

THE ANDAMANS AND NICOBARS.¹

ALTHOUGH much valuable information regarding the two most interesting groups of islands in the Bay of Bengal, known from very early times as the Andamans and Nicobars, has been published in Indian official reports and in scientific papers by officials of the islands, or by visitors to them, there is, so far as we know, no general connected monograph of them. The present volume will be welcomed, therefore, as containing an account of a three months' cruise among them, undertaken, in 1901, by the author's companion and host, Dr. W. L. Abbott, owner of the American schooner yacht *Terrapin*, of Singapore, to obtain collections of natural history, especially small mammals and ethnological objects, for the National Museum, Washington, U.S.A. It is well illustrated with photographs by the author, two maps and a hydrographical chart. We note that many of the ethnological portraits have been taken in full sunshine, and are disfigured by heavy, black shadows. Better results would have been obtained by photographing the subjects in the shade against a dark background, giving full exposure.

The first part of the book is devoted to the narrative of the cruise, and contains many interesting notes and observations upon the different islands visited, their inhabitants, fauna, flora, and physical characteristics. It opens with hints about the equipment and provisioning of a yacht for cruising in Indian seas, also regarding the guns and ammunition most suitable for a collecting naturalist. Crossing from Mergui early in January, the party first touched at Barren Island, a volcano which appears to be steadily cooling down, and passing through the Quangtung Strait, visited the convict settlement at Port Blair. Then touching at the South Andaman and the Cinques, they went to the north part of the Little Andaman, inhabited by the Öngés, who received them well. Here they found large thatched huts, very different from the palm-leaf shelters used by the natives of the northern isles.

Leaving the Andamans, they went south to the village of Mūs, in Sawi Bay, on Kar Nicobar. They were immediately struck by the entire change in place and people, from the dense forests of the Andamans to open grass land and groves of coco-palm,

and from a little black-skinned, grizzly-haired Negrito race in an exceedingly low plane of existence and of little intellectual capacity, though well made and by no means repulsive in appearance, to a brown-complexioned, lank-haired, muscular people of Malay race, of fair height, intelligent and good linguists, almost semicivilised, living in well-built dwellings, cultivating food products, and possessing domesticated animals. The author gives a very interesting description of the village of Mūs, and of some peculiar institutions found



FIG. 1.—Huts of the Shom Pen. (From "In the Andamans and Nicobars.")

there; the public halls for meetings and feasts, the maternity huts and huts for the dying on the outskirts. They then went to Tiliangchong, a forest-clad, uninhabited island where good collections of birds were made, and on to Trinkat. A week was spent in the beautiful harbour of Nankauri between the Islands of Camorta and Nankauri. A good account is given of the village of Malacca, or Nankauri, and of the customs of the inhabitants, which differ from the Kar Nicobarese. Of the convict settlement at Camorta, on the north side of the harbour, little now remains beyond

¹ "In the Andamans and Nicobars." The Narrative of a Cruise in the schooner *Terrapin*, with Notices of the Islands, their Fauna, Ethnology, &c. By C. Boden Kloss. Pp. xvi+373. (London: John Murray, 1903.) Price 21s. net.

two graves, one being that of the unfortunate De Rœpstorff, killed in 1883, whose memory is still cherished by the natives, and will not readily be forgotten by the members of the Eclipse expedition of 1875, for whom he did so much. He was one of the first to make a scientific study of these islands.

Leaving the harbour by the western exit, the party visited Dring, on Camorta, and thence passing by Bompoka, Teressa and Chaura, where all the Nicobar pottery is made, they anchored off Kachal, where they first found monkeys, and then crossed the Sombrero Channel to the island of Little Nicobar, east of Pulo Milo, where they found good anchorage. The author suggests this as a site for any future European settlement on account of the harbour, the fertility of the soil, and the presence of water. Here monkeys abounded, and in some caves they found a new leaf-nosed bat and the birds-nest swift living together, but never occupying the caves at the same time. After a halt at Kondul, they went to the north side of the Great Nicobar and spent nearly a month visiting villages on the west coast, ending with an excursion up the beautiful valley of the Galatea River. In this island they found some fairly civilised members of the Shom Pen tribe, who live in the interior, and many photographs of them are given. Fig. 1 shows one of their huts with a diagonal bracing to the props. The party left Singapore early in April.

In the second part, which is largely a compilation, the author discusses the two groups of islands more fully, as regards their history, geological formation, climate, products, languages, ethnographical characteristics and origin of the different races of inhabitants. Several illustrations are given of the ornaments, weapons, &c., used in both groups, and of the curious carved wooden images and painted screens used as charms or scare-devils by the Nicobarese. Dampier's narrative of his experiences in the Great Nicobar, in 1688, is reprinted, also an extract from an old account of Kar Nicobar by Dr. J. G. Koenig, a pupil of Linnæus. There is an account of the Kar Nicobarese from information given by Mr. V. Solomon, a Christian catechist who has lived among them for many years.

At p. 320, the author has given a summary of his conclusions regarding the origin and variation of the fauna of these islands, based on the theory that the two groups are surrounded by deep sea, except on the north, towards Arakan, and that consequently they have never been connected with the Malay peninsula or Sumatra, and could not have derived their fauna from them. On his hydrographic chart, at p. 166, he shows a wide deep sea channel of more than 1000 fathoms running in from the west between Great Nicobar and Sumatra into the deep Andaman Sea. The depth of this channel has usually been put at about 760 fathoms, but in the latest chart of this part of the Indian Ocean there seems to be no such deep-sea passage between the islands, but a distinct shallowing with a ridge, over which the depth of water does not exceed 950 fathoms in the deepest part about midway between them. The author also estimates the depth of the Ten-Degree Channel at 600 fathoms, but the chart shows a ridge between Little Andaman and Kar Nicobar at a depth of not more than 450 fathoms. The fact that these channels and other ocean depths are so much shallower than the author has been led to believe may modify his conclusions. The question of the geological, zoological and botanical relationships of these islands is a very difficult one, and has engaged the attention of officers of the Indian scientific services for many years past. A great deal has been published on the subject in the official records of the Indian Museum, Marine

and Geological Surveys, and the *Journal* of the Asiatic Society of Bengal, which the author seems to have overlooked, and a notice of which would have greatly enhanced the value of the book.

To zoologists, the fact that sixteen new species of mammals and ten hitherto undescribed species of birds from the two groups of islands were collected by Dr. Abbott and the author will be of interest. The former have been fully described by Mr. G. A. Miller, jun. (*Proc. Nat. Museum, Washington, U.S.A.*, xxiv., 1902), but, considering that they include some well known forms, and that the islands have been constantly visited by experienced collectors from India for many years past, their all being new is doubtful. The same may be said of the new birds, a list of which is given by the author at p. 331.

Lists of the mammalian fauna, and of the birds of both groups, including the new species, are given with notes on their distribution. The work concludes with appendices relative to the climate, forest trees and timbers, population, education, &c., of the Andamans, also to the flora, population, trade articles, presents and barter, besides tables of measurements of members of different tribes of Nicobarese.

The author has had the great advantage of the assistance of Mr. E. H. Man, who is the greatest living authority on the islands, and the book is a very useful work of reference regarding them.

J. W.

PULKOVA OBSERVATIONS OF NOVA PERSEI.

THE Pulkova Observatory has recently issued¹ a valuable contribution to our knowledge of Nova Persei, which attracted so much attention at the beginning of the year 1901. The observations which are here brought together and discussed were those made by M. Belopolsky, and were, for the main part, chiefly of a spectroscopic nature, both photographic and visual.

Fortunately, the high latitude of the observatory allowed this observer to photograph the spectrum of the star during its lower culmination, so that he was able to secure a complete series of 71 photographs, extending from February 26 to June 4; after this date, long exposures became impossible, and eye observations were substituted. In the first instance, the spectroscope employed was mounted on the astrographic refractor, but later (March 31) the 30-inch was substituted. In the present volume, M. Belopolsky gives a very complete account of each photograph, adding the reduced wave-lengths after the computation by the Cornu-Hartmann formula.

It will be remembered that the spectrum of this star underwent rapid changes, not only in intensity, but in the number and positions of the lines. The numerous bright lines with their dark components gradually became less in number, and when the Nova's magnitude began to undergo the short period light changes, the spectrum indicated a stellar and nebulous stage alternately; eventually, as the Nova grew fainter, the nebular spectrum predominated. All these changes are described in detail by M. Belopolsky, and he further gives the measurements of the width, intensity and displacement of the hydrogen and other lines at different epochs of the Nova's life.

In the discussion of the whole set of observations, this observer comes to conclusions which are different from those that are at present generally held. Thus, for instance, he is not inclined to believe that the displacements are due to movements of the Nova according to the Doppler-Fizeau principle. One of his reasons

¹ Publications de l'Observatoire Central Nicolas, vol. xvii. séries ii., 1902.