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HORTI SELBYANI

This issue of Selbyana *introduces a column entitled,* Horti Selbyani, *which is Latin for Selby Gardens or in a broader sense, for Selby growth. The column will appear occasionally with informative and entertaining essays by prominent scientists working in the fields of tropical botany and ecology.*

TWENTY YEARS OF BROMELIAD RESEARCH IN ECUADOR

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Numerous people talk about biodiversity in the tropics. As a botanist, I am frequently asked what I am doing to protect biodiversity. I typically respond that my most valuable and basic contributions are the three Ds—discovery, documentation, and dissemination of information for people who need to know what lives where. The three Ds are time-consuming but intellectually stimulating and essential for conservation. Tropical wet forests contain a high concentration of the earth's biodiversity, and there are not enough people available to go out and find it. We are always racing against the clock—actually, racing against bulldozers.

Questions frequently asked of tropical biologists include how many bromeliads are there? Or even more detailed questions such as, how many bromeliads occur in Ecuador? How many earthworms occur in Paraguay? How many ants are found on a single tree in Costa Rica? These kinds of questions are common, but when it comes to answers, we mostly do not know. We can make educated guesses, but these estimates frequently go down the drain once you take a closer look.

My research interest is the bromeliad family, whose members are restricted mostly to the neotropics. In 1980, I made my first trip to Ecuador. Among the varying habitats are some not particularly lush or luxuriant ones that include hot, dusty habitats and human-altered habitats such as a guava grove, where the bromeliad *Racinaea tandapiana* was discovered.

During the last 20 years, I have had the opportunity to describe a number of fairly showy species, many of which have been named after people who discovered them or were instrumental in their discovery or documentation. During the last decade, one of the most spectacular bromeliads to come to light was *Aechmea manzanaresiana,* named after José Manzanares of Quito, Ecuador. Another Ecuadorian interested in bromeliads, as well as other flora, is Jaime Jaramillo at the Catholic University Herbarium in Quito. *Guzmania jaramilloi* is named for him.

Of all the bromeliad genera in Ecuador, *Guzmania* probably has been expanded the most, as more explorations have taken place. Guzmanias are beautiful, spectacular plants. One of the problems with having a fondness for this genus is that most of the species, and nearly all of the big spectacular ones that visually knock your socks off only occur above 5000 ft. This makes these plants impossible to cultivate in Sarasota without special refrigerated growing conditions. If you want to see *G. squarrosa* in Sarasota you will have to be satisfied with a 2-dimensional herbarium specimen or a photo (FIGURE 1). Although the dried specimen may have very colorful notes, it certainly is not as attractive as the living, growing plant. I trust that a workable cool house will figure somewhere in the new

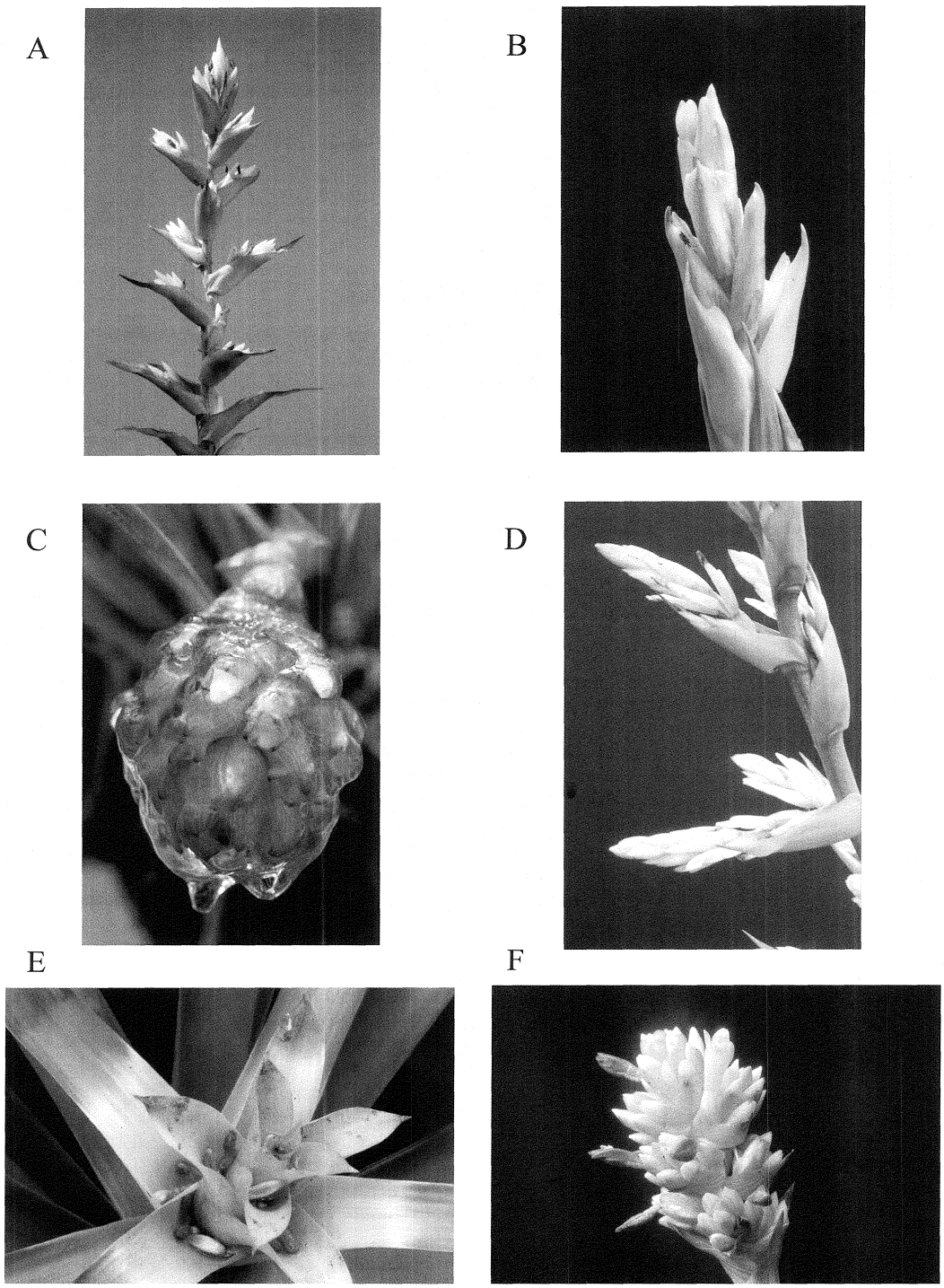

FIGURE 1. Guzmanias of Ecuador. **A.** *Guzmania rauhiana,* Ecuador and Colombia. **B.** *Guzmania fuquae,* a rheophyte. **C.** *Guzmania globosa,* northwest Ecuador. **D.** *Guzmania sieffiana,* northwest Ecuador. **E.** *Guzmania squarrosa,* widespread in the Andes. **F.** *Guzmania kentii,* northwest Ecuador. Photos by Bob Wands (A), Vern Sawyer (B, D, E, F), and Saundra Williamson (C).

development and long-range plans for Selby Gardens.

The following are other guzmanias of note, with an emphasis on Ecuador (FIGURE 1).

Guzmania sieffiana. This plant is named after my long-time administrative and research assistant, Edna Sieff. Although not present at the discovery, she has put in approximately 40,000 volunteer hours.

Guzmania fuquae. Semi-aquatic, it grows on boulders along rivers and streams and, during parts of the year, is submerged. This plant was named for the Fuqua family, who substantially contribute to the Atlanta Botanical Gardens and who sponsored the collecting trip during which the discovery occurred.

Guzmania hirtzii. It seems to grow only on large trees high above the ground and is known from a half dozen museum collections. The reason for its fairly recent description, some 10 years ago, is most likely the difficulty in reaching this epiphyte. In the field, you see many interesting plants at eye level across a valley, across a stream, and up the other side of a hill. Looking for something new requires a lot of walking and a lot of looking. Uncounted are the falls taken, because I was looking up a hillside or at a tree crown and not paying attention to the location of my feet. It is easy to kind of wonder, well, maybe I will find something new up the road on this side of the river or down the road—sometimes you do, sometimes you do not.

Guzmania globosa. This bromeliad, which grows in northwest Ecuador, has an inflorescence that is an oddity encased in clear mucus. Apparently the mucus that coats the inflorescence helps to protect the developing flowers from pathogens.

Guzmania kentii. I named this plant in honor of the discoverer, Jeffrey Kent, owner of a large bromeliad nursery in California.

Guzmania rauhiana. This species is still known from only two collections separated by several hundred miles (one in Ecuador, one in Colombia). Nobody is out there doing the fieldwork to fill in the distributional mysteries.

Many new species are far from inconspicuous and ugly. *Guzmania claviformis* is 6 ft. tall with bright red floral bracts. The latest species new to science (2001) is *G. farciminiformis* from southeast Ecuador. After a while, a plant explorer runs out of names for new plants. The developing inflorescence resembles a sausage, hence the name.

Going back to an earlier question, how many bromeliads occur in Ecuador? In 1972, A.J. Gilmartin published a monograph on Ecuador's bromeliads that recorded 12 genera and 249 species, among them a considerable number of new records for that country. In the 1977 *Flora Neotropica Monograph 14, Part 2: Tillandsioideae,* L.B. Smith and R.J. Downs noted 13 genera and about 300 species. My bromeliad chapter in the 1999 *Catalogue of Vascular Plants of Ecuador* enumerated 18 genera and 440 species. The print media cannot keep up with the latest taxa counts. The other day, I was looking at the Mulford B. Foster Bromeliad Identification Center database, which contained records for 460 species. Today at noon, there are probably 463 species.

ABOUT THE AUTHOR. Since 1978, Harry Luther has directed the Mulford B. Foster Bromeliad Identification Center at the Marie Selby Botanical Gardens. The BIC, named in honor of a leading bromeliad collector, is supported by local, national, and international bromeliad societies. Since 1979, Luther has been taxonomist and curator of Bromeliaceae at Selby Gardens and greenhouse manager and curator of living collections since 1980. He is working on Bromeliaceae for the Flora of Ecuador and on *Aechmea* and *Tillandsia* monographs. Author and lecturer, he serves on the *Selbyana* Editorial Board and writes on new taxa for *Selbyana* and other journals. He also contributed to the National Science Foundation Systematics Agenda 2000 report as a member of the National Resource Management Committee. This essay is based on a slide lecture delivered by the author at the Expeditions Seminar held in January 2001 to mark the Silver Anniversary of the Marie Selby Botanical Gardens.

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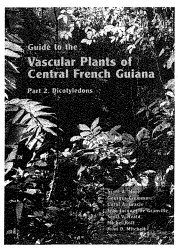
BOOK REVIEW

With this issue, *Selbyana* introduces a Book Review section to inform readers of new and noteworthy publications. Readers are invited to suggest titles for review. Book reviews will appear occasionally, as titles of interest become available.



GUIDE TO THE VASCULAR PLANTS OF CENTRAL FRENCH GUIANA PART 2. DICOTYLEDONS

SCOTT A. MORI, GEORGES CREMERS, CAROL A. GRACIE, JEAN-JACQUES DE GRANVILLE, SCOTT V. HEALD, MICHEL HOFF AND JOHN D. MITCHELL

2002. 776 p., $150.00. Hardback. 128 color plates, 326 black & white figures. Glossary. Index to Scientific Names. The New York Botanical Garden Press. Memoirs of the New York Botanical Garden Vol. 76, Part 2.

We are a very long way from Kansas. One of the first botany textbooks I ever had was already badly antiquated, having been written in Kansas nearly a century earlier. It spoke of palms as rare and unimportant plants. The first book of this flora, Vol. 76, Part 1, by Mori and coauthors, published in 1997, covered the palms, other monocots, ferns, and gymnosperms; and thus the present book, Vol. 76, Part 2 deals with dicots.

Floras have several uses, such as a tool for identifications and a learning device to broaden our knowledge of plants. Any work put together by many authors, covering a large, poorly known tropical flora, must have some unevenness. It is a tribute to the authors and editors of the present work that this professional and attractive work hides any such problems very well. The plants are strange to most of us, even if we think we have knowledge of other parts of the Neotropics. We like to think of Neotropical plants as having a unity, the familiar families, genera, even the many species likely to show up in Florida, Mexico, Brazil, or Costa Rica. Add a rich dose of local endemics in the same alliances. These dicots of French Guiana, however, can be surprisingly different. A casual impression is that they often deviate in their fruits.

The flora covers 112 families of dicots (counting legumes as three), with 1483 species. Some are introduced weeds, but not many, since the region tends to be mostly rain forest. Several families that are more or less standards to north temperate botanists play minor roles. For examples, see Apiaceae, Brassicaceae, Caryophyllaceae (limited to one weed in stark contrast to Europe), Rosaceae, Lamiaceae, Campanulaceae, and Malvaceae. Asteraceae has only 21 genera. Ericaceae, with three genera of one species each, is a shock, as compared to those in Costa Rica, India, or Florida. Lauraceae is well represented, as one might expect, but Persea is missing. Not even a stray avocado tree?

Nurserymen, weed-control people, and average gardeners in Florida will be surprised at one Asteraceae, *Sphagneticola trilobata* (L.) Pruski. It is none other than what we all know too well as *Wedelia trilobata* (L.) Hitchc. Not a sphagnum lover, it thrives in high alkalinity and salt; but a plant name is a label, nothing more.

It would be nice to test the keys and other ID aids with preserved samplings of this flora. Since this is not immediately feasible, I can only say that wordings seem cleancut and well contrasted. Most characters are the sort that can be easy to see and compare. It is obvious that careful professional thought went into the construction of the keys. The illustrations, both photos and drawings, are also well done, well chosen, and attractive. Lest some readers think that all this good work ought to be just what is expected in a flora, one had best correct "expected" to "hoped for," but not invariably achieved.

We are indeed a long way from Kansas, on an adventure through the French Guiana rain forest.

—John Beckner, Curator, Orchid Identification Center, Marie Selby Botanical Gardens, 811 South Palm Avenue, Sarasota, Florida 34236-7726, USA.