REFERENCES

AIRY SHAW, H. K. A dictionary of the flowering plants and ferns by J. C. Willis. 8th Rev. Ed. Cambridge 1973.

COOK, C. D. K. A revision of the genus *Rotala* (Lythraceae). *Boissiera* 29:. 1-156. 1979.

JOSEPH, K. T. AND V. V. SIVARAJAN. *Rotala* Linn. (Lythraceae) in peninsular India. *Proc. Indian Acad. Sci. (Plant Sci.)* 99(3): 179-197. 1989.

THE OCCURRENCE OF *PREMNA LUCIDULA* MIQ. (VERBENACEAE) IN INDIA

Premna flavescens Buch.-Ham. ex C.B. Clarke var. *glabrior* C. B. Clarke is found taxonomically identical with the Javanese *Premna lucidula* Miq., which brings to light the occurrence of *P. lucidula* in India. A description of the species is provided along with an illustration. *P. lucidula* Miq. is also lectotypified.

Clarke (1885) described two varieties under *Premna flavescens* Buch.-Ham. ex C.B. Clarke, non A. L. Juss. 1806 (=*Premna hamiltonii* J. L. Ellis), *viz.*, var. *glabrior* C.B. Clarke and var. *rubens* C.B. Clarke, based on material from Sikkim and Sylhet, and Malacca respectively. Ridley (1923 : 618) elevated var. *rubens* to the status of a species, *Premna rubens* (C.B. Clarke) Ridley. A study of material of var. *glabrior* housed in CAL showed that this variety too warrants the status of a species. However, this taxon is taxonomically identical with *Premna lucidula* Miq., a species so far thought to be confined to Java. *P. flavescens* var. *glabrior*, as a result, is synonymized under *P. lucidula* Miq. A detailed description of the species and an illustration are provided.

Premna lucidula Miq., Fl. Ind. Bat. 2 : 898. 1858 ; Backer & Bakh. f., Fl. Java 2 : 604. 1965. - *Type* : Miquel (*l.c.*) cited the type as "Java, in Patjitan (HORSF.)".

Thomas Horsfield (1773-1859), the American naturalist, was in Java (1800-1818) to make scientific investigations and some of Horsfield's plants were described by Miquel (Steenis-Kruseman, 1950 : 243, 244). According to Stafleu and Cowan (1979 : 336) Horsfield's herbarium and types are now at BM.

There are three sheets, numbered 1, 2 and 3 in pencil, at BM, collected by Horsfield in Patjitan, Java. All of them have been annotated as type specimen by R. M. Barker. Sheet No. 1 has two specimens, a large one on the left and a much smaller one at the right-hand bottom. The former, the identity of which could not be determined with certainty, has some resemblance to *Premna latifolia* Roxb., but it certainly is not *P. lucidula* Miq. The latter with a few mature fruits is *P. lucidula* Miq. Sheet No. 2 and 3 have one large, good specimen each ; both are *P. lucidula* Miq. As the specimen on sheet No. 3, albeit with only flower buds, resembles most with the description in the protologue, it is selected as lectotype.

P. flavescens Buch.-Ham. ex C. B. Clarke var. *glabrior* C. B. Clarke in Hook. f., Fl. Brit. India 4 : 578. 1885 ; H. J. Lam & Bakh. in Bull. Jard. Bot. Buitenzorg Ser. 3, 3 : 41. 1921 ; Fletcher in Kew Misc. Inform. 1938 : 420. 1938 ; Mold., Sixth Summ. Verbenac. etc. 568. 1980. - *Type* : *Herb. Ind. Or. Hook. fil. & Thomson, Premna* no. 24, Sylhet, *J. D. H. & T. T. s.n.* (K, lectotype, photo !). Clarke (*l.c.*) cited specimens from subtropical Sikkim and Sylhet. The one from Sylhet, a good specimen, is selected as lectotype.

Gumira lucidula (Miq.) Kuntze, Revis.

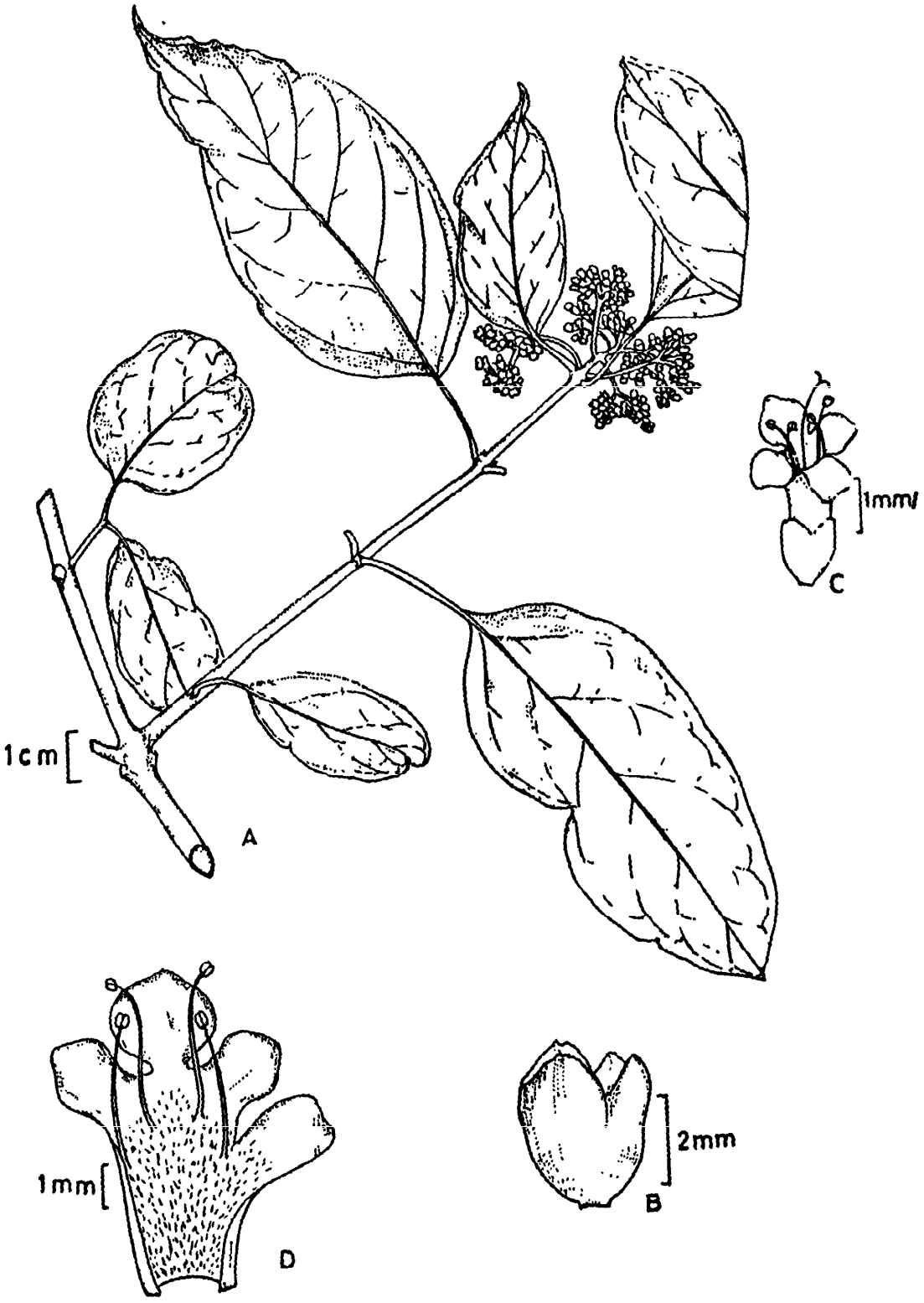


Fig. 1. A-D: *Premna lucidula* Miq.—A. Twig. B. Calyx. C. Flower. D. Corolla split open.

Gen. Pl. 2 : 508. 1891. - *Type* : as for *Premna lucidula* Miq.

Premna flavescens var. *rubens* sensu Mold., Sixth Summ. Verbenac. etc. 410. 1980, non C.B. Clarke 1885.

Trees, up to 10 m high; branches and branchlets subterete or obtusely 4-angular, sparsely villous; nodes annulate; internodes 1-8 cm long. Leaves oblong or ovate-elliptic, obtuse or subcordate at base, entire to undulate at margins, abruptly short-acuminate at apex, 6.5-18 × 3-8 cm, chartaceous, glabrous, dark green above, paler, villous on nerves beneath; lateral nerves 6-8 pairs, ascending, arcuate at margins, distinct beneath; petioles stout, canaliculate, 1.5-4 cm long, villous. Corymbs terminal, composed of 4-6 decussate-opposite cymes, 4-10 × 5-17 cm, villous throughout; peduncles obtusely 4-angular, 1-4 cm long; bracts linear-lanceolate *ca* 1 cm long; bractlets linear, *ca* 6 mm long; pedicels ca 1 mm long. Calyx cupular, *ca* 2 × 2 mm, 2-lipped, distinctly 4-toothed; teeth subacute, pubescent outside. Corolla infundibular, creamy-white, 2-lipped, 4-lobed; upper lip suborbicular, retuse, *ca* 2 × 2 mm; lower lip 3-lobed; lobes subequal, oblong, obtuse, *ca* 2 × 1.2 mm, glabrous; tube *ca* 3 × 2 mm, glabrous outside. Stamens 4, didynamous; filaments filiform, 3-4.5 mm long, glabrous; anthers ovoid, *ca* 0.2 mm, 2-celled, divaricate, black. Ovary subglobose, *ca* 1 mm across, glabrous; style slender, *ca* 4.5 mm long; stigma 2-lobed; lobes subulate. Drupes globose, *ca* 5 mm across, black; fruiting-calyx saucer-shaped, entire, *ca* 2 × 3 mm, membramous, villous (Fig. 1 : A-D).

Fl. & Fr. : May-Aug.

Distribution : India : Arunachal Pradesh, Sikkim and West Bengal, Burma, Java, Malaya and Thailand (Moldenke, 1980).

Moldenke (*l.c.*) recorded *P. flavescens* var. *glabrior* for Assam and Sikkim. We have not seen any specimen from the present Assam. It is recorded for Arunachal Pradesh and West Bengal here.

Kurz (Forest Fl. Burma 2 : 263. 1877) reported *P. lucidula* Miq. from the Andaman Islands. In the absence of a specimen from the Andamans in any Indian herbarium, *P. lucidula* sensu Kurz (1877), non Miq. (1858), as pointed out by Clarke (1885 : 575), appears to be only *Premna divaricata* Wallich ex Schauer.

Notes : *Premna lucidula* is represented by very few collections only and has not been collected in the states of Sikkim and West Bengal after the turn of this century. It seems to be a rare species in India.

Specimens examined : INDIA : Arunachal Pradesh, Kameng F.D., Bharabunda to Amartola, 8.5.1958, *G. Panigrahi* 15141 (CAL). Sikkim, Munpoo, Pudrowly, June 1874, *J. S. Gamble* 3610 A (CAL); Beechibong, 30.8.1874, *J. S. Gamble* 3610 C (CAL); Ryang, 2000′, 19.6.1877, *G. King* 4892 (CAL); Tista, 9.6.1908, *Ribu* 897 (CAL). West Bengal, Darjeeling, Chooatutee, 3000′, 2.6.1875, *C.B. Clarke* 26579 (CAL). INDONESIA : Java, Patjitan, *Horsfield s.n.* (3 sheets, syntypes, BM).

ACKNOWLEDGEMENTS

We are thankful to Dr. N. P. Balakrishnan, Joint Director, Botanical Survey of India, Coimbatore, for the facilities; to the Director (K) and Dr. N. P. Singh, then Indian Liaison Officer (K), for a photograph of the type of *P. flavescens* var. *glabrior*; to Dr. R. Vickery, Curator (BM), for sending the types of *P. lucidula* on loan, and to Dr. D. H. Nicolson (US), for help with some literature. AR is grateful to the Director, Botanical Survey of India, for a research fellowship during the tenure of which this work was carried out; he is also thankful to the officers-in-charge of ARUN, ASSAM, CAL, NEHU AND SHC for permission and facilities.

A. RAJENDRAN AND P. DANIEL
Botanical Survey of India, Coimbatore

REFERENCES

RIDLEY, H. N. The flora of the Malay Peninsula. Vol. II. London. 1923.

STAFLEU, F. A. AND R. S. COWAN Taxonomic literature. ed. 2, Vol. II. *Regnum Veg.* 98: 1-991. 1979.

STEENIS-KRUSEMAN, M. J. VAN. Malaysian plant collectors and collections. 5-606. *In*. Steenis, C. G. G. J. van (ed.), Flora Malesiana. Ser. I. Vol. I. P. Noordhoff Ltd., The Netherlands. 1950.