



Plate 8

**EPIPHYLLUM PHYLLANTHUS (L.) HAW. (CACTACEAE)
AND ITS ALLIES IN ECUADOR**

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Preparation of the Flora of Río Palenque has produced new insights into the status of some taxa which have been considered by the respective authorities as being of subspecific rank. We have taken the position that closely related plants which grow sympatrically, yet which do not hybridize naturally, should be treated as separated species, particularly when adequate morphological features for distinguishing them exist.

In 1964, Myron Kimnach published "*Epiphyllum phyllanthus*" in the *Cactus and Succulent Journal* 36:105-115. His treatment of this confusing group of epiphytic cacti unraveled a troublesome complex which had proven to be difficult for taxonomists. Kimnach treated the taxa as constituting 6 varieties of *Epiphyllum phyllanthus* (L.) Haw. New information provided by studies of natural populations at the Río Palenque Science Center indicates that at least some of the varieties proposed by Kimnach and others would be better treated as valid species. Kimnach's *E. phyllanthus* var. *columbiense* (Weber) Back. and *E. phyllanthus* var. *rubrocoronatum* Kimn. occur abundantly in trees of *Pithecellobium longifolium* (Humb. & Bonpl.) Standl. overhanging the river. They occur less frequently in the tops of trees in the mature forest as well. No hybrids have been found. The flowers and plants have features which clearly distinguish them from each other and from *E. phyllanthus* var. *phyllanthus* which is found only on the eastern side of the Andes (Plate 8:B, C and D). Kimnach published excellent comparative illustrations of the differentiating features. In addition, plants of the three varieties, as well as *E. phyllanthus* var. *hookeri* (Haw.) Kimn., have flowered simultaneously at the Marie Selby Botanical Gardens. The floral fragrances of the four were compared and proved to be quite distinct. The varieties *phyllanthus*, *columbiense*, and *rubrocoronatum* also proved to be autogamous while var. *hookeri* did not produce fruits without artificial pollination (Plate 8:B,C,D).

***Epiphyllum columbiense* (Weber) Dodson & A. Gentry, stat. nov.**

Phyllocactus phyllanthus var. *columbiensis* Weber, Dict. Hort. Bois 957. 1898.

Epiphyllum phyllanthus var. *columbiense* (Weber) Back., Die Cact. 2:746. 1959.

***Epiphyllum rubrocoronatum* (Kinnach) Dodson & A. Gentry, stat. nov.**

Epiphyllum phyllanthus var. *rubrocoronatum* Kimnach, Cact. Succ. J. (Los Angeles) 36:110. 1964.

	E. phyllanthus	E. rubrocoronatum	E. columbiense
Floral tube	25 cm long, sulcate in the basal half	22 cm long, terete	10 cm long, terete
Limb	7 cm in diameter	9 cm in diameter	4 cm in diameter
External color of tube	white	pink	white
Internal color of tube	white	yellow	white
Filaments	1.5 cm long, white	2.5 cm long, red-orange	1 cm long, white
Anthers	grey	yellow	white
Style	white	red	white
Stigma lobes	3 mm long, yellow	7 mm long, red-orange	4 mm long, white
Ovary	deeply sulcate, scales 11-17	slightly angled, scales 5-7	sharply ridged, scales 5-7

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