

# The Identity of *Swietenia alternifolia* (Mill.) Steud. (Meliaceae')

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## Abstract

*Swietenia alternifolia* (Mill.) Steud., formerly referred to Meliaceae, is a species of *Luehea* Willd. (Malvaceae, *s.l.*): the appropriate new combination, *L. alternifolia* (Mill.) Mabb. (syn. *L. speciosa* Willd.), is therefore proposed.

## Introduction

In the disposing of names to be excluded from Meliaceae in an account of that family being prepared for Kubitzki's *Families and Genera of Vascular Plants*, the binomial *Swietenia alternifolia* (Mill.) Steud., i.e. *Cedrus alternifolia* Mill. (*Cedrela alternifolia* (Mill.) Steud.), has had to be considered. That species described by Philip Miller (1691-1771) was based on the field notes made in 1730-1 in Campeche, Mexico, by William Houston (1695-1733) - the British surgeon who trained under Boerhaave in Leiden - combined with observations on plants raised by growers in England, including plants grown in the Chelsea Physick Garden from seeds sent by Houston. In his description of the new species, Miller (*Gard. Dict.* ed. 8, *Cedrus* n. 3, 1759) noted, "The third Sort [of *Cedrus*, i.e. *Cedrela*] was discovered by the late Dr *Houston* at Campeachy, from whence he sent Seeds to *England*, which succeeded in several Gardens; when the Doctor first observed these Trees, they were destitute of Leaves, but were loaded with ripe Fruits; and on his second Visit to the Place he found the Trees in full Verdure".

The plant is recorded by George Don in his *General History* (1831; see below) as if still being cultivated in England, but it seems never to have flowered there, and, in the *Flora neotropica* monograph dealing with the mahogany genus, *Swietenia* Jacq., Styles (in Pennington and Styles 1981: 385, 405) rejected it from the family Meliaceae, though he did not suggest any other disposition for it.

Houston's MS description quoted by Miller, "Arbor excelsa Coryli folio ampliore", is his 'C[ampichianus ager]. Coryli folio arbor' of f. 101 in

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*Catalogus plantarum in America observatarum* by Mr Wm HOUSTON (MS Banks 67, The Natural History Museum, London). This entry is accompanied by the note, 'spec.', indicating that a specimen was preserved. Houston's herbarium specimens were bequeathed to Miller (Dandy 1958 : 139-140) and, in 1774, Miller's collection was bought by Sir Joseph Banks, whose own herbarium came in 1827 to the British Museum, now the herbarium (BM) of The Natural History Museum, London.

The MS description, combined with Houston's other observations and records set out above, show that he had found in the Campeche area a large, deciduous tree with simple, alternate, large, hazel-like leaves and *Cedrela*-type fruits - and that he had collected a specimen of it.

The description is very strongly reminiscent of the plant more recently grown, albeit only occasionally, in some tropical botanic gardens (e.g. Bogor, Indonesia [Danimihardja & Notohardjo 1978 : 153] and Penang, Malaysia [*Cheang Kok Choy s.n.*, Nov. 1966 - L !, SING]) as *Luehea speciosa* Willd. (Malvaceae, *s.l.*), a tree native in the Neotropics. This is a species known from Yucatan and, sure enough, an excellent flowering specimen, collected by Houston, complete with his MS label, 'Coryli folio arbor C[ampeachy] MSS', is filed with other Mexican material of *L. speciosa* at BM. The correct disposition of *Swietenia alternifolia* is therefore under *Luehea*.

### New Combination

***Luehea alternifolia* (Mill.) Mabb., *comb. nova***

*Cedrus alternifolia* Mill., Gard. Dict., ed. 8, Cedrus n. 3 ("*alternifolius*", 1759) & ed. 9 : Cedrus n. 3 ('*alternifolius*', 1768); Chaz., Dict. Jard. 3: 332 ("*alternifolius*", 1785) - *Cedrela alternifolia* (Mill.) Steud., Nomencl. 1: 170 (1821); DC, Prodr. 1: 625 (1824); G. Don, Gen. Hist. 1: 687 (1831); M. Roem., Fam. Nat. Syn. Monogr. 1: 136 (1846); CDC, in DC, Monog. Phan. 1 : 747 (1878); Styles, Fl. Neotropica 28 : 385 (1981).- *Swietenia alternifolia* (Mill.) Steud., Nomencl., ed. 2: 653 (1841); Styles, op.cit.: 405 (1981).

**Type:** Mexico, Yucatan, Campeche, 1730-1, *Houstoun s.n.* (BM !, neo, **selected here**. In his description, first printed in ed. 7 (1757) of his *Gardeners Dictionary*, Miller made no mention of flowers, strongly suggesting that this Houston specimen was not taken into account when the description was originally drawn up - indeed, if it had been, Miller would no doubt not have named it as he did !).

*Luehea speciosa* Willd. in Neue Schr. Ges. Naturf. Fr. Berlin 3: 410, t. 5 ('*Lüheea*', 1801); Burret in Notizbl. Bot. Gart. Mus. Berlin-Dahlem 9 : 831 (1926), **synon. nov.**

**Type:** [Venezuela,] 'Auf dem Gipfel des hohen Gebirges zwischen la Gauyana [sic] und Caracas', January, *Bredemeyer s.n.* in Herb. Willdenow 14376 (B-WILLD, fiche!).

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