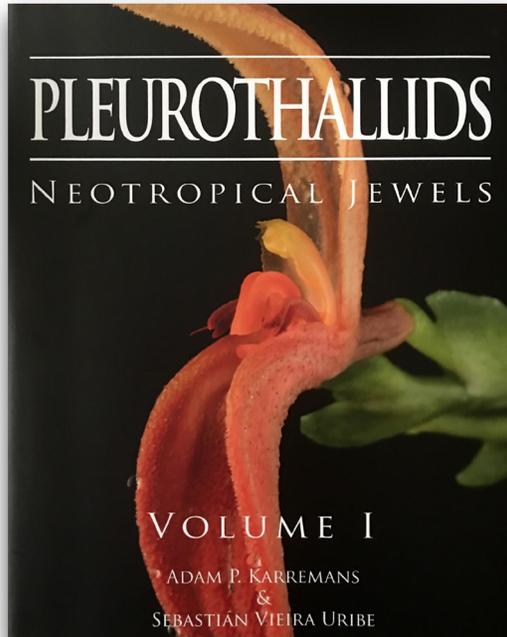


BOOKS

Pleurothallids. Neotropical Jewels. Vol. 1, by Adam P. Karremans and Sebastián Vieira-Uribe. Self-published, printed and bound by Imprenta Mariscal, Quito, Ecuador, 2020. ISBN 978-9942-38-400-3. *In quarto* volume (23.0 × 28.5 cm), 312 + vii pages, about 1,000 color photographs, 14 halftones, 1 line drawing. Hardbound with dust jacket. Price (including shipping): US\$128 North America and European Union; \$121 Central and South America; \$138 elsewhere. Ordering: <https://orchilibra.com/posts/shop>



Years of research, writing, editing, publications, and painstaking macrophotography underpin this spectacular debut volume of *Pleurothallids: Neotropical Jewels* by Adam Karremans and Sebastián Vieira Uribe. Adam is currently Professor at the University of Costa Rica and also Director of Jardín Botánico Lankester. Sebastián is Executive Director of Corporación SalvaMontes Colombia, editor of the long-running journal *Orquideología*, co-editor (with Adam) of the serial monograph *Species Orchidacearum*, and researcher at Jardín Botánico Joaquín Antonio Uribe in Medellín, Colombia. Their combined expertise and skills have produced an outstanding synopsis of 17 genera of subtribe Pleurothallidinae and the two genera in Dilomilinae (*Dilomilis*, *Neocognauxia*) in this first of four projected volumes.

The pleurothallid genera treated here are *Acianthera*, *Anathallis*, *Andinia*, *Andreettaea*, *Chamelophyton*,

Echinosepala, *Gravendeelia*, *Lankesteriana*, *Luerella*, *Muscarella*, *Myoxanthus*, *Ophidion*, *Phloeophila*, *Porroglossum*, *Pseudolepanthes*, *Pupulinia*, and *Specklinia*. For each of these genera, some monospecific (e.g. *Andreettaea*) and others with as many as a few hundred species (e.g. *Acianthera*), the authors provide its nomenclatural history and discuss etymology, circumscription, distribution, and ecology. Notes on identification, pollination, and/or taxonomy are included for some genera as well. Fourteen plates of scanning electron micrographs of floral surfaces illustrate features such as hairs and glands, some of which may have a role in attracting pollinators.

Lumpers may feel that some genera are too finely split, while splitters may rail against the lumping in other genera. In most if not all cases there are sound molecular data and/or morphological characters that can be adduced to support either viewpoint.

Differences these days are in the interpretation of those data, and those interpretations may well change as additional evidence springs from new technology, new discoveries in the field, and fresh human viewpoints. We need to remember that systematics of all organisms – from bacteria, algae, and fungi up to birds and mammals and orchids – is never static. If it were, that would mark the end of science as we know it.

Prior to the generic treatments is one for the subtribe as a whole with nomenclature, etymology, and a summary of systematics work beginning with Carlyle Luer's monumental contributions and ending with recent DNA studies. Immediately following that is a welcome chapter on vegetative morphology, thoroughly illustrating wide variations in habit, rhizomes, stems ("ramicauls"), and leaves in full color. Just to assemble the mosaic of images in each educational plate must have required hours and hours.

The photography throughout is stunning, and as anyone who attempts macrophotography knows all too well, it is one thing to produce focused images of tiny flowers (some only a few millimeters across) and quite another to illuminate them evenly with acceptable depth of field and not end up with what resembles either a supernova or else a black hole. The 100+ photographers who contributed their work to this

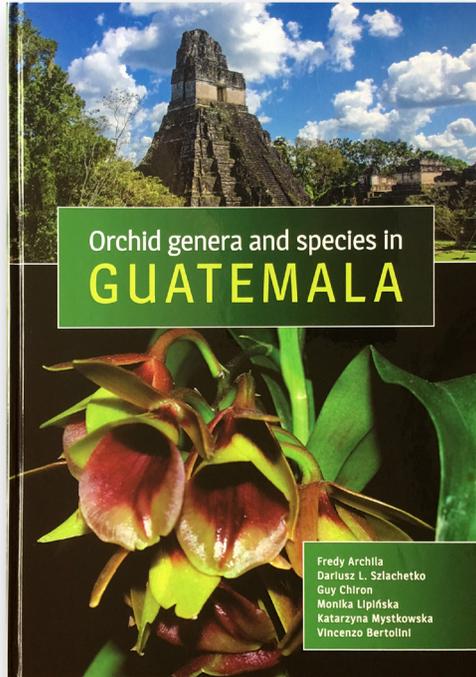
volume generally succeeded in navigating through this Scylla-Charybdis peril; however, a few photos are clearly underexposed and disappointing. Let no one refer to this as a "coffee-table book," which has disparaging connotations. The extreme close-ups are beautiful, yes, but they succeed in demonstrating the wide range of variation within and among genera. They also have diagnostic value, which will be helpful beyond measure for non-scientists trying to identify their plants but cannot decipher and visualize technical written descriptions in scientific journals (if such can be ferreted out).

I understand that volume 2 is scheduled for 2022 and will comprise treatments of *Draconanthes*, *Dresslerella*, *Lepanthes*, *Pabstiella*, *Platystele*, *Pleurothallopsis*, *Restrepiella*, *Teagueia*, and some monospecific genera. But for now this should be at the top of your holiday gift list for that pleurothallid aficionado in your midst.

Alec M. Pridgeon, Ph.D.

[Full disclosure: I was privileged to serve on Adam's doctoral committee many years ago at Leiden University, The Netherlands, and also invited to write the foreword for the volume.]

Orchid Genera and Species in Guatemala, by Fredy Archila, Dariusz L Szlachetko, Guy Chiron, Monika Lipińska, Katarzyna Mystkowska and Vincenzo Bertolini. Oberreifenberg, Germany, Koeltz Botanical Books, 2018. ISBN 978-3-946583-19-6. Large volume *in octavo*, 22 × 30 cm, 724 pages, 315 colour photographs, color maps. Bilingual in English and Spanish. Hardcover. 235,00 € (EU buyers); 223,81 € excl. vat (other buyers); 268,00 US\$.



I review this book only now, two years after its publication, because I realized that there is still no review available to the public, or at least none that I have been able to find.

As the book aims to present, in the first place, the genera of orchids registered in Guatemala, the text opens – after a short introduction – with a chapter dedicated to the age-old problem of “What is a genus?”. In the relatively short explanation, the bibliographic references are quite old (scientifically speaking), since they date back to 1988, that is, to an era preceding the advent of molecular taxonomy, so that the discussion centers on the number of characters useful for “calibrating” a genus. A large table gives a single example, comparing the morphological characters of *Trichosalpinx* and *Tubella*, and the key differences are summarized in a short three-step cladogram, but the data set used to build it is not indicated.

The chapter dedicated to the “Geographical Framework” discusses the geological origin of Guatemala, its physical geography and related life zones, and the climatic factors that contribute to the diversity of the orchids in the country are briefly outlined. Also in this case the bibliographic references are extremely limited and rather outdated, considering that the most recent specialized work cited dates back to over 20 years ago.

Then follows a long chapter dedicated to the historical background of orchidology in Guatemala, from the pre-colonial period, through the era of the colony and the botanical expeditions organized by the Spanish crown, to the period of independence, the liberal era and the contemporary age. It is intriguing that, in the historical review, there is no mention of the patient work carried out for many years by Carlos Ossenbach on Mesamerican orchidology. It is also intriguing that, in the chapter

on contemporaneity, only Standley and Steyermark (a short paragraph), Oakes Ames, Donovan Stewart Correll and Fredy Archila are mentioned, completely omitting the contributions of Margaret A. Dix (with her fundamental “Orchids of Guatemala: A revised annotated checklist”, published in 2000), Otto Mittelstaedt (1919–2000), Otto Tinschert (1915–2006) and Moisés Behar (1922–2015), among others.

In the chapter on orchid classification, the authors present their views about maintaining a subfamily Cypridiaceae (and questioning the monophyly of the remaining Orchidaceae, due to the sister relationship of Vanilloideae with Cypridiaceae+Orchidaceae), but this does not prevent them from including the treatment of the non-orchidaceous genera (according to their point of view) *Cypripedium* and *Phragmipedium* into a book devoted to the “orchids” of Guatemala.

For each genus, mention of the author, place of publication, and *typus generis* are given, plus a partial list of authors who have presented or discussed them. Given their unavoidable incompleteness, these references are chosen, in my opinion, in a completely arbitrary way. A full botanical description of the genus follows. In the family Orchidaceae, a key to the subfamilies is presented, with a number of taxa upon which there is large disagreement among contemporary scholars. The chapter with genera descriptions occupies some 280 pages, and also includes a number of genera which have traditionally received very limited recognition by other workers on the Orchidaceae. *Acropera*, *Ancipitia*, *Callistanthos*, *Dracontia*, *Encabarcenia*, *Habenella*, *Javieria*, *Orchidotypus*, *Stanhopeastrum*, *Zhukowskia*, and *Zosterophyllanthos*, are some of them. Under the Vanilloideae, besides the genera which belong to this subfamily according to all the most recent molecular analyses (included in tribes Pogonieae and Vanilleae), the authors insist in including also genera of the Calypsoeae, Neottiae, Sobralieae, and Triphoreae, which belong instead to the Epidendroideae,

In the Photographic Gallery (pp. 359–491), 315 color photographs illustrate 253 species (several are shown in more than one photograph) in 195 genera. The quality of the photographs is very variable, going from excellent (e.g., Photos 47, 79, 95, 147, 265) to barely readable (e.g., 80, 130, 140, 175, 181,

261, 299); on average, however, they are useful for identification purposes.

The Checklist of the orchids of Guatemala (pp. 495–717) is a catalogue of names with information on authorship, place of publication, type, and distribution (the latter frequently incomplete). No vouchers for Guatemala are however cited, unless those species typified by a specimen from that country. This is, in my opinion, the weakest part of the book. Modern catalogues (including that of Guatemalan orchids by Dix & Dix, 2000) necessarily include vouchers (and the herbaria where they are deposited) of the recorded species, as this is the only way to allow other scholars to check the application of names in complex floras. Without a voucher citation, the presence of a given taxon in the region under study remains relegated to the opinion of the authors (irrefutable, but certainly also unverifiable), who should rather – as it is customary in good science – present the evidence of their results, to support their taxonomic decisions.

I acknowledge my colleague Adam P. Karremans for pointing out that the catalogue of species includes several invalid names (e.g., *Lankesteriana glandulosa* Archila & Szlachetko, which lack a diagnosis; *Trichosalpinx cortezii* Archila, for which the herbarium where the holotype is kept was not specified; or *Tubella franciscantha* Archila, for which the author cited multiple specimens as type), and at the same time leaves out various species described by the authors of the book themselves (e.g., *Lepanthes any* Archila, *L. oroscoi* Archila, *Tubella cobanensis* Archila, and *T. tactiquensis* Archila).

A list of selected references (pp. 719–724) concludes the book. One cannot fail to notice the absence of a considerable number of works that are of daily use for those involved in the study of Mesoamerican orchid flora, and the presence instead of papers (such as Vermeulen’s monographs on the *Bulbophyllum* of continental Africa or the contributions to Mexican dipterology by Papavero and Ibáñez-Bernal) which would seem less central in a selected recopilation.

Since there is no an index of taxa, and since the authors frequently use rarely discussed and commonly unaccepted genera, tracking down some of the species can sometimes be a complicated job. I have searched far and wide a species of *Pteroglossa*

described by Archila as *P. claudiae*, and only by browsing the photographs I have been able to see that the authors of the book accept this species as a member of the genus *Callistanthos*. I must admit my ignorance, but in my excuse I point out the fact that this genus – that all major taxonomic databases treat as a synonym of *Pteroglossa* – was published in 2008 in a book of the Gdańsk University press (Rutkowski *et al.* 2008), which I venture to define of really limited circulation.

All in all, I found the book of limited utility to the knowledge of the orchids of Guatemala. The most significant contribution is undoubtedly constituted by the gallery of photographs, which presents many species (several originally described from Guatemala) that have rarely been portrayed and mostly in specialized literature. It is important to remind readers that not all the specimens illustrated in the gallery are native to Guatemala, as 25 of them have different provenances, mostly from Mexico and Brazil. The authors have correctly indicated the origin of the vouchers, together with the extended authorship of the photographs that portray them, in the photo credits on page 8.

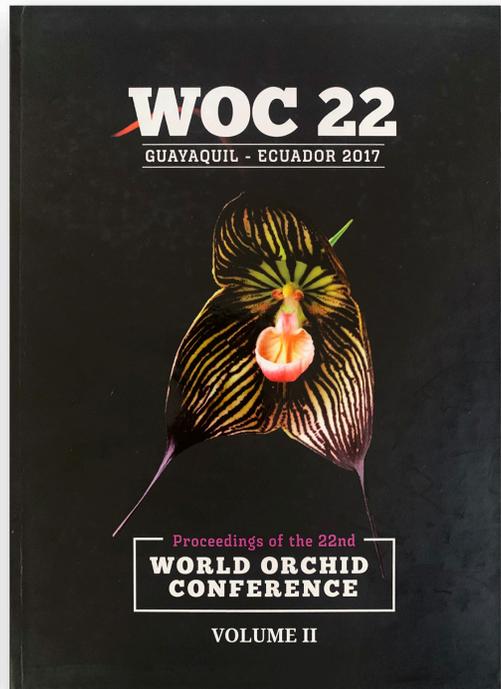
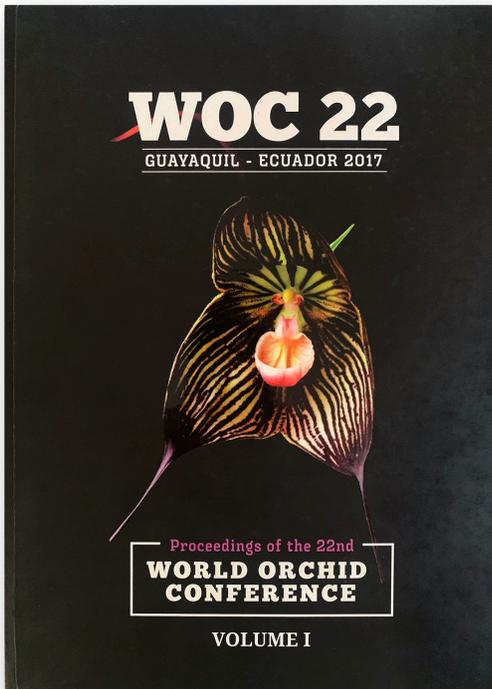
The *Camaridium* sp. illustrated on Photo 209 is arguably *Maxillariella alba*, whilst the *Camardium* sp. of Photo 210 is a species close to *C. punctostriatum*. The *Kefersteinia* in Photo 240 is not *tinschertiana*, which belongs to another group of species, but it is rather close to *K. wercklei*, of section *Umbonatae*, or an undescribed species. Finally, the Photo 275 do not corresponds to *Cohniella cebolleta*, but to *C. ascendens*.

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- Dix, M. & M. Dix. 2000. Orchids of Guatemala. *Camridium* sp. of Photo 1a: A revised annotated checklist. Monographs in Systematic Botany from the Missouri Botanical Garden 78: 1–61.
- Rutkowski, P., D. L. Szlachetko & M. Górniak (eds.). 2008. *Phylogeny and taxonomy of the subtribes Spiranthinae, Stenorrhynchidinae and Cyclopogoninae (Spirantheae, Orchidaceae) in Central and South America*. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk, Poland. 348 pp.

Proceedings of the 22nd World Orchid Conference, Guayaquil, Ecuador, 2017, edited by Alec M. Pridgeon and Arcadio Arosemena R. Asociación Ecuatoriana de Orquideología, Ecuador, 2019. ISBN 978-9942-8765-1-5. Two volume set. Volume 1: 466 pages. Volume 2: 405 pages. Hardbound. Price unknown.



Publishing the Proceedings of World Orchid Conference in the form of a book is something of a WOC tradition. Since the first edition held in Saint Louis in 1954, and for over sixty years, this Conference has gathered in its Proceedings the salient events, the most spectacular plants and the scientific conferences presented by scholars and enthusiasts brought together from all over the world, with the only notable exception of the South African edition of Johannesburg of 2014, for which the proceedings were never published. From a logistic and economic point of view producing them has become evermore challenging. The proceedings may not be a priority for certain authors and institutions, thus compiling and financing them can prove to be quite a task. Nevertheless, the contents of WOC Proceedings are usually highly representative of the current state of knowledge, and a “who is who”, in orchid science, and therefore may prove very useful. In addition, the quality and finesse with which editors Alec M. Pridgeon and Arcadio Arosemena R. have

produced the *Proceedings of the 22nd World Orchid Conference*, held in Guayaquil, Ecuador, in 2017, is certainly noteworthy.

The 22nd WOC *Proceedings* is divided into two volumes. Volume I begins with a dedication to Arcadio Arosemena G., Marcelo Bejarano G. and Max Konanz M. “whose collective dream it was to host a World Orchid Conference in Guayaquil”, followed by a foreword presenting professor Rapee Sagarik (1922-2018) from Thailand, who was scheduled to give a talk at the conference but was unable to travel due to his ill health. Additional non-scientific elements include several messages, acknowledgements, photographs of the different events and exhibits, awards, a conference report, and a list of exhibitors and vendors. However, the largest part of Volume I is made up of 41 scientific papers that are divided into four sections: Plenary papers; Symposium on Andean Orchids; Symposium on Vanilla, and; Systematics. The scientific portion of the inaugural volume begins with three Plenary

papers by the world-famous orchid gurus: Mark W. Chase, James D. Ackerman and Michael F. Fay.

The Symposium on Andean Orchids section compiles ten papers mainly dealing with conservation, diversity, and patterns of distribution of orchids in the Andean countries of Colombia, Ecuador and Peru. Ten more papers make up the Symposium on *Vanilla*, which includes works on conservation, diseases, distribution, genomics, mycorrhizal relationships, sustainable farming and systematics, focused on the queen of all orchids. The largest section with 18 papers is Systematics. This includes relevant works dealing with a great diversity of subjects such as anatomy, biogeography, hybridization, genetics, phylogenetics, phylogenomics, pollination, and species richness. Among the genera specifically treated are *Cattleya*, *Dendrobium*, *Epidendrum*, *Lepanthes*, *Liparis*, *Odontoglossum* and *Phragmipedium*; while countries or regions covered include Australasia, Colombia, Costa Rica, Mexico, Southeast Asia.

Volume 2 includes an additional 35 papers divided into three additional sections: Ecology; Conservation Science, and; Horticultural Science. The 11 papers in the Ecology section deal with subjects that include epiphyte biomass, floral rewards, floral scent, mycorrhizal associations, occurrence data, pollination biology and species distribution models. The nine papers in the Conservation Science section refer to a diversity of topics including conservation strategies, education,

in situ and *ex situ* conservation, micropropagation, reintroduction programs and the biology and ecology of rare and endangered orchids. The final 15 papers belong to the Horticultural Science section, which deals with subjects such as breeding, culture, hybridization, judging, name registration and tourism. The papers are followed by a rich Poster Abstracts section, which kick's off with the posters that were awarded. At the end of Volume 2 is a very practical Index of Authors, and a two page note dedicated to commercial grower Ecuagenera.

The *Proceedings of the 22nd World Orchid Conference* is an integral compilation of the most up-to-date state of orchid science and as such is an extremely useful source of information. From conservation to systematics, from horticulture to ecology, it includes studies on orchids from many different regions in the world, especially the Andes, Australia, Central America, Europe and Southeast Asia. The Editors, as well as the Organizing Committee of the Conference, have to be credited for publishing what is probably the largest volume of the WOC Proceedings ever, and to have done it in a timely way and with the utmost quality. The *Proceedings* of the WOC22 are a highly recommended reference for anyone working on the Orchidaceae worldwide.

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