

TAXONOMIC NOTES ON *EPIPACTIS VERATRIFOLIA* BOISS. & HOHEN. (ORCHIDACEAE): AN IUCN LEAST CONCERN ORCHID FROM SHIVALIK HILLS

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A new locality of terrestrial and globally least concern orchid *Epipactis veratrifolia* Boiss. & Hohen. was reported in Saharanpur Shivalik (U.P.). It was found growing mixed with mosses, grasses and ferns on wet rocky slopes. Review of literature reveals that in Uttar Pradesh this least concern species has been previously reported only from Bahraich district. A detailed taxonomic description of this species along with coloured illustration and specimen examined is presented here for easy identification and validation.

Key Words: *Epipactis veratrifolia*, Least Concern, Distribution, Saharanpur Shivalik.

While inventorying the flora of North West Shivalik, authors (AT) and (IM) collected an interesting Orchid from Saharanpur Shivalik. The careful examination of specimen with the help of available authenticated literature revealed that it belongs to genus *Epipactis*. On critical examination with the help of relevant literature (Collett 1971, Deva and Naithani, 1986, Chowdhery and Agrawala 2013), eflora of Pakistan and China, and matching with herbarium specimen housed in DD (Accession number 1688, 10768), it has been identified as *Epipactis veratrifolia*. Authors reported separate patches of populations of this terrestrial orchids growing on moist rocky slopes in March, 2019. Previously in India *Epipactis veratrifolia* has been reported from Uttarakhand, Himachal Pradesh, Jammu and Kashmir (Deva and Naithani 1986), Punjab (Attri and Verma 2016) and Bahraich district of Uttar Pradesh (Khanna 2018). A detailed taxonomic description of this globally least concern species along with coloured illustration and specimen examined is presented here for easy identification and validation.

Taxonomic Description

Epipactis veratrifolia Boiss. & Hohen. In, P.E, Boissies, Diagn. Pl. Orient. 13:11.1854; *E.*

consimilis Wall. ex Hook. & F., fl. Brit. India 6:126, 1890; non D. Dn.

Erect herb up to 83cm tall. Stem green, purple colour near the base. Leaves simple, alternate, ovate-lanceolate, long pointed, membranous, green; lower leaves with sheathing base and much shorter than upper ones; upper leaves larger upto 28×4cm in size gradually decreasing in size toward the upper portion of stem and converted into leafy bracts. Inflorescence upto 33cm lax, many flowered. Floral bracts leaf like; lower ones longer than the flower but upper ones as long as flower; lens shaped and acuminate. Flowers hanging toward one side of plant, about 29mm across. Sepals 3 tomentose on outside, one on dorsal side and two on the lateral side; dorsal sepal elliptic, obtuse 17×8mm, entire; lateral sepals 18×9mm ovate, lanceolate, entire acute. Petals 15×8mm ovate-elliptic with reddish-purple margins and slightly shorter than sepals. Labellum 18×7mm, acute without mesochile, hypochile 6-7×3-4mm; lateral lobes erect, epichile ovate, 8-9×6-7mm fleshy. Column length 9mm with anther, pollinia two, 1.5mm long (Plate-1).

Global IUCN Status: Least concern (Fay 2013).

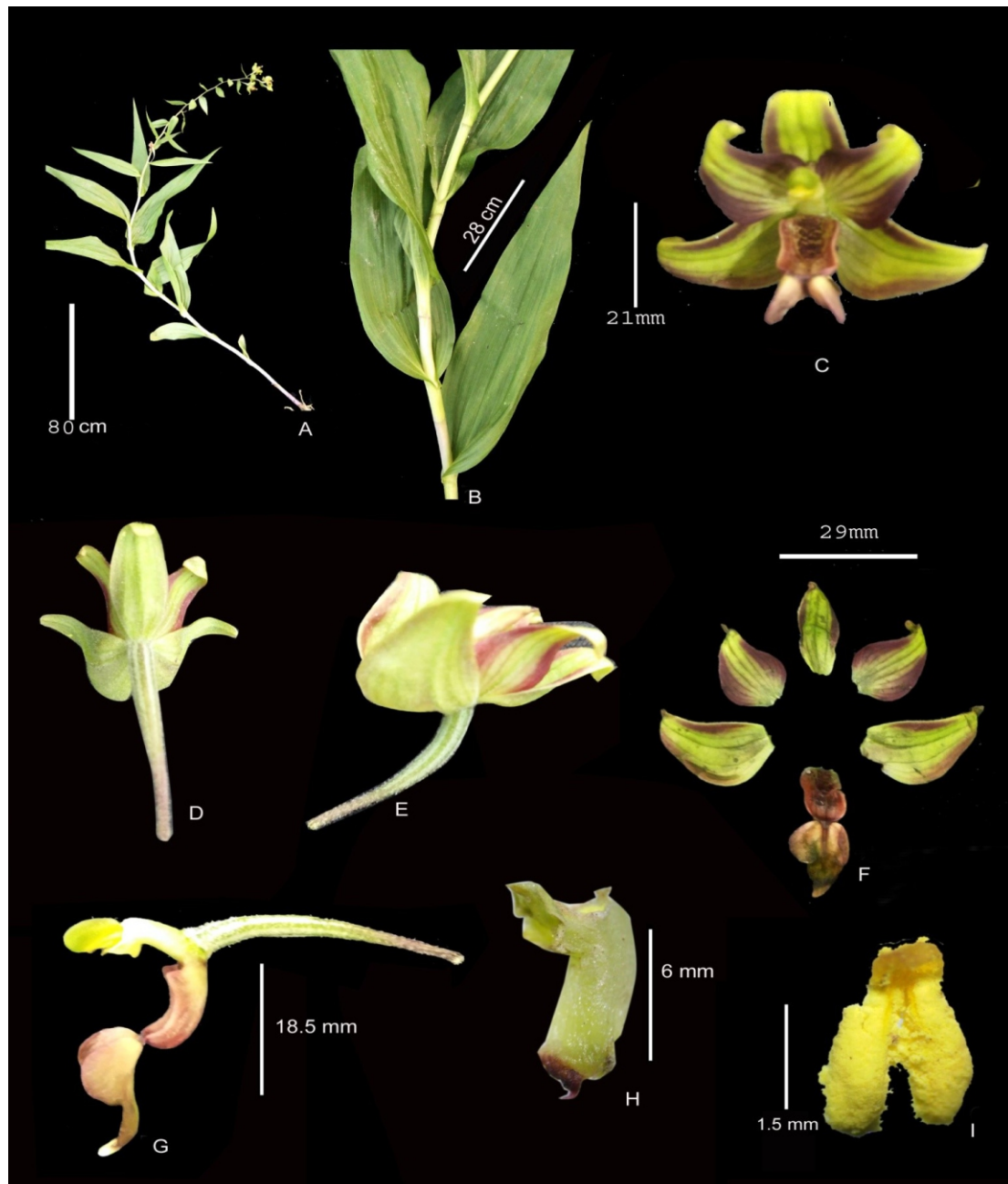


Plate 1 A-I: A. Habit B. Arrangement of leaves C. flower (Front view) D. Flower (Back view) E. Flower (Side view) F. Dissected Flower showing arrangement of sepals and petals G. Side view of Ovary, Column & Lip H. Column I. Pollinia

Flowering and fruiting: March-April.

Habitat & Ecology: This species has been found growing on open wet rocky slopes. The site of occurrence of this species experience sub-tropical climate condition. The common associate of this element in the study area are *Adiantum capillus-veneris*, *Pogonatherum*

panicum, *Funaria hygrometrica*, *Thysanolaena latifolia*, *Eriophorum comosum*, *Olea glandulifera*, *Hypericum perforatum*, *Ficus semicordata*, *Colebrookea oppositifolia* etc.

Distribution in World: In world it is found in India, Pakistan, Myanmar, Sinai Peninsula,

Persia, Afghanistan, Nepal, South west Asia and UAE (Deva and Naithani 1986, Sakkir *et al.* 2018).

Distinguishing features: The distinguishing feature of the species include: lip without mesochile and basally canoe shaped. Hypochile is narrow and boat shaped.

Voucher specimen: India, Uttar Pradesh, Saharanpur District, Shivalik Range, Katha Beat, 10.vi.2019, Mohammad, Malik and Tyagi, Accession No. 172709 (DD).

Specimens examined: India, Uttarakhand, Dehradun, Shivalik forest Division, Shahjanpur Rao, 11.iv.1998, Naithani, Accession No. 2117 (DD). Uttarakhand, Mussoorie, 15.iii.1961, Saxena, Accession No. 1688 (DD). Upper Gangetic Plain, Nepal Frontier, 20.xi.1900, Inayat, Accession No. 23861 (DD).

AT, IM and VM collected and prepared herbarium specimen. LS prepared illustration of this species. AT described this species and VM edited and prepared this manuscript. All authors have read and approved the final manuscript.

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