

## New Additions to the angiospermic flora of Nagaland, India

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### Abstract

Botanical survey conducted to the North-Eastern states of India has resulted in the addition of 13 angiospermic taxa [*Anaphalis royleana* DC., *Boehmeria penduliflora* Wedd. ex D.G.Long, *Byttneria pilosa* Roxb., *Cirsium verutum* (D.Don) Spreng., *Glochidion multiloculare* var. *pubescens* Chakrab. & Gangop., *Inula cuspidata* (Wall. ex DC.) C.B.Clarke, *Myriactis wallichii* Less., *Phyllanthus rheedei* Wight, *Sarcochlamys pulcherrima* Gaudich, *Swertia ciliata* (D. Don ex G. Don) B.L. Burt, *Symplocos sumuntia* Buch.-Ham. ex D. Don, *Tetrastigma serrulatum* (Roxb.) Planch. and *Uraria crinita* (L.) DC.] which form new distributional record to the State of Nagaland in India. The information is presented here with brief botanical description, distribution, phenology, habitat and photographs.

**Key words:** Angiosperm, Flora, Nagaland, New additions, North-East India

### INTRODUCTION

To strengthen the National Herbarium of Medicinal Plants (FRLH) in Foundation for Revitalisation of Local Health Traditions (FRLHT), Bengaluru, India, the botanical team had undertaken floristic surveys in the forests of Dimapur, Peren and Kohima districts of Nagaland state during September 2015. During this extensive field exploration, the authors have collected several plant specimens (200 voucher specimens), of which, based on critical study, 13 plant taxa are interesting and show new distributional report to Nagaland state. These specimens were confirmed by referring various literature (Hooker 1872 – 1897; Kanjilal *et al.* 1934 – 1940; Balakrishnan 1981, 1983; Chowdhery & Wadhwa 1984; Haridasan & Rao, 1985, 1987; Sanjappa 1992; Chaudhuri 1993; Sharma & Sanjappa 1993; Hajra *et al.* 1995a,b; Chauhan 1996; Chowdhery *et al.* 1996, 2008; Polunin & Stainton 1997; Singh *et al.* 2000a,b; Singh 2001; Kumar & Singh 2001; Singh *et al.* 2002; Balakrishnan *et al.* 2012) and also the specimens were compared with authentic herbarium specimens deposited at Botanical Survey of India, Shillong, Kolkata and Kew Digital Herbarium. All the 13 plant taxa namely *Anaphalis royleana*, *Boehmeria penduliflora*, *Byttneria pilosa*, *Cirsium verutum*, *Glochidion multiloculare* var. *pubescens*, *Inula cuspidata*, *Myriactis wallichii*, *Phyllanthus rheedei*, *Sarcochlamys pulcherrima*, *Swertia ciliata*, *Symplocos sumuntia*, *Tetrastigma serrulatum* and *Uraria crinita* are presented here in alphabetical order with updated nomenclature, family, phenology, habitat, distribution and specimens examined. All the voucher specimens are deposited at FRLH Herbarium, Bengaluru.

## TAXONOMIC ENUMERATION

***Anaphalis royleana*** DC., Prodr. 6: 272. 1838; Hook.f., Fl. Brit. India 3: 280. 1881; Hajra *et al.*, Fl. India 13: 71 & 72. 1995; Chowdhery *et al.*, Fl. Arunachal Prad. 2: 4. 2008. (**Asteraceae**) [Plates 1a & 2a]

Herbs, up to 50 cm high; branches erect, white tomentose. Leaves sessile, adnate to stem, linear-oblong or oblong-lanceolate, 2-5 x 0.2-0.4 mm, decurrent at base, entire, recurved at margins, acute at apex, 1-veined, upper side appressed, scaberulous hairy above, white tomentose beneath. Capitula *c.* 9 mm, densely arranged in corymbs; peduncles greyish white tomentose, as long as inflorescence. Involucre *c.* 5 mm long; phyllaries white, glabrous; outer ones ovate, shorter than florets; middle ones ovate-oblong, longer than florets; inner ones linear-oblong, as long as disc. Achenes young, flat.

**Flowering & Fruiting:** August – October.

**Habitat:** Less common, found along the edges of evergreen forest.

**Distribution:** Bhutan, China, northern Myanmar, Nepal, Pakistan, Tibet, Taiwan and India. In India, this species is reported from Arunachal Pradesh, Jammu & Kashmir, western and eastern Himalaya, Sikkim and now collected from Nagaland.

**Specimens examined:** INDIA: Nagaland, Kohima district, Dzuleke village, 1810 m, 27<sup>th</sup> September 2015, K. Ravikumar, T.S. Suma & A.C. Tangavelou 119375 (FRLH).

***Boehmeria penduliflora*** Wedd. ex D.G. Long, Notes Roy. Bot. Gard. Edinburgh. 40: 130. 1982; Chauhan, Contrib. Fl. Namdapha, Arunachal Prad. 291. 1996. *B. penduliflora* Wedd. in Ann. Sci. Nat. ser. 4, 1: 199. 1854, *nom. nud.* *B. macrophylla* D. Don, Prodr. Fl. Nep. 60. 1825, *auct. non* Hornem; Hook.f., Fl. Brit. India 5: 577. 1888; Kanjilal *et al.*, Fl. Ass. 4: 288. 1940. (**Urticaceae**) [Plates 1b & 2b]

Shrubs, up to 3 m high; branches 4-angled to terete, densely strigose. Leaves narrowly lanceolate, *c.* 25 × 4.5 cm, rounded at base, serrulate at margin, caudate-acuminate at apex, chartaceous, 3-nerved at base and reaching up to apex, upper side sparsely pubescent along nerves, brownish, lower side strongly rugose and sparsely strigose. Female spikes unbranched, up to 40 cm long.

**Flowering & Fruiting:** August – November

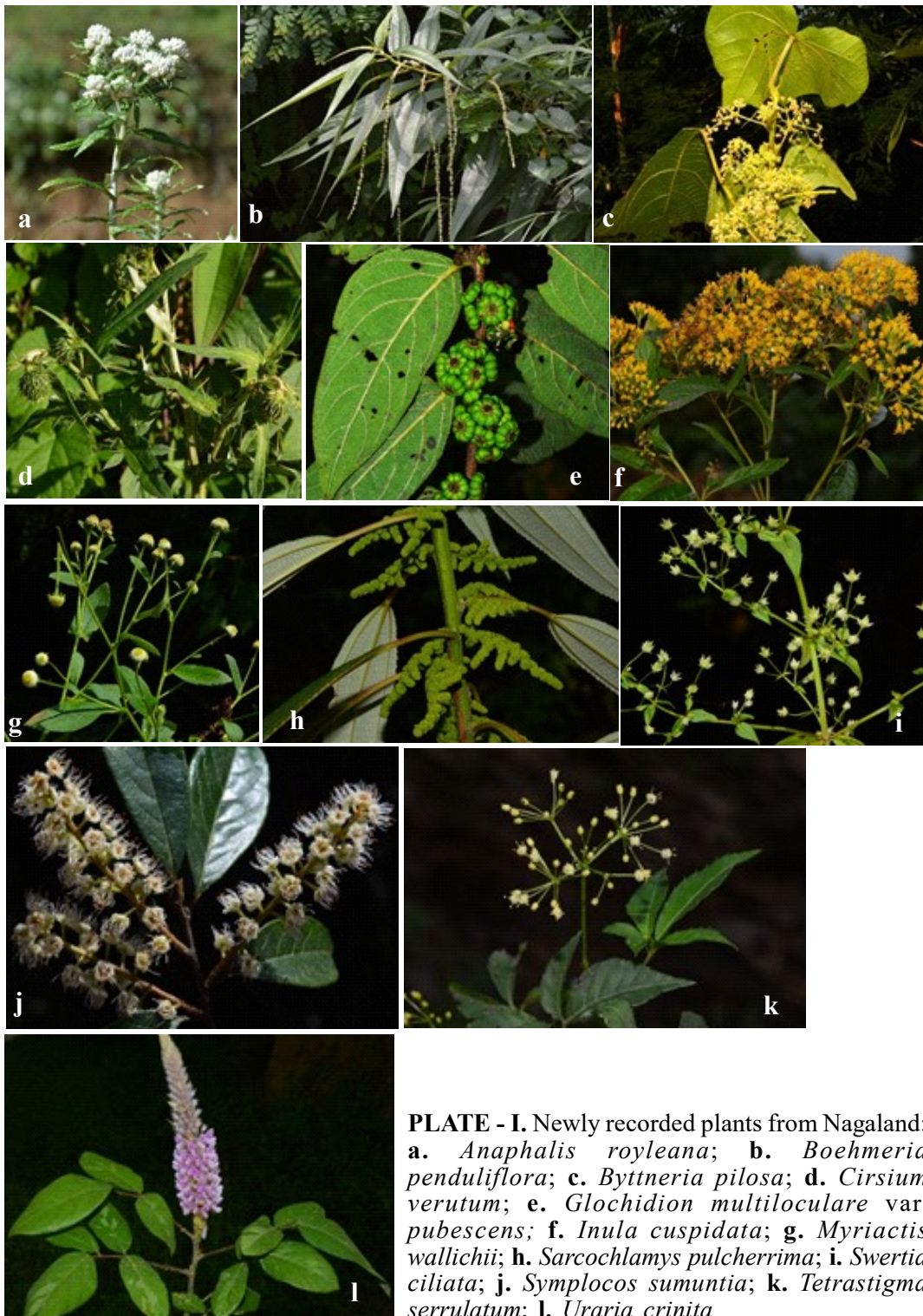
**Habitat:** Dry deciduous forests near small streamlets.

**Distribution:** Bhutan, China, Myanmar, Nepal, Thailand, Vietnam and India. In India, it is reported from Arunachal Pradesh, Meghalaya, Sikkim and now from Nagaland state.

**Specimen examined:** INDIA: Nagaland, Dimapur district, Chumukedima hills, 215 m, 26<sup>th</sup> September 2015, K. Ravikumar, T.S. Suma & A.C. Tangavelou 119332 (FRLH).

***Byttneria pilosa*** Roxb., Fl. India 1: 618, 381. 1824; Hook.f., Fl. Brit. India 1: 377. 1874; Kanjilal *et al.*, Fl. Ass. 1: 160. 1934; Sharma *et al.*, Fl. India 3: 414. 1993; Singh *et al.*, Fl. Manipur 1: 176. 2000. (**Sterculiaceae**) [Plates 1c & 2c]

Climbing shrubs; branches grooved, brownish when dry, stellate hairy. Leaves orbicular or ovate, shortly 3-5 lobed, 12- 20 × 11-19 cm, cordate at base, serrulate at margin, acuminate at apex, membranous, stellate-pilose on both sides, *c.* 9-nerved at base; petiole grooved or striated, *c.* 15 cm long, tomentose. Inflorescence a cyme, axillary, few-flowered. Flowers small, many branched, pubescent; bracteoles subulate-slender, *c.* 5 mm long. Sepals subulate-ovate, *c.* 3 × 1 mm long, glabrous above, hairy below. Petals yellow, incurved, shorter than



**PLATE - I.** Newly recorded plants from Nagaland:  
**a.** *Anaphalis royleana*; **b.** *Boehmeria penduliflora*; **c.** *Byttneria pilosa*; **d.** *Cirsium verutum*; **e.** *Glochidion multiloculare* var. *pubescens*; **f.** *Inula cuspidata*; **g.** *Myriactis wallichii*; **h.** *Sarcochlamys pulcherrima*; **i.** *Swertia ciliata*; **j.** *Symplocos sumuntia*; **k.** *Tetrastigma serrulatum*; **l.** *Uraria crinita*

sepals, lobes obtuse. Stamines partly connate, *c.* 1 cm long. Ovary globose, *c.* 1 mm long, verrucose; style about as long as the ovary.

*Flowering:* August – September

*Habitat:* Deciduous forest, commonly found along the periphery of the forest.

*Distribution:* Bangladesh, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam and India. In India, it is reported from Assam, Meghalaya, Manipur, Sikkim, West Bengal and now reported from Nagaland.

*Specimen examined:* INDIA: Nagaland, Kohima district, Mezoma, 360 m, 29<sup>th</sup> September 2015, K. Ravikumar, T.S. Suma & A.C. Tangavelou 119438 (FRLH).

***Cirsium verutum*** (D. Don) Spreng., Syst. Veg., ed. 16.3: 370. 1826; Hajra *et al.*, Fl. India 12: 171. 1995. *Cnicus verutus* D. Don, Prodr. Fl. Nepal. 167. 1825. *C. involucreatum* DC., Prodr. 6: 639. 1838. *C. involucreatum* var. *horrida* (Hook.f.) Balakr., Fl. Jowai 1: 256. 1981. *C. involucreatum* var. *horrida*, Hook.f., Fl. Brit. India 3: 326. 1881. (**Asteraceae**) [Plates 1d & 2d]

Shrubs, up to 3 m tall; branches terete, shallowly winged, hairy. Leaves sessile, oblanceolate, *c.* 15 × 9 cm, pinnati-partite, semi-amplexicaule at base; lateral spinules 3-5 mm long; apical spine *c.* 5 mm long, basal teeth sometimes spiniform. Bracts ovate, *c.* 10 × 5 mm, spiny at margin. Capitula corymbose. Involucre campanulate, 3-5 × *c.* 5 mm, glabrous or sparsely silky. Phyllaries imbricate in 5-7 rows; outer and middle phyllaries 1.5-2.5 mm, florets bisexual. Corolla whitish, *c.* 2.8 cm long. Achenes subflattened, dark, *c.* 3.5 mm long. Pappus bristles brownish or pale whitish, up to 2.5 cm long.

*Flowering & Fruiting:* July – September

*Habitat:* Common in evergreen forests.

*Distribution:* Afghanistan, Bhutan, China, Nepal, Pakistan and India. In India, it is reported from Jammu & Kashmir, Himachal Pradesh, Uttar Pradesh, Sikkim, Meghalaya and now collected from Nagaland.

*Specimen examined:* INDIA: Nagaland, Peren district, Benreu village (near Government Middle School), 1890 m, 29<sup>th</sup> September 2015, K. Ravikumar, T.S. Suma & A.C. Tangavelou 119487 (FRLH).

***Glochidion multiloculare*** (Rottler ex Willd.) Voigt var. *pubescens* Chakrab. & Gangop. in J. Econ. Taxon. Bot. 14: 720. 1990; Balakrishnan *et al.* Fl. India 23: 427. 2012. (**Phyllanthaceae**) [Plates 1e & 2e]

Trees, up to 8 m tall; stem hollow inside. Leaves elliptic-lanceolate, 8-11 × 3-4.5 cm, cuneate at base, entire at margins, acute-acuminate at apex; lateral nerves *c.* 7 pairs, appressed hairy above, pubescent below; petioles up to 6 mm long. Fruiting inflorescences fascicled in leaf axil; peduncles subsessile, *c.* 3 mm. Capsules depressed globose, 8-10 grooved, *c.* 1 × 1 cm, glabrous; seeds subglobose, *c.* 5 × 2 mm, subacute at apex, glabrous, red when mature.

*Fruiting:* July – September.

*Habitat:* Occasional in evergreen forest.

*Distribution:* Endemic to tropical forests of India and reported from Assam, Sikkim and now recorded from Nagaland.

*Specimen examined:* INDIA: Nagaland, Kohima district, Dzuleke village, 1900 m, 27<sup>th</sup> September 2015, *K. Ravikumar, T.S. Suma & A.C. Tangavelou 119420* (FRLH).

***Inula cuspidata*** (Wall. ex DC.) C.B. Clarke, Compos. Ind. 125. 1876; Hook.f., Fl. Brit. India 3: 296, 1881; Hajra *et al.*, Fl. India 13: 15. 1995. *Amphiraphis cuspidata* DC., Prodr. 5: 343. 1836. (Asteraceae) [Plates 1f & 2f]

Herbs, up to 80 cm high; branches striate; young stems minutely pubescent. Leaves elliptic-lanceolate, 6.5-12.5 × 1-3 cm, acute at base, serrulate at margins, shortly acuminate at apex, glabrescent above, minutely pubescent below; petioles 1-1.5 cm long, glabrous. Head in terminal panicle or corymbose, up to 1-2 cm long; peduncles 6-8 cm long, minutely pubescent. Ray florets *c.* 10, *c.* 8 mm long, 2-3 lobed. Disc florets *c.* 5 mm long, 5-lobed. Achenes slender, *c.* 3 mm long, silky; pappus *c.* 5 mm long.

*Flowering & Fruiting:* August – October

*Habitat:* Common in road cuttings and on rocks in evergreen forests.

*Distribution:* Bhutan, China, Nepal Pakistan and India. In India, it is reported from Jammu Kashmir, Himachal Pradesh, Himalayas, Sikkim, Uttar Pradesh, and now recorded from Nagaland.

*Specimen examined:* INDIA: Nagaland, Peren district, near Commemoration point (Khonoma Forest Entrance) Khonoma village, Kohima district, 1950 m, 27<sup>th</sup> September 2015, *K. Ravikumar, T.S. Suma & A.C. Tangavelou 119410* (FRLH).

***Myriactis wallichii*** Less. in Linnaea 6: 129. 1831; Hook.f., Fl. Brit. India 3: 247. 1881; Hajra *et al.*, Fl. India 12: 135. 1995; Chowdhery *et al.*, Fl. Arunachal Pradesh 2: 34. 2008. (Asteraceae) [Plates 1g & 2g]

Herbs, up to 60 cm high; stems erect, strigose or glabrescent. Leaves narrowly lanceolate, 3.5-5 × 2-3.5 cm, abruptly attenuate at base, serrate or repand at margins, obtuse to mucronate at apex, sparsely white hairy; petioles narrowly winged, base slightly expanded or auriculate-clasping. Capitula hemispheric, 6-10 mm across, in paniculate-corymbiform cymes; pedicels slender, up to 1.5 cm long. Phyllaries 2-seriate, subequal, oblong or oblanceolate, *c.* 3 mm long, sparsely pubescent at base. Ray florets 2- or 3-seriate, white turning pinkish. Achenes flat, *c.* 3.5 mm, shortly beaked, smooth, viscid secretion at apex.

*Flowering & Fruiting:* September – November

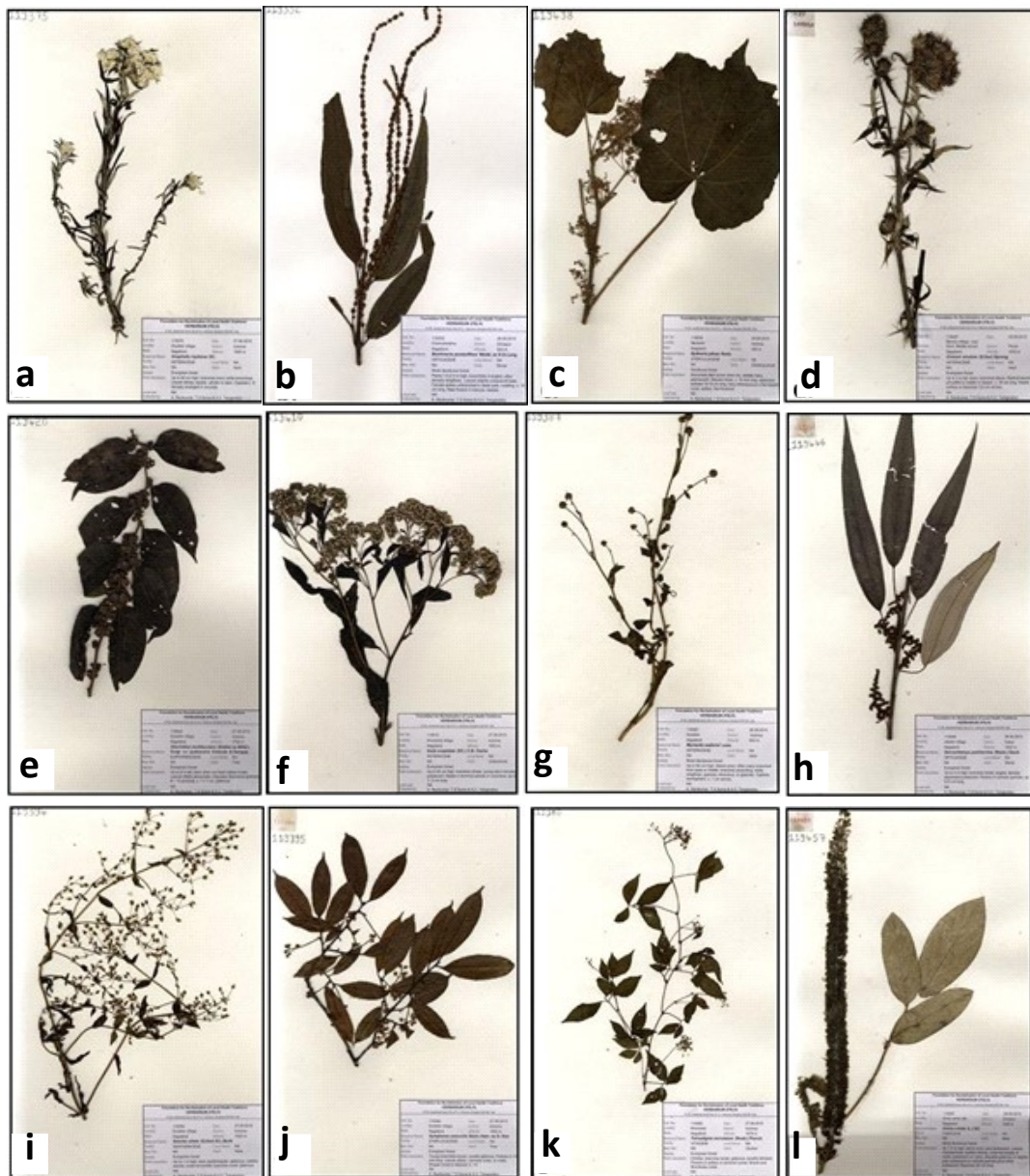
*Habitat:* Common in shady places and around water bodies in evergreen forests.

*Distribution:* Afghanistan, Bhutan, China, Indonesia, Myanmar, Nepal, Pakistan, Thailand, Vietnam, SW Asia (Caucasus, Iran) and India. In India, it is reported from Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttar Pradesh and now recorded from Nagaland.

*Specimen examined:* INDIA: Nagaland, Kohima district, Dzuleke village, 1900 m, 27<sup>th</sup> September 2015, *K. Ravikumar, T.S. Suma & A.C. Tangavelou 119387* (FRLH).

***Phyllanthus rheedei*** Wight, Icon. Pl. Ind. Orient. 5: 25, t. 1895, f. 1. 1852 (as *rheedii*) p.p., excl. syn. *P. niruri* Rheede: Hook.f., Fl. Brit. India 5: 293. 1887; Gamble, Fl. Madras 2 (7): 1298. 1925 (repr. ed. 2: 902. 1957); Chaudhary & Rao in Phytotaxonomy 2: 153. 2002, p. p.; Gangop. *et al.* in J. Econ. Taxon. Bot. 28: 588. 2004; Chakrabarty *et al.* in Balakrishnan *et al.*, Fl. India 23: 474. 2012. *P. kozhikodianus* Sivar. & Manilal in J. Indian Bot. Soc. 56: 165, ff. 1-6. 1977; Sivar. & Joseph in Bombay Nat. Hist. Soc. 77: 369. 1980. (Phyllanthaceae)





**PLATE - II.** Images of voucher specimens collected from Nagaland: **a.** *Anaphalis royleana*; **b.** *Boehmeria penduliflora*; **c.** *Byttneria pilosa*; **d.** *Cirsium verutum*; **e.** *Glochidion multiloculare* var. *pubescens*; **f.** *Inula cuspidata*; **g.** *Myriactis wallichii*; **h.** *Sarcochlamys pulcherrima*; **i.** *Swertia ciliata*; **j.** *Symplocos sumuntia*; **k.** *Tetrastigma serrulatum*; **l.** *Uraria crinita*

Herbs, up to 60 cm high. Stem slightly angled, glabrous. Leaves ovate-obovate to obovate-elliptic, 12-20 × 7-10 mm, cuneate at base, entire at margins, apiculate at apex, glaucous beneath and glabrous; lateral nerves obscure. Petioles *c.* 1 mm long. Male flowers *c.* 2 mm across, in axillary fascicles; tepals 6, unequal, ovate-obovate, 2-5 mm long, obtuse at apex. Female flowers, *c.* 2 mm across, in solitary, axillary; pedicels angled, *c.* 2.5 mm long; tepals

6, ovate-obovate, rounded at apex. Capsules depressed globose, *c.* 1.2 mm across, with accrescent tepals, glabrous; seeds trigonous, striate.

*Flowering & Fruiting:* August – November

*Habitat:* Abundant along shady places in moist forests.

*Distribution:* Indonesia, Pacific Islands, Sri Lanka, West Indies and India. This species is common in tropical regions of India now reported from Nagaland.

*Specimen examined:* INDIA: Nagaland, Dimapur district, Chumukedima 215 m, 26<sup>th</sup> September 2015, *K. Ravikumar, T.S. Suma & A.C. Tangavelou 119305* (FRLH).

***Sarcochlamys pulcherrima* (Roxb.) Gaudich. in Bot. Voy. Bonite. t. 89.1852; Hook.f., Fl. Brit. India 5: 588. 1888. *Urtica pulcherrima* Roxb., Fl. Ind. 3: 588. 1832; Chowdhery *et al.*, Fl. Arunachal Prad. 2: 423. 2008. (Urticaceae) [Plates 1h & 1h]**

Shrubs, up to 4 m high; branches terete or angled, densely appressed pubescent. Leaves narrowly lanceolate, 16-23 × 3-4 cm, cuneate or sub-rounded at base, serrate-dentate at margin, acuminate at apex, coriaceous, upper surface dark green, sub-glabrous, lower surface greyish tomentose, appressed pubescent on nerves; lateral nerves 3-nerved at base reaching up to apex; petioles terete, up to 5 cm long, appressed pubescent. Stipules triangular-ovate, *c.* 4 mm long, broaden at base. Inflorescence cymose panicles, up to 6 cm long. Achenes minute, ovoid, *c.* 0.5 mm, brownish.

*Flowering & Fruiting:* August – November

*Habitat:* Less common in shady localities and around water courses in moist deciduous forests.

*Distribution:* Bhutan, China, Indonesia, Myanmar, Thailand and India. In India, it is reported from Arunachal Pradesh, Assam, Meghalaya, Sikkim and now recorded from Nagaland.

*Specimen examined:* INDIA: Nagaland, Peren district, Jalukie village, 490 m, 28<sup>th</sup> September 2015, *K. Ravikumar, T.S. Suma & A.C. Tangavelou 119446* (FRLH).

***Swertia ciliata* (D. Don ex G. Don) B.L. Burtt in Notes Roy. Bot. Gard. Edinburgh 26: 272. 1965. *Ophelia ciliata* D. Don ex G. Don, Gen. Hist. 4: 178. 1837. *Swertia purpurascens* Fl. Orient. 347. 1888.; Kanjilal *et al.*, Fl. Ass. 2: 325. 1938. (Gentianaceae) [Plates 1i & 3i]**

Herbs, up to 50 cm high; stem quadrangular, weak, glabrous. Leaves sessile, ovate-lanceolate, 2-5 × 0.5-2 cm long, obtuse at base, entire at margins, acute at apex, glabrous, 5-6 nerved at base. Inflorescences paniculate cymes, many flowered, spreading. Flowers 5-merous, *c.* 1.3 cm across, white; pedicel sub-quadrangular, filiform, glabrous, 1.5-2 cm long. Fruiting calyx ovate, 3 × 2 mm across, 3-5-nerved at base. Capsules ovoid, *c.* 7 × 3 across, glabrous; seeds ovoid-subglobose, *c.* 1 mm across, glabrous, pale brownish.

*Fruiting:* August – October

*Habitat:* Common in dense shady areas in evergreen forests.

*Distribution:* Afghanistan, Burma, China, Pakistan, Nepal, Thailand and India. In India, it is reported from Assam, Kashmir, Meghalaya, Sikkim and now recorded from Nagaland.

*Specimen examined:* INDIA: Nagaland, Kohima district, Dzuleke village, 1900 m, 27<sup>th</sup> September 2015, *K. Ravikumar, T.S. Suma & A.C. Tangavelou 119394* (FRLH).

***Symplocos sumuntia* Buch.-Ham. ex D. Don, Prodr. Fl. Nep. 145. 1825; Hook.f., Fl. Brit. India 3: 578. 1882; Kanjilal *et al.*, Fl. Ass. 3: 211. 1939; Chowdhery *et al.*, Fl. Arunachal**

Pradesh 2: 141. 2008. *S. caudata* G. Don, Gen. Syst. 4: 3. 1837. *S. sumuntia* var. *floribunda* Wall. ex A.DC., Prodr. 8: 255. 1844; Hook.f., Fl. Brit. India 3: 579. 1882. (**Symplocaceae**) [Plates 1j & 3j]

Trees, up to 8 m tall. Leaves elliptic-lanceolate, 6.5-9.5 × 2-3 cm, acute at base, serrate at margin, acuminate-cuspidate at apex, glabrous; lateral nerves *c.* 9 pairs; petioles *c.* 8 mm long. Inflorescence lax racemes, up to 6 cm long. Flowers white, *c.* 1 cm across, 6-10, in a raceme. Bracts and bracteoles deciduous, linear, *c.* 3 mm, pubescent; pedicels *c.* 5 mm long. Calyx lobes 5, triangular-ovate, *c.* 1.5 mm, ciliate at margins, appressed hairy. Corolla *c.* 8 mm long. Stamens *c.* 40; filament filiform, *c.* 6 mm long. Drupes ovoid, *c.* 1 cm long with persistent calyx.

*Flowering:* August – October

*Habitat:* Common in evergreen forest.

*Distribution:* Bhutan, China, Japan, Korea, Malaysia, Myanmar, Nepal, Thailand, Vietnam and India. In India it is reported from Arunachal Pradesh, Assam, Meghalaya and now recorded from Nagaland.

*Specimen examined:* INDIA: Nagaland, Kohima district, Dzuleke village, 1905 m, 27<sup>th</sup> September 2015, K. Ravikumar, T.S. Suma & A.C. Tangavelou 119395 (FRLH).

***Tetrastigma serrulatum*** (Roxb.) Planch. in DC., Monogr. Phan. 5: 432. 1887; Singh *et al.*, Fl. India 5: 319. 2000. *Cissus serrulata* Roxb., Fl. Ind. 2: 414. 1824. *Vitis capreolata* D. Don, Prodr. Fl. Nep. 188. 1825; Hook. f., Fl. Brit. India 1: 659. 1875. (**Vitaceae**) [Plates 1k & 1k]

Climbers; branches terete, glabrous; tendrils 2-forked. Leaves 3-5 foliolate; lateral leaflets ovate-elliptic, 20-29 × 7-15 mm, oblique at base, crenate-spinulose at margins, acute-acuminate at apex, glabrous; central leaflets elliptic, 5-7 × 2-3 cm; lateral nerves *c.* 10 paired; petioles 2.5-5.5 cm long. Flowers in axillary or terminal umbels. Bracts and bracteoles ovate, *c.* 1 mm long; peduncles terete, 5.5-8.5 cm long, glabrous; pedicels filiform, *c.* 8 mm long, glabrous. Flowers 9-13 per umbel, *c.* 5 mm across, white, pedicellate.

*Flowering:* August – October

*Habit:* Less common, climbing on hedges in evergreen forests.

*Distribution:* Bhutan, China, Myanmar, Nepal, Thailand and India. In India, it is reported from Arunachal Pradesh, Assam, Himachal Pradesh, West Bengal, Sikkim, Meghalaya, Uttar Pradesh and now recorded from Nagaland.

*Specimen examined:* INDIA-Nagaland, Kohima district, Khonoma, 1880 m, 27<sup>th</sup> September 2015, K. Ravikumar, T.S. Suma & A.C. Tangavelou 119317 (FRLH).

***Uraria crinita*** (L.) DC., Prod. 2: 324. 1825; Hook.f., Brit. India 2: 155. 1876; Sanjappa, Legumes India 266. 1992. *Hedysarum crinitum* L., Mant. 1: 102. 1767. *Doodia crinita* (L.) Roxb., Fl. Ind. 3: 369. 1832. *Uraria picta* auct. non Desv. ex DC. 1825; Wight, Ic. Pl. Ind. Or. t. 411. 1840 (**Fabaceae**) [Plates 1l & 3l]

Herbs, up to 1.5 m high; stems erect, grey pubescent. Leaves imparipinnate; leaflets 3-5 foliolate, oblong-lanceolate, 8-15 × 3.5-6 cm, rounded at base, entire at margin, obtuse or mucronate at apex, upper surface glabrous, lower surface pubescent along nerves; lateral nerves *c.* 9 pairs; petioles 9-15 cm long. Stipules triangular, *c.* 1.7 cm long, broaden at base, acuminate at apex, pubescent. Racemes terminal, erect, 20-40 cm long, stout, densely grey-



white hirsute. Bracts lanceolate, c. 1.5 cm long, ciliate at margins, acuminate at apex, hirsute. Calyx 5-lobed, slightly unequal, white hirsute, c. 3 mm long. Corolla c. 1 cm across, pinkish purple. Pods slightly pubescent; articles 2 - 6, elliptic, reticulately veined, black when dry.

*Flowering & Fruiting:* August – November

*Habitat:* Locally abundant in plains of deciduous forests.

*Distribution:* Bangladesh, China, Cambodia, Indonesia, Japan, Laos, Malaysia, Myanmar, Philippines, Thailand, Vietnam, Northern Australia, Sri Lanka and India. In India, it is reported from Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Tripura and recorded now from Nagaland.

*Specimen examined:* INDIA: Nagaland, Dimapur district, Assam Rifles base CAMP area, 500 m, 29<sup>th</sup> September 2015, K. Ravikumar, T.S. Suma & A.C. Tangavelou 119457 (FRLH).

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