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# Typification of *Plantago* Names (Plantagineae, Plantaginaceae) Linked to the Flora of Argentina

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**ABSTRACT.** During the preparation of the treatment of the genus *Plantago* L. for the Flora Argentina project, dozens of names were identified as needing typification to stabilize their nomenclature. As a result, lectotypes are designated for 40 names, second-step lectotypes for four names, and a neotype for *P. grandiflora* Meyen. Furthermore, erroneous applications in past literature of the term “holotype” are corrected to lectotypes for five names.

**Key words:** Flora Argentina, nomenclature, Pilger, *Plantago*, Rahn, typification.

*Plantago* L. is a worldwide genus of wind-pollinated herbs or shrubs comprising ca. 250 species distributed in temperate zones and high-elevation tropical regions (Pilger, 1937; Rahn, 1996; Meudt, 2012; Hassemer et al., 2016). This genus is notable for its simplified morphology and high morphological plasticity (Rahn, 1996; Meudt, 2012; Anderson et al., 2013), complex taxonomy and nomenclature (Rahn, 1996; Di Pietro & Iamónico, 2014; Hassemer et al., 2017; Iamónico et al., 2017; Hassemer, 2018), and still unresolved phylogeny (Rahn, 1996; Rønsted et al., 2002; Tay et al., 2010; Meudt, 2011). It is worth noting that, despite it being a generally well-studied genus, especially in the Americas, a considerable number of new species from the New World have recently been discovered and described (Villaruel & Wood, 2011; Hassemer & Baumann, 2014; Hassemer et al., 2014, 2018; Hassemer, 2016; Hassemer & Rønsted, 2016). *Plantago* is represented in Argentina by 35 species (Rahn, 1995; Souza, 2008). During the revision of the genus for the Flora Argentina project (Moroni et al., in prep.), a relatively large number of names were identified as needing typification or nomenclatural clarifications.

Robert Knud Friedrich Pilger was a German botanist (Staffleu & Cowan, 1983) who greatly contributed to the taxonomic knowledge of the genus *Plantago* (Pilger, 1912, 1913, 1919, 1928, 1937). His relevant type collection was lodged mainly at B, and then partly

destroyed by the fire caused by the Allied bombing on the night of 1–2 March 1943 (Hiepko, 1987; R. Vogt, curator at B, pers. comm.). Sometimes Pilger explicitly specified the herbarium where the type was conserved (e.g., P, S, US), but many other times he did not. It has been extensively supposed (e.g., Rahn, 1974; Anton & Negritto, 1997) that Pilger held mainly at B the specimens used to describe his species. This has led to the assumption that holotypes for Pilger's names were once lodged at B. However, for most names described by Pilger there are no holotypes and therefore, following the *International Code of Nomenclature* (ICN; Turland et al., 2018), that kind of presumption is no longer accepted. Thereby, if Pilger did not specify a herbarium and syntypes are available, it is necessary to designate a lectotype (Art. 40.2 of the ICN).

Knud Rahn (1974, 1981, 1983, 1984, 1985) has also largely contributed to the study of *Plantago* in the Southern Cone, publishing taxonomic revisions of several sections within the genus. According to the modern rules of the ICN (Turland et al., 2018), effective or inadvertent typifications can be traced through Rahn's works. Additionally, Rahn also listed many herbaria where type material is located, which serves as a valuable source to resolve typification issues in *Plantago*.

In line with this, the aim of this article is to provide a contribution toward clarifying the nomenclatural status of *Plantago* names related to the Argentine flora.

## MATERIALS AND METHODS

In order to resolve typifications, the protologues of the treated taxa were studied and key literature was consulted to identify possible prior typifications. Type specimens and original material were analyzed from images on the JSTOR Global Plants database, from online access to herbaria P and W, or through digital images obtained by personal communication with herbarium curators from C, G, MO, SGO, and US. To proceed with the typifications, the rules of the ICN

(Turland et al., 2018) and suggestions proposed by McNeill (2014) were followed.

Of the 50 names here discussed, lectotypes are designated for 40 names and it was necessary to designate a neotype for *Plantago grandiflora* Meyen, while four names already typified by Rahn were found to require second-step lectotypifications (Art. 9.17 of the ICN) because more than one specimen exists at the herbarium cited by him. Furthermore, erroneous applications of the term “holotype” by previous authors are corrected to lectotypes (Art. 9.10) for five names. Accordingly, names in this work are arranged into three sections: (1) names in need of typification, (2) names in need of second-step lectotypification, and (3) names in need of clarifying remarks regarding their typification.

In selecting lectotypes, whenever choosing between syntypes (Art. 9.6 of the ICN), the one that shows the best quality of preservation of the important diagnostic features of the taxon was selected. When all potential sources of original material were checked but nothing was found, a neotype was designated (Art. 9.8 of the ICN).

Where the accepted name is other than the one being typified, the accepted name according to Souza (2008) is provided.

#### NAMES IN NEED OF TYPIFICATION

**1. *Bougueria nubicola*** Decne., Ann. Sci. Nat., Bot., sér. 2, 5: 132. 1836. TYPE: Bolivia, “cerca de la laguna de Potosí,” s.d., A. D. d’Orbigny 1483 (lectotype, designated here, P barcode [bc] P00609919 image!; isolecotype, G [bc] G00440081 image!).

*Discussion.* In the protologue of *Bougueria nubicola*, Decaisne (1836) cited a collection made by d’Orbigny in Potosí, Bolivia, and explicitly stated that he had studied six herbarium specimens lodged at P. Only one duplicate of the type collection was located there, as well as a sheet currently housed at G. The material at P is preferred since it bears an original label annotated, in Decaisne’s hand, as “*Bougueria nubicola*.” Therefore, it is here selected as lectotype of the name.

*Accepted name.* *Plantago nubicola* (Decne.) Rahn, Bot. J. Linn. Soc. 120(2): 197. 1996.

**2. *Plantago accrescens*** Pilg., Notizbl. Königl. Bot. Gart. Berlin 5: 259. 1912. *Plantago macrostachys* Decne. var. *accrescens* (Pilg.) Pilg., Bot. Jahrb. Syst. 62: 24. 1928. TYPE: Argentina. La Rioja: Sierra de Famatina, Jan. 1879, G. H. E. W. Hieronymus & G. Niederlein (lectotype, designated here, CORD [bc] CORD00005129 image!; isolecotypes, C not seen, CORD [bc] CORD00005128 image!, CORD [bc] CORD00005130 image!, E [bc] E00285452 image!, G [bc] G00440071 image!).

*Discussion.* In the protologue of *Plantago accrescens*, Pilger (1912) cited a collection made by Hieronymus and Niederlein in La Rioja, Argentina. According to Rahn (1974: 164), the type at B is no longer extant there, but he remarks “I have seen isotypes in C, CORD and G.” Five duplicates of the type collection were located at CORD, E, and G. A specimen from among those available at CORD is here selected as lectotype of the name.

*Accepted name.* *Plantago australis* Lam., Tabl. Encycl. 1(2): 339. 1792.

**3. *Plantago achalensis*** Pilg., Bot. Jahrb. Syst. 50 (2–3): 233. 1913. TYPE: Argentina. Córdoba: Sierra Achala, Quebrada al pie de los Gigantes, cerca de Esquina, 3 Dec. 1878, G. H. E. W. Hieronymus s.n. (lectotype, designated here, G [bc] G00440064 image!).

*Discussion.* Pilger (1913) described *Plantago achalensis* based on three syntypes from Argentina. The first collection was made by Hieronymus in Córdoba, while the other two were made in Tucumán by Hieronymus or by Hieronymus and Lorentz. Rahn (1974: 164) discussed this name and referred to a destroyed specimen at B belonging to the syntype *Hieronymus s.n.* collected in Córdoba as the type; he also remarks “I have seen an isotype in G.” Because the duplicate at B no longer exists, the syntype at G, which is in agreement with the diagnosis given in the protologue and annotated by Pilger as “*Plantago achalensis*,” is here selected as lectotype of the name.

*Accepted name.* *Plantago tomentosa* Lam., Tabl. Encycl. 1(2): 340. 1792.

**4. *Plantago achalensis*** Pilg. var. *hirtula* Pilg., Bot. Jahrb. Syst. 50(2–3): 234. 1913. TYPE: Argentina. Catamarca: Yacutula ca. Belén, 1879/1880, F. Schickendantz 137 (lectotype, designated here, CORD [bc] CORD00005133 image!).

*Discussion.* In describing *Plantago achalensis* var. *hirtula*, Pilger (1913) cited two syntypes from Catamarca, Argentina. The first collection was made by Schickendantz and the second by Lorentz. Rahn (1974: 164) discussed this name and its original material in some detail, referring to destroyed syntypes at B and mentioning a duplicate of the collection *Schickendantz 137* at CORD. However, he made no effective lectotypification. No additional original material was found, and, therefore, the sheet at CORD is here selected as lectotype of the name.

*Accepted name.* *Plantago tomentosa*.

**5. *Plantago argentina*** Pilg. var. *glabra* Pilg., Bot. Jahrb. Syst. 50(2–3): 255. 1913. TYPE: Argentina. Córdoba: “Sierra Achala, unterhalb der Potrerillos,

im Tal des Río de Catre,” Feb. 1887, *G. H. E. W. Hieronymus 764* (lectotype, designated here, CORD [bc] CORD00005136 image!; isolectotypes, F [bc] F0067327F image!, US [bc] US00137255!).

*Discussion.* In the protologue of *Plantago argentina* var. *glabra*, Pilger (1913) cited two syntypes collected by Hieronymus (*s.n.* and 764) in Córdoba, Argentina. No material of *Hieronymus s.n.* cited by Pilger was found. According to Rahn (1974: 165), a duplicate of *Hieronymus 764* was deposited at B and is now destroyed, but he remarks “I have seen isotypes in CORD, F, and US.” Thus, the duplicate at CORD of the syntype *Hieronymus 764* is here chosen as lectotype of the name.

*Accepted name.* *Plantago argentina*.

**6. *Plantago barbata*** G. Forst. var. ***puberula*** Pilg., Bot. Jahrb. Syst. 62(1): 106. 1928. TYPE: Chile. “Ohne näheren Standort,” 1841, *T. Bridges 1212* (lectotype, designated here, K [bc] K000573621 image!; isolectotype, E [bc] E00285471 image!).

*Discussion.* In describing *Plantago barbata* var. *puberula*, Pilger (1928) cited a collection made by Bridges in Chile. According to Rahn (1984: 617), the holotype housed at B is no longer extant there, and he cited a duplicate at K as an “isotype.” In addition, a specimen located at E must be added to the original material previously cited by Rahn (1984). From among the material available, the specimen lodged at K is here selected as lectotype of the name.

*Accepted name.* *Plantago barbata* G. Forst., Commentat. Soc. Regiae Sci. Gott. 9: 25. 1789.

**7. *Plantago barbata*** G. Forst. subvar. ***rigidula*** Pilg., Bot. Jahrb. Syst. 62(1): 102. 1928. TYPE: Argentina. Santa Cruz: Pescadores, 25 Dec. 1904, *P. K. H. Dusén 5456* (lectotype, designated here, S No. 09-15063 image!).

*Discussion.* In describing *Plantago barbata* subvar. *rigidula*, Pilger (1928) cited two syntypes from Santa Cruz, Argentina. No original material linked to this name is kept at B. Rahn (1984: 617) discussed this name and its original material, saying that two syntypes were lodged at BM and S. From among this material, the sheet held at S of the collection *Dusén 5456* is here selected as lectotype of the name.

*Accepted name.* *Plantago barbata*.

**8. *Plantago bismarckii*** Niederl., Monatsschr. Vereines Beförd. Gartenbaues Königl. Preuss. Staaten Ges. Gartenfr. Berlins: 16, t. 1. 1881. TYPE: Argentina. Buenos Aires: sierras cerca de Caminga [Sierra über Caminga], 19 Apr. 1879, *G. Niederlein*

*s.n.* (lectotype, designated here, CORD [bc] CORD00005978 image!).

*Discussion.* Niederlein’s (1881) description of *Plantago bismarckii* was based on a collection he made near Caminga, Buenos Aires. According to Rahn (1981: 303), the “holotype” at B is now destroyed, but a photograph from Macbride’s Berlin negatives (neg. 14150) is available at F with copies at C and UC. A duplicate of the type collection, in agreement with the diagnosis and the locality cited in the protologue, was located at CORD and is here selected as lectotype of the name.

**9. *Plantago brasiliensis*** Sims var. ***cinereovillosa*** Pilg., Bot. Jahrb. Syst. 62(1): 66. 1928. TYPE: Uruguay. Corticeiras [Curticeiras] (Rivera), 6 Dec. 1907, *M. B. Berro 4780* (lectotype, designated here, C-L41/80-454 image!; isolectotypes, MVFA [bc] MVFA0000238 image!, MVFA [bc] MVFA0000239 image!, MVFA [bc] MVFA0000240 image!).

*Discussion.* Pilger (1928) described *Plantago brasiliensis* var. *cinereovillosa* based on a Berro collection (no. 4780) from Corticeiras, Uruguay. According to Rahn (1983: 335), the “holotype” was housed at B and is now destroyed. Nonetheless, Rahn referred to a duplicate (erroneously cited as an “isotype”) at C that had been received from MVFA. In addition to this specimen, three duplicates of *Berro 4780* in agreement with the diagnosis and the locality cited in the protologue were located at MVFA. The Berro material currently held at C is here selected as lectotype of the name.

*Accepted name.* *Plantago brasiliensis* Sims, Bot. Mag. 53: t. 2616. 1825.

**10. *Plantago brasiliensis*** Sims var. ***cordobensis*** Pilg., Bot. Jahrb. Syst. 62(1): 64. 1928. TYPE: Argentina. Córdoba: Dpto. Punilla, Sierra de Achala; Cueva de la Cuesta de Copina, 2 Dec. 1901, *T. Stuckert 10338* (lectotype, designated here, CORD [bc] CORD00005139 image!; isolectotypes, B [bc] B10\_0294734 image!, CORD [bc] CORD00005138 image!, CORD [bc] CORD00005140 image!, G not seen, LL [bc] LL00373108 image!).

*Discussion.* According to Pilger (1928), the diagnosis of *Plantago brasiliensis* var. *cordobensis* was based on seven syntypes from Córdoba, Argentina. Rahn (1983: 335) discussed this name and its original material, stating that all the syntypes probably studied by Pilger at B were no longer extant there. Nonetheless, Rahn located duplicates of the syntypes *Stuckert 10338* (erroneously cited as 10838) and 20767 at CORD and G, although he did not designate any type. In addition,

and contrary to Rahn's statement, a duplicate of *Stuckert 10338* was located at B and must be added to the original material previously cited by him. A specimen of the collection *Stuckert 10338* from among those duplicates housed at CORD is here selected as lectotype of the name.

*Accepted name.* *Plantago brasiliensis*.

**11. *Plantago brasiliensis*** Sims var. ***flavido-hirsuta*** Pilg., Bot. Jahrb. Syst. 62(1): 68. 1928. TYPE: Uruguay. Río Negro al Norte, 18 Nov. 1898, *M. B. Berro 196* (lectotype, designated here, MVFA [bc] MVFA0000122 image!; isolectotype, MVFA [bc] MVFA0000121 image!).

*Discussion.* Pilger (1928) described *Plantago brasiliensis* var. *flavido-hirsuta* based on a Berro collection from Uruguay. In his discussion of the species name, Rahn (1983: 335) stated "Type: Berro 196 (B holotype now lost, no isotypes seen, no other collection cited)." Two duplicates of the type collection were located at MVFA, in agreement with the diagnosis and the locality cited in the protologue and, therefore, one from among them is here selected as lectotype of the name.

*Accepted name.* *Plantago brasiliensis*.

**12. *Plantago cantagallensis*** Zahlbr. ex Wawra, Itin. Princ. S. Coburgi 2: 56, t. 11A. 1888. TYPE: Brazil. Rio de Janeiro: Cantagallo [Cantagalo], 1879, *H. Wawra 288* (lectotype, designated here, W-1880-0000765 image!).

*Discussion.* In describing *Plantago cantagallensis*, von Fernsee (1888) cited a collection he made in Cantagalo, Brazil. The protologue of the species name also includes an excellent illustration that forms part of the original material. A specimen in agreement with the diagnosis and the locality cited in the protologue was located at W, where Wawra worked (Staffleu & Cowan, 1988). Given that a specimen has precedence over the illustration in lectotype designation (Art. 9.12), the sheet at W is here selected as lectotype of the name.

*Accepted name.* *Plantago australis* subsp. *hirtella* (Kunth) Rahn, Bot. Tidsskr. 60(1–2): 50. 1964.

**13. *Plantago coriacea*** Cham. & Schldtl., Linnaea 1: 171. 1826. TYPE: Brazil. "In planitiebus (Campo Hisp.) inter Montevideo em fluvium Rio grande do Sul," s.d., *F. Sellow s.n.* (lectotype, designated here, BR [bc] BR0000005290260 image!; isolectotypes, E [bc] E00259326 image!, LE not seen, M [bc] M0186386 image!, UC [bc] UC158138 image!, W-0071379 image!, W-1889-0282603 image!).

*Discussion.* In describing *Plantago coriacea*, Chamisso and Schlechtendal (1826) cited a Sellow

collection from Brazil. According to Rahn (1983: 335), the "probably holotype" lodged at B is no longer extant there, although he refers to duplicates (erroneously cited as "isotypes") at E, K, LE, and W. All specimens cited by Rahn were studied and annotated by Chamisso, and therefore they are considered as original material. In addition to this material, three duplicates were also located at herbaria BR, M, and UC. The Sellow material at BR is here selected as lectotype of the name.

*Accepted name.* *Plantago brasiliensis*.

**14. *Plantago cumingiana*** Fisch. & C. A. Mey. var. ***minor*** Pilg., Bot. Jahrb. Syst. 50(2–3): 269. 1913. TYPE: Chile. Región de Los Ríos, Provincia de Valdivia, "Valdivia an Wegen," 1896, *O. Buchtien s.n.* (lectotype, designated here, US [bc] US01908235!; isolectotype, US [bc] US01908236!).

*Discussion.* Pilger (1913) described *Plantago cumingiana* var. *minor* citing three syntypes from Chile in the protologue, which are no longer extant at B. According to Rahn (1974: 166), there is original material at US, studied and annotated by Pilger, from two syntypes collected by Buchtien in 1896 (US-1134476) and 1899 (US-1134474). From among this material, the collection *Buchtien s.n.* made in Valdivia, Chile, in 1896 is preferred. One of the two duplicates found at US is here selected as lectotype of the name.

*Accepted name.* *Plantago australis* subsp. *cumingiana* (Fisch. & C. A. Mey.) Rahn, Bot. Tidsskr. 60: 48. 1964.

**15. *Plantago dolichophylla*** Phil., Anales Univ. Chile 91. 262. 1895. TYPE: Chile. "In monte Huahuim Andium prov. Valdivia," Jan. 1887, *O. Philippi s.n.* (lectotype, designated here, SGO-43305 image!; isolectotypes, K [bc] K000573616 image!, K [bc] K000573617 image!, SGO-56642 image!).

*Discussion.* In describing *Plantago dolichophylla*, Philippi (1895) cited a collection made by Otto Philippi in Valdivia, Chile. According to Muñoz Pizarro (1960), there are two sheets lodged at SGO that appear to be original material. These duplicates were located there, bearing original labels annotated by Philippi with the identification of "*Plantago dolichophylla*." However, only one sheet bears a fertile specimen in agreement with the diagnosis given in the protologue and therefore is here selected as lectotype of the name.

*Accepted name.* *Plantago brasiliensis*.

**16. *Plantago fiebrigii*** Pilg., Repert. Spec. Nov. Regni Veg. 15: 420. 1919. TYPE: Bolivia. "Pinos bei Tarija, Calderillo, felsige Passhöhe bei 3000

m ü. M.," 21 Mar. 1904, *K. Fiebrig 2918* (lectotype, designated here, MO-954650!; isolectotypes, F [bc] F0067333F image!, G [bc] G00440021 image!, GH [bc] GH00092254 image!, K [bc] K000573550 image!, LD [bc] LD1214424 image!, NY [bc] NY659048 image!, S-05-405 image!, US [bc] US00137272!, US [bc] US01013905!).

*Discussion.* Pilger (1919) described *Plantago fiebrigii* based on a collection made by Fiebrig in Tarija, Bolivia. According to Rahn (1981: 318), the "holotype" housed at B is no longer extant, but a photograph from Macbride's Berlin negatives (neg. 14158) is available at F with copies in C and UC. In addition, Rahn (1983) referred to duplicates (erroneously cited as "isotypes") lodged at F, K, LE, LIL, NY, S, and US. Duplicates located at G, GH, LD, and MO must be added to the original material previously cited by Rahn (1974). From among the material available, the specimen lodged at MO is here selected as lectotype of the name.

*Accepted name.* *Plantago sericea* Ruiz & Pav. var. *lanuginosa* Griseb., Abh. Königl. Ges. Wiss. Göttingen 19: 202. 1874.

**17. *Plantago grandiflora*** Meyen, Reise Erde 1: 348. 1834. TYPE: Chile. VII Region: Prov. Talca, near rd. from Talca to Laguna del Maule, 35°58'S 70°38'W, 25 Mar. 1979, *K. Rahn & S. Ødum 4782* (neotype, designated here, C-L41/80-598!). Figure 1.

*Discussion.* In describing *Plantago grandiflora*, Meyen (1834) cited a collection he made in Chile, but he did not include a reference to the type locality. According to Stafleu and Cowan (1981), the botanical collections from his trips around the world were acquired by the herbarium of the Botanic Garden and Botanical Museum Berlin-Dahlem (B) in 1842. Unfortunately, this material is no longer extant there because it was destroyed (Rahn, 1981), but a photograph of the destroyed B specimen from Macbride's Berlin negatives (neg. 14159) is available at F with copies in C and UC. No original Meyen material linked to *P. grandiflora* could be traced at the herbaria that are known to house some of his duplicates: BR, CAS, CGE, K, and L (Stafleu & Cowan, 1981). Since all potential sources of original material have been checked, but nothing has been found, a neotype is here proposed (Art. 9.7 of the ICN). The element selected is a specimen in morphological agreement with the material studied and cited by Rahn (1981).

**18. *Plantago hypolasia*** Pilg., Notizbl. Königl. Bot. Gart. Berlin 5: 260. 1912. *Plantago tomentosa* Lam. subsp. *hypolasia* (Pilg.) Pilg., Bot. Jahrb. Syst. 50(2-3): 237. 1913. *Plantago paralias* Decne. subsp. *hypolasia* (Pilg.) Pilg., Notizbl.

Königl. Bot. Gart. Berlin 11(105): 328. 1932. TYPE: Argentina. Entre Ríos: Concepción del Uruguay, Sep. 1877, *P. G. Lorentz 1124* (lectotype, designated here, S-09-15846 image!; isolectotypes, BAF!, CORD [bc] CORD00005146 image!).

*Discussion.* According to the protologue of *Plantago hypolasia* (Pilger, 1912) the type material was collected by Lorentz in Entre Ríos, Argentina. Rahn (1974: 169) discussed this name and its original material, stating that the type at B is no longer extant there, but there are "isotypes" in BAF and CORD. An additional duplicate located at S must be added to the original material previously cited by Rahn (1974). From among the material available, the specimen lodged at S is here selected as lectotype of the name.

*Accepted name.* *Plantago tomentosa*.

**19. *Plantago juncooides*** Lam., Tabl. Encycl. 1(2): 342. 1792. *Plantago maritima* L. var. *juncooides* (Lam.) A. Gray, Manual (ed. 2) 268. 1856. *Plantago maritima* L. subsp. *juncooides* (Lam.) Hultén, Fl. Alaska Yukon 9: 1431. 1949. TYPE: Chile. Magallanes y Antártica Chilena: "Detroit de Magellan," Sep. 1767, *P. Commerson s.n.* (lectotype, designated here, P [bc] P00675442 image!; isolectotypes, G [bc] G00149842 image!, P [bc] P00380790 image!, P [bc] P00609860 image!, P [bc] P00609861 image!, P [bc] P00609862 image!).

*Discussion.* In describing *Plantago juncooides*, Lamarck (1792) cited a gathering made by Commerson in the Strait of Magellan, Chile. Six duplicates of the type collection in agreement with the diagnosis and the locality cited in the protologue were located at G and P, one of them (P00380790) lodged in Lamarck's herbarium at P. Only two specimens (P00380790, P00675442) were annotated, in Lamarck's hand, as "*Plantago juncooides*," and therefore one specimen from among them is here selected as lectotype of the name.

*Accepted name.* *Plantago maritima* L, Sp. Pl. 1: 114. 1753.

**20. *Plantago kuntzei*** Pilg., Revis. Gen. Pl. 3(3): 263. 1898. TYPE: Uruguay. "(...) am Rio Santa Lucia," Nov. 1892, *C. E. O. Kuntze s.n.* (lectotype, designated here, NY [bc] NY00278439!).

*Discussion.* In describing *Plantago kuntzei*, Pilger (1898) cited a Kuntze collection made in Uruguay. According to Rahn (1974: 169), the type at B is no longer extant there. A duplicate of this collection, in full agreement with the diagnosis and the locality cited in the protologue, was located at NY. Therefore, this specimen is here selected as lectotype of the name.



Figure 1. Neotype of *Plantago grandiflora* Meyen, K. Rahn & S. Ødum 4782 (C; reproduced with permission of the Natural History Museum of Denmark).

*Accepted name.* *Plantago penantha* Griseb., Abh. Königl. Ges. Wiss. Göttingen 24: 220. 1879.

**21. *Plantago kurtzii*** Pilg., Notizbl. Königl. Bot. Gart. Berlin 5: 260. 1912. TYPE: Argentina. Mendoza: Malargüe, La Cienaguita, valle al lado del Río Salado, 25 Jan. 1892, *F. Kurtz 7087* (lectotype, designated here, CORD [bc] CORD00005149!; isolectotypes, CORD [bc] CORD00005147 image!, CORD [bc] CORD00005148 image!).

*Discussion.* In the protologue of *Plantago kurtzii*, Pilger (1913) cited a collection made by Kurtz in Mendoza, Argentina. According to Rahn (1974: 169), the type is no longer extant at B, but he stated, “I have collected specimens from the type-locality and seen two isotypes in CORD.” However, he made no effective lectotypification. Thus, one sheet from among those at CORD is here selected as lectotype of the name.

*Accepted name.* *Plantago australis*.

**22. *Plantago macropus*** Pilg., Bot. Jahrb. Syst. 50 (2–3): 254. 1913. TYPE: Argentina. Catamarca: Andalgalá, Nov. 1877, *F. Schickendantz 73* (lectotype, designated here, CORD [bc] CORD00005153 image!).

*Discussion.* The original material of *Plantago macropus*, as referred to by Pilger (1913) in the protologue, was collected by Schickendantz in Catamarca, Argentina. According to Rahn (1974: 169), the type at B is no longer extant there. Although he said, “I have seen an isotype in CORD,” he made no effective lectotypification. The sheet at CORD matches the diagnosis given by the author in the protologue and is here selected as lectotype of the name.

*Accepted name.* *Plantago australis*.

**23. *Plantago macrostachys*** Decne. var. ***brachypus*** Pilg., Bot. Jahrb. Syst. 50(2–3): 264. 1913. *Plantago macrostachys* Decne. f. *brachypus* (Pilg.) Pilg., Bot. Jahrb. Syst. 62(1): 24. 1928. TYPE: Uruguay. Montevideo, Nov. 1866, *M. Fruchard s.n.* (lectotype, designated here, P [bc] P03530113 image!).

*Discussion.* In the protologue of *Plantago macrostachys* var. *brachypus*, Pilger (1913) cited two syntypes: the first one was collected by Arechevaleta near Montevideo, Uruguay, and the second one was collected by Fruchard, also from Montevideo. Rahn (1974: 170) discussed this species name, but he did not study the type material. No original collections could be traced at B, but a duplicate of Fruchard’s collection was located at P. Since this sheet agrees with the diagnosis and the locality cited in the protologue, it is here selected as lectotype of the name.

*Accepted name.* *Plantago australis*.

**24. *Plantago macrostachys*** Decne. f. ***pilosa*** Pilg. ex Kuntze, Revis. Gen. Pl. 3(3): 264. 1898. TYPE: Paraguay. Río Tebicuary, Sep. 1892, *C. E. O. Kuntze s.n.* (lectotype, designated here, NY [bc] NY02859243!).

*Discussion.* In describing *Plantago macrostachys* f. *pilosa*, Pilger (1898) cited a collection made by Kuntze in Río Tebicuary, Paraguay. Rahn (1974: 170) discussed this name and its original material, stating that the type at B was destroyed. No further material was located by Rahn. A duplicate of the type collection, in agreement with the diagnosis and the locality cited in the protologue, was found at NY. Therefore, this sheet is here selected as lectotype of the name.

*Accepted name.* *Plantago australis*.

**25. *Plantago myosuuros*** Lam. var. ***angustifolia*** Pilg., Bot. Jahrb. Syst. 62: 17. 1928. TYPE: Brazil. Rio Grande do Sul: Rio Grande, Sacco de Mangueira, 23 Oct. 1901, *G. O. Malme 45* (lectotype, designated here, S No. 09-15115 image!; isolectotype, S No. 05-408 image!).

*Discussion.* The original material of *Plantago myosuuros* var. *angustifolia*, as referred to by Pilger (1928) in the protologue, was collected by Malme in Sacco de Mangueira, Brazil. Rahn (1974: 170), who discussed this name and its original material, stated that the type element at B is no longer extant there, but a duplicate (erroneously cited as an “isotype”) is lodged at S. Two sheets were located there, bearing material that matches with the diagnosis and labels agreeing with the cited locality. Thus, one sheet from among them is here selected as lectotype of the name.

*Accepted name.* *Plantago myosuuros* Lam., Tabl. Encycl. 1(2): 342. 1792.

**26. *Plantago myosuuros*** Lam. var. ***major*** Pilg., Bot. Jahrb. Syst. 50(2–3): 247. 1913. TYPE: Uruguay. Montevideo, Quinta Varela, 6 Nov. 1876, *C. Fruchard s.n.* (lectotype, designated here, P [bc] P04046458 image!; isolectotype, G [bc] G00378057 image!).

*Discussion.* Pilger (1913) based the diagnosis of *Plantago myosuuros* var. *major* on seven syntypes. Among them, three collections were made in Uruguay (*Osten 3242*, *Arechevaleta s.n.*, *Fruchard s.n.*) while the other four gatherings were collected in Argentina (*Bettfreund & Köster s.n.* and 683; *Spegazini 16372* and 23655). Rahn (1974: 170) discussed this name and its original material, only stating that he had studied at G a duplicate of the syntype *Fruchard s.n.* According to Pilger (1913), this gathering was studied at P by him and

therefore it should be located there. In the general collection at P there is one specimen annotated, in Pilger's hand, as "*Plantago myosuuros* var. *major*," in full agreement with the diagnosis and locality cited in the protologue. Thus, it is here selected as lectotype of the name.

*Accepted name.* *Plantago myosuuros*.

**27. *Plantago myosuuros*** Lam. var. ***parviflora*** Pilg., Bot. Jahrb. Syst. 50(2–3): 247. 1913. TYPE: Argentina. Córdoba: "am Río Primero," Oct. 1896, T. J. V. Stuckert 256 (lectotype, designated here, CORD [bc] CORD00005155 image!; isolectotypes, CORD [bc] CORD00005156 image!, G not seen, LIL not seen).

*Discussion.* Pilger's description of *Plantago myosuuros* var. *parviflora* (Pilger, 1913) was based on three syntypes from Argentina. A collection was made by Spegazzini in Sierra de Cura Malal, Buenos Aires, while the other two were made by Hieronymus and Lorentz (no. 510) in Quilino, Córdoba, and by Stuckert (no. 256) in Río Primero, Córdoba. According to Rahn (1974: 170), the three syntypes at B are no longer extant there but he mentioned the existence of duplicates at G and LIL of Stuckert 256, and at CORD of Hieronymus & Lorentz 510. One duplicate of the gathering Hieronymus & Lorentz 510 was located at CORD, while two duplicates of Stuckert 256 were found at CORD. This last collection is preferred, and, therefore, a sheet from among those at CORD is here selected as lectotype of the name.

*Accepted name.* *Plantago myosuuros*.

**28. *Plantago myosuuros*** Lam. var. ***taraxacoides*** Speg., Anales Soc. Ci. Argent. 53: 279. 1902. TYPE: Argentina. Chubut: "secus Río Chico," 1898, C. Ameghino s.n. (lectotype, designated here, LP [bc] LP004455 image!; isolectotypes, LP [bc] LP004456 image!, LP [bc] LP004458 image!).

*Discussion.* In describing *Plantago myosuuros* var. *taraxacoides*, Spegazzini (1902) cited three syntypes from Patagonia, Argentina. The first gathering consists of a collection he made near Carmen de Patagones, Buenos Aires, while the other two were made by C. Ameghino along Río Chico, Chubut, and by F. Silvestri along Río Santa Cruz, Santa Cruz. Three duplicates of the syntype collected by Ameghino are kept at LP, and among the other syntypes, a duplicate of the collection made by Spegazzini is also housed at LP. All duplicates are in agreement with the diagnosis and the localities cited in the protologue. The Ameghino material is preferred because it is the most complete syntype, and,

therefore, a duplicate from this collection is here chosen as lectotype of the name.

*Accepted name.* *Plantago myosuuros*.

**29. *Plantago patagonica*** Jacq. f. ***glabrescens*** Pilg., Bot. Jahrb. Syst. 62(1): 38. 1928. TYPE: Argentina. Córdoba: Río Cuarto, 14 Dec. 1905, T. J. V. Stuckert 15280 (CORD [bc] CORD00005163 image!).

*Discussion.* Pilger (1928) described *Plantago patagonica* f. *glabrescens* based on two syntypes from Argentina. The first gathering was made by Spegazzini (no. 5359) in Sierra de Cura Malal, Buenos Aires, while the other collection was made by Stuckert (no. 15289) in Río Cuarto, Córdoba. According to Rahn (1979), both syntypes were housed at B and are no longer extant there. A duplicate of Stuckert 15289 was located at CORD, bearing seven fertile plants that match the diagnosis given in the protologue. Thus, it is here selected as lectotype of the name.

*Accepted name.* *Plantago patagonica* Jacq., Icon. Pl. Rar. [Jacquin] 2(16): 9, pl. 306. 1795.

**30. *Plantago patagonica*** Jacq. f. ***vestita*** Pilg., Bot. Jahrb. Syst. 62(1): 38. 1928. TYPE: Argentina. Córdoba: 15 Nov. 1907, T. J. V. Stuckert 17910 (lectotype, designated here, CORD [bc] CORD00005161 image!; isolectotype, G [bc] G00378085 image!).

*Discussion.* According to the protologue of *Plantago patagonica* f. *vestita*, Pilger (1928) based the description on four syntypes from Córdoba, Argentina: Hieronymus s.n., Lorentz 124, Lorentz 624, and Stuckert 17910. According to Rahn (1979), a duplicate of the syntype Stuckert 17910 is lodged at G, while the other syntypes were probably lost at B. An additional sheet located at CORD must be added to the original material previously cited by Rahn. This specimen is in full agreement with the diagnosis and locality cited in the protologue and therefore is here selected as lectotype of the name.

*Accepted name.* *Plantago patagonica*.

**31. *Plantago patagonica*** Jacq. f. var. ***gracilescens*** Speg., Anales Soc. Ci. Argent. 53: 277. 1902. TYPE: Argentina. Río Negro: "in sabulosis ad confluentiam fluminum Limay et Nequen [Neuquén]," Dec. 1897, C. Spegazzini s.n. (lectotype, designated here, LP [bc] LP004465 image!).

*Discussion.* In describing *Plantago patagonica* var. *gracilescens*, Spegazzini (1902) cited two syntypes he collected in Argentina. The first collection was made in Bahía San Blas, Buenos Aires, while the other one was made at the confluence of the Limay and Neuquén



Rivers, Río Negro. There is one specimen at LP studied and annotated by Spegazzini, whose label reads “Conf. Limay-Neuquen 12/97 [December, 1897].” This material is in full agreement with the diagnosis and locality cited in the protologue and therefore is here selected as lectotype of the name.

*Accepted name.* *Plantago patagonica*.

- 32. *Plantago patagonica*** Jacq. f. var. **minuscula** Speg., Anales Soc. Ci. Argent. 53: 277. 1902. TYPE. Argentina. Chubut: “secus Río Chubut,” 1899, *F. Basaldua s.n.* (lectotype, designated here, LP [bc] LP004466 image!).

*Discussion.* In the protologue of *Plantago patagonica* var. *minuscula*, Spegazzini (1902) cited a gathering he made in Río Negro, Argentina, and another collection made by Basaldua in Chubut, Argentina. A specimen corresponding to the syntype collected by Basaldua, in agreement with the diagnosis and locality cited in the protologue, was located at LP, where Spegazzini worked (Staffeu & Cowan, 1986). No additional original material was found and, therefore, the sheet at LP is here selected as lectotype of the name.

*Accepted name.* *Plantago patagonica*.

- 33. *Plantago stuckertii*** Pilg., Notizbl. Königl. Bot. Gart. Berlin 5: 262. 1912. *Plantago macrostachys* Decne. var. *stuckertii* (Pilg.) Pilg., Bot. Jahrb. Syst. 62(1): 24. 1928. TYPE: Argentina. Córdoba: Dpto. Anejos Norte, Nov. 1897, *T. J. V. Stuckert 3781* (lectotype, designated here, CORD [bc] CORD00005164 image!; isolectotype, G [bc] G00440080 image!).

*Discussion.* In describing *Plantago stuckertii*, Pilger (1912) cited two syntypes collected by Stuckert (nos. 3781 and 4963) in Córdoba, Argentina. According to Rahn (1974: 173), this material at B was destroyed. Fortunately, there are duplicates of both collections at herbaria CORD and G. The material *Stuckert 3781* lodged at G is preferred over the syntype *Stuckert 4963* since it is more complete. Thus, it is here selected as lectotype of the name.

*Accepted name.* *Plantago australis*.

- 34. *Plantago stuckertii*** Pilg. var. **catamarcensis** Pilg., Notizbl. Königl. Bot. Gart. Berlin 5: 263. 1912. *Plantago macrostachys* Decne. subvar. *catamarcensis* (Pilg.) Pilg., Bot. Jahrb. Syst. 62(1): 24. 1928. TYPE: Argentina. Catamarca: Fuerte de Andalgalá (Quebrada de Villavil), Feb. 1876, *F. Schickendantz 228* (lectotype, designated here, CORD [bc] CORD00005168 image!).

*Discussion.* Pilger (1912) described *Plantago stuckertii* var. *catamarcensis* based on two syntypes

from Catamarca, Argentina. The first collection was made by Schickendantz in Fuerte de Andalgalá, while the other one was made by Hieronymus and Lorentz in Quebrada de la Tala. Rahn (1974: 173–174) discussed this name and its original material in some detail, stating that both syntypes were destroyed at B. He also reported that a duplicate of the collection *Schickendantz 228* had been studied by him at CORD. Therefore, this sheet is here selected as lectotype of the name.

*Accepted name.* *Plantago australis*.

- 35. *Plantago tarijensis*** Pilg., Repert. Spec. Nov. Regni Veg. 15: 420. 1919. TYPE: Bolivia. “Tucumilla bei Tarija, an felsigem Hang 3000 m ü. M.,” 1904, *K. Fiebrig 2947* (lectotype, designated here, LD [bc] LD1244306 image!).

*Discussion.* In describing *Plantago tarijensis*, Pilger (1919) cited a collection made by Fiebrig in Tarija, Bolivia. According to Rahn (1981: 318), the “holotype” is no longer extant at B, but a photograph from Macbride’s Berlin negatives (neg. 14173) is available at F with copies at C and UC. A duplicate of the type collection was located at LD, in agreement with the diagnosis and the locality cited in the protologue. Thus, it is here selected as lectotype of the name.

*Accepted name.* *Plantago sericea* var. *lanuginosa*.

- 36. *Plantago tomentosa*** Lam. subsp. **balansai** Pilg., Bot. Jahrb. Syst. 50(2–3): 238. 1913. TYPE: Paraguay. Guarapi, na Wegrändern, Oct. 1880, *B. Balansa 3185* (lectotype, designated here, CORD [bc] CORD00005169 image!; isolectotypes, G [bc] G00307236 image!, G [bc] G00307244 image!, K [bc] K000573570 image!, K [bc] K000573571 image!, P [bc] P00609869 image!, P [bc] P00609870 image!, P [bc] P01817783 image!, S-09-15827 image!).

*Discussion.* In the protologue of *Plantago tomentosa* subsp. *balansai* Pilger (1913) indicated that his diagnosis was based on material collected by Balansa in Guarapi [Guarapi], Paraguay. According to Rahn (1974: 174), the type element at B is no longer extant there, but there are duplicates (erroneously cited as “isotypes”) lodged at C, CORD, G, and LE. Additional specimens located at K, P, and S must be added to the original material previously cited by Rahn. The sheet housed at CORD is here selected as lectotype of the name.

*Accepted name.* *Plantago tomentosa*.

- 37. *Plantago tomentosa*** Lam. subsp. **dasystachys** Pilg., Bot. Jahrb. Syst. 50(2–3): 242. 1913. *Plantago paralias* Decne. subsp. *dasystachys* (Pilg.)

Pilg., Notizbl. Bot. Gart. Berlin-Dahlem 11: 328. 1932. TYPE: Argentina. Córdoba: “Sierra prope Córdoba,” 14 Oct. 1901, *T. J. V. Stuckert 10185* (lectotype, designated here, **CORD** [bc] **CORD00005170** image!; isolectotype, **G** not seen).

*Discussion.* Pilger (1913) described *Plantago tomentosa* subsp. *dasystachys* based on five syntypes from Argentina (*Niederlein 259d*, *Spegazzini 13268*, *Spegazzini 32046*, *Stuckert 10185*) and Paraguay (*Kuntze s.n.*). According to Rahn (1974: 174), the synypes at **B** are no longer extant there, but he stated: “I have seen an isotype in **G** (*Stuckert 10185*).” However, he made no effective lectotypification. An additional sheet located at **CORD** must be added to the original material previously cited by Rahn. This specimen is in full agreement with the diagnosis and locality cited in the protologue and therefore is here selected as lectotype of the name.

**38. *Plantago tomentosa* Lam. var. *cordobensis*** Pilg., Bot. Jahrb. Syst. 50(2–3): 236. 1913. *Plantago paralias* Decne. var. *cordobensis* (Pilg.) Pilg., Notizbl. Bot. Gart. Berlin-Dahlem 11: 328. 1932. TYPE: Argentina. Córdoba: “bei der Stadt,” 30 Dec. 1876, *G. H. E. W. Hieronymus s.n.* (lectotype, designated here, **US** [bc] **US00589013**!; isolectotypes, **BAF** not found, **US** [bc] **US01013904**!).

*Discussion.* In the protologue of *Plantago tomentosa* var. *cordobensis*, Pilger (1913) cited two syntypes collected by Hieronymus in Córdoba, Argentina. The first collection was made on November 4, 1876, while the other one was made on December 30, 1876. According to Rahn (1974: 174), both syntypes at **B** are no longer extant, although he mentioned duplicates lodged at **BAF**, **G**, and **US**. No material has been located at **BAF**. There are two duplicates, one at **G** and one at **US**, of the syntype collected on November 4, 1874. In addition, there are two sheets at **US** of the syntype collected on December 30, 1876. All of these specimens are annotated by Pilger and agree with the diagnosis in the protologue. All syntypes are in good condition; a duplicate of the *Hieronymus s.n.* material collected on December 30, 1876, is here selected as lectotype.

*Accepted name.* *Plantago tomentosa*.

**39. *Plantago tomentosa* Lam. var. *mollior*** Pilg., Bot. Jahrb. Syst. 50(2–3): 239. 1913. *Plantago paralias* Decne. var. *mollior* (Pilg.) Pilg., Notizbl. Bot. Gart. Berlin-Dahlem 11: 328. 1932. TYPE: Uruguay. Montevideo, Buceo, Oct. 1907, *M. B. Berro 4784* (lectotype, designated here, **MVFA** [bc] **MVFA0000123** image!; isolectotype, **MVFA** [bc] **MVFA0000124** image!).

*Discussion.* Pilger (1913) described *Plantago tomentosa* var. *mollior* based on three syntypes from Uruguay. The first collection was made by Gibert (*s.n.*) in Montevideo, while the other two were made by Arechavaleta (no. 3124) in Carrasco and by Berro (no. 4784) in Buceo. Rahn (1974: 175) discussed the original material for the name, stating that the syntypes lodged at **B** are no longer extant there. Two sheets belonging to the syntype *Berro 4784* were located at **MVFA**, in agreement with the diagnosis and the locality cited in the protologue. Therefore, a duplicate from among them is here selected as lectotype of the name.

*Accepted name.* *Plantago tomentosa*.

**40. *Plantago tomentosa* Lam. var. *saxicola*** Pilg., Bot. Jahrb. Syst. 50(2–3): 240. 1913. *Plantago paralias* Decne. var. *saxicola* (Pilg.) Pilg., Notizbl. Bot. Gart. Berlin-Dahlem 11: 328. 1932. TYPE: Uruguay. Montevideo, El Cerro, 1859, *M. Fruchard s.n.* (lectotype, designated here, **P** [bc] **P04046411** image!).

*Discussion.* According to the protologue of *Plantago tomentosa* var. *saxicola*, Pilger (1913) based the description of this variety on two syntypes. The first collection was made by Fruchard in Montevideo, near El Cerro, Uruguay, while the other consists of a Gibert collection without locality data. As far as this last syntype is concerned, all potential sources of original material have been checked, but nothing has been found. However, a Fruchard specimen studied and annotated by Pilger was located at **P**, in full agreement with the diagnosis and locality cited in the protologue. Thus, it is here selected as lectotype of the name.

*Accepted name.* *Plantago tomentosa*.

**41. *Plantago uniglumis* Wallr. ex Walp. var. *breviscuspis*** Pilg., Bot. Jahrb. Syst. 62: 98. 1928. TYPE: Chile. Región Metropolitana: “Prov. Santiago, Cord. Rio San Francisco, Fierro Carrera, ca. 3000 m ü. M.,” Feb. 1925, *E. Weddermann 647* (lectotype, designated here, **K** [bc] **K000573601** image!; isolectotypes, **E** [bc] **E00273220** image!, **G** not seen, **HGB** [bc] **HGB509674**!, **MO**-1564550 image!, **S-09-15887** image!).

*Discussion.* In the protologue of *Plantago uniglumis* var. *breviscuspis*, Pilger (1928) cited three syntypes from Chile. The first gathering was collected by Weddermann in “Prov. Santiago, Cord. Rio San Francisco, Fierro Carrera,” while the other two collections were made by Philippi in “Cordillera von Talca” and “Cordillera von Santiago.” According to Rahn (1984: 620), original material for the three syntypes at **B** is no longer extant there, but isosyntypes of *Weddermann 647* were

located by him at G, K, MO, and S as well as a duplicate of *Philippi s.n.* (from “Cordillera von Talca”) at W. Duplicates at E and HBG must be added to the original material of *Weddermann 647* previously cited by Rahn (1984). The sheet kept at K belonging to this collection is here selected as lectotype of the name.

*Accepted name.* *Plantago uniglumis* Wallr. ex Walp., Nov. Actorum Acad. Caes. Leop.-Carol. Nat. Cur. 19(Suppl. 1): 4012. 1843.

#### NAMES IN NEED OF SECOND-STEP LECTOTYPIFICATION

**42. *Plantago argentina*** Pilg. in Kuntze, Revis. Gen. Pl. 3[3]: 263. 1898. TYPE: Argentina. Córdoba: Sierra Chica, 14 Nov. 1880, *G. H. E. W. Hieronymus s.n.* (first-step lectotype, designated by Rahn [1974: 70], CORD; second-step lectotype, designated here, CORD [bc] CORD00005134 image!; isolectotypes, CORD [bc] CORD00005135 image!, E [bc] E00285451 image!, G [bc] G00440063 image!, NY [bc] NY00278431!).

*Discussion.* According to Rahn (1974: 70), the type material at B is no longer extant there. In line with this, he lectotypified the name *Plantago argentina* and chose material collected by Hieronymus housed at CORD. However, two sheets linked to *P. argentina* were located there, which can certainly be considered as original material. Given that Rahn (1974) made no distinction as to which of the two sheets might be intended to be the lectotype, his statement must be considered as a first-step lectotypification. In order to narrow this earlier designation, the most complete specimen is here selected as a second-step lectotype.

**43. *Plantago gayana*** Decne. ex Barnéoud, Monogr. Plantag. 46. 1845. *Plantago brasiliensis* Sims var. *gayana* (Decne. ex Barnéoud) Pilg., Repert. Spec. Nov. Regni Veg. 15: 423. 1919. TYPE: Chile. “In rupibus volcanicis Andium,” 1831, *C. Gay 215* (first-step lectotype, designated by Rahn [1983: 335], P; second-step lectotype, designated here, P [bc] P00609815 image!; isolectotypes, F [bc] F0067335F image!, G [bc] G00148797 image!, P [bc] P00609816 image!, P [bc] P00609817 image!).

*Discussion.* In describing *Plantago gayana*, Barnéoud (1845) cited a collection made by Gay in Chile. Rahn (1983) discussed this name and its original material, designating a lectotype from among three specimens lodged at P, which belong to the collection *Gay 215*. However, Rahn’s statement is insufficiently precise since it cannot be ascertained to which of the specimens at P he was referring. Thus, his choice is here interpreted as a first-step lectotypification. In order to narrow this designation, the most complete specimen is here selected as a second-step lectotype.

*Accepted name.* *Plantago brasiliensis*.

**44. *Plantago macrantha*** Decne. ex Barnéoud, Monogr. Plantag. 45. 1845. TYPE: Chile. “In Andibus provinciae Colchaguae,” 1831, *C. Gay 214* (first-step lectotype, designated by Rahn [1981: 302], P; second-step lectotype, designated here, P [bc] P00609835 image!; isolectotypes, P [bc] P00609833 image!, P [bc] P00609834 image!).

*Discussion.* Barnéoud (1845) described *Plantago macrantha* based on a Gay collection made in Colchagua, Chile. Rahn (1981) discussed this name and its original material, stating that the holotype was lodged at P, as well as isotypes housed at F and K. However, in the general collection at P three sheets were found in agreement with the diagnosis and the locality cited in the protologue. Thus, Rahn’s statement is here interpreted as a first-step lectotypification. The sheet P00609835, which bears a label annotated, in Barnéoud’s hand, as “*Plantago macrantha*,” is here selected as a second-step lectotype of the name. As for the specimen cited by Rahn (1981) as housed at F, this material belongs to a collection made by Gay in 1833, and thus does not belong to the original material of *P. macrantha*, which was collected earlier in 1831.

*Accepted name.* *Plantago grandiflora*.

**45. *Plantago monanthos*** d’Urv., Fl. Iles Malouin. 37. 1825. *Plantago barbata* G. Forst. var. *monanthos* (d’Urv.) Pilg., Bot. Jahrb. Syst. 50(suppl.): 64. 1914. TYPE: Argentina. Tierra del Fuego, Antártida e Islas del Atlántico Sur: Isla Soledad, 1825, *J. D. d’Urville s.n.* (first-step lectotype, designated by Rahn [1984: 613], P; second-step lectotype, designated here, P [bc] P00609864 image!; isolectotypes, P [bc] P00609863 image!, P [bc] P00609865 image!, P [bc] P04046366!).

*Discussion.* In describing *Plantago monanthos*, d’Urville (1825) cited a collection he made in Islas Malvinas during Bougainville’s circumnavigation aboard *La Coquille*. The collections on which his publications were based are currently kept at P (Staffeu & Cowan, 1976), where four duplicates of this gathering are found. Rahn (1984: 613) stated “Type: Dumont d’Urville (P holotype present, but only isotype at P studied, Lesson specimens in P and K possibly from the same collection.),” and, therefore, Rahn’s statement must be considered as a first-step lectotypification. In order to narrow this broad designation, a specimen from among those at P is here selected as a second-step lectotype.

*Accepted name.* *Plantago barbata* subsp. *monanthos* (d’Urv.) Rahn, Nordic J. Bot. 4(5): 613. 1984.

NAMES IN NEED OF TYPIFICATION REMARKS

**46. *Plantago barbata*** G. Forst., *Commentat. Soc. Regiae Sci. Gott.* 9: 25. 1789. TYPE: Argentina. Tierra del Fuego, Antártida e Islas del Atlántico Sur: “Lectum in porti Natiuitatis Christi,” 27 Dec. 1774, *J. R. Forster & J. G. A. Forster s.n.* (lectotype, designated by Rahn [1984: 617], BM [bc] BM000993052 image!; isolectotypes, B-W [bc] 02963-01 0 image!, C not seen, FR [bc] FR0031050 image!, P not found, UPS-V-003553 image!, W-0073253 image!).

*Discussion.* In describing *Plantago barbata*, Forster (1789) cited a collection made by himself in Tierra del Fuego, Argentina. Rahn (1984: 617) discussed the original material for the name and cited a Forster sheet lodged at BM as the holotype. However, in the protologue there is no indication of any particular specimen as such, and, in addition, it is well documented that it is not possible to assert where Forster’s herbarium is preserved (Stafleu & Cowan, 1976). In line with this, Nicolson and Fosberg (2004: 559–560) stated: “The BM material cannot be a holotype and he [Rahn] did not realize that there were two specimens on the same sheet.” A full list of the syntypes they found at different herbaria is also provided. As far as the sheet at BM is concerned, the upper specimen (BM000993053) is labeled as coming from Pallas’s herbarium, while below this element there is a fragmentary specimen (BM000993052) labeled as coming from Forster’s own herbarium. The former specimen is not relevant for typification purposes because it cannot be linked to the protologue, so it is not original material for the name. Therefore, the designation of the specimen from BM as the “holotype” by Rahn (1984) is an error to be corrected to an effective lectotype designation.

**47. *Plantago coriacea*** Cham. & Schltld. var. ***pilosula*** Kuntze, *Revis. Gen. Pl.* 3(3): 263. 1898. TYPE: Argentina. Buenos Aires: Tandil, Nov. 1892, *C. E. O. Kuntze s.n.* (lectotype, designated by Rahn [1983: 338], NY [bc] NY278435!; isolectotypes, F not seen, HBG [bc] HBG509665 image!, US not seen).

*Discussion.* In describing *Plantago coriacea* var. *pilosula*, Kuntze (1898) cited a collection he made in Sierra de Tandil, Argentina. Duplicates of this collection are found at F, HBG, NY, and US. Rahn (1983: 338) stated that the sheet at NY was the holotype, while duplicates at F and US were isotypes. The use of the term “holotype” is an error to be corrected to an effective lectotype designation.

*Accepted name.* *Plantago tandilensis* (Pilg.) Rahn, *Nordic J. Bot.* 3: 337. 1983.

**48. *Plantago heterophylla*** Nutt., *Trans. Amer. Philos. Soc. ser. 2*, 5: 177. 1835. TYPE: U.S.A. Arkansas: s.l., s.d., *T. Nuttall s.n.* (lectotype, designated by Bassett [1966: 475], BM [bc] BM001024987 image!; isolectotype, PH [bc] PH00030773 image!).

*Discussion.* The description of *Plantago heterophylla*, as referred to by Nuttall (1835) in the protologue, was based on two syntypes he collected in Arkansas and Mississippi, in the United States. Bassett (1966) clearly indicated a sheet housed at BM as the holotype, although an additional element, also annotated in Nuttall’s hand as “*Plantago \*heterophylla* / Arkansas” was located at PH. Both elements agree with the diagnosis, although there is no evidence concerning the date of collection. Despite this, it is documented that Nuttall generally added an asterisk before his new names for the plant species he described (Freire-Fierro & Landale, 2011), and therefore these specimens are certainly original material for the name. Thus, Bassett’s statement that the BM sheet is a “holotype” is an error to be interpreted as an effective lectotype designation.

**49. *Plantago pauciflora*** Lam., *Tabl. Encycl.* 1(2): 342. 1792. TYPE: Chile. Magallanes y Antártica Chilena: “Detroit de Magellan,” s.d., *P. Commerçon s.n.* (lectotype, designated by Rahn [1984: 617], P [bc] P00380776!; isolectotypes, P [bc] P00609809!, P [bc] P00609810 image!, P [bc] P00675448 image!, P [bc] 04046355 image!).

*Discussion.* Lamarck (1792) based the diagnosis of *Plantago pauciflora* on a Commerson collection from the Strait of Magellan, Chile. Rahn (1984: 617), in his revision of *Plantago* sect. *Oliganthos*, referred to a specimen lodged in Lamarck’s own herbarium at P as the holotype of the name. However, four additional duplicates, two of them (P00609810, P00675448) studied and annotated by Lamarck, were located at the general collection at P. Therefore, the element cited by Rahn is not the holotype, and his statement must be considered as an effective lectotypification.

*Accepted name.* *Plantago barbata*.

**50. *Plantago sempervivoides*** Dusén, *Ark. Bot.* 7 (2): 37. 1907. TYPE: Argentina. Santa Cruz: “Río Fósiles in montanis ad terram nudam in alt. c. 850–1100 m s. m.,” 1 Apr. 1905, *P. K. H. Dusén 5932* (lectotype, designated by Rahn [1984: 619], S-05-409 image!; isolectotypes, BM [bc] BM000993055 image!, HBG [bc] HBG509677 image!, K [bc] K000573603 image!, S-09-15087 image!).

*Discussion.* Dusén (1907) described *Plantago sempervivoides* based on a collection he made in Santa Cruz,

Argentina. Rahn (1984: 619–620) noted syntypes of this collection at BM, NY, and S, and treated one element among those at S, whose label reads “Rio Fosiles in montanis ad terram nudam ca. 1000 m s.m. 1. Apr. 1905” as the supposed holotype, although Dusén had not indicated any collection as such at the time he published the species. In addition, the protologue includes a figure (tab. 8, fig. 4–6), which is also original material for the name. Thus, given that only one of the syntypes at S satisfies the information given by Rahn, his statement is here interpreted as a lectotype designation.

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