

**A SUMMARY OF LECTOTYPES ASSOCIATED WITH
ALOYSIA PALAU (VERBENACEAE)**

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ABSTRACT

A summary of lectotypes associated with the genus *Aloysia* Palau is presented along with notes about each. Two were previously designated by other workers (*Aloysia citrodora* Palau and *Verbena triphylla* L'Her.), while 11 are designated here for the first time: *Aloysia chamaedryfolia* Cham., *Aloysia dusenii* Moldenke, *Aloysia polygalifolia* Cham., *Aloysia urticoides* Cham., *Lippia fiebrigii* Hayek, *Lippia peruviana* Turcz., *Lippia polystachya* Griseb., *Lippia montana* Brandege, *Lippia scorodonioides* var. *hypoleuca* Briq., *Lippia virgata* var. *platyphylla* Briq., and *Lippia wrightii* var. *macrostachya* Torr. Lectotypification is needed in many cases due to the destruction of material in the Berlin herbarium (B) in 1943. *Phytologia* 92(2): 199-205 (August 2, 2010).

KEY WORDS: *Aloysia*, *Lippia*, *Verbena*, Verbenaceae, lectotype

In the course of conducting taxonomic investigations into the genus *Aloysia* Palau, the need to designate lectotypes for certain associated names became apparent. A more readily accessible forum was deemed preferable to a traditional monograph for ease of citation and acquisition. Eleven lectotypes are designated here for the first time and two, previously designated by other authors, are included for the sake of completeness. The summary below includes known lectotypes, nomenclatural synonyms, and brief notes. In many cases lectotypification is needed due to the destruction of specimens at the Berlin herbarium (B) during World War Two; these are handled in the first section. The second section deals with other cases. It is the sole

aim of the author to address nomenclatural issues and no taxonomic determination is implied.

Types destroyed in Berlin in 1943

World War Two led to the destruction of much material in the herbarium of the Botanical Garden and Botanical Museum in Berlin (B), including many types. Hiepko (1987) details this history and reports the Verbenaceae types were not among the specimens that escaped destruction. Adelbert von Chamisso described several of the species of *Aloysia* here discussed and worked at B from 1819 until shortly before his death in 1838 (Hiepko 1987). While he did not designate single specimens as holotypes, like many authors of the time, it is a commonly accepted practice to designate the specimen housed at the worker's herbarium as such. This type material would have been at B and subsequently destroyed (Hiepko 1987). Thus, following sections 9.9 and 9.10 of the Code (McNeill *et al.* 2006), lectotypification is necessary for Chamisso's species, and for several others based on types destroyed at Berlin, as follows:

Aloysia chamaedryfolia Cham., *Linnaea* 7: 234. 1832. TYPE: BRAZIL. "Brasilia," without date, *F. Sellow s.n.* (LECTOTYPE [designated here]: W!; ISOLECTOTYPES: G-2!, W!).

≡ *Lippia chamaedrifolia* (Cham.) Steud., *Nomencl. Bot. ed. 2*, 2: 54. 1841.

Photographs of the destroyed type specimen from B are extant (F!, GH!, MO!, NY!) and the lectotype is selected from among the known isotypes. One of the two specimens housed at W is here designated as the lectotype based on its completeness and quality of preservation.

Aloysia dusenii Moldenke, *Phytologia* 1: 440. 1940. TYPE: BRAZIL. PARANÁ: shrubby campo at Tamandré, 4 Oct 1914, *P. Dusen 1050a* (LECTOTYPE [designated here]: S!; TYPE FRAGMENT: NY!).

Photographs of the destroyed type specimen from B are extant (LL!, NY!). The only isotype known is housed at S and is here designated as the lectotype.

Aloysia polygalifolia Cham., *Linnaea* 7: 236. 1832. TYPE: BRAZIL.

Without date or location, *F. Sellow s.n.* (LECTOTYPE [designated here]: G!).

Photographs of the destroyed type specimen from B are extant (F!, GH!, MO!, NY-2!). The only isotype known is housed at G and is here designated as the lectotype.

Aloysia urticoides Cham., *Linnaea* 7: 238. 1832. TYPE: BRAZIL.

Without specific locality, without date, *F. Sellow s.n.* (LECTOTYPE [designated here]: G!; ISOLECTOTYPES: G!, GH!, NY!, US!).

≡ *Lippia urticoides* (Cham.) Steud., *Nomencl. Bot.* ed. 2, 2: 54. 1841.

This case parallels the previous and a lectotype is selected from among the known isotypes. One of the two specimens housed at G is here designated as the lectotype based on its completeness and quality of preservation.

Lippia fiebrigii Hayek, *Bot. Jahrb. Syst.* 42: 165. 1908. TYPE:

BOLIVIA. TARIJA: Cercado Tarija, 4 Feb 1904, *K. Fiebrig 3036* (LECTOTYPE [designated here]: US!; ISOLECTOTYPES: BM!, F!, G-2!, GH-2!, GOET, IBI, S-2!, W!; TYPE FRAGMENT: F!, NY!; PHOTO OF ISOLECTOTYPE [IBI]: NY!).

≡ *Aloysia fiebrigii* (Hayek) Moldenke, *Rev. Sudamer. Bot.* 4: 15. 1937.

Hayek referenced two collections in the protologue for *Lippia fiebrigii* Hayek, *Fiebrig 3036* and *Weberbauer 4910*. Moldenke, upon making the combination *Aloysia fiebrigii* (Hayek) Moldenke, cited the Fiebrig collection housed at B as the type, and that specimen has been destroyed. Photographs of this specimen are extant (F!, LL!, NY!) and a lectotype is selected from among the known isotypes. The specimen housed at US is here designated as the lectotype for its completeness and quality of preservation.

Lippia peruviana Turcz., *Bull. Soc. Nat. Mosc.* 36, 2: 200. 1863.

TYPE: PERU. Punochuca, without date, *Mathews s.n.* (LECTOTYPE [designated here]: BM!; ISOLECTOTYPE: BR; PHOTO OF ISOLECTOTYPE [BR]: NY!).

≡ *Aloysia peruviana* (Turcz.) Moldenke, *Rev. Sudamer. Bot.* 4: 15. 1937.

The holotype of *Lippia peruviana* Turcz. would have been housed at B and thus destroyed. A lectotype is here designated from among the known isotypes. The specimen housed at BM is here designated as the lectotype for its completeness and quality of preservation.

Lippia polystachya Griseb., Abh. Königl. Ges. Wiss. Göttingen 19: 242. 1874. TYPE: ARGENTINA. CORDOBA: prope Las Mollas ditionis Las Peñas, loco unico obvia, Jan 1871, P. Lorentz 130 (LECTOTYPE [designated here]: G!; ISOLECTOTYPES: US!, VT).

≡ *Aloysia polystachya* (Griseb.) Moldenke, Lilloa 5: 380. 1940.

The holotype of *Lippia polystachya* Griseb. would have been housed at B and thus destroyed. Photographs of this specimen are extant (F!, GH!, MO!, NY-2!) and a lectotype is selected from among the known isotypes. The specimen housed at G is here designated as the lectotype for its completeness and quality of preservation.

Other lectotypes

Aloysia citrodora Palau, Partes Prac. Bot. 1: 768. 1784. TYPE: Un-numbered illustration by B. Salvador y Carmona in appendix of Parte Práctica de la Botánica de Linnaeus. 1784. (LECTOTYPE: MA [designated by Armada and Barra 1992]).

≡ *Verbena citrodora* (Palau) Cav., Descript. 68. 1802.

The lectotype for *Aloysia citrodora* Palau was designated by Armada & Barra (1992) as the illustration by B. Salvador y Carmona published in the appendix of Palau's protologue. The use of an illustration, while not common practice, is satisfactory in this case given the uniqueness of the species in question, the exceptional quality of the illustration, and the lack of material annotated by the author. The origin of the cultivated material which served as the basis for the illustration is unknown. One potential specimen exists ("Ortega scripsit", without location, collector, or date [S!], photographs [F!, NY!], photocopy [LL!]) which may have served as type material; however, there is no evidence of this specimen having been examined by Palau.

Lippia montana Brandegee, Proc. Calif. Acad. Sci. ser. 2, 3: 163. 1891.

TYPE: San Bartolomé, Oct 10 1889, *T. S. Brandegee s.n.* (LECTOTYPE [here designated]: UC!; ISOLECTOTYPE: US!).

Brandegee cited three of his own collections in the protologue for *Lippia montana* Brandegee; Sierra de la Laguna (UC!), San José del Cabo (NY!, UC!), and San Bartolomé (UC!, US!). The Brandegee collection from San Bartolomé housed at UC is here designated as the lectotype for its completeness, quality of preservation, and its location in Brandegee's former working herbarium.

Lippia scorodonioides* var. *hypoleuca Briq., Bull. Herb. Boiss. 4: 338.

1896. TYPE: PERU. Without date, *Dombey 259* (LECTOTYPE [here designated]: G!; PHOTO OF LECTOTYPE: F!, MO!, NY!).

≡ *Aloysia scorodonioides* var. *hypoleuca* (Briq.) Moldenke, Phytologia 36: 437. 1977.

Briquet cites two collections in the protologue for *Lippia scorodonioides* var. *hypoleuca*, *Dombey 259* and *Mandon 522*. He goes on to state "specimen Mandonnium jam ad var. sequentem transit" indicating that he probably considered the Dombey collection to be more typical of the taxon. Therefore, the Dombey specimen housed at G is here designated as the lectotype based on the quality of preservation and its location in Briquet's former working herbarium.

Lippia virgata* var. *platyphylla Briq., Ann. Conserv. Jard. Bot. Genève

7-8: 304. 1904. TYPE: PARAGUAY. Paraguari, Mar 1881, *B. Balansa 3116* (LECTOTYPE [designated here]: F!; ISOLECTOTYPE: GH!).

≡ *Aloysia virgata* var. *platyphylla* (Briq.) Moldenke, Phytologia 2: 408. 1948.

Briquet cites two collections in the protologue for *Lippia virgata* var. *platyphylla*, *Balansa 1016 pro parte* and *Balansa 3116*. He goes on to cite the remainder of *Balansa 1016* as the type for *L. virgata* var. *elliptica*. Since there is no material labeled *Balansa 1016* housed at Briquet's former working herbarium (G), and to avoid confusion amongst these collections, *Balansa 3116* is chosen as the type for *L. virgata* var. *platyphylla*. The specimen housed at F is here designated as the lectotype for its completeness and quality of preservation.

Lippia wrightii* var. *macrostachya Torr., in Emory, Rep. U.S. & Mex. Bound. Surv. 2: 126-127. 1859. TYPE: MÉXICO. NUEVO LEON: W of Cerralbo, 28 May 1847, *J. Gregg 822* (LECTOTYPE [here designated]; NY!; ISOLECTOTYPE: MO!).

≡ *Aloysia macrostachya* (Torr.) Moldenke, Phytologia 1: 95. 1934.

Torrey cites two collections in his protologue for *Lippia wrightii* var. *macrostachya*, *Gregg 822* and *Schott s.n.* The Gregg collection is chosen over that of Schott because it is more complete and there is a duplicate of *Gregg 822* housed at MO. The specimen housed at NY does not actually have the collection number (822) on the label, but it bears Torrey's autograph, matches the label data from the numbered specimen at MO, and is deposited in Torrey's former working herbarium, leaving no doubt that this is the specimen cited in the protologue. Therefore, the specimen housed at NY is here designated as the lectotype.

Verbena triphylla L'Her., Stirp. Nov. 1: 21, pl. 11. 1785. TYPE: FRANCE. ILE DE FRANCE: cultivated plant in the Jardin de Plantes, Paris, without date, *C. L. L'Heritier s.n.* (LECTOTYPE: P [designated by Moldenke & Moldenke 1983]).

≡ *Aloysia triphylla* (L'Her.) Britton, Sci. Surv. Porto Rico and Virgin Islands 6: 140. 1925.

≡ *Lippia triphylla* (L'Her.) Kuntze, Rev. Gen. Pl. 3: 253. 1898.

Moldenke and Moldenke (1983) designated the lectotype for *Verbena triphylla* L'Her. as *L'Heritier s.n.* (P) and report the material was chosen "from seed sent by Commerson from Montevideo, Uruguay." Indeed, in his protologue L'Heritier reports the "habitat in Chile. Dombey. in Bonaria: Monti-Video. Philib. Commerson" which would indicate either Dombey or Commerson collections from Chile or Uruguay as potential sources. However, L'Heritier goes on to state "viviam necnon semina bunigne communicavit praedictus Ortega" indicating the seeds were probably sent by Ortega. Indeed, the lectotype housed at P is from cultivated material and does not represent a wild collection. No specimens attributable to either Dombey or Commerson have been uncovered which may serve as complementary material.

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