

# 广西润楠属一新种—狭基润楠

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**摘要:** 报道了润楠属一新种, 狭基润楠 *Machilus attenuata* F. N. Wei & S. C. Tang。本种与形态上相似的定安润楠 *M. dinganensis* S. Lee & F. N. Wei 的区别在于叶先端尾状渐尖或长渐尖, 基部渐狭并略下延, 幼叶上面无毛, 下面疏被短柔毛; 与西畴润楠 *M. sichouensis* H. W. Li 的区别在于叶较小, 薄革质, 倒披针形或椭圆形, 长 8~13 cm, 宽 2.2~4 cm, 基部渐狭, 侧脉在上面明显或略明显, 下面明显。

**关键词:** 樟科; 润楠属; 狭基润楠; 广西; 中国; 新种

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## *Machilus attenuata* (Lauraceae), A New Species from Guangxi, China

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**Abstract:** A new species of Lauraceae, *Machilus attenuata* F. N. Wei & S. C. Tang, is described and illustrated from Guangxi, China. It is closely related to *M. dinganensis* S. Lee et F. N. Wei, differing in its leaf apex caudate acuminate or long acuminate, base attenuate and slightly decurrent, and adaxial surface glabrous when young. It also resembles *M. sichouensis* H. W. Li, from which it differs in the leaves thinly coriaceous, oblanceolate or elliptic, smaller (8~13 cm long, 2.2~4 cm wide), gradually narrowed or slightly decurrent at base, and with lateral veins indistinct or slightly distinct adaxially and distinct abaxially.

**Key words:** Lauraceae; *Machilus*; *Machilus attenuata*; Guangxi; China; New species

The genus *Machilus* Nees (Lauraceae) consists of approximately 100 species distributed in tropical and subtropical SE and S Asia, of which ca. 82 species and 4 varieties are recorded in China, with 71 species endemic to China (Wei F N & Werff H. van der, unpublished data). Thirty-five species of *Machilus* were recorded from Guangxi<sup>[1]</sup>.

*Machilus* and *Phoebe* Nees belong to the tribe *Perseae* Mez. subtribe *Perseinea* Kosterm. The two genera are so similar in appearance that they are difficult to separate from each other without flowers and fruits. Both of them often have distinct bud scale scars at the base of the seasonal growth, and the outer whorl of the perianth segments is equal or subequal to the inner one.

In rare cases (eg. *M. parabreviflora* H. T. Chang), the outer whorl of the perianth segments is distinctly shorter than the inner. However, the two genera differ in several aspects. In *Phoebe*, glands of the 3<sup>rd</sup> whorl of stamens are sessile or sometimes very shortly stipitate; perianth segments lose the upper 1/3 part after flowering, leaving the remaining 2/3 developing into complete and entirely persistent segments, which tightly or sometimes loosely clasp the base of fruit or rarely slightly spreading at apex, which are thickened, coriaceous to lignescent, and not reflexed; ovaries are monocarpellate, sometimes tricarpellate (plesiomorphic character, eg. *P. shearereri* var. *omeiensis* (Yang) N. Chao); and fruits are ovoid, rarely globose or ellipsoid. In *Machilus*, glands of

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the 3<sup>rd</sup> whorl of stamens are obviously stipitate, sometimes long-stipitate; perianth segments do not lose the apex after flowering and are thin, mostly chartaceous to thinly coriaceous, strongly reflexed and persistent, rarely falling from the base of fruit (eg. *M. chinensis* (Champ. ex Benth.) Hemsl., *M. calcicola* S. Lee et C. J. Qi); ovaries are monocarpellate; and fruits are globose, rarely ellipsoid or oblong<sup>[2]</sup>.

However, there are species transitional between the two genera. *Phoebe chinensis* Chun was once regarded as *M. macrophylla* Hemsl. Because the upper portions of perianth segments are neither thickened nor wilting, glands of the 3<sup>rd</sup> whorl of stamens are obviously stipitate, and fruits are globose. But some characters in this species, such as the lower portions of perianth segments being distinctly thickened and clasping the base of fruit or sometimes loose, are consistent with those in *Phoebe*. It may be the key species linking the two genera. *Machilus* might have originated from those in *Phoebe* with globose fruits.

Flower structures are so similar among species in *Machilus* that they are not important for classification. The infrageneric classification depends mainly on whether a plant is pubescent on the outer surface of the perianth segments and the type of pubescence (appressed, tomentose), shape and size of fruits, as well as inflorescence characters (position, size). In the course of studying *Machilus* Nees for the *Flora of China*, we found some specimens at IBK collected from Guangxi Zhuang Autonomous Region do not fit in any species described. These specimens have inflorescences arising from the base of young branches; perianth segments pubescent on both surfaces, outer whorl equal or subequal to the inner whorl, chartaceous and reflexed after flowering; glands of the 3<sup>rd</sup> whorl of stamens stipitate; and fruits globose and small. They were considered to be a new species of sect. *Pubiflorae* S. Lee. subsect. *Bombycinae* S. Lee, which we describe below.

*Machilus attenuata* F. N. Wei & S. C. Tang, sp. nov. Sect. *Pubiflorae* S. Lee, Subsect. *Bombycinae* S. Lee. Fig. 1

Haec species habitu *M. dingnensis* leviter proxima, a qua foliis apice caudato-acuminatis vel longe acuminatis, basi gradatim angustis leviter decurrentibusque, in juventute supra glabris subtus sparsim pubescentibus differt. A *M. sichourensi* foliis oblanceolatis vel ellipticis, minoribus 8 ~ 13 cm longis, 2.2 ~ 4 cm latis, apice caudato-acuminatis vel longe acuminatis, basi gradatim angustis leviter decurrentibusque, supra nervis lateralibus inconspicuis vel leviter conspicuis, subtus conspicuis differt.

Shrubs or trees, ca. 2 ~ 8 m tall (based on the specimen label information). Branchlets terete, glabrous and light black when dry. Bud scales densely gray brown pubescent outside. Leaves thin coriaceous, oblanceolate or elliptic, 8 ~ 13 cm long, 2.2 ~ 4 cm wide, caudate acuminate or long acuminate at apex, attenuate and slightly decurrent at base, adaxially lustrous and glabrous, abaxially sparsely appressed puberulous; midrib impressed adaxially, elevated abaxially, lateral veins 8 ~ 13 on both sides of midrib, ascending 45°, inconspicuous or slightly conspicuous on adaxial surface and conspicuous on abaxial surface, veinlets foveolate adaxially; petiole 1 ~ 1.8 cm long, glabrous. Inflorescences in dichasial-cymose panicles arising from base of current year's branchlet, 8 ~ 10 cm long, branched at upper part of the peduncle, multiflorous, peduncle and pedicel densely grayish appressed pubescent. Flowers ca. 5 mm long; pedicels 5 ~ 7 mm long; perianth-segments ovate oblong, densely gray pubescent on both surfaces, outer whorl segments subequal to inner ones, ca. 3.8 mm long, 1.8 mm wide, inner ones ca. 4.2 mm long, 2.4 mm wide. Fertile stamens 9 in 3 whorls, anthers 4-celled, introrse in 1<sup>st</sup> and 2<sup>nd</sup> whorl stamens, extrorse in 3<sup>rd</sup> whorl stamens; filaments of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> series ca. 4 mm long, hairy at base, glands of 3<sup>rd</sup> whorl cordiform, stipitate; staminodes sagittate, glabrous. Ovary ovoid, style gracile, stigma capitate. Infructescences to 11 cm long, sparsely pubescent; fruits globose, ca. 7 mm in diam; fruiting pedicels ca. 7 mm long, sparsely pubescent. Flowering in April, fruiting in September.

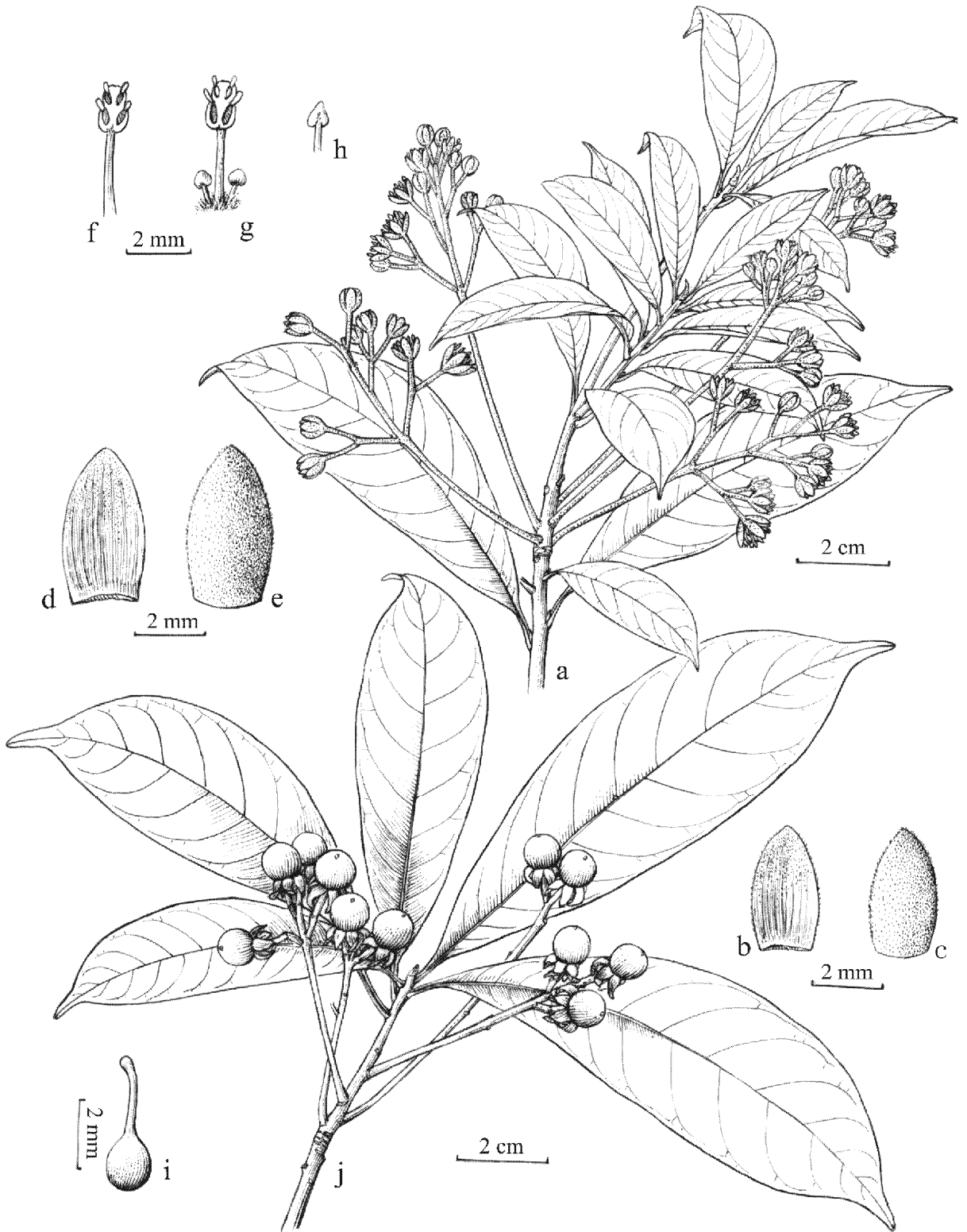


Fig. 1 *Machilus attenuata* F. N. Wei & S. C. Tang

a. Flowering branch; b, c. Perianth-segment of exterior whorl, adaxial and abaxial view; d, e. Perianth-segment of interior whorl, adaxial and abaxial view; f. Stamen of 1<sup>st</sup> and 2<sup>nd</sup> whorl; g. Stamen of 3<sup>rd</sup> whorl; h. Staminode; i. Ovary; j. Fruiting branch. (Drawn by S. Q. HE; a, b, c, d, e, f, g, h, i from C. F. Liang 31621; j from holotype).

*Machilus attenuata* is closely related to *M. dinganensis* S. Lee et F. N. Wei<sup>[3]</sup>, which is distributed in Hainan Province, differing in its leaf apex caudate acuminate or long acuminate, base attenuate and slightly decurrent, and adaxially glabrous when young. In the latter species, leaf apex is acute or obtuse (rarely short acuminate), base cuneate, and adaxially sparsely appressed pubescent, abaxially densely appressed pubescent when young. The species is also easily confused with *M. sichouensis* H. W. Li which distributed in southeast of Yunnan Province, from which it differs in the leaves thin coriaceous, oblanceolate or elliptic, smaller (8 ~ 13 cm long, 2.2 ~ 4 cm wide), caudate or long-acuminate at apex, gradually narrowed or slightly decurrent at base, and lateral veins indistinct or slightly distinct adaxially and distinct abaxially. In *M. sichouensis* leaves are oblong to obovate-oblong, larger

[7 ~ 16(21.5) cm long, 2.3 ~ 5(6.8) cm wide], long acuminate at apex, cuneate or broadly cuneate at base, and with distinct lateral veins on both surfaces<sup>[4]</sup>. The comparison of main characters among *M. dinganensis*, *M. sichouensis* and *M. attenuata* are shown in Table 1.

CHINA. Guangxi: Lingui County, Wantian Village, 300 m, at the foot of a mountain, roadside, shrub, June 3, 1955, Guangfu Exp. 00457 (holotype, IBK); Lingui County, valley in dense forest, April 8, 1955, C. F. Liang 31621 (IBK); same locality, streamside, thicket, 2 m tall, May 29, 1957, H. F. Qin & Z. T. Li 70179 (IBK, IBSC); Xingan County, October 12, 1954, Xingan Exp. 352 (IBK); Guigang County, Longshan, June 22, 1957, Z. Z. Chen 50713 (IBK); Hengxian County, on slope, thicket, 3 m tall, April 18, 1957, Z. Z. Chen 50164 (IBK).

Table 1 Comparison of *M. dinganensis*, *M. sichouensis* and *M. attenuata*

Characters	<i>M. dinganensis</i>	<i>M. sichouensis</i>	<i>M. attenuata</i>
Leaf shape	Elliptic or oblanceolate	Oblong to obovate-oblong	Oblanceolate or elliptic
Leaf apex	Acute or obtuse	Long acuminate	Long acuminate or caudate acuminate
Leaf base	Cuneate or narrowly cuneate, not decurrent	Cuneate or broadly cuneate	Attenuate and slightly decurrent
Leaf size	6 ~ 12 cm long, 2 ~ 3.5(4.5) cm wide	7 ~ 16(21.5) cm long, 2.3 ~ 5(6.8) cm wide	8 ~ 13 cm long, 2.2 ~ 4 cm wide
Lateral veins	Conspicuous on both surfaces	Conspicuous on both surfaces	Inconspicuous or slightly conspicuous on adaxial surface, conspicuous on abaxial surface
Distribution	Hainan	Yunnan	Guangxi

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