



Lectotypifications in species of *Chusquea* (Poaceae, Bambusoideae, Bambuseae) from southern South America

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Abstract

Lectotypes of *Chusquea phacellophora*, *C. tenella*, *C. uruguayensis* and *C. valdiviensis* are herein designated on the basis of specimens deposited at Museo Nacional de Historia Natural (MVM), Muséum National d'Historie Naturelle (P) and Smithsonian Institution (US) herbaria.

Introduction

Chusquea Kunth (1822: 151) is the most diverse woody bamboo genus in the world, comprising ca. 169 species (Fisher *et al.* 2014). *Chusquea* is distributed from Mexico to Argentina and Chile with a large group of endemic species in Brazil and one disjunct species in the Juan Fernandez Islands, another in the West Indies, and a third in the Sierra Parima of Venezuela and Brazil, and the Guayana highlands (Clark 1995). It has the widest latitudinal range of any bamboo genus, 24°N to 47°S, and the widest altitudinal range, from sea level to over 4000 m (Judziewicz *et al.* 1999). The species of *Chusquea* are often significant, sometimes dominant components of montane forest and high altitude grassland vegetation (Judziewicz *et al.* 1999).

Based on a recent taxonomic study of woody bamboos native to Northeastern Argentina (Lizarazu 2012, 2013), the revision of the Argentinean species of the genus *Chusquea* (Guerreiro & Rúgolo 2012) and the upcoming treatment of the Chilean species of the genus for the Flora of Chile project (Guerreiro & Vega unpubl.), four taxa were detected that remain without typification. For this reason, lectotypes are herein designated for the following taxa: *Chusquea phacellophora* Pilger (1923: 456), *C. tenella* Nees (1835: 492), *C. uruguayensis* Arechavaleta (1897: 546) and *C. valdiviensis* Desvaux in Gay (1854: 446). The label and characters exhibited by the specimens selected agree with the original descriptions of these species. In some cases, holotypes were deposited at Berlin Dahlem Herbarium (B), but these were destroyed during the Second World War and duplicates of them are preserved at BAA and US herbaria.

In the taxonomic treatment accepted names are in bold face and synonyms are in italics. Type protologues were checked in original publications 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 taxon, details about the selected lectotype material are included, as well as the isolectotypes and the herbaria where they are housed. Herbarium acronyms follow Thiers (2014). Usually, herbaria have identification (accession) numbers and/or barcodes to designate their specimens, and when this is the case, these numbers are given after the herbarium acronym. Information on specimens housed at BAA was obtained from Vega (2013).

Taxonomic Treatment

1. *Chusquea ramosissima* Lindman (1900: 24). Lectotype (designated by Parodi 1941: 338):—PARAGUAY. Cordillera de Villa Rica, in silvis abundans, 30 September 1874, B. Balansa 134a [S 055423 photo SI!, isolectotypes BR, S 0510846 photo SI!, US 2874652! (fragm. ex S)].

Chusquea affinis Munro ex Camus (1913: 80). Type:—BRAZIL. Minas Gerais, 1816–1821, *A. de Saint-Hilaire 1010* [holotype P 00625480!, isotypes US 1645640! (fragm. ex P), US 2874613! (fragm. ex P)].

Chusquea phacellophora Pilger (1923: 456). **Lectotype (herein designated)**:—BRAZIL. Rio Grande do Sul: Rio Pardo, Fazenda Soleade, December 1916, *C. Jürgens 511* [US 2874644! (fragm. ex B)].

Note:—The holotype specimen of *C. phacellophora* was deposited at B and is now destroyed (R. Vogt, pers. comm.). A fragment of that specimen, comprising spikelets and leaves, is kept at US and it is chosen as the lectotype (Fig. 1 A).

2. *Chusquea tenella* Nees (1835: 492). **Lectotype (herein designated):—BRAZIL. In Brasilia, no date, *J. Lhotsky s.n.* [US 2874662! (fragm. ex B), isolectotype BAA 804! (fragm. ex US), E 373675 (fragm. ex B)].**

Chusquea tenella Nees var. *latifolia* Dutra (1938: 146). Lectotype (designated by Clark 2000):—BRAZIL. Rio Grande do Sul: Sao Leopoldo, Amaral, in selva, 30 July 1932, *T. J. Dutra 1543* (US 1723529!).

Chusquea uruguayensis Arechavaleta (1897: 546). **Lectotype (herein designated)**:—URUGUAY. Tacuarembó: bosques, October 1896, *J. Arechavaleta s.n.* [MVM 5121!, isolectotype BAA 810! (fragm. ex MVM)]. Syntype:—URUGUAY. Tacuarembó: bosques, October 1896, *J. Arechavaleta s.n.* (MVM 5120!), isosyntype BAA 809! (fragm. ex MVM).

Notes:—The specimen *J. Lhotsky s.n.* (US), selected as the lectotype of *Chusquea tenella*, is a fragment of the destroyed holotype (R. Vogt, pers. comm.) composed of a foliage leaf blade and a few spikelets (Fig. 1 B). An isolectotype is kept at BAA, comprising a spikelet and a foliage leaf blade line drawing.



FIGURE 1. A. Lectotype of *Chusquea phacellophora* Pilg. (*C. Jürgens 511*, US 2874644). B. Lectotype of *Chusquea tenella* Nees (*J. Lhotsky s.n.*, US 2874662). ©Smithsonian Institution.

The specimen *T. J. Dutra 1543* (US 1723529) was cited by Clark (2000) as “Type” of *Chusquea tenella* var. *latifolia* and is here corrected to lectotype, following Art. 9.9 of the International Code of Nomenclature (McNeill *et al.* 2012).

The protologue of *Chusquea uruguayensis* states: “Uruguay, gruta de los Helechos en Tacuarembó, bosques encajonados de Tambores. Florece en Octubre y Noviembre”. There are two specimens kept at MVM, where

Arechavaleta worked, that match the information given in the protologue. The specimen *J. Arechavaleta s.n.* (MVM 5121) is herein designated as the lectotype of this species, being composed by a culm, leaves and inflorescences (Fig. 2 A). The specimen BAA 810 is a duplicate of MVM 5121 and comprises a culm, leaves, inflorescences and loose spikelets. The syntype *J. Arechavaleta s.n.* (MVM 5120), also housed at MVM, consists of a culm, leaves and inflorescences, and its duplicate (BAA 809) is composed of a leaf and loose spikelets.

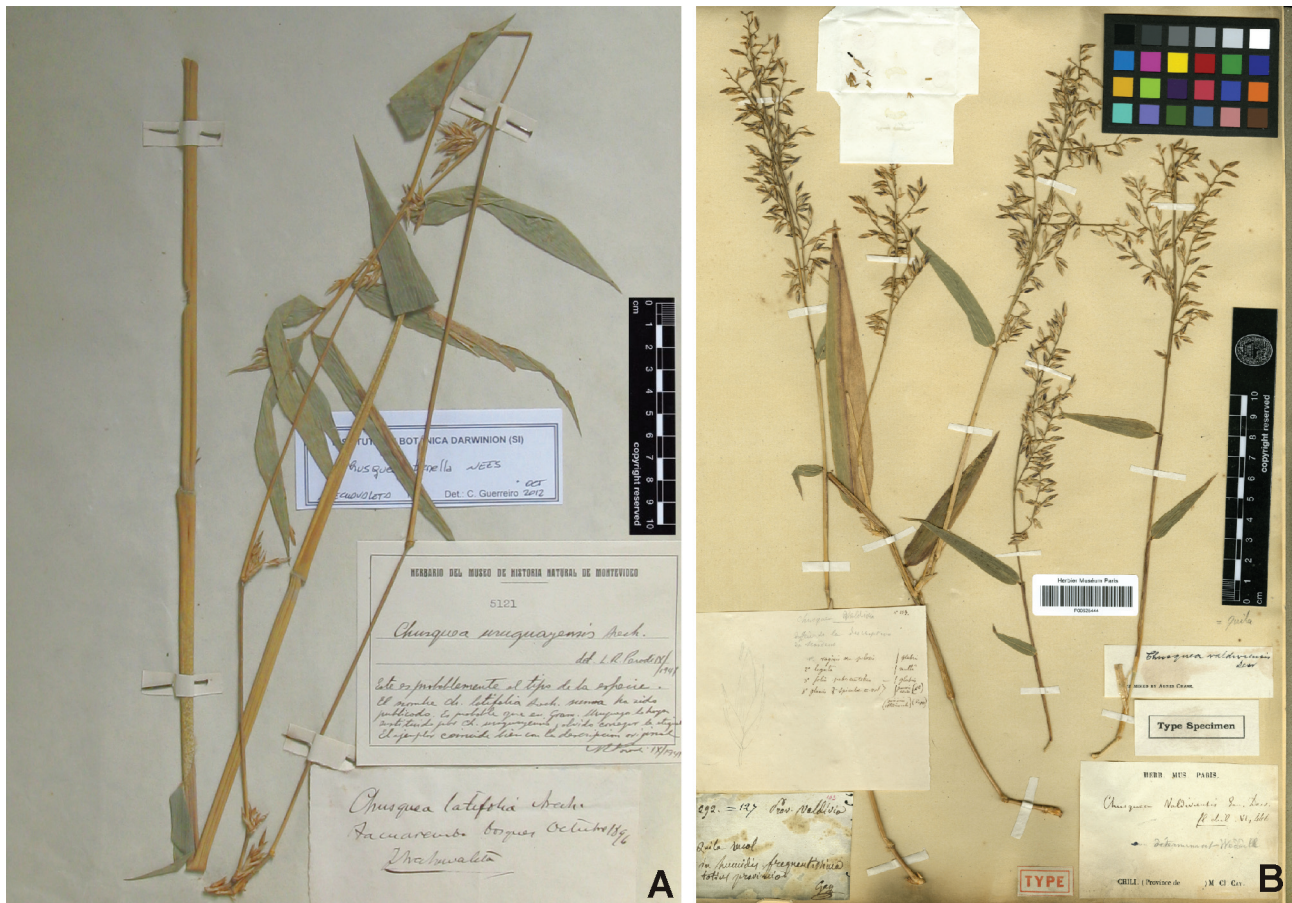


FIGURE 2. A. Lectotype of *Chusquea uruguayensis* Arechav. (*J. Arechavaleta s.n.*, MVM 5121), photo: Manuel García (MVM). B. Lectotype of *Chusquea valdiviensis* E. Desv. (C. Gay 292, P 00625444, obtained from <http://plants.jstor.org/specimen/p00625444?s=t>).

3. *Chusquea valdiviensis* Desvaux in Gay (1854: 446). Lectotype (herein designated):—CHILE. Valdivia: in humidis frequentissima, 1835, C. Gay 292 [P 00625444!, isolectotypes BAA 811! (fragm. ex P), P 00625445!, P 00625446!, SGO 63017! (fragm. ex P), US 556454! (fragm. ex SGO), US 2874668! (fragm. ex P)]. Syntype:—CHILE. No date, R. A. Philippi s.n. (P 02663536!).

Chusquea palenae Philippi (1896: 350). Type:—CHILE. In valle fluminis Palenae, February 1887, F. Delfin s.n. [holotype SGO (2 sheets: SGO 63032! and SGO 63033!), isotypes BAA 793! (fragm. ex SGO), CORD, US 556448! (fragm. ex SGO), W 1916 0039865! (fragm. ex SGO)].

Note:—The protologue of *C. valdiviensis* indicates “el señor Gay ha hallado muy abundante el *Chusquea valdiviensis* en sitios húmedos de la provincia de Valdivia; el Dr. Philippi la ha cojido también en Chile”. The specimen C. Gay 292 (P) comprises three sheets: P 00625444 bears several leafy flowering branches (Fig. 2 B); P 00625445 bears branches, foliage leaves and inflorescences and P 00625446 bears a piece of culm with a floriferous branching complement. The specimen R. A. Philippi s. n. (P) comprises only a few floriferous branches. The multiple sheets of Gay 292 (P) are not clearly labelled as being parts of the same gathering. On this basis and according to Art. 8.3 of the International Code of Nomenclature (McNeill *et al.* 2012), sheet P00625444 is selected as the lectotype of the species. Fragments of this specimen are also housed at BAA (floriferous branches), SGO (a leafy inflorescence), and US (a flowering branch and loose spikelets).

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