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Lectotypification of *Siphocampylus* (Campanulaceae) from Argentina

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During the revision of *Siphocampylus* for the Flora of Argentina, we detected names which need lectotypification. As a result of our analysis of original materials and protologues, lectotypes are designated for the following names: *S. fiebrigii* var. *intermedius*, *S. foliosus*, *S. foliosus* var. *minor*, *S. lorentzii*, *S. nemoralis*, *S. nemoralis* var. *grisebachii*, *S. nemoralis* fo. *hieronymi*, *S. orbignianus*, and *S. verticillatus*.

Keywords: Campanulaceae, lectotypes, nomenclature, *Siphocampylus*.

The neotropical genus *Siphocampylus* Pohl (1831:104) (Campanulaceae: Lobelioideae) comprises 231 species including suffrutescent herbs or shrubs and twining lianas with entire corolla tubes, conical ovary apices, and capsule fruits (Lammers 2007). The species are distributed from the Greater Antilles and Costa Rica to Argentina (Lammers 1998, 2007) in tropical regions from 1000 to 3000 m of altitude (Lammers 1993, Pontiroli 1993). However, *Siphocampylus* is not monophyletic with respect to *Centropogon* Presl. and the Caribbean taxa are distantly related to the mainland taxa; therefore it is probable that the taxonomic definition of the genus change in the near future to reflect phylogenetic relationships (Lagomarsino *et al.* 2014).

Several species names have been lectotypified so far in *Siphocampylus* (McVaugh 1943, Lagomarsino & Santamaría-Aguilar 2015), but until now the genus had not been treated for Argentina. Currently, nine species of *Siphocampylus* have been reported in Argentina, two of them endemic (Lammers 2008). During the revision of the Argentinian species of *Siphocampylus* (in prep.), we have studied the nomenclatural types of several names and detected names which need lectotypification in order to assure their correct application. Thus, the aim of this study was to lectotypify nine names.

Materials and methods

Original material kept at SI was studied. Digital images of the type specimens at B, G, and W were requested and analyzed. We also examined type specimens from B, CORD, F, G, GH, GOET, HAL, K, LE, LIL, P, PH, and US at the JSTOR website (http://plants.jstor.org) or virtual herbaria (P: https://science.mnhn.fr/all/search; W: http://herbarium.univie.ac.at/database/search.php). All the protologues were cross-checked with the label information of the herbarium specimens. We applied the article 9.12 (McNeill *et al.* 2012) to designate the lectotypes.

Taxonomic Treatment

Siphocampylus fiebrigii E. Wimmer (1926: 209). Type:—BOLIVIA pr. Chiquiacá 1000 m. An Waldbach. April 1904 lg *K. Fiebrig*, Pl. austro-boliv. nº *2755* (Hb. Berl.) (holotype: B 10-0242599!; isotype: M 0189964!).

=*Siphocampylus fiebrigii* var. *intermedius* E. Wimmer (1953: 310).

Lectotype (designated here):—BOLIVIA: Chiquiaca- Carapari, Wald, 900 m, X., *C. Troll n. 275* (B 100242598!, isolectotype: B 100242597!).

Other original material examined:—BOLIVIA: Villamontes, 30–40 cm hohes, gelbblühendes Kraut im Wualdschatten an Fluβ niederung, *K. Pflanz 2061* (US 00146993!).

Note:—The following syntypes were cited in the protologue of *Siphocampylus fiebrigii* var. *intermedius*: 'C. Troll n. 275!', 'Pflanz n. 2061! 2047!- Heb. Berl' and 'Steinbach n. 1631!- Hb Wien'. We could only find one specimen at US and two specimens at B that corresponds with the protologue information: *Pflanz 2061* (US 00146993) and *C. Troll 275* (B 100242598 and B 100242597). The specimen *C. Troll 275* (B 100242598) is designated here as lectotype since it is well preserved and has more flowers; furthermore it has a label with an identification made by Wimmer.

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Siphocampylus foliosus Grisebach (1874: 201).

Lectotype (designated here)**:**—[ARGENTINA] Cordoba, in montanis pr. S. Bartolo [February 1871, *P. G. Lorentz 121*] (GOET 008974!, isolectotypes: CORD 00006338!, W 15316!).

=*Siphocampylus foliosus* var. *minor* Zahlbruckner (1898: 189).

Lectotype (designated here)**:**—ARGENTINA. Prov. Cordoba: al Sud de la Cuesta de Copina, Sierra Achala [28 March 1881] legit *Galander s/n* (W 1897-0004960!, isolectotypes: CORD 00005198!, CORD 00005199!).

Note:—The Argentinian material collected by Professor P.G. Lorentz and published in Grisebach (1874), which includes the description of *S. foliosus*, were deposited by the collector at CORD, GOET, and W. As lectotype for *S. foliosus*, we selected the specimen deposited at GOET since it is likely the original material that Grisebach examined.

We examined original material of *S. foliosus* var. *Minor* available at W (W 1897-0004960) and CORD (CORD 00005198, CORD 00005199). We selected the W material as lectotype since this is Zahlbruckner's primary institution, matches the protologue, and is a well-preserved specimen with numerous flowers and fruits. Assigning isolectotypes was more difficult because there is no collection number and there are two distinct dates listed on the CORD specimens: "29 III 1881" (CORD 00005198) and "28 III 1881" (CORD 00005199). Because this latter matches the W specimen, we consider it an isolectotype.

Siphocampylus lorentzii E. Wimmer (1931: 85).

Lectotype (designated here):—Bolivia australis, lg. *K. Fiebrig nº 2463a* (B 10 0242583!, isolectotype: B 10 0242582!).

Other original material examined:—Argentinia pr. San Bartolo lg. *P.G. Lorentz nº 697* (Herb. Berl.) (B 10 0366429!, F 0BN030240!).

Note:—Two syntypes were cited in the protologue of *Siphocampylus lorentzii*: '*K. Fiebrig nº 2463a*' and '*P.G. Lorentz nº 697*'. We could not find any material at W, the herbarium where Wimmer worked. However, three specimens corresponding to the two collections were found at B (*P.G. Lorentz 697* [B 10 0366429] and *Fiebrig nº 2463a* [B 10 0242582 and B 10 0242583]). We designate here the specimen B 10 0242583 as lectotype because it is representative of the species, matches with the protologue information, is preserved in good condition, is a complete collection with roots and whole inflorescences, and includes a label with an identification made by Wimmer.

Siphocampylus nemoralis Grisebach (1874: 201).

Lectotype (designated here):—[ARGENTINA]. Tucumán, non raro in sylvis Alni regionis Cuesta de Anfama, pr. Cienaga, pr. Tafi. [25–31 March 1872, *P. G. Lorentz 120*] (GOET 000527!, isolectotypes, F 0BN030210!, GOET 000528!).

Other possible original material examined: *P.G. Lorentz 382* (CORD 00006339!, GOET 009579!).

=*Siphocampylus nemoralis* var. *grisebachii* E. Wimmer (1935: 92).

Lectotype (designated here):—Argentinia, La Cienaga, Sierra de Tucumán, [10–17] Jan [1874], leg. *G. Hieronymus et P. Lorentz nº 702* (Herb. Mus. Berolin) (B 10 0673682!, isolectotypes: B 10 0673684!, B 10 0673687!, CORD 00005200!, CORD 00005201!, K 000329994!, US 00147010!).

Other original material examined: Argentinia, La Cienaga, Sierra de Tucumán, [10–17] Jan [1874], leg. *Lorentz 332* (Herb. Mus. Berolin) (B 10 0673683!).

=*Siphocampylus nemoralis* fo. *hieronymi* E. Wimmer (1935: 100).

Lectotype (designated here):—Arg. Sierra de Tucumán [Argentinien: Sierra de Tucuman, Cuesta de Garabatal, I.1874 (Hieronymus & Lorentz p.p!-Hb. Berl.)] (B 10 0673686!).

Notes:—The protologue of *Siphocampylus nemoralis* in Plantae Lorentzianae, cited 'Tucumán, non raro in sylvis Alni regionis Cuesta de Anfama, pr. Cienaga, pr. Tafi.'. We found four specimens of *S. nemoralis* collected by Lorentz that correspond with the protologue information: *P.G. Lorentz 120* (GOET 000527, GOET 000528) and *P.G. Lorentz 382* (CORD 00006339 and GOET 009579). The specimen GOET 000527 is designated as lectotype because it is an abundant and complete specimen and it has original labels.

According to the protologue of *Siphocampylus nemoralis* var. *grisebachii* the type material was housed at the herbarium of Berlin. We found four specimens at B that correspond with the protologue: *G. Hyeronimus et P. Lorentz nº 702* (B 10 0673682, B 10 0673684, B 10 0673687) and *Lorentz 332* (B 10 0673683). We selected the specimen B 10 0673682 as lectotype because it was identified by Wimmer, perfectly matches with the protologue, and it is a complete and well-preserved specimen.

The protologue information of *Siphocampylus nemoralis* fo. *hieronymi* only mentioned 'Arg. Sierra de Tucumán' as type locality in the context of a species key but no collector or number was mentioned. In a posterior revision of the genus, Wimmer (1953) mentioned a list of specimens for this species from different locations but does not designate any type of fo. *hieronymi*. From that list, a specimen housed at B ('Argentinien: Sierra de Tucuman, Cuesta de Garabatal, I.1874. Hieronymus & Lorentz p.p!-Hb. Berl.') corresponds to the type locality and it is a well-preserved complete specimen.

Siphocampylus orbignianus DC. (1838: 405).

Lectotype (designated here):—In Bolivia (d'Orbigny!) […] (v. in h. mus. Par.) [*d'Orbigny 469*] (P 00152271!).

Notes:—Material collected by D'Orbigny was cited in the protologue of *S. orbignianus* without specifying a collection number. Later, Wimmer (1953) mentioned two specimens deposited in the Paris Herbarium ('*D'Orbigny 469*!, *414* - Hb. Paris'). Of these, we found and selected the specimen *D'Orbigny 469* (P 00152271) as lectotype of the species since it fully agrees with the protologue and it is a well-preserved and complete specimen.

Considering the surname of the person on which this name was dedicated, his correct latinization, and the incorrect writing by later authors, we clarify here that the exact spelling according to the author of the species in the original publication is "orbignianus" with "i", not with "y".

Siphocampylus verticillatus (Chamisso) G. Don (1834: 703). *Lobelia verticillata* Chamisso (1833: 202).

Lectotype (designated here):—[BRAZIL.] Brasilia [Meridional]. *F. Sellow s/n* (B 10-0242536!, isolectotypes: HAL 0068263!, HAL 0097794!, HAL 0068481!, K 000329868!, K 000329869!, K 000329870!, LE 01032122!, M 0175703!, M 0175704!).

Note:**—**The original diagnosis by Chamisso (1833) mentioned material collected by F. Sellow in Brazil as type. We selected as lectotype the material kept in B since it fully agrees with the protologue and because it is a complete and well-preserved specimen.

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