

Andrographis paniculata (Burm. f.) Nees

Standardized Common Name: Andrographis

Other Common Names: Indian Chiretta, Kalmegh, Kariyat, Kiryat

Family: Acanthaceae

Taxonomy: There are about twenty species in the genus, all native to tropical Asia and most of limited distribution. No complete modern treatment exists, and much herbarium material appears to be misidentified. The basionym of *A. paniculata*, one of two widespread species, is *Justicia paniculata* Burm. f.; *A. subspathulata* C. B. Clarke is another synonym.

Description: Herb, (30–)40–90 cm high, branching, erect; stems quadrangular. Leaves opposite, short-petioled or sessile, lanceolate, 3–8 cm long, (0.75–)1–2(–2.5) cm broad, glabrous; apex acute to acuminate, often asymmetrical; base cuneate to attenuate. Inflorescences lax, terminal and axillary panicles or racemes, or flowers rarely solitary; inflorescence branches subtended by small leaflike bracts, flowers usually subtended by two linear bracteoles. Flowers bilaterally symmetrical; calyx fused at base, 5-lobed, the lobes 2.5–4 mm long, narrowly lanceolate, glandular-pubescent; corolla 7.5–12.5 mm long, white or purple-spotted or purplish, bilabiate with lips almost as long as corolla tube, the upper lip 3-lobed, the lower-lip 2-lobed, narrower and reflexed with purplish color inside near the base; stamens 2, protruding from corolla, pubescent; filaments fused to corolla, the free part ca. 4 mm long; anthers ca. 2 mm long, bearded, purplish or dark; ovary 2-locular. Fruit a capsule, linear, (15–)17–20 mm long, laterally compressed, 6–12-seeded; seeds somewhat square in cross-section, with a wrinkled surface.

Parts in Commerce: Leaves and flowers

Identification:

Leaves

- Lanceolate, 3–8 cm long, (0.75–)1–2(–2.5) cm broad
- Base cuneate, tapering into short petiole or leaf nearly sessile
- Apex acute to acuminate, often somewhat curved to one side
- Margins entire or with extremely shallow crenation, giving an inconspicuously notched or wavy appearance
- Upper surface dark green; lower surface pale green
- Venation pinnate, secondary veins curving toward apex; midrib and secondary veins usually visible on both sides of leaf
- Glabrous or bearing minute inconspicuous hairs
- Taste bitter

Flowers

- Stem fragments quadrangular or 4-ridged
- Inflorescences lax, axillary and terminal racemes or panicles
- Bracts leaflike, smaller than leaves
- Each flower usually subtended by two small linear bracteoles
- Sepals 5, 2.5–4 mm long, narrowly lanceolate, acute, fused only at base
- Sepals and pedicels densely pubescent with fine, long-stalked glandular hairs
- Corolla 7.5–12.5 mm long, bilabiate; upper lip 3-lobed, erect; lower lip narrower, 2-lobed, reflexed in full flower
- Corolla whitish to purplish, usually with purplish spots, pubescent
- Stamens 2, protruding from corolla
- Filaments pubescent
- Anthers purplish or dark, with tuft of white hairs below attachment to filament

Adulterants: Reported adulterants or substitutes include *Indoneesiella echioides* (L.) Sreemadh. and a poorly defined species of *Swertia* (which belongs to the gentian family), possibly *S. cordata* (Wallich ex G. Don) C. B. Clarke. The former, previously known as *Andrographis echioides* (L.) Nees, often has an obtuse leaf apex and/or a rounded leaf base, and the leaves may be sparsely pubescent. The flow-

ers are borne in one-sided axillary racemes and are larger than those of *A. paniculata*. *Swertia* has 4–5 stamens and a radially symmetrical corolla; the leaves normally have 3 to several main veins from the base rather than a single midrib.

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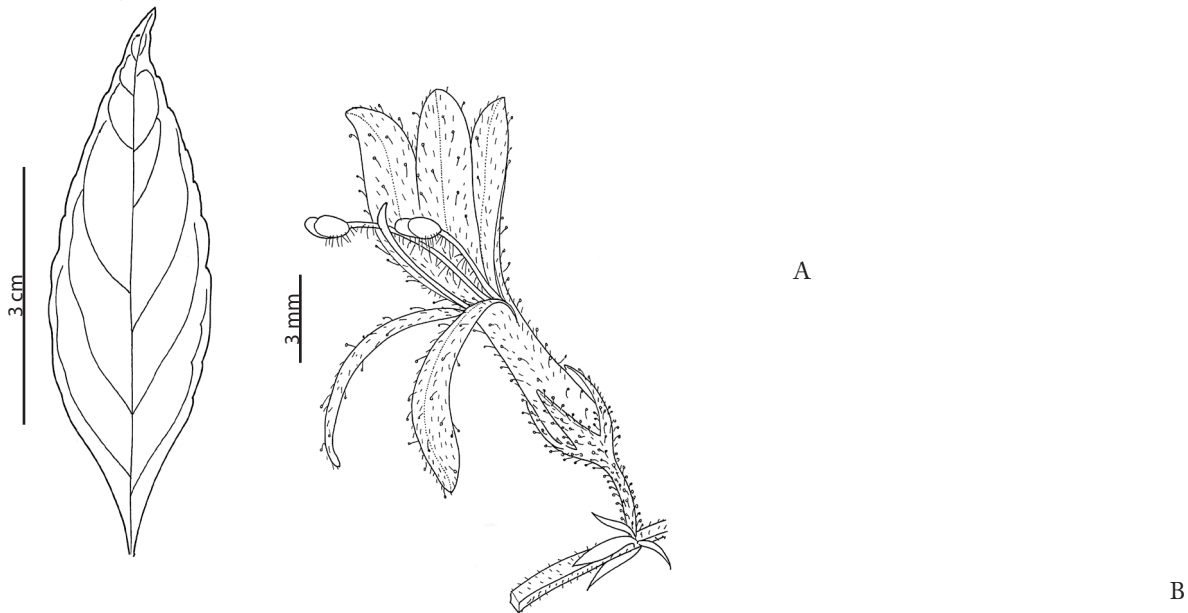


Figure 5: a–b, *Andrographis paniculata* leaf and flower.