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Cover: A gravid praying mantis just before she laid her ootheca—digital art on procreate. © Aakanksha Komanduri.



Addition of two wild jasmines (*Jasminum caudatum* and *J. grandiflorum*) to Sikkim Himalaya, India

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Jasminum Tourn. ex L. is the largest genus of Oleaceae with 210 accepted species worldwide, distributed mostly in tropical and subtropical regions (Kiew & Tan 2020; POWO 2023). Southern and southeastern Asia are the centres of diversity of the genus (Kiew 1994). In India, the genus is represented by 48 species, three subspecies and four varieties, of which 17 taxa are endemic (Sabeena et al. 2007).

During 2021–2022, the authors jointly, as well as independently explored several regions of Namchi and Soreng districts of Sikkim for the floristic studies. Two interesting *Jasminum* species in flowering and fruiting stages were encountered and collected for the taxonomical studies. Photographs were taken along with field notes for each species. Specimens were compared with several vouchers deposited in different herbaria (digitally [CAL and K] and physically [Lloyd Botanic Garden, Darjeeling, West Bengal]), literature (Clarke 1882; Watson 1999; Green 2003; Kiew & Tan 2020; Gogoi et al. 2021 and their identities revealed. On checking their distributions, it was also found that two taxa were not recorded in the state. Herbarium sheets were prepared for each species by conventional techniques (Jain & Rao 1977) and deposited at BSHC.

Taxonomic treatments

Jasminum caudatum Wall. Ex Lindl. In Edward's Bot. Reg. 28: t. 26. (1842). *J. ovatum* Wall., Numer. List [Wallich] n. 2882 (1831).

Type: cult. Ex India (holotype CGE, n.v.).

Description: Scrambling shrub to 4 m long. Stem woody and rigid. Leaves opposite, trifoliate, terminal one always largest; petioles 0.8–2 cm long, glabrous and woody, petiolules of lateral leaflets 3–5 mm long, petiolules of terminal leaflets sub-equaling petiole, lateral leaflets ovate or oblong-ovate, cuneate at base, sometimes oblique, undulate at margin, acuminate at apex, 3–5 × 1.5–2 cm, glabrous both sides; terminal leaflets ovate or oblong-ovate, cuneate at base, undulate at margin, acuminate at apex, 5–8 × 2–2.5 cm, glabrous both sides. Inflorescence a terminal or axillary cyme with solitary or 3–5 flowers; peduncle 1–2 cm long, slender, rigid with 1–2 nodes with opposite or sub-opposite acuminate bracts, each bract 1–3 mm long, glabrous; pedicel shorter than peduncle, slender, 0.5–0.8 cm long, both peduncle and pedicel glabrous. Calyx glabrous, teeth 5, each tooth triangular, c. 1 mm long. Flowers faintly scented, white. Corolla tube narrow to 2.5 cm, glabrous both surfaces, lobes 4–5, 9–12 × 3–5 mm. Stamens 2, included in corolla tube; filament 1–2

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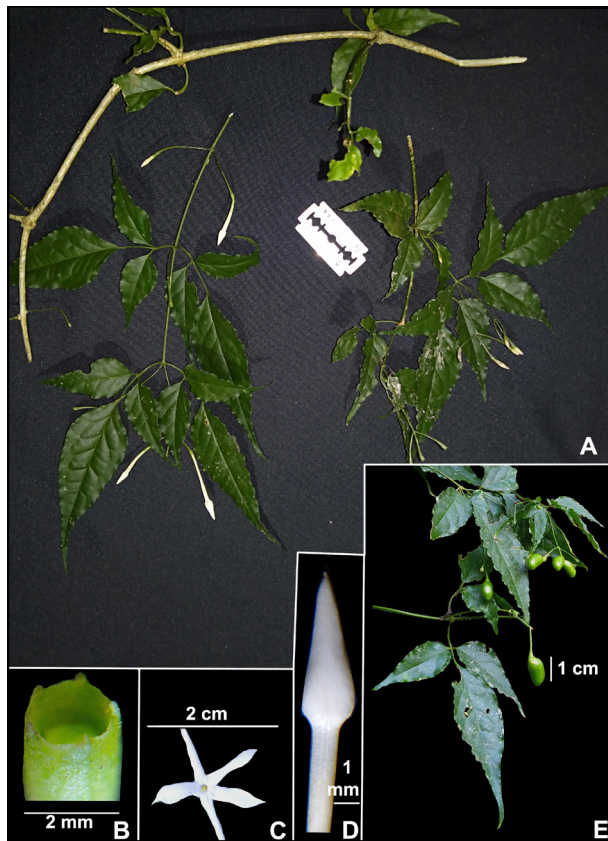


Image 1. *Jasminum caudatum* Wall.: A—Habit showing stem | B—Calyx | C—Flower top view | D—Flower bud. E—Habit showing fruiting. © Pramod Rai



Image 2. *Jasminum grandiflorum* L.: A—Habit and habitat | B—Flower | C—fruiting. © Pramod Rai.

mm long, slightly twisted, glabrous; anthers oblong, 4–5 mm long, yellow. Pistil 2–5 cm long, glabrous; ovary 1–2 mm across; style glabrous; stigma oblong, 2–3 mm long, undivided. Fruits globose, paired or rarely solitary, c. 0.7 cm across, glabrous.

Flowering and fruiting: September–November.

Habitat: Scrambling over other shrubs like *Chromolaena odorata*, *Phlogacanthus thyriformis* and *Boehmeria macrophylla* on a cool shaded forest margin.

Distribution: Andaman Is., Assam, Bangladesh, East Himalaya, India, Nepal.

Specimens examined: INDIA. Sikkim, Namchi District, Sirisay forest, 656 m elevation, 27.17584°N, 88.3378°E, 27.xi.2021, P.Rai P0343a (BSHC; P.Rai P0343b, Sikkim University Herbarium, Gangtok, Sikkim).

Notes: The plant is easily distinguished by its rigid stems, trifoliate leaves and conspicuously visible undulate leaf margins (Image 1). Sometimes other shrubs may be suppressing it beneath them. The plant poses narrower and more caudate leaves, due to which it can be distinguished from its closely related species, *Jasminum flexile* Vahl. (Clarke 1882; Green 2003). The

plant was growing in a single population with more than 90 individuals spread over 500 m². No apparent threat to the population was observed.

Jasminum grandiflorum L., Sp. Pl., ed. 2. 1:9 (1762). *J. officinale* var. *grandiflorum* (L.) Stokes, Bot. Comm. 1:21(1830). *J. officinale* ssp. *grandiflorum* (L.) E.Laguna, Toll Negre 8: 12 (2006). *J. officinale* f. *grandiflorum* (L.) Kobuski, J. Arnold Arbor. 12:161 (1932).

Type: Linn 17.2 (Lectotype, n.v.).

Description: Scrambling shrub to 5 m long, stems spreading. Leaves large, opposite, odd-pinnate with 5–10 leaflets; petioles short or highly reduced, 0.3–1.5 cm long, glabrescent. Leaflets elliptic or oblong elliptic, sessile or sub-sessile, terminal one bigger and narrower than laterals, cuneate at base, acute or acuminate at apex, terminal leaflets 1–3 x 0.5–1.5 cm. Inflorescence an open cyme, 1–10 flowered, peduncle 1–5 cm long, pedicels 0.5–2 cm long, peripheral ones longer than central. Flowers white, gently fragrant; corolla tube 1–2 cm long, lobes 4–6, ovate, 0.5–1.5 x 0.5–0.7 cm, acute, acuminate or abruptly acuminate at apex. Fruits globose,

paired, c. 0.5 cm across, glabrous.

Flowering and fruiting: July–November.

Habitat: Growing in open subtropical forest, in association with *Berberis napaulensis*, *Himalrandia tetrasperma*, *Rubia sikkimensis*, *Liparis deflexa*, *Luculia gratissima*, *Coelogyne fuscescence*, and *Corralodiscus*.

Distribution: Bangladesh, south-central China, Djibouti, Eritrea, Ethiopia, Kenya, Nepal, Oman, Pakistan, Rwanda, Saudi Arabia, Somalia, Sudan, Uganda, western Himalaya.

Specimens examined: India, Sikkim, Geyzing district, Lingchom, 27.2981°N, 88.2147°E, 1,500 m, 11.ix.2022, P. Rai, P0344a (BSHC; P0344b, Sikkim University Herbarium, Gangtok, Sikkim).

Notes: It is a widely cultivated species in France, Italy, China, Japan, India, Morocco and Egypt and used to extract 'oil of Jasmine', used in perfume industries (Watson 1999). The plant is documented to possess beneficial effects as odontalgic, thermogenic, aphrodisiac, antiseptic, emollient, anthelmintic, deobstruent, suppurative, tonic, in fixing loose teeth, ulcerative stomatitis, leprosy, skin diseases, otorrhea, otalgia, wounds, corns and aroma therapy (Sandeep & Paarakh 2009). *J. grandiflorum* ssp. *floribundum* (R.Br. ex Fresen.) P.S.Green occurs in Saudi Arabia, Oman and Southernmost Sudan south to Kenya (Green 2003). The

current report is from a population consisting of more than 70 individuals distributed vertically, spread over an area more than 1 km². Fodder collection was posing a threat to its population from lower region of population.

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