

Hiroshi HOSHI\* & Hiroyoshi OHASHI\*: *Maackia*  
(Leguminosae) of Taiwan

星 比呂志\*・大橋広好\*: 台湾のイヌエンジュ属植物 (マメ科)

The first record of *Maackia* in Taiwan was made by Sasaki (1928). He identified the Taiwanese plants as *M. tashiroi* (Yatabe) Makino which was known to be distributed in southern Japan. Kanehira (1936) considered it as a new variety of *M. tashiroi* and named it as var. *taiwaniana* with a description in Japanese and a short diagnosis in English. This name is not published validly and the circumscription of the variety is not clear. Hatusima (1936) and Ohwi (1953) identified this *Maackia* as *M. floribunda* (Miq.) Takeda which was recorded from Japan. Liu (1960) followed Sasaki's identification. Kurata (1964) and Ohwi (1965a) cited Formosa as one of the range of the distribution of *M. amurensis*. Kurata recognized Formosan *Maackia* as identical with *M. amurensis* var. *buergeri*. Subsequently, the *Maackia* of Taiwan has been treated as *M. floribunda* (Ohwi 1965b, Huang & Ohashi 1977, Ohashi et al. 1984). However, we found that the plants of *Maackia* recorded so far in Taiwan were different from these species as well as all of the other known species of the genus in the characters of external morphology and pollen grains.

The Taiwanese plant is distinguishable from *M. tashiroi* by arboreous habit, obovate standard petals, broadly linear pods with a broad wing along the upper suture, thick seeds without a hilar rim and inconspicuous veinlets of adaxial surface of leaflets (Fig. 1). Also it is different from *M. floribunda* in having reflexed upper calyx-lobes, thick seeds without a hilar rim (Fig. 1). The Taiwanese plant is clearly different from *M. amurensis* and *M. amurensis* var. *buergeri* in having reflexed upper calyx-lobes, broad wing along the upper pod-suture. The pollen grains of the Taiwanese plant differ from those of *M. tashiroi* and *M. floribunda* in having weak verrucae with foveolae or fine rugulae in mesocolpium, verrucae or rugulae around colpus and thicker tectum (Fig. 2).

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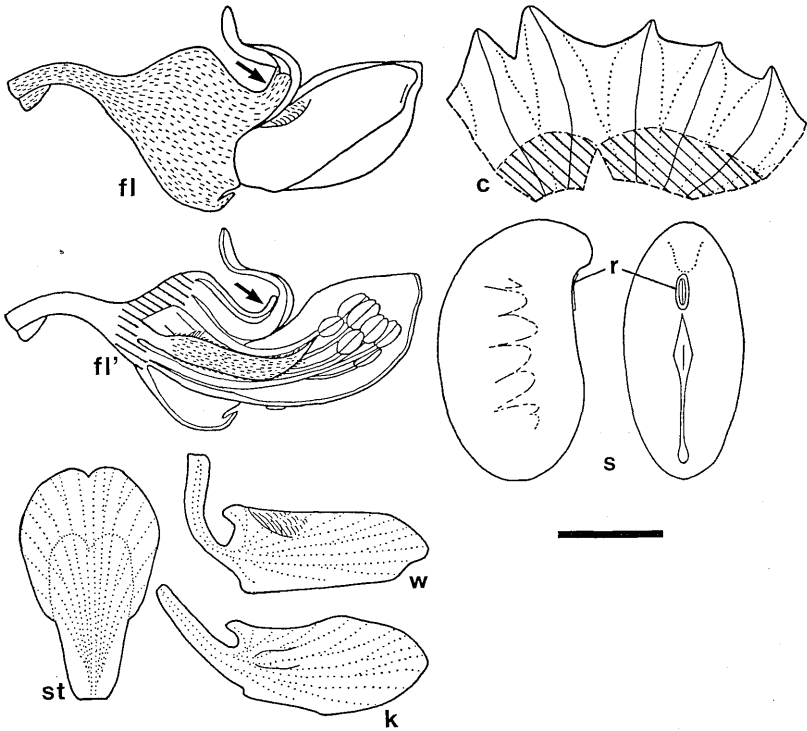


Fig. 1. Flower and seed of *Maackia taiwanensis*. fl: flower, fl': section of flower, st: standard, w: wing, k: keel-petal, c: calyx, arrows: upper calyx lobes reflexed along with standard petal, oblique lines: hypanthium, s: seed, r: rim-aril. Hilar rim is inconspicuous, so rim-aril can be seen in lateral view. Flower—Y. Tateishi & T. Nemoto 18053 (TUS); Seed—Y. Tateishi et al. 16394 (TUS). Scale line 3 mm.

We consider, therefore, this Taiwanese plant should be treated as a new species of *Maackia* as described below:

***Maackia taiwanensis* Hoshi et Ohashi, sp. nov. (Fig. 3)**

Arbor usque ad 10 m alta; foliis imparipinnatis, praelumque 11-13 foliolatis, 8-20 cm longis; foliolis ellipticis vel ovatis, 2.5-4.5 cm longis, 1.0-1.5 cm latis,

Fig. 2. Pollen morphology of *Maackia taiwanensis* (A-F), *M. floribunda* (G, H) and *M. tashiroi* (I). A, B, H, I: sculpture in mesocolpium, C, D: sculpture around colpus (C and D are corresponded to A and B each other), E: whole pollen grain in equatorial view, F, G: exine stratification, scale line A, B, C, D, F, G, H, I: 1  $\mu$ m, E: 3  $\mu$ m. A, B, C, D, E, F—Y. Tateishi & T. Nemoto 18053 (TUS), G, H—H. Hoshi 751 (TUS), I—H. Hoshi 228 (TUS).

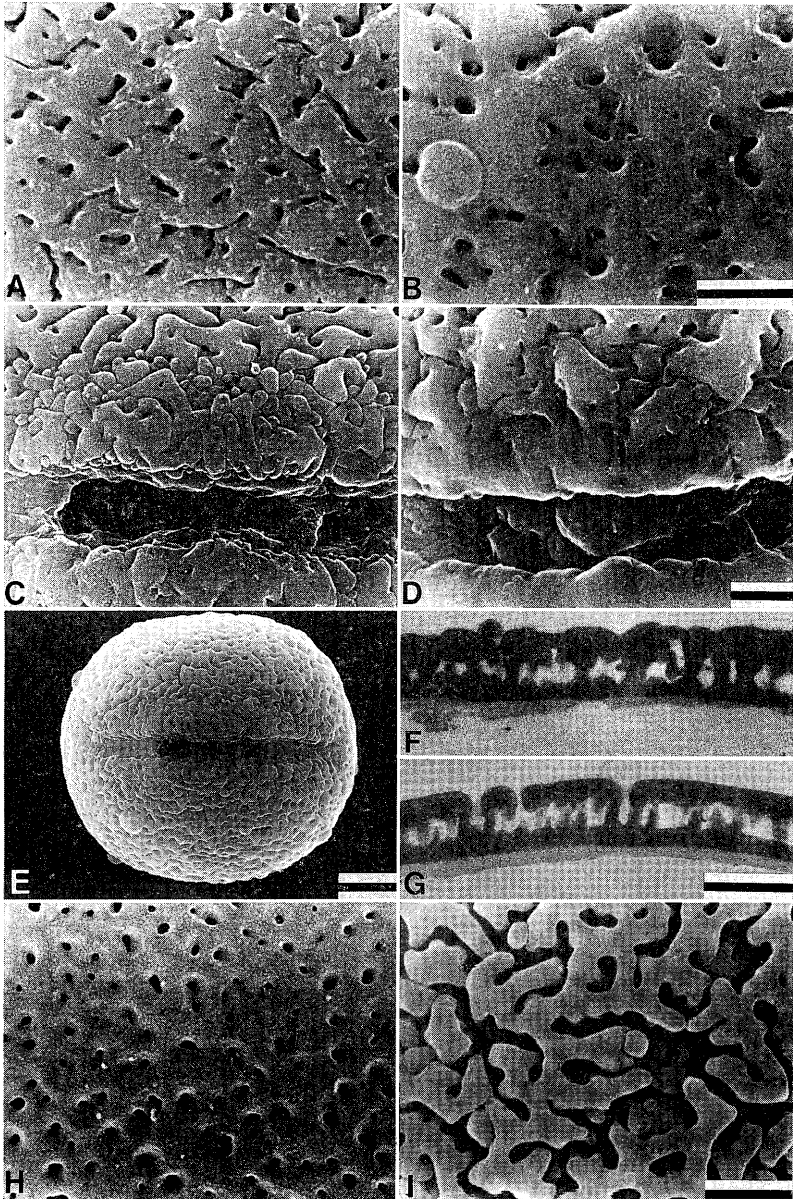




Fig. 3. Holotype of *Maackia taiwanensis* in TUS.

utrinque dense pubescentibus, decalvatis, petiolulis 3-5 mm longis. Inflorescentiae terminales, racemosae; bracteis lanceolato-oblongis, 1 mm longis, 0.5 mm latis; floribus 8-9 mm longis; pedicellis ca. 3 mm longis sub antheri, 5-6 mm longis sub fructu; calycibus campanulatis, ca. 4 mm longis, inaequaliter 5-lobulatis; 2 lobulis superis 3 lobulis inferis majoribus; corollis candidis; vexillis reflexis, 6-7 mm longis, laminis obovatis, emarginatis; alis semihastatis, 6.5-7.5 mm longis, laminis lanceolato-oblongis; carinis semihastatis, 7.5-8.5 mm longis, laminis obovatis. Legumina lato-lineares, 3-8 cm longi, 1-1.5 cm lati, glabri, 1-4 seminibus inculis, sutris superis leguminum alatis; alis 2-3 mm latis.

Tall tree up to 10 m high; branchlets greenish brown; lenticels pale brown and elliptic. Leaves exstipulate, odd-pinnate, (7-)11-13(-15) foliolate, 8-20 cm long, elliptic and ovate; rachises glabrous; exstipellate; leaflets more or less coriaceous, blades elliptic or ovate, 2.5-4.5 cm long, 1.0-1.5 cm wide, acute or obtuse at the apex, acute, obtuse or rotundate at the base, entire, both surfaces densely pubescent with short (about 1 mm long) yellowish-white hairs when young, later glabrescent, glabrous in maturity; petiolules 3-5 mm long, glabrous, sulcate above.

Inflorescences terminal, 6-9 cm long, racemose but branched near the base, branches 1-4, axis and each branch racemose, densely flowered, 3-7 cm long, rachis with dense short (0.1 mm long) pale-brown appressed hairs; bracts lanceolate-oblong, attenuate-acuminate at the apex, 1 mm long, 0.5 mm wide, abaxial surface hairy as the rachises. Flowers 8-9 mm long; pedicels about 3 mm long in anthesis, 5-6 mm long in fruit, hairy as the rachises; calyces campanulate, about 4 mm long, hairy outside as the rachis, calyx-tubes 1 mm long, unequally 5-lobulate, upper two lobules triangular, 1 mm long, 1.5 mm wide, reflexed, curved upwards along standard, lower three triangular, 0.5 mm long and 0.5 mm wide; corollae white; standards reflexed, claw 2.0-2.5 mm long, lamina obovate, emarginate, 4.0-4.5 mm long, 3.5-4.0 mm wide, very much thickened at the base; wings semihastate, claw 3.0-3.5 mm long, lamina lanceolate-oblong, 5.0-6.0 mm long, 2.0-2.5 mm wide; keel-petals semihastate, claw 3.0-3.5 mm long, lamina obovate, 5.0-6.0 mm long, 2.5-3.5 mm wide. Stamens free, curved upwards, about 7.0 mm long; anthers oblong to lanceolate-oblong. Pistils about 5.0 mm long; gynophores about 1.0 mm long; ovaries lanceolate, 3.5 mm long, with dense short (0.1 mm long) pale-brown appressed hairs; styles 0.5 mm long; stigmata inconspicuous.

Pods broad-linear, 3-8 cm long, 1-1.5 cm wide, glabrous, 1-4 seeded, upper sutures broadly winged, the wing 2-3 mm wide. Seeds oblong in the lateral view, reddish brown, 6.5-7.5 mm long, 4.0-4.5 mm wide, the hilum oblong, ca. 1 mm long, ca. 0.5 mm wide, the hilar rim inconspicuous.

Pollen grains tricolporate, oblate spheroidal to subprolate ( $P \times E$ : 11.9-15.3  $\times$  11.5-14.0  $\mu\text{m}$ ), circular in the polar view, compressed oval to elliptic in the equatorial view; colpi usually about 3/4 length of the polar axis; endapature circular or lolate to lalongate, diameter ca. 3  $\mu\text{m}$ ; exine surface sculpture weakly verrucate with foveolae to fine rugulate in the mesocolpium, verrucate with foveolae or rugulate with small verrucae around the colpus. Exine ca. 1.0  $\mu\text{m}$  thick; ectexine thick ca. 0.9  $\mu\text{m}$ ; tectum two times thicker than the foot layer; endexine very thin ca. 0.1  $\mu\text{m}$  thick.

Hab.: Taiwan. Taipei Co.: Mt. Tatun-shan, alt. 800-900 m, Aug. 22, 1984 (Y. Tateishi & T. Nemoto 18053 fl., holotype—TUS, isotypes—TUS, TI, TAI, A, E); l. c., Nov. 30, 1982 (Y. Tateishi, J. Murata, Y. Endo, T. Nemoto & Y. Ueno 16394 fr. TUS); l. c., Aug. 11, 1984 (Y. Tateishi, J. Murata & T. Nemoto 17425 bud TUS); l. c., Aug. 22, 1984 (Y. Tateishi & T. Nemoto 18054 fl. TUS); l. c., Oct. 19, 1984 (H. Ohashi & T. Nemoto 20794 fr., 20795 fr. TUS); l. c., Nov. 10, 1985 (Y. Tateishi & H. Hoshi 21458 fr. TUS); l. c., Sept. 1, 1985 (S. F. Huang 3145 fl. TUS); l. c., Sept. 27, 1984 (S. F. Huang fr. TUS); l. c., Oct. 26, 1985 (T. Sato 302 fr. TI).

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#### References

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台湾には、イヌエンジュ属の1種が分布することが知られている。これは、ハネミノイヌエンジュ (*M. floribunda* (Miq.) Takeda), シマエンジュ (*M. tashiroi* (Yatabe) Makino) またはその変種タイワンエンジュ (*M. tashiroi* var. *taiwaniana* Kanehira; ただし裸名) あるいはイヌエンジュ (*M. amurensis* Rupr. et Maxim. var. *buengeri* (Maxim.) C. K. Shun.) とされてきた。1982年から1985年に台湾で植物調査を行ない、本種についても、多数の良い標本を得ることが出来た。これをもとに、台湾産イヌエンジュ属植物の分類学的再検討を行なった。その結果、台湾産種は、本文中に述べたように、外部形態においても、花粉粒の形態においても、シマエンジュ、ハネミノイヌエンジュやイヌエンジュとは明かに異なる新種であることが明白となり、*M. taiwanensis* Hoshi et Ohashi と命名した。

□梅村 雪 (編): 梅村甚太郎日記抄 601pp. 図版7 pp. 1986. 自費出版. 本草学は江戸時代末期に名古屋で特に盛んであった。最後の本草家とも思われる梅村甚太郎翁 (1862, 11, 3~1946, 3, 21) の明治14年から昭和20年の敗戦の年までの日記から、次女の雪さんが選び編集したものである。梅村翁は牧野富太郎先生と同年に生まれ、植物採集には特に熱心だった。富士山のフロラや桜の研究、仏法僧の本態がミミズク的一种であることを明らかにされたことでも有名である。三男一女を病気や戦争で失い、日記は昭和20年1月29日の「敵機大阪方面へ来襲す」で終わっている。さまざまな場所の採集植物リストもあれば、明治、大正、昭和にわたる多くの植物学者の動静もこの日記により察知できる。最後に梅村雪「父の思い出」、吉川芳秋「思い出、梅村甚太郎先生と私」がある。非売品ではあるが、〒466 名古屋市 [ ] 梅村雪様宛に実費 3,000円を送れば、残部があれば求めることができる。 (木村陽二郎)