

---

# ADDITIONAL TRANSFERS OF ASIATIC *MACHILUS* SENSU NEES, NON DESROUSSEAUX, TO *PERSEA* MILLER (LAURACEAE)

---

A. J. G. H. Kostermans<sup>1</sup>

In 1962 I reviewed the genus *Machilus* sensu Nees in Asia, relegating the species known at that time to *Persea* because there is not the slightest difference between *Machilus* Nees and *Persea* Miller. This can be easily demonstrated by comparing the drawings of the American *Persea* (Kopp, 1966) and those of Chinese *Machilus* (Lee, 1979).

The name *Machilus* goes back to the pre-Linnaean Rumphius, *Herbarium Amboinense* 3 (1743), a latinization of the vernacular name makilan (which is perhaps the general name for lauraceous trees, like medang in the greater part of Indonesia).

Rumphius described initially two species of *Machilus*, which he called the male and the female. The "male" is depicted on plate 40 and represents *Litsea glutinosa* (Lour.) C. B. Robinson.

Of the "female" a leaf is shown on the same plate 40; it is certainly not the "male." It might not belong to Lauraceae.

Rumphius added two more species on page 70, of which the third one, depicted on plate 41, represents *Dehaasia media* Bl. The fourth one, called the smallest by Rumphius, which I formerly thought to be a real *Machilus*, is not lauraceous, as is evident from the presence of five perianth lobes and the shape of the fruit; it might be *Ilex*. Merrill's (1917) suspicion that this should be a species of *Phoebe* is not accurate.

Thus Rumphius's *Machilus* is a mixture of a *Litsea*, a *Dehaasia*, and two non-Lauraceae. The Rumphian species were validated under the name of *Machilus* by Desrousseaux (1791) in Lamarck's *Encyclopédie* (3: 668). No type species was indicated.

As the "male" (*Litsea glutinosa*) is the most elaborately described, we accept it as the lectotype.

*Litsea* Lamarck was published a few pages earlier (p. 574) and hence takes priority. If this is not acceptable, *Litsea* Lamk. should be conserved against *Machilus* Desrousseaux.

*Machilus* turned up again as a generic name in 1831 as adapted by Nees. Nees's species were

based on herbarium material of plants from India, Sumatra, and the Malay Peninsula. He incorrectly added Rumphian names in synonymy; they do not invalidate Nees's names.

Hence, as I have pointed out (1962), Nees's *Machilus* is a later homonym of that of Desrousseaux. Whether Nees was unacquainted with Desrousseaux's publication is unknown.

*Machilus* sensu Nees was described with four species (no type indicated). The first, *Machilus odoratissimus* Nees, based on an Indian specimen, should be accepted as the type species of Nees's genus. Nees's addition of the synonym *Machilus quarta* Rumphius is a mistake. The second species, *M. macranthus*, likewise belongs to *Machilus* sensu Nees. The third one, with the Rumphian synonym *M. "tertia media"*, is *Dehaasia media* Bl. The fourth species, *M. incrassatus* Nees, was based on *Laurus incrassatus* Jack and was relegated by Nees first to *Persea* and later moved to *Haasia*. Its correct name is *Dehaasia incrassata* (Jack) Kosterm.

*Machilus* sensu Nees was accepted by Meissner (1864), but wrongly ascribed to Rumphius, whereas Desrousseaux is not mentioned. Baillon (1872), Bentham & Hooker (1880), Pax (1889), Allen (1936), and Chinese students of Lauraceae (Lee, 1979) likewise accepted *Machilus* sensu Nees, unaware of the existence of *Machilus* Desrousseaux. I suggested in 1962 that *Machilus* sensu Nees was congeneric with *Persea* Mill.

All Asiatic species belong to sect. *Machilus* Kopp.

*Persea* is very similar to *Phoebe* Nees, non Mez, but the latter in the fruiting stage has enlarged, thickened, yellowish, erect perianth lobes, clasping tightly the black, ovoid, gradually pointed fruit. In *Persea* the lobes are not enlarged, not thickened and reflexed or completely deciduous in sect. *Machilus*; other American species have persistent, indurate not or little enlarged nonerect perianth lobes in the fruiting stage and might be referred to a different genus.

---

<sup>1</sup> Herbarium Bogoriense, Jalan Juanda 22, Bogor, Indonesia.

- Persea austroguizhouensis** (S. K. Lee & F. N. Wei) Kosterm., comb. nov. *Machilus austroguizhouensis* S. K. Lee & F. N. Wei, Guihaia 4(2): 95. 1984.
- Persea chayuensis** (S. K. Lee & H. W. Li) Kosterm., comb. nov. *Machilus chayuensis* S. K. Lee & H. W. Li, Acta Phytotax. Sin. 17: 46. 1979.
- Persea chekiangensis** (S. K. Lee) Kosterm., comb. nov. *Machilus chekiangensis* S. K. Lee, Acta Phytotax. Sin. 17: 53. 1979.
- Persea chienkweiensis** (S. K. Lee) Kosterm., comb. nov. *Machilus chienkweiensis* S. K. Lee, Acta Phytotax. Sin. 17: 48. 1979.
- Persea chrysotricha** (H. W. Li) Kosterm., comb. nov. *Machilus chrysotricha* H. W. Li, Acta Phytotax. Sin. 17: 50. 1979.
- Persea chuanchienensis** (S. K. Lee) Kosterm., comb. nov. *Machilus chuanchienensis* S. K. Lee, Acta Phytotax. Sin. 17: 47. 1979.
- Persea chunii** (Chang ex S. C. Lee) Kosterm., comb. nov. *Machilus chunii* Chang ex S. C. Lee, Forest Bot. China 175. 1973.
- Persea cicatricosa** (S. K. Lee) Kosterm., comb. nov. *Machilus cicatricosa* S. K. Lee, Acta Phytotax. Sin. 8: 182. 1963.
- Persea dinganensis** (S. K. Lee & F. N. Wei) Kosterm., comb. nov. *Machilus dinganensis* S. K. Lee & F. N. Wei, Guihaia 4: 94. 1984.
- Persea fasciculata** (H. W. Li) Kosterm., comb. nov. *Machilus fasciculata* H. W. Li, Acta Phytotax. Sin. 17: 53. 1979.
- Persea foonchevii** (S. K. Lee) Kosterm., comb. nov. *Machilus foonchevii* S. K. Lee, Acta Phytotax. Sin. 8: 183. 1963.
- Persea fragrans** (Kanehira ex S. C. Lee) Kosterm., comb. nov. *Machilus fragrans* Kanehira ex S. C. Lee, Forest Bot. China 175. 1973.
- Persea fukienensis** (H. T. Chang) Kosterm., comb. nov. *Machilus fukienensis* H. T. Chang, Acta Phytotax. Sin. 17: 52, table 5, fig. 4. 1979.
- Persea glaucifolia** (S. K. Lee & F. N. Wei) Kosterm., comb. nov. *Machilus glaucifolia* S. K. Lee & F. N. Wei, Guihaia 4: 98. 1984.
- Persea gongshanensis** (H. W. Li) Kosterm., comb. nov. *Machilus gongshanensis* H. W. Li, Acta Phytotax. Sin. 17: 48. 1979.
- Persea grandibracteata** (S. K. Lee & F. N. Wei) Kosterm., comb. nov. *Machilus grandibracteata* S. K. Lee & F. N. Wei, Guihaia 4: 96. 1984.
- Persea grandifolia** (S. K. Lee & F. N. Wei) Kosterm., comb. nov. *Machilus grandifolia* S. K. Lee & F. N. Wei, Guihaia 4: 100, fig. 3. 1984.
- Persea kwangtungensis** (Y. C. Yang) Kosterm., comb. nov. *Machilus kwangtungensis* Y. C. Yang, J. West China Border Res., Ser. B 15: 77. 1945.
- Machilus polyneura* H. T. Chang, Acta Sci. Univ. Sunyatsenia 1960(1): 21. 1960; H. W. Lee, For. Fl. China 823. 1973.
- Machilus cathayensis* Chun & H. T. Chang, Acta Sci. Univ. Sunyatsenia 1960(1): 21. 1960; H. W. Lee, For. Fl. China 823. 1973.
- Persea lenticellata** (S. K. Lee & F. N. Wei) Kosterm., comb. nov. *Machilus lenticellata* S. K. Lee & F. N. Wei, Guihaia 4: 97. 1984.
- Persea lichuanensis** (W. C. Chang) Kosterm., comb. nov. *Machilus lichuanensis* W. C. Chang, Acta Phytotax. Sin. 17: 51, table 5, fig. 2. 1979.
- Persea litseifolia** (S. K. Lee) Kosterm., comb. nov. *Machilus litseifolia* S. K. Lee, Acta Phytotax. Sin. 17: 46. 1979.
- Persea lohuiensis** (S. K. Lee) Kosterm., comb. nov. *Machilus lohuiensis* S. K. Lee, Acta Phytotax. Sin. 8: 184. 1963.
- Persea longipedunculata** (S. K. Lee & F. N. Wei) Kosterm., comb. nov. *Machilus longipedunculata* S. K. Lee & F. N. Wei, Guihaia 4: 93. 1984.
- Persea melanophylla** (H. W. Li) Kosterm., comb. nov. *Machilus melanophylla* H. W. Li, Acta Phytotax. Sin. 17: 54, table 8, fig. 4. 1979.
- Persea mikweiensis** (S. K. Lee) Kosterm., comb. nov. *Machilus mikweiensis* S. K. Lee, Acta Phytotax. Sin. 17: 52, table 5, fig. 3. 1979.
- Persea minutiloba** (S. K. Lee) Kosterm., comb. nov. *Machilus minutiloba* S. K. Lee, Acta Phytotax. Sin. 17: 50, table 7, fig. 5. 1979.

**Persea monticola** (S. K. Lee) Kosterm., comb. nov. *Machilus monticola* S. K. Lee, Acta Phytotax. Sin. 8: 183. 1963.

**Persea nakao** (S. K. Lee) Kosterm., comb. nov. *Machilus nakao* S. K. Lee, Acta Phytotax. Sin. 8: 188. 1963.

**Persea nanchuanensis** (N. Chao) Kosterm., comb. nov. *Machilus nanchuanensis* N. Chao, Acta Phytotax. Sin. 17: 47. 1979.

*Machilus parabreviflora* Chang, Fl. Sichuanica 1: 117. 1981.

**Persea obscurinervis** (S. K. Lee) Kosterm., comb. nov. *Machilus obscurinervis* S. K. Lee, Acta Phytotax. Sin. 17: 51, table 5, fig. 1. 1979.

**Persea ovatiloba** (S. K. Lee) Kosterm., comb. nov. *Machilus ovatiloba* S. K. Lee, Acta Phytotax. Sin. 17: 56. 1979.

**Persea pedicellata** Kosterm., nom. nov. Based on *Machilus longipes* H. T. Chang, Acta Sci. Univ. Sunyatsenia 1960(1): 20. 1960. [The combination in *Persea* is occupied by *Persea longipes* (Schl.) Meissn.]

**Persea pyramidalis** (H. W. Li) Kosterm., comb. nov. *Machilus pyramidalis* H. W. Li, Acta Phytotax. Sin. 17: 53, table 8, fig. 2. 1979.

**Persea rufipes** (H. W. Li) Kosterm., comb. nov. *Machilus rufipes* H. W. Li, Acta Phytotax. Sin. 17: 55, table 8, fig. 5. 1979.

**Persea salicoides** (S. K. Lee) Kosterm., comb. nov. *Machilus salicoides* S. K. Lee, Acta Phytotax. Sin. 17: 48. 1979.

**Persea shiwardashanica** (H. T. Chang) Kosterm., comb. nov. *Machilus shiwardashanica* H. T. Chang, Acta Sci. Univ. Sunyatsenia 1960(1): 19. 1960.

**Persea sichourensis** (H. W. Li) Kosterm., comb. nov. *Machilus sichourensis* H. W. Li, Acta Phytotax. Sin. 17: 51. 1979.

**Persea sichuanensis** (N. Chao) Kosterm., comb. nov. *Machilus sichuanensis* N. Chao, Acta Phytotax. Sin. 17: 47, table 4, fig. 3. 1979.

**Persea suaveolens** (S. K. Lee) Kosterm., comb. nov. *Machilus suaveolens* S. K. Lee, Acta Phytotax. Sin. 8: 187. 1963.

**Persea tenuipilis** (H. W. Li) Kosterm., comb. nov. *Machilus tenuipilis* H. W. Li, Acta Phytotax. Sin. 17: 54. 1979.

**Persea velutinoides** (S. K. Lee & F. N. Wei) Kosterm., comb. nov. *Machilus velutinoides* S. K. Lee & F. N. Wei, Guihaia 4: 101, fig. 4. 1984.

**Persea verruculosa** (H. W. Li) Kosterm., comb. nov. *Machilus verruculosa* H. W. Li, Acta Phytotax. Sin. 17: 55, table 2. 1979.

**Persea versicolora** (S. K. Lee & F. N. Wei) Kosterm., comb. nov. *Machilus versicolora* S. K. Lee & F. N. Wei, Guihaia 4: 98, fig. 5. 1984.

**Persea wenshanensis** (H. W. Li) Kosterm., comb. nov. *Machilus wenshanensis* H. W. Li, Acta Phytotax. Sin. 17: 49. 1979.

#### OTHER SPECIES OF *MACHILUS* SENSU NEES

*Machilus dumicola* (W. W. Smith) H. W. Li, Acta Phytotax. Sin. 17: 49. 1979. = *Persea bonii* (Lec.) Kosterm.

*Machilus kanehirai* (Sphalm.) = *Cinnamomum kanehirai* C. E. Chang in Fl. Taiwan 2: 416. 1976. = *Cinnamomum micranthum* Hayata.

*Machilus macrophylla* var. *arisanensis* Hayata, J. Coll. Sci. Tokyo 30: 243. 1911; Kostermans, Bibl. Laur. 917. 1964; T. S. Liu, Illustr. Nat. and Introd. Pl. Taiwan. 1960: table 103; C. E. Chang, Bull. Taiwan Prov. Pingtung Agric. Inst. 11: 476. 1970; in Fl. Taiwan 2: 462. 1976; H. W. Li, Tree Fl. China 814. 1973. = *Persea thunbergii* (S. & Z.) Kosterm.

*Machilus mushaensis* F. I. Lu, Quart. J. Chin. For. 2: 19, table 6. 1969; C. E. Chang, Bull. Pingtung Agric. Inst. 11: 44. 1970; in Fl. Taiwan 2: 164. 1976. = *Persea zuihoensis* Hayata.

*Machilus nanshoensis* Kanehira, Formos. Trees 449. 1917; Kostermans, Bibl. Laur. 919. 1964; T. S. Liu, Illustr. Nat. and Introd. Pl. Taiwan 1: table 106. 1960 (synonym of *Persea thunbergii*); Lu, Quart. J. Chin. For. 2: 21. 1969; C. E. Chang, Bull. Taiwan Prov. Pingtung Agric. Inst. 11: 47. 1970; in Fl. Taiwan 2: 452. 1975. = *Persea thunbergii* (S. & Z.) Kosterm.

*Machilus parabreviflora* H. T. Chang, Acta Sci. Univ. Sunyatsenia 1960(1): 17. 1960; in Fl. Sichuanica 1: 117. 1981; H. W. Li, Tree Fl. China 845. 1973. = *Persea nanshoensis* (Chang) Kosterm.

*Machilus pomifera* (Kosterm.) S. K. Lee, Acta Phytotax. Sin. 8: 186. 1963; W. Y. Chun,

- Fl. Hainan. 1: 270. 1964; H. W. Li, Tree Fl. China 843, fig. 355. 1973. = *Persea pomifera* Kosterm.
- Machilus sericea* (Nees) Blume, Mus. Bot. Lugd. Bat. 1(21): 330. 1851; Kostermans, Reinwardtia 8: 110. 1974. = *Persea wallichii* Long, Notes Roy. Bot. Gard. Edinburgh 41: 518. 1984.
- Machilus gammieana* King ex Hooker f. in Hara, Fl. E. Himalaya 3: 42. 1975; *Persea gammieana* (King ex Hooker f.) Kostermans in Hara et al. (editors), Enum. Fl. Pl. Nepal 3: 186. 1982; Long, Notes Roy. Bot. Gard. Edinburgh 4: 521. 1984 (as a synonym of *Persea clarkeana* (King ex Hooker f.) Kosterm.); Grierson & Long, Fl. Bhutan 1(2): 264. 1984.
- LITERATURE CITED
- ALLEN, C. K. 1936. J. Arnold Arbor. 17: 376. [See also, Studies in the Lauraceae. I. Ann. Missouri Bot. Gard. 25: 361-434. 1938.]
- BAILLON, H. 1872. Lauracées. In: Hist. Pl. 2: 429-486.
- BENTHAM, G. & J. D. HOOKER. 1880. Genera Plantarum, volume 3, part 1.
- DESROUSSEAU, L. A. J. 1791. In: Lamarck, Encycl. Méth. Bot. 3: 668.
- KOPP, L. 1966. Mem. New York Bot. Gard. 14.
- KOSTERMANS, A. J. G. H. 1952. A historical survey of Lauraceae. I. J. Sci. Res. (Jakarta) 1: 91, 92, 116, 121.
- . 1954. *Machilus*. In Bibliotheca Laurac. 900-932.
- . 1962. The Asiatic species of *Persea* Mill. (Lauraceae). Reinwardtia 6: 189-194.
- LEE, S. K. 1979. Acta Phytotax. Sin. 17: 46-56.
- MEISSNER, C. F. 1864. *Machilus*. In: A. DC., Prodromus 15(1): 39-43.
- MERRILL, E. D. 1917. An interpretation of Rumphius' Herbarium Amboinense. 234.
- NEES VON ESENBECK, C. G. 1831. In: Wallich, Plantae Asiaticae Rariores 2: 70.
- PAX, F. 1889. *Machilus*. In: Engler & Prantl, Die Natürlichen Pflanzenfamilien. III(2): 115.
- RUMPHIUS, E. 1743. Herbarium Amboinense 3: 68-70.



Kostermans, A. J. G.H. 1990. "Additional Transfers of Asiatic *Machilus* sensu Nees, Non Desrousseaux, to *Persea* Miller (Lauraceae)." *Annals of the Missouri Botanical Garden* 77, 545–548. <https://doi.org/10.2307/2399518>.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/89021>

**DOI:** <https://doi.org/10.2307/2399518>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/7572>

#### **Holding Institution**

Missouri Botanical Garden, Peter H. Raven Library

#### **Sponsored by**

Missouri Botanical Garden

#### **Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.