Report on the Little Cocos

quinine for ninety days. A single P. vivax, not too well stained, is little to go on, and laboratory report was not available till later.

Urobilin is excreted in quantity after any large destruction of red corpuscles, and they are most rapidly destroyed in malarial attacks. Urobilin is most conveniently recognized by the direct vision spectroscope and the amount roughly estimated by the depth from the top of the conical glass that shows the absorption spectrum. I prefer to add five cubic centimetres of amyl alcohol to ten cubic centimetres of urine acidified with HCl, shake well and allow to settle, when the resulting colour of the alcohol suggests the amount of urobilin present, as does the colour of the chloroform in testing for indican.

I would like to mention here a test for bile pigment in urine which I find very delicate and convenient. It is that of M. Albert Rolland (Arch. de Méd. Militaire, April, 1921, p. 415), iodine 1, potassium iodide 1, water 50, spiritus rect. 150.

It floats above the urine, gives a sharp interface, and a green line between if bile pigment is present.

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Echoes from the Past.

REPORT ON THE LITTLE COCOS.

By Colonel A. Lang Browne.

Army Medical Service (R.P.).

On February 19, 1882, the party organized and headed by Major (afterwards General) Protheroe, C.S.I., Officiating Chief Commissioner Andaman and Nicobars, after their inspection of Saddle Peak, North Andaman, proceeded to and landed on the island of the Little Cocos: The object of the visit to the island being to ascertain if it would be a suitable place to send a party of convicts to gather the nuts during the dry season. The matter contained in this report was gathered during a short stay of a few hours only at the island and is therefore of necessity more or less limited in regard to minute details.

General Description.—The island of the Little Cocos lies twenty-eight miles to the north-east of the Andamans group in longitude 93° 13' east and latitude 14° north and at a distance of ten miles in a south-westely direction from the island of Great Cocos.

The island is about 3½ miles long and from ½ to ¾ of a mile broad and 7½ miles in circumference. It is rather flat, but running through its centre from north to south there are two ridges of low hills from eighty to 160 feet in height, and along the east coast small hills also crop up here and there close to the sea beach, particularly towards the north-east where they run together and form a low rocky cliff overlooking the sea for some 300 or more yards. The sea beach with the exception of 800 yards on the east coast (where heavy stone boulders and gravel
exist) is composed of beautifully white sand mixed with brilliantly coloured shells and coral debris, which has by the constant action of the flow and ebb of the tide been washed or silted up to the edge of the original coral reef until it now forms a sandy bund of from 4 to 6 feet high and 50 to 100 feet broad all round the entire island. At both the north and south extremities of the island, rocks and extensive coral reefs run out into the sea for some 400 or more yards; the south reef is the larger, and extends out for a very much greater distance. Immediately beyond its most southern edge the water is very deep and so clear that the white sand at the bottom can be easily seen and also the fishes, crabs, etc., moving about. At this point at a great depth the wreck of a three-masted ship with sails set, lies on its side at the bottom. It must have lain where it is for many years, as no account of a ship having been wrecked on this reef is obtainable. Being at so great a depth it down it appears to have escaped damage by storm, or by the ebb and flow of the sea, but possibly it is covered with barnacles.

**Anchorage.**—According to the season of the year good and sheltered anchorage for even large ships can be obtained to the lee of the island either on the east or west coast.

Between the sandy bund which forms the beach, and the high land towards the centre of the island the ground for a varying breadth of from 100 to 300 yards is flat and only slightly above sea level. This flat land no doubt has for its foundation the original coral reef, which in ages past first grew up and surrounded the high land which now forms the centre of the island. The soil is composed of sand and coral debris mixed with earth and decayed vegetable matter washed down from the hills. During the dry season of the year this flat land is hard and firm, except at the south end of the island where it is more or less swampy owing to the rain water from the hills collecting at this point and forming a shallow lake, but in the rainy season of the year it must be all mostly under water, as the sandy bund forming the beach prevents to a great extent the free escape into the sea of the rain water from the hills, which therefore collects, and forms a temporary muddy swamp during this period.

The high land which rises from the inner edge of the flat ground above described consists for the most part of two ranges of low hills running north and south and varying in height from eighty to 160 feet. The soil covering these hills appears to be composed of decomposed lava, yellowish clay and black vegetable mould. Many small dry watercourses run down from and intersect the hill sides, and empty their contents during the rains on to the flat ground above alluded to.

**Vegetation.**—Coco-nut trees grow all along the sea beach and over the flat land and form a thick belt which surrounds the island to the depth of 100 to 250 yards. The remainder of the island is covered by light scrub jungle with coco-nut, sago palms and other large trees of many varieties interspersed through it. On the eastern coast there are some magnificent
trees, and the vegetation on this side is most luxuriant. A few mangrove trees grow in the swampy ground at the southern extremity of the island.

Natural History.—The wild pig and iguana are plentiful. Pigeons of many varieties, teal and small birds abound.

Population.—There are no people living constantly in the Little Cocos, but Burmese visit the island regularly every year to gather coco-nuts.

Water.—With the exception of the swampy lake at the south end of the island no water was found, but on the north-west coast there are the remains of an old well supposed to have been sunk by some nut gatherer. It is however at present almost choked up and nearly dry. Were proper wells sunk, no doubt, an abundance of good water would be found. A large and good supply of water might also be collected by leading into a tank a few of the many streams running down from the hills during the rainy season, and so store a sufficient supply to last throughout the dry season.

Climate.—Owing to its position the Little Cocos is exposed to the full force of both the south-west and north-east monsoon, and therefore during one part of the year (i.e., when the south-west monsoon is blowing) the climate must be very damp, muggy, and more or less unhealthy. While on the other hand the climate should be cool, bracing and healthy throughout the north-east monsoon, more so towards the middle and end of the monsoon, when the swampy and damp places will have become dried up and so to a great extent non-malarious. The healthiest season of the year might therefore be said to be the period comprised between December 15 and March 31, when the island is comparatively dry and free of stagnant water.

Temperature.—The maximum and minimum temperatures taken on February 15 and 16 respectively were: maximum, 85° and 82°; minimum, 81° and 79°.

Conclusion.—As regards the Little Cocos being used as a convict station during the nutting season, that is from December 1 to March 31, there is no apparent reason why its climate should prove unhealthy were the following recommendations carried out, viz., (1) a good wooden barracks raised on piles and built on one of the hills situated towards the north-east end of the island; (2) wells sunk so as to give a sufficient supply of good water; (3) a good ration containing a large amount of vegetable matter with salt, etc.; (4) clothing made suitable to the climate which is much cooler than that of the Andamans generally.

About the time the above report was written in February, 1882, a German naturalist visited Port Blair with the object, he said, of searching for a particular orchid which he considered might be found growing in the jungles of the Andaman or Cocos Islands. He spent several days exploring these jungles, and, no doubt, in his supposed searchings for this unknown specimen of the orchid family came across the two fine land-locked harbours of Port Cornwallis and Stewart's Sound at the base
of Saddle Peak in the North Andamans, and, of course, must have noticed how the entrance to each of these fine harbours is so screened by the formation of the land and the high tree jungle that, looking from the sea it is, until getting quite close in, impossible to see any opening, and how even a very large vessel once inside the harbour would be so hidden that a ship passing close along the coast would never detect her. No better base could there be for a pirate vessel to lie low in and steal out of, to attack merchant and trading vessels on their way through the Indian Ocean than either of these harbours. Now, may not the German mystery ship, the "Little Emiden," have used these harbours when making her attacks on the Madras, Burmah, and Penang coasts during the late war, and was she not chased by H.M.S. "Sydney," and wrecked on North Keeling or Cocos Island? And may not the very simple-minded naturalist have found in these harbours what he was really in search of? Possibly he may have found the wonderful and unknown orchid, too, but I never heard that he did.

Reviews.


The aim of this book is "to present in a concise and readily accessible form the information now available concerning epidemiology and the management of the communicable diseases, ashore and afloat."

The first chapters are devoted to a discussion of the causes, methods of spread, and prophylaxis of communicable diseases in general. Then follow chapters dealing with the application of these general principles to special conditions, military, naval, municipal, rural, school, prison, industrial, arctic and tropical communities, being separately considered. A novel chapter in this part of the volume is one dealing with "Sanitary Measures following Great Disasters."

In Part II each disease is considered separately, the diseases being grouped according to their method of spread.

The general arrangement is logical and well thought out, paper and printing are good, and effective paragraphing with bold type headings facilitates reference. It is therefore the more disappointing to find important matters dismissed with inadequate discussion. For example, bacterial food poisoning is dealt with in three-quarters of a page, although two pages are devoted to the less important subject of botulism, while important communicable diseases (e.g. encephalitis lethargica and schistosomiasis) are omitted altogether.

Several of the statements in the text are open to obvious criticism. Thus the author states (p. 753): "Cases of chicken-pox should be reported, if for no other reason than that it is frequently mistaken for smallpox." Surely the converse possibility, mistaking a sporadic case of smallpox for one of chicken-pox, constitutes the real danger. And in these days when "vitamine" is a household word, it is surprising to read (p. 13) that a diet deficient in potassium salts causes scurvy.

Upon the whole, the volume falls short of success as a satisfactory exposition of its subject.

J. A. A.