

**A NEW SPECIES OF LECANOPTERIS (POLYPODIACEAE)
FROM THE PHILIPPINES**

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SUMMARY

Lecanopteris luzonensis Hennipman is newly described from Luzon, Philippines.

INTRODUCTION

A taxonomic monographic study is presently executed in order to establish the phylogenetic relationship of the species of the Malesian antfern genus *Lecanopteris* Reinw. (Polypodiaceae). Prior to the publication of the complete monograph it has become necessary to publish on a new species of this genus which was recently recognized during fieldwork in the Philippines. At the same time collections were made of the ants, living in association with this fern, inhabiting the galleries of the much inflated rhizome.

Fieldwork in the Philippines in December 1986 could be successfully realized thanks to invaluable cooperation with Dr. B. Tan, Prof. Dr. V. F. Pancho and B. F. Hernaez (University of the Philippines, Los Baños), Dr. D. A. Madulid (Philippine National Museum), and Mrs. G. Roedl-Linder (Manila).

Lecanopteris luzonensis* Hennipman, *spec. nov.

Lecanopteris carnosa auct. non (Reinw.) Blume: Holttum, Ferns of Malaya (1954) 210, p.p.; Copel., Fern Flora of the Philippines 3 (1960) 499.

Planta myrmecophila epiphytica. Rhizoma ventricosum, initio subviride carnosum, demum nigrum coriaceum, apice et in phyllopodia pilis longis hyalinis ramificatis obtectum, ceterum glabrescens. Frondes stipitatae, bifariae, 20-30 x 5-7 cm; lamina pinnatifida, lobis acutis, venis anastomosantibus, areolis venulas liberas clavatas includentibus. Sori in extensionibus exmarginalibus, reflexis, 1,5 x 2 mm. Sporae biconvexas, monoletes, index 1.4-1.8 (L/P), 55-65 x 35-45 µm, luteolae, laeves. - Typus: *Hennipman* 7820 (Hernaez leg.), Quezon Prov., near Real, 300-500 m alt. (U, iso in PNH).

Rhizome epiphytic, swollen, much branched, forming flat 'crusts' up to 30 cm across, c. 4 cm thick, above with two longitudinal rows of basally somewhat swollen phyllopodia, in part with short, scattered rigid spines; the growing parts green,

otherwise black or with a glaucous waxy layer; meristems of apices and phyllopodia densely set with usually hyaline, sometimes brownish glandular hairs, up to 1.2 mm long, hairs branched at the base, the longest branches consisting of up to 25 cells. *Fronde*s deeply pinnatifid, with a terminal segment conform to the lateral ones, 12–45 cm long; lamina index 3–7, 10–32 × 2.5–9 cm; basal lobes sterile, index 2–4, 1.5–4 × 0.7–1.1 cm, fertile lobes index 1.7–5.5, 1.5–5.5 × 0.8–1.6 cm, apex usually acute, sometimes rounded. *Sori* ± oval, situated on extended, reflexed, extra-marginal lobes, 5–15 to a lobe, c. 1.5 × 2 mm. Sporangia c. 1000 µm long, capsule c. 250 × 280 µm. *Spores* released in tetrads, biconvex, monoletic, index (L × P) 1.4–1.8, 55–65 × 35–45 µm. Receptacular paraphyses, 2–4-celled unbranched glandular hairs.

Distribution. Philippines (Luzon).

PHILIPPINES. Luzon: Pangasinan Prov., Mt San Isidro, Labrador, *BS 29848 Fénix* (P). – Panganga Prov., Mt Pinatubo, Camp Stotsenburg, *Elmer 22092* (BM, K, L, NY). – Bataan Prov., Mt Mariveles, *PPE 5 Copeland* (BM, M, MICH, P, S); *Whitford 334* (K, MICH, NY, P); *Williams 703* (NY). – Quezon Prov., near Real, *Hennipman 7806* (U, PNH), *7820* (U, PNH, type). – Rizal Prov., Paningtingan, *Loher 13430* (M). – Laguna Prov., San Antonio, *BS 635 Ramos* (MICH), *BS 20398* (BM, MICH, P). – Camarines Norte Prov., Bicol National Park, *Price 3084* (MICH).

Habitat. Medium to high epiphyte on exposed places in evergreen forest at 300–1100 m.

Notes. 1. The present species is closest to the group formed by *Lecanopteris carnosa* (Reinw.) Blume (endemic to northern Sulawesi) and *L. celebica* Hennipman (endemic to central Sulawesi). It is easily distinguished from these two species by its smaller size and its rhizome indument. *Lecanopteris luzonensis* shows a general resemblance to *L. pumila* Blume (Malay Peninsula, Sumatra, Borneo) which has round sori and a rhizome indument consisting of few small hairs and scales.

2. Ants associated with this species were kindly identified by R.V. Hensen. They include *Crematogaster borneensis* André (*Hennipman 7820*, *BS 29848 Fénix*) and *Iridomyrmex cordatus* (Smith) (*PPE 5 Copeland*).