



# Names and types relating to the South American genus *Lamanonia* (Cunoniaceae) and its synonyms, the identity of *L. speciosa*, and an account of the little-known *L. ulei*

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**Summary.** Publication details for names that refer to the South American genus *Lamanonia* and its synonyms, *Belangeria* and *Polystemon*, are reviewed, including names published by Vellozo, Cambessèdes, David Don, Pampanini and Engler, amongst others. The types of these names, collected by Saint-Hilaire, Glaziou, Sellow and others, are also reviewed and lectotypes designated where appropriate. A specimen of the handwriting of David Don is provided. The types of *L. grandistipularis* and *L. speciosa* are clearly conspecific and so *L. speciosa* is removed from the synonymy of *L. ternata* and now takes priority over the name *L. grandistipularis* for a shrub or small tree from campo rupestre in Minas Gerais and Bahia in Brazil; this species has sharply toothed, coriaceous leaves and large stipules that are usually persistent on fertile stems. A description, illustration and distribution map are provided for *L. ulei*, which has largely been overlooked as an accepted species, but which is distinguished from all other species in the genus by a distinctive layer of dense greyish or fawn indumentum formed of small hairs on the abaxial surface of the leaflets.

**Key Words.** Argentina, Brazil, nomenclature, Paraguay, typification.

## Introduction

*Lamanonia* Vell. (Cunoniaceae) is a small, well defined South American genus from central, eastern and southern Brazil, Paraguay and northern Argentina (Zickel & Leitão 1993; Zuloaga *et al.* 2008). The species are small to medium-sized trees or occasionally shrubs characterised by opposite and decussate, palmately compound leaves, each usually composed of three or five leaflets that always have toothed margins. Other distinguishing characters of the genus are two pairs of free lateral stipules per node, which can be either persistent or not in mature foliage, axillary racemose inflorescences of white to cream flowers that have a single perianth whorl, usually of six lobes, numerous (c. 25 – 60) stamens in more than one series, and a superior gynoeceum composed of two carpels that are fused at the level of the ovary, each with a free style (strictly a stylodium). The fruit is a 2-valved capsule containing numerous small, flattened seeds. The most recent revision, by Zickel & Leitão (1993), accepted five species, and an additional one, *L. ulei* (Engl.) L. B. Sm., treated as a synonym by these authors, was recently re-instated as distinct (Hopkins *et al.* 2013). The generic names *Belangeria* Cambess. and *Polystemon* D. Don are synonyms of *Lamanonia*.

*Lamanonia* belongs to the tribe Geissoieae (Bradford & Barnes 2001), along with three genera from the western side of the Pacific Ocean: *Geissois*

Labill. (19 spp., New Caledonia, Vanuatu, Fiji and Vanikoro in the Solomon Islands), *Pseudoweinmannia* F. Muell. (2 spp., eastern Australia) and *Karrabina* Rozefelds & H. C. Hopkins (2 spp., eastern Australia) (Hopkins *et al.* 2013, 2014; Rozefelds & Pellow 2011). Within the Geissoieae, *Lamanonia* is distinguished by its free lateral stipules, simple axillary inflorescences and stamens in more than one series.

This paper is one of a series that reviews names and their types in the predominantly southern hemisphere family Cunoniaceae; previous publications have dealt with genera from islands in the south-west Pacific (Hopkins 2005, 2006; Hopkins & Bradford 2009). Its principal aim is to establish publication details for all names referable to *Lamanonia* and its synonyms, and discuss the types of these names, designating lectotypes where appropriate. No attempt is made to revise the taxonomy of the whole genus and comments on synonymy rely largely on the account by Zickel & Leitão (1993), except in a few instances.

Although Zickel & Leitão (1993) provided considerable information on names and types, more is now available, especially concerning the collections of Auguste de Saint-Hilaire (see Pignal *et al.* 2013). Furthermore, while trying to establish publication details of names in Cunoniaceae for the unpublished families of the *World Checklist of Selected Plant Families* (available online through *Plants of the World Online*

(POWO, <http://plantsoftheworldonline.org>), some inconsistencies between different sources became apparent. With databases of plant names, images of many type specimens and some historical taxonomic literature now available online, a review of names and their types in this genus is timely.

### Organisation of the paper and methods

The first part of the paper discusses: (A) generic names (numbers I – III) in order of their date of publication, and then in alphabetical order: (B) validly published specific (numbers 1 – 14) and (C) infraspecific names (15 – 17), and finally, (D) invalidly published names (18 – 20). Specific or infraspecific names based on the same type are dealt with together under the combination in *Lamanonia*, if one exists; only a few names in *Belangera* and *Polystemon* have not been published as combinations in *Lamanonia*. The second part of the paper discusses the identity of *L. speciosa* (E) and presents an account of *L. ulei* (F). An index to types, including lectoparatypes, is given at the end.

Information on generic names was taken from the *International Plant Names Index* (IPNI, [online](#)) and *Index Nominum Genericorum* ([online](#)). Lists of species names in *Lamanonia*, *Belangera* and *Polystemon* were obtained from IPNI and infraspecific names were found in the taxonomic files of R. D. Hoogland at P. Images of types and other collections were viewed using *Jstor Global Plants* ([online](#)), the *Saint-Hilaire Virtual Herbarium* (SHVH) ([online](#)), the *Reflora Virtual Herbarium* ([online](#)), the *Glaziov Virtual Herbarium* ([online](#)), and the online databases of numerous individual herbaria (including B, BR, E, F, G, L, MICH, MO, NY, P, S, US). Some additional images were supplied directly by herbaria (B, FI, G, MBM, R). Protologues were seen either in the library at K or via the *Biodiversity Heritage Library* ([online](#)). Information on authors and their taxonomic works, including dates of publication, were taken from *Taxonomic Literature* ed. 2 (TL2, [online](#) and see Stafleu *et al.* 1976, 1979, 1981, 1983, 1985, 1986, 2000) unless otherwise stated. Dates of birth and death are given for many of the botanists and collectors mentioned below, but not the more recent ones.

In accordance with the *International Code of Nomenclature* (INC) (McNeill *et al.* 2012: Art. 9), many names are lectotypified, even when based on a single gathering, if the original material consists of more than one element and the author did not specify a holotype in the protologue. When discussing types, “!” after a herbarium abbreviation indicates that I have seen the specimen, and “image!” that I have seen an image of the specimen; however, an online image should not be regarded as part of the original material. The locations of herbarium specimens that I have not seen are cited either because of informa-

tion in online databases or because the sheet was mentioned by Zickel & Leitão (1993), and for some names, it is likely that further duplicates exist. Specimen barcodes are given, when known, for types, but where a lectotype has been designated from amongst syntypes with different collection numbers, the label details, herbaria and barcodes are not indicated for the remaining syntypes, now lectoparatypes, except in the case of the Saint-Hilaire collections, for which it is necessary to discuss all the syntypes.

Several herbaria, including G and P, sometimes have multiple sheets bearing the same collector's name and number, which together form part of a single gathering. At P, each herbarium sheet (or occasionally each fragment on one sheet) has been individually barcoded and so no ambiguity is likely. At G, material with a single collection number often comprises several individual specimens that were acquired at different times from different botanists or herbaria, and in the case of *Lamanonia*, each of these specimens comprises up to three individual sheets. When such a specimen comprises more than one sheet, only one bears a barcode (e.g. G00229802); recognition that the other sheets are part of the same specimen depends on the integrity of the specimen folder at G, although the images are linked under the barcode number in *Jstor Global Plants* ([online](#)). The sheets without barcodes are cited below using the numbers in pencil in the “Herbarium Genavense G” symbol on the sheet (e.g. 7901/12, 7901/13), rather than G00229802\_a and G00229802\_b, as the latter do not appear in the images seen.

In the account of *Lamanonia ulei*, both herbarium registration numbers and barcodes are given, when known. The distribution map was produced using *SimpleMappr* ([online](#)).

### An overview of the taxonomic history of *Lamanonia*

Although *Lamanonia* is now the accepted name for the genus, both this name and *Belangera* were published almost simultaneously in 1829, and the following year, David Don published the generic name *Polystemon* (see below). Thus in the early 1830s, a single species had been described in *Lamanonia* (*L. ternata* Vell.), four in *Belangera* (*B. cuneata* Cambess., *B. glabra* Cambess., *B. speciosa* Cambess., *B. tomentosa* Cambess.) and two in *Polystemon* (*P. pentaphyllus* D. Don, *P. triphyllus* D. Don).

The generic names *Lamanonia*, *Belangera* and *Polystemon* have long been accepted as synonyms (e.g. Engler 1871, 1928; Kuntze 1891; Pampanini 1905; Zickel & Leitão 1993) but until relatively recently, the genus was usually known as *Belangera*. For instance, in Martius's *Flora brasiliensis*, Engler (1871) recognised five species of *Belangera* (the four

described by Cambessèdes plus *B. denticulata* Moric.); Pampanini (1905) treated seven species (the five recognised by Engler (1871) plus *B. chabertii* Pamp. and *B. paraguayensis* Pamp.) as well as two infraspecific taxa; and Engler (1928) recognised eight (the five from 1871 plus *B. chabertii*, *B. grandistipularis* Taub. and *B. ulei* Engl.). Kuntze (1891) considered that the correct generic name was *Lamanonia*, rather than *Belangera*, and he made several new combinations, but it was not until well after Engler's 1928 account that *Lamanonia* became widely accepted (e.g. by Biloni 1965; Cuatrecasas & Smith 1971; Hatschbach & Nakamura 1976; Leite 1983; Pirani & de Castro 2011; Smith 1958; Zickel & Leitão 1993; Zuloaga *et al.* 2008). The name *Polystemon* has rarely been used except in synonymy.

## A. Generic Names

**I. *Lamanonia* Vell.** (Vellozo dated 1825, published 7 Sept. – 28 Nov. 1829: 228). Type: *L. ternata* Vell.

**NOTES.** The generic name *Lamanonia* was established by José Mariano da Conceição Vellozo (1742 – 1811) in *Florae fluminensis* (Vellozo 1829), which described plants from the area around Rio de Janeiro and which was published after his death. The title page of the text bears the date 1825; however, although the work was printed then, it was not distributed, and thus not validly published in the sense of the ICN (McNeill *et al.* 2012), until sometime between 7 September and 28 November 1829 (Carauta 1973). The precise date of publication is not known, but in the absence of evidence to show that *Lamanonia* was not validly published by 28 November 1829, the date on which *Belangera* was published (see below), we must assume that the former name has priority. In addition to the generic description, Vellozo (1829) gave a brief account of a single species, *L. ternata*.

**ETYMOLOGY.** Vellozo named *Lamanonia* “In memoriam D. Lamanon, globum Comite de Peyrouse circum navigante”. This refers to Jean Honoré Robert de Paul de Lamanon (1752 – 1787), often known as Robert de Lamanon, a French botanist, physicist and meteorologist, who was killed in Samoa on the Comte de Lapérouse's ill-fated expedition to Oceania (Cartwright 1997).

**TYPE OF VELLOZO'S NAME IN *LAMANONIA*.** According to TL2, little original Vellozo material has ever been traced (Stafleu & Cowan 1986, and see Knapp *et al.* 2015; Pellegrini *et al.* 2015). However, illustrations were made to accompany the text of *Flora fluminensis* (Vellozo dated 1827, published 29 Oct. 1831) and as these are part of the author's original material, they can serve as lectotypes (see Pellegrini *et al.* 2015).

**II. *Belangera* Cambess.** (Cambessèdes 28 Nov. 1829: 4). Lectotype (selected here): *B. speciosa* Cambess.

**NOTES.** Jacques Cambessèdes (1799 – 1863) first published the name *Belangera* in what, in the library at K, is a 4-page leaflet with no cover, entitled *Portulacearum, Crassulacearum, Ficoidearum, Cunoniacearumque, Brasiliae meridionalis, synopsis* (Cambessèdes 1829). When referring to the Cunoniaceae in this leaflet, the title has often been abbreviated in the literature to “*Cunon. Syn. Bras. Merid.*” although TL2 gives “*Portulac. Crassul. Bras. merid. syn.*” as the designated abbreviation (Stafleu & Cowan 1976). The leaflet bears the printed date “Novembri 1829” and according to Stafleu & Cowan (1976), the work was published on 28 November 1829. It presents a description of the genus *Belangera* and diagnoses for four species: *B. cuneata*, *B. glabra*, *B. speciosa* and *B. tomentosa*, with brief mention of their places of occurrence.

Cambessèdes's treatment of Cunoniaceae in 1829 was a precursor to his account of the family in volume 2 of *Flora Brasiliae meridionalis*, which was published soon after (Cambessèdes 1830, in Saint-Hilaire *et al.* 1829 – 1833). This flora was based on collections made by Auguste de Saint-Hilaire (1779 – 1853) in Brazil and Uruguay between 1816 and 1822 (Pignal *et al.* 2013), and in it, Cambessèdes re-published word-for-word his generic description of *Belangera* from 1829 and then gave detailed descriptions of the four species for which he had previously published only diagnoses. The title page of volume 2 bears the printed date 1829 but the account of Cunoniaceae, in part 16 of the entire work in the quarto edition, was published in October to November 1830 (Stafleu & Cowan 1983), with line drawings by Pierre Jean François Turpin (1775 – 1840) for *B. glabra*, *B. speciosa* and *B. tomentosa* appearing on 24 July 1830. In the folio edition, the treatment of *Belangera* is in vol. 2, pp. 145 – 149, with the illustrations in colour (dates of publication not given by Stafleu & Cowan 1983).

**ETYMOLOGY.** Cambessèdes (1829) stated that the genus was named in honour of Bélanger (“Dixi in honorem cl. Belanger, horti regii Pondichery rectoris ...”). Charles Paulus Bélanger (1805 – 1881) was a French explorer, naturalist and collector who was sent by the French Colonial Department to India in 1825 to establish a botanic garden in Pondicherry (Matthew 1982; van Steenis-Kruseman 1950).

**TYPES OF CAMBESSÈDES'S NAMES IN *BELANGERA*.** According to TL2, Cambessèdes's own herbarium is at MPU, with further material at LY, P and PC (Stafleu & Cowan 1976); these authors also stated that “Saint Hilaire left his Brazilian herbarium, including the types of the new taxa, published in the books listed here [of which “*Fl. Bras. merid.*” was one] to P” (Stafleu & Cowan 1983). Although the protologues

were published before the account in *Flora Brasiliae meridionalis*, material at MPU and P with Saint-Hilaire labels thus includes the types of Cambessèdes's names in *Belangera*. Some Saint-Hilaire sheets at MPU have small printed labels for Herb. Cambessèdes.

The protologues of Cambessèdes's names in *Belangera* did not mention collection numbers and the locality details were brief; Cambessèdes (1830) gave more information on localities but again did not include collection numbers. As we cannot be sure that the illustrations in *Flora Brasiliae meridionalis* existed when the protologues were published in the earlier pamphlet, they cannot be regarded as part of the original material. Zickel & Leitão (1993) cited these illustrations as the types for three of Cambessèdes's names and designated a neotype for the name that was not illustrated. However, since original herbarium material exists for all four names, the neotype of *B. cuneata* is not needed and these names are lectotypified below, following study of the Saint-Hilaire material at P and MPU.

The labels of the Saint-Hilaire specimens of *Belangera* at P and MPU lack detailed locality data but most have numbers, either on a label in the corner of the sheet, or on a small label attached directly to the plant fragment(s) by a thread, or on both. These correspond to the collection numbers in Saint-Hilaire's catalogues at P, and to identify a collection precisely, both the catalogue number (e.g. C<sup>2</sup>) and collection number (e.g. 1204<sup>bis</sup>) are needed, and should be cited as "C2 – 1204<sup>bis</sup>" (see Pignal *et al.* 2013). Unfortunately, for a few collections of *Belangera*, the number attached to the plant fragment does not correspond to that written on the sheet label; in these instances, it is the number attached to the plant fragment that should be cited.

The *Saint-Hilaire Virtual Herbarium* (online) shows images of his specimens from Brazil that are now at MPU and P, as well as his catalogues, which give a brief description of each collection, sometimes with more information on locality. A few further Brazilian specimens are at K, LE (n.v.), and perhaps elsewhere. Images of some of Saint-Hilaire's specimens of *Lamanonia* are also available on *Jstor Global Plants* (online) and the website of the Muséum national d'Histoire naturelle (MNHN), Paris (online). About half the sheets from P and MPU have a label attached with the name of the plant in spidery writing followed by the symbol "+". Comparison with examples in Burdet (online) and a Gazette-Drouot catalogue (pdf relating to a sale of letters and manuscripts on 14 April 2015, kindly supplied by Sergio Romaniuc-Neto) show it is Cambessèdes's writing and it is from amongst these sheets that the lectotypes have been selected. The "+" indicates that the species is not well known, following the convention proposed by de Candolle

(1819), which was followed in Saint-Hilaire *et al.* (1829 – 1833: Preface) (Sergio Romaniuc-Neto pers. comm.).

**III. Polystemon** *D. Don* (April – June 1830: 95).  
Lectotype (selected here): *P. pentaphyllus* *D. Don*.

**NOTES.** David Don (1799 – 1841) published the name *Polystemon* in his synopsis of the Cunoniaceae in *The Edinburgh New Philosophical Journal* (Don 1830). Although the title page of the volume at K bears the printed date "July ... October 1830", several pages in the first half of the volume, in which Don's paper appears, have "April ... June 1830" printed at the bottom margin. With the description of his new genus, Don published diagnoses for two species, *P. pentaphyllus* and *P. triphyllus*. In a note at the end of his account, Don (1830: 96) equated *Polystemon* with Cambessèdes's genus *Belangera*.

**ETYMOLOGY.** The generic name refers to the numerous stamens in each flower (Don 1830).

**TYPES OF DON'S NAMES IN POLYSTEMON.** Following the diagnoses of his new species, Don (1830) mentioned collections for both as follows: "Hab. In Brasiliã. – Sello. B. (V. s. sp. in Herb. Lamb.)". Friedrich Sello(w) (1789 – 1831) was a German botanist and naturalist who collected in Brazil between 1814 and 1831, sometimes in the company of Auguste de Saint-Hilaire (Herter 1945; Moraes 2008; Stafleu & Cowan 1985). According to Stearn (1973), "B" is the medieval planetary symbol for Saturn and indicates the plants are trees or shrubs. "V. s. sp. in Herb. Lamb." shows that Don had seen dried material (V. s. = vidi sec = seen dried) in the herbarium of Aylmer Bourke Lambert (1761 – 1842), one of the founding Fellows of the Linnean Society of London. For much of his career, David Don was Keeper of the Lambertian Herbarium and Librarian to the Linnean Society (Anon 1842). Following Lambert's death, his herbarium was sold to pay his debts and was thus dispersed, parts being acquired by 18 different institutions in Europe and the U.S.A. (Miller 1970).

According to Miller (1970), the Sellow specimens from Lambert's herbarium are mostly at G with some at BM and K. Before his death, Lambert had sent some Sellow specimens to William J. Hooker in Glasgow and these presumably included a fragment of *Lamanonia* now at K (K000761379) on a sheet that bears Hooker's stamp. (Another sheet at K (K000761377), *Sello* 453, was received from B.) The specimens at G labelled "Herb. Delessert" were bought by Rich, as Delessert's agent, at the sale of Lambert's herbarium, and those now at BM were bought by Brown (Miller 1970). *Index Herbariorum* (Thiers online) and TL2 (Stafleu & Cowan 1985) list further herbaria where Sellow material can be found, but although some of these institutions may have duplicates of the specimens from Herb. Lambert, they are unlikely to have the material seen by Don.

The Sellow material of *Lamanonia* at K (two sheets) and BM (one sheet) has no original label data, no indication of the name *Polystemon* and no handwriting that might be that of David Don, and thus none of these specimens is likely to be the material studied by him.

At G, four sheets of *Lamanonia* collected in Brazil by Sellow are from Herb. Delessert; two have “*Polystemon triphyllus* D. Don” and two have “*Polystemon pentaphyllum* D. Don” written on pinned labels that also bear the stamp for “Hb. Delessert”. The names may be in David Don’s hand, based on a comparison with samples provided by the Linnean Society of London (Fig. 1), although this requires verification. Because the type material at G lacks collection numbers, it is difficult to determine whether or not Sellow sheets in other herbaria are duplicates of these collections.

## B. Validly published species names

**1. *Belangera lamanonia* Steud.** (Steudel 1840: 195), *nom. illegit., nom. superfl.*

Basionym: *Lamanonia ternata* Vell. Type: as for *Lamanonia ternata*.

**NOTES.** From the layout of his list of species in the genus *Belangera*, Steudel (1840) clearly had the intention of making a new combination to replace the name *Lamanonia ternata* Vell., which was cited as a synonym. This makes *B. lamanonia* a superfluous name.

**2. *Belangera paraguayensis* Pamp.** (Pampanini 1905: 53). Lectotype (selected here): *Balansa* 3183 [cited in protologue as 3188], Paraguay, Cordillera de Peribebui, 1879, G – image! [G00229802] (fl.); isolectotypes: BM! [BM000548803] (buds, fl., fr.); F – image! [V0063194F]; G ×7 – images! [G00229803, G00229804, G00229805, G00229806, 7901/10 (no barcode), 7901/12 (no barcode), 7901/13 (no barcode)]; K! [K000486104] (fl. & fr.); L ×3 – images! [L0019930, L0019931, L0019932]; P ×8! [P00697283, P00697284, P01817785 (fl.), P01817786 (fr.), P01817787, P01817788, P05616946, P05616951]; NY [NY533108] (no image); U – image! [U0001475] (buds & fl.).

**NOTES.** In the protologue, Pampanini (1905) cited two collections: “1. – « Cordillère de Peribebui, – 1879 – [B. Balansa, – Pl. du Paraguay, (1878–1884), n. 3188] » (D, D C). 2. – « Vallée de l’Y-acan-guazu, près de Valenzuela, sur le versant humide des montagnes – 15 mars 1884 – [B. Balansa, – Pl. du Paraguay, (1878–1884), n. 4752] » (D).” “D C” signifies the De Candolle herbarium at G and “D” the Delessert herbarium, now part of the general herbarium at G. Sheets of *Balansa* 4752 are now lectoparatypes.

According to Zickel & Leitão (1993), *Belangera paraguayensis* is a synonym of *Lamanonia cuneata*. No combination in *Lamanonia* is given in IPNI (online) for the epithet *paraguayensis*.

**3. *Lamanonia brasiliensis* Zickel & Leitão (1993: 80).**

Type: Ratter *et al.* 3524, Brazil, Federal Distr., Fazenda Agua Limpa (University of Brasília field station), near Vargem Bonita, c. 18 km SSW of Brasília TV tower, 1 Sept. 1976. Holotype: UEC (fl. & fr.); isotypes: E – image! [E00319711]; K! [K000761380]; MO [MO-1551635] (no image seen); NY – image! [NY00922466]; additional isotype (fide Zickel & Leitão 1993): UB.

**NOTES.** *Lamanonia brasiliensis* was an accepted species in the revision of Zickel & Leitão (1993).

**4. *Lamanonia chabertii* (Pamp.) L. B. Sm.** (Smith 1958: 283).

Basionym: *Belangera chabertii* Pamp. (Pampanini 1904: 328). Lectotype (selected here): *Glaziou* 8247, Brazil, (either “Rio de Janeiro, 1876” or “São Paulo, Campos da Bocaina, 8 Jan. 1876”), G – image! [G00357597] (fl.); isolectotypes: B – image! [B109009669]; BR – image! [BR0000013505233]; G ×2 – images! [G00357597, 6864-2 (no barcode)]; K! [K00761375]; P ×5! [P00697272, 00697273, P00697274, P02441814 + 1 sheet without barcode]; R – image! [R000008836]; S ×3 – images! [S 08-7441, S 08-7442, S 08-7443 (no barcodes)]; additional isolectotype cited by Zickel & Leitão (1993) (as an isotype): LE.

**NOTES.** In the protologue of *Belangera chabertii*, Pampanini (1904) cited the following specimen: “*Hab.* « Prope Rio de Janeiro (Glaziou n. 8247). » – Typ. in Herb. Delessert”, and these details were repeated in Pampanini (1905). Two sheets of *Glaziou* 8247 at G are from Herb. Delessert. Zickel & Leitão (1993) stated that one was the holotype and the other an isotype, but did not distinguish between them, either in print or by labelling the sheets. The sheet that gives locality data is now the lectotype.

All the type material cited above as *Glaziou* 8247 appears to be from a single gathering. The lectotype bears the locality “Prope Rio de Janeiro”, with the date 1876. However, among the sheets of *Glaziou* 8247 at P, three (P00697272, P00697273, P02441814) state “Brésil, S. Paulo, Campos de Bocaina, près de la fazenda, 8 janv 1876”. The sheet at B has “Rio de Janeiro” on the label for Herb. A. W. Eichler, but Engler’s det. slip repeats the information from the three Paris sheets and this locality is cited in Engler (1928). In his own account of his collections from

SP 321 Don. D.

Remarks on a few Rare Scottish Plants, chiefly  
 from the Clova Mountains, and of which  
 specimens are now on the table. By Mr  
 David Don, Libr. L. S.

Read April 16<sup>th</sup> 1833

It has been justly observed by my  
 late Father that no part of Scotland presents  
 a richer field for the Botanist than the range  
 of lofty mountains which bounds the upper part  
 of Forfarshire, a region famous for containing  
 many of the rarer productions of the British  
 Flora, and which the interesting discoveries of more  
 recent investigators have shown to be still far  
 from being exhausted of novelties. From the fear  
 my Father entertained that, if the habitats were  
 once made generally known, many of those  
 rare & interesting plants, which he was the  
 first to discover, would soon be eradicated through  
 the avidity of collectors, he carefully concealed  
 their localities, and thereby often rendered himself  
 liable

Fig. 1. Specimen of the handwriting of David Don. Reproduced by permission of the Linnean Society of London.

Brazil, Glaziou (1905 – 1913: 199) gave the locality “Campos da Bocaina, São Paulo” for this collection, which was listed under *Belangera denticulata*. Several places named Bocaina occur in the state of São Paulo, and the present-day Parque Nacional de Boacina is on the border between the states of São Paulo and Rio de Janeiro. Some comments about the labelling of Glaziou material are made under *Lamanonia grandistipularis*.

*Lamanonia chabertii* was an accepted species in the revision of Zickel & Leitão (1993), known at the time only from the type, and said to be distinguished by its rather small leaflets and hairs on the filaments.

##### 5. *Lamanonia cuneata* (Cambess.) Kuntze (1891: 227).

Basionym: *Belangera cuneata* Cambess. (Cambessèdes 28 Nov. 1829: 4). Lectotype (selected here): *A. de Saint-Hilaire* C1 – 133, Brazil, Minas Gerais, P! [P00594819] (fr.); isoelectotypes: P! [P00594818] (133, s.loc.); MPU – image! [MPU011798] (133, s.loc.).

**NOTES.** In the protologue of *Belangera cuneata*, Cambessèdes (1829) mentioned cuneate leaflets with puberulous lower surfaces and the fruits (capsules hirsute-tomentose, the hairs turning reddish) and he gave the locality as “Minas Geraës” (sic). The collection cited here as the type is the only Saint-Hilaire material seen with this name (Table 1). All three sheets are labelled “133”, and the lectotype also mentions a catalogue number and the province of “Minas Geraes” (sic). All the sheets have dehisced fruits and appear to be from the same gathering.

As mentioned above, Zickel & Leitão (1993) designated a neotype (*Hatschbach* 16173, Brazil, Paraná, Porto Amazonas, Rio Iguacu, 16 Nov. 1967, fr., MBM; isoneotypes MO, US) for this name because no illustration was provided in Cambessèdes (1830), but this neotype is not required because original material exists. *Lamanonia cuneata* was an accepted species in Zickel & Leitão’s revision.

##### 6. *Lamanonia denticulata* (Moric.) Kuntze (1891: 227).

Basionym: *Belangera denticulata* Moric. (Moricand Jan. – June 1847: 153, tab. 90). Lectotype (selected here): *Blanchet* 3253, Brazil, Bahia, G – image! [G00357595] (old fl.); isoelectotypes: BM ×2!; BR ×3 – images! [BR0000013327309, BR0000013327316, BR0000013327323]; F ×2 – images! [V0063192F, V0063193F]; G ×4 – images! [G00357594, G00357596, 6864-11 (no barcode), 6864-14 (no barcode)]; K ×2! [K000486105, K000486106]; NY – image! [NY0356071]; P ×7! [P00697275, P00697276 & P00697279 (mounted on same sheet), P00697277 & P00697278 (mounted

on same sheet), P05616937, P05519309 (*Blanchet* s.n.)]; additional isoelectotype, cited by Zickel & Leitão (1993) (as an isotype): LE.

**NOTES.** Moïse-Étienne Moricand (1779 – 1854), known as Stefano, worked in the later part of his life with A. P. de Candolle in Geneva (Stafleu & Cowan 1981), and a label on the lectotype of *Belangera denticulata* at G indicates the sheet was previously in Moricand’s own herbarium. Moricand (1847) cited the type as “Hab. in sylvis, prov. Bahiensis. Blanchet Exsic. N° 3253”. Some collections provide further locality details, including “Jacobina” (on a sheet at F), “Solidado” (sheets at BR, F) and “circa Igreja Vilha” (sheets at BM, P).

*Lamanonia denticulata* is a synonym of *L. ternata* (fide Zickel & Leitão 1993).

##### 7. *Lamanonia glabra* (Cambess.) Kuntze (1891: 227).

Basionym: *Belangera glabra* Cambess. (Cambessèdes 28 Nov. 1829: 4). Lectotype (selected here): *A. de Saint-Hilaire* C – 66, Brazil, Minas Gerais, MPU – image! [MPU 011041] (fl. & fr.); isoelectotypes: P ×3! [P00594820, P00594822, P00594649]; probable isoelectotype: P! [P0059824 p.p., fragm. on right hand side]. (Catalogue number given as C1 in SHVH.)

**NOTES.** In the protologue, Cambessèdes (1829) mentioned oblong leaflets narrowing at the base with the undersides glabrous and the fruits (capsules almost glabrous). He gave the collection locality as “Minas Geraës”, which is also on the printed label of one of the isoelectotypes (P00594822).

The Saint-Hilaire material of *Belangera glabra* at P and MPU appears to represent two gatherings (Table 1). The lectotype and isoelectotypes (C1 – 66) have flowers and sometimes young or mature fruits (the latter in the lectotype and P00594824). The lectoparatypes (D – 122) (P00594821, P00594823) have flowers. Sheet P00594824 is listed in SHVH as No. 1289, but the number is written on the sheet label in pencil and appears to have been added subsequent to the original labelling; the fragment on the left-hand side of this sheet matches D – 122. Based on the shape of the leaflets, collection D – 122, and probably sheet P00594821, was the basis of tab. 115 in Cambessèdes (1830).

Zickel & Leitão (1993) included this name in the synonymy of the widespread and variable *Lamanonia ternata*.

##### 8. *Lamanonia grandistipularis* (Taub.) Taub. (Taubert 1892: 16).

Basionym: *Belangera grandistipularis* Taub. (Taubert 1890: 17). Lectotype (selected here): *Glaziou*

**Table 1.** Saint-Hilaire specimens referable to *Lamanonia* (syn. *Belangera*), arranged by name and barcode number. Sheets at P and K have all been seen and for material at MPU, online images were studied (see *Jstor Global Plants*, the website of the Muséum national d'Histoire naturelle (MNHN) Paris and the *Saint-Hilaire Virtual Herbarium* (SHVH)). In column 4, small labels attached to fragments often have the catalogue letter indicated as a squiggle below the collection number. Only sheet P00594817 has two fragments with different collection numbers, although on some other sheets, only one of the fragments has a numbered label attached and so it is not clear whether all belong to the same gathering. LHS = left hand side; RHS = right hand side; "C2 – 1240" means: Catalogue C2, collection number 1240 (see text). In column 6, the locality data use the spellings given on the sheet label; some are printed, others are hand-written in ink. In column 8, types are said to refer to a name in *Lamanonia*, but note that all these names were originally published in *Belangera*.

Barcode of herbarium sheet or fragment	Identity indicated in Cambessèdes's handwriting	Identity indicated in other handwriting	Number on label attached to fragment(s)	Number on sheet label	Locality given on sheet label	Reproductive state	Comments
MPU011798	<i>B. cuneata</i>		133	none	Brésil	fr.	isolectotype of <i>L. cuneata</i>
P00594818	<i>B. cuneata</i>		133	none	none	fr.	isolectotype of <i>L. cuneata</i>
P00594819	<i>B. cuneata</i>		133	C1 – 133	Prov. de Minas Geraes	fr.	lectotype of <i>L. cuneata</i>
MPU011041	<i>B. glabra</i>		not visible (SHVH gives C1 – 66)	none	Brésil	fl. & fr.	lectotype of <i>L. glabra</i>
P00594820		<i>B. glabra</i>	none (SHVH gives C1 – 66)	none	Prov. des Mines	fl.	isolectotype of <i>L. glabra</i>
P00594821		<i>B. glabra</i>	D – 122	66	Prov. des Mines	fr.	lectoparatype of <i>L. glabra</i> ; probably basis for Cambessèdes (1830; tab. 115)
P00594649 (on same sheet as P00594821)			C – 66			fl.	isolectotype of <i>L. glabra</i>
P00594822	<i>B. glabra</i>		C – 66	C1 – 66	Prov. de Minas Geraes	fl. & imm. fr.	isolectotype of <i>L. glabra</i>
P00594823	<i>B. glabra</i>		D – 122	none	none	fl.	lectoparatype of <i>L. glabra</i>
P00594824		<i>B. glabra</i>	RHS & centre: none LHS: D – 122	1289 in pencil	none	3 fragm.: RHS: fl. + buds; centre: fr. LHS: fl.	RHS: isolectotype of <i>L. glabra</i> ; centre: isolectotype of <i>L. glabra</i> ; LHS: lectoparatype of <i>L. glabra</i> , matches P00594823
MPU011042	<i>B. speciosa</i>		none; "Penha" not legible	none	Brésil	large bud fl.	isolectotype of <i>L. speciosa</i>
P00594825	<i>B. speciosa</i>			none	Prov. de Minas Geraes	fl.	lectotype of <i>L. speciosa</i> ; basis of Cambessèdes (1830; tab. 117)
P00594826	<i>B. speciosa</i>		none	none	none	large bud fl. & fl.	isolectotype of <i>L. speciosa</i>
K000486108		<i>B. tomentosa</i>	none	B – 2073	Prov. des Mines	fragm. 1 & 2; bud fl.	isolectotype of <i>L. tomentosa</i>
MPU011043	<i>B. tomentosa</i>		2073	none	Brésil	fragm. 1: fl. fragm. 2: fr.	lectotype of <i>L. tomentosa</i> ; basis for Cambessèdes (1830; tab. 116)



Table 1. (continued)

	<i>B. tomentosa</i>	C – 342bis	BI – 2073	Prov. de Minas Geraes	fr.	lectoparatype of <i>L. tomentosa</i>
P00594813				Geraes		lectoparatype of <i>L. tomentosa</i>
P00594814	<i>B. tomentosa</i>	2073	B – 2073	Prov. de Minas Geb. [sic]	fragm. 1: bud fl. fragm. 2: fl.	isolectotype of <i>L. tomentosa</i>
P00594815	<i>B. tomentosa</i>	107	BI – 107	Prov. de Minas Geraes	imm. fr.	lectoparatype of <i>L. tomentosa</i>
P00594816	<i>B. tomentosa</i>	C – 343	C2 – 1204	Prov. de Saint Pauli	fr.	lectoparatype of <i>L. tomentosa</i>
P00594817	<i>B. tomentosa</i>	1204bis	none	none	fl.	lectoparatype of <i>L. tomentosa</i>
upper fragm. P00594817		C – 342			fr.	lectoparatype of <i>L. tomentosa</i>
lower fragm. P05616957	<i>Belangera</i>	none	C2 – 1204bis	Prov. de Saint-Paul	bud fl.	possibly a lectoparatype of <i>L. tomentosa</i> . “2/2”
P05616958	<i>Belangera</i>	none	C2 – 1204	Prov. de Saint Pauli	fl.	possibly a lectoparatype of <i>L. tomentosa</i> . “1/2”
P05616935	<i>Belangera</i>	none	none	Bresil	st.	sapling foliage, species unknown. “non décrite dans la flore”
P05616955	<i>Belangera</i>	735	none	Bresil	st.	sapling foliage of <i>L. ullei</i> . “non décrit [sic] dans la flore”

17623, Brazil, Minas Gerais, Pico de Itabira de Campo, [21 Dec. 1888], B – image! [B109009678] (fl.); isolectotypes: C – image! [C10009982]; K! [K000486111]; P ×2! [P00697280, P00697281]; additional isolectotype listed by Zickel & Leitão (1993) (as an isotype): R.

**NOTES.** In the protologue of *Belangera grandistipularis*, Taubert (1890) cited the type material as “Habitat in Brasilia loco non indicato : Glaziou n. 17623”. However, two sheets at P, as well as Glaziou (1905 – 1913), give the locality for this collection as “Pico d’Itabira do Campo, Minas”. Two peaks with the name Pico do Itabira (at 19°35’S 43°15’W and 20°14’S 43°52’W) are near the town of Itabira (19°37’S 43°13’S) in the State of Minas Gerais but I have been unable to find a locality of Itabira de Campo.

The French botanist and traveller Auguste François Marie Glaziou (1828 – 1906) collected in Brazil between 1861 and the mid 1890s (*Glaziou Virtual Herbarium online*; Stafleu & Cowan 1976). In addition to the collections he made himself, it is known that he acquired material from other collectors and distributed it with his own labels and numbers, and that sometimes he also altered locality data (see Prance 1971; Wurdack 1970).

Among the specimens listed under *Lamanonia grandistipularis* by Zickel & Leitão (1993) is “Minas Gerais, Pico D’Itabira do Campo, 20 – XII – 1988 [sic], fl., Schwacke, (R 63041)”, although the sheet was determined by Zickel in 1989 as *L. ternata*, and the date of collection is likely to be 1888. The locality is the same as that of the type of *L. grandistipularis*, and Prance (1971) stated that “much Schwacke material was pirated by Glaziou”. While it is possible that the type of *L. grandistipularis* might have been collected by Schwacke and relabelled by Glaziou, *Schwacke* R 63041 represents a separate collection that does not closely resemble *Glaziou* 17623. Zickel & Leitão (1993) also cited *Saint-Hilaire* 1249 (LE) under the name *L. grandistipularis*, which was said to be from Rio de Janeiro. This number does not correspond to that on any of the Saint-Hilaire sheets at P or MPU and I have not seen the specimen.

*Lamanonia grandistipularis* was an accepted species in Zickel & Leitão’s treatment of 1993, but it is now a synonym of *L. speciosa* (see below under E).

### 9. *Lamanonia speciosa* (Cambess.) L. B. Sm. (Smith 1958: 283).

Basionym: *Belangera speciosa* Cambess. (Cambessèdes 28 Nov. 1829: 4). Lectotype (selected here): *A. de Saint-Hilaire* s.n., Brazil, Minas Gerais, [Minas Novas], P! [P00594825] (fl.); isolectotypes: MPU –

image! [MPU011042] (“Penha”, buds); P! [P00594826] (s.loc., buds & fl.).

**NOTES.** In the protologue of *Belangera speciosa*, Cambessèdes (1829) mentioned ovate-elliptic, acute leaflets with glabrous undersides and gave the locality as “Minas Novas”. In Cambessèdes (1830), this was expanded to “In pascuis prope pagum Nossa Sñra da Penha in parte provinciae Minas Geraës dictâ Minas Novas à fidelissimo famulo Laruotte lecta”. (In pasture near the district of Nossa Sñra da Penha, in part of the province of Minas Gerais called Minas Novas ...). “Penha” is written on a small label attached to one of the fragments on sheet MPU011042. Minas Novas (17°15'S 42°36'W) is just south of the Rio Jequitinhonha and according to Herter & Rambo (1953), Saint-Hilaire collected there in 1817. The three sheets cited here as type material represent all the Saint-Hilaire material that I have seen with the name *B. speciosa* and all appear to be from the same gathering (Table 1). The lectotype (P00594825) is most probably the basis for tab. 117 in Cambessèdes (1830).

Zickel & Leitão (1993) treated *Lamanonia speciosa* as a synonym of *L. ternata*; however, the type of *L. speciosa* is conspecific with that of *L. grandistipularis* and has priority over the latter name (see below under E).

**10. *Lamanonia ternata* Vell.** (Vellozo dated 1825, published 7 Sept. – 28 Nov. 1829: 228). Lectotype (selected here): Brazil, [Rio de Janeiro], habitat silvis Regii Praedii Sanctae Crucis. Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no. mss1198654\_107] [image!] and subsequently published in Vellozo, *Fl. Flumin. Icones* 5: tab. 104 (dated 1827, published 29 Oct. 1831).

**NOTES.** The protologue did not mention a collection number but gave the habitat and locality: “Habitat silvis Regii Praedii Sanctae Crucis” (Grows in woods of the region of the farm of the Sacred Cross). According to Lima (1995), this is now in the neighbourhood of Santa Cruz in the city of Rio de Janeiro.

As no herbarium specimen of *Lamanonia ternata* collected by Vellozo is known to exist (see above), the illustration prepared to accompany the text is designated as the lectotype. Several recent publications, including Knapp *et al.* (2015), Moraes (2005), Pastore (2013) and Pellegrini *et al.* (2015), have lectotypified Vellozo names in other families. With the exception of Pastore (2013), they have all stated that the lectotypes are the original parchment plates held in the Biblioteca Nacional, Rio de Janeiro (<https://www.bn.br/>) and in some cases they overturned previous lectotypifications based on the published versions of these plates. My

lectotypification of *L. ternata* follows the format they have established.

Zickel & Leitão (1993) treated *Lamanonia ternata* as a widespread species that has numerous synonyms and varies in the number of leaflets (three or five) and the amount of indumentum on the foliage (glabrous to tomentose). Because the illustration that is now the lectotype is highly stylised, it would be useful to designate an epitype to fix the usage of this name; however, this should be done as part of a wider study of infraspecific variation within *L. ternata*, which is beyond the scope of this paper.

**11. *Lamanonia tomentosa* (Cambess.) Kuntze (1891: 227).**

Basionym: *Belangera tomentosa* Cambess. (Cambessèdes 28 Nov. 1829: 4). Lectotype (selected here): A. de Saint-Hilaire B – 2073, Brazil, MPU – image! [MPU011043] (fl. & fr.); isolectotypes: K! [K000486108] (B – 2073, fl. buds); P! [P00594814] (B – 2073, fl. & fl. buds). (Catalogue number given as B1 in SHVH.)

**NOTES.** In the protologue of *Belangera tomentosa*, Cambessèdes (1829) mentioned oblong, acuminate leaflets with the lower surface pubescent-tomentose, and white, tomentose fruits. The collection locality was given as “Prov. S. Pauli, Minas Geraës”.

Saint-Hilaire’s material of *Belangera tomentosa* comprises several collections and some of the label data are contradictory (Table 1). Ideally, besides having tomentose indumentum on the undersurface of the leaflets, the lectotype should have fruits, indicate the locality of Saint Paul and have a label in Cambessèdes’s handwriting, but none of the sheets fulfils all of these criteria.

Labels on three sheets listed in Table 1 mention the locality Saint Paul: P00594816 has mature fruits but the numbers on the sheet and fragment labels do not correspond, and neither P05616957 nor P05616858 (C2 – 1204<sup>bis</sup> and 1204 respectively) was labelled *Belangera tomentosa* by Cambessèdes. The upper fragment on sheet P00594817 has the same collection number (1204<sup>bis</sup>) as one of the preceding sheets, suggesting it also came from Saint Paul, whereas the lower fragment on this sheet (C – 342) has dehisced fruits and leaves that are a good match with those of P00594813, in which again, the number on the fragment (C – 342<sup>bis</sup>) does not correspond to that on the sheet label (B1 – 2073). Of the four remaining sheets, MPU011043 (2073) (lectotype) appears to be the basis for tab. 116 in Cambessèdes (1830), and K000486108 (B – 2073) and P00594814 (2073) almost certainly belong to the same gathering although they lack fruits. P00594815 (B1 – 107) is the only sheet with immature fruits.

Zickel & Leitão (1993) placed *Lamanonia tomentosa* in the synonymy of *L. ternata*.

**12. *Lamanonia ulei*** (Engl.) L. B. Sm. (Smith 1958: 283). Basionym: *Belangera ulei* Engl. (Engler dated 1930, published 1928: 236). Lectotype (selected here): *E. Ule* Herb. Brasil. 4551 [cited in protologue as 4581], Brazil, Prov. Rio de Janeiro, Pedra do Cônico bei Nova Friburgo, 1300 m, 17 Jan. 1898, B – image! [B109009682] (fl.); isolectotype: HBG – image! [HBG506927].

**NOTES.** Although the name *Belangera ulei* was said by Zickel & Leitão (1993) to be a *nomen nudum*, the synoptic key in Engler (1928) provided diagnostic information for this species, allowing it to be distinguished from other members of the genus, and so the name was validly published. The protologue gave the collection locality as stated above but did not cite a particular sheet of *Ule* 4551 as the holotype, and so a lectotype is designated here.

The date of publication of Engler's account of the Cunoniaceae in *Die Natürlichen Pflanzenfamilien* was given by Stafleu & Cowan (1976) as 1930, which is the date that appears on the title page of the volume, and Stafleu & Mennega (2000) provided no further information. However, evidence from the volume itself (Engler 1928: 229), from the annual report of Berlin Botanical Garden and Museum (Anon 1929) and from Diels (1931: lvi) suggests that the treatment of Cunoniaceae was issued as a preprint in 1928. No copies of this were located in the libraries of B, G, K, L or P in 1999 (N. Kilian pers. comm.; H. M. Burdet pers. comm.; pers. obs.) and thus we have no firm evidence that this preprint was distributed in 1928 in a manner to constitute valid publication. However, the date 1928 is accepted here in the absence of proof establishing some other date of publication (following ICN, McNeill *et al.* 2012: Art. 31.1). The acceptance of 1928 in preference to 1930 has no nomenclatural implications in *Lamanonia*.

*Lamanonia ulei* was included in the synonymy of *L. ternata* by Zickel & Leitão (1993) but was re-instated as an accepted taxon in Hopkins *et al.* (2013) because of the distinctive greyish or fawn indumentum on the abaxial surface of the leaflets. Because no detailed account of this species has ever been published, a description and illustration are given below (see F).

**13. *Polystemon pentaphyllus*** D. Don (1830: 95). Lectotype (selected here): *Sello(w)* s.n., Brazil (buds): G – image! [G00105573 (6864/44)]; isolectotypes: BM!; G – image! [G00105572 (6864/48)] (buds). The following are probably also isolectotypes: BR ×2 –

images! [BR0000013548490, BR0000013521912]; P! [P05519326].

**NOTES.** The two sheets at G labelled *Polystemon pentaphyllus* (G00105573, G00105572) both have a mixture of 3- and 5-foliolate, apparently glabrous leaves and inflorescences in bud, and are sufficiently similar to belong to a single gathering. Both bear a label indicating the name *Belangera glabra* in the same writing as *P. pentaphyllus* and the lectotype also gives the name “*B. speciosa* Camb.”. None of the labels on either sheet appears to mention growing in a vineyard, as mentioned by Don (1830: 95, “*Arbor habitu Viticis*”), although parts of the principal label for Herb. Delessert on the lectotype are now illegible. The sheet cited by Zickel & Leitão (1993) as an isotype (with number 6864/44) is now designated as the lectotype. The two sheets at BR have similar characters and are therefore likely to be isolectotypes; both are labelled *B. speciosa*.

The name *Polystemon pentaphyllus* was regarded as a synonym of *Belangera speciosa* by Don (1830), Engler (1871) and Pampanini (1905) (but see below under E), and as a synonym of *Lamanonia ternata* by Kuntze (1891), Leite (1983) and Zickel & Leitão (1993).

**14. *Polystemon triphyllus*** D. Don (1830: 95). Lectotype (selected here): *Sello(w)* s.n., Brazil: G – image! [G00105570 (6864/67)] (fr.); isolectotype: *Sello(w)* 1411, G – image! [G00105571 (6864/68)] (fl. & y. fr.).

**NOTES.** The two sheets at G labelled *Polystemon triphyllus* have 3-foliolate leaves; G00105570 has almost mature fruits and G00105571 has old flowers and young fruits. The leaves are sufficiently similar for them to be part of the same gathering. The sheet cited by Zickel & Leitão (1993) as an isotype (with number 6864/67) is now the lectotype. One of the labels for Herb. Delessert on sheet G00105571 has the name “*Belangera tomentosa* Cambess.” in the same hand as the name *Polystemon triphyllus*, and a small label with the number 1411 has been stuck onto this label.

*Polystemon triphyllus* was equated with *Belangera tomentosa* by Don (1830), Engler (1871) and Pampanini (1905), and with *Lamanonia ternata* by Zickel & Leitão (1993).

Among the Sellow collections of *Lamanonia* that I have seen are: *Sello* 453 (fl.) (K! [K000761377], P! [P05537945]), originally labelled *Belangera tomentosa*; *Sello* 5087 (buds) (P! [P05519305]), *B. cuneata*; *Sello* s.n. (fr.) (P! [P05519339]), *B. glabra*; *Sello* s.n. (fl.) (P! [P05519340]), *B. glabra*; *Sello(w)* s.n. (buds) (K! K000761379), with no original determination. None of these appears to belong to the same gathering as either of collections given above as the types of *Polystemon pentaphyllus* or *P. triphyllus*.

### C. Validly published infraspecific names

**15. *Belangera glabra* Cambess. var. *intermedia* Pamp.** (Pampanini 1905: 54). Lectotype (selected here): *Martius* Herb. Flora Brasiliensis 93, Brazil, [Matto Grosso, Porto do Corumbá]: G – image! [G00229817] (fl.); isolectotypes: BR – image! [BR0000013327293] (*Martius* 93, also labelled No. 375); E – image! [E00319710]; K ×2! [K000486107, K000761378]; L – image! [L0019923]; NY – image! [NY00918700]; P! [P00697282]; additional isolectotype cited by Zickel & Leitão (1993) (as an isotype): LE.

**NOTES.** In the protologue, Pampanini (1905) cited two collections: “1. – « Brésil, St. Paul [Lund] » (D C). 2. – sine loco – « ex Martii Herb. Florae Brasiliensis, n. 93 » (D C).” He took the epithet *intermedia* from *Martius* (1837), whose name *Belangera intermedia* was invalidly published (see below). The locality details for the lectotype are taken from *Martius* (1837).

Zickel & Leitão (1993) included this name in the synonymy of *Lamanonia ternata*.

**16. *Belangera speciosa* Cambess. forma *pubescens* Pamp.** (Pampanini 1905: 56). Type: *Glaziou* 2495, Brazil, Prov. Rio de Janeiro. Holotype: FI – image! [FI012926] (fl. buds); isotypes: BR ×3 – images! [BR0000013505240, BR0000013505257, BR0000013505264]; K! [K000761376] (fl.); NY – image! [NY00533064] (fl. buds); P ×4 – images! [P05537925, P05537929, P05616959, P05616961]; additional isotypes (fide Zickel & Leitão 1993): MO, R.

**NOTES.** In the protologue, Pampanini (1905) cited a single collection as follows: “1. – Province of Rio de Janeiro [A. Glaziou, n. 2495] » – ex Mus. Kew. – sub *B. tomentosa* – (C-I)”. “C-I” indicates the Centrale Italiano Herbarium at Florence. Because only one sheet was cited, it is the holotype, assuming that no further sheets of this collection exist at F. The locality indicated on the specimen label is “Rio de Janeiro” and the material consists of leaves with racemes of flowers in bud.

Numerous other sheets of *Glaziou* 2495 have been located, at BR, K, NY and P, and all have either flowers in bud, or at anthesis, or both, but it is possible that they represent more than one collection. Those that resemble the holotype most closely have been designated as isotypes, including the sheet at K, which I previously indicated erroneously (on the sheet) as the holotype.

The localities stated on the labels of sheets of *Glaziou* 2495 are either “Brésil”, “Rio de Janeiro” or “Corcovado, et Serra dos Orgãos (Rio Jan.)” (P05616959 only), and the latter locality was given for this number and two others in *Glaziou* (1905 – 1913). One sheet (P05616961) that may be part of the same material as the holotype has the locality

“Chemin des Macacos, Province de R. J.”, as do two others (P05537926, P05537927), although the latter possibly do not belong to the same gathering as the sheet at FI and so they have been omitted from the list of isotypes.

Engler determined the three sheets at BR as belonging to *Belangera glabra*. Zickel & Leitão (1993) put *B. speciosa* forma *pubescens* into the synonymy of *Lamanonia ternata*.

**17. *Belangera tomentosa* Cambess. var. *calvata* Chodat & Hassl.** (Chodat & Hassler 1903: 540). Lectotype (selected here): *Hassler* 6583a, Paraguay, Upper course of the river Y-acá, 1900, G – image! [G00229812] (fl.); isolectotypes: B – image! [B109009675]; BM! [BM000953539]; K! [K000486109]; G ×9 – images! [G00229810, G00229811, G00229813, 7901/19, 7901/20, 7901/21, 7901/26, 7901/27, 7901/29]; MICH – image! [MICH1192175]; MO – image! [MO-247934]; MPU – image! [MPU011797]; P ×3! [P03322143, P03322152, P05537934]; S – image! [S08-7445 (no barcode)]; UC [UC940752]; US – image! [US00036514].

**NOTES.** The protologue referred to two collections: “ad marginem fluminis Y-aca in campo rupestre pr. Chololo, Dec., n. 6583a florifera et 6583b. Jan. fructifera”. The sheet at K of *Hassler* 6583a gives a variant of this locality (“In regione cursus superioris flumis Y-acá”). Numerous duplicates of both syntypes exist and according to Stafleu & Cowan (1979), Émile Hassler’s (1864 – 1937) own herbarium from Paraguay is at G, with other sets at K, P, S and W (plus B†). Sheets of *Hassler* 6583b are now lectoparatypes.

*Belangera tomentosa* var. *calvata* was cited as a synonym of *Lamanonia cuneata* by Zickel & Leitão (1993). Stearn (1973) gave the meaning of “calvata” as hairless, glabrous or bald.

### D. Invalid names

**18. *Belangera hirta* Glaz.** (*Glaziou* July 1906: 199), *nom. subnud.* Specimen cited: *Glaziou* 21119a, Brazil, Goyaz, Corrego do Brejo, 9 May 1895, G – image! [G00229818] (fl.); P ×2! [P05537930, P05537935]; R – image! [R000008838]).

**NOTES.** After the name “*B. hirta* Glaz.”, *Glaziou* (1906) stated “sp. n.? [...] ined.” and for a description, wrote only “Grand arbre, fl. blanchâtres”. As this is inadequate as a description or diagnosis, the name is invalid. He referred to a single collection: “in herb. Berol. [...] Corrego do Brejo, GOYAZ, n° 21119 a”. At B, no material of this number has been found (Robert Vogt, pers. comm. 11 May 2016), although a sheet of *Glaziou* 21119 is specimen of *Weinmannia*. The sheet at

G (G00229818) was determined as *Belangera tomentosa* by Pampanini in 1904 and as *Lamanonia ternata* by Zickel in 1989. The two sheets at P are both labelled “*Belangera hirta* Glaz. sp. nov.”.

Glaziou’s account of his collections (Glaziou 1905 – 1913) was published in vol. 3 of *Mém. Soc. Bot. France*, in several parts, labelled a, b and c, but all are part of a single work. The fascicle in which *Belangera hirta* appeared has the date “juillet 1906” printed on the last page (p. 200), although the front cover bears the date “1907”, with “22 Février 1908” in small print by the bottom margin. Stafleu & Cowan (1976) gave the date of publication of this fascicle as July 1906.

**19. *Belangera intermedia* Mart.** (Martius 1837: 95), *nom. subnud.* Specimen cited: Martius 93, Porto do Corumbá, prov. Mato Grosso, fl. Aug. *Oreas*. (See *Belangera glabra* var. *intermedia* for further details).

**NOTES.** The collection cited by Martius (1837) is now the type of *Lamanonia glabra* var. *intermedia* Pamp. “*Oreas*” refers to the plant growing in the mountains (Stearn 1973).

**20. *Belangera riedelina* Casar. ex Engl.** (Engler 1870: 591), *nom. nud., pro syn. sub Belangera speciosa*. Specimen cited: none.

**NOTES.** As Giovanni Casaretto’s name was simply cited by Engler (1870, 1871) as a synonym of *Belangera speciosa*, the name is invalid.

### E. The identity of *Lamanonia speciosa*

As mentioned above, in the most recent revision of this genus, Zickel & Leitão (1993) placed the name *Lamanonia speciosa* (and its basionym *Belangera speciosa*) in the synonymy of *L. ternata*, and treated *L. grandistipularis* as a separate taxon. However, type specimens of *L. speciosa* (*Saint-Hilaire* s.n.) and *L. grandistipularis* (*Glaziou* 17623) compared at P are strikingly similar and clearly conspecific. The type material of both names has large stipules that are persistent at several nodes on fertile stems (in the remaining taxa the stipules are usually smaller and generally caducous on fertile stems), as well as 5-foliate leaves that have glabrous, rather coriaceous leaflets with sharply toothed margins. The leaflets in both types are of similar size and shape and most are slightly bullate, with the intervenium raised on the upper surface between the impressed secondary veins (in other species the intervenium is  $\pm$  flat). Types of both names have axillary racemes that exceed the leaves, although the inflorescences of *Glaziou* 17623 are longer than those

in the *Saint-Hilaire* material. The similarity between the types is illustrated in Fig. 2, which shows the drawing of *L. speciosa* from Cambessèdes (1830, as *B. speciosa*), based on the specimen that is now the lectotype of that name, next to a sheet of *Glaziou* 17623. (Note also the similarity between Fig. 2A and the drawing of *L. grandistipularis* in Pirani & de Castro 2011: 43, Fig. 1A).

The types of *Lamanonia speciosa* and *L. grandistipularis* belong to a species that is distinct from the remainder of the material that Zickel & Leitão (1993) called *L. ternata* (which includes the types of *L. glabra* and *L. tomentosa*, amongst others). According to these authors, although *L. ternata* and *L. grandistipularis* both have leaves with either three or five leaflets, in *L. grandistipularis* they are coriaceous, shiny and glabrous above and puberulous beneath, and in *L. ternata* they are chartaceous, opaque, glabrous to puberulous above, and glabrous, puberulous or tomentose beneath. In their key, Zickel & Leitão distinguished *L. grandistipularis* principally by its stipules, which were said to be large (c.  $1.5 \times 1$  cm), persistent and semi-cordate, where as in *L. ternata* (and others) they are smaller (c.  $0.4 \times 0.3$  cm), caducous or persistent, falcate and chartaceous. (However, their description of *L. ternata* gave the size range of the stipules as  $0.8 - 1.4 \times 0.2 - 0.7$  cm, and they thus  $\pm$  accommodated the illustration of *B. speciosa* from Cambessèdes 1830). *L. grandistipularis* is a low shrub or small tree 2 – 6 m high (the remaining taxa in the genus are generally but not always larger), and it is known principally from the Espinhaço Range in Minas Gerais and Bahia, where it grows in campo rupestre (savanna in rocky, mountainous areas) and associated cerrado (savanna) (Pirani & de Castro 2011; Zickel & Leitão 1993). *L. ternata* was said to be more widely distributed in southern, central and eastern Brazil, where its distribution overlaps with that of *L. grandistipularis*, and it occurs in a variety of wooded habitats. As noted by Zickel & Leitão (1993), juvenile material of *L. ternata* has more sharply toothed leaflets and larger, more persistent stipules than the adult foliage, and thus bears a closer resemblance to *L. grandistipularis*.

Unfortunately, the information available regarding the habitat and elevation for the type collections of *Lamanonia grandistipularis* and *L. speciosa* is inadequate to show whether either was collected in campo rupestre, and even the locality of the type of *L. grandistipularis* is not entirely certain because of the labelling problems associated with Glaziou. As far as we know, *Glaziou* 17623 came from near Itabira in central Minas Gerais but no habitat is given on the label. The habitat for the type of *L. speciosa*, from Minas Novas to the north-east of Itabira, also in Minas Gerais, is stated to be pasture, which might indicate cattle pasture or cerrado/campo rupestre.



**Fig. 2.** Comparison of *Lamanonia speciosa* and *L. grandistipularis*. A drawing of *Belangera speciosa* Cambess., the basionym of *L. speciosa* (Cambess.) L. B. Sm., from Cambessèdes (1830: tab. 117), based on Saint-Hilaire s.n. [P00594825]; B image of Glaziou 17623, isolectotype of *L. grandistipularis* (Taub.) Taub. [<http://specimens.kew.org/herbarium/K000486111>] reproduced from The Herbarium Catalogue, with permission of the Trustees of the Royal Botanic Gardens, Kew.

The name *Lamanonia* (or *Belangera*) *speciosa* has been much mis-interpreted, almost since first publication. Although “*Belangera glabra*” is written on the lectotype of *Polystemon pentaphyllus*, in print, Don (1830) incorrectly equated *P. pentaphyllus* with *B. speciosa*, perhaps because the type material of both names has 5-foliolate, glabrous or almost glabrous leaves. Don made no mention of the stipules of *P. pentaphyllus*; Cambessèdes (1829) had not mentioned these structures in the protologue of *B. speciosa*, describing them only in 1830, when he said that they were oblong, falcate and 8 – 10 lines long (in contrast to the stipules of his other three species that were all between 3 and 4 lines long).

Following on from Don, some material of *Lamanonia* with glabrous leaves has been identified as *L.* (or *Belangera*) *speciosa*, irrespective of the size and persistence of the stipules and the thickness of the leaflets. Engler (1871), Kuntze (1891) and Pampanini (1905) all (wrongly) treated *Lamanonia ternata* as a synonym of *B. speciosa*, and conversely, Leite (1983) included *B. speciosa* in the synonymy of *L. ternata*. In

addition, *L.* (or *B.*) *speciosa* has often been used on specimen labels and in flora accounts (including Biloni 1965; Cuatrecasas & Smith 1971; Hatschbach & Nakamura 1976) for material that was later placed in *L. ternata* by Zickel & Leitão (1993). One dissenting voice was Smith (1958), who treated *L. speciosa* and *L. ternata* as distinct species; however, he differentiated between them only by the number of leaflets, which alone, is insufficient to distinguish two taxa. Much of the material in herbaria that has at some time been labelled as *L.* (or *B.*) *speciosa* is, in fact, closer to the type of *B. glabra*.

In contrast to the situation regarding *Lamanonia* (or *Belangera*) *speciosa*, the name *L.* (or *B.*) *grandistipularis* has generally been regarded as referring to a distinct species (e.g. Engler 1928), although Leite (1983) put it into synonymy under *L. ternata* before Zickel & Leitão (1993) reinstated it as a separate taxon.

In conclusion, the names *Lamanonia speciosa* and *Belangera speciosa* must be removed from the synonymy of *L. ternata* and the epithet *speciosa* has priority

over *grandistipularis* for the shrub or small tree from campo rupestre that has a combination of rather coriaceous, sharply toothed leaflets and comparatively large stipules that are generally persistent on fertile stems.

**Lamanonia speciosa** (*Cambess.*) *L. B. Sm.* (Smith 1958: 283).

Basionym: *Belangera speciosa* Cambess. (*Cambessèdes* 1829: 4). Type: see above.

Synonyms: *Belangera grandistipularis* Taub. (Taubert 1890: 17), **synon. nov.** *Lamanonia grandistipularis* (Taub.) Taub. (Taubert 1892: 16), **synon. nov.** Type: see above.

#### F. *Lamanonia ulei*

**Lamanonia ulei** (*Engl.*) *L. B. Sm.* (Smith 1958: 283).

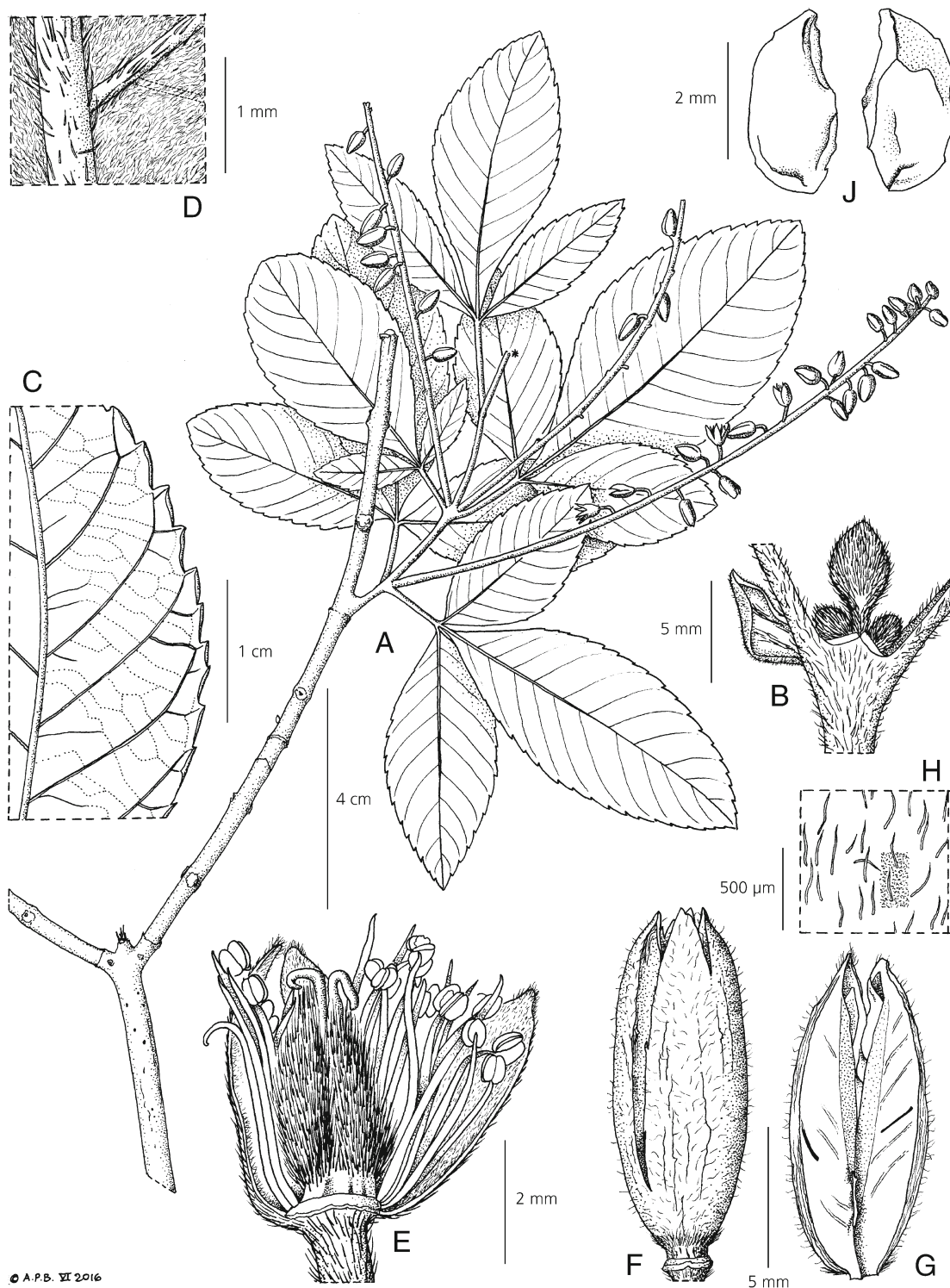
Basionym: *Belangera ulei* Engl. (*Engler* 1928: 236). Type: see above.

*Trelets or small trees*, 4 – 10 m tall. Indumentum on leaf-bearing twigs, petioles and inflorescence axes fawn, composed of two layers, the upper layer hirsute to tomentose (hairs c. 1 mm long), over a lower dense layer of minute hairs. Apical bud of shoot circular in outline and swollen, 3 – 4 mm diam., densely hirsute, hairs fawn. *Stipules* 4 per node, free, rhombic-elliptic, 6 × 3 mm, with the adaxial surface bearing long and short hairs, caducous, leaving scars 1 mm long. *Leaves* opposite and decussate, each 3-foliolate, the median leaflet larger than the laterals; in fertile material: petioles (1.6 –) 2 – 3 cm long; median leaflets with a short petiolule 3 – 6 mm long, the blade ovate, (4.6 –) 5 – 9 × (2 –) 2.3 – 4 cm, cuneate at the base, usually acute or obtuse at the apex, tending to be conduplicate distally; lateral leaflets ± sessile and symmetrical at the base, the blades ovate, (3.3 –) 4 – 7 × (1.1 –) 1.7 – 3.6 cm; margins serrate; upper surface of leaflets glabrous except along the midrib towards the base of the blade, with midrib and secondary veins impressed; lower surface of leaflets with midrib and secondary veins prominent, clearly visible and appearing darker than the intervenium, bearing fawn hairs to c. 0.5 mm long, glabrescent; intervenium covered by a dense, almost felty indumentum of minute, dull white, fawn or yellowish grey hairs; tertiary veins less clearly visible than the secondary veins to almost obscure, covered by minute hairs; secondary veins pinnate, 12 – 16 on either side of the midrib in median leaflets, each one ending at the sinus of a tooth; tertiary veins somewhat ladder-like. Leaves in sterile material larger, median leaflets to 14 cm long. *Inflorescences* axillary, racemose; axis 6.5 – 12.5 cm long (including a basal peduncle of 1.5 – 4 cm), projecting beyond the subtending leaves. *Flowers* well

spaced along the axis, white or cream at anthesis; pedicels 2 – 3 mm long (– 5 mm in fruit), buds ovoid, 4 – 5 mm long, pedicels and buds covered by dense, fawn indumentum; calyx lobes (4) 6, triangular, 4.5 × 1.5 mm, coriaceous, outer surface with faint longitudinal ridges, inner surface hairy; corolla absent; stamens numerous, in > 1 series; filaments c. 4 mm long but not all of equal length, narrowly cylindrical-subulate, hairy in bud especially towards the base; anthers 0.5 × 0.5 mm, versatile, not apiculate; gynoecium ovoid, 4 × 3 mm, densely golden-hairy except around the base where nectar is probably secreted, comprising 2 locules, each containing numerous ovules in two rows; styles 2 per ovary, c. 1.5 mm long, glabrous. *Capsules* numerous per infructescence, dry, woody, brown, narrowly ovoid to ± cylindrical, 10 – 13 mm long (including 2 apical beaks 1 mm long) × 4 – 5 mm diam., with a constriction at the base (former nectar-secreting region), sitting above a wider annulus bearing the calyx scars, narrowing towards the pointed apex, dehiscent almost to the base into 2 valves, the valves scarcely separating; except for the glabrous constricted region, outer surface of valves bearing fawn indumentum in two layers, the upper one pubescent (hairs to 0.5 mm long), in the lower layer hairs minute, vermiform; inner surface of each half-capsule glabrous and bony, deeply incised longitudinally down the mid-line dividing each locule into 2 sub-locules. *Seeds* numerous (c. 9 per half-locule, i.e. 36 per capsule), densely packed and imbricate, 3.5 – 5 × 1.8 – 2 mm, glabrous, orange-red (when dry), not all identical in size and shape, thin and either flat or sometimes with a raised lateral auricle, each with a very narrow, marginal wing. Fig. 3.

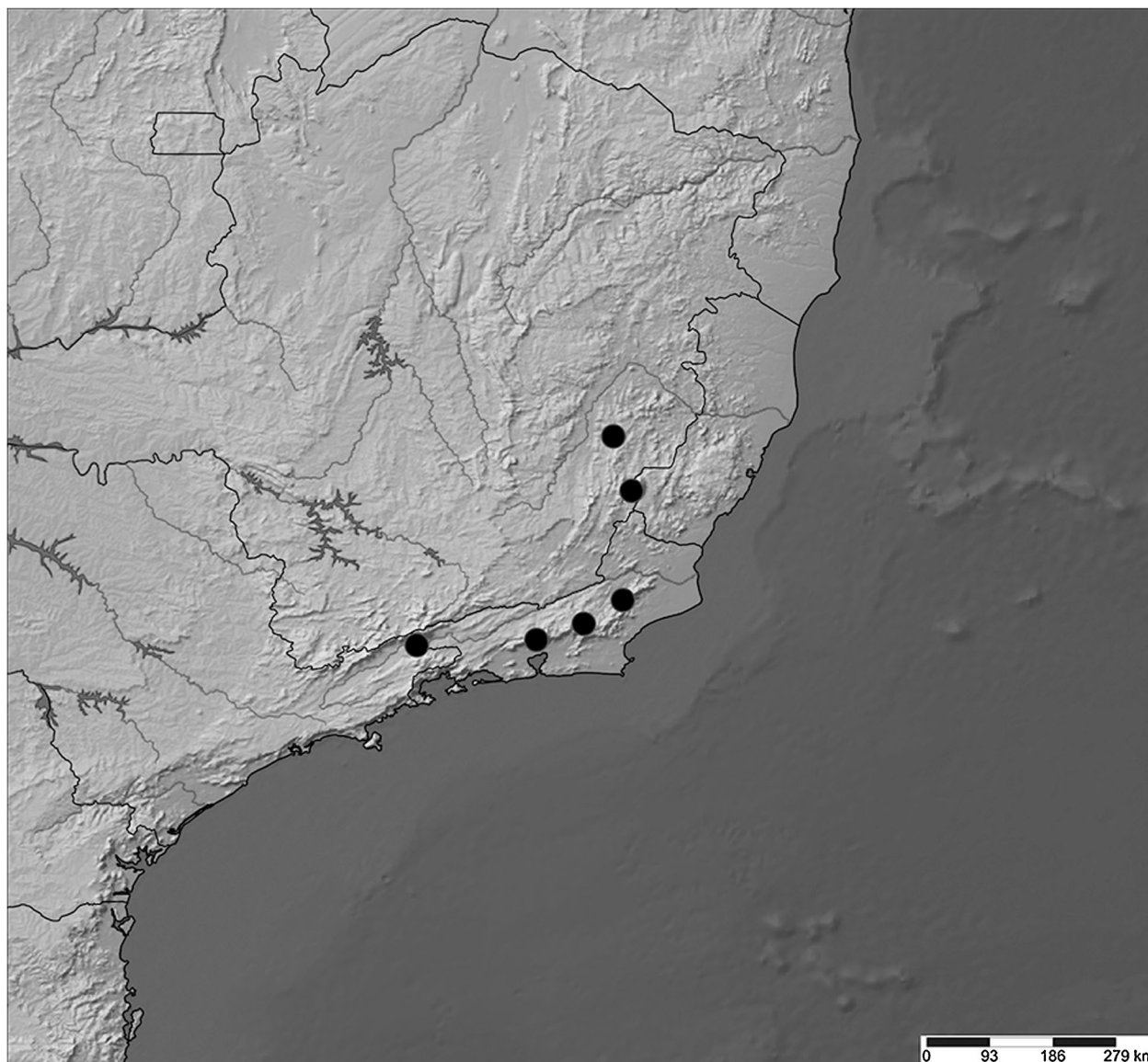
**DISTRIBUTION.** South-eastern Brazil (Map 1).

**SPECIMENS EXAMINED. BRAZIL. Minas Gerais:** Caparaó, Parque Nacional do Caparaó, próximo a Cachoeira Bonita, 1700 – 1800 m, 14 June 1991 (fl.), *G. & M. Hatschbach* 55459 & *J. M. Silva* (MBM – image! [MBM0151324]); Fazenda Silva, Alto da pedra Caratinga, 17 Sept. 1929 (fr.), *I. Kuhlmann* 7 (RB – image! [RB111079, barcode: RB00073232]). **Rio de Janeiro:** Petrópolis, A.P.A. Petrópolis, Vale das Videiras, Serra da Maria Comprida, Morro do Cuca, 1500 m, s.dat. (fr.), *M. A. Moraes* 151 & *E. Fernandes* (K!, RB – image! [RB462639, barcode: RB00593594]); Nova Friburgo (fl.), *Luis Edmundo Pães* 111 (RB – image! [RB56549, barcode: RB00073197]); Município de Santa Maria Madalena, Santa Maria Madalena, Pedra Dubois, 21°58'S 42°01'W, 900 – 1195 m, 22 Feb. 1983 (buds), *T. C. Plowman* & *H. C. de Lima* 12870 (K!; NY [NY533109]); Pedra do Cônico bei Nova Friburgo, 1300 m, Jan. 1898 (buds & fl.), *E. Ule* Herb. Bras. 4551 (B – image! [barcode: B109009682], holotype;



**Fig. 3.** *Lamanonia ulei*. A leafy shoot with inflorescences in bud, \* indicating that part of one of the most distal pair of leaves has been removed for clarity; the apical bud of the shoot is at the base of this petiole; B terminal node of a shoot showing an apical bud, a pair of axillary buds with stipular scars at their bases and one stipule remaining, and the bases of two opposite petioles; C part of the lower surface of a leaflet; D detail of C, showing the midrib and secondary vein with longish hairs, and the intervenium and tertiary veins covered by a dense, felty coat of minute hairs; E flower, lateral view, after the removal of part of the perianth and some stamens; F fruit, lateral view; G adaxial surface of one half of a fruit; H detail of the fruit wall, showing long hairs overlying a minute, vermiform indumentum on the surface; J both surfaces of a seed. (A – E from *Plowman & de Lima* 12870; F – J from *Moraes* 151). DRAWN BY ANDREW P. BROWN.





**Map 1.** The distribution of *Lamanonia ulei* in south-eastern Brazil.

HBG – image! [barcode: HBG506927], isotype). **São Paulo:** Serra da Bocaina, 1800 m, 18 May 1957 (st.), A. C. Brade s.n. (RB – image! [RB73894, barcode: RB00073182]). **S.loc.:** (st.), A. de Saint-Hilaire 735 (P! [barcode: P05616955]).

**HABITAT.** Forest, including secondary forest, at c. 1000 – 1750 m elevation.

**CONSERVATION STATUS.** The extent of occurrence (EOO) and area of occupancy (AOO) (see IUCN 2001, 2016), calculated in *GeoCAT* (online), suggest a threat status of either NT (Near Threatened) or EN (Endangered) respectively. Without more information about the distribution of this plant, its occurrence within protected areas and possible threats to its habitat, a provisional threat status of NT seems appropriate.

**NOTES.** When publishing the basionym of *Lamanonia ulei*, Engler (1928) distinguished his new species by the dense, grey, felty indumentum on the lower surface of the leaflets (“Blattchen unterseits dicht graufilzig”). This layer of small hairs is quite distinct from the pubescent to tomentose indumentum seen in some specimens of *L. ternata*, and does indeed differentiate *L. ulei* from all the remaining species in the genus. The dense arrangement of the hairs means that while the secondary veins can be seen on the lower leaf surface in *L. ulei*, the tertiary and quaternary venation are not visible.

*Lamanonia ulei* is not a common tree and I have seen material or images of only eight collections. The description given here is based primarily on

*Plowman & de Lima* 12870 and *Moraes* 151, the specimens available at K, so it is possible that a greater range in characters, such as leaf size, will be found when other collections are included. The number of stamens per flower needs to be determined from better material than is currently available to me.

The earliest of the collections listed here was made by Saint-Hilaire between 1816 and 1822. This sheet (P05616955) bears a label in the bottom left-hand corner stating “Rameau d’une Cunoniacee, sans fleurs et sans fruits, non décrite dans la flore” in Cambessèdes’s hand. No locality is indicated on the sheet other than Brazil, nor is a catalogue number given. The material appears to be from a sapling as it has much larger leaflets, longer internodes and more persistent stipules than normally seen in collections from mature plants with flowers and/or fruits.

### Index to the types of names in *Lamanonia*, *Belangera* and *Polystemon*

- Balansa* 3183 — lectotype (G) & isolectotypes of *B. paraguayensis* Pamp.  
*Balansa* 4752 — syntypes, now lectoparatypes of *B. paraguayensis* Pamp.  
*Blanchet* 3253 — lectotype (G) & isolectotypes of *B. denticulata* Moric. & *L. denticulata* (Moric.) Kuntze  
*Glaziou* 2495 — holotype (FI) & isotypes of *B. speciosa* Cambess. forma *pubescens* Pamp.  
*Glaziou* 8247 — lectotype (G) & isolectotypes of *B. chabertii* Pamp. & *L. chabertii* (Pamp.) L. B. Sm.  
*Glaziou* 17623 — lectotype (B) & isolectotypes of *B. grandistipularis* Taub. & *L. grandistipularis* (Taub.) Taub.  
*Glaziou* 21119a — specimen cited under *B. hirta*, nom. inval.  
*Hassler* 6583a — lectotype (G) & isolectotypes of *B. tomentosa* Cambess. var. *calvata* Chodat & Hassl.  
*Hassler* 6583b — syntypes, now lectoparatypes of *B. tomentosa* Cambess. var. *calvata* Chodat & Hassl.  
*Martius* Herb. Flora Brasiliensis 93 — lectotype (G) & isolectotypes of *B. glabra* Cambess. var. *intermedia* Pamp.  
*Ratter et al.* 3524 — holotype (UEC) & isotypes of *L. brasiliensis* Zickel & Leitão  
*Saint-Hilaire* (B1 -) 107 — syntype, now lectoparatype of *B. tomentosa* Cambess.  
*Saint-Hilaire* (B -) 2073 — lectotype (MPU) & isolectotypes of *B. tomentosa* Cambess. & *L. tomentosa* (Cambess.) Kuntze  
*Saint-Hilaire* C (or C1) - 66 — lectotype (MPU) & isolectotypes of *B. glabra* Cambess. & *L. speciosa* (Cambess.) Kuntze  
*Saint-Hilaire* (C1 -) 133 — lectotype (P) & isolectotypes of *B. cuneata* Cambess. & *L. cuneata* (Cambess.) Kuntze

*Saint-Hilaire* C - 342 and C - 342bis — syntypes, now lectoparatypes of *B. tomentosa* Cambess.

*Saint-Hilaire* C - 343 — syntype, now lectoparatype of *B. tomentosa* Cambess.

*Saint-Hilaire* C (or C2) - 1204bis — possibly lectoparatypes of *B. tomentosa* Cambess.

*Saint-Hilaire* D - 122 — syntype, now lectoparatype of *B. glabra* Cambess. & *L. glabra* (Cambess.) Kuntze

*Saint-Hilaire* s.n. “Penha” — lectotype (P) & isolectotypes of *B. speciosa* Cambess. & *L. glabra* (Cambess.) L. B. Sm.

*Sello(w)* s.n. — lectotype (G) & isolectotypes of *P. pentaphyllus* D. Don

*Sello(w)* s.n. — lectotype (G) & isolectotypes of *P. triphyllus* D. Don

*Ule* Herb. Bras. 4551 — lectotype (B) & isolectotype of *B. ulei* Engl. & *L. ulei* (Engl.) L. B. Sm.

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