The system of revenue in force under the Ahom kings was one of personal service. The whole of the adult male population was divided into bodies of three men called *gots*, each individual being styled a *paik*. One *paik* out of the three was always engaged on labour for the State, and while so employed, was supported by the remaining members of his *got*. In return for his labour, each *paik* was allowed 8 *bighas* of *rupit* land, and the land occupied by his house and garden, which is now called *basti*, free of revenue. Any land taken up in excess of this amount, was assessed at annas 4 a *bigha*. In addition to this, the villagers paid a poll tax of one rupee for each adult *paik*.

Buchanan Hamilton, writing in 1809 states that each pargana was let for a term of year to a Chaudri,
who made what profit he could out of land held in excess of the paiks' free grants. The Chaudris are said to have retained for their own use three-fifths of the gross collections, and to have treated the raiyats in a very oppressive manner. The nominal rent per plough of land in Kamrup was Rs. 2 but the exactions of the Chaudri raised it to Rs. 5 or Rs. 7. The yield of a plough was said to be 79 maunds of "rough rice" and 16 maunds of mustard seed, and as estimates of yield prior to the era of crop experiments were generally too high, the area of a plough was probably between four and five acres, and the rates exacted by the Chaudri must at that time have seemed oppressive. These remarks have been quoted, as, in all probability, the system prevailing in Nowgong was not dissimilar from that existing in Kamrup.

On the occupation of the country by the British, the system of compulsory labour was abolished and the paik land assessed to revenue. In 1835, the rates assessed in Nowgong and Kaliabar were four annas a bigha on rupit, and two annas a bigha on bao land and land exposed to flood. Basti land was held free of revenue: but a poll tax of one rupee was levied on each adult. In the Mikir Mahal there was no poll tax, but land revenue was assessed at five annas and two and a half annas per bigha. In the chapari, Raha, Jamunamukh, and Morang no land revenue was assessed, but there was a tax of two or three rupees on each plough, and one rupee on each man cultivating with a spade. A poll tax of one rupee was also levied

† Letter No 121 from Lieut. Brodie, dated 14-11-1836.
on Doms and Haris, and of five rupee on each Moria or working brass-smith.

Prior to 1868, the rates assessed did not exceed five and a half annas per bigha, but in that year the Commissioner, Lieutenant-Colonel Hopkinson, introduced a distinction between basti or garden and other land and raised the bigha rates to one rupee for basti, ten annas for rupit, and eight annas for other land. No detailed enquiries were made, there was no attempt to estimate the comparative value of the three different classes of land, there was no discrimination between good and bad land in the same class or even between district and district. The revised rates were, however, so moderate that it was never seriously contended that they would have an oppressive incidence even on the worst land on which they were imposed. Colonel Hopkinson was of opinion that the existing assessment was ridiculously low, and in support of his opinion pointed out that in 1864-65 the receipts from opium were about four lakhs of rupees more than the total land revenue of his division, an excess which in those days, represented a difference of about forty per cent. The new assessment was successfully introduced in 1868-69, and in spite of the enormous enhancement the revenue was collected without difficulty.

The next settlement was made in 1893. The three-fold division of land was retained, but instead of imposing the same rate on all land of the same class throughout the district, the villages were

<table>
<thead>
<tr>
<th>Class</th>
<th>Basti</th>
<th>Rupit</th>
<th>Faringati</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rs. A</td>
<td>Rs. A</td>
<td>Rs. A</td>
</tr>
<tr>
<td>1st</td>
<td>1 6</td>
<td>1 0</td>
<td>0 12</td>
</tr>
<tr>
<td>2nd</td>
<td>1 4</td>
<td>0 14</td>
<td>0 10</td>
</tr>
<tr>
<td>3rd</td>
<td>1 2</td>
<td>0 12</td>
<td>0 9</td>
</tr>
<tr>
<td>4th</td>
<td>1 0</td>
<td>0 10</td>
<td>0 8</td>
</tr>
</tbody>
</table>
divided into four grades and, as will be seen from the statement in the margin, the rates imposed per bigha varied with the class of the village. The villages were provisionally graded by the Director of Land Records and Agriculture, the class in which each village was placed being determined by the demand for land, and not by any intrinsic considerations of the value of the produce, the fertility of the soil, or the profits of cultivation. The demand for land was estimated by ascertaining the density of the population, the proportion of settled to unsettled land, and the proportion of fluctuating cultivation. These lists were sent to local officers for examination, and were modified by them in view of the fertility of the soil, the facilities for bringing the produce to market, and the rents paid by subtenants where ascertainable. This enquiry was carried out by the ordinary district staff within the space of a single cold weather, and the results obtained made no pretensions to scientific accuracy. Such accuracy was considered to be unnecessary, as it was not intended to impose anything like the maximum assessment on the land. The Government had no desire to assess up to its fair share of the value of the produce of the soil, and under these circumstances it was contended that it would be waste of time and money to have recourse to any minute and elaborate classification of the soils, to crop experiments on a large scale, or to a close examination of all the elements that affect the net profits of the cultivator. The theory on which the settlement was based was that the worst
lands were capable of bearing the assessment imposed, and that Government alone was a loser by its inequalities. A fresh settlement of the district, which will discriminate more closely between good and inferior land in the same class is now in progress.

Land in Nowgong town is assessed at a uniform rate of two rupees a bigha the place not being of sufficient size and importance to warrant as yet a special settlement of town lands. In the Mikir Hills the people pay a tax of two rupees a house, and no attempt is made to measure up the land that is actually cultivated by them.

The following statement shows the gradual expansion of the land revenue and the settled area since the district first came under our administration. The figures for years in which a new settlement first came into operation, are printed in italics.

<table>
<thead>
<tr>
<th>A.D.</th>
<th>Rs.</th>
<th>Acres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1834-36 ...</td>
<td>-</td>
<td>60,475 ... Not available,</td>
</tr>
<tr>
<td>1852-53 ...</td>
<td>1,53,024 ...</td>
<td>176,689</td>
</tr>
<tr>
<td>1865-66 ...</td>
<td>2,16,660 ...</td>
<td>233,117*</td>
</tr>
<tr>
<td>1888-69 ...</td>
<td>3,55,147 ...</td>
<td>Not available</td>
</tr>
<tr>
<td>1892-93 ...</td>
<td>5,41,144 ...</td>
<td>344,522</td>
</tr>
<tr>
<td>1893-94 ...</td>
<td>6,90,980 ...</td>
<td>355,469</td>
</tr>
<tr>
<td>1902-03 ...</td>
<td>4,67,478 ...</td>
<td>265,889</td>
</tr>
</tbody>
</table>

The great decrease between 1893-94 and 1902-03 is primarily due to the destruction of one fourth of the total population by kala azar. As soon as the full extent of this appalling calamity had been revealed by the census of 1901, the Government of India directed that,
as a measure of relief, the land revenue demand of the
district should be reduced by one lakh of rupees,
and it is satisfactory to know that at last the tide has
turned and that the settled area is once more increasing.

The system of cultivation in the district falls into
two main heads, established and fluctuating. In the
established area the staple crop is sali or transplanted
paddy. Land is not readily resigned, and it occasionally
possesses a certain market value, though in Nowgong
this value has been materially affected by the fearful
mortality that has prevailed of recent years. In the
fluctuating tracts the staple crops are mustard, pulse,
and summer rice, ahu, and continual change is one of
the essential elements of cultivation, the same field
being seldom cropped for more than three years in
succession. Most of this fluctuating cultivation is
situated on the chapari, or tract of land lying between
the Brahmaputra and the Kalang.

The bulk of the land on which the staple crops of
the district are grown is held direct from Government
by the actual cultivators of the soil on annual or
periodic leases. The periodic lease confers a right of
re-settlement and a heritable and transferable title.
Annual leases merely authorise the occupation of the
land for a single year, though in practice the rights
of transfer, inheritance, and re-settlement are recogniz-
ed. The only drawback of the annual lease lies in the
fact that if the land happens to be required by Govern-
ment, it can be resumed without payment of compen-
sation to the occupant. Land held under either
form of lease or any individual field within the holding can be resigned, on formal notice of the fact being given to the Deputy Commissioner.

The basis of the land revenue system is the mandal, the village accountant and surveyor, who draws a modest stipend ranging from Rs. 8 to Rs. 12 per mensem. In March he proceeds to his circle, inspects the fields which have been formally resigned to see whether they have been actually relinquished, tests the boundaries of fields taken up in recent years to see whether they are in accordance with the map, and surveys land which has been broken up for what is called the regular settlement or for which a formal application has been filed. His two principal registers are the Dagchitha, in which particulars are entered for each field within the village, and the Jamabandi or rent roll, which classifies the fields by holdings and shows the area covered by each lease. During the hot weather he is occupied with the revision of his maps and registers, and the preparation of his leases. When the winter comes, he again proceeds to the field, distributes the leases he has prepared, and surveys the land which has been broken up since his former tour, and which is included in what is known as the dariabadi or supplementary settlement. He is also required to prepare statistics of the area under different crops; he assists in the collection of the revenue, and is often ordered to report on local disputes connected with the land. In most Provinces in India, a settlement is concluded for a term of years. During its currency no land which is held on lease can
be resigned, and there is not, as a rule, any appreciable quantity of waste land to be taken up. The state of affairs in Nowgong is very different. In 1902-03, the total settled area was 265,889 acres, the area excluded from settlement was 26,651 acres, and the area of land newly included in settlement 34,685 acres. It must not, however, be supposed that this kaleidoscopic shifting of the fields is taking place in every portion of the district, and that everywhere may be seen the spectacle of cultivated land becoming jungle and jungle land changing into fields of waving rice. In the established portion land is seldom given up, but in the fluctuating area, as has been already explained, it is less trouble to burn the jungle and break up new land every second or third year, than to clean the fields of the weeds which spring up after they have been two or three times cropped.

Above the mandal comes the supervisor kanungo, a peripatetic officer on pay ranging from Rs. 30, to Rs. 40, who checks his work both in the field and in the office. The superior revenue officers are called sub-deputy collectors and draw salaries ranging from Rs. 100 to Rs. 200 per mensem. The appointments are usually made by selection from candidates who must be of good physique and moral character, of respectable family, under 26 years of age, and must either have taken a university degree or have read up to that standard.

The different tenures in the district fall under two main classes—(1) those under which land is held for the cultivation of ordinary crops, and (2) those under
which grants have been made for the growth of tea or other crops, which are not included amongst the ordinary staples of the Province, and which require a considerable amount of capital for their production. The bulk of the land included in the first class is settled under the ordinary rules at full rates, but there are also considerable areas of revenue free land (lakhiraj) and land settled at half rates (nisf-khiraj). In the time of the Ahom kings the whole of this land is said to have been held rent free, but in 1834 the Government of India ruled that "all rights to hold lands free of assessment founded on grants made by any former Government must be considered to have been cancelled by the British conquest. All claims, therefore, for restoration to such tenures can rest only on the indulgence of Government without any right." Mr. David Scott, the first British Commissioner of Assam, found that, even under the Ahom Rajas, these revenue free lands had been assessed at the rate of five annas a pura,* and he imposed this cess, which was subsequently raised to eight annas, upon them. The Government of India then directed that an enquiry should be instituted into these claims and that all cases in which land was held on bona-fide grants dating from before the time of the Burmese conquest, or an account of services which were still performed, should be reported to them for orders. These instructions were not fully observed by the Commissioner at that time, Captain (subsequently General) Jenkins. This officer, for reasons which have never

* A pura=4 bighas, 3 025 bighas=1 acre.
been ascertained, drew a broad distinction between *debottar* or temple lands and *brahmottar* and *dharmottar* lands, i.e., lands which were devoted to some religious purpose but were not actually the property of a temple. The former he released from all claims for revenue; on the latter he imposed the rate assessed by Mr. Scott, which happened to be half the full rates prevailing at the time. No report was even submitted to the Government of India and no final orders were ever received from them, but the right of the former class of proprietors to hold free of revenue, and of the latter at half the usual rates, has been definitely recognised.

Waste land included within the boundaries of *nisf-khiraj* estates is assessed at 1 anna 3 pies per bigha, and as the proportion of uncultivated land in these estates is fairly high, this assessment adds considerably to the gross demand. The total area of *lakhi-raj* land in the district in 1903-04 was 2,314 acres and of *nisf-khiraj* land 5,382 acres. The area settled year by year at full rates is shewn in Table XIV.

Two sets of rules were in force for the grant of land for tea prior to 1861. The underlying principle in each case was that the land should be held on long leases at low but progressive rates of revenue, and that precautions should be taken against land speculation by the imposition of clearance conditions. Between 1861 and 1876 the fee simple tenure of waste land grants was put up to auction at an upset price of Rs. 2-8-0 an acre, which in 1874 was raised to Rs. 8. The holders of grants under the earlier rules of 1838 and 1854...
were allowed to purchase a fee simple tenure by payment of twenty times the revenue then due, provided that the clearance conditions had been carried out. Advantage was very generally taken of this concession, and there is no longer in the district any land held under the rules of 1838 and only 469 acres under the rules of 1854, while there are 21,349 acres held on fee simple tenure. The existing rules came into force in 1876. The land is sold at an upset price of Re. 1 per acre, for, though it is nominally put up to auction, there is no case on record in which more than one applicant appeared to bid. For two years the grant remains revenue free, and the rates gradually rise to 8 annas an acre in the eleventh and one rupee in the twenty-first year. The lease runs for 30 years, and when it expires the land is liable to re-assessment. The total area settled under these rules will be found in Table XIV.

The collection of land revenue was first introduced in Nowgong in 1833-34. Engagements were entered into with the raiyats direct, but the duty of collection was entrusted to a bissooh who received a commission of 12½ per cent., though he was not held responsible for the payment of the total revenue demand, irrespective of the amount that he actually succeeded in collecting. In 1840, a village accountant or kakati was appointed, who received a commission of 2½ per cent., and this, in addition to the grants of land given to the peons, raised the total cost of collection to 16¼ per cent., of the revenue realized. In 1839-40, the experiment was tried of making a
settlement with the mauzadar for a term of years, and holding him responsible for any losses that might occur, but allowing him to absorb any profits that accrued from the extension of cultivation. In practice this system was found to be unsatisfactory, and was abandoned, and recourse was again had to the annual settlement under which the fiscal officer was only responsible for the collection of the revenue. Efforts were made to induce respectable mauzadars to take five years leases of the chapari mahals, on a commission of no less than 20 per cent. Twenty chapari mauzas were settled in this manner, but in every case but one, the mauzadars threw up their leases, and accepted annual settlements on the old rate of commission. The fiscal units at that time were very small and in 1853 there were no less than 158 mauzadars, exclusive of those appointed for the Mikir Hills.*

The general tendency, since that date, has been to increase the size of the unit of collection. In 1867, the mauzadars, as the collecting officers were called, received 15 per cent. of the revenue as commission, and were allowed half the revenue of land reclaimed during the currency of the settlement. Three years later, their commission was reduced to 10 per cent. and in 1872 the further restriction was imposed that this 10 per cent. could only be drawn on the first Rs. 6,000 of revenue, .5 per cent. being allowed on revenue in excess of that sum. In 1883, the idea gained ground that Government would do better by putting

the mauzadar aside and employing salaried officials as a collecting agency. Mauzas were accordingly amalgamated and placed in charge of an official called a tahsildar, who was remunerated by a fixed salary and was exempted from the responsibility imposed upon the mauzadar of paying in the revenue on the due dates, irrespective of the amounts actually collected by him. Three tahsils were opened in 1892, at Nowgong, Raha, and Samaguri, an arrangement which left the mauzadars still responsible for 60 per cent. of the land revenue demand. It was subsequently found, that there was some difficulty in dealing direct with so large a body of raiyats, and in 1904, the tahsils were again broken up into mauzas.

The revenue demand on account of the regular settlement is due in two instalments; three-fifths on January 15th, and two-fifths on the 15th February, except in those villages which meet the government demand from the sale of mustard and pulse when it is due in one instalment on March 15th. The demand on account of the supplementary settlement, is also due in one instalment on that date.

In 1903-04, notice of demand was issued on account of 10 per cent. of the total land revenue demand, but it was only necessary to attach property on account of 2 per cent. The number of cases in which it was necessary to have recourse to sale was very small, and the revenue on account of which property was sold only represented 0.05 per cent. of the total demand.
The figures below show the total area of the district as reported by the Assistant Surveyor General, Calcutta, the settled area, and the area of reserved forests in 1902-03 and the area of waste land at the disposal of Government in that year.

<table>
<thead>
<tr>
<th>Area of unsettled waste</th>
<th>Square mi's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area of district</td>
<td>3,843</td>
</tr>
<tr>
<td>&quot; settled area</td>
<td>415</td>
</tr>
<tr>
<td>Area of reserved forests</td>
<td>142</td>
</tr>
<tr>
<td>Area of unsettled waste</td>
<td>3,286</td>
</tr>
</tbody>
</table>

No less than 85 per cent. of the total area falls in the latter category, but it must not be supposed that the whole of this land is fit for cultivation or human habitation. The figures include the area of roads and of tracts that are permanently under water, which amounts to a very considerable total. It also includes the area of the Mikir Hills, which could never support a dense population, of extensive tracts which are submerged during the rainy season and are hardly fit for permanent habitation, and of land which is too high or barren to be fit for the growth of food crops. It is useless to attempt to form any estimate of the proportion of the unsettled area in which cultivation could be carried on with profit, and it is hardly necessary to do so, as it is obvious that the district could support a much larger population than it now possesses.

The most densely populated portion of the district is the tract of country lying on either side of the Kalang, between Silghat and Raha, but there is not a single mauza in which the area of unsettled land is not extremely large. Nearly one-third of the sadr tahsil
was, for instance, unsettled in 1902-03, but this, for Nowgong, is but a small proportion. The following statement shows the unsettled area of the *chapari* mauzas, and there is also an enormous area of waste land in the Kapili valley.

<table>
<thead>
<tr>
<th>Mauza</th>
<th>Total area in acres</th>
<th>Unsettled area in acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juria</td>
<td>...</td>
<td>80,000</td>
</tr>
<tr>
<td>Dhing</td>
<td>...</td>
<td>70,000</td>
</tr>
<tr>
<td>Mikirbhetα</td>
<td>...</td>
<td>42,000</td>
</tr>
<tr>
<td>Gerua Bokani</td>
<td>...</td>
<td>98,000</td>
</tr>
<tr>
<td>Ghugua</td>
<td>...</td>
<td>40,000</td>
</tr>
<tr>
<td>Mayang</td>
<td>...</td>
<td>76,000</td>
</tr>
</tbody>
</table>

From Table XII it will be seen that excise furnishes nearly three-eighths of the total revenue of Nowgong, and that five-sixths of the excise receipts are derived from the sale of opium. Prior to 1860, no restriction was placed upon the cultivation of the poppy, but the evil effects of unrestrained indulgence in opium were undeniable, and, in that year, poppy cultivation was prohibited, and the drug was issued from the treasury, the price charged being Rs. 14 a seer. This change was bitterly resented by the people, and cost the life of the Assistant Commissioner, Lieutenant Singer, but the story of the Phulaguri riots has already been told in the chapter on the history of the district. The price was quickly raised to Rs. 20 in 1862, Rs. 22 in 1863, Rs. 23 in 1873, Rs. 24 in 1875, Rs. 26 in 1879, Rs. 32 in 1883, and Rs. 37 in 1890, the figure at which it

*Opium is said to have been introduced by some of Captain Welsh's Soldiers and to have been first used as a specific against bowel complaints. The poppy was first cultivated in Beltala near Gauhati and the drug, which was at first regarded as a medicine, soon enslaved the Assamese.*
now stands. While Assam was under the Bengal Government, licenses for the retail vend of opium were issued free of charge. In 1874, a fee of Rs. 12 per annum was levied on each shop, and in the following year, it was raised to Rs. 18. Between 1877 and 1883, the right to sell opium in a particular mahal was put up to auction, but this system was found to be unsatisfactory, and in the latter year the individual shops were sold as is done at the present day. The general result of the Government policy has been to enormously reduce the facilities for obtaining the drug. In 1873-74 there were in the district 867 shops for the retail vend of opium, whereas in 1903-04 there were only 134.

The following figures show the extent to which the consumption of the drug has been affected by the raising of the rate of duty. 1873-74, 284 maunds; 1879-80, 179 maunds; 1889-90, 243 maunds; 1899-1900, 168 maunds; and 1902-1903, 191 maunds. The population, in the first and the last years of the series, was about the same, though the number of aboriginal tribesmen, who are the chief consumers, was probably smaller in the latter year, but the quantity of opium issued was only two-thirds of the amount sold in 1874. Prior to 1860, when there were no restrictions upon the cultivation of the poppy, the opium habit had taken a firm hold upon the people, and even though it was taxed, habitual eaters were unable to forswear the drug. But the steady rise in price and the diminution in the number of shops, naturally tended to restrict
consumption and to deter the younger generation from taking to the habit. During the first half of the century, opium probably cost the people about Rs. 5 a seer.* Since 1890, the price has varied from Rs. 40 to Rs. 50 a seer, and it is only natural, that such a heavy increase in the cost should be attended with a decrease in the amount consumed.

The drug is generally swallowed in the form of pills or mixed with water and drunk, and is seldom smoked as this is considered to have an injurious effect upon the constitution of the smoker. Madak is made by mixing boiled opium with pieces of dried pan leaf, and stirring it over the fire. The compound is then rolled up into pills and smoked. Chandu is made out of opium boiled with water till the water has all evaporated, and is smoked like madak in the form of pills.

The outstill system is still in force in the district, that is to say the right to manufacture and sell spirit at a particular locality is put up to auction, and no attempt is made to levy duty on the actual quantity of spirit distilled. The abstract in the margin shows that of recent years there has been a considerable increase in the revenue derived from country spirits. But the system of auctioning the shops depends for its success upon the existence of competition at the sales, and the lowness of the fees received in 1880 and 1890.

* Vide Statement XIV appended to a report submitted by the Deputy Commissioner of Darrang, on February 15th, 1896.
suggests that at that time purchasers were able to obtain licenses at practically their own prices. The large increase in the foreign population, most of whom are liquor drinkers, which more than trebled itself between 1881 and 1901, has been the principal cause of the expansion of the trade, as, though the aboriginal tribes are great consumers of liquor, they prefer a strong beer which they brew from rice to ordinary country spirit.

The attention of the Administration has been more than once directed to the discovery of the most effective means of discouraging a taste for drinking, but the most serious obstacle to improvement lies in the fact that, if the supply of licensed liquor is cut off, rice-beer and spirit can be readily manufactured by the people, and complaints have more than once been received of excessive drunkenness on tea gardens which were situated far beyond the reach of any licensed liquor shop. The outstill system is not theoretically the most desirable, but, owing to the difficulty of communications and the facilities that exist for the manufacture of illicit liquor, it has not yet been found possible to introduce any more satisfactory methods in its place. The following measures have recently been introduced with the object of reducing, as far as possible, the evils attendant on the liquor trade. A special excise establishment has been entertained, the vendor is required to arrange for an abundant supply of good drinking water near his shop, and his license can be withdrawn if he is twice convicted of allowing drunkenness and disorderly conduct near the still.
The most important shops are situated at Lumding, Jakhalabandha, Nowgong, and Barjuri.

Country spirit is manufactured by native methods and generally in what is known as the open still. The apparatus employed consists of a large brass or copper retort, which is placed over the fire, to the top of which is fitted the still head, a compound vessel, part of which is made of earthenware and part of brass. The wash is placed in the retort, and, as it boils, rises in the form of vapour into the still head, over the outer surface of which a stream of cold water is continually kept flowing. As the vapour cools, it is precipitated in the form of liquid, and is carried off by a bamboo tube into a vessel placed at the side. The mouth of this tube is open, and the spirit trickles from it into the vessel beneath, so that the outer air has access by this channel into the still head and retort in which the process of distillation is going on. In the closed still, the vapour passes down two tubes into two receivers, where it is cooled and condenses into liquid. These tubes are so fixed to the receivers that the air cannot have access to the spirit, and, though distillation does not proceed so rapidly, the liquor produced is stronger than that obtained from the open still.

The material employed is generally the flower of the mohwa tree (*bassia latifolia*), which contains a very large proportion of sugar, but its place is sometimes taken by molasses and rice. The following are the proportions in which these ingredients are generally mixed: mohwa 30 seers and water 60 seers; or mohwa 25 seers,
molasses 5 seers, and water 60 seers; or boiled rice 20 seers, molasses 10 seers, and water 80 seers. *Bakhar* is a substance composed of leaves, roots, and spices, whose actual ingredients are not divulged by the villagers who manufacture it, is frequently added to the wash, which is put to ferment in barrels. Fermentation takes three or four days in summer and a week in the cold weather, and the wash is then considered to be ready for the still.

The process of distillation takes about three hours. A retort of 40 gallons yields two gallons of spirit in an hour and three-quarters, three gallons in two hours and a quarter, and four gallons in three hours. The best and strongest spirit comes off first, and in the case of a brew of 30 seers of mohwa, the first 3½ gallons will be classed as *phul* if they are at once drawn off from the receiver. If they are allowed to remain while two more gallons are distilled, the whole 5½ gallons will be classed as *bangla*. The exact proportions vary, however, at the different shops, some distillers taking 4½ gallons of *phul* or 5½ gallons of *bangla* from 30 seers of mohwa. Occasionally only two gallons of spirit are distilled from 30 seers of mohwa, and the liquor is then called *thul*, is very strong, and is sold for one or two rupees a quart. *Thul* is also sometimes made by redistilling *bangla*. Only one kind of liquor is generally taken from each distillation as if the *thul* or *phul* were removed, the spirit subsequently distilled would be not only weak but impure. Strong liquor watered to reduce it to a lower strength is not considered palatable, and it
seems to be the usual practice to distil the liquor at the actual strength at which it will be sold. One disadvantage of the cheaper kinds of liquor is that it will not keep, and in four or five weeks it is said to lose all its spirituous qualities.

Laopani, or rice beer, is the national drink of the unconverted tribes, and a special name, modahi, is applied to those who have to some extent attorned to Hinduism, but have not yet abandoned their ancestral liquor. It is also taken by some of the humble Hindu castes, and is largely used by garden coolies if facilities are not afforded to them for obtaining country spirit. The following is the usual system of manufacture followed: The rice is boiled and spread on a mat, and bakhar is powdered and sprinkled over it. After about twelve hours it is transferred to an earthen jar, the mouth of which is closed, and left to ferment for three or four days. Water is then added and allowed to stand for a few hours, and the beer is at last considered to be ready. The usual proportions are 5 seers of rice and 3 chattaks of bakhar to some 8 or 10 quarts of water, and the liquor produced is said to be much stronger than most European beers. Liquor is often illicitly distilled from laopani or boiled rice, by the following simple method. An earthen pot with a hole in the bottom is placed on the top of the vessel containing the laopani or rice, and the whole is set on the fire. The mouth of the upper pot is closed by a cone-shaped vessel filled with cold water, and a saucer is placed at the bottom of the pot over the hole. The vapour rises into the upper of the
two jars, condenses against the cold cone, with which the mouth is closed, and falls in the form of spirit on to the saucer beneath. Care must of course be taken to see that the various cracks are closed against the passage of the spirituous vapour, but this can easily be done with strips of cloth.

Ganja is usually mixed with water, kneaded till it becomes soft, cut into small strips, and smoked. Wild ganja grows very freely in Nowgong but it is doubtful whether it is much used except as a medicine for cattle. It does not produce such strong effects as the ganja of Rajshahi, but the leaves are sometimes dried and mixed with milk, water, and sugar to form a beverage. Ganja is not much used except by foreigners, and from Table XII it will be seen that the revenue raised from this drug is comparatively small. It is imported from Rajshahi in bond by a wholesale dealer, who pays a duty of Rs. 11 per seer when issuing it for sale to the retail vendors. The right of retail sale is put up to auction and in 1904 Rs. 6,898 were paid for the 14 shops that are sanctioned for Nowgong.

The receipts, on account of income tax, are very small and in 1903-04 only amounted to Rs. 6,876. Nearly one-half of this is derived from the salaries paid by companies and private employers, in other words the salaries drawn by managers of gardens and their staff, and about one-third is obtained from ‘other sources of income.’

The total number of assesses under the latter head was only 55. More than half were reported to have
incomes ranging from Rs. 1,000 to Rs. 1,250 per annum, and there were only three assessee with incomes of more than Rs 5,000 per annum. The bulk of the persons assessed on 'other sources of income' were general shop keepers, and the balance was composed of 10 mauzadars, 9 buffalo keepers, 4 contractors, 3 pleaders, a doctor and a teacher.

The receipts under the head both of judicial and non-judicial stamps, are considerably lower than those obtained from any other district in the plains. In 1903-04, they only amounted to Rs. 17,568 under the former head, as compared with Rs. 25,577 in Darrang, the next lowest district in the two Valleys, and Rs, 4,04,169 in Sylhet. The corresponding figures for non-judicial stamps were Rs. 3,923, Rs. 6,396 and Rs. 1,51,623. It is, however, only natural that with regard to this particular item of revenue, Nowgong should stand at the bottom of the list. It has a smaller population than any district in the plains, there is little crime, and very little trade or business to require the intervention of our courts.

Public works are in charge of the Assistant or Executive Engineer, who is stationed at Tezpur, and who has, under his orders, a subdivisional officer with two upper and four lower subordinates in Nowgong.

The department is entrusted with the construction and maintenance of all the larger public buildings. The most important are the jail, the public offices, the circuit house, dak-bungalow, schools, and post and telegraph offices at Nowgong, and inspection bungalows,
on Provincial roads. Rest houses on other roads are maintained by the Local Board. The most important roads which are directly under the department are:—the section of the south trunk road which runs through the district from Nakhola via Jagi, Nowgong and Kuwarital to the frontier of Sibsagar, and the road from Amlaki to Kathiatali. It has already been explained that Local Board works, that require professional skill or engineering knowledge, are usually made over to the Executive Engineer for execution. The principal difficulties with which the department has to contend are the absence of an artizan class, and the scarcity and dearness of unskilled labour, and it is to these two causes that the heavy cost of public works in Nowgong is largely due.

Nowgong is not divided into any sub-divisions, and the district is under the immediate charge of the Deputy Commissioner who is allowed two subordinate magistrates as his immediate assistants.

The total number of clerks employed in the Deputy Commissioner’s office in 1903 was 43, who drew altogether from Government Rs. 20,760 in salaries. Separate officers are in charge of the Police, Forests, Public Works, and Medical Department.

Appeals lie to the Deputy Commissioner from orders passed by magistrates of the second or third class, and from the orders of first class magistrates to the Judge of the Assam Valley. Appeals from the Judge lie to the High Court of Fort William at Calcutta. In 1902, there were four stipendiary and two honorary
magistrates in the district and the former decided 1,072 and the latter 210 original criminal cases. In the course of these proceedings 3,148 witnesses were examined. Altogether there were 965 cases under the Penal Code returned as true, the immense majority of which were either offences against property or against the human body. There is little serious crime in Nowgong and most of these offences were either petty assaults or thefts of small sums. Civil work is not heavy, and the Deputy Commissioner acts as sub-judge while one of the assistant magistrates discharges the functions of a munsif. In 1902, the sub-judge heard 5 original cases and 45 appeals, while 1,262 original suits were disposed of by the munsif. Almost all of these cases were simple money suits and nearly three-fourths were disposed of without contest. Special rules are in force for the administration of criminal justice in the Mikir Hills. The jurisdiction of the High Court is barred and the Deputy Commissioner is empowered to pass sentences of death, transportation, and imprisonment exceeding seven years subject to the confirmation of the Local Government. Fine and imprisonment may be awarded in lieu of any other punishment, provided that the amount of punishment awardable for such offence under the Penal Code be not exceeded, and no appeal lies of right from any sentence by the Deputy Commissioner of less than three years imprisonment.

The Deputy Commissioner is also the Registrar of the district, and one of the assistant magistrates acts as sub-
registrar. The number of documents registered is, however, very small, and in 1903 only amounted to 219, a fact which shows in a very striking manner how extremely simple is the economic organization of Nowgong.

Nowgong like most of the districts in Assam has no regular garrison, but a certain number of the European residents have been enrolled as volunteers. A corps of mounted infantry was first raised in Nowgong in 1888, with a strength of 30 members, and three years later, the volunteers in the four upper districts of the Valley, were formed into one corps known as the Assam Valley Mounted Rifles, which in 1896, was converted into a regiment of Light Horse. The strength of the corps in 1903, was 312, 21 of whom were residing in Nowgong.

The civil police are in charge of a District or Assistant Superintendent of Police. The sanctioned strength consists of one inspector, 15 sub-inspectors, and 177 constables. Ninety-one smooth bore Martinis are allotted to Nowgong and a reserve of men is kept up at the district headquarters, who are armed with these weapons and are employed on guard and escort duty. Up-country men, Nepalese, and members of the aboriginal tribes are usually deputed to this work, though attempts are made to put all the constables through an annual course of musketry. There is very little organized crime, and the actual police duties are comparatively light. Table XIX in the Appendix shows the places at which there are investigating centres and the strength maintained at each.
The only jail in the district is situated at Nowgong, and has accommodation for 49 male convicts and 14 under-trial prisoners. The jail premises, which cover an area of almost three acres, were originally surrounded by a wall of masonry. Parts of this wall were thrown down by the earthquake of 1897, and the gaps have since been filled up with a bamboo palisade. Most of the wards are built of timber and bamboo with roofs of thatch. Female prisoners are transferred to Tezpur and male convicts sentenced to more than three months' imprisonment to Gauhati. The prisoners are principally employed on gardening and oil pressing.

During the first half of the nineteenth century, the condition of education in Bengal was bad enough, but in Assam it was even worse. In 1841, Mr. Robinson of the Gauhati College described the state of education in the Valley as being "deplorable in the extreme." He pointed out that unlike the Province of Bengal, where every village had its teacher supported by general contribution, provincial schools had only recently been introduced in Assam. In 1847-48, there were no secondary and only 10 primary schools in the district. The next few years witnessed very little progress as on the occasion of Mr. Mill's visit in 1853, there were only 13 schools of all grades.

In the following year, Major Butler reported that there were 14 vernacular schools, with 836 pupils on the rolls, but he drew a gloomy picture of the state of education in the district. "The proficiency attained

* A descriptive account of Assam, page 277.
by the boys at these institutions is very low indeed, few stay longer than is sufficient to enable them to read and write a common petition and acquire a little arithmetic, with a slight knowledge of the surveying in use in Assam. When their education is, in their own opinion, complete, they are qualified to become village Kaguttees or writers. One of the greatest impediments to the advancement of education in Assam, is the indifference with which it is received by the respectable classes. They show no wish whatever to see the rising generation educated or made wiser than themselves; in fact, I am half inclined to think, that, if the higher classes could prevent the youth of Assam from being instructed, they would not hesitate to do so.†

1874-75 is the first year for which complete statistics are available, and the following abstract shows the progress of education since that year. Figures for years subsequent to 1900-01 will be found in Table XXI.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of secondary schools</th>
<th>No. of primary schools</th>
<th>Total no. of pupils</th>
<th>No. of persons in district to each pupil</th>
<th>Percentage under instruction to those of school going age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>1874-75</td>
<td>9</td>
<td>467</td>
<td>81</td>
<td>2,816</td>
<td>98</td>
</tr>
<tr>
<td>1880-81</td>
<td>7</td>
<td>582</td>
<td>100</td>
<td>3,282</td>
<td>82</td>
</tr>
<tr>
<td>1890-91</td>
<td>5</td>
<td>539</td>
<td>175</td>
<td>5,138</td>
<td>61</td>
</tr>
<tr>
<td>1900-01</td>
<td>5</td>
<td>430</td>
<td>113</td>
<td>4,683</td>
<td>58</td>
</tr>
</tbody>
</table>

The column showing the total number of pupils suggests that education is not spreading but receding, but

† Travels and adventures in the Province of Assam, by Major John But'er, p 239, London, Smith Elder and Coy, 1865.
this of course is not the case. Each of the years selected shows an increase in the proportion of the people under instruction, and though there was but little spread of education during the last decade, to those acquainted with the calamities from which the district has been suffering this can hardly be a matter for surprise.

The schools of the district are divided into five grades, high, middle English, middle vernacular, upper primary, and lower primary. There is only one high school in the district which is situated at Nowgong.

The boys at this school are taught from the earliest stage of their education up to the Entrance course as prescribed by the University of Calcutta, but many leave school without completing the course. Till recently English was taught in all the classes. The smaller boys no longer learn that language, but the standard of instruction is higher than that prevailing in lower secondary (middle) schools. English is the medium of instruction in the first four classes of high schools, in the lower classes and in other schools the vernacular is employed. The course of instruction at middle English and middle vernacular schools is the same, with the exception that English is taught in the former and not in the latter. The following are the subjects taught in the middle vernacular course:

1. Assamese, comprising literature, grammar and composition,  
2. History of India,  
3. Geography,  
4. Arithmetic,  
5. Elements of Euclid (Book I), Mensuration of plane surfaces and surveying, and  
6. simple lessons in botany and agriculture. There are only five middle
schools in Nowgong, which are situated at Nowgong town, Raha, Demow-Salmara, Puranigudam, and Silghat.

Primary education is again divided into upper and lower, but in 1903-04 there was only one upper primary school in the district. The course of study in lower primary schools includes Reading, Writing, Dictation, Simple Arithmetic, and the Geography of Assam. In upper primary schools the course is somewhat more advanced, and includes part of the first book of Euclid, Mensuration, and a little History. The standard of instruction given still leaves much to be desired, but efforts have been recently made to improve it by raising the rates of pay given to the masters. Fixed pay is now awarded at average rates of Rs. 8 per mensem for certificated and Rs. 5 per mensem for uncertificated teachers, supplemented by capitation grants at rates ranging from 3 annas to 6 annas for pupils in the three highest classes. For educational purposes, the district is in charge of a Deputy Inspector of schools who is assisted by two subinspectors.

The district is in the medical charge of the Civil Surgeon who is stationed at Nowgong. It contains ten dispensaries, and the supervision of the work done at these institutions is one of the most important duties of the Civil Surgeon. He also controls and inspects the vaccination department, and is required to visit and report on all tea gardens on which the death rate for the previous year has exceeded 7 per cent.

The conditions under which the people pass their days are far from conducive to a long mean duration
of life. Their houses are small, dark, and ill-ventilated, and the rooms in summer must be exceedingly close and oppressive. They are built upon low mud plinths and are in consequence extremely damp, and the inmates, instead of sleeping on beds or bamboo platforms, which would cost them nothing to provide, often pass the night on a mat on the cold floor. Their attire, which is suitable enough for the warm weather, offers but a poor resistance to the cold and fogs of winter, and many lives are annually lost from diseases induced by chills, which might have been avoided by the purchase of a cheap woollen jersey. The houses are buried in groves of fruit trees and bamboos, which afford indeed a pleasant shade, but act as an effective barrier to the circulation of the air, and increase the humidity of the already over-humid atmosphere. Sanitary arrangements there are none, the rubbish is swept up into a corner and allowed to rot with masses of decaying vegetation, and the complete absence of latrines renders the neighbourhood of the village a most unsavoury place. The water supply is generally bad, and is drawn either from shallow holes, from rivers, or from tanks in which the villagers wash their clothes and persons. All of these are undoubtedly factors which contribute to produce a high mortality, and nearly every one of them could be eliminated.

Vital statistics are reported by the gaobura or village headman to the mandal of the circle, this report being in theory submitted every second week. In practice they were received at much longer intervals, as the gaobura
was an unpaid servant of Government and not very amenable to discipline. It has recently been decided to allot to each *gaobura* $2\frac{1}{3}$ acres of land revenue free, and it will now be possible to enforce a stricter adherence to the rules. Between 1891 and 1901, the mean recorded birth rate was 24 per mille, the death rate 45 per mille and it is certain that both of these figures were much below the truth. The statistics of age recorded at the census are, however, so unreliable, and the disturbing effect of immigrants is so great that it is not possible to fix a normal birth and death rate for the district. It is, however, fairly clear that the exceptional unhealthiness of the last decade not only killed off the people, but had a prejudicial effect on the fertility of the survivors. The number of children under 10 to every thousand of the population decreased from 329 in 1891 to 313 in 1901, and similar decreases were to be seen in Sylhet and the Khasi and Jaintia Hills where public health was also bad.

Epidemics of cholera from time to time produce a high mortality, for though it is apparently endemic in the district, it occasionally breaks out with quite exceptional violence. The abstract in the margin shows the recorded death rate from this cause in the years when cholera was most prevalent. For the purposes of comparison it may be added that the death rate in England from all causes in 1901 was only 10.9

<table>
<thead>
<tr>
<th>Year</th>
<th>Cholera death rate per mille</th>
</tr>
</thead>
<tbody>
<tr>
<td>1879</td>
<td>... 11.9</td>
</tr>
<tr>
<td>1884</td>
<td>... 9.0</td>
</tr>
<tr>
<td>1886</td>
<td>... 10.1</td>
</tr>
<tr>
<td>1889</td>
<td>... 9.9</td>
</tr>
<tr>
<td>1893</td>
<td>... 9.7</td>
</tr>
<tr>
<td>1900</td>
<td>... 25.0</td>
</tr>
<tr>
<td>1908</td>
<td>... 6.7</td>
</tr>
</tbody>
</table>
per mille. In 1900, the recorded death rate in Nowgong from cholera alone was nearly 50 per cent. higher than the total death rate for England in the following year.

The distribution of cholera varies considerably from year to year, and is by no means confined to the villages that line the banks of the sluggish Kalang. In 1900, there was a terrible outbreak on the *chapari* from Dhing to Nij Tetelia, Ghugua and Dandua being the places most affected. The recorded death rate per mille from cholera in these mauzas in that year was as follows: Dhing, 58; Mikirbheta, 73; Ghugua and Dandua, 124; Charaibahi, 109; and Tetelia 63. It will be seen that the cholera death rate in these mauzas was much higher than the cholera death rate in the three tahsils at each of the four great epidemics,* though the Kalang flows through all the three. Mauzas that seem generally to be predisposed to cholera are Kachamari, which lies along the Kalang opposite Nowgong, and Jamunamukh and Kampur in the valley of the Kapili. It does not appear, however, that the Kapili can have much to do with the dissemination

<table>
<thead>
<tr>
<th>Death rate per mille from Cholera in—</th>
<th>1890</th>
<th>1893</th>
<th>1900</th>
<th>1903</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samaguri</td>
<td>9</td>
<td>10</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Nowgong</td>
<td>10</td>
<td>10</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>Raha</td>
<td>5</td>
<td>17</td>
<td>23</td>
<td>4</td>
</tr>
</tbody>
</table>

*For the first two epidemics the rate is calculated on the population for 1891 for the last two on the population of 1901.
of the disease as Garubat and Kathiatali, which are in close proximity, have been fairly free. The mauzas on the *chapari* that suffered so terribly in 1900 were not very seriously affected by the other epidemics.

Other diseases which are prevalent in the district are worms, diseases of the skin such as itch and ringworm, ulcers, dysentery and diarrhoea, and rheumatic affections. Worms are extremely common and are said to be absorbed into the system through the coarser kinds of plantains. Elephantiasis is rare and only the simpler form of goitre is met with, but that is common, especially in the Mikir Hills. Venereal diseases are practically unknown amongst the indigenous population, though Bengali coolies and other foreigners are not unfrequently affected. Small-pox is endemic and occasionally breaks out in a most virulent form. The highest recorded death rate of recent years was 8.3 per mille in 1898. The people do not seem to be fully alive to the advantages of vaccination and only 32 per mille of the population was protected on the average in each of the five years ending with 1902-03.

The most deadly lethal agent in the district has, however, been the mysterious form of fever known as *kala-azar*. The following account of this disease is extracted from the Report on the Census of Assam in 1901.

"When first referred to in the Sanitary Reports of the province, it is described as an intense form of malarial poisoning, which was popularly supposed to be contagious. The Civil Surgeon of Goalpara, however, rejected the theory of contagion, and in 1884 expressed the opinion that *kala-azar* was simply a local name for malarial fever and its consequences. In 1889-90 a
specialist (Surgeon-Captain Giles) was appointed to investigate both *kala-azar* and the so-called *beri-beri* of coolies, and he rapidly came to the conclusion that *kala-azar* and *beri-beri* were merely different names for *anchylostomiasis*, and that the mortality was due to the ravages of the *dochmius duodenalis*, a worm which lives in the small intestine. This theory corresponded with the observed facts to the extent that it admitted, what at that stage of the enquiry could hardly be denied, that *kala-azar* was communicable, the uncleanly habits of the natives of the province affording every facility for the transfer of the ova of the parasite from the sick to the healthy; but the support which was given to Dr. Giles' views by local medical opinion was withdrawn when Major Dobson proved by a series of experiments that *anchylostoma* were present in varying numbers in no less than 620 out of 797 healthy persons examined by him. In 1896, Captain Rogers was placed on special duty to make further investigations, and, in addition to demonstrating various differences of a more or less technical character in the symptomatology of the two diseases, he pointed out that, whereas *kala-azar* was extremely inimical to life, the number of cases of *anchylostomiasis* that terminated fatally was by no means large. The conclusion to which this specialist came, after a very careful enquiry, was that the original view was correct, and that *kala-azar* was nothing but a very intense form of malarial fever, which could be communicated from the sick to the healthy, an opinion which was to a great extent endorsed by the profession in Assam, successive Principal Medical Officers declaring that, whatever *kala-azar* was, it had been abundantly proved that it was not *anchylostomiasis*. The suggestion that malaria could be communicated did not, however, commend itself to the entire medical world, and was criticised with some severity, Dr. Giles writing as recently as 1898—"Dr. Rogers, like a medical Alexander, cuts his Gordian knot by announcing that Assamese malaria is infectious. In this he places himself at variance with not only the scientific but the popular opinion of the entire world."

A complete change in popular and scientific opinion was, however, brought about by the development of Manson's mosquito theory, and Major Ross, who visited Assam, in the course of his enquiry into the manner in which infection by malaria takes place, confirmed Dr. Rogers' conclusions, and in 1899 placed on record his opinion that, as stated by Dr. Rogers, *kala-azar* was malarial fever. The principal points of difference between *kala-azar* and ordinary malarial fever lie in the rapidity with which
the former produces a condition of severe cachexia, and the ease
with which it can be communicated from the sick to the healthy.
The origin of the disease is obviously a matter which must always
be open to doubt. Captain Rogers is of opinion that kala-azar
was imported from Rangpur, where malarial fever was extra-
ordinarily virulent in the early seventies, but this is still a matter
of conjecture."

"The first recorded case occurred at Nowgong in 1888, where
it was brought from Gauhati by some boys who attended the
school there, and in 1889 another centre of infection was started
at Raha by a man who came home to die, after contracting the
disease in Kamrup. Two years afterwards the infection was
conveyed in the same way to Nakhola, and from these three
centres the disease gradually spread over the whole district.
The inaccuracy of the returns of vital occurrences collected by
the unpaid gaonburas of the Assam Valley is well known, but
it is possible to draw some conclusions from them, provided that
the amount of error remains constant, and the recorded birth-
rate for Nowgong is such as to justify us in assuming that there
has not been any very marked improvement in registration
during the last fourteen years. During the five years 1887-91,
before kala-azar had got a grip on the district, the average
number of deaths annually from fever was 4,405. Had it been
maintained for the nine years ending December 31st, 1900,
the total mortality from fever would have amounted to 39,645,
but our records, imperfect though they are, show 93,824 deaths
as due to fever and kala-azar, and we are thus left with a recorded
mortality from kala-azar of 54,179 out of a population which in
1891 only numbered 847,807 souls. The following account was
given by the Deputy Commissioner of the effects of the dis-
ease upon the district:—

The state of the district can hardly be realised by any one
who has not travelled throughout it, and been into the villages.
Deserted basti sites are common; a few of the people in such
cases removed elsewhere, but most stuck to their houses till
they died. In Lalung and Hojai villages, I believe hardly any-
one went elsewhere, and these two tribes lost very heavily.
There used to be numbers of Hojais in the neighbourhood of
Kharikhana; almost all have died; ten or twelve Hojai villages
at the foot of the hills near Dabaka have completely disappeared,
and Dabaka itself has shrunk from an important trade centre
to a miserable hamlet. kala-azar is not only merciless in the
number of its victims, but also in the way it kills. Men rarely
died under three months, and often lingered two years, sometimes even more. If two or three members of a family were attacked with the disease, all its little savings were spent to support them. *kala-azar* not only claimed victims in a family but left the survivors impoverished, if not ruined. A case which came under my personal notice will show what I mean: I noticed some fine rice land at Ghilani, near Kampur, lying uncultivated, and sent for the *pattadar* to question him about it. He came and said—"We were three, my father, my elder brother, and myself. They died of *kala-azar*, and we sold our cattle and all we had to support them. Now I am ill, and shall die next year, how can I cultivate the land?" In many instances, an old man or woman, or two or three small children, are all that is left of a large family. In Nowgong, Raha, and Puranigudam are empty spaces where formerly houses stood, and the same sort of thing can be seen all over the district. So much land had gone out of cultivation that it has hardly any value except in the town, near Silghat, and in the Kandali mauza. A man will not buy land when it can be had for the asking.

Since this report was written a new theory has been mooted and it has been suggested that *kala-azar* may after all not be a malarial fever, but may be caused by those curious parasites which have recently been discovered in the spleens of fever stricken patients, and which are known as Leishman-Donovan bodies. Fortunately the disease is now fast dying out in Nowgong, and its origin and treatment are no longer the burning question that they were, but it will be many years before the district will have fully recovered from its ravages.

The native methods of midwifery unfortunately leave much to be desired. There are very few professional midwives amongst the Assamese and a woman in her confinement is generally attended by her relatives or friends. In difficult cases they can render little help.
and recourse is had to Heaven for assistance. An ojha or village medicine man is summoned and the first thing that he does is to have a plant called son borial pulled up by the roots, as an inspection of these roots enables him to pronounce an opinion on the prospects of the case. The patient is then required to eat a pan leaf, a betel nut, and a small worm found in the plantain tree. While she is doing this, the appropriate mantras are recited, a goat or a duck is sacrificed, and as a further precaution mantras are written out and tied round her neck and arm, or inscribed on a brass vessel which is placed where her eyes can fall upon it. In cases of false presentation attempts are made to drag the child out by anything that offers, and the abdomen is kneaded in the hope that the foetus may be expelled. In the absence of medical aid, and this aid is seldom to be obtained, the mother, in such cases, generally dies. The confinement sometimes takes place in a small hut which has been specially constructed for the purpose, and the patient's bed generally consists of an old mat laid on the floor. The unfortunate mother receives practically no assistance. If the labour is a natural one, all is well, but if complications arise, the case has usually a fatal termination, and it is probable that many lives are lost owing to a disregard of the rules of cleanliness which are of such paramount importance in these cases.

The natives are not altogether illogical in their therapeutic system, and believing, as they do, that many diseases are caused by the malignant action of some evil
spirit, they, not unreasonably, try to cure them by incantations, charms, and mantras. They have, however, simple prescriptions for some of the commoner ailments which are summarised below:

(a) For fevers essence of ginger (*zingiber officianale*) prepared from the dried rhizome by maceration and percolation with a decoction of tulsi leaves (* Ocimum Bacilicum*) flavoured with honey as an excipient.

(b) For diarrhoea. Coriander seed (*Coriandrum Sativum*) and dry ginger, one chatta of each, and half a seer of water. This is boiled down to two chattaks. Dose, one chatta twice daily for two or three days, until improvement is maintained.

(c) For dysentery a decoction of turmeric (*Curcuma Longa*) made with lime water. One chatta to be taken twice or thrice daily.

(d) For dyspepsia. A combination of camphor, cloves, catechu, aniseed and rock salt, approximately one grain of each made up into a bolus and taken once daily usually in the morning.

(e) For diseases of the urinary organs linseed tea is given as a demulcent drink, as it is supposed to be efficacious in dissolving vesical calculi.

(f) For inflammatory diseases of the ear gum asafetida (*Ferula alliacea*), coriander seed and dry ginger are prescribed. Equal parts of each of these are boiled together in a little oil and dropped into the ear when warm.
(g) For bronchitis. Essence of ginger one part, honey three parts, to be taken three or four times daily till relief is obtained.

(h) For diseases of the eye. Catarrhal and purulent ophthalmia are treated internally with a decoction of the bark of titasapa (*Michelia champaca*) flavoured with honey as an adjunct. Externally the eyes are bathed frequently in a decoction of *Tamarindus Indica*.

(i) For splenic enlargement. Internally fresh juice of papaya (*carica papaya*) on a few grains of sugar to be taken two or three times daily. Externally strips of cloth soaked in hot cow's urine are applied frequently over the region of the spleen.

(j) For cutaneous diseases, itch, ringworm, &c. Powdered sulphur made into an ointment with butter as it's basis is applied externally.

(k) For worms. The fresh juice of pine-apple leaves is regarded as an efficacious anthelmintic.

Though there can be little doubt that many lives are annually lost which could be saved by proper treatment, it is satisfactory to know that of recent years there has been a great increase in the facilities for obtaining medical aid, and in the extent to which the people avail themselves of the advantages now offered to them. The first dispensary was opened in Nowgong town in 1863, but of recent years the number has very largely been increased. From the statement below it appears that for every patient treated in 1881,
there were 55 in 1901, while the number of operations performed rose from 16 to 1,159.

<table>
<thead>
<tr>
<th>Year</th>
<th>No.</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1881</td>
<td>...</td>
<td>1,867</td>
</tr>
<tr>
<td>1891</td>
<td>...</td>
<td>34,099</td>
</tr>
<tr>
<td>1901</td>
<td>...</td>
<td>101,268</td>
</tr>
</tbody>
</table>

The principal dispensaries are those situated at Nowgong, Puranigudam, Silghat, and Dhing, each of which had a daily average attendance in 1903 of 40 or more. The diseases for which treatment is most commonly applied are malarial fevers, worms, cutaneous disorders, dysentery and diarrhoea, dyspepsia, and rheumatic affections.

A professional revenue survey of the district was made at the time when Assam was still a division of Bengal and the maps were published in 1875. They are on the scale of one mile to the inch and shew the sites of villages and the physical features of the country. A smaller map on the scale of four miles to the inch was published in 1882 and brought up to date in 1893. An area of 1,003 square miles which included the more densely populated portions of the district was cadastrally surveyed in the season of 1887 and 1890-91. The maps are on the scale of 16 inches to the mile and in addition to topographical features show the boundaries of each field. Certain areas which were omitted by the professional party were subsequently surveyed by local agency on the basis of a theodolite traverse, and the results obtained from the cadastral survey both by professional and local agency have been utilized in the revision of the one inch maps.*

* The area so surveyed up to September 30th 1900 was 1,05 square miles.