

TWO NEW SPECIES OF *MAXILLARIA* (ORCHIDACEAE)
FROM NICARAGUA

John T. Atwood*

The *Maxillaria cucullata* Lindl. complex ranges from Mexico south through Central America and Panama, reaching into continental South America. A bewildering array of variety may be found throughout its range, and in Nicaragua alone several kinds of populations have been assigned to *Maxillaria cucullata*. At least two of these seem sufficiently distinct to warrant recognition as separate species for reasons given in the notes following the species descriptions. I have also observed a very different member of the complex on Cerro Hornito, Panama, with small rose-salmon flowers, but they have a slight putrid odor similar to that of the "normal" *Maxillaria cucullata* which is common in Nicaragua. Further studies in Costa Rica and Northern Central American may prove much of the variation to be clinal.

The various flower colors and fragrances in the *Maxillaria cucullata* complex suggest visitation by different pollinators, although I am not aware of any reported observations on pollination.

Maxillaria mombachoensis Heller ex Atwood, sp. nov.

Plate 1

Planta caespitosa epiphytica saepe caespites magni formantes, pseudobulbis unifoliatis compressis, foliis ligulato-ellipticis, scapis uno vel pluribus, bracteis scaporum concavis tribus vel quatuor, floribus magnis coriaceis croceis vel stramineis, labello aurantiaco trilobato.

Affine *Maxillariae cucullatae* Lindl., sed bracteis paucioribus majoribusque, et floribus majoribus aurantiacisque distinguitur.

Plant caespitose, epiphytic, often forming large clumps; roots slender; pseudobulbs congested and obscuring the rhizome, subtended by two to four cataphylls and often a foliose bract, unifoliate, 4 to 6 cm tall. Leaves ligulate-elliptic, bilobed at the apex, 15 to 30 cm long and 3.2 to 4.2 cm wide, with a conduplicate petiole to 5 cm long. Scapes one or more arising at the base of the newly completed growth, to 8 cm long with 3 or at most 4 conspicuous tubular bracts, the uppermost much inflated and about 3.2 cm long; ovary 2 cm long including the pedicel. Flowers odorless in the live material examined, coriaceous, orange or occasionally yellow becoming white near the base of the perianth parts, the lip with a red midlobe; the dorsal sepal elliptic-lanceolate, acute, concave, 4 cm long and 1.8 cm wide, the lateral sepals 3.5 cm long and 1.5 cm wide, elliptic-lanceolate, acute; lateral petals concave and projecting forward with the dorsal sepal, 3 cm long and 1.4 cm wide; the lip very stiff and difficult to spread out, with 2 short, rounded lateral lobes diverging at about the middle, 2 cm long and over 1 cm across the lateral lobes when spread out; the midlobe of the lip reflexed-geniculate with an excavated ligulate callus extending to just below the divergence of the lateral lobes; the column arcuate about 1.3 cm long including the short foot.

ETYMOLOGY: Originally named by the late A. H. Heller for the mountain on which it grows.

TYPE: NICARAGUA: DEPT. OF GRANADA: Volcan Mombacho, 1 October 1977, W. D. Stevens 4331 (HOLOTYPE: MO).

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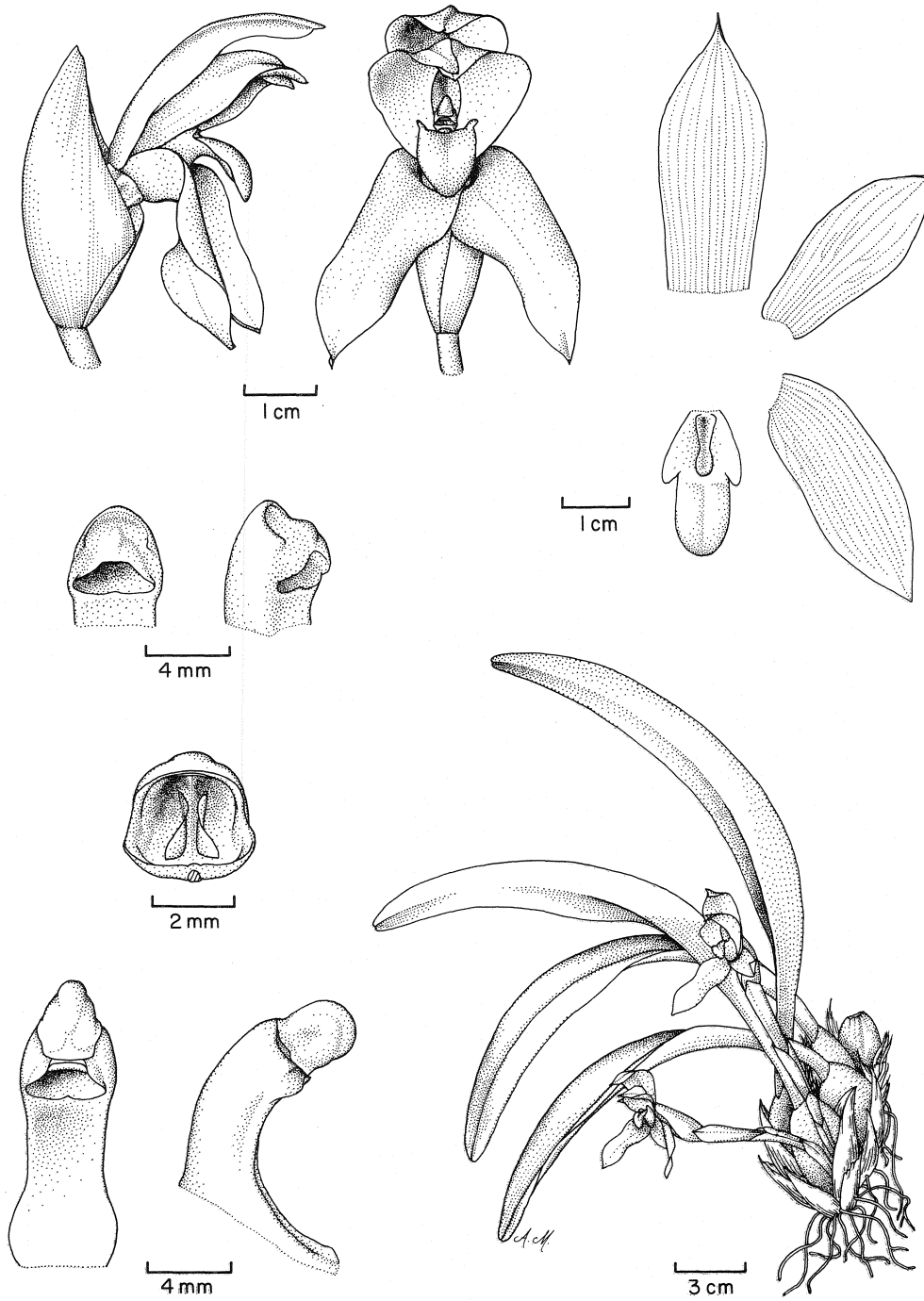


Plate 1: *Maxillaria mombachoensis* showing profile and frontal views, spread perianth parts, details of the column, and plant habit. Illustration prepared from a flower in spirit collection, type herbarium specimen and photographs.

Maxillaria mombachoensis is one of the more unusual members of the *cucullata* complex. Its closest affinity is with *Maxillaria rubrilabia* Schltr. described from Costa Rica, but *Maxillaria mombachoensis* differs in the much broader petiole, the stouter scapes with fewer and larger bracts, and the larger flowers. It differs from the following species in its more inflated bracts and the differently colored flowers, which lack fragrance. *Maxillaria mombachoensis* differs from the typical *M. cucullata* in the larger, fewer, and more inflated bracts of the inflorescence, and the larger flowers, which lack dark pigmentation.

Though apparently endemic to Volcan Mombacho, *Maxillaria mombachoensis* is an abundant elfin forest orchid, but its exploitation by numerous and overzealous collectors could quickly decimate the population. The notes of A. H. Heller indicate that a similar species occurs on the island of Omotope in Lago Nicaragua south of Volcan Mombacho, but that population has smaller flowers and smaller, less inflated floral bracts.

Maxillaria seymouriana Atwood, sp. nov.

Plate 2

Planta caespitose epiphytica saepe caespites magni formantes, pseudobulbis unifoliatis compressis, foliis ligulato-ellipticis, scapis uno vel paucis, bracteis scaporum quinque vel sex, floribus magnis primulinis basi tepalorum erythro-maculatis, labello trilobato canarino.

Affine *Maxillariae cucullatae* Lindl., sed floribus grandioribus, fragrantibus (*M. cucullata* putida est) primulisque, et basi tepalorum erythro-maculatis differt.

Plant caespitose, epiphytic, often forming large clumps; roots slender; pseudobulbs unifoliate, laterally compressed, 4 cm long; leaf ligular-elliptic, retuse, to about 20 cm long and 4 cm wide, and with a petiole 1 to 2 cm long. Scapes one or more arising from the flush of new growth (always?) to about 13 cm tall with 5 or 6 loosely appressed bracts, the uppermost little inflated and scarcely exceeding 2 cm long. The flowers primrose yellow with reddish spots at the base of the tepals; ovary and pedicel 1.5 cm long; the dorsal sepal elliptic-lanceolate, 3.5 cm long and 1 cm wide; the lateral sepals lanceolate, acute at the apex, and united with the column foot, 3.2 cm long and 1 cm wide; the lateral petals elliptic-lanceolate, acute, 2.8 cm long and 0.9 cm wide; the lip three-lobed, loosely hinged to the column foot, reflexed-geniculate at slightly less than half the length of the lip, reflexed again at the apex, provided with a ligulate callus terminating at about the sinuses between the lateral and midlobes, 2.8 cm long and 1.5 cm wide across the lateral lobes when spread out. Column arcuate, about 2 cm long including the short foot.

ETYMOLOGY: Named in honor of Mr. F. C. Seymour, ardent plant collector of the Nicaraguan flora.

TYPE: NICARAGUA: DEPT. OF JINOTEGA: Cerro Zamaria, 5 July 1975, Atwood & Neill AN112 (HOLOTYPE: SEL).

This species is found growing on liquidambar and other hardwoods at moderate elevations (about 1500 meters) with *Maxillaria cucullata*, where I have observed no intermediates. *Maxillaria seymouriana* differs from the latter, more common species in that the larger flowers are primrose yellow with red maculations at the base of the perianth parts, and has a rather strong,

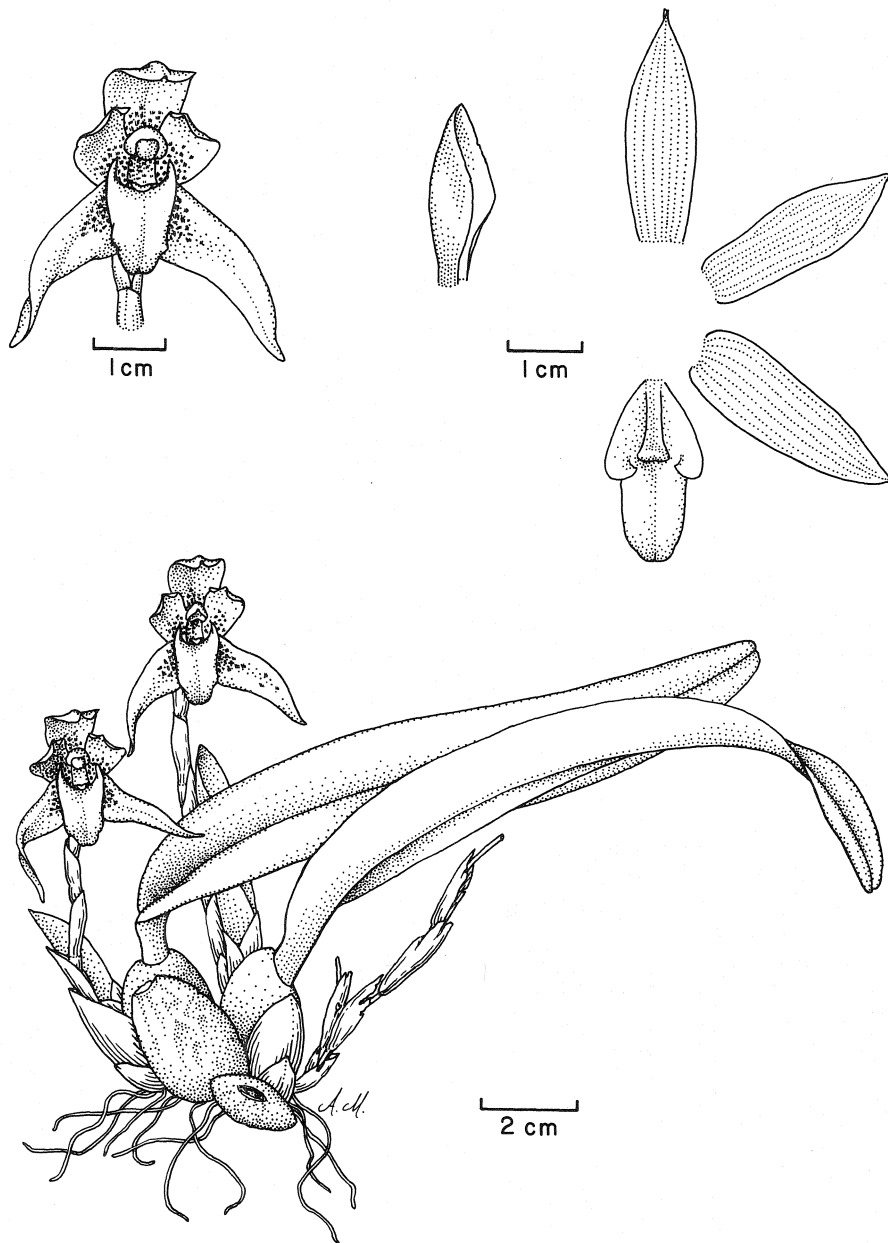


Plate 2. *Maxillaria seymouriana* showing frontal view of flower, floral bract, spread perianth parts and plant habit. Reconstruction based on type herbarium specimen and photograph.

sweet fragrance. *Maxillaria cucullata* has orange to pink flowers with smaller red maculations and a slight foetid odor. *Maxillaria seymouriana* is among the most attractive of the cucullata complex.