The Tetramicra Mystery

by Chuck McCartney

Florida's native *Tetramicra* may have a new name — if Florida ever had a native *Tetramicra* in the first place.

The reported presence of a species of the orchid genus *Tetramicra* along the southeastern coast of Florida has been problematic ever since its purported discovery in 1961.

This discovery was first reported to the orchid world by Dr. Carlyle A. Luer in the December of 1970 issue of *The Florida Orchidist*, the quarterly magazine of the South Florida Orchid Society. Luer wrote:

> "In the year 1961, Mrs. Candice Barrs of Ft. Lauderdale gathered a few plants of *Oncidium sylvestre* [now *Oncidium bahamense*] for her orchid collection from among the rosemary bushes (*Ceratiola ericoides*) on the sand dunes in Martin County, Florida ... One of the plants Mrs. Barrs found seemed a little different from the rest. Since none was in bloom, she watched it carefully for its blooming efforts the following year. The plant in question produced a long spike with several little bright pink flowers and a noticeably oversized lip, reminiscent of *Ionopsis utricularioides*. During the succeeding years, the plant has freely multiplied, never failing to flower each spring.
>
> Photographs and specimens of it were sent to several authorities for identification and recording. It proved to be *Tetramicra canaliculata*, a common species with a wide distribution throughout the West Indies. This, however, is a first official recording of the species for Florida."

This find was reported to a wider audience by Luer in his beautiful and comprehensive 1972 work, *The Native Orchids of Florida*. There, Luer illustrates a flowering plant in a typical Martin County coastal scrub habitat in color photographs dated June 1970. He says the species, known to botanists as *Tetramicra canaliculata* (Aublet) Urban, is "widespread through the Antilles and is common in the Bahama Islands ..." However, in 1982, a new survey of the orchids of the Bahamas by Drs. Ruben P. Sauleda and Ralph M. Adams was published in *Flora of the Bahama Archipelago* by Drs. Donovan S. Corell and Helen B. Correll, and the only *Tetramicra* species listed as growing in the Bahamas is *Tetramicra urbaniana* Cogniaux, a much smaller species than *Tetramicra canaliculata*. Sauleda, in a personal communication, said the latter larger species is endemic to the island of Hispaniola, shared by the nations of Haiti and the Dominican Republic.

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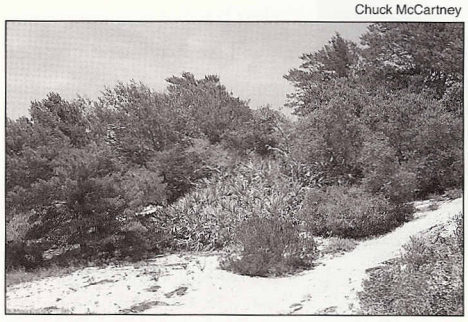
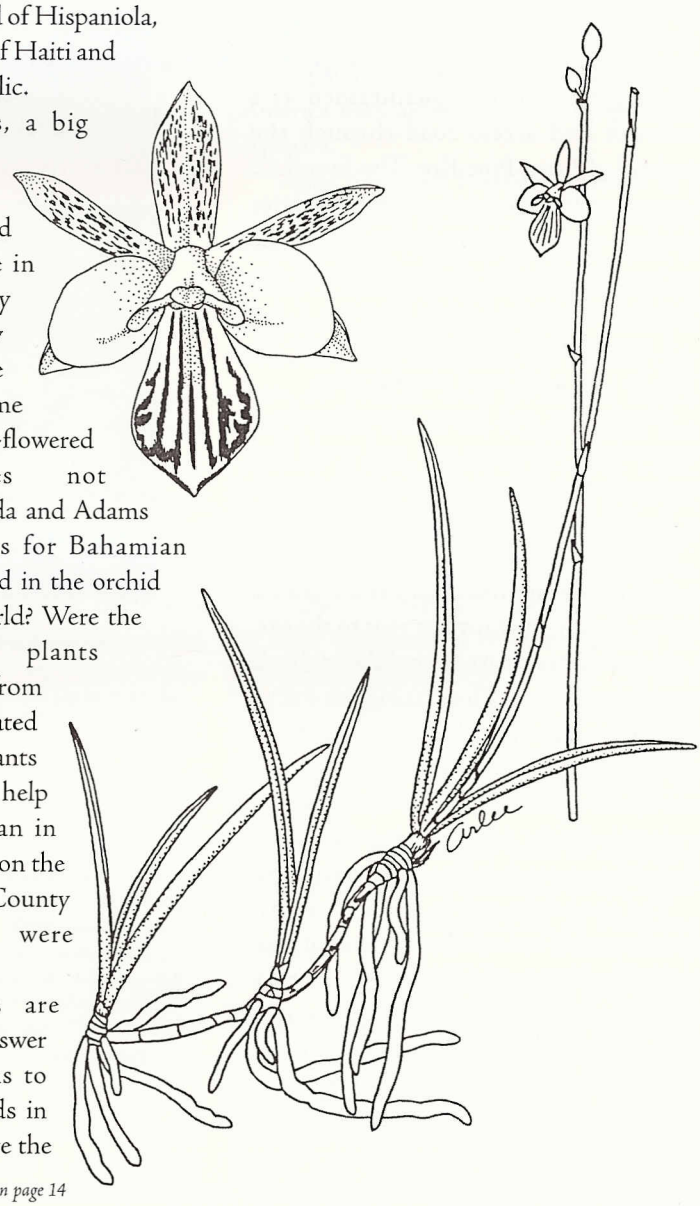


LEFT: Florida's purported *Tetramicra* plants were said to grow among rosemary bushes in coastal sand pine scrub similar to this one in Jonathan Dickinson State Park, Martin County, Florida. BELOW: Plant habit and floral details of *Tetramicra canaliculata* drawn by A.M. Montalvo for Dr. James D. Ackerman's *An Orchid Flora of Puerto Rico and the Virgin Islands*. Reprinted here with permission of Dr. Ackerman and the New York Botanical Garden. The Puerto Rican plants are very similar to the one allegedly found in Florida.



Considering this, a big question becomes: If these plants of a larger-flowered *Tetramicra* really were in Florida, where did they come from? Were they waifs, chance introductions from some population of a larger-flowered *Tetramicra* species not encountered by Sauleda and Adams in their explorations for Bahamian orchids in the field and in the orchid herbariums of the world? Were the purported Florida plants "escapees" that grew from seeds from some cultivated source? Or did these plants have some more direct help from the hand of man in reaching the scrub site on the Palm Beach/Martin County line where they were supposedly found?

These questions are almost impossible to answer because no one seems to have seen these orchids in the wild in Florida since the

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first years after they were found here — if they were found here. The lack of herbarium specimens or living plants makes it all the more difficult to positively identify the Florida *Tetramicra*. No recognized botanical authority has ever been able to verify the presence of this orchid in the wild in Florida.

Looking back more than a quarter of a century to his only encounter with the Florida *Tetramicra*, Luer wrote in a June 29, 1996, letter:

> "... I did not see a plant of *Tetramicra* in flower in the wild in Florida ... However, as I recall, rumors reached me via Irene Van Alstyne [then co-editor of *The Florida Orchidist*] that Candice Barrs had found one. Naturally, we had to seek her out. We were fortunate because her plant was in flower at her home ... She led us somewhere ... where she said we could look for plants. I faked the habitat show with her flowering plant in the rosemarys ... but down below were supposedly non-flowering plants ... I don't know if someone had naturalized them there some years before or not, nor do I know positively that these were plants of *Tetramicra*. I had only her word."

But surely herbarium specimens would validate this discovery. After all, Luer, in 1970, wrote: "Photographs and specimens of it were sent to several authorities for identification and recording."

However, if such specimens were preserved, they can't be found now. Luer, in his 1996 letter, writes that he knows of no existing herbarium specimens of these Florida plants. Also, recent inquiries to three major herbariums with significant collections of Florida orchid material (the Oakes Ames Orchid Herbarium at Harvard University and herbariums at The New York Botanical Garden and the Marie Selby Botanical Gardens in Sarasota, Florida) have produced no specimens of a *Tetramicra* from Florida. Nor have checks of smaller herbariums in southern Florida uncovered any such specimens.

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Thus, the reported presence of a *Tetramicra* in Florida remains "anecdotal evidence," or hearsay, and hearsay is no more valid in botany than in a court of law. Even in 1970, Luer cautioned against too quickly believing reports of a new orchid being found growing wild in Florida. He wrote:

> " ... one must be careful in accepting a species as being naturally, instead of artificially, introduced. Numerous exogenous species are cultivated by many people. Some species have actually been planted in remote areas, apparently in experiments to determine whether or not they will be able to survive and reproduce. Discovery of any of these plants by someone unsuspecting does indeed lead to confusing reports."

Then there is the possibility of fraud. Someone may have introduced plants into an area, intending to return later and get credit for "discovering" them. Another type of hoax may involve outright lying, with someone telling a gullible orchid authority that a plant was found at a particular place, perhaps, again, in hopes of getting credit for "discovering" the plant. A third cause for error might be a grower simply getting confused about where a particular plant came from, recalling it as coming from Florida when it actually came from some other source.

These scenarios are responsible for the reported presence of several orchid species in the wild in Florida, including *Leochilus labiatus*, *Restrepiella ophiocephala*, a *Maxillaris* tentatively identified as *Maxillaria sanguinea*, and even a wildly erroneous report of *Brassavola nodosa*. There is no evidence that any of these species ever occurred naturally in the wild in Florida. There is every possibility that Florida's *Tetramicra* also should be included in this list.

There have been many searches for *Tetramicra* in Florida since its discovery was first reported. But these seem to have come to nought. Even in 1970, Luer wrote: "Recent attempts to rediscover *Tetramicra* in the original Florida location have been unsuccessful." Observers interested in this species have scoured likely coastal scrub habitats in southeastern Martin County and adjacent areas of Palm Beach County in May and June, the reported blooming season for these orchids. But no *Tetramicra* plants have shown up.

Even if the plants actually had been in Florida, it is entirely possible that the population could be gone now. Vast areas of the high, valuable sand pine scrub have fallen before the bulldozer for real estate development. Also, avaricious orchid collectors could have taken the few remaining plants. Or the plants could have succumbed to killing freezes like the one of December 1989.

Because no population of this orchid can be found in Florida and no valid herbarium specimens seem to exist, the genus *Tetramicra* will be excluded, except perhaps as a footnote, from two comprehensive floristic surveys now being prepared, one on the flora of Florida and the other enumerating the flora of North America. Luer, in a personal communication several years ago, said he feared he may have erroneously included this species in his book. Thus, it seems a proper decision to exclude *Tetramicra* from these upcoming floristic surveys.

The Florida *Tetramicra* mystery became even a little more complicated, if such a thing is possible, with the 1996 publication of Dr. Carl L. Withner's fourth book in his projected six-volume work titled *The Cattleyas and Their Relatives*. In this series, he surveys the members of the new world orchid subtribe Laeliinae that are most closely related to the genus *Cattleya*, which gives us the famous corsage-type blossoms that define the word *orchid* in the popular mind.

Volume IV of Withner's series is subtitled *The Bahamian and Caribbean Species*. In it, he presents the first monographic treatment of the little known West Indian genus *Tetramicra* since Alfred Cogniaux's study in 1909-1910.

Withner proposes a narrow species concept for *Tetramicra canaliculata*, echoing the belief of Sauleda and Hispaniolan orchid authority Donald D. Dod that this species in the strict sense is endemic to Hispaniola.

In other texts, the distribution of *Tetramicra canaliculata* is listed as Puerto Rico, the Virgin Islands, the Lesser Antilles — and the widely disjunct population reported from Florida.

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But Withner, from a "splitter" perspective, believes that those plants reported from places other than Hispaniola represent a near-twin sister species called *Tetramicra elegans* (Hamilton) Cogniaux. The differences between the species are relatively minor, and taxonomists of a "lumper" persuasion might argue that they are too insignificant to warrant separation into distinct species.

Withner summarizes Dod's concept of the way *Tetramicra elegans* differs from *Tetramicra canaliculata* in this manner:

> "*Ttma.* [=*Tetramicra*] *elegans* has yellow on the lip and stigma, the angle of the lateral lobes to the axis of the lip is more upswept, the leaves are more terete and elongated, and, when grown side by side, it flowers after *Ttma. canaliculata*."

The distinct yellow coloration on the lip in Luer's photographs of the Florida *Tetramicra* lead Withner to speculate that this plant may be *Tetramicra elegans* rather than *Tetramicra canaliculata*. He devotes an entire paragraph to the Florida *Tetramicra*:

> "*Tetramicra canaliculata* (or *Ttma. elegans*?) was also found in Jupiter, Florida, growing by the beach on low shrubs. The account is written up by Luer in *The Florida Orchidist* for 1970, and his photographs (Luer, 1972) show the telltale yellow on the lip. Some believe that the plant colony was the result of an escape from some Florida orchid collection, not a native species; or it could have been from a chance plant carried by a storm from the islands that are east of the Florida coast."

Fresh flowers seem to be a necessity for determining positive identification of our purported Florida *Tetramicra*. Vegetative characters alone would not be sufficient. Withner notes: "Both species grow in the same sorts of environments, and both vary in leaf shape and succulence according to the amount of sun, moisture, and humidity in a specific location." All of which indicates that distinguishing the two species from dried herbarium sheets must be extremely difficult.

In his 1995 *An Orchid Flora of Puerto Rico and the Virgin Islands*, Dr. James D. Ackerman treats the specimens from those islands as *Tetramicra canaliculata*, although he leaves open the possibility that *Tetramicra elegans* might be a valid name for those plants. But he wisely notes: "A field-oriented study is needed to clarify relationships in the group."

Based on Withner's view, the Florida *Tetramicra* plants may well represent *T. elegans* rather than *T. canaliculata* — if either of these plants ever existed naturally in the wild in Florida in the first place. The *Tetramicra* mystery continues.