



Lectotypification of seven names in *Chusquea* (Poaceae, Bambusoideae, Bambuseae) from Central Andes

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Lectotypes of seven names of Andean *Chusquea* are herein designated on the basis of specimens deposited at MOL and US. The names newly lectotypified are *Chusquea huantensis*, *C. inamoena*, *C. picta*, *C. polyclados*, *C. serrulata*, *C. straminea* and *C. tarmensis*.

Chusquea Kunth (1822: 151) is the most diverse woody bamboo genus, with *ca.* 175 described species (Clark *et al.* 2015, Guerreiro 2016, Vorontsova *et al.* in press). This Neotropical genus has the widest latitudinal range of any bamboo, from 24°N in Mexico to 47°S in Chile, and the widest altitudinal range of any bamboo, from sea level to over 4,000 m. The species of *Chusquea* are often significant and sometimes dominant components of montane forest and high-altitude grassland vegetation, where they can be aggressive colonizers (Judziewicz *et al.* 1999). All major groups within this genus occur in the Andes, a primary center of diversity (Clark 1995). In the fast-disappearing Andean montane forest, bamboos are usually found along forest edges or in gaps, but where deforestation is extreme they are often restricted to the moist, sometimes steep, still-vegetated ravines with running water, with the exception of the more aggressive species, which can take over the deforested areas. In temperate regions of South America, *Chusquea* species are well known as understory dominants in Andean-Patagonian beech forests of Argentina and Chile (Judziewicz *et al.* 1999).

As part of an ongoing revision of Andean species of *Chusquea*, seven names were detected that remain without typification. Lectotypes are herein designated for the names *Chusquea huantensis* Pilger (1920: 29), *C. inamoena* Pilger (1905: 150), *C. picta* Pilger (1905: 151), *C. polyclados* Pilger (1905: 147), *C. serrulata* Pilger (1898: 719), *C. straminea* Pilger (1905: 147) and *C. tarmensis* Pilger (1905: 151). Also, a correction of the type is made for the name *C. pubispicula* Pilger (1905: 148).

All these species were described by Robert K.F. Pilger (1876–1953), a German botanist based at Berlin-Dahlem Botanical Garden (Herbarium B), where holotype specimens were deposited (Stafleu & Cowan 1983). Those specimens were destroyed during World War II (R. Vogt, pers. comm.). As such, duplicates and type fragments housed at various herbaria around the world are here selected as lectotypes.

The label data and characters exhibited by the specimens designated as lectotypes agree with the original descriptions of these species. Type protologues were checked and type specimens are cited. In cases where type specimens are fragments, the kind of material available is described: inflorescence, spikelets, leaf blade, line drawing, etc. For each name, details about the selected lectotype and isolectotypes are included. Herbarium acronyms follow Thiers (2017). In cases where herbaria have identification (accession) numbers and/or barcodes on their specimens, these numbers are given after the herbarium acronym.

Lectotypifications

1. *Chusquea huantensis* Pilger (1920: 29). Lectotype (designated here):—PERU. Ayacucho: Huanta, Weg von Tambo über Osno zum Flusse Apurimac, Gebüsch, reich an hartlaubigen Formen, 3000 m, 31 May 1910, *A. Weberbauer* 5581 [US-1517186!, isolectotypes F-621589 (digital image!), G-99332 (2 sheets, digital image!), GH-404356 (digital image!), S 05-5409 (fragm. ex B, digital image!), US-1498092!, US-2874628! (fragm. ex B), US-1127083! (fragm. ex B)].

Note:—The specimen *A. Weberbauer 5581* (US-1517186) bears a piece of culm with leafy floriferous branching complements (Fig. 1A).

Distribution:—Endemic to Peru.



FIGURE 1. A. Lectotype of *Chusquea huantensis*. B. Lectotype of *C. inamoena* (photo: C. Guerreiro). C. Lectotype of *C. picta*. D. Lectotype of *C. polyclados* (photo: C. Guerreiro). A and C: information provided with the permission of the National Museum of Natural History, Smithsonian Institution, 10th and Constitution Ave. N.W., Washington, DC 20560-0193, <http://www.nmnh.si.edu/>.

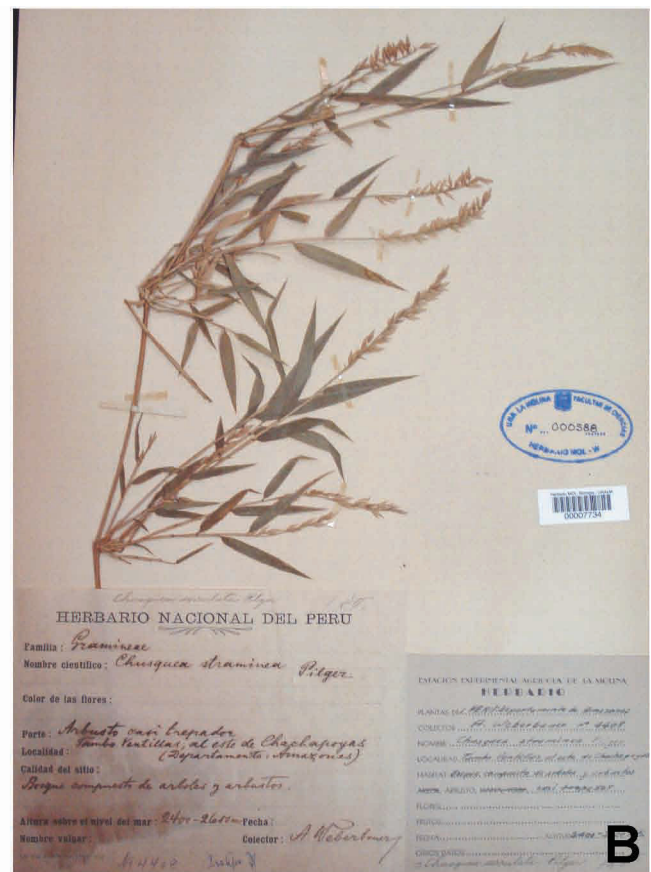


FIGURE 2. A. Lectotype of *Chusquea serrulata*. B. Lectotype of *C. straminea* (photo: C. Guerreiro). C. Lectotype of *C. tarmensis*. D. Lectotype of *C. pubispicula*. A, C and D: information provided with the permission of the National Museum of Natural History, Smithsonian Institution, 10th and Constitution Ave. N.W., Washington, DC 20560-0193, <http://www.nmnh.si.edu/>.

2. *Chusquea inamoena* Pilger (1905: 150). Lectotype (designated here):—PERU. Tarma: in montibus ad occidentem ab Huacapistana versis, in silvis humidis, humilioribus, saepe nebulis obtectis ad 2700 m, January 1903, *A. Weberbauer* 2295 [MOL-7737!, isoelectotypes S 05-10836 (fragm. ex B, digital image!), US-2874629! (fragm. ex B), US-1127080! (fragm. ex B)].

Note:—The specimen *A. Weberbauer* 2295 at MOL (Fig. 1B) is an isotype of *C. inamoena*, composed of culms, foliage leaves and inflorescences, and is selected as the lectotype. The specimens deposited at S and US are also isotypes, being fragments of the destroyed holotype, consisting only of short pieces of inflorescences and loose leaves.

Distribution:—Endemic to Peru.

3. *Chusquea picta* Pilger (1905: 151). Lectotype (designated here):—PERU. In andium nemoribus, no date, *H. Ruiz López & J.A. Pavón y Jimenez s.n.* [US-2874645! (fragm. ex B), isoelectotype US-1127082! (fragm. ex B)].

Note:—The two specimens kept at US are clearly labeled as being fragments of the destroyed holotype specimen. The specimen *H. Ruiz López & J.A. Pavón y Jimenez s.n.* (US-2874645) consists of a few loose leafy inflorescences and a spikelet line drawing (Fig. 1C), and is more complete than the other specimen (US-2874645); the former is therefore selected as the lectotype. There are also three specimens deposited at herbarium G (G-99326, G-99327 and G-99328) labeled as “possible isotype”, but neither the collector nor the place of collection are clearly stated on any of those sheets.

Distribution:—Bolivia and Peru.

4. *Chusquea polyclados* Pilger (1905: 147). Lectotype (designated here):—PERU. Cajamarca: supra Hacienda La Tahona ad Hualgayoc, in formatione densa plantis herbaceis et fruticibus mixta, 3100–3300 m, May 1904, *A. Weberbauer* 4021 [MOL-7736!, isoelectotypes G-99324 (digital image!), S 05-10837 (fragm. ex B, digital image!), US-2874647! (fragm. ex B), US-1127086! (fragm. ex B)].

Note:—August Weberbauer (1871–1948) kept a duplicate of the holotype specimen at the herbarium MOL of the Universidad Nacional Agraria La Molina in Lima, Peru, where he worked as a botanist for many years. This herbarium was later named after him. There is another duplicate deposited at G. Because *C. polyclados* is an endemic species of Peru, the specimen housed at MOL is selected as the lectotype (Fig. 1D). The isoelectotypes are fragments of flowering culms taken from the destroyed holotype specimen by different botanists.

Distribution:—Endemic to Peru.

5. *Chusquea serrulata* Pilger (1898: 719). Lectotype (designated here):—COLOMBIA. Collecta in itinere oppido Pasto ad Laguna grande de Cocha et ad montem Patascoy, no date, *A. Stübel* 344 (US-1127084! fragm. ex B).

Note:—The specimen *A. Stübel* 344 (US), selected as the lectotype of *C. serrulata*, is a fragment of the destroyed holotype, taken by Agnes Chase in 1922, composed of a small piece of inflorescence and a few loose spikelets (Fig. 2A).

Distribution:—Bolivia, Colombia, Ecuador and Peru.

6. *Chusquea straminea* Pilger (1905: 147). Lectotype (designated here):—PERU. Amazonas: prope Chachapoyas ad orientem versus Tambo Ventillas, in fruticetis arboribus intermixtis, 2400–2600 m, July 1904, *A. Weberbauer* 4408 [MOL-7734!, isoelectotypes G-99319 (digital image!), US-2874660! (fragm. ex B)].

Note:—The specimen *A. Weberbauer* 4408 at MOL (Fig. 2B) comprises a piece of culm with leafy floriferous branching complements. There is also an isotype in G. Because the species is endemic to Peru, the MOL sheet is selected as the lectotype.

Distribution:—Endemic to Peru.

7. *Chusquea tarmensis* Pilger (1905: 151). Lectotype (designated here):—PERU. Tarma: in montibus ad Yanangu, ad orientem ab Huacapistana versus, in silvis et fruticetis, frequens et insignis altitudine imprimis 2100–2600 m, January 1903, *A. Weberbauer* 2129 [US-2874661! (fragm. ex B), isoelectotype US-1127081! (fragm. ex B)].

Note:—A fragment of the destroyed holotype specimen, comprising two foliage leaves, a short floriferous branch, a few loose spikelets and a spikelet line drawing, is kept at US and is chosen as the lectotype (Fig. 2C).

Distribution:—Endemic to Peru.

8. *Chusquea pubispicula* Pilger (1905: 148). Lectotype (designated by Clark 2000: 47):—PERU. Prope Sandía, fruticeta extensa fere pura formans, ad 2800 m, April 1902, *A. Weberbauer 688* [US-2874648! (fragm. ex B), isolectotype US-1127088!].

Note:—The specimen *A. Weberbauer 688* (US-2874648, Fig. 2D) was cited by Clark (2000) as “Type” of *Chusquea pubispicula* and is here corrected to lectotype, following Art. 9.9 of the International Code of Nomenclature (McNeill *et al.* 2012).

Distribution:—Endemic to Peru.

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