

## Orchid Research Newsletter No. 44 (July 2004)

### Introduction

Taxonomy and conservation have always been intimately related. Unless you know where plants grow and what they are, you cannot formulate plans to conserve them. Great strides have been made in recent years to complete an alpha-taxonomic checklist of the world's orchids, and few countries are now devoid of a checklist or floristic account. The same could not have been said even ten years ago. The World Orchid Checklist (details in the last ORN), to which many specialists have contributed, is now on the web and is being widely used, but we would still appreciate corrections being sent to the compiler. It is proving an immensely useful tool, and a searchable version will shortly be made available on the Kew website.

The successful Second International Orchid Conservation Conference at the Marie Selby Botanical Garden in May 2004 was attended by 130 delegates from 22 countries. The programme was diverse and of a high standard. The attendance of so many postgraduate students and their excellent contributions was particularly encouraging and invigorating. Wes Higgins and the Selby staff are to be congratulated for providing superb facilities and an enjoyable ambience for the meeting. Readers will be able to see the contributions in a forthcoming issue of *Selbyana*.

I have recently been in Madagascar and China, both countries where conservation is a major issue because of large human populations and consequent loss of habitat. In Madagascar, the new government has given conservation efforts a higher priority, and the signs are promising that the rate of habitat loss will be reduced. However, habitats continue to suffer because of the continuing rapid rise in population numbers and the low standard of living with many people still dependent on the environment for their survival. In China, where population numbers are more stable, rising standards of living are the main threat. Areas that were remote and difficult of access ten years ago have now been opened up to tourism by major road-building programmes, hotel construction, and generally tidying up of the countryside. Nevertheless, the generation of substantial income from tourism in protected areas in China portends that many will survive.

Now that ORN is not distributed by conventional means and available only on the Internet, I would encourage readers to continue to send in information about their research and any other pertinent news for inclusion in the forthcoming issues (see below).

Karlheinz Senghas and Paddy Woods, two of the leading orchid taxonomists of the past few decades,

passed away this spring, a sad and significant loss for the small community of orchid specialists and to their many friends. – **Phillip Cribb**

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### News from Correspondents

We invite readers to send us changes of address (e-mail and snail mail), notice of recent publications, recently completed projects, current and future projects, and recent and future field trips for inclusion in this section of the *Orchid Research Newsletter*. Please send all news to Dr. David Roberts at [d.roberts@rbgkew.org.uk](mailto:d.roberts@rbgkew.org.uk).

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### In Memoriam

#### Fritz Hamer (1912-2004)

Fritz Hamer, the most prominent and maybe the only real expert on the orchids of El Salvador and Nicaragua during the second half of the 20th century, was the last of a long list of German collectors and scientists who played a relevant role in the history of Central American orchidology.

Hamer was born on 22 November 1912 in Hamburg, Germany, where he grew up and received his education in business in a Dutch-owned export company. In 1936 his company sent him to Venezuela and a year later to Guatemala, where the onset of World War II found him. He owned a farm that was confiscated by the Guatemalan government and in 1942 was repatriated to Germany, where he served in the Army during the campaign against Russia. At the end of the war he went back to Guatemala for a short period of time and established himself later in El Salvador, where he formed a successful company that imported and distributed auto parts.

His interest in orchids started relatively late in life. Around 1960, someone gave him a *Miltonia* that caught his artistic eye and led to his first orchid drawing. He began exploring the country in search of orchids, which he cultivated patiently, preparing photographs, illustrations, and descriptions. Hamer soon discovered the lack of adequate bibliography about the orchids of his adoptive country. After Standley's and Calderón's *Preliminary List of the Plants of El Salvador* (1925), in which 63 species of orchids in 28 genera were described, nothing else had been published about the orchid flora of the country. Motivated by this, Hamer began in 1971 the preparation of his fundamental work *The Orchids of El Salvador*, the first two volumes of which were published in 1974 by the Ministry of Education of El Salvador. In it 279 species in 67

genera were described. Social and political unrest, which led later to civil war, made Hamer abandon El Salvador and move to Florida, where he became part of the scientific staff of the Marie Selby Botanical Gardens. It was there where he published, in 1981, the third volume of his work, bringing the number of Salvadorian orchids to 362 species in 93 genera.

Alfonso H. Heller (1894-1973), an American of German origin, died of a coronary in 1973 while watering the garden of his large estate high up in the hills overlooking Managua, the capital of Nicaragua. Heller, who had studied the orchids of Nicaragua since 1957, left a truckload full of information on local orchids with drawings, descriptions, color slides, and specimens of dried plants of Orchidaceae, as well as a large and valuable library, which were donated by Christiane Heller to the Marie Selby Botanical Gardens, then under the directorship of Dr. Calaway H. Dodson. The donation was made with the understanding that arrangements would be made to use Heller's work for a publication. Dodson invited Hamer, who still resided in El Salvador, to have a look at Heller's material. Then there was another development. The Missouri Botanical Garden had committed itself to preparing a *Flora de Nicaragua*, in cooperation with the University of Managua, and Hamer was asked to take over the family of orchids within that *Flora*. With Heller's material as a base, Hamer visited the herbaria at Kew, the Field Museum in Chicago, the Escuela Agrícola Panamericana at "El Zamorano" in Honduras, at Managua and at the University of Michigan, finding that there was more material available from past expeditions to Nicaragua. Fascicle seven of the first series of *Icones Plantarum Tropicarum*, edited by Dodson, which contained the first 100 descriptions and illustrations by Hamer on the orchids of Nicaragua, was published in 1982. During the next years, Hamer published 500 additional plates for the *Icones*. Thus it was again Hamer who filled a void in the bibliography of the orchids of Central America. Since the doubtful '*Flora Nicaragüense*' of Miguel Ramírez Goyena (1909), in which 94 species were listed, nothing else had ever been published about the orchidaceous flora of that country. Between 1988 and 1990 Hamer published in the scientific journal *Selbyana* (Vol. 10 and 11) his *Orchids of Central America – an Illustrated Field Guide*, in which he reproduced all his illustrations of the orchids of the region, although without descriptions. The project of the *Flora de Nicaragua* of the Missouri Botanical Garden became finally a reality in 2001, and again it was Hamer, already 89 years of age, who authored the chapter on Orchidaceae, describing 587 species in 144 genera.

Hamer collaborated also with Dr. Carlyle A. Luer, translating into German the seven volumes of

*Thesaurus Dracularum* (1988-1994) and the first five volumes of *A Treasure of Masdevallia* (1996-2001).

During his life, Hamer published 14 new species and 9 new combinations of Orchidaceae. Other species were described based on collections by Hamer and dedicated to him: *Beloglottis hameri* Garay, *Pelexia hameri* Garay, and *Ponthieva hameri* Dressler. Hamer was married for 42 years to Hedwig Pfister, to whom he dedicated one of the new species he had discovered: *Maxillaria hedwigae* Hamer & Dodson.

He had three sons, one of which was murdered in 2003 by kidnappers in El Salvador. Overwhelmed by this tragedy, which cast a shadow over the last months of his life, Fritz Hamer passed away in Sarasota, Florida, on 13 January 2004. -- **Carlos Ossenbach.**

### **Dr. Karlheinz Senghas (1928–2004)**

On 4 February 2004, Dr. Karlheinz Senghas, former academic director of the University of Heidelberg's Botanical Garden, passed away in the early morning hours. Supported by internet and e-mail, this sad news has spread rapidly through the international orchid community.

After his studies and Ph.D. in 1960, he served as curator and scientific director of Heidelberg's Botanical Garden until his retirement in 1993. Professor Rauh persuaded him to take over the responsibility of the orchid section in 1960. Rauh believed that a single individual could not expand several collections and conduct scientific research at the same time (see *Journal für den Orchideenfreund* 4/2000, page 269).

Dr. Senghas was president of the Deutsche Orchideen-Gesellschaft from 1976-1978 and active in the society's editorial office. There he contributed to the society's journal, *Die Orchidee*, as co-initiator of the reliable orchid card files. These card files have been published from 1976 until today.

In 1962 he described his first orchid species, *Aerangis buchlohii* Sengh. He was responsible for more than 300 publications on orchids (see: <http://www.kurpfalzorchid.de/>). All of his studies and publications are respected at both the national and international levels. As a taxonomist and researcher in systematic botany, he established 17 new orchid genera and described 388 species.

Dr. Senghas was co-publisher and concluding editor of the third edition of the Schlechter manual *Die Orchideen* (four volumes and one register volume), adding up to 13 kg of books with more than 3000 pages! This is a manual for botanists, scientists, orchid enthusiasts, and commercial growers, an immense work

finally published after 17 years of preparation beginning in 1953.

Among orchid enthusiasts this opus, his life's work, is simply known as "Schlechter". But, it should or could be titled "Senghas", without disrespecting his co-author's merits, as he was the sole editor over the years of publishing, gave this manual his personal style, and brought it to completion. In his bilingual book *Orchids – Plants of Extremes, Contrasts, and Superlatives*, he gave an excellent overview of this large plant family. It was illustrated with colour photos of more than 500 species, many of them rare, which he documented during his scientific work at Heidelberg Botanic Garden.

He was known not only to the orchid people but to the general botanical and horticultural communities as well. He edited, revised, and enlarged *Schmeil Fitschen*, a flora of Germany, several times. This flora is studied by every German botany student. In his popular lectures and courses for beginners in botany, he always tested its functionality and so improved its easy use.

Dr. Senghas received many honours, such as the orchid genera *Senghasia* (*Journal für den Orchideenfreund*, 4/2003) and *Senghasiella* (*Die Orchidee*, 3/2003), the complex hybrid *Senghasara*, and the hybrid *Paphiopedilum* Dr. Karlheinz Senghas (*roebellini* × *Vanguard*), grown by Hilmar Doll. *Coryanthes senghasiana* was dedicated to him by Gerlach.

From its first issue, he was engaged in working for the Vereinigung Deutscher Orchideenfreunde's *Journal für den Orchideenfreund*. His first article in the journal described a new genus, *Cydoniorchis* (see issue 1/1994, pages 11 ff.). This premiere was followed by some 200 contributions, including about a hundred literature reviews, that Dr. Senghas made to 40 issues of *Journal für den Orchideenfreund*. This cooperative working relationship lasted ten years, as the first issue is dated 4 February 1994. Only a few days before his death we discussed issue 1/2004. For us as editor of *Journal für den Orchideenfreund*, leader of the Kurpfalz Orchid Group or curator and scientific collaborator, we lose a friend and "the orchid specialist" in Europe. -- **Roland Schettler** (Mittelcarthausen 2, D-58553 Halver, Germany); **Ingrid and German Senger** (Kreuzstr. 25, D-68753 Waghäusel, Germany); **Dr. Günter Gerlach**, Botanischer Garten München-Nymphenburg, Menzinger Str. 65, D-80638 München, Germany).

### Ellinor ("Nora") Freeman Dunsterville (1904-2004)

Nora Dunsterville, widow of G.C.K. ("Stalky") Dunsterville, passed away on 15 May 2004, just three

months short of what would have been her 100th birthday on 14 August. A chance meeting that began on a hockey field in Birmingham, England, led to marriage in Egypt in 1929 and eventually an unparalleled account of Venezuela's orchid flora until Stalky died on 26 November 1988.

In a partnership that spanned six decades, they explored the remotest tepuis of Venezuela, including Auyántepeui that inspired Arthur Conan Doyle to write *The Lost World*. They recounted their exploits for over 20 years in the pages of the *American Orchid Society Bulletin* and other journals, brimming with Stalky's magnificent photographs and drawings of orchid species and thrilling a generation of orchid growers vicariously. We were there when they found the only way to the summit of Auyántepeui through the so-called Access Crack, helicoptered to the tops of other spectacular tepuis, crawled unknowingly over pit-vipers, and paddled along often treacherous rivers in a dugout canoe. Their joy in discovering nature infected readers with a passion to cultivate orchid species. Nora was there to tell us how, a skill which Stalky attributed to training by her father, Bertram Freeman, who won several gold medals in England for his alpine plants.

From their base in El Hatillo southeast of Caracas they would use every free moment on weekends and holidays to climb into their jeep and explore the tepuis, rivers, and forests of Venezuela for orchids. Long before women's liberation became a movement, Nora would meet every challenge that Stalky did – being lowered by helicopter onto Cerro Autana, standing on the edge of the deep holes of Meseta de Sarisariñama, paddling down the Orinoco, surviving insects, snakes, thirst, cloudbursts, mud, and heat. In 1964, at the age of 60, she hiked up the boulders of the Access Crack with Stalky to the top of Auyántepeui, where Jimmy Angel's plane had landed without rising again in 1937. Nora filtered drinking water from bromeliads through rags for the expedition, "making it potable but producing a dreadful cup of tea," she later wrote.

Nora co-authored many of Stalky's 250 articles on orchids over four decades. They collected more than 1,055 species, which were described with Dr. Leslie Garay of the Oakes Ames Orchid Herbarium of Harvard University and illustrated in the six volumes of *Venezuelan Orchids Illustrated* and later in *Orchids of Venezuela: An Illustrated Field Guide*. In 1985 Stalky and Nora donated hundreds of their liquid-preserved specimens to the American Orchid Society. Several years later these (which included 23 holotypes) were transferred to The Marie Selby Botanical Gardens, where they were part of a restoration grant from the National Science Foundation.

Several species were named after both Stalky and Nora, such as *Epidendrum dunstervilleorum*, *Lepanthes*

*dunstervilleorum*, *Oncidium dunstervilleorum*, and *Stelis dunstervilleorum*. Nora is individually commemorated in *Lepanthes norae*, *Elleanthus norae*, *Notylia norae*, and *Stelis norae*. Both Stalky and Nora received Silver Medals from the American Orchid Society in 1987 for decades of service to the orchid world.

Nora's ashes were interred next to Stalky's grave in the cemetery in El Hatillo on 19 June 2004. They are survived by their daughters, Jennifer D. Fernández and Hilary D. Branch, along with many grandchildren and great-grandchildren. We send our sincere condolences and thank them for sharing such gifted individuals with the world for so long. – **Alec Pridgeon**

### Patrick Woods (1932-2004)

Patrick Woods, Paddy to his many friends, died peacefully on 28 May 2004 after a long illness. He is best known for his association with and work on Bornean and New Guinea orchids and gesneriads, passions stimulated by an expedition to the islands in 1962, more of which later.

Paddy was born on 3 July 1932 in Ballinderry, Northern Ireland, the middle of three brothers and the great-grandson of Thomas Smith, the founder of the renowned Daisy Hill nursery in Newry. He grew up on the outskirts of Belfast and attended a local primary school. Coincidentally, he had already established an early link with Scotland, having spent his seventh year in Glasgow. His leaving-present was Norman Macdonald's 1940 book, *The Orchid Hunters*, with its tales of derring-do set in South America. At the age of 11 he started his secondary education at Belfast High School.

After he left school he took up an apprenticeship at Mount Stewart, a famous garden on the Ards Peninsula, Strangford Loch (now a National Trust property). His early interests there were rhododendrons, conifers, and temperate trees and shrubs, but he also gained his first taste of orchids in the small but choice tropical orchid collection there. He entered the Edinburgh Botanic Garden in 1953 as a student on their three-year horticultural diploma course. Edinburgh had a fine orchid collection that had been developed and grown from 1911 until 1947 by Alfred Munday, a former employee of the famous Sander orchid nursery of St Albans. During this period, Sir Isaac Bayley Balfour, the Director, had worked closely with George Forrest, the famous plant collector in China. Consequently, a number of rare Chinese species survived in the collection, including the spectacular *Cymbidium wilsonii* (which fortunately still survives there), *Pleione forrestii*, and *Bulleya yunnanensis*, named after Forrest's patron A.K. Bulley, the owner of Bee's Nursery at Ness, Cheshire.

On successfully completing the diploma course in 1956, Paddy joined the herbarium staff as an

assistant to Mr B. L. "Bill" Burt, who is an authority on Old World Gesneriaceae. He originally helped with Burt's work on *Streptocarpus* and *Saintpaulia* but was asked to name Asiatic species, especially *Aeschynanthus*, which became a life-long interest.

In 1962, Paddy joined Bill Burt's expedition to Sarawak for five of the six months. They worked in the Gunung Mulu area before it was gazetted as a National Park. The later rediscovery in 1978 of *Paphiopedilum sanderianum* in the region by his good friend George Argent was received philosophically by Paddy, who must have been within metres of the discovery himself.

From Sarawak, Paddy visited Papua New Guinea at the invitation of Geoff Elworthy, a keen orchid grower who lived in Port Moresby. He was amazed at the diversity of New Guinea's orchids, currently estimated at over 3000 species. Many orchids were brought back as living plants for later identification when they flowered. This injection of fine species led to Edinburgh gaining a reputation for its expertise on New Guinea orchids, especially the brightly coloured, cushion-forming, high-elevation *Dendrobium* species of sections *Oxyglossum*, *Calypstrochilus*, and *Cuthbertsonia*. Dick Warren was inspired to start propagating these when Paddy introduced him to Edinburgh's collection of them several years ago.

Paddy embarked on a revision of the perplexing and variable species of *Dendrobium* sect. *Oxyglossum* with Tom Reeve, who lived for many years at Laiagam in the New Guinea highlands and undertook many expeditions to collect orchids for the Enga Province government orchid centre that he established at Laiagam. The resulting monograph that was published in 1990 is a model of its kind, accessible to both the professional taxonomist and orchid growers. Paddy was able to compare his collections with those of Rudolf Schlechter and other collectors in New Guinea, of which Edinburgh has an excellent selection. Paddy encouraged the Garden to exhibit its New Guinea orchid collection, and it did so successfully at several orchid shows as far afield as Glasgow, London, and Germany.

The 14<sup>th</sup> World Orchid Conference in Glasgow saw the publication of highly praised *Wild Orchids of Scotland*, which Paddy co-authored. Paddy also nearly brought off a coup in getting a series of fine watercolours of Scottish orchids or another set of orchids with Scottish connections featured on a series of British postage stamps to commemorate the event. Sadly, another series of orchid stamps was chosen. Paddy retired from the Royal Botanic Garden Edinburgh in 1992, their last orchid specialist (for the time being I hope!). However, both he and Jennifer continued to take an active part in the Garden's work as honorary staff members.

Paddy's links with Ireland were nurtured all the time. In a lecture he once gave he commented that

"Ireland is full of odd people and odd places – there are even moss forests nearer than New Guinea. This one (a photograph of the Burren) is an area on the west coast... which consists of vast tracts of apparently barren limestone pavement. This prompted one of Cromwell's generals to remark in the 17<sup>th</sup> Century: 'it is a country where there is not water enough to drown a man, wood to hang one, nor earth enough to bury him'." Paddy added, "But this is not the case, for there are plants between the rocks and there are lovely banks of flowers, which brings me back to where I started – *Orchis mascula*". His good friend, the artist Raymond Piper, produced a magnificent study of Irish orchids, including *Orchis mascula*, and their varieties, all in habitat. Paddy was his main confidant and identified all that was sent to him, encouraging him to publish his deep knowledge of these wonderful plants (he has yet to do so, "being a perfectionist always searching for the holy grail" as Paddy noted). Throughout his life, Paddy kept up a correspondence with many friends and acquaintances, encouraging them. He was particularly pleased to see the National Botanic Garden, Glasnevin, revive their orchid collection through the enthusiasm of Brendan Sayers and his team and received honourable mention in the recent book on orchids at Glasnevin.

Paddy contracted multiple sclerosis in 1969. His wife, Pauline, contracted breast cancer at about the same time and died in 1975. Paddy married his colleague Jennifer Lamont, with whom he worked at the Herbarium, shortly afterwards. Jennifer and Paddy formed a marvellous team and made light of Paddy's illness until near the end. Paddy died on 28 May and is survived by Jennifer and his son and daughter from his first marriage.

The orchid world is the poorer for his loss. We all admired his determination to lead a full life and his and Jennifer's devotion to each other. He was a great friend and mentor to me and many others and will be greatly missed by us. --**Phillip Cribb**

## Upcoming Conferences

### 18th World Orchid Conference (11-20 March 2005)

Registration forms and hotel bookings for what promises to be a spectacular World Orchid Conference and Show in Dijon, France, are now online at <http://www.woc2005.org>. The provisional lecture programme has been recently added to the website. You may also download a .pdf file with complete information on all the social events, optional tours, and post-Conference tours. We urge those planning to attend to arrange for hotel rooms as soon as possible because they will be going fast.

### First Scientific Conference on Andean Orchids (11-13 November 2005)

The First Scientific Conference on Andean Orchids, sponsored by Ecuagenera, Cia. Ltda., will be held 11-13 November 2005 in Gualaceo, Ecuador. The Conference will not be associated with any show, and there will be no social events. However, there will be multiple-day pre-conference tours for registrants on a first-come, first-served basis as well as local tours to Cuenca, Sigüig, and Chordeleg. This is an excellent opportunity to see first-hand the incredible diversity of Ecuador's orchids with expert guides from Ecuagenera.

There can be no collecting on the tours without a permit from the Ecuadorian government, but plants from Ecuagenera will be available for sale and CITES export documents and phytosanitary certificates will be provided on-site. Publicity with registration details and the lecture programme will soon appear in orchid journals, on the web and in the next issue (no. 45) of the *Orchid Research Newsletter*.

This promises to be an extraordinary experience for all registrants, many of whom will be students from Ecuador and other countries. For further information you may contact either Pepe Portilla ([ecuagen@c.ecua.net.ec](mailto:ecuagen@c.ecua.net.ec)) or Alec Pridgeon ([a.pridgeon@rbgkew.org.uk](mailto:a.pridgeon@rbgkew.org.uk)).

## Recent Orchid Nomenclature

We thank Rosemary Davies for supplying new orchid names received by *Index Kewensis* from 6 November 2003 to 26 May 2004.

*Acampe joiceyana* (J.J.Sm.) Seidenf. in *Nord. J. Bot.* 22(6): 532 (2002 publ. 2003): *Trichoglottis joiceyana*

*Acianthella* D.L.Jones & M.A.Clem. in *Orchadian* 14(7): 331 (2004)

*Acianthella aegeridantennata* (N.Hallé) D.L.Jones & M.A.Clem. in *Orchadian* 14(7): 331 (2004)

*Acianthella amplexicaulis* (F.M.Bailey) D.L.Jones & M.A.Clem. in *Orchadian* 14(7): 331 (2004):  
*Microstylis amplexicaulis*

*Acianthella confusa* (Guillaum.) D.L.Jones & M.A.Clem. in *Orchadian* 14(7): 331 (2004): *Acianthus confusus*

*Acianthella elegans* (Rchb.f.) D.L.Jones & M.A.Clem. in *Orchadian* 14(7): 331 (2004): *Acianthus elegans*

*Acianthella heptadactyla* (Kraenzl.) D.L.Jones &

M.A.Clem. in *Orchadian* 14(7): 331 (2004): *Acianthus heptadactylus*

*Acianthella macroglossa* (Schltr.) D.L.Jones & M.A.Clem. in *Orchadian* 14(7): 331 (2004): *Acianthus macroglossus*

*Acianthella sublesta* (Dockrill) D.L.Jones & M.A.Clem. in *Orchadian* 14(7): 331 (2004): *Acianthus sublesta*

*Acianthera breedlovei* Soto Arenas, Solano & Salazar in *Icon. Orchid.* 5-6: t. 502 (2002 publ. 2003)—Chiapas

*Acianthera eximia* (L.O.Williams) Solano in *Icon. Orchid.* 5-6: t. 505 (2002 publ. 2003): *Pleurothallis eximia*

*Acianthera gacayana* (Schltr.) Solano & Soto Arenas in *Icon. Orchid.* 5-6: x (2002 publ. 2003): *Pleurothallis gacayana*

*Acianthera greenwoodii* Soto Arenas in *Icon. Orchid.* 5-6: t. 506 (2002 publ. 2003)—Oaxaca

*Acianthera hartwegiifolia* (H.Wendl. & Kraenzl.) Solano & Soto Arenas in *Icon. Orchid.* 5-6: t. 507 (2002 publ. 2003): *Pleurothallis hartwegiifolia*

*Acianthera herrerae* (Luer) Solano & Soto Arenas in *Icon. Orchid.* 5-6: x (2002 publ. 2003): *Pleurothallis herrerae*

*Acianthera majakoluckae* Soto Arenas & Solano in *Icon. Orchid.* 5-6: t. 510 (2002 publ. 2003)—Oaxaca, Chiapas

*Acianthera unguicallosa* (Ames & C.Schweinf.) Solano in *Icon. Orchid.* 5-6: t. 512 (2002 publ. 2003): *Pleurothallis unguicallosa*

*Acineta hagsateri* Salazar & Soto Arenas in *Icon. Orchid.* 5-6: t. 514 (2002 publ. 2003)—Guerrero

*Acineta mireyae* G.Gerlach & M.H.Weber in *J. Orchideenfreund* 10(3): 230 (2003)—Panama

*Acineta salazarii* Soto Arenas in *Icon. Orchid.* 5-6: t. 515 (2002 publ. 2003)—El Salvador, Oaxaca, Chiapas

*Adenoncos quadrangularis* Sulist. in *Floribunda* 2(4): 104; fig. 1 (Dec. 2003)—Jawa, Sumatera

*Adenoncos triangularis* Sulist. in *Floribunda* 2(4): 105; fig. 2 (Dec. 2003)—Sulawesi, Jawa

*Aeranthes campbelliae* Hermans & Bosser in *Adansonia* 25(2): 215 (26 Dec. 2003)—Comoros

*Alamania punicea* La Llave & Lex. subsp. *greenwoodiana* Soto Arenas & R.Jiménez in *Icon. Orchid.* 5-6: t. 516 (2002 publ. 2003)—Querétaro, Puebla, Oaxaca, Veracruz  
*Amesilabium* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003).nom. nov.: *Tuberella* J.M.H.Shaw (*Amesiella* × *Tuberolabium*)

*Amitostigma wenshanense* W.H.Chen, Y.M.Shui & K.Y.Lang in *Acta Bot. Yunnan.* 25(5): 521 (2003)—Yunnan

*Anacamptis ×albuferensis* R.M.Bateman in *Taxon* 53(1): 53 (2004): (*Anacamptis robusta* × *Anacamptis fragrans*) Baleares

*Anacamptis pyramidalis* (L.) L.C.Rich. var. *sanguinea* (Druce) Kreutz in *J. Eur. Orchideen* 35(4): 767 (2003): *Orchis pyramidalis* L. var. *sanguinea*

*Anathallis greenwoodii* Soto Arenas & Salazar in *Icon. Orchid.* 5-6: t. 519 (2002 publ. 2003)—Oaxaca

*Anathallis haberi* (Luer) Solano & Soto Arenas in *Icon. Orchid.* 5-6: t. 520 (2002 publ. 2003): *Pleurothallis haberi*

*Anathallis involuta* (L.O.Williams) Solano & Soto Arenas in *Icon. Orchid.* 5-6: x (2002 publ. 2003): *Pleurothallis involuta*

*Anathallis lewisiae* (Ames) Solano & Soto Arenas in *Icon. Orchid.* 5-6: x (2002 publ. 2003): *Pleurothallis lewisiae*

*Anathallis oblanceolata* (L.O.Williams) Solano & Soto Arenas in *Icon. Orchid.* 5-6: x (2002 publ. 2003): *Pleurothallis oblanceolata*

*Anathallis yucatanensis* (Ames & C.Schweinf.) Solano & Soto Arenas in *Icon. Orchid.* 5-6: x (2002 publ. 2003): *Pleurothallis yucatanensis*

*Arthrochilium africanum* (Rendle) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis africana*

*Arthrochilium atromarginatum* (Seidenf.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis atromarginata*

*Arthrochilium flavum* (Seidenf.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis flava*

*Arthrochilium giganteum* (Douglas ex Hook.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis gigantea*

*Arthrochilium handelii* (Schltr.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis handelii*

*Arthrochilium mairei* (Schltr.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis mairei*

*Arthrochilium royleanum* (Lindl.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis royleana*

*Arthrochilium schensianum* (Schltr.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis schensiana*

*Arthrochilium setschuanicum* (Ames & Schltr.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis setschuanica*

*Arthrochilium thunbergii* (A.Gray) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis thunbergii*

*Arthrochilium uluguricum* (Mansf.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis ulugurica*

*Arthrochilium veratrifolium* (Boiss. & Hohen.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis veratrifolia*

*Arthrochilium wilsonii* (Schltr.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis wilsonii*

*Arthrochilium xanthophaeum* (Schltr.) Szlach. in *Orchidee (Hamburg)* 54(5): 588 (18 Dec. 2003): *Epipactis xanthophaea*

×*Ascofadanda* J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 14 (2004). (*Ascocentrum* × *Vanda* × *Seidenfadenia* × *Vanda*)

*Aspasia omissa* Christenson in *Richardiana* 4(2): 85 (84-87; fotogr.) (2004)—Colombia

×*Australia* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Australorchis* × *Dockrillia*)

*Baptistonia albinii* (Schltr.) Chiron & V.P.Castro in *Richardiana* 4(3): 117 (2004) [8 Jun]: *Oncidium albinii*

*Baptistonia ×amicta* (Lindl.) Chiron & V.P.Castro in *Richardiana* 4(3): 117 (2004) [8 Jun]: *Oncidium amictum*

*Baptistonia brieniana* (Rchb.f.) V.P.Castro & Chiron in *Richardiana* 4(3): 117 (2004) [8 Jun]: *Oncidium brienianum*

*Baptistonia ×cassolana* (V.P.Castro & Campacci) Chiron & V.P.Castro in *Richardiana* 4(3): 117 (2004) [8 Jun]: *Oncidium ×cassolanum*

*Baptistonia cornigera* (Lindl.) Chiron & V.P.Castro in *Richardiana* 4(3): 117 (2004) [8 Jun]: *Oncidium cornigerum*

*Baptistonia cruciata* (Rchb.f.) Chiron & V.P.Castro in *Richardiana* 4(3): 117 (2004) [8 Jun]: *Oncidium cruciatum*

*Baptistonia damacenoii* Chiron & V.P.Castro in *Richardiana* 4(3): 124 (121-134; figs. 1-6; fotogr., tabl. 1) (2004) [8 Jun] -Espirito Santo, Brazil, Southern America

*Baptistonia fimbriata* (Lindl.) Chiron & V.P.Castro in *Richardiana* 4(3): 117 (2004) [8 Jun]: *Oncidium fimbriatum*

*Baptistonia gutfreundiana* (Chiron & V.P.Castro) Chiron & V.P.Castro in *Richardiana* 4(3): 117 (2004) [8 Jun]: *Oncidium gutfreundianum*

*Baptistonia kautskyi* (Pabst) V.P.Castro & Chiron in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium kautskyi*

*Baptistonia leinigii* (Pabst) Chiron & V.P.Castro in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium leinigii*

*Baptistonia lietzei* (Regel) Chiron & V.P.Castro in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium lietzei*

*Baptistonia nitida* (Barb.Rodr.) V.P.Castro & Chiron in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium nitidum*

*Baptistonia pabstii* (Campacci & C.Espejo) Chiron & V.P.Castro in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium pabstii*

*Baptistonia pubes* (Lindl.) Chiron & V.P.Castro in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium pubes*

*Baptistonia pulchella* (Regel) Chiron & V.P.Castro in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Waluwewa pulchella*

*Baptistonia remotiflora* (Garay) Chiron & V.P.Castro in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium remotiflorum*

*Baptistonia riograndense* (Cogn.) Chiron & V.P.Castro in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium riograndense*

*Baptistonia sarcodes* (Lindl.) Chiron & V.P.Castro in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium sarcodes*

*Baptistonia silvana* (V.P.Castro & Campacci) V.P.Castro & Chiron in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium silvanum*

*Baptistonia truncata* (Pabst) Chiron & V.P.Castro in *Richardiana* 4(3): 118 (2004) [8 Jun]: *Oncidium truncatum*

*Baptistonia verrucosissima* (Cogn.) V.P.Castro & Chiron in *Richardiana* 4(3): 119 (2004) [8 Jun]: *Oncidium verrucosissimum*

*Baptistonia widgrenii* (Lindl.) V.P.Castro & Chiron in *Richardiana* 4(3): 119 (2004) [8 Jun]: *Oncidium widgrenii*

*Bathiorchis* Bosser & P.J.Cribb in *Adansonia* 25(2): 229 (26 Dec. 2003)

*Bathiorchis rosea* (H.Perrier) Bosser & P.J.Cribb in *Adansonia* 25(2): 229 (26 Dec. 2003): *Gymnochilus roseus*

*Bertauxia* Szlach. in *Richardiana* 4(2): 56 (2004)

*Bertauxia nasuta* (Rchb.f. & Warm.) Szlach. in *Richardiana* 4(2): 58 (2004) [Apr.]

*Bertauxia rodeiensis* (Barb.Rodr.) Szlach. in *Richardiana* 4(2): 58 (2004)

*Bertauxia vaupellii* (Rchb.f. & Warm.) Szlach. in *Richardiana* 4(2): 58 (2004)

*Bhutanthera humidicola* (K.Y.Lang & D.S.Deng) Ormerod in *Taiwania* 48(3): 139 (2003): *Peristylus humidicola*

×*Brassanthe* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Brassavola* × *Guarianthe*)

*Brassia verrucosa* Lindl. subsp. *gireoudiana* (Rchb.f. & Warsz.) Dressler & N.H.Williams in *Selbyana* 24(1): 44 (2003): *Brassia gireoudiana*

×*Brassophranthe* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Brassavola* × *Guarianthe* × *Sophranitis*)

×*Brianara* J.M.H.Shaw in *Orchid Rev. Suppl.*,

111(1254): 95 (2003): (*Galeottia* × *Pabstia* × *Promenaea* × *Zygopetalum*)

*Bulbophyllum anakbaruppui* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 143 (2003)–Sulawesi  
*Bulbophyllum anisopterum* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 142 (2003)–Sabah

*Bulbophyllum apoense* Schuit. & de Vogel in *Blumea* 48(3): 507 (2003), nom. nov.: *Bulbophyllum graciliscapum* Ames & Rolfe

*Bulbophyllum boudetianum* Fraga in *Novon* 14(1): 40 (-42; fig. 1)(2004)–Espirito Santo

*Bulbophyllum catillus* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 148 (2003)–Papua New Guinea

*Bulbophyllum coweniorum* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 150 (2003)–Laos

*Bulbophyllum decurrentilobum* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 134 (2003)–Sulawesi

*Bulbophyllum filifolium* Borba & E.C.Smidt in *Novon* 14(1): 29 (-32; fig. 1) (2004) [23 Mar]–Minas Gerais

*Bulbophyllum flavorubellum* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 128 (2003)–Sabah

*Bulbophyllum furcillatum* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 136 (2003)–Sumatera

*Bulbophyllum globulosum* (Ridl.) Schuit. & de Vogel in *Blumea* 48(3): 507 (2003): *Phreatia globulosa*

*Bulbophyllum illecebrum* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 144 (2003)–Sulawesi

*Bulbophyllum incisilabrum* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 152 (2003)–Sulawesi

*Bulbophyllum iterans* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 140 (2003)–Sulawesi

*Bulbophyllum lyriforme* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 154 (2003)–Papua New Guinea

*Bulbophyllum pseudopelma* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 130 (2003)–Sulawesi

*Bulbophyllum simplex* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 132 (2003)–Sulawesi

*Bulbophyllum sinapis* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 156 (2003)–Papua New Guinea

*Bulbophyllum tectipes* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 126 (2003)–Sulawesi

*Bulbophyllum turpe* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 158 (2003)–Peninsular Malaysia  
*Bulbophyllum uncinatum* J.J.Verm. & P.O'Byrne in *Gard. Bull. Singapore* 55(1): 147 (2003)–Sulawesi

*Campylocentrum bonifaziae* Dodson in *Orquideologia* 22(3): 191 (2003)–Ecuador

*Campylocentrum cornejoi* Dodson in *Orquideologia* 22(3): 192 (2003)–Ecuador

*Campylocentrum puyense* Dodson in *Orquideologia* 22(3): 195 (2003)–Ecuador

×*Catasellia* M.Chen & J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Ansellia* × *Catasetum*)

*Cattleya labiata* Lindl. var. *amesiana* L.C.Menezes in *Orquideas/Orchids: Cattleya labiata autumnalis* 83 (2002)–Brazil

*Cattleya labiata* Lindl. var. *amoena* L.C.Menezes in *Orquideas/Orchids: Cattleya labiata autumnalis* 85 (2002)–Brazil

*Cattleya labiata* Lindl. var. *atropurpurea* L.C.Menezes in *Orquideas/Orchids: Cattleya labiata autumnalis* 87 (2002)–Brazil

*Cattleya labiata* Lindl. var. *caerulea* L.C.Menezes in *Orquideas/Orchids: Cattleya labiata autumnalis* 89 (2002)–Brazil

*Cattleya labiata* Lindl. var. *concolor* L.C.Menezes in *Orquideas/Orchids: Cattleya labiata autumnalis* 89 (2002)–Brazil

*Cattleya labiata* Lindl. var. *purpureolineata* L.C.Menezes in *Orquideas/Orchids: Cattleya labiata autumnalis* 91 (2002)–Brazil

*Cattleya labiata* Lindl. var. *semialba* L.C.Menezes in *Orquideas/Orchids: Cattleya labiata autumnalis* 92 (2002)–Brazil

*Cattleya* ×*varelae* V.P.Castro & Cath. in *Richardiana* 4(2): 43 (–46; fig. 1; photogr. 1–4) (2004) [Apr]–Bahia, Brazil

×*Cattlianthe* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Cattleya* × *Guarianthe*)

×*Ceporillia* J.M.H.Shaw in *Orchid Rev.* 111(1254): 95 (2003): (*Cepobaculum* × *Dockrillia*)

×*Chrisnopsis* J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 14 (2004): (*Christensonia* × *Paraphalaenopsis*)

*Chysis violacea* Dressler in *Orquideologia* 22(3): 237 (2003)–Panama

×*Clomophyllum* M.Chen & J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Clowesia* × *Grammatophyllum* × *Mormodes*)

*Coelogyne yiii* Schuit. & de Vogel in *J. Orchideenfreund* 10(3): 225 (2003)–Sarawak

*Cuitlauzina candida* (Lindl.) Dressler & N.H.Williams in *Selbyana* 24(1): 44 (2003): *Oncidium candidum*

*Cuitlauzina convallarioides* (Schltr.) Dressler & N.H.Williams in *Selbyana* 24(1): 44 (2003): *Osmoglossum convallarioides*

*Cuitlauzina egertonii* (Lindl.) Dressler & N.H.Williams in *Selbyana* 24(1): 44 (2003): *Odontoglossum egertonii*

*Cuitlauzina pulchella* (Bateman ex Lindl.) Dressler & N.H.Williams in *Selbyana* 24(1): 44 (2003): *Odontoglossum pulchellum*

×*Cycnophyllum* M.Chen & J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Cycnoches* × *Grammatophyllum*)

*Cymbidium gaoligongense* Z.J.Liu & J.Yong Zhang in *J. Wuhan Bot. Res.* 21(4): 316 (2003)–Yunnan.

*Cyrtochilum posadarum* (Königer) Senghas in *J. Orchideenfreund* 10(3): 281 (2003): *Odontoglossum posadarum*

×*Dactyloдения engelii* M.Gerbaud, O.Gerbaud & J.M.Lewin in *Orchidophile (Asnieres)* 159: 269 (267–269; figs.) (Dec. 2003): (*Dactylorhiza savogensis* × *Gymnadenia gabasiana*)–France

*Dactylorhiza majalis* (Rchb.) P.F.Hunt & Summerh. subsp. *ebudensis* (Wief. ex R.M.Bateman & Denholm) M.R.Lowe in *Eurorchis* 15: 81 (2003): *Dactylorhiza majalis* (Rchb.) Rauschert var. *ebudensis*

*Dendrobium caudiculatum* (M.A.Clem. & D.L.Jones) Schuit. & de Vogel in *Blumea* 48(3): 509 (2003): *Dockrillia caudiculata*

*Dendrobium erythraeum* Schuit. & de Vogel in *Blumea* 48(3): 509 (2003), nom. nov.: *Dockrillia hepatica* M.A.Clem. & D.L.Jones

*Dendrobium leptophyton* Schuit. & de Vogel in *Blumea*

48(3): 509 (2003), nom. nov. *Dockrillia delicata*  
M.A.Clem. & D.L.Jones

*Dendrobium limpidum* Schuit. & de Vogel in *J. Orchideenfreund* 10(4): 315 (2003)–Papua New Guinea  
*Dendrobium meghalayense* Y.Kumar & S.Chowdhury in *Orchidee (Hamburg)* 54(4): 455 (2003)–Meghalaya, Assam

*Dendrobium nothofageti* (M.A.Clem. & D.L.Jones) Schuit. & de Vogel in *Blumea* 48(3): 509 (2003):  
*Dockrillia nothofageti*

*Dendrobium racieanum* Cavestro in *Orchidophile (Asnieres)* 159: 272 (2003)–Irian Jaya

*Dendrobium schildhaueri* Ormerod & H.A.Pedersen in *Orchid Rev.* 111(1254): 341 (2003)–Laos, Thailand

*Dichromanthus cinnabarinus* (La Llave & Lex.) Garay subsp. *galeottianum* (Schltr.) Soto Arenas & Salazar in *Icon. Orchid.* 5-6: xii (2002 publ. 2003):  
*Stenorrhynchos galeottianum*

*Dipteranthus nectariferus* Senghas in *J. Orchideenfreund* 10(3): 260 (2003)–Bolivia

×*Docjonesia* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Davejonesia* × *Dockrillia*)

×*Dossinyera* Glic. & J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Dossinia* × *Goodyera*)

*Dryadella greenwoodiana* Soto Arenas, Salazar & Solano in *Icon. Orchid.* 5-6: t. 550 (2002 publ. 2003)–Oaxaca

*Encyclia adenocaulon* Schltr. subsp. *kennedyi* (Fowlie & Withner) Soto Arenas, Salazar & Hagsater in *Icon. Orchid.* 5-6: xii (2002 publ. 2003): *Epidendrum kennedyi*

*Encyclia calderoniae* Soto Arenas in *Icon. Orchid.* 5-6: t. 558 (2002 publ. 2003)–Oaxaca

*Encyclia huertae* Soto Arenas & R.Jiménez in *Icon. Orchid.* 5-6: t. 560 (2002 publ. 2003)–Michoacán, Oaxaca, Jalisco, Morelos, Nayarit, Guerrero, Sinaloa

*Encyclia nizandensis* Pérez-García & Hagsater in *Icon. Orchid.* 5-6: t. 564 (2002 publ. 2003)–Oaxaca

*Encyclia rzedowskiana* Soto Arenas in *Icon. Orchid.* 5-6: t. 565 (2002 publ. 2003)–Oaxaca

*Epidendrum cesar-fernandezii* Carnevali & I.Ramírez in *Novon* 13(4): 405 (5 Dec. 2003)–Venezuela

*Epidendrum* ×*gransabanense* Carnevali & I.Ramírez in

*Novon* 13(4): 407 (5 Dec. 2003): (*Epidendrum secundum* × *Epidendrum ibaguense*)–Venezuela

*Epidendrum reclinatum* Carnevali & I.Ramírez in *Novon* 13(4): 409 (5 Dec. 2003)–Guyana, Venezuela  
*Epidendrum silvanum* V.P.Castro & Chiron in *Richardiana* 4(1): 36 (2003)–Bahia

*Epigeneium mimicum* Ormerod in *Taiwania* 48(3): 139 (2003)–Guangxi, China

*Epipactis densifolia* W.Hahn, Passin & R.Wegener in *Ber. Arbeitskreis. Heimische Orchid.* 20(1): 59-61 (2003)–Turkey

*Epipactis helleborine* (L.) Crantz var. *tangutica* (Schltr.) S.C.Chen & G.H.Zhu in *Novon* 13(4): 423 (5 Dec. 2003): *Epipactis tangutica*

*Epipactis heraclea* P.Delforge & Kreutz in *Naturalistes Belges* 84 (*Orchid.* 16): 22 (19-33; figs.) (15 Dec. 2003)–Greece

*Epipactis humilior* (Tang & F.T.Wang) S.C.Chen & G.H.Zhu in *Novon* 13(4): 423 (5 Dec. 2003): *Epipactis mairei* Schltr. var. *humilior*

*Epipactis leptochila* (Godfery) Godfery subsp. *dinarica* S.Hertel & Riech. in *Ber. Arbeitskreis. Heimische Orchid.* 20(1): 17-18 (2003)–Croatia

*Epipactis tremolsii* Pau subsp. *latina* (W.Rossi & E.Klein) S.Hertel & Riech. in *Ber. Arbeitskreis. Heimische Orchid.* 20(1): 28 (2003): *Epipactis helleborine* (L.) Crantz subsp. *latina*

*Erythrodes gigantea* Dodson in *Orquideologia* 22(3): 196 (2003)–Ecuador

*Erythrodes selbyana* Dodson in *Orquideologia* 22(3): 213 (2003), nom. nov.: *Erythrodes preslii* Lindl. ex D.E.Benn. & Christenson

*Erythrodes umbraticola* (Garay) Dodson in *Orquideologia* 22(3): 213 (2003): *Ligeophila umbraticola*

*Fernandezia aurantiaca* Senghas in *J. Orchideenfreund* 10(3): 258 (2003)–Ecuador

×*Fisherara* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Neogardneria* × *Pabstia* × *Promenaea* × *Zygopetalum*)

*Flickingeria lonchigera* (Schltr.) Schuit. & de Vogel in *Blumea* 48(3): 510 (2003): *Dendrobium lonchigerum*

*Galeandra santarena* S.H.N.Monteiro & J.B.F.Silva in

*Bol. Mus. Paraense Emilio Goeldi, n.s., Bot.* 18(1): 80 (79-84; fig. 1). 2002 publ. 2003–Pará

*Gavilea feuilleana* (Kraenzl.) Lehnbech in *Bot. J. Linn. Soc.* 143(4): 450 (2003): *Asarca feuilleana*  
*Glomera myrtilus* (Schltr.) Schuit. & de Vogel in *Blumea* 48(3): 511 (2003): *Ischnocentrum myrtilus*

*Glomera sepalosiphon* Schuit. & de Vogel in *Blumea* 48(3): 511 (2003), nom. nov.: *Sepalosiphon papuanum* Schltr.

× *Gomonia* J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 14 (2004): (*Gomesa* × *Miltonia*)

× *Goodisachilus* Glic. & J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 14 (2004): (*Anoectochilus* × *Goodyera* × *Ludisia*)

*Govenia greenwoodii* Dressler & Soto Arenas in *Icon. Orchid.* 5-6: t. 589 (2002 publ. 2003)—Guatemala, Honduras, Chiapas, Guerrero, Michoacán, Oaxaca

*Govenia matudae* E.W.Greenw. & Soto Arenas in *Icon. Orchid.* 5-6: t. 590 (2002 publ. 2003)—Guatemala, Chiapas

× *Guariburgkia* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Guarianthe* × *Schomburgkia*)

× *Guaricattonia* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Broughtonia* × *Cattleya* × *Guarianthe*)

× *Guaricyclia* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Guarianthe* × *Encyclia*)

× *Guaridendrum* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Guarianthe* × *Epidendrum*)

× *Guarisophleya* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Cattleya* × *Guarianthe* × *Sophranitis*)

× *Guaritonina* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Broughtonia* × *Guarianthe*)

× *Guarlaeliopsis* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Guarianthe* × *Laeliopsis*)

× *Guarthron* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Caularthron* × *Guarianthe*)

*Gymnadenia conopsea* (L.) R.Br. [beta]. *serotina* Schönh. in *Taschenb. Fl. Thüringen* 432 (1850)

*Gymnadenia conopsea* (L.) R.Br. subsp. *serotina* (Schönh.) Dworschak in *Jahresber. Naturwiss. Vereins*

*Wuppertal* 55: 39 (2002): *Gymnadenia conopsea* (L.) R.Br. [beta]. *serotina*

*Gymnadenia graminea* Dworschak in *Jahresber. Naturwiss. Vereins Wuppertal* 55: 42 (2002)—Germany  
*Gymnadenia rhellicani* (Teppner & E.Klein) Teppner & E.Klein var. *robusta* P.Delforge in *Naturalistes Belges* 84 (*Orchid.* 16): 127 (132; fig.) (15 Dec. 2003)—France

*Gymnadenia splendida* Dworschak in *Jahresber. Naturwiss. Vereins Wuppertal* 55: 35 (2002)—Germany

*Gymnadenia splendida* Dworschak subsp. *odorata* Dworschak in *Jahresber. Naturwiss. Vereins Wuppertal* 55: 37 (2002)—Germany

*Gymnadenia vernalis* Dworschak in *Jahresber. Naturwiss. Vereins Wuppertal* 55: 31 (2002)—Germany

*Habenaria* subgen. *Plantaginea* Kraenzl. in *Bot. Jahrb. Syst.* 16: 56, 194. 1893

*Habenaria pabstii* J.A.N.Bat. & Bianch. in *Novon* 13(4): 397 (5 Dec. 2003)—Goiás, Brasília Distrito Federal

*Hemipiliopsis* Y.B.Luo & S.C.Chen in *Novon* 13(4): 450 (5 Dec. 2003)

*Hemipiliopsis purpureopunctata* (K.Y.Lang) Y.B.Luo & S.C.Chen in *Novon* 13(4): 450 (5 Dec. 2003):  
*Habenaria purpureopunctata*

× *Hirayamaara* S.Hiray. & J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 14 (2004): (*Ascozentrum* × *Neofinetia* × *Paraphalaenopsis* × *Rhynchostylis* × *Vanda*)

*Hoffmannseggella* × *cristinae* F.E.L.Miranda & K.G.Lacerda in *Orchids (USA)* 72(11): 853 (2003): (*Hoffmannseggella rupestris* × *Hoffmannseggella briegei*)—Minas Gerais

*Hoffmannseggella* × *feldmanniana* F.E.L.Miranda & K.G.Lacerda in *Orchids (USA)* 72(11): 854 (2003): (*Hoffmannseggella pabstii* × *Hoffmannseggella endsfeldzii*)—Minas Gerais

*Hoffmannseggella flavasulina* F.E.L.Miranda & K.G.Lacerda in *Orchids (USA)* 72(11): 850 (2003)—Minas Gerais

*Hoffmannseggella pabstii* F.E.L.Miranda & K.G.Lacerda in *Orchids (USA)* 72(11): 851 (2003)—Minas Gerais

*Hoffmannseggella pendula* Mota, P.L.Viana &

K.G.Lacerda in *Richardiana* 4(1): 1 (2003)–Minas Gerais

*Hoffmannseggella × raganii* F.E.L.Miranda & K.G.Lacerda in *Orchids (USA)* 72(11): 856 (2003): *Hoffmannseggella bradei* × *Hoffmannseggella rupestris*–Minas Gerais

×*Holcenda* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Ascocentrum* × *Holcoglossum* × *Vanda*)

×*Holcodirea* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Holcoglossum* × *Sedirea*)

*Holcoglossum* subgen. *Brachycentron* X.H.Jin & S.C.Chen in *Syst. Gen. Holcoglossum* 80 (July 2003)

*Holcoglossum* sect. *Sorotylos* X.H.Jin & S.C.Chen in *Syst. Gen. Holcoglossum* 91 (July 2003)

*Holcoglossum omeiense* X.H.Jin & S.C.Chen in *Syst. Gen. Holcoglossum* 88 (July 2003)–Sichuan

*Holcoglossum weixiense* X.H.Jin & S.C.Chen in *Syst. Gen. Holcoglossum* 94 (July 2003)–Yunnan

×*Holcopsis* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Holcoglossum* × *Vandopsis*)

×*Hygranda* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Hygrochilus* × *Vanda*)

×*Hygrocenda* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Ascocentrum* × *Hygrochilus* × *Vanda*)

×*Hygrodirea* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Hygrochilus* × *Sedirea*)

×*Jeaneara* G.Monnier & J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 14 (2004): (*Aganisia* × *Warrea* × *Zygopetalum*)

×*Johnara* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Cochleanthes* × *Pabstia* × *Promenaea* × *Zygopetalum*)

×*Keferella* E.E.Michel, Glic. & J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Chaubardiella* × *Kefersteinia*)

*Kefersteinia alata* Pupulin in *Harvard Pap. Bot.* 8(2):161 (-164; figs. 1-2A-B). (2004) [Mar]–Panama

*Kefersteinia angustifolia* Pupulin & Dressler in

*Harvard Pap. Bot.* 8(2):164 (-166; fig. 3). (2004) [Mar]–Panama

*Kefersteinia tinschertiana* Pupulin in *Harvard Pap. Bot.* 8(2):166 (168-169; fig. 5). (2004) [Mar]–Guatemala

*Kraenzlinella erinacea* (Rchb.f.) Solano in *Icon. Orchid.* 5-6: xi (2002 publ. 2003): *Pleurothallis erinacea*

*Kraenzlinella hintonii* (L.O.Williams) Solano in *Icon. Orchid.* 5-6: t. 595 (2002 publ. 2003): *Pleurothallis hintonii*

*Kusibabella* Szlach. in *Richardiana* 4(2): 58 (2004) [Apr]

*Kusibabella bractescens* (Lindl.) Szlach. in *Richardiana* 4(2): 59 (2004) [Apr]: *Habenaria bractescens*

*Kusibabella burkartiana* (Hoehne) Szlach. in *Richardiana* 4(2): 59 (2004) [Apr]

*Kusibabella cryptophila* (Barb.Rodr.) Szlach. in *Richardiana* 4(2): 59 (2004) [Apr]

*Kusibabella fastor* (Warm. ex Hoehne) Szlach. in *Richardiana* 4(2): 59 (2004)[Apr]

*Kusibabella gourlieana* (Gillies ex Lindl.) Szlach. in *Richardiana* 4(2): 59 (2004) [Apr]: *Habenaria gourlieana*

*Kusibabella longicauda* (Hook.) Szlach. in *Richardiana* 4(2): 61 (2004) [Apr]

*Kusibabella macronectar* (Vell.) Szlach. in *Richardiana* 4(2): 61 (2004) [Apr]: *Orchis macronectar*

*Kusibabella sartor* (Lindl.) Szlach. in *Richardiana* 4(2): 61 (2004) [Apr]: *Habenaria sartor*

×*Laelianthe* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Guarianthe* × *Laelia*)

×*Laelirhynchus* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Laelia* × *Rhyncholaelia*)

*Lepanthes anisoloba* Dod ex Luer in *Selbyana* 24(1): 4 (2003)–Dominican Republic, Caribbean, Southern America

*Lepanthes apiculata* Dod ex Luer in *Selbyana* 24(1): 5 (2003)–Haiti

*Lepanthes austinae* Dod ex Luer in *Selbyana* 24(1): 6 (2003)–Haiti

*Lepanthes boomerang* Dod ex Luer in *Selbyana* 24(1): 6 (2003)–Dominican Republic

*Lepanthes braccata* Luer & Dod in *Selbyana* 24(1): 10 (2003)–Dominican Republic

*Lepanthes casasaе* Pupulin in *Orchidee (Hamburg)* 54(4): 472 (2003)–Costa Rica

*Lepanthes decussata* Dod ex Luer in *Selbyana* 24(1): 10 (2003)–Haiti

*Lepanthes dondodii* Luer in *Selbyana* 24(1): 13 (2003)–Dominican Republic

*Lepanthes excavata* Dod ex Luer in *Selbyana* 24(1): 13 (2003)–Haiti

*Lepanthes incurva* Dod ex Luer in *Selbyana* 24(1): 16 (2003)–Dominican Republic

*Lepanthes longiloba* Dod ex Luer in *Selbyana* 24(1): 16 (2003)–Haiti

*Lepanthes magnipetala* Dod ex Luer in *Selbyana* 24(1): 19 (2003)–Haiti

*Lepanthes maldonadoe* Soto Arenas in *Icon. Orchid.* 5-6: t. 602 (2002 publ. 2003)–Chiapas

*Lepanthes mazatlanensis* Solano & Reynaud in *Icon. Orchid.* 5-6: t. 603 (2002 publ. 2003)–Oaxaca

*Lepanthes microdonta* Dod ex Luer in *Selbyana* 24(1): 19 (2003)–Haiti

*Lepanthes miniflora* Dod ex Luer in *Selbyana* 24(1): 22 (2003)–Dominican Republic

*Lepanthes politilabia* Dod ex Luer in *Selbyana* 24(1): 22 (2003)–Haiti

*Lepanthes pteroglossa* Dod ex Luer in *Selbyana* 24(1): 25 (2003)–Haiti

*Lepanthes schugii* Pupulin in *Orchidee (Hamburg)* 54(4): 474 (2003)–Costa Rica

*Lepanthes semperflorens* Dod ex Luer in *Selbyana* 24(1): 25 (2003)–Haiti

*Lepanthes truncatipetala* Dod ex Luer in *Selbyana* 24(1): 26 (2003)–Caribbean

×*Leptoguarianthe* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003): (*Guarianthe* × *Leptotes*)

*Leptotes pohlitinocoi* V.P.Castro & Chiron in

*Richardiana* 4(2): 78 (-81; figs. 2-3; fotogr.) (2004)–Bahia

*Liparis chungthangensis* Lucksom in *Orchid Rev.* 112(1255): 14 (2004)–Sikkim, East Himalaya

*Liparis madrensis* Soto Arenas, Salazar & R.Jiménez in *Icon. Orchid.* 5-6: t. 608 (2002 publ. 2003)–Durango, Zacatecas, Aguascalientes, Chihuahua

*Liparis nervosa* (Thunb.) Lindl. subsp. *granitica* Carnevali & I.Ramírez in *Novon* 13(4): 411 (5 Dec. 2003)–Venezuela

*Malaxis brevis* Dressler in *Selbyana* 24(2): 141 (31 Dec. 2003)–Panama

*Malaxis insperata* Dressler in *Selbyana* 24(2): 142 (31 Dec. 2003)–Nicaragua

*Malaxis rostratula* Dressler in *Selbyana* 24(2): 142 (31 Dec. 2003)–Panama

*Malaxis triangularis* Dressler in *Selbyana* 24(2): 143 (31 Dec. 2003)–Guatemala, Veracruz, Honduras, El Salvador, Chiapas

*Masdevallia acaroi* Luer & Hirtz in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 789a (2003)–Ecuador

*Masdevallia ametroglossa* Luer & Hirtz in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 29a (2003)–Ecuador

*Masdevallia anomala* Luer & Sijm in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 227a (2003)–Peru

*Masdevallia eburnea* Luer & Maduro in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 409a (2003)–Panama

*Masdevallia glorieae* Luer & Maduro in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 413a (2003)–Panama

*Masdevallia loui* Luer & Dalström in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 113a (2003)–Ecuador

*Masdevallia milagroii* Luer & Hirtz in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 1227 (2003)–Ecuador

*Masdevallia plynophora* Luer in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 149a (2003)–Peru

*Masdevallia rolandorum* Luer & Sijm in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 165a (2003)–Peru

*Masdevallia segrex* Luer & Hirtz in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 1169 (2003)–Ecuador

*Masdevallia stigii* Luer & L.Jost in *Monogr. Syst. Bot. Missouri Bot. Gard.* 91: 895a (2003)–Ecuador

×*Mauriceara* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 95 (2003); (*Aganisia* × *Batemannia* × *Otostylis* × *Pabstia* × *Promenaea* × *Zygopetalum* × *Zygosepalum*)  
*Maxillaria atwoodiana* Pupulin in *Orchidee (Hamburg)* 54(5): 563 (-566; figs. 16-17) (18 Dec. 2003)—Costa Rica

*Maxillaria cachacoensis* J.T.Atwood in *Selbyana* 24(1): 30 (2003)—Ecuador

*Maxillaria canarensis* J.T.Atwood in *Selbyana* 24(1): 31 (2003)—Ecuador

*Maxillaria condorensis* J.T.Atwood in *Selbyana* 24(1): 32 (2003)—Ecuador

*Maxillaria maldonadoensis* J.T.Atwood in *Selbyana* 24(1): 33 (2003)—Ecuador, Colombia

*Maxillaria mexicana* J.T.Atwood in *Selbyana* 24(1): 35 (2003). Colima, México State, Michoacán, Guerrero, Nayarit, Oaxaca

*Maxillaria milenae* V.P.Castro & Chiron in *Richardiana* 4(2): 74 (73-77; fig. 1; map; photogr.) (2004) [Apr]—Espirito Santo

*Maxillaria oxapampensis* J.T.Atwood in *Selbyana* 24(1): 36 (2003)—Peru

*Maxillaria patella* J.T.Atwood in *Selbyana* 24(1): 37 (2003)—Peru

*Maxillaria pseudonubigena* J.T.Atwood in *Selbyana* 24(1): 39 (2003)—Colombia, Bolivia, Ecuador

*Maxillaria pustulosa* J.T.Atwood in *Selbyana* 24(1): 41 (2003)—Ecuador

*Maxillaria sculliana* J.T.Atwood in *Selbyana* 24(1): 1 (2003)—Colombia

*Maxillaria simplex* J.T.Atwood in *Selbyana* 24(1): 43 (2003)—Peru

×*Mendelara* Juszczak & J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 14 (2004); (*Ascocentrum* × *Holcoglossum* × *Neofinetia* × *Rhynchostylis* × *Vanda*)

×*Myoxastrepia* Glic. & J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003); (*Myoxanthus* × *Restrepia*)

×*Neofadanda* J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 14 (2004); (*Neofinetia* × *Seidenfadenia* × *Vanda*)

*Ochyrorchis* Szlach. in *Richardiana* 4(2): 52 (2004)[Apr]

*Ochyrorchis arietina* (Hook.f.) Szlach. in *Richardiana* 4(2): 53 (2004)[Apr]; *Habenaria arietina*  
*Ochyrorchis cavatibrachia* (Summerh.) Szlach. in *Richardiana* 4(2): 53 (2004)[Apr]

*Ochyrorchis davidii* (Franchet) Szlach. in *Richardiana* 4(2): 53 (2004)[Apr]

*Ochyrorchis egregia* (Summerh.) Szlach. in *Richardiana* 4(2): 53 (2004)[Apr]

*Ochyrorchis ensifolia* (Lindl.) Szlach. in *Richardiana* 4(2): 53 (2004)[Apr]

*Ochyrorchis gilbertii* (S.Thomas & P.J.Cribb) Szlach. in *Richardiana* 4(2): 53 (2004) [Apr]; *Habenaria gilbertii* S.Thomas & P.J.Cribb

*Ochyrorchis godefroyi* (Rchb.f.) Szlach. in *Richardiana* 4(2): 53 (2004)[Apr]

*Ochyrorchis intermedia* (D.Don) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis keniensis* (Summerh.) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis limprichtii* (Schltr.) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis macrantha* (A.Rich.) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis mairei* (Schltr.) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis mannii* (Hook.f.) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis multipartita* (Blume ex Kraenzl.) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis occlusa* (Summerh.) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis oligoschista* (Schltr.) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis pectinata* (D.Don) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis praestans* (Rendle) Szlach. in *Richardiana* 4(2): 55 (2004)[Apr]

*Ochyrorchis praestans* (Rendle) Szlach. var. *umbrosa* (G.Will.) Szlach. in *Richardiana* 4(2): 55 (2004) [Apr]

*Ochyrorchis quartiniana* (A.Rich.) Szlach. in *Richardiana* 4(2): 56 (2004) [Apr]

*Ochyrorchis splendens* (Rendle) Szlach. in *Richardiana* 4(2): 56 (2004) [Apr]

*Ochyrorchis splendentior* (Summerh.) Szlach. in *Richardiana* 4(2): 56 (2004) [Apr]

*Ochyrorchis tosariensis* (J.J.Sm.) Szlach. in *Richardiana* 4(2): 56 (2004) [Apr]

*Octarrhena angustifolia* (Schltr.) Schuit. in *Blumea* 48(3): 511 (2003): *Chitonanthera angustifolia*

*Octarrhena angustissima* (Schltr.) Schuit. in *Blumea* 48(3): 511 (2003): *Chitonanthera angustissima*

*Octarrhena aporoides* (Schltr.) Schuit. in *Blumea* 48(3): 512 (2003): *Chitonanthera aporoides*

*Octarrhena brassii* (L.O.Williams) Schuit. in *Blumea* 48(3): 512 (2003): *Chitonanthera brassii*

*Octarrhena falcifolia* (Schltr.) Schuit. in *Blumea* 48(3): 512 (2003): *Chitonanthera falcifolia*

*Octarrhena gracilis* (L.O.Williams) Schuit. in *Blumea* 48(3): 512 (2003): *Chitonanthera gracilis*

*Octarrhena latipetala* (J.J.Sm.) Schuit. in *Blumea* 48(3): 512 (2003): *Chitonanthera latipetala*

*Octarrhena podochiloides* (Schltr.) Schuit. in *Blumea* 48(3): 512 (2003): *Chitonanthera podochiloides*

*Octarrhena reflexa* (J.J.Sm.) Schuit. in *Blumea* 48(3): 512 (2003): *Chitonanthera reflexa*

*Octarrhena spathulata* (Schltr.) Schuit. in *Blumea* 48(3): 512 (2003): *Chitonanthera spathulata*

*Odontochilus saprophyticus* (Aver.) Ormerod in *Taiwania* 48(3): 141 (2003): *Pristiglottis saprophytica*

*Oncidium leucomelas* (Rchb.f.) Dressler & N.H.Williams in *Selbyana* 24(1): 44 (2003): *Odontoglossum leucomelas*

× *Oncostele* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Oncidium* × *Rhynchostele*)

*Ophrys brutia* P.Delforge in *Naturalistes Belges* 84 (Orchid. 16): 74 (-75; figs.) (15 Dec. 2003)–Italy

*Ophrys* × *capellae-pacis* G.Kretzschmar & H.Kretzschmar in *Ber. Arbeitskreis. Heimische Orchid.* 20(1): 70 (2003): (*Ophrys spruneri* subsp. *grigoriana* × *Ophrys iricolor*)–Kriti

*Ophrys holosericea* (Burm.f.) Greuter subsp. *grandiflora* (H.Fleischm. & Soó) Faurh. in *J. Eur. Orchideen* 35(4): 745 (2003): *Ophrys bornmuelleri* Schulze f. *grandiflora*

*Ophrys incubacea* Bianca ex Tod. var. *dianensis* Perazza & Doro in *J. Eur. Orchideen* 35(4): 726 (2003)–Italy

*Ophrys integra* (Moggr. & Rchb.f.) Paulus & Gack in *Israel J. Bot.* 39(1-2): 79 (1990) *Ophrys insectifera* L. subsp. *integra*

*Ophrys janrenzii* M.Hirth in *Jahresber. Naturwiss. Vereins Wuppertal* 55: 171 (2002)–Greece

*Ophrys kvarneri* Perko & Kerschb. in *Ber. Arbeitskreis. Heimische Orchid.* 20(1): 46 (2003)–Croatia

*Ophrys lucis* (Kalteisen & H.R.Reinhard) Paulus & Gack in *Israel J. Bot.* 39(1-2): 78 (1990): *Ophrys aegaea* Kalteisen & H.R.Reinhard subsp. *lucis*

*Ophrys lusitanica* (O.Danesch & E.Danesch) Paulus & Gack in *Israel J. Bot.* 39(1-2): 77 (1990): *Ophrys speculum* Link subsp. *lusitanica*

*Ophrys lutea* Cav. subsp. *aspea* (Devillers-Tersch. & Devillers) Faurh. in *Ber. Arbeitskreis. Heimische Orchid.* 20(1): 83 (2003): *Ophrys aspea*

*Ophrys* × *marinaltae* M.R.Lowe, Piera & M.B.Crespo in *Flora Montiberica* 24: 100 (2003): (*Ophrys dianica* × *Ophrys speculum*)–Spain

*Ophrys melena* (Renz) Paulus & Gack in *Israel J. Bot.* 39(1-2): 79 (1990), nom. inval. basionym published as *O. lutea* (× *fusca*) ssp. *melena* Renz in *Feddes Repert. Spec. Nov. Regni Veg.* 25: 264 (1928)

*Ophrys parvimaculata* (O.Danesch & E.Danesch) Paulus & Gack in *Israel J. Bot.* 39(1-2): 78 (1990): *Ophrys fuciflora* (F.W.Schmidt) Moench subsp. *parvimaculata* O.Danesch & E.Danesch

*Ophrys* × *sulcitana* Scrugli, Todde & Cogoni in *J. Eur. Orchideen* 35(3): 672 (2003): (*Ophrys annae* × *Ophrys bombyliflora*)–Sardegna

*Ophrys umbilicata* Desf. subsp. *flavomarginata* (Renz) Faurh. in *J. Eur. Orchideen* 35(4): 745 (2003): *Ophrys attica* f. *flavomarginata*

*Ophrys umbilicata* Desf. subsp. *lapethica* (Gözl & H.R.Reinhard) Faurh. in *J. Eur. Orchideen* 35(4): 745 (2003): *Ophrys lapethica*

*Ophrys zeusii* M.Hirth in *Jahresber. Naturwiss. Vereins Wuppertal* 55: 180 (2002)–Greece

*Orchis ×sciathia* Biel in *Ber. Arbeitskreis. Heimische Orchid.* 20(1): 73–74 (2003): (*Orchis morio* × *Orchis boryi*)–Greece

*Paphiopedilum callosum* (Rchb.f.) Stein var. *viniferum* (Koop. & N.Haseg.) J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 16 (2004): *Paphiopedilum viniferum*

*Paphiopedilum crossii* (E.Morren) Braem & Senghas f. *viniferum* (Koop. & N.Haseg.) Braem & Chiron in *Paphiopedilum* 261 (2003): *Paphiopedilum viniferum*

*Paphiopedilum crossii* (E.Morren) Braem & Senghas f. *viridiflorum* (Linden) Braem & Chiron in *Paphiopedilum* 262 (2003): *Cypripedium callosum* Rchb.f. var. *viridiflorum*

*Paphiopedilum esquirolei* Schltr. var. *chiwuanum* (Tang & F.T.Wang) Braem & Chiron in *Paphiopedilum* 181 (2003): *Paphiopedilum chiwuanum*

*Paphiopedilum esquirolei* Schltr. f. *viride* (O.Gruss & Roeth) Braem & Chiron in *Paphiopedilum* 180 (2003): *Paphiopedilum hirsutissimum* (Lindl. ex Hook.) Stein f. *viride*

*Paphiopedilum godefroyae* (God.-Leb.) Stein f. *leucochilum* (Rolfe) Braem & Chiron in *Paphiopedilum* 104 (2003): *Cypripedium godefroyae* God.-Leb. var. *leucochilum*

*Paphiopedilum kolopakingii* Fowlie f. *topperi* (Braem & H.Mohr) Braem & Chiron in *Paphiopedilum* 346 (2003): *Paphiopedilum topperi*

*Paphiopedilum moquetteanum* (J.J.Sm.) Fowlie f. *flavoviride* (Braem) Braem & Chiron in *Paphiopedilum* 419 (2003): *Paphiopedilum glaucophyllum* J.J.Sm. f. *flavoviride*

*Paphiopedilum roebbelenii* Pfitzer f. *alboflavum* (O.Gruss) Braem & Chiron in *Paphiopedilum* 354 (2003): *Paphiopedilum philippinense* (Rchb.f.) Stein f. *alboflavum*

*Pecteilis hawkesiana* (King & Pantl.) C.S.Kumar in *Nord. J. Bot.* 22(6):526 (2002) [2003]: *Habenaria hawkesiana*

*Peristylus garrettii* (Rolfe ex Downie) J.J.Wood & Ormerod in *Taiwania* 48(3): 141 (2003): *Habenaria garrettii*

*Phreatia vanuatensis* T.Yukawa in *Acta Phytotax. Geobot.* 54(2): 105 (2003)–Vanuatu

*Plantaginorchis* Szlach. in *Richardiana* 4(2): 61 (2004) [Apr]

*Plantaginorchis alinae* (Szlach.) Szlach. in *Richardiana* 4(2): 64 (2004) [Apr]

*Plantaginorchis cephalote* (Lindl.) Szlach. in *Richardiana* 4(2): 64 (2004) [Apr]

*Plantaginorchis chloroleuca* Szlach. in *Richardiana* 4(2): 64 (2004) [Apr]: *Habenaria chloroleuca* Schltr. in K.Schum. & Lauterb.

*Plantaginorchis dentata* (Sw.) Szlach in *Richardiana* 4(2): 64 (2004) [Apr]: *Orchis dentata* Sw.

*Plantaginorchis dianthoides* (Nevski) Szlach. in *Richardiana* 4(2): 64 (2004) [Apr]

*Plantaginorchis elliptica* (Wight) Szlach. in *Richardiana* 4(2): 64 (2004) [Apr]

*Plantaginorchis engleriana* (Kraenzl.) Szlach. in *Richardiana* 4(2): 64 (2004) [Apr]

*Plantaginorchis finetiana* (Schltr.) Szlach. in *Richardiana* 4(2): 64 (2004) [Apr]

*Plantaginorchis longifolia* (Lindl.) Szlach. in *Richardiana* 4(2): 64 (2004) [Apr]

*Plantaginorchis parva* (Summerh.) Szlach. in *Richardiana* 4(2): 65 (2004) [Apr]

*Plantaginorchis parvipetala* (J.J.Sm.) Szlach. in *Richardiana* 4(2): 65 (2004) [Apr]

*Plantaginorchis plantaginea* (Lindl.) Szlach. in *Richardiana* 4(2): 65 (2004) [Apr]

*Plantaginorchis prionocraspedon* (Summerh.) Szlach. in *Richardiana* 4(2): 65 (2004) [Apr]

*Plantaginorchis radiata* (Thunb.) Szlach. in *Richardiana* 4(2): 65 (2004) [Apr]: *Orchis radiata*

*Plantaginorchis rhynchocarpa* (Thwaites) Szlach. in *Richardiana* 4(2): 65 (2004) [Apr]

*Platanthera montana* (F.W.Schmidt) Rchb.f. subsp. *holmboei* (H.Lindb.) Ströhle in *J. Eur. Orchideen* 35(4): 834 (2003): *Platanthera holmboei*

*Platantheroides* Szlach. *Richardiana* 4(3): 103 (2004) [8 Jun]

*Platantheroides alata* (Hook.) Szlach. in *Richardiana* 4(3): 104 (2004) [8 Jun]: *Habenaria alata*

*Platantheroides brevilabiata* (A.Rich. & Galeotti) Szlach. in *Richardiana* 4(3): 104 (2004) [8 Jun]: *Habenaria brevilabiata*

*Platantheroides clavigera* (Lindl.) Szlach. in *Richardiana* 4(3): 104 (2004) [8 Jun]: *Platanthera clavigera*

*Platantheroides cumminsiana* (King & Pant.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria cumminsiana*

*Platantheroides curvilabra* (Barb.Rodr.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria curvilabra*

*Platantheroides densa* (Wall. ex Lindl.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria densa*

*Platantheroides dentifera* (C.Schweinf.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria dentifera*

*Platantheroides edgeworthii* (Hook.f. ex Collett) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria edgeworthii*

*Platantheroides epipactidea* (Rchb.f.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria epipactidea*

*Platantheroides eustachya* (Rchb.f.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria eustachya*

*Platantheroides floribunda* (Lindl.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria floribunda*

*Platantheroides hamata* (Barb.Rodr.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria hamata*

*Platantheroides heleogena* (Schltr.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria heleogena*

*Platantheroides herzogii* (Schltr.) Szlach. in *Richardiana* 4(3): 106 (2004) [8 Jun]: *Habenaria herzogii*

*Platantheroides hologlossa* (Summerh.) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria hologlossa*

*Platantheroides latilabris* (Lindl.) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Platanthera latilabris*

*Platantheroides ligulata* (C.Schweinf.) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria ligulata*

*Platantheroides liguliglossa* (Hoehne) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria liguliglossa*

*Platantheroides linioides* (C.Presl) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria linifolia*

*Platantheroides lucida* (Wall. ex Lindl.) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria lucida*

*Platantheroides magdalenensis* (Hoehne) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria magdalenensis*

*Platantheroides obtusa* (Lindl.) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria obtusa*

*Platantheroides odontopetala* (Rchb.f.) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria odontopetala*

*Platantheroides oerstedii* (Rchb.f.) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria oerstedii*

*Platantheroides ornithoides* (Barb.Rodr.) Szlach. in *Richardiana* 4(3): 107 (2004) [8 Jun]: *Habenaria ornithoides*

*Platantheroides parvidens* (Lindl.) Szlach. in *Richardiana* 4(3): 108 (2004) [8 Jun]: *Habenaria parvidens*

*Platantheroides petalodes* (Lindl.) Szlach. in *Richardiana* 4(3): 108 (2004) [8 Jun]: *Habenaria petalodes*

*Platantheroides quadrata* (Lindl.) Szlach. in *Richardiana* 4(3): 108 (2004) [8 Jun]: *Habenaria quadrata*

*Platantheroides saprophytica* (Bossert & P.J.Cribb) Szlach. in *Richardiana* 4(3): 108 (2004) [8 Jun]: *Habenaria saprophytica*

*Platantheroides seticauda* (Lindl. ex Benth.) Szlach. in *Richardiana* 4(3): 108 (2004) [8 Jun]: *Habenaria seticauda*

*Platantheroides stenochila* (Lindl.) Szlach. in *Richardiana* 4(3): 108 (2004) [8 Jun]: *Habenaria stenochila*

*Platantheroides strictissima* (Rchb.f.) Szlach. in *Richardiana* 4(3): 108 (2004) [8 Jun]: *Habenaria strictissima*

*Platantheroides unellezii* (Foldats) Szlach. in *Richardiana* 4(3): 108 (2004) [8 Jun]: *Habenaria unellezii*

*Platantheroides zambesina* (Rchb.f.) Szlach. in *Richardiana* 4(3): 108 (2004) [8 Jun]: *Habenaria zambesina*

*Pleurothallis aguirrei* Luer & R.Escobar in *Orquideologia* 22(3): 255 (2003)–Colombia

*Pleurothallis calogramma* Luer in *Orquideologia* 22(3): 256 (2003)–Colombia

*Pleurothallis conformalis* Luer & Dalström in *Orquideologia* 22(3): 259 (2003)–Ecuador

*Pleurothallis dubbeldamii* Luer in *Orquideologia* 22(3): 260 (2003)

*Pleurothallis embreei* Luer & Hirtz in *Orquideologia* 22(3): 263 (2003)–Ecuador

*Pleurothallis escalerensis* Carnevali & Luer in *Novon* 13(4): 414 (5 Dec. 2003)–Venezuela

*Pleurothallis lilianae* Luer in *Orquideologia* 22(3): 264 (2003)–Ecuador

*Pleurothallis loreae* Carnevali & I.Ramírez in *Novon* 13(4): 412 (5 Dec. 2003)–Venezuela

*Pleurothallis nanella* Luer & Hirtz in *Orquideologia* 22(3): 267 (2003)–Ecuador

*Pleurothallis persimilis* Luer & Hirtz in *Orquideologia* 22(3): 268 (2003)–Ecuador

*Pleurothallis quadricristata* Luer & Hirtz in *Orquideologia* 22(3): 271 (2003)–Ecuador

*Pleurothallis sergioi* Luer & R.Escobar in *Orquideologia* 22(3): 272 (2003)–Colombia

*Pleurothallis stellata* I.Ramírez & Carnevali in *Novon* 13(4): 417 (5 Dec. 2003)–Venezuela

*Pleurothallis upanoensis* Luer & Hirtz in *Orquideologia* 22(3): 275 (2003)–Ecuador

*Pleurothallis zumbae* Luer & Hirtz in *Orquideologia* 22(3): 276 (2003)–Ecuador

×*Plumatistylis* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Pterostylis* × *Plumatichilos*)

*Podochilus banaensis* Ormerod in *Taiwania* 48(3): 142 (2003). Vietnam

*Podochilus oxystophylloides* Ormerod in *Taiwania* 48(3): 143 (2003)–Guangdong

*Polycycnis grayi* Dodson in *Orquideologia* 22(3): 200 (2003)–Ecuador

*Polystachya clareae* Hermans in *Orchid Rev.* 111(1254): 354 (2003)–Madagascar

*Polystachya mcvaughiana* Soto Arenas in *Icon. Orchid.* 5-6: t. 642 (2002 publ. 2003)–Jalisco, Guerrero, Nayarit, Oaxaca

*Polystachya montiquetiana* Stévant & Geerinck in *Syst. Geogr. Pl.* 73(2): 281 (2003)–São Tomé, Gabon, Equatorial Guinea

*Prasophyllum hygrophilum* D.L.Jones & D.T.Rouse in *Orchadian* 14(6): 282 (–285; fig. 1) (Dec. 2003)–Victoria, Australia

*Prosthechea* subgen. *Equiloba* Chiron & V.P.Castro in *Richardiana* 4(1): 29 (2003)

*Prosthechea* subgen. *Hormidium* (Lindl.) Chiron & V.P.Castro in *Richardiana* 4(1): 29 (2003);  
*Epidendrum* subgen. *Hormidium*

*Prosthechea* sect. *Longiloba* Chiron & V.P.Castro in *Richardiana* 4(1): 30 (2003)

*Prosthechea* subgen. *Osmophytum* (Lindl.) Chiron & V.P.Castro in *Richardiana* 4(1): 28 (2003);  
*Epidendrum* subgen. *Osmophytum*

*Prosthechea* sect. *Parviloba* Chiron & V.P.Castro in *Richardiana* 4(1): 31 (2003)

*Prosthechea* sect. *Rotundiloba* Chiron & V.P.Castro in *Richardiana* 4(1): 31 (2003)

*Prosthechea latro* (Rchb.f. ex Cogn.) V.P.Castro & Chiron in *Richardiana* 4(1): 28 (2003); *Epidendrum latro*

*Prosthechea mulasii* Soto Arenas & L.Cerv. in *Icon. Orchid.* 5-6: t. 651 (2002 publ. 2003)–Jalisco, Guerrero

*Prosthechea punctulata* (Rchb.f.) Soto Arenas &

Salazar in *Icon. Orchid.* 5-6: t. 652 (2002 publ. 2003):  
*Epidendrum punctulatum*

*Pseudencyclia* Chiron & V.P.Castro in *Richardiana* 4(1): 31 (2003)

*Pseudencyclia boothiana* (Lindl.) V.P.Castro & Chiron in *Richardiana* 4(1): 32 (2003): *Epidendrum boothianum*

*Pseudencyclia brassavolae* (Rchb.f.) V.P.Castro & Chiron in *Richardiana* 4(1): 32 (2003): *Epidendrum brassavolae*

*Pseudencyclia campylostalix* (Rchb.f.) V.P.Castro & Chiron in *Richardiana* 4(1): 32 (2003): *Epidendrum campylostalix*

*Pseudencyclia concolor* (La Llave & Lex.) V.P.Castro & Chiron in *Richardiana* 4(1): 32 (2003): *Epidendrum concolor*

*Pseudencyclia cretacea* (Dressler & G.E.Pollard) V.P.Castro & Chiron in *Richardiana* 4(1): 32 (2003): *Encyclia cretacea*

*Pseudencyclia ghiesbreghtiana* (A.Rich. & Galeotti) V.P.Castro & Chiron in *Richardiana* 4(1): 32 (2003): *Epidendrum ghiesbreghtianum*

*Pseudencyclia hastata* (Lindl.) V.P.Castro & Chiron in *Richardiana* 4(1): 32 (2003): *Epidendrum hastatum*

*Pseudencyclia ionocentrum* (Rchb.f.) V.P.Castro & Chiron in *Richardiana* 4(1): 32 (2003): *Epidendrum ionocentrum*

*Pseudencyclia linkiana* (Klotzsch) V.P.Castro & Chiron in *Richardiana* 4(1): 32 (2003): *Epidendrum linkianum*

*Pseudencyclia livida* (Lindl.) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum lividum*

*Pseudencyclia magnispatha* (Ames, F.T.Hubb. & C.Schweinf.) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum magnispatha*

*Pseudencyclia michuacana* (La Llave & Lex.) Chiron & V.P.Castro in *Richardiana* 4(1): 32 (2003): *Epidendrum michuacanum*

*Pseudencyclia mulasii* (Soto Arenas & L.Cerv.) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Prosthechea mulasii*

*Pseudencyclia neglecta* (Pupulin) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Prosthechea neglecta*

*Pseudencyclia pringlei* (Rolfe) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum pringlei*

*Pseudencyclia prismatocarpa* (Rchb.f.) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum prismatocarpum*

*Pseudencyclia pterocarpa* (Lindl.) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum pterocarpum*

*Pseudencyclia punctulata* (Rchb.f.) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum punctulatum*

*Pseudencyclia semiaperta* (Hágsater) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Encyclia semiaperta*

*Pseudencyclia tardiflora* (Mora-Ret. ex Pupulin) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Prosthechea tardiflora*

*Pseudencyclia tripunctata* (Lindl.) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum tripunctatum*

*Pseudencyclia varicosa* (Bateman) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum varicosum*

*Pseudencyclia venosa* (Lindl.) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum venosum*

*Pseudencyclia vitellina* (Lindl.) V.P.Castro & Chiron in *Richardiana* 4(1): 33 (2003): *Epidendrum vitellinum*

*Pseudoliparis hippocrepiformis* (J.J.Wood) Marg. in *Ann. Bot. Fenn.* 40(5): 362 (2003): *Malaxis hippocrepiformis*

×*Pteropodium* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Diplodium* × *Pterostylis*)

*Renanthera breviflora* (Rchb.f.) R.Rice & J.J.Wood in *Orchid Rev.* 111(1254): 349 (2003): *Renanthera matutina* (Blume) Lindl. var. *breviflora*

*Renanthera chanii* J.J.Wood & R.Rice in *Orchid Rev.* 111(1254): 346 (2003)–Sabah

*Renantherella auyongii* (Christenson) R.Rice in *Orchid Rev.* 111(1254): 351 (2003): *Renanthera auyongii*

×*Rhynarthron* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Caularthron* × *Rhyncholaelia*)

×*Rhynburgkia* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Rhyncholaelia* × *Schomburgkia*)

×*Rhyncanthe* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Guarianthe* × *Rhyncholaelia*)

×*Rhynchodendrum* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Epidendrum* × *Rhyncholaelia*)

×*Rhynchofadanda* J.M.H.Shaw in *Orchid Rev. Suppl.*, 112(1255): 14 (2004): (*Rhynchostylis* × *Seidenfadenia* × *Vanda*)

*Rhynchosele beloglossa* (Rchb.f.) Dressler & N.H.Williams in *Icon. Orchid.* 5-6: t. 654 (2002 publ. 2003): *Odontoglossum beloglossum*

×*Rhyncyclia* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Encyclia* × *Rhyncholaelia*)

×*Rhynitanthe* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Guarianthe* × *Rhyncholaelia*)

×*Rhynitis* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Rhyncholaelia* × *Sophranitis*)

*Rossioglossum hagsaterianum* Soto Arenas in *Icon. Orchid.* 5-6: t. 661 (2002 publ. 2003)—Nayarit, Jalisco

*Sarcoglottis Richardiana* (Schltr.) Salazar & Soto Arenas in *Icon. Orchid.* 5-6: t. 664 (2002 publ. 2003): *Spiranthes Richardiana*

*Sarcoglottis scintillans* (E.W.Greenw.) Salazar & Soto Arenas in *Icon. Orchid.* 5-6: t. 665 (2002 publ. 2003): *Pelexia scintillans*

*Schluckebieria* Braem in *Richardiana* 4(2): 49 (2004) [Apr]

*Schluckebieria araguaiensis* (Pabst) Braem in *Richardiana* 4(2): 49 (2004) [Apr]: *Cattleya araguaiensis*

*Senghasia* Szlach. in *J. Orchideenfreund* 10(4): 335 (2003)—*Kefersteinia* sect. *Umbonatae* Senghas & G.Gerlach

*Senghasia auriculata* (Dressler) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia auriculata*

*Senghasia chocoensis* (G.Gerlach & Senghas) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia chocoensis*

*Senghasia costaricensis* (Schltr.) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia costaricensis*

*Senghasia guacamayoana* (Dodson & Hirtz) Szlach. in

*J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia guacamayoana*

*Senghasia maculosa* (Dressler) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia maculosa*

*Senghasia ocellata* (Garay) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia ocellata*

*Senghasia parvilabris* (Schltr.) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia parvilabris*

*Senghasia perlonga* (Dressler) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia perlonga*

*Senghasia retanae* (G.Gerlach) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia retanae*

*Senghasia trullata* (Dressler) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia trullata*

*Senghasia vollesii* (Jenny) Szlach. in *J. Orchideenfreund* 10(4): 336 (2003): *Kefersteinia vollesii*

*Senghasia wercklei* (Schltr.) Szlach. in *J. Orchideenfreund* 10(4): 337 (2003): *Kefersteinia wercklei*

*Sigmatostalix cardioglossa* Pupulin in *Harvard Pap. Bot.* 8(1): 38 (2003)—Costa Rica

*Sigmatostalix integrilabris* Pupulin in *Harvard Pap. Bot.* 8(1): 45 (2003)—Costa Rica, Panama

*Sigmatostalix savegreensis* Pupulin in *Harvard Pap. Bot.* 8(1): 55 (2003)—Costa Rica

*Sobralia macdougallii* Soto Arenas, Pérez-García & Salazar in *Icon. Orchid.* 5-6: t. 668 (2002 publ. 2003)—Oaxaca, Chiapas, Guatemala

×*Sophranthe* J.M.H.Shaw in *Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Guarianthe* × *Sophranitis*)

*Specklinia alata* (A.Rich. & Galeotti) Solano & Soto Arenas in *Icon. Orchid.* 5-6: x (2002 publ. 2003): *Pleurothallis alata*

*Specklinia blancoi* (Pupulin) Soto Arenas & Solano in *Icon. Orchid.* 5-6: t. 669 (2002 publ. 2003): *Pleurothallis blancoi*

*Specklinia echinata* (L.O.Williams) Soto Arenas &

Solano in *Icon. Orchid.* 5-6: t. 670 (2002 publ. 2003):  
*Pleurothallis fuegii* Rchb.f. var. *echinata*

*Specklinia fimbriata* (Ames & C.Schweinf.) Solano in  
*Icon. Orchid.* 5-6: t. 671 (2002 publ. 2003):  
*Masdevallia fimbriata*

*Specklinia fuegii* (Rchb.f.) Solano & Soto Arenas in  
*Icon. Orchid.* 5-6: x (2002 publ. 2003): *Pleurothallis*  
*fuegii*  
*Specklinia pisinna* (Luer) Solano & Soto Arenas in  
*Icon. Orchid.* 5-6: xi (2002 publ. 2003): *Pleurothallis*  
*pinna*

*Specklinia segregatifolia* (Ames & C.Schweinf.) Solano  
& Soto Arenas in *Icon. Orchid.* 5-6: xi (2002 publ.  
2003): *Pleurothallis segregatifolia*

*Sphyrastylis bonitensis* Dodson in *Orquideologia* 22(3):  
205 (2003)—Ecuador

×*Staffordara* G.Monnier & J.M.H.Shaw in *Orchid Rev.*  
*Suppl.*, 111(1254): 14 (2003): (*Aganisia* × *Galeottia* ×  
*Zygosepalum*)

*Stanhopea whittenii* Soto Arenas, Salazar & G.Gerlach  
in *Icon. Orchid.* 5-6: t. 679 (2002 publ. 2003)—Belize,  
Guatemala, Chiapas

*Stelis aristocratica* (L.O.Williams) Solano & Soto  
Arenas in *Icon. Orchid.* 5-6: xi (2002 publ. 2003):  
*Pleurothallis aristocratica*

*Stelis emarginata* (Lindl.) Soto Arenas & Solano in  
*Icon. Orchid.* 5-6: t. 681 (2002 publ. 2003):  
*Pleurothallis emarginata*

*Stelis greenwoodii* Soto Arenas & Solano in *Icon.*  
*Orchid.* 5-6: t. 682 (2002 publ. 2003)—Michoacán,  
Jalisco, Guatemala, Sinaloa, Chiapas, Colima, Oaxaca,  
Nayarit, Guerrero

*Stelis megachlamys* (Schltr.) Pupulin subsp.  
*teotepecensis* Soto Arenas in *Icon. Orchid.* 5-6: t. 685  
(2002 publ. 2003)—Guerrero

*Stelis nicaraguensis* (Liebm.) Solano & Soto Arenas in  
*Icon. Orchid.* 5-6: xi (2002 publ. 2003): *Physosiphon*  
*nicaraguensis*

*Stelis nonresupinata* Solano & Soto Arenas in *Icon.*  
*Orchid.* 5-6: t. 688 (2002 publ. 2003)—Guerrero,  
Oaxaca

*Stelis punctulata* (Rchb.f.) Soto Arenas in *Icon. Orchid.*  
5-6: t. 690 (2002 publ. 2003): *Physosiphon punctulatus*

*Stelis quadrifida* (La Llave & Lex.) Solano & Soto

Arenas in *Icon. Orchid.* 5-6: xi (2002 publ. 2003):  
*Dendrobium quadrifidum*

*Stelis tacanensis* Solano & Soto Arenas in *Icon.*  
*Orchid.* 5-6: t. 693 (2002 publ. 2003)—Guatemala,  
Chiapas, Mexico

*Stelis xerophila* (Schltr.) Soto Arenas in *Icon. Orchid.*  
5-6: t. 695 (2002 publ. 2003): *Pleurothallis xerophila*

*Stellilabium anacristinae* Pupulin in *Harvard Pap. Bot.*  
8(1): 30 (2003)—Costa Rica

*Stellilabium tsipiriense* Pupulin in *Harvard Pap. Bot.*  
8(1): 30 (2003)—Costa Rica

×*Stellipogon* J.M.H.Shaw in *Orchid Rev. Suppl.*,  
111(1254): 96 (2003): (*Telipogon* × *Stellilabium*)

×*Stenopogon* Glic. & J.M.H.Shaw in *Orchid Rev.*  
*Suppl.*, 111(1254): 96 (2003): (*Cyclopogon* ×  
*Stenorrhynchos*)

×*Stephenmonkhousera* Monkhous & J.M.H.Shaw in  
*Orchid Rev. Suppl.*, 111(1254): 96 (2003): (*Aganisia* ×  
*Batemannia* × *Otostylis* × *Pabstia* × *Zygopetalum* ×  
*Zygosepalum*)

×*Telidezia* J.M.H.Shaw in *Orchid Rev. Suppl.*,  
111(1254): 96 (2003): (*Fernandezia* × *Telipogon*)

*Telipogon cuscoensis* Nauray & Christenson in *Orchids*  
(USA) 72(9): 696 (2003)—Peru

*Telipogon machupicchuensis* Nauray & Christenson in  
*Orchids (USA)* 72(9): 697 (2003)—Peru

×*Telisterella* J.M.H.Shaw in *Orchid Rev. Suppl.*,  
111(1254): 96 (2003): (*Hofmeisterella* × *Telipogon*)

×*Tetrallia* J.M.H.Shaw in *Orchid Rev. Suppl.*,  
111(1254): 96 (2003): (*Dockrillia* × *Tetrabaculum*)

×*Thelybaculum* J.M.H.Shaw in *Orchid Rev. Suppl.*,  
111(1254): 96 (2003): (*Tetrabaculum* × *Thelychiton*)

×*Thelyrillia* J.M.H.Shaw in *Orchid Rev. Suppl.*,  
111(1254): 96 (2003): (*Dockrillia* × *Thelychiton*)

*Trichocentrum andreanum* (Cogn.) R.Jiménez &  
Carnevali in *Icon. Orchid.* 5-6: t. 697 (2002 publ.  
2003): *Oncidium carthaginense* var. *andreanum*

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*depauperatum*

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*longifolium*

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*longipes*

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*megalophium*

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## Recent Literature

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## Book Reviews

**Koeniger, W.** *Oncidium. Eine Monograph I.* Verlag Helga Koeniger, München, Germany. Pp. 256, 60 colour photographs, 60 b/w line drawings. Price: c. £66.

This volume, the first of a projected five on the genus *Oncidium*, is both well produced and well illustrated. The aim of the author is to present a monograph of the genus to show the diversity of this "polymorphic genus" and enable readers to identify all of the known species.

The text is bilingual, German and English, and covers etymology, allied species, a description, distinguishing features, section, distribution, selected herbarium collections, taxonomic notes and brief cultural notes. Each species is illustrated by a fine colour photograph of a flower and a detailed black-and-white line drawing. It would have been helpful to fellow taxonomists if the collector's name and number

could have been added to the herbarium collection details.

The content covers many familiar species, such as *O. abortivum*, *O. croesus*, *O. forbesii* and *O. hastilabium*, as well as a few that will be less well known, such as *O. niesseniae*, *O. macasense*, *O. magnificum*, and *O. riopalenquianum*.

The author has adopted the traditional treatment of *Oncidium* outlined by Garay (1974) in the *Botanical Museum Leaflets*, with minor modifications made by Senghas (1997) in the third edition of Schlechter's *Die Orchideen* and here by the author. Chase and Williams' (2001) revision of the Oncidiinae based on molecular sequence analysis is mentioned but not followed. For example, the author dismisses their removal of a number of species to *Trichocentrum* because "the pollinaria...show all typical features of the pollinaria of the genus *Oncidium*". Deeper examination, reflection, and time may well change the author's views on this matter.

It will be a relief to readers that the text is in English, albeit a slightly idiosyncratic version, and this will undoubtedly increase the readership. Might I suggest that the English text of future volumes is checked by a native English speaker?

This book is undoubtedly a useful addition to the literature on *Oncidium* and will serve to achieve the author's aims of bringing the genus to a wider audience and of supplying names for plants in cultivation. The publisher is to be commended for the attractive presentation of this volume.

**Phillip Cribb**

**Ecott, T.** 2004. *Vanilla. Travels in search of the luscious substance.* Michael Joseph Penguin, London. Pp. 278, 16 b/w photographs. ISBN 0-718-14589-5. Price: £16.99.

Vanilla is such a ubiquitous flavouring nowadays that little thought is given to its introduction, biology, cultivation, and trade. However, like many of our spices, vanilla has exotic origins and an intriguing history. The origins can be traced to pre-Colombian Mexico where the Aztecs and their forebears used it to flavour a chocolate drink consumed by the nobility and rulers. Like many tropical American plants, especially the useful ones, the Spanish introduced it to Europe where it was cultivated as a hothouse novelty. Tim Ecott brings the fascinating story of its development into a plantation crop in Réunion to life, especially the sad story of Edmond Albius, a black slave in Réunion who solved the problem of pollinating the flowers, without which they would not produce their valuable beans (the fruits), but died impoverished. Edmond's success started an industry that flourishes today in places as far afield as the Mascarene Islands,

Madagascar, and Tahiti but, sadly, is only a shadow of its former glory in Mexico where the plant originated.

In Mexico, vanilla is still cultivated but on a small scale and in a marketplace dominated by the middlemen and shady dealers. They reap the profits rather than the poor farmers who grow this labour-intensive crop. *Vanilla* is still known as a wild plant but must be considered endangered in its present range, a conservation issue that has yet to be fully addressed. The author has trodden the ground thoroughly both in Mexico and where it is currently commercially grown, taking him to some of the world's most exotic locations, all with tropical moist climates on the edges of some of the world's finest coral reefs, the author being a well-known travel journalist, specializing in diving and snorkelling.

Today, vanilla capsules ("pods") are almost worth their weight in gold. Successive cyclones have devastated the vanilla plantations of north-eastern Madagascar, and when I visited Antalaha (one of the centres) last year, the current price was over \$500 per kilo. Madagascar fears for its premier place in the league of vanilla growers and the corresponding loss of revenue, which accounts for such a large proportion of the GDP of that impoverished country.

Tim Ecott has put together a gripping story that is well told and remarkably free from factual errors and typos that plague so many popular science books these days. He has followed the story of vanilla from Mexico to Spain, then to 17<sup>th</sup> century England and France and on to the tropics where the French took the lead in establishing vanilla as a plantation crop. His retelling of the story of Edmond Albius, thoroughly researched from the Colonial archives in Reunion, fills many gaps and is a poignant one. Reading his tale of the cloak-and-dagger, modern-day trade, devastated by natural disasters in 2001 and again this year, makes one fear for the future of Madagascar's poor vanilla growers.

I can thoroughly recommend this exciting account of the world's most famous orchid to readers. The publishers should be commended for an attractive and well-illustrated production.

**Phillip Cribb**

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**Luer, C. A.** 2004. *Icones Pleurothallidarum XXIV. Pleurothallis subgenus Acianthera and three allied subgenera. A second century of new species of Stelis of Ecuador.* Epibator, Ophidion and Zootrophion. Missouri Botanic Garden Monographs 95. ISBN 0161-1542. Pp. 265. 247, b/w line drawings, and distribution maps.

Carl Luer's phenomenal production rate shows no sign of diminishing. The 24<sup>th</sup> volume of his seminal account

of pleurothallid orchids has appeared on schedule and to the same high standard as previous volumes.

Volume 24 comprises accounts of the species of four groups of *Pleurothallis* s.l. namely *Acianthera* (107 spp.), *Abberantia* (2 spp.), *Didactylus* (4 spp.) and *Unguella* (1 sp.), a hundred new species of *Stelis* from Ecuador, and revisions of the genera *Epibator*, *Ophidion* and *Zootrophion*. Those unfamiliar with the rich diversity of orchids in the Andes and the inaccessible nature of much of the terrain will never cease to be amazed at the sheer number of novelties that Carl Luer and his colleagues are describing from countries that were thought to be relatively well explored botanically. However, such is the narrow endemism of many species, confined often to a single valley or mountain, that new species are the norm rather than the exception. For example, subgenus *Acianthera* contains well-known species such as *P. prolifera* and *P. sicaria*, but the majority of the species have been described by Luer and his colleagues in recent years. The 100 *Stelis* described here are only a fraction of the number of novelties that he has identified but have yet to be described. This is perhaps less surprising than the numbers of new *Masdevallia*, *Dracula*, and *Pleurothallis* that have recently appeared because *Stelis* have, by and large, small flowers with tiny petals, lip and column. Earlier generations have shied away from them, finding easier and showier subjects for study. The author is to be particularly commended for his determination and ability to sort out the new from those species already described. This involves years of detailed examination of herbarium material, some dating back to the pioneering explorations of Ruiz and Pavon and Humboldt and Bonpland.

The format for each account is similar to that of earlier volumes. A key to the species follows the generic or sectional account. For each species, nomenclature, description, distribution with map, collections, and taxonomic notes are provided, accompanying a fine b/w line drawing by the author and inked by Stig Dalström.

I have recently found the series of immense use in identifying Lehmann collections from Colombia and Ecuador, many of which have not been examined before by botanists despite having been collected over a century ago. Every herbarium has large collections of unidentified specimens awaiting determination. Carl Luer's series certainly makes the task easier.

This series is now effectively the "bible" for all pleurothallid aficionados. I cannot imagine that the author ever thought that the series would stretch to 24 volumes, but I am assured that several more are in the pipeline. I for one eagerly await them.

**Phillip Cribb**

