

Haplanthus laxiflorus (Blume) Gnanasek., G.V.S.Murthy & Y.F.Deng (Acanthaceae): A New Generic Record for Nepal

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Abstract

Haplanthus laxiflorus (Blume) Gnanasek., G.V.S.Murthy & Y.F.Deng is reported here as a new generic record for the flora of Nepal. A detailed description, along with notes on habitat, distribution, photographs and a herbarium image have all been provided. This species can be easily distinguished by its distinctly pouched filaments inserted at the base of subactinomorphic corolla.

Keywords: Distribution, *Haplanthus*, Himalaya, Taxonomy

The genus *Haplanthus* Nees belongs to the tribe Andrographideae and family Acanthaceae (Manzitto-Tripp et al., 2022). It consists of four species worldwide, with three varieties in one species (Gnanasekaran et al., 2016). This genus' native range is from South China to Tropical Asia, including Bangladesh, Bhutan, Cambodia, India, Malesia, Myanmar, Thailand and Vietnam (Gnanasekaran et al., 2016; Plants of the World Online [POWO], 2023a). Nees established the genus *Haplanthus* with a single species, *H. tener* Nees, in 1832. Later, Anderson (1867) transferred *H. tener*, the type of *Haplanthus*, to *Andrographis* Wall. ex Nees and made a new combination as *A. tenuiflora* T. Anderson. During the systematic study of *Andrographis* in India, Gnanasekaran et al. (2016) restored *Haplanthus* as a distinct genus from *Andrographis*, based on morphological characters. *Haplanthus* differs from *Andrographis* by its sub-actinomorphic corolla with curved tube, included filaments that are pouched at the apex, dorsally hairy anther connectives and oblong, compressed, not distinctly grooved seeds (Gnanasekaran et al., 2016).

Specimens of *Haplanthus laxiflorus* (Blume) Gnanasek., G.V.S.Murthy & Y.F.Deng were collected from different locations of Godawari, Lalitpur district, Nepal. *Haplanthus laxiflorus* is native to Assam to South China and West Malesia (POWO, 2023b), but its occurrence in Nepal is not yet documented in any previous literature (Hara et al., 1982, Singh, 2001, Shrestha et al., 2022), therefore, it has been recorded as a new genera for the flora of Nepal.

The field survey was conducted for the floristic investigation in Godawari area of Lalitpur district from January to June in 2023. During the investigation, some specimens of an unfamiliar species belonging to the family Acanthaceae were collected. After consulting pertinent literature, herbarium specimens at different herbaria (BM, E, KATH & KUN) including the types, and various online databases (Jiaqi et al., 2011,

<https://powo.science.kew.org/>), the species was identified as *Haplanthus laxiflorus*. During our study of herbarium specimens at different herbaria, one specimen identified as *Haplanthus laxiflorus* was found in KUN which was collected by Prof. Xinfen Gao (from the Chengdu Institute of Biology, China) and her team from Pokhara. However, it has not been published or reported.

Haplanthus laxiflorus (Blume) Gnanasek., G.V.S.Murthy & Y.F.Deng in *Blumea* 61(3): 168 (2016). a” *Justicia laxiflora* Blume in *Bijdr. Fl. Ned. Ind.*: 789 (1826). a” *Andrographis laxiflora* (Blume) Lindau in H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* 4(3b): 323 (1895). a” *Rungia laxiflora* (Blume) C.B.Clarke in *J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist.* 74: 698 (1908). **Type:** Indonesia, Java, s.d., *Blume* s.n. (L0003148).

Herbs, up to 70 cm. Roots tuberculated, yellowish. Stem erect or decumbent, quadrangular; branched, pubescent on angles, internodes 9–12 cm. Petioles 0.2–2 cm, glabrous. Leaf blade elliptic to lanceolate, 1.2–9 × 0.6–4 cm, base cuneate, apex acute-obtuse, margin entire, both surfaces sparsely pubescent, lateral veins 3–5 pairs. Inflorescence axillary and/or terminal, compound leafy panicle of racemes. Bracts 2, linear, ca. 4 mm. Bracteoles present. Calyx 5-lobed; lobes linear, ca. 4 × 1 mm, apex acuminate, sparsely pubescent outside. Corolla whitish, ca. 9 mm long, outer surface sparsely pubescent with glandular and eglandular hairs; tube curved, ca. 6 mm long, inconspicuously ventricose; lower lip deeply 2-lobed, ca. 3 mm; upper lip 3-lobed, ca. 3 mm. Stamens 2; filaments inserted at the base of corolla tube, ca. 4 mm, pouched at apex, eglandular-pubescent; anthers lobed, bithecous, ca. 1 mm. Disc present. Ovary oblong, ca. 1 mm, eglandular or glandular; style ca. 4 mm, eglandular-pubescent, proximally curved slightly. Capsules linear, 10–13 mm long, glabrous. Seeds 19–21 per capsule, oblong, compressed (Figure 1).

Phenology: Flowering and fruiting from March to August.

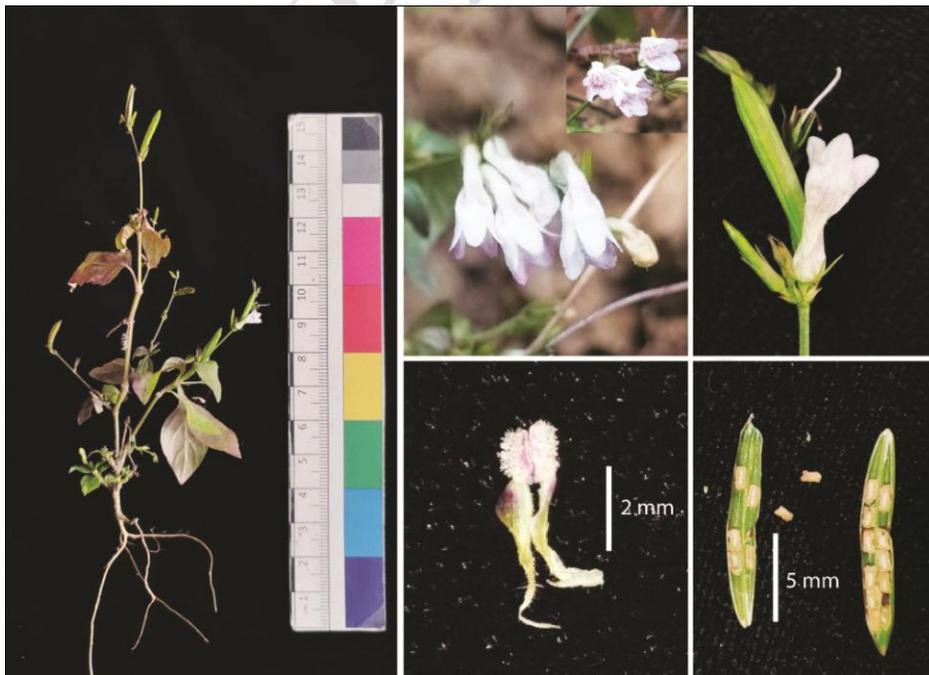


Figure 1: *Haplanthus laxiflorus*, (A) Habit, (B) Flowers, (C) Flowers, one dissected showing a pistil, (D) Stamen with pouched filament at apex, (E) Capsule with seeds

Distribution: 1000-1650 m in Kaski and Lalitpur Districts, Central Nepal. It is distributed in Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Laos, Malesia, Myanmar, Thailand and Vietnam.

Habitat: In the forest margins, in the vicinity of rocky substrate and in disturbed area near road in the subtropical region.

Specimens examined: Central Nepal: Gandaki Province, Kaski District, Pokhara, Nayapul, 1002 m, 12 August 2017, X. Gao *et al.*, QTP-II08-TO5-000394 (KUN); Bagmati Province, Lalitpur District, Godawari, 1510 m, 5 March 2023, S. Gupta & K. Tiwari, SG1 (KATH), Lalitpur District, Godawari, 1510 m, 16 March 2023, S. Gupta & G. Parmar, SG2 (KATH), Lalitpur District, Godawari, 1640 m, 7 May 2023, S. Gupta, K. Tiwari & G. Parmar, SG4 (KATH) (Figure 2).

Notes: Gnanasekaran *et al.* (2016) have described three varieties of *Haplanthus laxiflorus*, viz., var. *laxiflorus*, var. *parishii* (T.Anderson) Gnanasek., G.V.S.Murthy&Y.F.Deng, and var. *recedens* (C.B.Clarke) Gnanasek., G.V.S.Murthy & Y.F.Deng. However, it is not convincing to distinguish this species at the variety level based on observation of few specimens, as var. *laxiflorus* and var. *recedens* share similar morphology, and the latter is only described from the type specimen collected from Myanmar.

Haplanthus laxiflorus, reported from Kaski and Lalitpur Districts of Central Nepal, is a new generic record for the flora of Nepal.

D. L. & G. P. conceptualized the research; S. G. did the microscopic study; S. G., Y. B. P. & G. P. drafted the manuscript; B. A., D. L. & G. P. revised the manuscript.

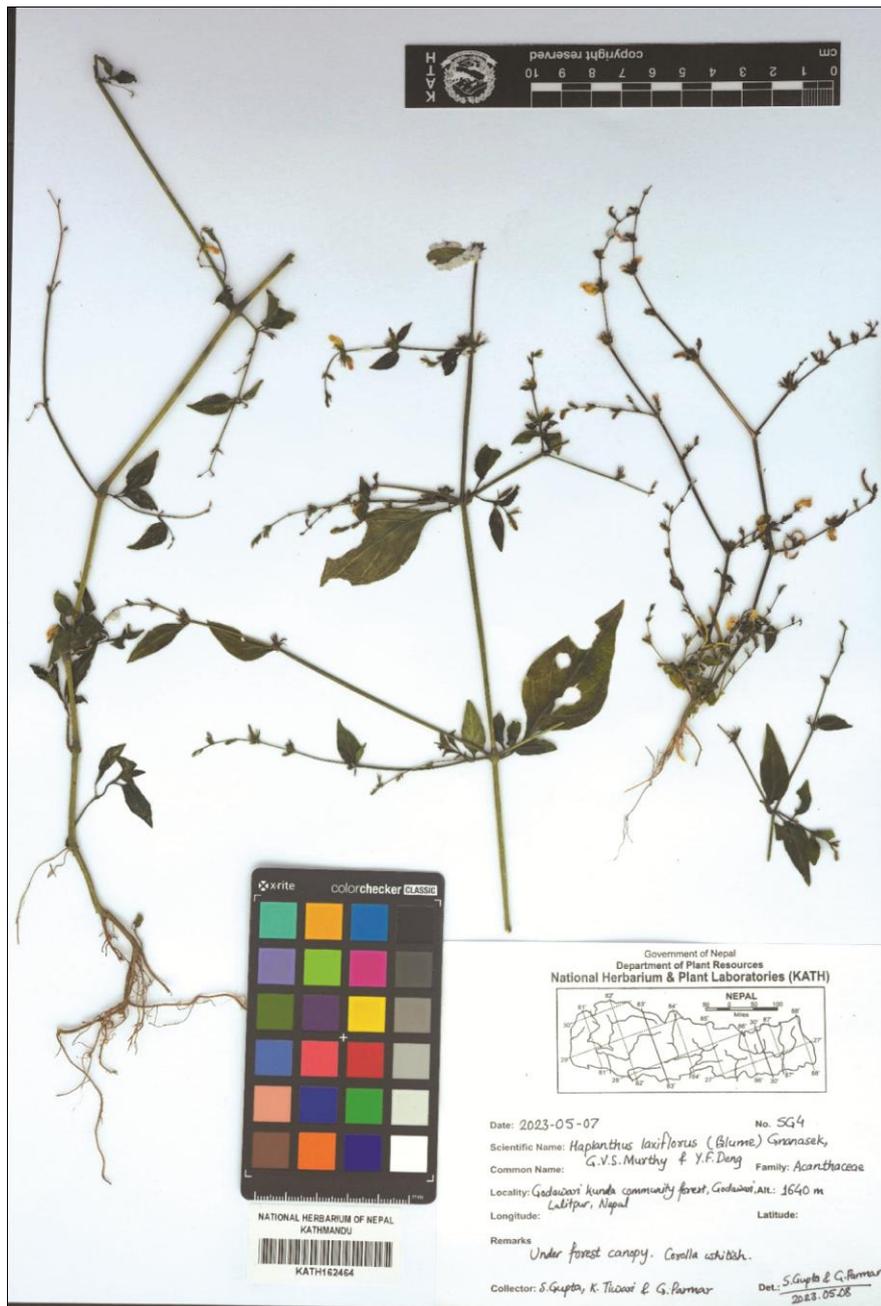


Figure 2: A specimen of *Haplanthus laxiflorus* deposited at KATH

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