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Additions to the Herbarium Hamburgense orchid type registry

Short title orchids Herbarium Hamburgense

Abstract Fourteen types of orchids (Orchidaceae) have been recently detected in the Herbarium Hamburgense. They are listed as an addition to a previously published orchid type registry.

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Introduction

The Herbarium of the University of Hamburg (HBG) holds a significant orchid collection including many valuable type specimens. The results of a thorough search for orchid types have been published recently by Schultz (2013). In the meantime, a small number of additional types appeared. Some have been found among separately kept sheets studied by E.A. Christenson in 1994 and D.L. Szlachetko in 1995. Others have been recognized by specialist alerts as well as literature and online searches. For example, some of the new species described by Szlachetko (1996) and based on HBG material have not been listed by Schultz (2013). The reason was that some of these new species were still filed under the old or provisional names or that the sheets were simply marked "spec. nov." without a proper epithet. Another example is the very large collection of plants from Mount Kinabalu built up by J. & M.S. Clemens in the 1930ies. The Hamburg Herbarium holds almost 4.000 sheets including many yet unidentified orchids. The Clemens collection from Mount Kinabalu is extremely diverse and very important for the study of the Melanesian plant diversity. Still, new species are being described from that herbarium material including new orchids. The importance of herbarium material for the exploration and documentation of the global plant diversity including the discovery and description of new species has been impressively highlighted by Bebber et al. (2010).

Metadata and scans of the newly detected types are available online at www.herbariumhamburgense.de and will be submitted to JSTOR Global Plants (www.plants.jstor.org), the primary, global digital resource for plant type specimens. This digital resource is extremely useful for a variety of curational tasks. The number of fully documented orchid types at HBG rises to 1050 sheets representing 174 genera, 818 species and 35 subspecies, varieties and forms. Figure 1 illustrates the geographic origin of the HBG orchid type species. Not unexpected, most types come from South America given that the HBG orchid collection has a special focus in megadiverse regions such as the Andean and Atlantic rain forests.

Altensteinia fiebrigii Schltr., Repert. Spec. Nov. Regni Veg. 10: 445. 1912
Bolivia, Calderillo, 23 Mar 1904, K. Fiebrig 3557, HBG500272: ISO

Note: Schlechter (1912) cited "Fiebrig 2920" from Calderillo collected in March 1904 as type. Due to the deviating collection number on the HBG sheet it has not been marked as type in April 2005 at the beginning of the HBG GBIF-Orchid Type project. However, since JSTOR Global Plants has no entry for Fiebrig 2920 but lists a Fiebrig 3557 sheet preserved in the Geneva herbarium (G) as type, it is presumed here that Schlechter either misprinted the collection number, or that the Fiebrig material studied by him

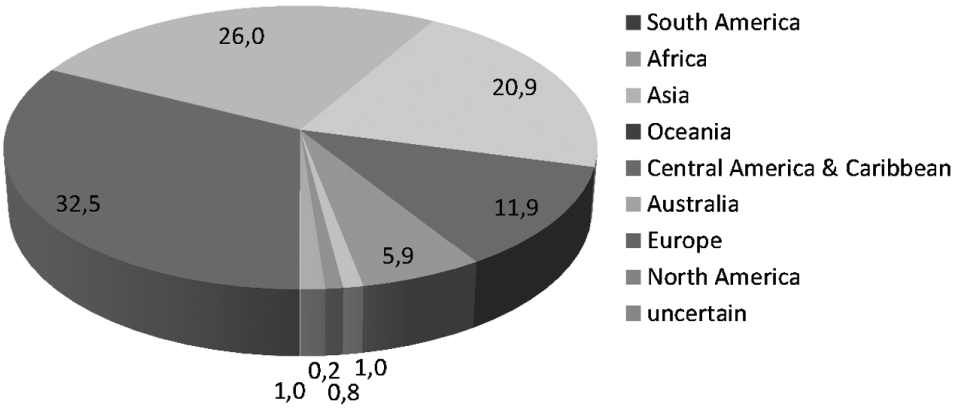

Fig. 1 Geographic origin of HBG orchid types (%).

had a (perhaps preliminary?) numbering sequence differing from that used in the regular Fiebrig exsiccate "Plantae austro-bolivienses 1903–1904".

≡ *Aa fiebrigii* (Schltr.) Schltr.

Brachystele bicrinita Szlach., Fragm. Florist. Geobot. 41: 849. 1996
Brazil, Estado de Sta. Catharina, auf Bergen des Campo de Capivare auf der Serra Geral, Jan 1901, E. Ule 1906, HBG500824: HOLO, HBG500825: ISO

It should be noted that *Spiranthes subfiliformis* Cogn. is based on two syntypical collections: "Glaziou n. B" and "Ule 1906" (Cogniaux 1906). One of the HBG sheets (HBG500825) has been annotated by A. Cogniaux as "*Spiranthes pedicellata* Cogn. var. au sp. nov. A. Cogniaux". Obviously, sheet HBG500825 is part of the original material seen by the describing author. A typification problem potentially arises from the fact that Szlachetko (1996) designated the HBG part of the *Spiranthes subfiliformis* syntypes (i.e. the two sheets of Ule 1906 cited above) as holo- and isotype of yet another species: *Brachystele bicrinita* Szlach. Unfortunatly, he did not comment on the fate of *Spiranthes subfiliformis* Cogn., and it seems that this name is in need of lectotypification, preferably with the other syntype element: Glaziou n. B. The latter is extant in the herbarium of Brussels Botanical Garden (BR) (JSTOR Global Plants, checked 11.09.2015) accompanied by a detailed description written by Cogniaux. Things are complicated, however, since Glaziou is notorious for having altered locality data and moreover for having cited material collected by other persons under his own name with faked collection numbers. Wurdack (1970) gives examples of such manipulations discovered in neotropical Melastomataceae and lists Ule as one of the collectors being directly affected.

Brachystele waldemarii Szlach., Fragm. Florist. Geobot. 41: 850. 1996
Uruguay, Colinas pedregosas de Minas, Mar 1894, J. Arechavaleta, HBG524499: HOLO

This was originally identified by F. Kränzlin as *Spiranthes rupestris* Lindl., but has been recognized by D.L. Szlachetko (1996) as a new species.

Bulbophyllum placochilum J.J. Verm., Orchids Borneo 2: 29. 1991
Malaysia, B.[ritish] N.[orth] Borneo, Mount Kinabalu, Columbon river, 21 Jun 1933, J. & M.S. Clemens 34056, HBG524865: ISO

Isotype material of this fairly recently described species has been found among the large amount of still undetermined Bornean orchids collected by J. & M.S. Clemens at Mount Kinabalu in the 1930ies.

Coelogyne obtusifolia Carr, Gard. Bull. Straits Settlem. 8: 205. 1935
Malaysia, B.[ritish] N.[orth] Borneo, Mount Kinabalu, Tenompok, 21 Aug 1931, J. & M. S. Clemens 26125, HBG524867: ISO

Although correctly identified by an unknown specialist in 1988, this species escaped the previous registration because it wasn't marked as type.

Dendrobium augustae-victoriae Kraenzl., Gartenfl.: 115. 1894 (as "*Augustae Victoriae*")
Papua New Guinea, Dallmann Hafen, Sept 1893, L. Kärnbach, HBG524486: ISO

The holo- and one isotype of this showy orchid have been already reported by Schultz (2013). Another isotype now appeared in separately kept material properly annotated by E.A. Christenson.

Dendrobium coelandria Kraenzl., Pflanzenr. 50(1) (Heft 45): 132. 1910
Papua New Guinea, Brit. New Guinea, Jimari, 1895, W.V. Fitzgerald 50, HBG501568: TYPE

This sheet has been listed by Schultz (2013) in the appendix of unpublished names as "*Dendrobium muellerianum* Kraenzl. non Schltr. 1907". Thanks to information kindly provided by G.A. Romero (Cambridge, Mass.) the sheet Fitzgerad 50 has been identified as the type of *Dendrobium coelandria* Kraenzl. published by Kränzlin (1910) in his monographic treatment of genus *Dendrobium* subtribe *Dendrobiinae.*

Epidendrum floribundum Kunth var. ***lilacinum*** Rchb. f., Linnaea 22: 840. 1849
Venezuela, Merida, K. Moritz 233, HBG524692, HBG524693: ISOSYN

Two sheets of this showy orchid were found under "*Epidendrum paniculatum*", a name misapplied by Moritz for the present plant from his Venezuelan herbarium.

Epidendrum moritzii Rchb. f., Linnaea 22: 837. 1849
Venezuela, Merida, K. Moritz 1061, HBG524691: ISOSYN

This type has been found among undetermined material of the large genus *Epidendrum.* The Hamburg Herbarium holds a large and important set of Venezuelan plants collected by K. Moritz between 1830 and 1866. There are two main sources for Moritz material at HBG: the herbarium of H.W. Buek, nucleus of the Herbarium Hamburgense and the collection of J.J. Meyer whose herbarium was first taken over by the Museum Altona and later got incorporated into HBG. The two sets are not fully identical and, unfortunately, there is only an old and largely outdated list of Moritz specimens from the J.J. Meyer collection hampering the systematic search of types and proper identifications.

Eria clemensorum Ormerod, Harvard Pap. Bot. 19: 81. 2014
Malaysia, B.[ritish] N.[orth] Borneo, Mount Kinabalu, Dallas, 26 Sept 1931, J. & M.S. Clemens 26603, HBG524866: ISO

This species has been described very recently. The holotype at the Oakes Ames Orchid Herbarium (AMES), Harvard University Herbaria has been digitized and scans and metadata are available online at JSTOR Global Plants, the primary digital resource for botanical type material. A recent query for undetected Clemens type material at HBG revealed three still unmarked orchid types.

Eurystyles rutkowskiana Szlach., Polish Bot. J. 46: 63. 2001
Brazil, Epiphyt im Walde der Tijuca, 24 Apr 1896, E. Ule 4011, HBG524487: HOLO

This sheet was originally identified by A. Cogniaux as *Stenoptera ananassocomos* Griseb., but has been recognized by D.L. Szlachetko (2001) as a new species.

Microstylis buchtienii Schltr., Repert. Spec. Nov. Regni Veg. 10: 449. 1912
Bolivia, Nord-Yungas, Unduavi im Walde, 12 Feb 1907, O. Buchtien 803, HBG524489: ISO?

Despite slight differences in the collection data, this is likely isotype material of *Microstylis buchtienii* Schltr. There is another sheet of Buchtien 803 kept in the United States National Herbarium (US00093455) with scans available at JSTOR Global Plants. It has the same collection details as the HBG sheet and likewise had been originally identified by F. Kränzlin as *Microstylis histionantha* Link & Otto. This is an

example of many identifications made by Kränzlin that have been rectified by R. Schlechter only a short time later.

Odontorrhynchus domeykoanus Szlach., Fragm. Florist. Geobot. 41: 853. 1996
Chile, Valparaiso, rasiger Boden am Wege zwischen Camino de la Polvora und Playa Ancha, 28 Apr 1904, C. Scheding, HBG500787: HOLO

This sheet was originally labelled "*Spiranthes chilensis* Rich." (label written by H. Hallier f., former curator at HBG), but has been recognized by D.L. Szlachetko (1996) as a new species.

Odontorrhynchus erosus Szlach., Fragm. Florist. Geobot. 41: 854. 1996
Chile, Cordill. de San Fernando, ex herb. S. Jago 287 [=SGO], HBG500796: HOLO
Chile, Concepcion, Feb 1895, F.W. Neger 18, HBG500788: PARA

F. Kränzlin originally identified these sheets as *Spiranthes diuretica* Lindl., but D.L. Szlachetko (1996) recognized them as a new species.

Tropidia effusa Rchb. f., Fl. Vit.: 295. 1868
Fiji, Viti-Levu, E. Graeffe 1279, HBG506861: PARA?

This sheet has been listed by Schultz (2013) in the appendix of unpublished names as "*Tropidia bipectinata* Rchb. f. ined.". Accoding to the list of E. Graeffe's collections made for the Museum Godeffroy on Fiji and Samoa no. 1279 is the only *Tropidia* present in this important collection. Furthermore, *Tropidia effusa* Rchb. f. is the only indigenous species of the genus in the Fiji Archipelago (Smith 1991: 365). HBG holds another sheet of the species from the Godeffroy museum collected by Th. Kleinschmidt on Fiji in 1877, and this latter sheet agrees very well with the Graeffe material. Thus, it is concluded that HBG506861 refers to the unnumbered Graeffe material cited by Reichenbach f. in his original diagnosis. According to Smith (1991: 366), *Tropidia effusa* is typified with a B. Seemann specimen kept in the Kew Herbarium (K), and the HBG material is thus considered here as a putative paratype.

Acknowledgments

I would like to thank G.A. Romero (Cambridge, Mass.) for sharing information on some Australian orchid types.

Corrections in Schultz (2013)

Coelogyne crassiloba J.J. Sm.: delete "HBG500711: ISO"
Habenaria juncea King & Pantl.: "HBG5000108" should read HBG500108.

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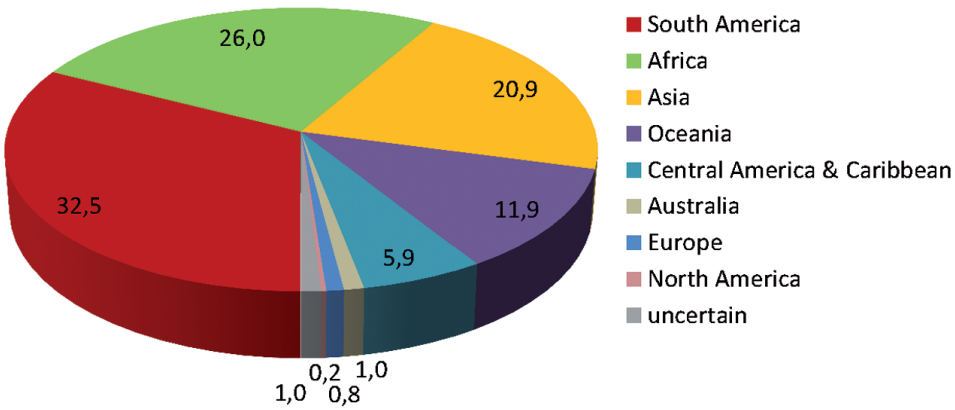

Fig. 1 Geographic origin of HBG orchid types (%).