Notes on a new variety of Machilus (Lauraceae) of Taiwan

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【Summary】Morphological variations of Machilus obovatifolia (Hayata) Kanehira & Sasaki in Taiwan were analyzed. There is a new variety recognized: Machilus obovatifolia (Hayata) Kanehira & Sasaki var. taiwuensis S. Y. Lu & T. T. Chen. The present study of Morphological description, illustrations, and SEM photographs of pollen grains as the base data of classification.

【Key words】Lauraceae, Machilus obovatifolia var. taiwuensis, Taiwan, New variety.

台灣產楓楠屬之一新變種

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【摘要】經由形態及種內變異的研究結果顯示，本文確認一屬於倒卵葉楠(Machilus obovatifolia)的新變種——大武楓楠(M. obovatifolia var. taiwuensis)。本文提供形態描述、手繪圖及花粉SEM照片圖，以做為分類的基本資料。

【關鍵詞】樟科、大武楓楠、台灣、新變種

Machilus obovatifolia (Hayata) Kanehira & Sasaki var. taiwuensis S. Y. Lu & T. T. Chen var. nov. Type—Taiwan, Taitung Hsien, Shangwu(尚武). S Y Lu 24264 (holotype, isotype TAIF)大武楓楠(Fig.1,2)Folia crassus chartacea ad tenuis coriacea, elliptica, obovata vel oblongoelliptica 4~7cm longa, 1.5~3cm lata, apice acuta ad acumina, basi, cuneata ad attenuata.

A small tree, evergreen; branchlets terete, slightly puberulent, glabrate; buds conical or small, perulate, the scales imbricate, glabrous adaxially, puberulent abaxially, dark brown. Leaves thick chartaceous to thin coriaceous, elliptica, obovata or oblongoelliptica, 4~7cm long, 1.5~3cm wide, acute to acuminate or sometimes obtuse at apex, cuneate to attenuate at base, entire at margin, glabrous adaxially, puberulent abaxially when young, glabrate; midrib depressed adaxially and slightly elevated abaxially, the lateral veins about 5 pairs, veinlets reticulate, prominent when dry; petioles ca. 0.5cm long, slightly puberulent adaxially when young, glabrous abaxially. Inflorescences in cymose panicle, terminal, peduncle about 1.5cm long, puberulent, pedicels about 7mm long, slightly puberulent, glabrate. Perianth in two whorls, distinctly unequal, persistent; tepals 6, broadly ovate in inner one, ovate to lanceolate in outer one, glabrous.
adaxially, slightly puberulent abaxially, yellowish-green; stamens 9 in three whorls, the outer two introrse and eglandular, the inner one extrorse and glandular at base, filaments barbate at base, anthers elliptic, 4-celled, glabrous, yellow, staminodes 3, sagittate, nearly sessile; ovary globose to ellipsoid, glabrous, style ca. 1 mm long, glabrous, stigma slightly dilated, barbate. Fruit compressed globose, glabrous, black when mature.

Endemic. Margins of forest at low elevations (ca. 400m) in the south-eastern part of Taiwan.

Additional specimens examined. Taitung Hsing: Shangwu, T. T. Chen 9710, 9711, 9712 (TAIF); Gueitian, T. T. Chen 9713 (TAIF).

Pingtung Hsien: Shouka, K.C. Chen 118.

Notes: This new variety differs from M. obovatifolia var. obovatifolia (Fig. 3.) in having thinner leaves and mostly elliptic to oblanceolate in shapes with acute to acuminate at apex, more puberulent on leaf abaxial and pedicel when young, and less puberulent on abaxial of perianth. (Lu, 1969; Hayata, 1912; Kanehira, 1936; Liao, 1996)

* Machilus obovatifolia var. taiwuensis * is mainly distributed in Shang-Wu, which is the north of Shou-Ka, some occurs in Tsau-Pu. However * M. obovatifolia var. obovatifolia * is distributed in Shou-Ka and Hengchun Peninsula. So they are partiality mixed in Tsau-Pu.

Literature Cited


Fig. 1. *Machilus obovatifolia* (Hayata) Kanehira & Sasaki var. *taiwuensis* Lu & Chen.

1. Flowering and fruiting branches; 2. 3rd whorl of stamen with glands; 3. Flower; 4. Staminode; 5. Pistil; 6. 1st and 2nd stamen.
Fig. 2-1. SEM micrographs of pollen grains of Machilus obovatifolia var. taiwensis (x3K).

Fig. 2-2. SEM micrographs of pollen grains of Machilus obovatifolia var. taiwensis (x10K).
Fig. 3. *Machilus obovatifolia* (Hayata) Kanehira & Sasaki.
1. branch with inflorescence and leaves; 2. flower bud; 3. perianth;
4. flower; 5. pistil; 6. 3rd whorl of stamen with glands; 7. stamens.