

V. VEGETATION AND FLORA

A. A brief history of botanical observations and collections made in the Maldivé Islands, Indian Ocean

by E. W. Groves */

Although the earliest known account of the Maldives is that given by the Moorish traveller, Ibn Batutah (1329, 1353-59) who was in the islands in 1343-44 and briefly mentioned pomegranates (*Punica granatum* L.) in cultivation there, it was not until nearly 300 years later that the first description of any of the vegetation was made. This was recorded by a Frenchman, Pyrard de Laval, who whilst travelling to the East Indies in the barque "Corbin", was shipwrecked on one of the northern islands of the group during July 1602. He stayed on in the Maldives from 1602 to 1607 and it was during this period that he made notes for an account of the islands which he subsequently published on his return to France (Pyrard, 1679). His references to the vegetation were, however, confined to describing plants that he had noticed either in cultivation or being put to some domestic use.

The first collection of plants, albeit somewhat fragmentary and few in number, was made by H.C.P. Bell, a Ceylon Civil Servant, during the first of his visits to Malé (the capital of the Maldives) in 1879. The few specimens he brought back from this trip were examined by W. Ferguson of Colombo. Bell incorporated Ferguson's determinations along with other of his observations on plants seen in cultivation (amounting to 39 species in all) in his excellent account of the Maldivé Islands and its people which was published by the Ceylon Government a few years later (Bell, 1883).

Capt. A. C. Christopher, serving in a British Naval warship, visited Malé in 1888 making a collection of flowering plants (both wild and cultivated) amounting to 73 species of which 44 were new to Bell's previous list. A few more additions were discovered later by a Mr. Haly, at that time Director of the Colombo Museum, visiting the same island in 1893. Both collections were reported upon by Henry Trimen (1896). In 1896, Mohammed Ibrahim Didi, then Prime Minister to the Sultan of the Maldives, despatched to the Peradeniya Gardens herbarium a collection he had made of some 174 numbers including many cultivated species. These he had collected probably all from Malé or Funadu islets, both on Malé atoll and included 100 species new to the Maldivé list. Three further brief visits to the same atoll were made during the next few

*/

Dept. of Botany, British Museum (Natural History), London

years: the first by J. J. Thorburn in Aug. 1901 when he made notes of some of the economic plants under cultivation there; the second by Capt. Simons of the British warship "Pomone" who recorded another three new species; and the third by F. Lewis of the Ceylon Forestry Dept. who visited Malé and two adjacent islands in Oct. 1901 and was able to add yet a further seven records. All these additions were taken into account in the Willis and Gardiner paper mentioned below.

The first widely gathered botanical collection was not made in the Maldives until the visit of the J. Stanley Gardiner expedition^{*} to Minikoi and the Maldives during 1899-1900. In the course of this expedition, the primary purpose of which was to study the reef formations and their associated fauna and flora, collections were made on 19 atolls from Thavandifulu in the north to Addu in the south. About 212 different species including flowering plants and ferns were collected and presented to the herbarium at Peradeniya Gardens, Ceylon. The marine algae that were collected were brought back to England and presented to the herbarium at Cambridge University. They were determined and published upon as follows: the calcareous algae 9 species belonging to 4 genera were dealt with by M. Foslie (1903) and the remainder which included 4 species from Suvadivan waters and 2 species from Addu Atoll were written up by Miss E. Barton (1903). The vascular plants were determined in Ceylon by W. de Alvis and J. C. Willis and were written up, along with those smaller collections mentioned above, in an excellent account by the latter in conjunction with J. Stanley Gardiner (Willis & Gardiner, 1901). Thus by the end of 1909 the vascular flora list for the islands had risen to 284 species.

Although a few visits were made to the islands between the two World wars the only known reference to any plants is that given by T.W. Hockley in his book (1935) which gives an account of his trip, to Male in particular, in 1926. He mentions some of the species grown or used economically but all of these had already been mentioned by earlier authors. During World War II the present author (E. W. Groves) was stationed at Addu Atoll from 1943 to 1945 during which time he made a small collection of flowering plants and some notes of some of the species seen growing on Gan and a few on Fedu and Hittadu. Owing to insect ravage two specimens only survived to be determined but these together with those identifiable from his notes amounted to 18 species of which ³ species were new Maldivian records. These were Canavalia cathartica,^{**} Commelina suffruticosa and Cyanotis axillaris, all from Gan island.

^{*}/ J. S. Gardiner was a Fellow of Cambridge University and his expedition, consisting of himself as leader, with L. A. Borradaile from June-July 1899 and C. Forster Cooper from Oct. 1899-April 1900, was under patronage from the Royal Society and the British Association.

^{**}/ Seeds of Canavalia cathartica were brought back to England in 1945 and taken to the Chelsea Physic Garden, London. These were germinated in 1946 under tropic heat and by that midsummer two vines at least were trailing along beams of the glass house for about 15 ft. Unfortunately a countrywide fuel shortage the following winter prevented the stoves being maintained at the necessary temperature and the Canavalia, along with many other plants that were in the tropic house at the time, perished.

In April 1956 F. R. Fosberg paid a short visit to Malé atoll and whilst there made a good collection of flowering plants both on Malé island itself and on two adjacent islands (Kudos Bados and Furannafuri). In addition notes were made of species identified in the field but not actually collected, especially of plants in cultivation in gardens on Malé. A later assessment of specimens both collected and identified on sight indicated a further 44 species not already known from the Maldives. These were listed together with a detailed ecological account of the islands visited in a paper published by Fosberg (1957). W. W. A. Phillips who was in the Maldives first at Malé, Nov. 1956-Feb. 1957, and then on Gan island, Addu Atoll, May 1958-April 1959, made a small collection during his first stay which he sent for identification to A.S.A. Packeer (Asst. Warden, Dept. of Wild Life) in Colombo. The list of 12 species was included in Fosberg's paper just mentioned.

During Sept. and Oct. 1957 the Yale University Seychelles expedition en route there from Colombo visited North Malé, Fadiffolu, South Mahlosmadulu and Addu atolls. At a prior request W. D. Hartman, one of the zoologists on the expedition, collected as many different Pandanus spp. as he encountered and as a result a small but excellent collection was brought back to the Arnold Arboretum herbarium for Dr. H. St. John to study. After evaluation 4 species new to science and to the Maldivian list were described (St. John, 1961).

As far as known, the next and most recent collections made in the Maldives are those of the 1964 expedition, reported upon below in parts C and D.