

LESKEODON PONAPENSIS, A NEW MOSS FROM MICRONESIA

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Among the collections from the Miami University--Schooner *Collegiate Rebel* Expedition in 1960, we found a small *Distichophyllum*-like plant mixed among other bryophytes collected from tree bark in the rainforest of Ponape Island in the eastern Carolines. I have recently had the opportunity to compare the Ponape plant with material, usually type or isotype, and descriptions of each species reported from the tropical and western Pacific. These comparisons made at the British Museum (Natural History) indicate that this is an undescribed taxon which differs from *Leskeodon acuminatus* (Bosch et Lac.) Fleisch. in smaller size, shorter costa, larger cells and a weak border.

Leskeodon ponapensis, sp. nov.

Plantae gregariae ad arbores, nitidae, aureae usque ad 1 cm altas. *L. acuminatus* (Bosch et Lac.) Fleisch. persimilis, sed foliis minor, nervo foliis usque ad medium aut minor, margine infirmo, et cellulis laminae major rhombeis.

Type: Ponape: Mt. Kubursoh, 1000-1500 ft. alt, 17 June 1960, H. A. Miller 6429 (BM). Paratypes: Mt. Kubursoh, 1000-1500 ft alt, H.A. Miller 6448; Nanpili District, below Mt. Namulek, 500-700 ft alt, 20 June 1960, H. A. Miller 6710 and 6788 (G, MU).

Plants loosely gregarious and in rich admixture with other mosses and foliose hepatics on the trunks of trees in lowland rainforest. Individual plants are up to 1 cm tall, shiny, golden (when dry), and somewhat complanate on the red-brown, unbranched stem. Leaves crisp-entire when dry, carinate below and at the tip when wet, obovate to spatulate; dorsal leaves ca 1.4 x 0.65 mm, lateral leaves ca 1.6 x 0.85 mm, costa ca 0.5 (0.35-0.75) mm long; margin entire, border weakly defined, 1-2 cells wide; upper leaf cells rhomboid, ca 130 x 20 μ m, marginal cells 180 x 10 μ m; leaf base 0.30-0.35 mm wide and often decurrent on the stem by 1-2 yellow-brown, pigmented cells; leaf apex rather abruptly cuspidate-acuminate, channeled and sometimes twisted. All specimens found were sterile.

The genus *Leskeodon* is comprised of 22 species in the tropical Americas, the tropical western Pacific and southeast Asia. Only *L. acuminatus*, *L. pandurifolius*, *L. philippinensis*, *L. robbinsii*, and *L. rotundifolius* occur in the western Pacific--southeast Asian region. Of these, only *L. acuminatus* is known to have reached a remote island (New Caledonia) and so the discovery of *L. ponapensis* on tiny (only 15 km across) Ponape is somewhat unexpected.

This single record of a genus for an isolated island points up sharply a role for islands, especially those with orographic rainfall, as refugia for bryophytes through geologic time. Of course, few diaspores of a diverse flora on a large land mass will become established on an island. Thus, insular floras are strongly filtered and are usually populated by somewhat diverse taxa at the generic and family levels, and all taxa from the source land masses are not represented. When continental droughts occurred during ancient climatic changes, it is most probable that islands like Ponape or dynamic island archipelagos like Hawaii provided critical refugia during prolonged periods of inhospitable continental climates. With amelioration of continental climates, the genetic stock preserved on islands may have served to repopulate larger land masses. Since the origin of major bryophytic lines in the Devonian this process must have occurred several times through time.

Alternating geographically and geologically isolated floras as sketched above can explain the great systematic and geographic disjunctions observed today among bryophytes. Studies of insular bryofloras are yielding data from which to develop new understandings of biosystematics and evolution. The case of *Leskeodon ponapensis* seems so well marked that attention is drawn to it as an indicator of one means by which wide systematic diversity may have been achieved between some of the phylogenetically isolated extant groups within the bryophytes.

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Figure 1. *Leskeodon ponapensis*. Leaves, ca x 50.

