

Botany. — *On the Ferns of Sumba (Lesser Sunda Islands).* By O. POSTHUMUS. (Communicated by Prof. J. C. SCHOUTE.)

(Communicated at the meeting of October 25, 1930).

In the following list the Ferns gathered by the native collector IBOET of the Herbarium Buitenzorg, during the voyage of Dr. K. W. DAMMERMAN to this island (14 March 1925 to 26 May 1925) are enumerated; the material belongs to the Buitenzorg Herbarium.

The details about the localities are taken from the labels; the altitude is added, wherever it could be derived from the maps of the island; its correctness is of course approximative because the collecting work was done in the rather hilly surroundings of the indicated villages.

Remarks about the general aspect of the vegetation can be found in the report of Dr. DAMMERMAN on his voyage¹⁾ and in the report, made by H. WITKAMP²⁾ on his geological investigations of the island.

Botanical collections were made here formerly only by J. E. TEYSMANN³⁾. The Ferns, collected on this occasion were mentioned by BAKER in the book of BECCARI on "Malesia"; an additional specimen, not recorded by BAKER, was mentioned by VAN ALDERWERELT VAN ROSENBURGH in his Handbook. Moreover I could study in the Buitenzorg Herbarium some other Ferns collected in the island by TEYSMANN and not mentioned in "Malesia". The nomenclature and arrangement used is after C. CHRISTENSEN, Index Filicum, where further details may be found, except in some cases, where the quotations have been given wholly.

POLYPODIACEAE.

Dryopteris Haenkeana (Presl) O. Kuntze. *Nephrodium Haenkeanum* Presl ex Baker in Beccari, *Malesia*, III, p. 57, 1886. On the banks of a river. Karita, Teysmann 10695 (l.c.); Karoeni, 100 M, Iboet

¹⁾ Natuurk. Tijdschr. Ned.-Indië, Vol. 86, p. 27—122, 1926.

²⁾ Tijdschrift Kon. Ned. Aandr. Gen. (II), Vol. 29, p. 744—774, 1912; (II), Vol. 30, p. 8—27, 484—505, 619—627, 1913.

³⁾ Natuurk. Tijdschr. Ned.-Indië, Vol. 34, p. 411—441, 1874.

⁴⁾ O. BECCARI, *Malesia*, Vol. 3, p. 57, 1886.

⁵⁾ VAN ALDERWERELT VAN ROSENBURGH, *Handbook of the Malayan Ferns*, p. 310 1908.

184, 9-4-1926. — Malacca, Borneo, Celebes, Flores, Timor, the Philippine islands, Polynesia.

Dryopteris mollis (Jacquin) Hieronymus. *Nephródium molle* Desvaux ex Baker in Beccari, Malesia III, p. 57, 1886. Kemala, Teysmann 10688 (l.c.). — Tropical countries.

Dryopteris sagenioides (Mettenius) O. Kuntze. In forest. Boendohero, 200 M, Iboet 314, 18-4-1925. — Birma, Malacca, W. Java¹), Sumatra, Celebes, the Philippine islands.

Aspidium siifolium (Willdenow) Mettenius. In forest, along a river. Maeo Marroe, 400 M, Iboet 465, 10-5-1927, Karita, Teysmann 16411.

Idem, forma *Teysmannianum* v.A.v.R. Mengiliwai, near Maeo Marroe, 450 M, Iboet 449, 9-5-1925. Lologooh, 100 M, Iboet 303, 16-4-1925. — Malay Islands, the Philippines, New Guinea, Polynesia.

Polystichum carvifolium (Kuntze) C. Christensen. In forest, terrestrial fern. Kananggar, 700 M, Iboet 499, 15-5-1925. — South Africa, tropical Asia, China, Japan, Malay Islands, Polynesia, Sandwich islands.

Polybotrya H.B. Willd.

Polybotrya Teysmannianum (Baker) nov. comb. *Acrostichum Teysmannianum* Baker in Beccari Malesia, III, p. 57, 1886. *Stenosemia Teysmannianum* (Baker) Diels in Engler-Prantl., Nat. Pflanzenfam. I, abt. IV, p. 198, 1899. Karita, Teysmann 10696 (l.c.; specimen in H.B.).

The co-type specimens from the Buitenzorg Herbarium agree with the description; the dimorphous leaves, of which both a fertile and a sterile one is present, show, however, a free venation; only the basal forked veins of the neighbouring segments, extending in the costal wing of the pinnatifid pinnae closely approach each other; fusion has not been observed, but may occur occasionally. The leaves are broadly lanceolate, the lower pinnae being of about the same size as the middle ones. The frond lacks both the triangular form of *S. aurita* Pr. and *S. pinnata* Copel., and the copious areolae. It seems to me, after the descriptions, to be allied to *Polybotrya stenosemioides* (Baker) Copeland from Borneo (Serawak) and the Philippines (Luzon); it may be identical with this species.

Campium Presl.

Campium semicordatum (Baker) Copeland, Philipp. Journal of Science, XXXVII, p. 708, fig. 31, pl. 23, 24, 1928. *Phegopteris Hosei* var. *sumbense* Van Alderwerelt van Rosenburgh, Bulletin dept. Agric., XXI, p. 7, 1908; Malayan Ferns, p. 510, 1908. Maeoerroe, 450 M, Iboet 422, 7-5-1925; Karita, Teysmann 10693. — British India, Ceylon.

¹) Has been mentioned from this island only from the first description: Mettenius, *Phegopteris* and *Aspidium*, 1858, p. 113, (as *Aspidium sagenioides*; type specimen; Zollinger (1803). The Fern mentioned by RACIBORSKI; *Pteridophyta* von Buitenzorg, p. 179, 1898, belongs, according to VAN ALDERWERELT VAN ROSENBURGH, to *D. dissecta* O. K. (Malayan Ferns, p. 197, 1908, as *D. RACIBORSKII* v. A. v. R.; Supplement, p. 165, 1916).

Nephrolepis Schott.

Nephrolepis exaltata (L.) Schott. Along a river. Maoe Marroe, 450 M, Iboet 464, 10-5-1927. — Tropical countries.

Davallia Smith.

Davallia denticulata (Burm.) Mettenius. In forest. Lologooh 100 M, Iboet 271, 14-4-1925. — Fernando Po, Madagascar, tropical Asia and Australia, Polynesia.

Microlepia Presl.

Microlepia speluncae Moore. *Davallia speluncae* Hooker ex Baker in Beccari, Malesia, III, p. 57, 1886. Along rivulets. Near Karoeni, 100 M, Iboet 183, 7-4-1927, Kadoemben, 25 M, Teysmann 10677 (l.c.). — Tropical and subtropical countries.

Diplazium Swartz.

Diplazium esculentum (Retzius) Swartz. *Asplenium esculentum* Presl ex Baker in Beccari, Malesia, III, p. 57, 1886. Karita, Teysmann 10691 (l.c.). — Tropical Asia, Polynesia.

Diplazium sylvaticum (Bory) Swartz. *Asplenium sylvaticum* Presl ex Baker in Beccari, Malesia, III, p. 57, 1886. Karita, Teysmann 10692 (l.c.). — Mauritius, tropical Asia, Queensland, Polynesia.

Asplenium Linnaeus.

Asplenium adiantoides (Linnaeus) C. Christensen. On rocky slopes. Karoeni, 100 M, Iboet 178, 7-4-1925. — S.E. Africa, Madagascar, tropical Asia and Australia, Malay Archipelago, Polynesia, New Zealand.

Asplenium laserpitiifolium, Lamarck. Epiphytial, in forests. Kananggar, 700 M, Iboet 536, 18-5-1925. — Malay Archipelago, tropical Australia, Polynesia.

Asplenium Nidus Linnaeus. In forest. Maoe Marroe, 450 M, Iboet 378, 4-5-1925. — Tropical Africa, Madagascar, tropical Asia and Australia, Polynesia.

Asplenium tenerum Forster, forma *sumbense* nov forma (distinguished by shorter, rather coriaceous leaves). Terrestrial. Kananggar, 700 M, Iboet 496, 15-5-1925. — Seychelles, British India, Ceylon, Malay Archipelago, Polynesia.

Adiantum Linnaeus.

Adiantum capillus veneris Linnaeus. On rock slopes, along river. Maoe Marroe, 450 M, Iboet 466, 10-5-1925. — West and South Europe, Africa, temperate Asia, tropical Asia and Australia, Polynesia, tropical and subtropical America.

Adiantum caudatum Linnaeus. On rock slopes. Lologooh, 100 M, Iboet 304, 16-4-1925. — Tropical Africa and Asia, Malay islands, New Hebrides.

Adiantum hispidulum Swartz. Terrestrial, in forest. Kananggar, 700 M, Iboet 498, 15-5-1925. — South Africa, Madagascar, British India, Malay Archipelago, tropical Australia, Polynesia.

Adiantum lunulatum Burmann. In forest, on rocks. Between Waikaboebak

and Karoeni, 100 M, Iboet 337, 21-4-1925. — Tropical Africa, Asia and Australia; Polynesia; Central America.

Pteris Linnaeus.

Pteris vittata Linnaeus. *Pteris longifolia* Linnaeus ex Baker in Beccari, Malesia, III, p. 57, 1886. Kemala, Teysmann 10698 (l.c.). — Tropical Africa, Asia, Australia and Polynesia.

Vittaria Smith.

Vittaria elongata Swartz. Epiphytical, in forest. Kananggar, 700 M, Iboet 534, 18-5-1925. — Tropical Asia and Australia, Malay Archipelago, Polynesia.

Anthrophyum Kaulfuss.

Anthrophyum callifolium Blume. In forest, on trees. Maoe Marroe, 450 M, Iboet 379, 4-5-1925. — Malay Archipelago, Polynesia.

Polypodium Linnaeus.

Polypodium phymatodes Linnaeus. Terrestrial, in forest. Lologooh, 100 M, Iboet 268, 13-4-1925. Maoe Marroe, 450 M, Iboet 488, 12-5-1925. — Tropical Africa, Madagascar, Seychelles, China, tropical Asia and Australia, Polynesia.

Polypodium subauriculatum Blume. Epiphytical. Kananggar 700 M, Iboet 53, 18-5-1925. — Malay Archipelago, tropical Australia, Samoa, New Caledonia.

Cyclophorus Desvaux.

Cyclophorus adnascens (Swartz) Desvaux. *Polypodium Koenigii* Blume ex Baker in Beccari, Malesia, III, p. 57, 1886. Kemala, Teysmann 10679 (l.c.). — Tropical Asia, Polynesia.

SELAGINELLACEAE.

Selaginella Spring.

Selaginella plana Hieronymus. *Selaginella canaliculata* Baker in Beccari, Malesia, III, p. 57, 1886. In forest. Karita, Teysmann 10681 (l.c.). Lologooh, 100 M, Iboet 267, 13-4-1925. Maoe Marroe 450 M, Iboet 469, 11-5-1925. British India, Malay Archipelago.

The number of Ferns, now known from Sumba, is 26. Of this total 23 are known from Java both of its western and eastern part, only one, *Dryopteris sagenioides* O.K. from West-Java only. These species have also been found throughout the Archipelago, most of them even far without; some of them are even pantropical.

Of the 3 species, not found in Java, the following remarks can be made.

Dryopteris Haenkeana, which is mentioned in the literature from the Malay Peninsula, Borneo, Celebes, Flores, Timor, the Moluccas, the Philippines, and Polynesia is often considered to be a broad leaved form of *D. unita* (L.) O.K. which is found throughout tropical Asia, and is not uncommon in Java.

Campium semicordatum Copeland is known to occur with certainty otherwise in British India only. It has often, for instance in the Handbook of Malay Ferns by van Alderwerelt van Rosenburgh, been mixed up in *Leptochilus virens*. Its distribution is therefore still uncertain; probably it occurs also in the Philippines.

Polybotrya Teysmannianum (Baker) has its nearest affinity to *P. stenosemioides* of Sarawak and Luzon. Only the two latter species represent floral elements different from Java.

As may be demonstrated in a forthcoming paper, the relations of the Fern-flora of the Lesser Sunda-islands with that of Celebes, the Moluccas, New Guinea and Australia are, compared with Java, very small.
