

# Orchids in Costa Rica

## Part III: Rafael Lucas Rodríguez

BY CARLOS OSSENBACH

*“Those who dedicate too much time to orchids begin as orchidophiles, become soon orchidologists and end as orchidiots ...”*

— *Rafael Lucas Rodríguez, during a lecture, 1974*



F. PUPULIN

SCHLECHTER HAD GOOD REASONS to dedicate *Ramonia pulchella* to the small village of San Ramón, which with a population of barely 15,000, has produced more than its share of great biologists. Not satisfied with having Alberto M. Brenes and Guillermo Acosta among its prominent citizens, San Ramón gave birth in the early 20th century to one of the most respected figures of Costa Rica’s scientific world: Rafael Lucas Rodríguez Caballero (1915–1981).

During one of his first visits to Costa Rica, Robert Dressler visited Rodríguez in his office at the University of Costa Rica. As Dressler remembers, “After that, a visit to Costa Rica was incomplete without seeing ‘Don Rafa’, as friends and students called him. Quite aside from our mutual interest in orchids, I was at once impressed by his charm, his intellect and his linguistic skill.”

Rodríguez received his first lessons from his mother, Emilia Caballero, who was a teacher in his home town. After finishing elementary school, he moved with his mother to the United States, where he began his high school studies, which he later finished at the Liceo de Costa Rica, one of the best schools of the capital. His friends at school called him “El Sabio” (the wise man) because of his dedication to his books. He stayed at the same Liceo as an assistant for natural history, zoology and botany. Blessed by the muse of arts, he was also employed during those years in the workshop of the famous French sculptor Louis Ferón, where he developed his talents as a jeweler and illustrator. Years later he would design the great mural that Ferón crafted for the Golden Room in San José’s old airport building.

In 1942, shortly after the University of Costa Rica opened its doors, Rodríguez started his studies in biology at its School of Sciences, and in 1945 received a scholarship that allowed him to continue his specialization in plant systematics at the University of California at Berkeley. His teacher was Lincoln Constance, whose illustrious career at Berkeley spanned more than six decades and who wrote several years later: “Rafael was torn between a career as a professional biologist with strong interest in natural history or as an artist with a flair for graphic illustration. He was happiest when these interests coincided in the study of recurring patterns in living organisms.” Rodríguez’ doctoral dissertation was a comparative investigation of the Costa Rican tree *Myrrhidendron*, in relation to other woody Umbellales, profusely and beautifully illustrated by the author. This publication is still quoted widely, years after his death.

After returning to Costa Rica in 1953, Rodríguez was incorporated as a professor at the University of Costa Rica, where he was instrumental in the creation of a Department of Biology, and was appointed as its first director. Under his leadership, the department assumed custody of the University Herbarium (USJ), which had been founded in 1943. Today, the department, which has become the School of Biology, carries his name.

Rodríguez contributed enormously to the development of the studies of biology in Costa Rica and was one of the first editors of the prestigious *Revista de Biología Tropical* (Journal of Tropical Biology). Again through his



COURTESY UNIVERSITY OF COSTA RICA PRESS



F. PUPULIN

OPPOSITE ABOVE *Scaphyglottis pulchella*, which is also known under the synonym *Ramonia pulchella*. The specific epithet *pulchella* means beautiful.

OPPOSITE BELOW Front cover of *Géneros de Orquídeas de Costa Rica* showing one of Costa Rica's most beautiful orchids, *Cattleya dowiana*.

TOP LEFT The center of the village of San Ramón with the Municipal Building. 1925.

TOP RIGHT Rafael Lucas Rodríguez (1915–1981): artist, scientist and gentleman.

ABOVE *Maxillaria rodrigueziana*.

LEFT *Maxillaria rodrigueziana*, painted by Rafael Lucas, who thought it was *Maxillaria speciosa*.



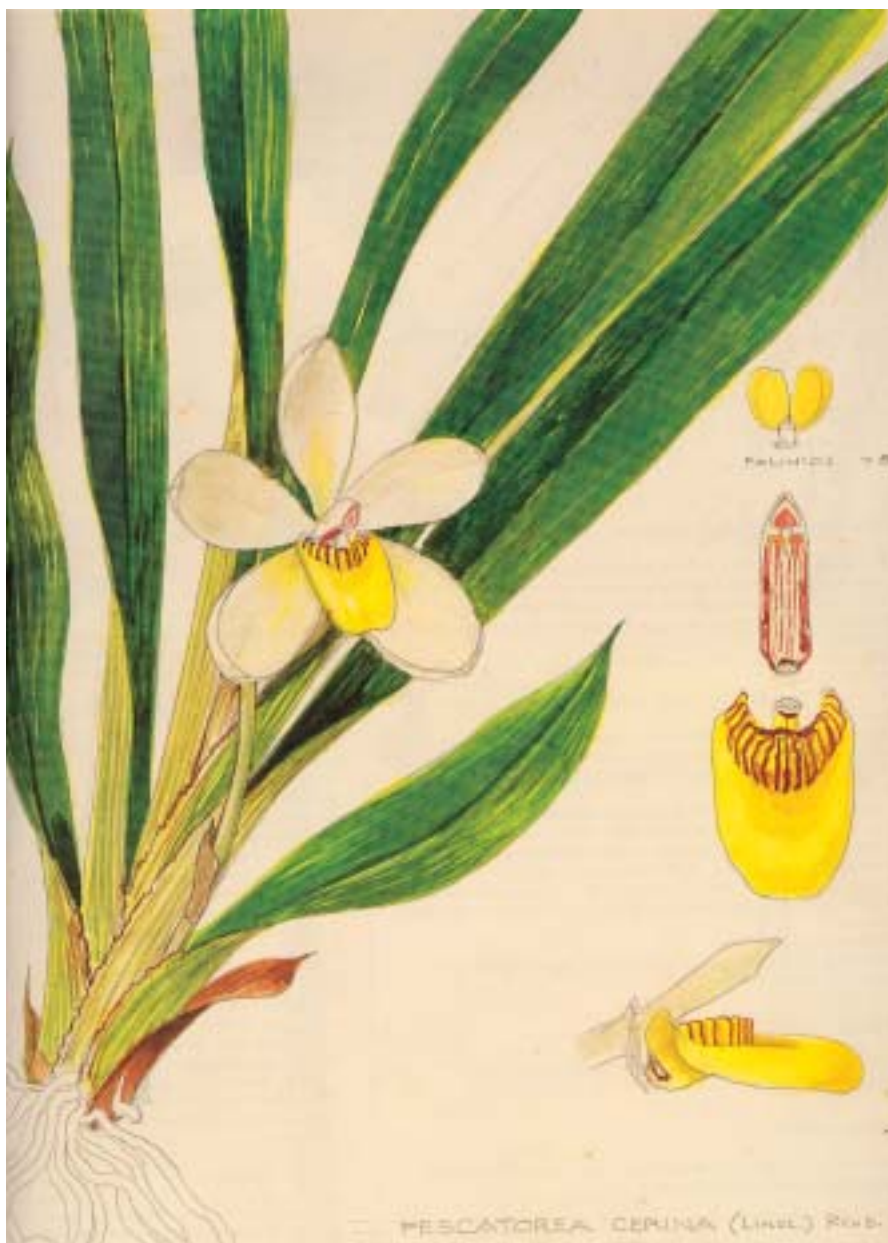
efforts, the first contacts between the University of Costa Rica and the Organization for Tropical Studies were established, a milestone in the history of nature conservation in the country.

A many-faceted man, Rodríguez was a leader of the Boy Scout movement in Costa Rica, a passionate stamp collector and he combined his teaching in biology with singing in the University Choir. As his friend and fellow artist Francisco Amighetti wrote, "Like many scientists and artists, Rafael Lucas Rodríguez had the privilege of maturing intellectually while still preserving his childhood spirit intact." Strongly interested in Orientalism, he believed in a theosophical interpretation of nature and intended to form his students not only as biologists but as true humanists. His passion for botanical illustration led him to organize a special course for the School of Arts, which he called "watercolor painting for biologists."

It was because of his reputation as a botanical illustrator that Rodríguez first became interested in orchids. One day in the early 1960s he was approached by well-known orchidologist Charles H. Lankester, who asked him to produce an illustration from a live orchid: it was a specimen of *Pescatorea cerina* (Lindl. & Paxton) Rehb. f., which became the first of a large number of beautiful orchid watercolors.

As Constance said, his paintings were "artistically gorgeous but scientifically accurate." Rodríguez began in 1966 his most ambitious project, a treatise with the title *Orquídeas del Istmo Centroamericano* (Orchids of the Central American Isthmus), a manuscript that unfortunately remains unpublished; large parts are still preserved in the archives of the Lankester Botanical Garden. It began with the words, in Rafael Lucas' characteristic calligraphy, "Central America is famous for the abundance and above all, the variety of its orchids."

It was for this project that Rodríguez began his series of illustrations, which reached the impressive number of 1,092. As Dressler recalls, as time went on, his skill increased and it was easy to see which were the older paintings and which newer. Then he changed to a larger format, with the intention of redoing all of the earlier paintings, as flowers



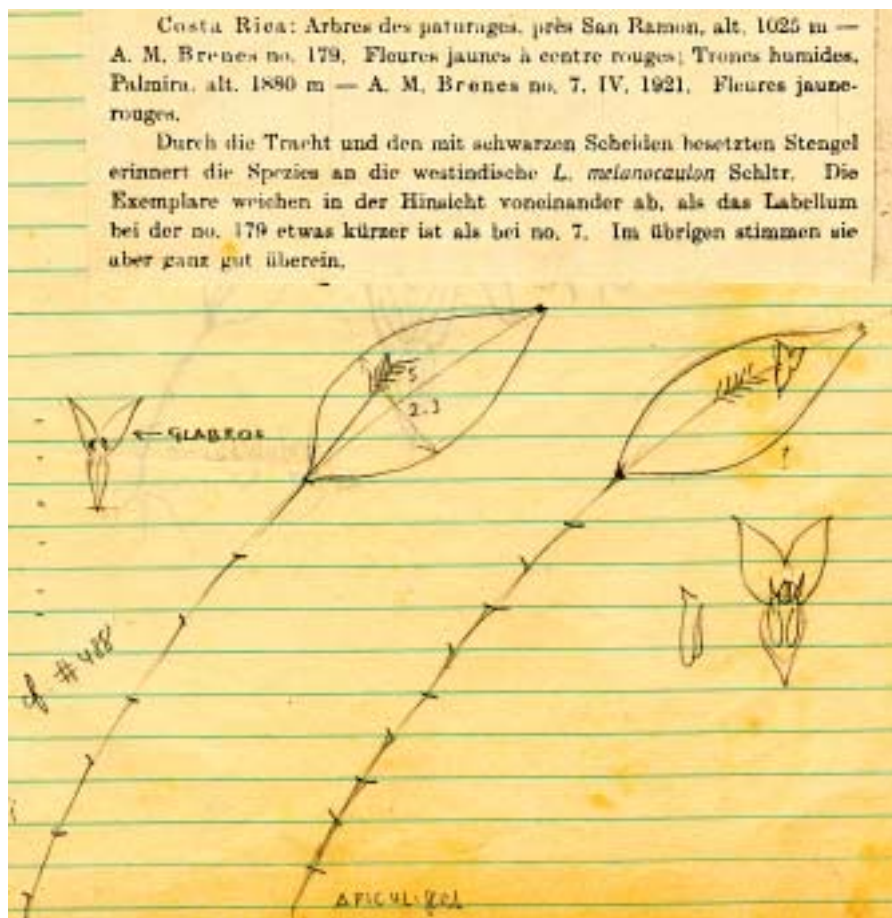
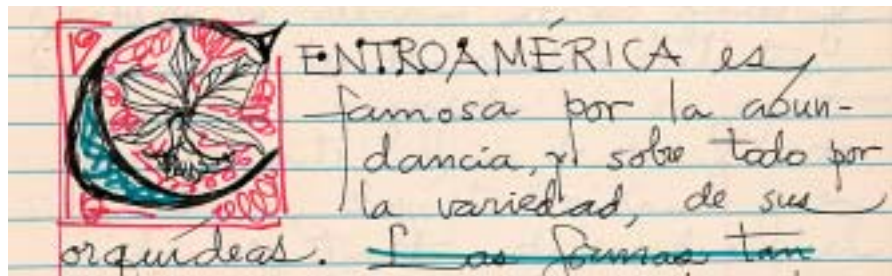
became available. However, many of the illustrations remained unfinished at the time of his death.

What Rodríguez lacked, however, was a good hand at cultivating orchids. As Dressler says, "He didn't have a green thumb." His office was usually decorated with the dying remains of many plants that his friends had brought in for him to paint. Clearly, he was not a field botanist. Luis D. Gómez, one of his pupils, tells us that he once had to drag his professor into the field to admire a tree that was laden with masses of flowering *Trisetella triaristella*.

It is not clear why Rafael Lucas did not publish his work. He might have been a perfectionist, waiting to finish his series of paintings before committing anything to press; he might also, being a specialist in other plant families, have felt somewhat insecure about Orchidaceae. According to L.D. Gómez, don Rafa always complained about the lack of literature, reference collections and time to travel and study type specimens. He never stopped studying: his notebooks are full of annotations and sketches, and he often pasted a photocopy of the original description of a species next to one of his detailed pencil sketches.

In 1969, members of the Latin-American Committee of Orchidology proposed to Miguel A. Ramírez the idea of founding a Costa Rican organization that should unite all those interested in the cultivation and conservation of orchids. Ramírez responded with enthusiasm and found immediate support from Rodríguez, Dorothy Lankester (daughter of Charles Lankester, who had recently passed away) and Roy Lent. The first meeting of the group was held in a classroom at the School of Biology of the University of Costa Rica on May 16, 1970, and in July of that same year the Costa Rican Orchid Society (Asociación Costarricense de Orquideología, or A.C.O.) was officially constituted, with Miguel A. Ramírez as its first president.

And here the links of this four-part story can be easily understood: it was Schlechter's attempt to monopolize the study of Costa Rican orchids that brought Oakes Ames into the picture; Ames looked desperately for local collectors to work for him and so found Charles Lankester. It was Lankester who seduced Rafael Lucas Rodríguez into the world of orchids when he first



asked him to paint *Pescatorea cerina*. And it was one of the main purposes of A.C.O. to save El Silvestre, the orchid garden of Charles Lankester and Rafael Lucas Rodríguez that made the international contacts and organized a network of institutions that eventually provided the funds to buy the property and donate it to the University of Costa Rica. On March 2, 1973, Rodríguez had the satisfaction of giving the opening address during the official inauguration of the Lankester Botanical Garden.

In 1975, the first Central-American Orchid Show, organized by A.C.O., was held in San José. The Costa Rican Postal Office issued a commemorative set of stamps whose designs were made by Rafael Lucas.

Rodríguez was not only a great biologist and a convinced humanist, he

OPPOSITE TOP LEFT Commemorative stamps of the First Central-American Orchid Show (1975) designed by Rafael L. Rodríguez (clockwise from upper right):

*Peristeria elata*, *Rhyncholaelia* (syn. *Brassavola*) *digbyana*, *Miltoniopsis* (syn. *Miltonia*) *roezlii* and *Lycaste skinneri* fma. *alba*.

OPPOSITE TOP RIGHT Rafael Lucas, in his office at the University.

OPPOSITE This watercolor of *Pescatorea cerina* was the first orchid illustration by Rafael Lucas Rodríguez.

TOP The opening paragraph of the manuscript of *Orquídeas del Istmo Centroamericano* by Rafael Lucas Rodríguez.

ABOVE A pencil sketch of *Lepanthes turialvae* (syn. *brenesii*) in one of Rafael Lucas' notebooks, next to a copy of Schlechter's original description (fragment).



**Watercolors by Rafael Lucas Rodríguez**  
(from the book *Géneros de Orquídeas de Costa Rica*)

- 1 *Acineta chrysantha*. There are perhaps 15 species in this genus, all native to tropical America, from southern Mexico to Peru.
- 2 *Hexisea bidentata* is one of the few orchids pollinated by hummingbirds.
- 3 *Myrmecophila* (syn. *Schomburgkia*) *tibicinis*. Among the Mayans, the pseudobulbs of this species were used as trumpets and flutes. Bateman, in 1838, called this plant *Epidendrum tibicinis*, referring to the Latin word *tibicen* (= trumpeter).
- 4 *Restrepia trichoglossa* (syn. *subserrata*), one of the many species discovered near San Ramón.
- 5 *Stenorrhynchos speciosum*, including precise details of a dissected flower.
- 6 *Dryadella guatemalensis*, a beautiful miniature, was originally described by Schlechter from Guatemala, under the name *Masdevallia guatemalensis*. Today it is known from southern Mexico through Colombia.
- 7 *Ponthieva brenesii* with microscopic details of the pollinia.
- 8 *Cattleya* (syn. *Guarianthe*) *skinneri*, Costa Rica's national flower.

2

3

4



5



6



7



8

was also a man of charm and humor. Dressler, his friend and admirer, remembers an episode that describes vividly Rafael Lucas' character, "In one major botanical congress, we learned that Dr. Rodríguez was to present an after-dinner speech on recent advances in algology. None of us knew him to be interested in algae, and there was much speculation on the subject of the speech, but Don Rafa smilingly evaded all leading questions. When the time came, the speech had little to do with algae. Rather, he went back to the Greek, *algos* = pain, and laid the foundations for a new science, the study of pain and more specifically, the pain caused by sitting on hard chairs in classrooms and auditoria, listening to poorly prepared, or overly long lectures illustrated by blurry or upside-down slides. The talk was charming, erudite and very funny. No one suffered the slightest pain on that occasion."

In 1977, Rodríguez was awarded the highest academic honor of the country: the Magón, National Award for Cultural Achievement, as a recognition of his extraordinary contributions to botanical science. In the same year, the lagoons of Palo Verde, in the province of Guanacaste, were declared as a Wildlife Refuge under the name Refugio Nacional de Fauna Silvestre Rafael



Lucas Rodríguez Caballero. (Today, this is part of Palo Verde National Park.)

On some occasions, Rodríguez painted orchids without realizing that they were species new to science, and these were later dedicated to him. This was the case with *Epidendrum rafaellucasii* Hágsater, *Lepanthes rafaelliana* Pupulin, *Masdevallia rafaelliana* Luer and *Maxillaria rodrigueziana* J.T. Atwood & Mora-Ret.

Shortly before his death, in 1980, his paintings were exhibited at the National

Museum in San José and at the Marie Selby Botanical Gardens in Sarasota, Florida. In 1986, the University of Costa Rica published a beautiful volume, authored by Dora E. Mora de Retana, María E. Barahona and Norris H. Williams, with some texts from Dr. Rodríguez, featuring 143 of the most beautiful orchid paintings by Rafael Lucas, under the name of *Géneros de Orquídeas de Costa Rica* (Costa Rican Orchid Genera).

Rafael Lucas Rodríguez died on January 29, 1981, after a long illness. We leave the final words to Francisco Amighetti, Robert Dressler and Rudolf Jenny, who wrote, "A good man in the broadest sense of the word ... [his paintings] are a wonderful tool for anyone studying the orchids of Costa Rica, and their value will only increase as the availability of orchids in their natural habitat diminishes everywhere ... Dr. Rodríguez' death was a tragedy, and we can only imagine what he might have done with another ten or twenty years of life ... that charm and intellect that was Don Rafa can never be replaced ... An extraordinarily friendly person, a true gentleman and artist."

Unfortunately, only about 150 of Rafael Lucas Rodríguez' 1,092 illustrations were recovered by the University of Costa Rica, mainly those that were used for the publication of his book. The rest remained in the hands of his family. The largest part of the legacy of Costa Rica's most important orchid illustrator is therefore still unknown to the scientific community.

#### Acknowledgments

To Luis Diego Gómez, Rudolf Jenny and the archives of the Lankester Botanical Garden, for their valuable information. To Franco Pupulin for his photographs.

#### References

- Jenny, R. 2005. *Rafael Lucas Rodríguez Caballero, Gentleman, Wissenschaftler und Künstler* (in ed.).
- Morales, C.O. 2003. El botánico y artista Rafael Lucas Rodríguez (1915–1981); reseña de su vida y su obra. *Lankesteriana* 7:159–164.
- Ossenbach, C. 2003. *Breve Historia de la Orquideología en Costa Rica*. Editorial de la Universidad de Costa Rica.
- Pupulin, F., and Ossenbach, C. 2005. *Orchidology in Costa Rica*, in Pp. xi–xxx, Pupulin et al. *Vanishing Beauty, Native Costa Rican Orchids, Vol. 1*. University of Costa Rica Press.
- Rodríguez, R.L. 1978. An overlooked species of *Odontoglossum* from Central America: *Odontoglossum hortensiae* Rodríguez. *Orquídea* (Mex) 7(3):145–154.
- Rodríguez, R.L., Mora, E. E., Barahona, M. E.

## Rhynchostele hortensiae

"THE species is named in honor of my wife, Hortensia Sevilla-Alvarez de Rodríguez, as a tribute of love and gratitude on the tenth anniversary of our wedding." With these words, Rafael Lucas Rodríguez began his description of an endemic orchid of the mountains of Costa Rica, described by him as *Odontoglossum hortensiae* in 1979 (see illustration and photograph on opposite page).

As Lincoln Constance wrote, a dedication to his wife that was produced by his talents as artist and scientist.

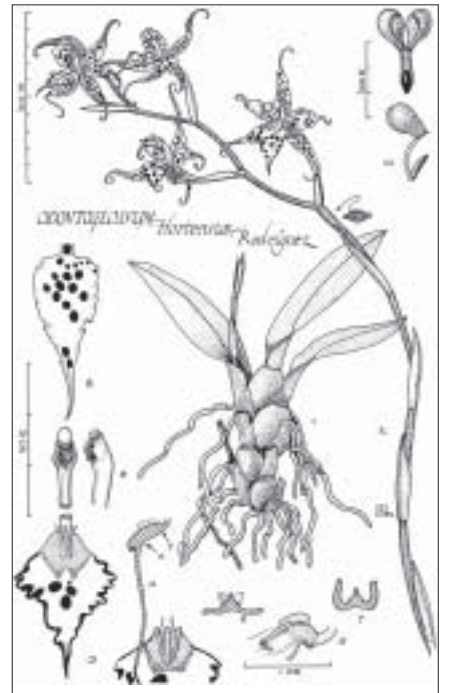
Rafael Lucas died less than two years later, and it would remain the only new species of orchid that he ever described. But it was undoubtedly worth the effort. It is one of the most beautiful of the 17 species in the genus *Rhynchostele*, with spectacular large flowers up to 2 inches (5 cm) in diameter. Endemic to Costa Rica, it grows at altitudes between 5,580 and 8,200 feet (1,700 and 2,500 m) in cool and humid conditions on the branches of the highest trees where it receives plenty of light. Because of the brown spots on petals and sepals it is popularly known as *tigrillo* (little tiger).

A relative of *Oncidium*, its name was changed in 1983 by Federico Halbinger to *Cymbiglossum*, one year later, again by Halbinger, to *Lemboglossum* and finally, in 1993, by Soto Arenas and Salazar to *Rhynchostele*, where we hope it will remain for a while.

Following the advice of Harry Zelenko, smaller plants of the genus *Rhynchostele* should be grown in pots with a bark seedling mixture, while larger established plants will do better grown on cork slabs with a small amount of moss placed below the plant, covering the roots. Cool to intermediate conditions in light shade should be provided, with humid, buoyant air and frequent watering when in growth, somewhat less so at other times. — *Carlos Ossenbach*.



F. PUPULIN



and N.H. Williams. 1987. *Géneros de Orquideas de Costa Rica*. University of Costa Rica Press.

Zelenko, H. 2005. Orchids in Art: *Rhyncho스테le hortensiae* (R.L. Rodríguez) Soto Arenas & Salazar. *Orchids* (AOS) 74(2):118-119.

*Carlos Ossensbach is a research associate of Jardín Botánico Lankester, University of Costa Rica. In 2003, he published for the University of Costa Rica Press a Brief History of Costa Rican Orchidology. He is preparing the 3rd International Orchid Conservation Congress (IOCC), to be held in San José in March 2007. Jardín Botánico Lankester, Universidad de Costa Rica, PO Box 1031-7050 Cartago, Costa Rica (e-mail caossenb@racsa.co.cr).*

OPPOSITE Rafael Lucas in a cartoon in *La Nación*, Costa Rica's largest newspaper, a few days after his death on January 29, 1981.

ABOVE *Masdevallia rafaelliana* was beautifully illustrated by Rafael Lucas in 1978 and officially described as a new species by Carlyle A. Luer, MD, the following year.

TOP RIGHT *Masdevallia rafaelliana*. ABOVE RIGHT *Rhyncho스테le* (syn. *Odontoglossum*) *hortensiae*, a loving dedication of Rafael Lucas to his wife Hortensia. Original botanical illustration by Rafael Lucas Rodríguez.

RIGHT *Rhyncho스테le* (syn. *Odontoglossum*) *hortensiae*.



F. PUPULIN