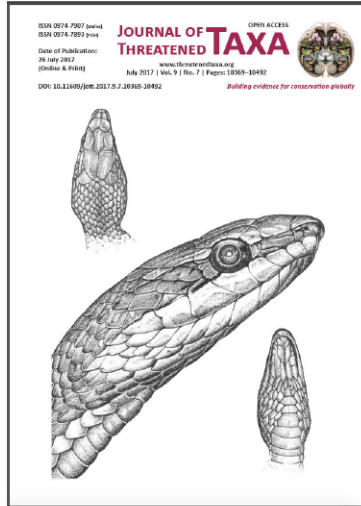


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### NOTE

### RE-COLLECTION OF THE BLACK CATCHFLY *SILENE NIGRESCENS* (CARYOPHYLLALES: CARYOPHYLLACEAE) AFTER 130 YEARS FROM INDIAN WESTERN HIMALAYA

Satish Chandra, D.S. Rawat & P.K. Pusalkar

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The genus *Silene* L. is represented in India by 29 species (Majumdar 1993; Pusalkar et al. 2004) and mainly confined from the temperate to the alpine zone of the Himalaya. Only two *Silene* species (*S. colorata* Poir. and *S. gallica* L.) are present in central and southern India. In western Himalaya this genus is represented by 26 species of which 20 species are reported from Uttarakhand (Majumdar 1993; Pusalkar et al. 2004; Uniyal et al. 2007).

During the compilation of Flora of British India Edgeworth & Hooker (1874) proposed a new species *Lychnis nigrescens* Edgew., on the basis of specimens collected by J.D. Hooker from Sikkim Himalaya. Later, Majumdar (1964) transferred the species to *Silene*, a genus characterized by capsule valves twice as many as styles and styles not persistent on fruit and hence named as *Silene nigrescens* (Edgew.) Majumdar. This species belongs to the section *Physolychnis* (Benth.) Bocquet, subsection *Nigrescentes* Bocquet of the genus *Silene* (Bocquet, 1967).

In Indian western Himalaya, this species was collected from Nila Valley and Pangarchula area by J.F. Duthie. Both places are located in the Garhwal region of Uttarakhand State. During his historic collections in the western Himalaya, Duthie collected specimens from Rudraghera and Auri Gadh area of Nila Valley (J.F. Duthie 629, DD) of then Tehri (Tihri) Garhwal (current Uttarkashi District) in July–August 1883 and Pangarchula area of then British Garhwal (current Chamoli District) in September 1885 (J.F. Duthie 3857, DD). Since then, this

species was never re-collected from western Himalaya.

During exploration of the Indian Himalayan region in 2015, the authors re-collected this species from Pangarchula area of District Chamoli (Image 1) after 130 years since the last collection in 1885. The species is described hereunder for easy identification in future collections.

### *Silene nigrescens* (Edgew.) Majumdar

in J. Indian Bot. Soc. 42: 647. 1964; Majumdar in Fl. India 2: 572. 1993; *Lychnis nigrescens* Edgew. in J.D. Hooker, Fl. Brit. India 1: 223. 1874.

Type: India, Sikkim: Chumbi, 4877m, 11.ix.1889, J.D. Hooker s.n. (000728820) (K, Holotype Image!).

Herb, perennial. Stem solitary or few from base, erect, slender, 8–40 cm long, pubescent with both glandular and eglandular hairs in hirsute vestiture, hairs violet-black. Basal leaves caespitose, 3–5 pairs, obovate-spathulate, 3–5×0.2–0.5 (0.8) cm long, apex

## RE-COLLECTION OF THE BLACK CATCHFLY *SILENE NIGRESCENS* (CARYOPHYLLALES: CARYOPHYLLACEAE) AFTER 130 YEARS FROM INDIAN WESTERN HIMALAYA

Satish Chandra<sup>1</sup>, D.S. Rawat<sup>2</sup> & P.K. Pusalkar<sup>3</sup>

<sup>1,2</sup> Department of Biological Sciences, College of Basic Sciences & Humanities, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, Uttarakhand 263145, India

<sup>3</sup> Botanical Survey of India, Northern Regional Centre, Dehradun, Uttarakhand 248195, India

<sup>1</sup>satishchandrasemwal07@gmail.com (corresponding author),  
<sup>2</sup>drds\_rawat@yahoo.com, <sup>3</sup>lecyth@yahoo.com

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acute, cauline leaves 2–4 pairs, ovate, 1–1.5×0.2–0.5 cm long, both type of leaves hairy at both surfaces and margin, leaves violet-black toward leaf margins, midvein and apex. Flower white, solitary or 2–3 in number, nodding before anthesis. Bract similar to distal leaves but smaller. Pedicel 5–15 mm long, hairy. Calyx inflated, 15–20 mm long, 10 veined, veins violet-black, glandular hairy on veins and eglandular hairy between veins; calyx teeth triangular, ciliate at margins, apex obtuse. Androgynophore 1–2 mm long, hairy with long eglandular hairs. Petals 5, white-creamish in colour, with prominent violet veins at abaxial surface, 20–25 mm long, auriculate, veins 3, limb exerted, apex emarginated; coronal scale present; claw broad, cuneate at base, hairy. Stamens 10 (5+5), 10–15 mm long, almost equal in length, hairy at base, anther white-

yellow-violet, slightly exceeding calyx tube. Ovary ovoid, 4–6×2–3 mm; styles 5, included in young flowers, slightly exerted in mature flowers (Images 1, 2).

Flowering & Fruiting: August–October

Habit & Habitat: Plants of this species grow solitary or 2–3 together in moist alpine meadows above 3,500m and characterised by inflated calyx with peculiar violet-black venation, having both glandular and eglandular hairs. Seeds of the species are winged.

Specimens examined: India, Sikkim: Chumbi, 4,877m, 11.ix.1889, J.D. Hooker s.n. (000728820) (K) (Holotype Image !); Lachoong, 3,353m, 30.ix.1889, J.D. Hooker s.n. (000728821) (K) (Image !); Uttarakhand: Uttarkashi District (erstwhile Tihri Garhwal), Nila Valley, Rudraghera, 3,900–4,200 m, 20.vii.1883, J.F. Duthie 629a (DD!); behind Auri Gadh, 4,200–4,500 m, 17.vii.1883,



Image 1. *Silene nigrescens* (Edgew.) Majumdar

A - Pangarchula area; B - area of specimen collection; C - plant; D–E - closeup of flowers



Image 2. Herbarium specimen of *Silene nigrescens* (Edgew.) Majumdar

J.F. Duthie 629b (DD!); Auri Gadh, 3,900–4,200 m, 15.viii.1883, J.F. Duthie 629 c (DD!); Chamoli District (erstwhile British Garhwal), Kuari Pass, Pangarchula, 3,600–3,900 m, 09.ix.1885, J.F. Duthie 3853, 3857 (DD!); Reg.no. 775a, 22.viii.2015, 30.44305556 N & 79.58111111 E (based on wikimapia.org), coll. Satish Chandra (deposited in Govind Ballabh Pant University Herbarium Pantnagar, Uttarakhand, India!).

**Distribution:** The species is reported from the Himalaya in China, Bhutan, India (Sikkim and Uttarakhand), Myanmar and Nepal (Grierson 1984; Lihua et al. 2001; Majumdar 1993; Press et al. 2000). Uttarakhand is the western most limit of this species in

the Himalaya, as this species is not reported westward from Himachal Pradesh, in Jammu & Kashmir or in Pakistan Himalaya (Chowdhery & Wadhwa 1984; Majumdar 2002; Ghazanfar & Nasir 1974). In the Flora of Bhutan (Grierson 1984) and the Flora of India (Majumdar 1993) this species is mentioned as having pink petals while in Flora of China (Lihua et al. 2001) flower colour is described as black-violet. The examination of live specimens in the western Himalaya revealed that petals are white-creamish with prominent violet veins at abaxial surface.

**Conclusion:** After studying protologue of the species, type specimen, specimens collected by J.F. Duthie and relevant literature (Grierson 1984; Majumdar 1993; Lihua et al. 2001) it is concluded that *Silene nigrescens* is an extremely rare species as is evident from the present re-collection report from Pangarchula area of District Chamoli, Uttarakhand, India after 130 years. Pusalkar & Singh (2012) only referred to Duthie's collection from Nila Valley in 1883 and no fresh collection was cited. It is worth mentioning that of two reported localities Nila Valley area lies in Gangotri National Park and Pangarchula area is in Nanda Devi Biosphere Reserve offering in situ conservation possibilities for the species. Yet, considering its rare occurrence, the species is suggested to be treated as conservation dependent and further species oriented surveys need to be undertaken in inner Himalayan valleys to assess its distribution, population, and threat status.

## References

- Bocquet, G. (1967). *Physolychnidium* olim *Gastrolychnidium* nomenclaturae fundamentum includens combinationes taxae novae nonnulla *Silenes* generis. *Candollea* 22(1): 1–38.
- Chowdhery, H.J. & B.M. Wadhwa (1984). *Flora of Himachal Pradesh - Vol. 1*. Botanical Survey of India (BSI), Calcutta, India, 340pp.
- Edgeworth, M.P. & J.D. Hooker (1874). *Caryophyllaceae*, pp. 212–246. In: Hooker J.D. (eds.). *The Flora of British India - Vol. 1*. L. Reeve, London.
- Ghazanfar, S. & Y.J. Nasir (1974). *Caryophyllaceae*. In: Nasir, E. & S.I. Ali (eds.) *Flora of Pakistan*. Available at: [http://www.efloras.org/florataxon.aspx?floraid=5&taxon\\_id=](http://www.efloras.org/florataxon.aspx?floraid=5&taxon_id=)
- Grierson, A.J.C. (1984). *Caryophyllaceae*, pp. 197–216. In: Grierson, A.J.C. & D.G. Long (eds.). *Flora of Bhutan*. Royal Botanical Garden, Edinburgh, UK.
- Lihua, Z., W. Zhengyi, M. Liden & B. Oxelman (2001). *Silene* L., pp. 66–100. In: Wu, Z. & P.H. Raven (eds.). *Flora of China (Caryophyllaceae through Lardizabalaceae)*, Volume 6. Science Press, Beijing, China, and Missouri Botanical Garden Press, St. Louis, Missouri, USA. Available from: [http://www.efloras.org/florataxon.aspx?flora\\_id=2&taxon\\_id=110972](http://www.efloras.org/florataxon.aspx?flora_id=2&taxon_id=110972). Accessed on 15 April 2017.
- Majumdar, S.C. (2002). *Caryophyllaceae*, pp. 633–690. In: Singh, N.P., D.K., Singh, & B.P. Uniyal (eds.). *Flora of Jammu and Kashmir - Vol. 1*. Botanical Survey of India (BSI), Kolkata.
- Majumdar, N.C. (1964). New combination of some Indian *Silene* species. *Journal of Indian Botanical Society* 42: 45–58.
- Majumdar, N.C. (1993). *Caryophyllaceae*, pp. 503–595. In: Sharma, B.D.

- & N.P. Balakrishnan (eds.). *Flora of India - Volume 2 (Papaveraceae - Caryophyllaceae)*. Botanical Survey of India, Calcutta.
- Press, J.R., K.K. Shrestha & D.A. Sutton (2000)**. *Annotated Checklist of the Flowering Plants of Nepal*. Natural History Museum Publications. Available at: [http://www.efloras.org/florataxon.aspx?flora\\_id%110&taxon\\_id%242318751](http://www.efloras.org/florataxon.aspx?flora_id%110&taxon_id%242318751). Accessed on 12 April 2017.
- Pusalkar, P.K. & D.K. Singh (2012)**. *Flora of Gangotri National Park Western Himalaya, India*. BSI, Kolkata, 708pp.
- Pusalkar, P.K., D.K. Singh & P. Lakshminarasimhan (2004)**. *Silene gangotriana* (Caryophyllaceae): a new species from western Himalaya, India. *Kew Bulletin* 59: 621–624.
- Uniyal, B.P., J.R. Sharma, U. Choudhery & D.K. Singh (2007)**. *Flowering Plants of Uttarakhand (A Checklist)*. Bishen Singh Mahendra Pal Singh, Dehradun, 404pp.





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