

Debabrata MAITY: Rediscovery of *Pedicularis globifera* (Orobanchaceae) in India after 110 Years

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(Accepted on July 12, 2021)

Summary: In India, *Pedicularis globifera* Hook.f. (Orobanchaceae) had been known only from two historical collections, in 1849 and 1903 made in Sikkim. Recently, we rediscovered *P. globifera* in the Lhonak Valley and in the Gurudongmar Valley, the Sikkim Himalaya, after more than 110 years. According to IUCN criteria and guidelines, *P. globifera* is proposed to be recognized in the Critically Endangered (CR) category in India.

Pedicularis globifera Hook.f. (Orobanchaceae) was described from Sikkim Himalaya by Hooker (1884) and it is presently distributed in Nepal, India and China (Yamazaki 1982, 1988, Yang et al. 1998, Mill 2001, Husain et al. 2010). Notably, Sikkim is the only known habitat of this species in India (Hooker 1884, Mill 2001, Husain et al. 2010). This species had been known only from two historical collections in India: one by Hooker and Thomson in 1849, the type collection, and the other by Prain in 1903. Apart from these specimens from over 110 years ago, the species had never been collected in India.

In recent years during the study of the alpine flora of Sikkim, we rediscovered *P. globifera* in the Lhonak Valley and in the Gurudongmar Valley in 2014, 2015 and 2018 (Fig. 1).

Pedicularis globifera Hook.f., Fl. Brit. India 4: 308 (1884); Maxim. in Mélanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. Saint-Pétersbourg 12: 869, t. 5, f. 95 (1888); Prain in J. Asiat. Soc. Bengal 58(2): 261 (1889) & in Ann. Roy. Bot. Gard. Calcutta 3: 170, t. 32D, f. 7–12 (1890); Tsoong in Acta Phytotax. Sin. 3: 313, 333

(1955); T.Yamaz. in H.Hara & al., Enum. Flow. Pl. Nepal 3: 123 (1982) & in H.Ohba & Malla, Himal. Pl. 1: 108, t. 6b & 8a, f. 4b (1988); Yang & al. in Wu & Raven, Fl. China 18: 68 (1998); Mill in Grierson & Long, Fl. Bhutan 2(3): 1182 (2001); Husain & al., Gen. *Pedicularis* India: 93 (2010).

Type: INDIA. Sikkim Himalaya. Kongra Lama, 14000–15000 ft., 4 July 1849, J.D.Hooker ‘*Pedicularis* no. 10’ (K000708920–holotype; Fig. 2).

Distribution: Nepal (Central), India (Sikkim), China (Tibet).

Habitat in India: Plants prefer to grow in open pastures, grassy fields, loose soil, or along small streams in association with *Anaphalis* sp., *Arenaria ciliolata* Edgew., *Kobresia* sp., *Potentilla peduncularis* D.Don, *Rhodiola* sp., etc. at 4400–5000 m alt.

Proposed IUCN conservation status in India: Critically Endangered (CR). This species presently grows only in four small populations in Lhonak and Gurudongmar Valleys. There are just 23 individuals altogether within an area of about 2 km² in Lhonak Valley and about 0.02 km² in Gurudongmar Valley. The habitat is also severely fragmented. The AOO and EOO of the species is <10 km² and <100 km² respectively. Considering this high risk situation I propose the IUCN conservation category ‘Critically Endangered’ (CR B & D) for this species in India (IUCN Standards and Petitions Subcommittee 2019).

Voucher specimens examined [all at the Herbarium of

lines. It also had the calyx tube greenish-cream with greenish-maroon veins on upper half and calyx lobes light pink, tinged with dark pink (see Fig. 1B). Similar observation was done by Yamazaki (1988). Possibly some variation for the coloration of flowers exist within the species, an extensive survey is needed in other *P. globifera* populations.

I am grateful to the Ministry of Environment, Forest and Climate Change, Government of India for financial support, the Department of Forests, Environment and Wildlife Management and Superintendent of Police, Gangtok for permitting and supporting our field visit, Dr. J.McNeill (E) for his critical comments, Prof. Wen-Bin Yu, Xishuangbanna Tropical Botanical Garden, CAS for his help. The author wish to thank the directors/curators of the following herbaria: CAL, E, K, LE and PE. Mr. J.Ghosh, Mr. M.Midday and Mr. Arnab Banerjee are warmly thanked for their help. The author also appreciates the corrections and constructive suggestions of the referee and Chief Editor, JJB, who contributed greatly to the improvement of this manuscript.

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- D.Maity : 110年ぶりにインドで再発見された *Pedicularis globifera* (ハマウツボ科)
 ハマウツボ科シオガマグク属の *Pedicularis globifera* Hook.f. は 1884 年にシッキムから記載された種である。その後、中部ネパールやチベットからも得られたが、シッキムでは再確認されていなかった。しかし、シッキムの高山フロラを調査中、2014 年、2015 年、2018 年に四ヶ所
 所で本種が見出された。これは実に 110 年ぶりの再発見となる。
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