

**CAPT. LOW'S DISSERTATION.**  
FROM A CORRESPONDENT.

*A Dissertation on the Soil and Agriculture of the British Settlement of PENANG or PRINCE OF WALES ISLAND, including PROVINCE WELLESLEY—with brief references to the Settlements of SINGAPORE and MALACCA. By Captain JAMES LOW of the Madras Army, in civil charge of PROVINCE WELLESLEY &c. &c. p.p.321. Printed at the Singapore Free Press Office.*  
CONTINUED FROM OUR LAST.

We are happy to notice in the beginning of the first chapter that there has been "a considerable increase of late in agricultural activity and spirit at Penang."

"Of the climate the author says:—

"The climates of Penang and of Province Wellesley slightly differ in some respects from each other, but both are adapted to all the purposes of intertropical agriculture. Hurricanes have never visited either of these places, although strong squalls, have occasionally done considerable mischief to plantations. The evil has happily seldom extended beyond shaking fruit off the trees, prostrating a weak tree here and there, and breaking a few branches. Droughts of considerable duration occur at intervals of four or five years—and severer ones at longer periods. The planter can always provide by tanks and wells against any material loss from drought. A superabundance of rain is an inconvenience rather than a mischief, but it increases the cost of cultivation by one-third. The Island and the Province owe the exuberant vegetation which covers them to the general humidity of their climates throughout the year. Rains likewise fall more copiously at intervals; thus rain fell almost every day betwixt October 1789 and June 1790; and rain fell on 145 days betwixt May 1833 and April 1834 inclusive, on Penang plain, and 166 days on the Flag-staff Hill, and on 226 days in Province Wellesley. The Atmosphere of Penang is more loaded with aqueous vapor than that of Province Wellesley owing to the latter being removed from so close a proximity to the mountains as the former. The average temperature of Penang is about one degree higher during the day than that of the opposite coast. The dews are heaviest perhaps in Province Wellesley. The northern half of the Province is swept by the strong sea breeze during the day, and generally by a cool land wind at night. A hot wind is not known at either nor within the straits. The climate of Province Wellesley generally is believed to be more healthy than that of Penang Plain. This must be chiefly attributed to its being better ventilated. The best manifestation of the nature of the climates of both as regards the feeling is that in Penang a punkah is indispensable, in Province Wellesley its absence is not felt. The temperature in the interior on the opposite coast was observed one day in January last at 5 p. m. to be 65° of Far: Inc. 10ths.

From May 1833 to April 1834 inclusive, there fell on the Flag-staff Hill on Penang, 116. 6  
Penang Plain ..... 65. 5  
Province Wellesley ..... 79. 1 1/2  
Mean temp: of Penang Plain is about 80 1/2 d. of Fahrenheit—that of Province Wellesley 79 1/2 d."

And the soil is said to be—

"For the most part, decomposed granite. The alluvial soil, owing to the absence of large rivers, is confined almost entirely to some tracts of low-lying rice swamp. The land skirting the hills extend by gentle undulations towards the sea, excepting where interrupted by the swamps alluded to. The soil of these lands, generally considered, is of a lighter quality and is inferior in fertility to either the hill or rice lands and the deficiency must be supplied by composts. The narrow valleys which penetrate the mountains have slopes covered with a description of mould holding a middle rank betwixt these two. The soil on the hills is formed of the most recently decomposed granite, and the process of disintegration proceeds in some places, with a rapidity that would not be suspected by a person unacquainted with the nature of

that rock under certain circumstances. But as it is of unequal composition the soil partakes also of the irregularity. Where quartz prevails, as a component part of the granite, a sandy gritty soil must be expected; where felspar is superabundant a rich white clay will be produced, and where mica is in excess the resulting soil will be tinged of a red or dark brown colour, owing to the iron contained in that substance becoming oxidised. The granite which, on disintegration, yields the best soil, will therefore be that in which mica and felspar predominate."

"Province Wellesley is by no means uniform in quality. The coast line exhibits a narrow sandy belt of low land to the northward and eastward, while to the southward the arable or habitable tracts are hemmed in, excepting in a few high points, by a broad mud flat covered with mangrove trees and which is flooded at high water. Beyond the sandy belt and mangrove are extensive alluvial tracts under rice cultivation, alternating with ridges of light soil running parallel to the coast. These ridges in the centre of the Province and towards the frontier give place to irregularly shaped dry alluvial plains stretching north and south. A few hills of moderate elevation are scattered throughout the district. The soil of the alluvial plains and rice grounds is superior in fertility to lands of the same classes on Penang. That of the hills is much the same in both. Extensive roads have been and are now being made to facilitate intercourse, and three large rivers, besides numerous creeks, afford ready access to many parts of the country. The materials for building are obtained either in the Province or from the country immediately beyond, and all ordinary supplies, such as cattle, poultry and butter &c. &c. are abundant, and indeed Penang, is now chiefly provided with these supplies from this Province."

"The advantages of cultivating the hills" at Penang "consist in the general good quality of their soil—in the constant supply of moisture in the shape of rain and mist or clouds, and in elevation above the heated and drying air of the valley."

And  
"The disadvantages are the deterioration—unless pains be taken by encouraging the growth of binding grasses—of the soil by the rain washing or filtering away; the impracticability of effectually using the plough and the inconvenience of distance and consequent enhancement in the pay of labourers and cost of conveying produce to town. Some of the swampy land, before alluded to, might be rendered available to the planter by deep draining, trenching and raising; but very partial attempts only have been made to attain these purposes, for agriculturists have rarely deviated from old and half obsolete customs. The richest soil, could it be recovered from the sea, is that in which the mangrove grows—being composed of the finest alluvions of the continental rivers and the hill streams of Penang, which are carried by the currents and deposited along the coasts. The process of recovery is now slowly going along the coast of Province Wellesley, by the recession of the sea, or rather by the depositions alluded to."

Of labor it is said:

"If good wages be indicative of the prosperity of a community, then Penang and its dependency must be flourishing. Should this position be questioned in a superlative sense, still the fact that such wages are paid, may be considered as proving the absence of distress; and it is, in a philanthropic point of view, satisfactory to think, that although the fixed native population of the Island now exceeds 46,000 and that of Province Wellesley is upward of 47,000 souls, the rate of wages has not been so materially affected as to degrade the labouring class, while it has been reduced in a degree sufficient to give a stimulus to cultivation and encouragement to settlers. The fact is that the bulk of the non-commercial native population is composed of independent land-owners and that those who are not proprietors, are either farmers of land, or persons engaged in various occupations which, unless in times of scarcity, supply all their wants. But such is the character of the Malay that, with occasional exceptions, he will, rather than take a spade in hand for hire, content himself with a bare subsistence not exceeding half of the sum he might gain by labor in the plantation of a planter. These remarks apply perhaps more strongly to the Province than to Penang, because rice is there more abundant and a livelihood may be obtained in various ways not requiring constant application. The same disinclination to exertion not imperiously called for by necessity prevents the native land-owners, not being Chinese, embarking to a useful extent in any sort of cultivation requiring considerable capital; and it is observable that the most unenterprising part of the community consists of those native proprietors who pay but a nominal quit-rent and can afford to live in frugal indolence, which, with their simple habits, is luxury to them; so reverting to the old adage—necessity—which, in these days, originates in artificial wants and refinements as well as in natural impulses—is the parent of invention, or in other words, prosperity in its fullest sense."

And in illustration of the above, the author states that—

"In 1828, I imported silk-worms from Calcutta, and offered them gratis to the natives, but not one was accepted, although the mulberry thrives there, requiring only a very small degree of care to be bestowed on it. The same had nearly attended my offer of seed coffee, and other plants and grains; some of the Malays have, however, cultivated the foreign tobacco-seeds obtained from Calcutta."

The Chinese he considers the only native class who are really deserving of the name of spirited cultivators, and they feel no inclination to raise produce which will not yield a speedy return such; as Pepper, Sugar, Gambier, Cutch, Indigo, &c. or to adopt European improvement. This class of laborers can scarcely be had for less than nine Sicca Rs per month. But Chuliahs, whose comparative strength may be considered equivalent to 5 Chuliahs to 3 Chinese, are paid about six Rs. monthly: Malay laborers, the author considers about the same as the natives of the Madras side of India, the Chuliahs; but he thinks them preferable where very systematic work is to be done. Laborers are generally engaged by the month, but paid commonly according to the number of days only in which work is done.

In Singapore, the number of laborers from India is small in comparison to the Chinese, but that marked difference, in favor of the latter, is not observed, and they obtain the same rate of wages, which is eight days work for one Spanish dollar, or four dollars per month; in both cases the laborers providing themselves with food &c. &c. There is also another apparent difference in the Chinese population of this Island, which is, that they evince no backwardness in making plantations of commodities, the growth and production of which require a length of time, such as Sugar-canes (sold here exclusively for mastication). Pepper and Gambier, both of which latter are favorite plants and grown in small plantations, amidst the jungle, to a very considerable extent.

Coffee is said to be making some progress among them likewise.

Penang seems possessed of a privilege not enjoyed by this Settlement, and we believe, Malacca also, in having land granted out by Government to cultivators, on reasonable terms. Formerly this benefit extended to Malacca and Singapore, but on account of the little encouragement which the last land regulations held out to persons wishing to become planters, if they are still in force, they remain a dead letter. The author states that at Penang (and we suppose Province Wellesley is also included)—

"Dry waste land for plantations may be obtained from the Government on leases of 20 years endurance, at a quit-rent varying according to its locality, but not on the average exceeding 2 Rs an acre, from 2 to 5 years being allowed rent free, and the rent gradually increasing to the maximum; and persons desirous of growing spices or other valuable products may, it is believed, on application to the Government, have the term extended."

The regulations alluded to above, stipulated first, that the party intending to locate himself should, after clearing the land, obtain a lease for fifteen years at a yearly rent of one Spanish dollar per acre: at the expiration of which, it is to be exchanged for another of fifteen years, but at three dollars per acre—then for another one for the same period at not exceeding six dollars; and finally for a fourth one not exceeding ten dollars, which was the maximum ground rent, per annum. As we have already said these high exactions were so little calculated to call forth enterprising persons to locate themselves here, that from the time of their enactment to the present day, they have remained inoperative. With regard to this Island, which was then much more so than even at present, a mass of forest and swamp, and at a time too when the finer kinds of Spices were more exclusively the subject of attention than other tropical commodities, such regulations argued a great want of wisdom: for it must have been apparent that common prudence would deter persons from engaging in the business of planting nutmegs and cloves which do not become productive until ten years after planting, knowing that meanwhile, they must be paying an annual rent of one dollar per acre to the Government, in addition to the expense already incurred in reclaiming the land and that daily called for in the prosecution of the work. The consequence of these regulations was that no applications were made for leases, and as has already been said, this Island remains without other cultivation than a few patches of Gambier and Pepper.