



New combinations in the genus *Machilus* (Lauraceae)

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Abstract

Recent molecular study supports the separation of *Machilus* from *Persea*. Therefore, new combinations for nine names in *Machilus* are proposed here.

Keywords: India, *Persea*, Shenzhen Code.

Introduction

The genus *Machilus* Nees comprises c. 100 species distributed in tropical and subtropical S and SE Asia (Wei and van der Werff 2008). Kostermans (1952) transferred *Machilus* to *Persea* Miller. Subsequent workers (Meissner 1864, Baillon 1872, Benthams 1880, Pax 1889, Li et al. 1984) recognized the genus *Machilus* while van der Werff (2001) treated *Machilus* under *Persea*. Rohwer et al. (2009) stated that the important characters for generic delimitation in the *Persea* group are: 'the structure of the perianth (equal vs. unequal tepals); its fate in fruit (deciduous vs. persistent; indurate or not; reflexed, spreading or clasping the base of the fruit); the structure of the pedicel in fruit (Kostermans 1957, Rohwer 1993, van der Werff 2001)'. Further, they stated that the above traditional morphological characters used to define genera in the *Persea* group are not fully satisfactory. Recent molecular evidence supports the separation of *Machilus* from *Persea* which is distributed in subtropical to tropical America and the Macaronesian Islands (Rohwer et al. 2009, Li et al. 2011). Nine new combinations are proposed here in *Machilus* mainly distributed in India, Bangladesh and Myanmar along

with types of the names which have been cited in the publications of Gangopadhyay (2006, 2009).

New combinations

Machilus arunachalensis (M. Gangop.) Anand Kumar, **comb. nov.**

Persea arunachalensis M. Gangop. in Bull. Bot. Surv. India 48: 129. 2006.

Type: India, Arunachal Pradesh, Karko south east forests. 23 Feb. 1988. K. Haridasan 4529 (holotype–APFH n.v.).

Distrib.: India.

Machilus bhaskarii (M. Gangop.) Anand Kumar, **comb. nov.**

Persea bhaskarii M. Gangop. in Bull. Bot. Surv. India 48: 131. 2006.

Type: Myanmar, Tavoy, Feb. 1918. A.T. Gage 52 (holotype–CAL0000024885!); Tavoy, Feb. 1918, P.T. Russell 52 (paratypes–CAL0000024886!, CAL0000024887!).

Distrib.: Myanmar.

Machilus haridasanii (M. Gangop.) Anand Kumar, **comb. nov.**

Persea haridasanii M. Gangop. in Bull. Bot. Surv. India 48: 133. 2006.

Type: India, Arunachal Pradesh, Dibang valley district, Anini, 30 March 1984, *K. Haridasan* 601 (holotype–APFH *n.v.*); Kameng district, Saiden to Jirigoon, 4 Feb. 1995, *K.P. Singh* 99369 (paratype–ASSAM0000000115 image!).

Distrib.: India.

Machilus lohitisensis (M. Gangop.) Anand Kumar, **comb. nov.**

Persea lohitisensis M. Gangop. in Bull. Bot. Surv. India 48: 138. 2006. ('*lobitisensis*').

Type: India, Arunachal Pradesh, Lohit district, Melinja, 10 Oct. 1984, *K. Haridasan* 1693 (holotype–APFH *n.v.*; isotype–APFH *n.v.*)

Distrib.: India.

Machilus macrantha (Nees) Kosterm. var. *brevifolia* (M. Gangop.) Anand Kumar, **comb. nov.**

Persea macrantha (Nees) Kosterm. var. *brevifolia* M. Gangop. in Bangladesh J. Pl. Taxon. 16: 144. 2009.

Type: India, Tamil Nadu, Anamalais, 2000 m, June 1859, *Beddome* 120 (holotype– CAL0000021557!; isotype–CAL0000021558!).

Distrib.: India.

Note: The new combination made by Robi & Udayan (2014: 275) has not been published effectively under Art. 29.1 of the Shenzhen Code (Turland *et al.* 2018).

Machilus russellii (M. Gangop.) Anand Kumar, **comb. nov.**

Persea russellii M. Gangop. in Bull. Bot. Surv. India 48: 138. 2006.

Type: Myanmar, Tavoy, Head waters of Sedi chaung, 1000 m, 17 May 1920, *P.T. Russell* 1815 (holotype–CAL0000021547!; isotypes–CAL0000021548!, CAL0000021548!, CAL0000021548!).

Distrib.: Myanmar.

Machilus sharmae (M. Gangop.) Anand Kumar, **comb. nov.**

Persea sharmae M. Gangop. in Bull. Bot. Surv. India 48: 142. 2006.

Type: India, Meghalaya, Khasi hill district, Shillong peak, 7 June 1931, *S.R. Sharma* 9202 (holotype–ASSAM *n.v.*); Dwaki forests, 25 Oct. 1934, *S.R. Sharma* 10853 (paratype–ASSAM0000000112 image!); Nagaland, Naga hills, May 1935, *N.L. Bor* 21057 (paratype–ASSAM *n.v.*). MYANMAR. Thaton

district: Panigkyn to Tale, Dacona range, 22 Feb. 1909, *J.H. Lacey* 4623 (paratype–CAL *n.v.*); Bhamo, 1909, *G.E.S. Cubitt* 326 (paratype–CAL *n.v.*).

Distrib.: India, Myanmar.

Machilus sikkimensis (M. Gangop.) Anand Kumar, **comb. nov.**

Persea sikkimensis M. Gangop. in Bull. Bot. Surv. India 48: 144. 2006.

Type: India, Sikkim, *T. Thomson* s.n., acc. no. 384803 (holotype–CAL0000021553!; isotypes–CAL0000021554!, CAL0000021555!); Tista, 300 m, 20 March 1913, *G.H. Cave* s.n. (paratype–CAL0000021556!).

Distrib.: India.

Machilus upendrae (M. Gangop.) Anand Kumar, **comb. nov.**

Persea upendrae M. Gangop. in Bull. Bot. Surv. India 48: 146. 2006.

Type: Bangladesh, Sylhet district, Bashi hills, 1500 m (?), 28 Apr. 1915, *U.N. Kanjilal* 6895 (holotype–ASSAM0000000110 image!; isotype–ASSAM *n.v.*).

Distrib.: Bangladesh.

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