

The Flora of an Indian Island.¹

AS a preliminary to the faunistic study of Barkuda, one of several islands in the Chilka Lake, Dr. N. Annandale has investigated its climate, physical structure, palæontology, and vegetation. The lake is a maritime one in the extreme north-east of Ganjam, and is connected with the Bay of Bengal. The island, some three hundred acres in extent, though isolated for terrestrial animals, is within the range of insects of feeble flight and that of dispersal for many seeds. The climate is that of the coasts of the Circars to the south and Orissa to the north. The physical structure is simple and the geological formation uniform; the rocks are the quartz schists of the Ganjam Malias. The changes in the shore water-level, though of faunistic importance, scarcely affect the vegetation. The rocks contain no fossils, but sub-fossil molluscan shells abound in the soil of the island and the sand of its shores. These shells indicate that the island, as such, is recent; the age of the rocks has no bearing on its existing biological features.

Though the vegetation is restricted, several types occupy different areas. Much of the surface has been colonised primarily by species of *Ficus*, mainly *F. bengalensis*, with an undergrowth of *Glycosmis* and a partial thatch of woody climbers. This is gradually replaced by other species of *Ficus* accompanied by trees like *Melia Azadirachta* and *Strychnos Nux-Vomica*, while the undergrowth is reinforced by *Capparis* and *Zizyphus*. The foreshore vegetation is scanty. Where the coast is rocky the species present, though fewer than on sandy or gravelly sections, are arboreal and therefore more conspicuous. Behind the foreshore comes a *Pongamia* belt, broken in places by intruding *Cratæva* and *Melia*. Within this zone, besides surviving *Ficus* groves with *Glycosmis* undergrowth, are areas where the latter is replaced by *Weihea ceylanica*, the former by *Cratæva*, *Odina*, and *Albizzia*. Stony areas, have a scanty plant-covering; the rock-flora of the interior includes masses of two arboreal *Euphorbias*, *E.*

antiquorum and *E. neriifolia*. The commonest tree on the island is *Melia Azadirachta*; perhaps the most abundant herb indigenous there is *Oldenlandia Heynei*.

Dr. Annandale's ecological sketch is supplemented by a plant-list prepared from his specimens by two members of the Botanical Survey staff. This important adjunct to the paper is somewhat marred by typographical errors, and shows want of uniformity in citation. Messrs. Narayanaswami and Carter have not supplied an analysis of the vegetation from the point of view of plant-distribution to correspond with Dr. Annandale's discussion of the subject from the point of view of plant-association. Their carefully prepared list provides all the material required for the purpose, but they have made it more troublesome for those desiring to ascertain the facts by adopting a taxonomic system which, whatever its academic merits, has the inconvenience of differing from that used in the "Flora of British India."

The affinities of the Barkuda flora are South Indian. The list enumerates 139 plant-forms, of which two may be new while five remain undetermined. The remaining 132 include twenty-one, nearly 16 per cent., not reported from Orissa north of the lake, and seventeen, nearly 13 per cent., never found north of the Dekhan. One species, *Riccia crispatula*, has hitherto only been known from Ceylon; two, *Selaginella tenera* and *Weihea ceylanica*, have only been reported from Ceylon and from India south of the Dekhan. Thirty-five, more than 32 per cent., of the Barkuda species reported from North-eastern India, are themselves indicative of South Indian affinity. Seven are littoral plants that are North-eastern Indian only, because they occur on the Orissa coast and in the Sundribuns. The remaining twenty-eight include ten reported only from Orissa, which is a northward continuation of the Circars, and eleven reported only from Chutia Nagpur, which forms a north-eastern extension of the Dekhan, while the remaining seven have been met with both in Orissa and Chutia Nagpur but not in the Gangetic Plain.

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The Sed Festival of Ancient Egypt.

AT a meeting of the Royal Anthropological Institute held on February 20, Mr. P. E. Newberry presented a paper on "The Sed Festival of Ancient Egypt." This was perhaps the most ancient of all the many Egyptian festivals: it was certainly the most important. There are representations of it on monuments from the beginning of the 1st Dynasty down to Ptolemaic times.

Various interpretations of the festival have been given, but none of them are entirely satisfactory. According to the Greek version of the Rosetta Stone, it was a festival marking a period of 30 years, but there are records of it being celebrated in the 2nd, 15th, 22nd, and 25th years of different kings' reigns. It appears to have been a repetition of the festivals of a coronation and its celebration seems to have procured for the king a new lease of life. It certainly had something to do with the king's assumption of responsibility for the protection of Egypt. It should be especially noted that the king's daughters take a prominent part in the festival. On the mace head of Narmer-Menes is the earliest representation of it: here there is a princess seated in a palanquin and behind her are three men in the act of running:

this scene is also found in the Sed festivals of Neuser (Vth Dyn.), of Amenhotep III. (XVIIIth Dyn.), and of Osorkon (XXIInd Dyn.), although in the later examples young princesses standing replace the figure in the palanquin. This ceremony is probably the most primitive one of the Sed festival and represents, Mr. Newberry believes, a *race*, and a race for no less a prize than the Kingdom. Frazer in his "Lectures on the Early History of Kingship" (p. 260 sq.) notes that something, apparently the right to the hand of the princess and to the throne, has been determined by a race, and he quotes instances from classical and other sources. "Such a custom," he says, "appears to have prevailed among various peoples, though in practice it has degenerated into a mere form or pretence."

Although it is often assumed that the kingship was hereditary, in the male line—that the son regularly succeeded his father on the throne—it is certain that in Egypt the king claimed his right to the kingship, not because he was the son of his predecessor on the throne; but because he married the hereditary princess who might be the widow or daughter of his predecessor. It is obvious, there-