

## *Search for Orchids*

A New *Mormodes* from the Sarapiquí District of Costa Rica

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New species sometimes turn up in the strangest places and the present example is no exception. For some years now the Los Angeles Arboretum has been developing a collection of habitat-bearing orchid plants cultured by Joe Lerchenmuller under the direction of Dr. Stewart and Glenn Hiatt. Numerous trips have been made to the tropical regions and collected plants naturalized at the Arboretum have commenced flowering out revealing some interesting information. These plants are carefully photographed, studied, and preserved and the literature and herbaria searched to reveal discovery of plants "lost" to cultivation (i.e. previously described but no longer cultivated) and "new" to cultivation (i.e. previously undescribed). Wherever possible fine botanical plates of these species have been made by Mrs. Patricia Roberts of Pasadena, an example of whose work illustrates this article.

During development of the Costa Rica collections at the Arboretum the past five years, many "lost" species have been subsequently refound and are currently in cultivation. But only rarely has a totally "new" species made an appearance . . . so comprehensively has this region been collected previously, particularly by the Germans in the mid 1800's and more recently in the early 1900's.

The plant in question came to us first in 1961 following our Costa Rica expedition for plants the prior November. It was sent the summer of 1961, having been collected by Mr. Clarence K. Horich from "Thatched Roof of Hut on N. Shore of Laguna del Cerro Congo, 12 mi. NW of Cariblanco 800M." This plant flowered the following fall when we were preparing to embark for another expedition and for the most part was ignored and labelled "*Mormodes atropurpureum*," appearing very much like a similar plant illustrated by Teuscher in *Amer. Orch. Soc. Bull.* Vol. 30 p. 650 Aug. 1961. At the time neither preserved material nor slides were made of it.

Sometime thereafter I commenced amassing the known literature on this genus and came across an illustration by Allen in *Annls. Mo. Bot. Gard.* Vol. 36 p. 355 1949 of a plant with a very different flower labelled "*Mormodes atropurpureum*" in which the margins were revolute and the labellum convex (instead of involute with a concave labellum as was Teuscher's concept of this species). Checking back with our own material I found that the plant in question was no more and had perished with flowering—leaving the problem in a muddle. The next spring a private collector, Mr. Ralph Spencer of San Marino flowered out another plant with identical flowers also obtained from Horich, but unfortunately without locality data. A look at this plant with reference to the literature now proved to me conclusively we must be dealing with two different species. Shortly thereafter Mr. Spencer and I left for another month of orchid collecting in Costa Rica and amongst other events planned was a trip to the Laguna del Cerro Congo.



The region in question lies in the newly opened Sarapiquí district of Costa Rica where a new road from San Jose has proceeded over the top of the Cordillera Central and then drops abruptly to the Atlantic Rainforests to the North. Shortly after passing through Cariblanco (830 M), a road goes off to the left 15 miles across a low tableland and then along the rim of an extinct volcanic cone. This cone is actually an ancient caldera, formed by the collapse of the central area of an extinct volcano and has sheer 500 ft. walls on all sides except to the North where it has been eroded open. In the bottom of it lies a beautiful fresh water lagoon with crystal clear emerald blue green water. The humidity and rainfall of the region is further enhanced by this geological phenomenon. At Mr. Horich's direction we proceeded downwards along a road from the top of the caldera collecting on a bank some rare plants of *Sievekingia fimbriata*, appearing for all intents and purposes like juvenile *Stanhopeas*. Mr. Horich recognized them at once and pointed out the differences. We thence made our way to the caretakers hut\* on the N. shore, from whence the original plant was collected, only to find that a few days earlier the roof had been torn apart and replaced with a bright new thatch of palm fronds. The old roof was discarded in a nearby trash pile.

After considerable moaning and complaining we brought ourselves to examine the trash pile and 15 minutes of digging through all manner of trash, refuse, bottles, barbed wire, wasps, and fire ants revealed a broken *Mormodes* pseudobulb! We kept this and a few minutes later another piece appeared. These plants were then carefully labelled, cleaned and brought back to U.S. where in the spring of 1963 both flowered providing us with the necessary material for study. The pseudobulb with the broken surface bloomed a typical type of *Mormodes buccinator* Lindley but the other plant was indeed our new species. I was still not satisfied until I had an attempt to recheck the literature and see the real *Mormodes atropurpurea* Lindley. This later opportunity was provided by Dr. Joergen Hansen of Instituto Interamericano at Turrialba who sent a slide and live plant of this species collected from the Chirripo. Now there could be no doubt we were dealing with an undescribed species, allied to but different still from Teuscher's plant. I then forwarded materials to Mr. Summerhayes of Kew Botanical Gardens who kindly confirmed for me off Lindley's Type sheet that Allen's representation of *Mormodes atropurpurea* Lindley was the correct one.

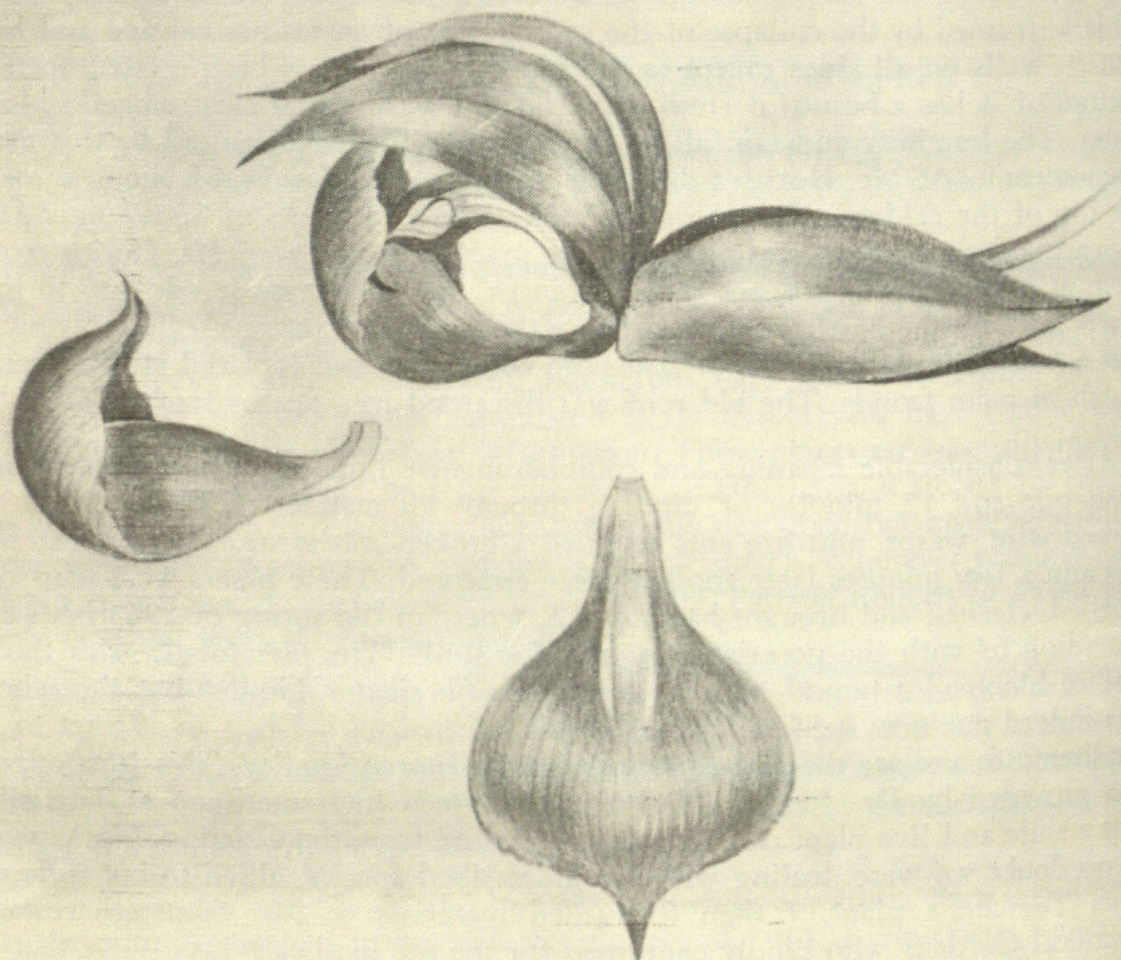
Mr. Henry Butcher of Volcan Chiriqui has kindly confirmed for me that he has never seen the new species in Panama; instead the typical *Mormodes atropurpurea* Lindley is occasionally encountered from his area. This tends to suggest the new species is limited to Northern Costa Rica and Nicaragua (where Mr. Heller has sent me specimens compatible with the diagnosis).

The new species is named in honor of the venerable Costa Rica Collector, Mr. Clarence Kl. Horich, who has so generously and unselfishly given of his time and talent to develop our investigations, and I take this method of recognizing his contribution. The diagnosis from related species together with its description follows.

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\*It should be mentioned that the members of the genus *Mormodes* appear to have a growing preference for dead and decomposed wood. As a net result they frequently take seed and grow in nature on rotting fenceposts, dead trees, and thatched hut roofs where the present example was collected originally by Mr. Horich.





# Mormodes horichii

## *sp. nov.*

*Mormodes horichii* J. A. Fowlie, M.D., Sp. Nov.



*Planta*—epiphytica *Pseudobulbi*—caulescentes infra medium c. 3 cm. diametientibus; *Folia*—lanceolata, decidua in florente, c. 30 cm. longa et 4.5 cm. lata. *Racemus*—lateralis, densus, oblongus, pedunculatus, ex pseudobulbo medio, laxis 5-15 floris. *Flores*—obscuri-sanguinei, non punctati, immaculati, *Mormodes stenoglossum* Schlechter faciei et aequimagni. *Sepala*—ovata-acuminata c. 3 cm. longis x 1.2 cm. latis. Sepalum superiorum supra columna cucullatum. Sepala lateralia lineariblonga aequalia, reflexa, basibus lateralium paulo obliquis et ungui labelli adnatis. *Petala*—quam sepala paulo latioribus et paulo brevioribus, glabris, c. 2.8 cm. longis x 1.5 cm. latis, ovato-acuminata, supra columna cucullata. *Labellum*—integrum, non-lobulatum, concavum, obtrullatum vel angusto obovatum c. 3 cm. longo, transverse late c. 2.5 cm. lato, leviter unguiculatum, cum marginibus lateralibus distalibus involutis. Apex labelli mucronatus, involutus supra columna cum occultatione desuper. Nervus medius crassus. *Columna*—1.7 cm. longa, torta, acuminata. *Pollinia*—4 *Ovarium*—pedicellatum, 3.4 cm. longum.

This species is at once distinguished from *Mormodes buccinator* Lindl., *Mormodes wendlandi* Rchb. f., *Mormodes colossus* Rchb. f., *Mormodes hookeri* Lem., *Mormodes powellii* Schlechter and *Mormodes skinneri* Rchb. f. by its concave labellum with involute distal margins, and concealed column with the upturned apex of the lip, rather than the convex labellum with revolute distal margins and exposed column of these species. *Mormodes lobulatum* Schl., and *Mormodes atropurpurea* Lindley are in addition three lobed as well as having these features, at least in the case of the latter species. Only *Mormodes stenoglossum* Schlechter\* is very closely related sharing with this species the concave labellum and turned up margins with mucronate apex folded over and concealing the column from above. Unlike the present species, however, *Mormodes stenoglossum* Schlechter inhabits primarily the Pacific Slope of Costa Rica, has sulfur yellow immaculate flowers, and has a much narrower, longer obovate lip with a mucronate apex.

There appears to be an increased tendency in the literature to "lump" the revolute and involute sections of this genus together, as if the flower appearance was a simple variation. This is very regrettable since anyone who has collected living plants of the two can see differences in the pseudobulbs and growth habit. The species with the involute margins of the distal labellum (concave lip), the apex of which is rolled up over the column, are sufficiently distinct both geographically and structurally to deserve sectional status and ought never to have been confused.

The two distinguishing features of the flower are the distal turned up portions with involute margins folded over and concealing the column from above, and its dark blood-red color.

Locality; "Thatched Roof Hut (from a trash pile) N. Shore of La Laguna del Cerro Cerro Congo, 2500 ft., 12 mi. NW of Cariblanco, Costa Rica."

Recently through the study of materials furnished by Mr. Heller of Nicaragua, I have learned that this is the commonest species encountered there, the others being quite uncommon. Perhaps, it has just reached this portion of Costa Rica and is a primarily Nicaraguan plant. Honduras has produced typical *Mormodes buccinator* Lindley but, as yet, no other species is identifiable from there.

The type specimen is deposited in the Herbarium of University of California (UCLA) for interested students.

\*Fide Schlechter *Fedde Repert. Beih.* 19 p. 225 1923; non Ames & Correll, *Orch. Guat.* p. 514 1953 which is *Mormodes nagelii* L. O. Williams.





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