has been domesticated by the wild tribes, and it is doubtful whether it is now found in Assam in a wild state. Rhinoceros are of three kinds: the large variety (R. unicornis), which lives in the swamps that fringe the Brahmaputra; the smaller variety (sondaicus), which is occasionally met with in the same locality; and the small two-horned rhinoceros (sumatrensis), which is now and again seen in the hills south of the Surmā Valley, though its ordinary habitat is Sumatra, Borneo, and the Malay Peninsula. The species of deer commonly found in the Pro-

.

Original from MICHIGAN STATE UNIVERSITY

the cold season of 1885-6, Mr. Needham and Captain Molesworth marched from Sadiyā to Rimā, but were prevented from going beyond that place by the obstructive attitude of the Tibetan authorities. The path followed ran along the north bank of the Brahmaputra, the total distance traversed being 187 miles. For the first 46 miles it lies entirely in the plains, and for this portion of the journey elephants can be used for transport. From thence to the Tibetan border, 26 miles west of Rimä, travelling is somewhat difficult. The track is rugged and uneven, and crosses ranges of hills varying from 1,000 to 3,500 feet in height; but these difficulties disappear on entering the Zayul valley. The upper portion of this valley was described by M. Krick as a tract cultivated as far as the eye could see, and abounding in herds of oxen, asses, horses, and mules, and in groves of bamboo, laurel, orange, citron, and peach trees. Pandit A. K., who entered the valley from the east, described the winter crops as rice, millets, and pulses, while wheat, barley, and mustard ripened in the spring. The Mishmis do a good deal of trade both with the Zayul valley and with Assam. They receive from the Tibetans cattle, woollen coats, swords, metal vessels, and other articles, and give them in exchange Mishmi teeta (a plant much valued as a febrifuge), musk, and Mishmi poison.

In 1899 the Bebejiya Mishmis murdered three Khamti British subjects and carried off three children. An expedition was dispatched against them in the following cold season, which, after a tedious and difficult march, succeeded in recovering the captives and burning the guilty villages. The Bebejiya country lies to the east of the Dibāng river, and was entered by the Maizu pass, which is 8,900 feet above sea-level. An account of the Mishmis will be found in Colonel Dalton's *Ethnology of Bengal.*

Khamti Hills.—A hilly country on the frontier of Assam, lying at the eastern end of the Brahmaputra Valley and inhabited by the Khamtis, a tribe of Shan origin, who are said to have migrated northwards to the hills near the upper waters of the Irrawaddy and Mekong when Mogaung was conquered by the Burman king, Alaungpayā, about the middle of the eighteenth century. A section of the tribe moved on into Assam and settled near Sadiyā, and their leader succeeded in establishing his position as the feudal chief of the surrounding country. He was recognized by the British when they took over the territories of the Ahom prince; but his son declined to abide by the decisions of the local British officer,

Digitized by Google

and was deprived of his office and dignities. The Khamtis then rose, raided the settlement at Sadiyā, and killed the commanding officer, Colonel White, in 1839. The rising was, however, quickly suppressed, and no trouble has since been given by the tribe.

Bor Khamti, the principal stronghold of this people, consists of the valley of the Namkiu (the western branch of the Irrawaddy) with the surrounding hills. It can be reached via the Pātkai and the Hukawng valley, or by a route running south-east from Sadiyā up the valley of the Diyun, over the Chaukan pass, which is 8,400 feet above the level of the sea. The distance from Sadiya to Putau, the principal Bor Khamti village, is 197 miles. After Bishi the path is very difficult in places, running through dense forests where there are no villages and no means of obtaining supplies. Oaks, rhododendrons, and beeches grow freely on the hills, and large game, such as elephants and rhinoceros, are common. Putau is situated in a valley, shut in on every side except the south by hills, which in the winter are crowned with snow. The valley is about 25 miles long by 15 broad, and is about 1,500 feet above sea-level. The villages are surrounded with a palisade about 12 feet high, made of split trees interlaced with bamboo. The houses are large, commodious structures built on piles, and the audience chamber in the Rājā's house is 50 feet in length by 40 wide. Rice is the staple crop grown in the valley, but pulse and poppy are also cultivated, the Khamtis being much addicted to the use of opium. The people are much more civilized than most of the hill tribes on the north-east frontier, and near Putau there is a brickbuilt temple 95 feet high with a gilded cupola. Some of the images of Buddha in this temple are of considerable artistic merit. The Khamtis seem to stand in some awe of the Singphos, who adjoin them on the west, and also of the Khakus, said to be of the same race as the Singphos, who occupy the hills on the east. Little is known about the geology of the tract, but pyrite, chalco-pyrite, and galena have been found. An account of the Khamtis will be found in Colonel Dalton's Ethnology of Bengal.

Singpho Hills.—A tract of hilly country lying to the southeast of Lakhimpur District, Assam, inhabited by the Singphos, or Kachins as they are called in Upper Burma. Their original home seems to have been near the sources of the Irrawaddy, but they have gradually moved southwards, crossing the Hukawng valley and the Pātkai range, and have entered the

Though a wide river, the Jaldhākā is very shallow mouths. and is fordable in every part during the winter months. The Duduyā and Mujnai, tributaries of the Jaldhākā, are navigable throughout the year by boats of 2 tons as far as the Alipur-Jalpaiguri road and Fäläkäta respectively. The Torsä rises in the Chumbi valley of Tibet, where it is known as the Amo-chu, and flows through Bhutan; it is navigable by cargo boats during the rains. The Kaljani, which is formed by the combined waters of the Alaikuri and Dima, after a course of a few miles enters the Cooch Behar State; it is used to float down timber from the forests at the foot of the hills. The Raidak rises near the Chumalhari mountain in Tibet. This river and the Sankosh, which forms the boundary between the Eastern and Western Duars, thus separating Eastern Bengal from Assam, flow into the Brahmaputra a few miles below Dhubri. Both rivers are navigable by boats of 3 or 4 tons for a considerable portion of their course, but 5 or 10 miles before reaching the hills navigation is impeded by rapids.

With the exception of the Buxa hills, the District is covered Geology. by recent alluvial deposits, consisting of coarse gravels at the foot of the hills, sandy clay and sand along the course of the rivers, and fine sand consolidating into clay in the other parts of the river plain. The Buxa hills are composed of a series of beds named after them, which consist of variegated slates, quartzites, and dolomites, and are fringed on the south by low hills of Upper Tertiary strata. About half a mile west of Buxa copper ore occurs in greenish slate with quartzose layers, and copper ores are found also 4 miles north of Sām Sing Tea Estate, close to the boundary between Jalpaigurī and Darjeeling Districts. Masses of calcareous tufa occur along the base of the hills¹.

In the Regulation portion of the District and the south of Botany. the Duārs the tree vegetation is sparse and rather stunted except in the Baikuntpur jungle, and the greater portion of the surface is covered with grasses, the commonest of these being Imperata arundinacea and Andropogon aciculatus. Among the trees, the most conspicuous is the red cotton-tree (Bombax malabaricum); the sissū (Dalbergia Sissoo), mango, jack, pipal, and tamarind occur as planted or sometimes self-sown species. The villages are surrounded by thickets or shrubberies of semi-spontaneous growth and weedy character. Areca palms are common, and bamboos thrive luxuriantly. Along the

¹ F. R. Mallet, 'Geology of Darjeeling and Western Duārs,' Memoirs, Geological Survey of India, vol. xi, pt. i. north of the Duars are large upland tracts of forest, part of which has been 'reserved' and is described below, declining southwards into plains of heavy grass jungle. Many varieties of orchids bloom in the forests; and there is a curious creeper, the pāni lahrā (Vitis repanda), from whose stem water is obtained.

Fauna.

The District is famous for its big game, which include wild elephants, bison, rhinoceros, buffaloes, tigers, leopards, bears, wild hog, swamp deer (Cervus duvauceli), and sāmbar (Cervus unicolor). A few elephants are caught on behalf of Government. The number of rhinoceros, bison, and buffaloes has been rapidly decreasing; and to prevent their extinction, they are now protected in the 'reserved' forests. Good mahseer fishing is to be had where the Jaldhākā, Torsā, Raidāk, and Sankosh debouch from the Himālayas.

Temperature and rainfall.

The temperature is rarely excessive ; the mean, which is 62° in January, rises to 73° in March and 79° in April, but it does not reach its highest point until July and August, when it is 83°. The highest mean maximum is 90° in April, and the highest maximum recorded was 103° in 1899. Rainfall is exceptionally heavy, the average varying from 122 inches at Jalpaiguri town to 200 inches at Buxa; and the normal mean is 129 inches, of which 12.3 inches occur in May, 25.6 in June, 28.1 in July, 27.4 in August, and 21.4 in September.

Natural

In September, 1902, an exceptionally high flood caused calamities. great damage in the tract between Jalpaigurī and Mandalghāt, bounded on the east by the Tista and on the west by the railway embankment, and also in the MaynagurI tahsil between the Dharla and the Tista; the roads and the railway embankment were breached, hundreds of cattle were drowned, and ten lives were lost. In the earthquake of 1897 much damage was done to roads by subsidence and the opening of deep fissures, and many bridges and buildings were destroyed.

In prehistoric times the District formed part of the powerful History. kingdom of PRAGJYOTISHA or Kāmarūpa, as it was subsequently called, which extended as far west as the Karatoyā. There is a legend that a temple was originally erected on the site of the present temple at JALPES by a Rājā named Jalpeswar, in whose day the Jalpes lingam first appeared. There are extensive remains at BHITARGARH, which is said to have formed the capital of a Sūdra king named Prithu. The Bengal Pal dynasty included this District in its dominions; and so did. the Khen Rājās-Nīladhwaj, Chakradhwaj, and Nīlāmbarof whom the first founded the city of KAMATAPUR in Cooch, Haringhāta, Rabnābād, and MEGHNĀ. The tract through which they flow is one vast alluvial plain, where the process of land-making has not yet ceased and where morasses and swamps, now gradually filling up, abound. The rivers are connected with each other by an intricate series of branches, and the latter in their turn by innumerable smaller channels; so that the whole tract is a tangled network of streams, rivers, and watercourses, enclosing a large number of islands of various shapes and sizes. Cultivation is confined to a fringe of reclaimed land situated along the northern boundary, except in Backergunge, where some of the clearings extend almost down to the sea.

The flat swampy islands are covered with dense forest, Botany. the most plentiful and important species being the sundri, which thrives most where the water in the channels is least brackish. Towards the north the forests contain a rather dense undergrowth, but elsewhere this is very scanty. In the north some mangroves, chiefly Kandelia and Bruguiera, are found scattered along the river banks; farther south, as the influence of the tide increases, they become more numerous, Ceriops and Rhizophora now appearing with the others, till at length the riparian vegetation is altogether mangrove. By this time too, sundri and its associates largely disappear from the interior forests, which are now mainly composed of geoā (Excoecaria Agallocha). Nearer the sea this in turn gives way to mangroves. This pure mangrove forest sometimes extends into the tide; but at other times it is separated from the waves along the sea face by a line of low sanddunes, on which reappear some of the swamp forest species, accompanied by a few plants characteristic of other Asiatic shores, such as Erythrina indica, Thespesia populnea, Ficus Rumphii, and others for which the conditions in the swampy islands of the interior seem to be unsuited.

The wild animals include tigers, which cause much destruc-Fanna. tion, rhinoceros (now nearly extinct), buffalo, hog, spotted deer (*Cervus axis*), barking-deer (*Cervulus muntjac*), and hog deer (*Cervus porcinus*). The rivers are infested with crocodiles, which are dangerous to man and beast; and the cobra, python, and many other varieties of snakes are found. In the cold season, geese, ducks, and other birds congregate in large numbers on the sandbanks.

The average annual rainfall varies from about 82 inches Rainfall in the west to over 200 inches in the east. Cyclones and and storm-waves occur from time to time. The worst of the geographical and ethnical division of the whole country into three oblong strips, of which the most westerly is known as the Chittagong Hill Tracts; the central strip constitutes the LUSHAI HILLS, and the eastern the Chin Hills, which form part of Upper Burma.

The general aspect of the District is a tangled mass of hill, ravine, and cliff, covered by dense tree, bush, and creeper jungle. The mountains are steep, and can only be ascended slowly and painfully along narrow zigzag paths through the jungle. The highest hills are Keokrādang (4,034 feet) on the watershed of the Rankhiang river, and Pyramid hill (3,017 feet).

The principal rivers are the FENNY, KARNAPHULI, SANGU, and MATAMUHARI. The Karnaphuli and Fenny flow transversely across the main lines of the hills and have no regular valleys; but the reverse is the case with the Sangu and Mātāmuhari rivers, which run parallel to the ranges, until they debouch in the plains, and also with the two main tributaries of the Karnaphuli, the Kāsālang and Chingri, which do the These rivers are of great depth during the rains; but same. the rapidity and violence of their currents and their sharp turns and whirling eddies render them unnavigable by large craft within the limits of the District, and present considerable dangers to small boats. In addition to these rivers, there is a network of hill streams, on which canoes alone are able to ply, and these only in parts. A mountain lake of great beauty is situated on the east of the Rāmakrī Tang hill; it is about a mile long by a quarter of a mile broad, and is well stocked with fish.

Geology.

The District has not been geologically explored, but so far as is known the rocks belong to the Upper Tertiary period.

Botany.

The hills are covered with Laurineae, Dipterocarpeae, Ternstroemiaceae, Euphorbiaceae, and Leguminosae. A list of the principal trees will be found in the section on Forests. There are many kinds of bamboos, including Bambusa Tulda, vulgaris, arundinacea, and auriculata, as well as Melocanna bambusoides, Teinostachyum Dullooa, and others. Canes of various species, kurujpat (Licuala peltata), and a thatching-grass known as san (Imperata arundinacea) are common products. Orchids and ferns grow everywhere in great variety and profusion.

Fauna.

The forests afford an asylum to numerous wild animals, including elephants, tigers, leopards, both ordinary and clouded (*Felis nebulosa*), rhinoceros, bison, three kinds of bear—the Himālayan black bear (*Ursus torquatus*), the sloth bear (*Melur*-

The drainage-levels of the country are unusually complicated. The Tlong for some 40 miles of its length runs due north, while parallel to it, on the east the Mat, and on the west the Deh, flow due south. In the same way, the Tuivol and Tuichang and the Tuilianpui and Gutur have parallel courses for many miles, but run in opposite directions. The Tuichong and Phairang flow north till they join the Deh, which then turns west and delivers their combined waters into the Karnaphuli, which flows south-west. Scattered about the District are several plains of considerable size. These have, as a rule, an elevation of about 4,500 feet, and are covered with a thick layer of rich alluvial soil. They are surrounded by hills, which slope gently towards the plain but are generally very steep and often precipitous on the other side. Through the centre runs a sluggish stream, which escapes through a narrow gorge, below which is generally a fall of some height. It has been suggested that these plains are the silted-up beds of lakes, a conjecture which is rendered the more probable by the fact that there are several lakes which at present have no outlet, and which must in course of time silt up till the water overtops the lowest point in the surrounding chain of hills. The largest of these plains is Champhai, which has a length of about 7 miles and at the widest point is nearly 3 miles across.

The hills consist of sandstones and shales of Tertiary age, Geology. thrown into long folds, the axes of which run nearly north and south. The rocks are a continuation southwards of those forming the Pātkai range, and were probably laid down in the delta or estuary of a large river issuing from the Himālayas in the Tertiary period. Marine fossils of that age have been found near Lungleh, embedded in nodular dark grey sandstone.

The hill-sides are generally covered with dense forest or Botany. bamboo jungle. Palms, which are common on the lower slopes, give place to various members of the *Ficus* family; and such trees as gurjan (Dipterocarpus turbinatus), gugera or maku (Schima Wallichii), oaks, chestnuts, and firs grow on the higher ridges. Herbaceous plants are not common, but ferns and orchids are found in large quantities.

Wild animals include elephants, rhinoceros, tigers, leopards, Fauna. the Himālayan black bear (Ursus torquatus) and the Malay bear (Ursus malayanus), bison, several kinds of deer, gural, and serow (Nemorhaedus). The mithan or gayāl (Bos frontalis) is kept in domestication. Small game include jungle fowl and several kinds of pheasant.

The valleys are malarious and unhealthy; and during the

457

from the northern side of the watershed the Krishnai, Dudhnai, Jinjiram, and other minor streams fall into the Brahmaputra. There are no lakes or bi/s in the hills, but near Phulbāri lies a large marsh, which is leased as a fishery. The general appearance of the District is wild and picturesque. Some of the rivers flow through rocky gorges, which are overgrown with trees, creepers, and giant ferns to the water's edge, and nowhere is the scenery tame or uninteresting. On a clear day a magnificent view over hill and plain is obtained from the summit of Turā hill, and the course of the Brahmaputra can be traced for many miles.

The greater portion of the District is formed of gneissic rock, Geology. overlaid by sandstones and conglomerates belonging to the Cretaceous system. On the top of these rest limestones and sandstones of Nummulitic age, while sandstones of Upper Tertiary origin form low hills along the Mymensingh border.

In their natural condition the hills are covered with dense Botany. forest, most of which is evergreen, though *sāl* and other deciduous trees are also found. Dense bamboo jungle springs up on land which has been cleared for cultivation and then left to fallow, and the bottoms of the valleys are often covered with high reeds and grass.

The hills abound in game, including elephants, tigers, Fauna. leopards, bears, bison, deer, and a species of goat antelope or serow (*Nemorhaedus bubalinus*); and in the low country buffalo and occasionally rhinoceros are found. In 1904, 17 persons were killed by wild animals, and rewards were paid for the destruction of 50 tigers and leopards and 54 bears. Since 1878 elephants have been hunted almost every year by the Government Khedda department, about 190 animals being captured annually; but operations have recently been suspended, to allow the herds a little rest. Small game include peafowl, jungle-fowl, partridges, snipe, pheasants, and hares; while excellent mahseer fishing is to be obtained in the rivers.

The whole of the District is malarious and unhealthy, and Climate kalā azār here made its first appearance in Assam. This and rainfall, disease is an acute form of malarial poisoning, which has been a cause of dreadful mortality in the Brahmaputra Valley. The elevation is not, as a rule, sufficient to produce any material reduction in the temperature; but the heavy rainfall, and the evaporation which goes on over the immense expanse of forest, tend to cool the air during the rainy season. The rainfall is recorded only at Turā, where about 125 inches usually fall

The principal rivers on the north bank of the Brahmaputra are the MANĀS, with its tributary the AI, the CHĀMPĀMATI, the SARALBHĀNGĀ or Gaurāng, the Gangia, and the SANKOSH. All these rise in the Bhutān hills and are navigable by country boats for a portion of their course throughout the year. Several other minor streams become navigable during the rainy season. A peculiar tract of pebbles, gravel, and sand, resembling the Bhābar tract in the Western Himālayas, borders the hills. The water of all the minor streams sinks into this during the greater part of the year, and does not again appear above ground till it reaches the alluvial clay. On the south bank the largest rivers are the JINJIRĀM and Krishnai, which rise in the Gāro Hills.

Geology. Geologically, the District consists of an alluvial plain composed of a mixture of clay and sand, with numerous outliers of gneissic rock.

Botany. As in the rest of Assam, enormous stretches of country are covered with high grass and reeds. The principal varieties are ikra (Saccharum arundinaceum), nal (Phragmites Roxburghii), and khagari (Saccharum spontaneum). Sāl (Shorea robusta)

• is common, and *khair* (Acacia Catechu) and sissu (Dalbergia Sissoo) are found in the west of the District, while evergreen forest clothes the foot of the hills.

Fauna. The larger fauna include elephants, rhinoceros, tigers, leopards, bears, bison (*Bos gaurus*), buffaloes, and several kinds of deer. Wild animals still do much damage; in 1904 they were responsible for the deaths of 685 animals and 12 human beings, though rewards were paid for the destruction of 257 tigers and leopards. Small game consists of partridges, jungle-fowl, florican, wild ducks, quail, and peafowl.

Climate and rainfall. Fogs are not common, and the winter is milder and the spring hotter than in Upper Assam. In January, the coldest month of the year, the mean temperature is 63°. The rainy season, on the other hand, is comparatively cool, and in no month does the mean temperature exceed 83°. The Eastern Duārs and the *tarai* at the foot of the Gāro Hills are excessively malarious, but the centre of the District is fairly healthy. Near the Brahmaputra the annual rainfall averages from 80 to 90 inches; but in the Eastern Duārs, which are near the hills and covered with dense forest, it is 60 or 70 inches higher.

Earth-Quakes and Storms. Goälpära town is said to have been swallowed up in one rivers take their rise in the Himālayas, and the swiftness of their current frequently causes them to cut away their banks and change their courses. At the foot of the northern hills there is a tract of gravel and sand, in which many of the minor streams vanish, to appear again some distance farther off. On the south bank the only rivers of any importance are the DIGRU, the KULSI, and the Singrā. All over the District are found numerous swamps, or *bils*, in many of which the water lies even during the dry season. The most extensive are the Dipār *bil*, about 8 miles west of Gauhāti, the Bildārā *bil* in the Palāsbāri *tahsil*, and the Asuchi *bil* in the Hājo *tahsil*.

The plain is of alluvial formation, composed of sand and Geology. clay in varying proportions. South of the Brahmaputra low ranges of gneissic rock project from the Khāsi Hills, and outliers are found on the north bank of the river.

The base of the southern hills is forest-clad; but to the Botany. north the country is covered with short grass, and is destitute of trees. High reeds and jungle grass spring up in great luxuriance on all low-lying land, and the forest is rendered beautiful by great ferns and the graceful foliage of the creeping cane.

Elephants and bison are still found in the low hills, and Fauna. rhinoceros and buffaloes in the marshes; tigers, leopards, bears, hog, and several species of deer are not uncommon. In 1904, 12 men and 2,709 animals were killed by wild beasts, though rewards were paid for the destruction of 201 tigers and leopards. The principal kinds of small game are hares, partridges, wild ducks and geese, florican, and snipe.

The climate of the District does not differ materially from Climate that of the rest of the Assam Valley; between November and rainfall, the middle of March it is cold and pleasant, but during the rest of the year warm and damp. The *tarai* at the foot of the Khāsi Hills is particularly unhealthy. The prevailing direction of the wind is from the north-east, and during the cold season fogs gather daily in the early morning over the valley of the Brahmaputra. The annual rainfall at Gauhāti averages only 67 inches, but near the hills 80 or 85 inches are received. The rainfall, though invariably abundant, is sometimes unfavourably distributed, and the rice crop suffers from the premature cessation of the monsoon.

The greatest natural calamity from which Kāmrūp District Earthhas suffered was the earthquake of June 12, 1897. The quakes. Government offices and nearly all masonry buildings in

M m 2