

NOTES RELATING TO THE FLORA OF BHUTAN: XVI
***Cromapanax lobatus*, a new genus and species from Bhutan**

A. J. C. GRIERSON†

Cromapanax lobatus Grierson, gen. et sp. nov. (Araliaceae) is described from Gaylegphug district, southern Bhutan. Its differences with the allied genus *Macropanax* are outlined, and some notes on ecology given.

***Cromapanax* Grierson, gen. nov.**

Macropanax Miquel similis sed foliis palmatim (3–)5-lobatis, subtus praesertim dense puberulis, pilis simplicibus 0.5–0.6mm longis instructis differt. *Flores* ignoti, pedicellis articulatis basi ovarii. *Fructus* ellipsoideus, leviter longitudinaliter costatus. *Styli* 2 subapicem connati; stylopodium plus minusve conicum.

Similar to *Macropanax* Miquel but differing in its leaves palmately (3–)5-lobed, densely puberulous especially beneath with simple hairs 0.5–0.6mm long. *Flowers* unknown; pedicels articulated at base of ovary. *Fruits* ellipsoid, weakly ribbed longitudinally. *Styles* 2, connate below apex; stylopodium more or less conical.

***Cromapanax lobatus* Grierson, sp. nov. Figs 1 & 2.**

Arbor c.4m alta, caulibus juvenibus simpliciter pubescentibus. *Folia* 20–22 × 18–24cm, lobis oblongo-ovatis, breviter acuminatis, basi cordatis, marginibus integris, subtus dense pubescentibus; petiolis 7–15cm longis. *Panicula* c.17cm longa, umbellis ultra 10 floribus, 2.5–3cm diametro. *Fructus* c.6 × 4mm, stylo 1.5–1.7mm longo.

Small tree to c.4m tall, young stems weakly longitudinally striate, pubescent with simple hairs. *Leaves* opposite, membranous, simple, broadly ovate in outline, 20–22 × 18–24cm, (3–)5-lobed; lobes oblong-ovate, shortly and abruptly acuminate; base cordate, margin entire, above sparsely pubescent, beneath paler and densely pubescent (especially on veins and margin) with simple 4–7-celled spreading hairs 0.5–0.6mm long; petiole 7–15cm, faintly ribbed, pubescent. *Flowers* unknown; pedicels articulated at base of ovary. *Panicles* (in fruit) glabrous, c.17cm long × c.8cm wide, umbels up to 10-flowered, 2.5–3cm diam. *Fruit* ellipsoid, c.6 × 4mm, longitudinally ribbed. *Style* 1.5–1.7mm long.

Type: Bhutan, Gaylegphug district, Lodrai Kholā near Gaylegphug, 26°54'N, 90°31'E, steep valley with thinned subtropical forest, 340m, 'small tree 4m, unarmed; old fruit collected', 21 iii 1982, *Grierson & Long* 3897 (holo. E).

*Cromapanax** most closely resembles *Macropanax* in being a small unarmed tree, the umbels in panicles and pedicels articulate at the base of the ovary. *Styles* are 2, connate almost to the apex, the fruit weakly ribbed and the style base somewhat conical. It

†Andrew Grierson died on 11 September 1990.

*Name derived from a rearrangement of the letters of the first syllable of *Macropanax*.

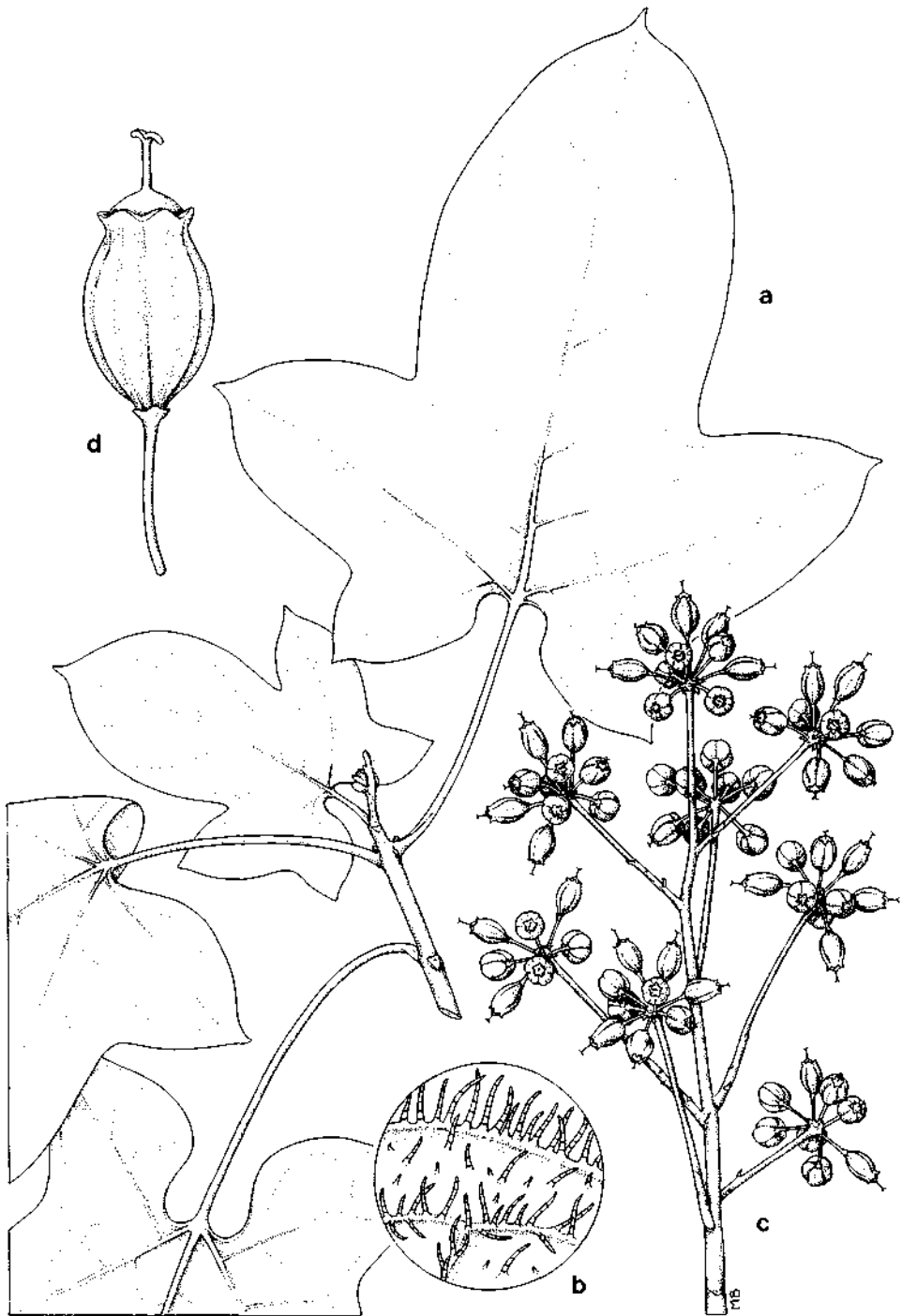


FIG. 1. *Cromapanax lobatus* Grierson drawn from the holotype: a, leafy shoot $\times \frac{1}{2}$; b, leaf indumentum $\times 18$; c, fruiting inflorescence $\times 1$; d, fruit $\times 5$. Drawn by Mary Bates.



FIG. 2. *Cromapanax lobatus* Grierson. Holotype (E).

differs from *Macropanax* in having leaves simple and palmately lobed (not palmately 3–5-foliolate) and bearing, especially beneath, an indumentum of simple hairs.

Other East Himalayan genera with simple, palmately lobed leaves are *Merrillioanax*, which differs in its stellate indumentum, pedicels not articulated, and styles free to base; also *Brassaiopsis* and *Trevesia* which differ in their prickly stems, stellate indumentum and non-articulated pedicels; *Brassaiopsis* also differs in having 2 styles connate to apex, and *Trevesia* with 10 connate styles.

The single collection of this distinctive new genus was made during botanical exploration of southern Bhutan by Grierson and Long in 1982. Unfortunately at the time, no taxonomic work on the Araliaceae of Bhutan had been done and the significance of the collection was not recognized. Clearly the species is extremely rare, and in such a habitat must be considered endangered. It is very desirable that the area be revisited and the plant re-collected, particularly in flowering condition, and to evaluate its status and more detailed ecology.

The Lodrai Khola is a small river valley running north–south from the Bhutan foothills to the plains (terai) of India. The forest on the plains has largely been cleared for agriculture. The vegetation clothing the lowest slopes of the Bhutan foothills around Gaylegphug would in the past have consisted of rich subtropical jungle. Logging for important timber species, followed by grazing and burning have degraded much of this forest, particularly on gentler slopes. However, in steep-sided stream valleys, gullies and less accessible areas, refugia of the indigenous forest survive with an extremely rich and diverse subtropical flora; in such a small valley *Cromapanax* was discovered.

The Gaylegphug area is well-known for having several very local, endangered species, such as *Hoya bhutanica* Grierson & Long, as well as many tropical species generally very rare in Bhutan and the East Himalaya, such as *Aesculus assamica* Griff., *Indofevillea khasiana* Chatterjee, *Miquelia assamica* (Griff.) Long, *Mitrephora harai* Ohashi, and *Pterospermum blumeianum* Korthals.

The following species were recorded in 1982 associated with *Cromapanax* in the Lodrai Khola valley: the trees *Actinodaphne obovata* Bl., *Calophyllum polyanthum* Choisy, *Ficus cyrtophylla* Miq., *Garcinia sopsopia* (Ham.) Mabberley, *Gynocardia odorata* R.Br., *Knema tenuinervia* de Wilde, *Litsea panamanja* (Nees) Hook.f., *Mitrephora harai* Ohashi, *Ostodes paniculata* Bl., *Pterospermum blumeianum* Korthals, and *Pterygota alata* R. Br.; the climbers *Beaumontia grandiflora* Wall. and *Trichosanthes truncata* Clarke; the shrubs *Ardisia solanacea* Roxb., *Ehretia wallichiana* Clarke, *Lepisanthes senegalensis* (Poir.) Leenhouts, *Murraya paniculata* (L.) Jack, *Oxyceros fasciculata* (Roxb.) Yamazaki, *Pavetta subcapitata* Hook.f., and *Piper mullesua* D. Don; and the herbs *Elatostema lineolatum* Wight and *E. platyphyllum* Wedd..

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