

**A NEW SPECIES OF ARENARIA (CARYOPHYLLACEAE)
FROM THE WESTERN HIMALAYA**

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SUMMARY

The article contains a discussion regarding the different identity of the specimens *J. F. Duthie 3858* in the Kew (K), and the Calcutta (CAL) and Poona (BSI) herbaria. The specimens at CAL and BSI represent a new species of *Arenaria*, which is described here.

INTRODUCTION

While studying the materials of the genus *Stellaria* in the Central National Herbarium of the Botanical Survey of India (CAL), I came across the following specimen with long curved leaves: – *Flora of N.W. India-Brit. Garhwal, No. 3858 – Stellaria longissima* Wall. *fide Kew – Near the Kuari pass, 11–12,000' Date 10.9.85 – Coll. J. F. Duthie*. There is a pencil writing by Duthie himself on the sheet 'I think not, but rather *S. sp. nov. J.F.D.*' The words 'fide Kew' after the name are obviously misleading, as the specimen is wrongly identified.

A duplicate of the same in the Herbarium of the Botanical Survey of India, Poona (BSI) was also studied, which is labelled as follows: – *Flora of N.W. India-Brit. Garhwal, No. 3858 – Stellaria longissima* Wall. – *near the Kuari pass, 11–12,000' Date Sep/85 – Coll. J. F. Duthie. Acc. No. 1932 in Talbot's Herbarium*.

Though the specimens are placed along with those of *Stellaria longissima*, in both the herbaria, it is clear that they do not belong to that species. As already pointed out, Duthie guessed it to be a new species, but neither he, nor any later worker described the same.

In the herbarium of the Forest Research Institute, Dehradun (DD), I came across another specimen with long curved leaves labelled as follows: – *Flora of N.W. India-Brit. Garhwal, No. 3863(b) – Stellaria sp. n.? Rocks E. of Dakhwani, 11–12,000', Date 11.9.85, J. F. Duthie. fide Kew*. Though with a different field number, the material belongs to the new taxon as referred to above.

In the herbarium of the Royal Botanic Gardens, Kew (K), there is a specimen, which was brought on loan and studied, with a very similar label which reads: – *Flora of N.W. India-Brit. Garhwal No. 3858 – Stellaria longissima* Wall. – *Near the Kuari pass, 12–13,000', date 8.9.85, Coll. J. F. Duthie-Recd. 3/1886*. The specimen here is the true *Stellaria longissima*. On the same sheet, two following specimens are mounted. (1). *Stellaria longissima* 168, wet ground Serain, Himalaya, altit. 8–9,000 ped. *M. P. Edgeworth* 1844. (2). Western Nepal- no. 5380, *Stellaria longissima* Wall., Near Budhi village, 9–10000', Date 18.7.86, Coll. *J. F. Duthie. Recd. 1.1887*.

All the specimens on the Kew sheet are true *Stellaria longissima* Wall., or more correctly *Stellaria patens* Don. Here, the label of field number 3858 differs from 3858 of CAL and BSI stated above, in altitude 12–13,000 ft and date 8.9.85. The specimens *J. F. Duthie 3858* at CAL and BSI belong to a new species which is described here as *Arenaria curvifolia*, sp. nov. This is placed in the genus *Arenaria* due to having entire petals. It differs from *Stellaria longissima* in having a different nature of indumentum, viz. very short white hairs, long curved leaves and larger flowers. *Stellaria longissima*, on the other hand, is characterised by long silky hairs. The specimens *J. F. Duthie 3858* at CAL and BSI, representing the new species, are marked 3858 A and 3858 B, respectively, to distinguish them from the specimen 3858 at K.

Recently I received on loan a duplicate specimen from the Herbarium of the British Museum (Nat. Hist.), London, labelled: — *Flora of N.W. India-Brit. Garhwal, No. 3858—Stellaria longissima* Wall. — *Near the Kuari Pass, 11–12,000'—Date 10.9.85—Coll. J. F. Duthie*. This is also marked by me as an isotype of the present new species, and renumbered 3858 C.

It might have been such that Duthie was coming down from an altitude range of 12–13,000 ft (8.9.85) to the range of 11–12,000 ft (10.9.85), near the Kuari pass, and during the first range he collected true *Stellaria longissima* Wall. which he kept under field no. 3858 and distributed to the Kew herbarium. During the second stage, he collected the new species, which he kept by chance under the same field number and distributed to CAL, BSI and BM. Next day (11.9.85), also he was travelling through the same 11–12,000 ft. range at a place East of Dakhwani, and collected the same new species, though he allotted a different field number 3863(b) to this and distributed it to DD.

Arenaria curvifolia Majumdar, sp. nov. — Fig. 1

A. kashmiricae Edgew. similis, a qua differt ramis e nodis superioribus orientibus, foliis usque ad 50 mm longis, plerumque curvatis, petalis quam sepalis glabris parvioribus, capsulis 6-valvis.

Herba decumbens vel ascendens, 30–60 cm alta, ad nodos ramificans. *Caulis* cylindricus, plusminusve scaberulus, pilis brevibus rigidis albis ad infuscatis. *Folia* linearia ad lineari-lanceolata, acuminata, opposita, basi scaberula, sursum glabrescentia, 25–55 mm longa, 1–3 mm lata, plerumque curvata, interdum recta, costa infra plus prominens, nervi laterales obscuri. *Cymae* terminales, pauciflorae, bracteae 4–6 mm longae, foliaceae, acuminatae, basi margineque scaberulae, pedicellus cylindricus, plusminusve scaberulus, usque ad 32 mm longus. *Sepala* 5, ovato-lanceolata, glabra, uninervia, acuminata, 8–10 mm longa. *Petala* 5, alba, integra, oblonga, obtusa ad subacuta, 5–6 mm longa. *Stamina* hypogyna, 4–6 mm longa, antherae ellipticae, dorsifixae, 0.8–1.0 mm longae. *Ovarium* globosum, 1–2 mm diametro, styli 3. *Capsula* obovata, ca 4–5 mm longa, longitudinaliter in 6 valvas dehiscens. *Semina* brunnea, 3 mm longa, ovato-oblonga, superficiebus asperis inaequalibus, faciebus concavis auriculiformibus, uno latere gracilia.

Holotypus: *J. F. Duthie 3858 A* (CAL).

Herbs decumbent or ascending, 30–60 cm tall, branching at the nodes. *Stem* cylindrical, more or less minutely scabrous with short stiff white to brownish hairs. *Leaves* linear to linear-lanceolate, acuminate, opposite, scabro-puberulent at base, glabrescent above, 25–55 mm long, 1–3 mm broad, usually curved, sometimes straight, midrib more prominent on lower surface, lateral veins obscure, *Cymes* terminal, few flowered, bracts 4–6 mm long, foliaceous, acuminate, scaberulous at base and margins; pedicel cylindrical, more or less scabro-puberulent, up to 32 mm

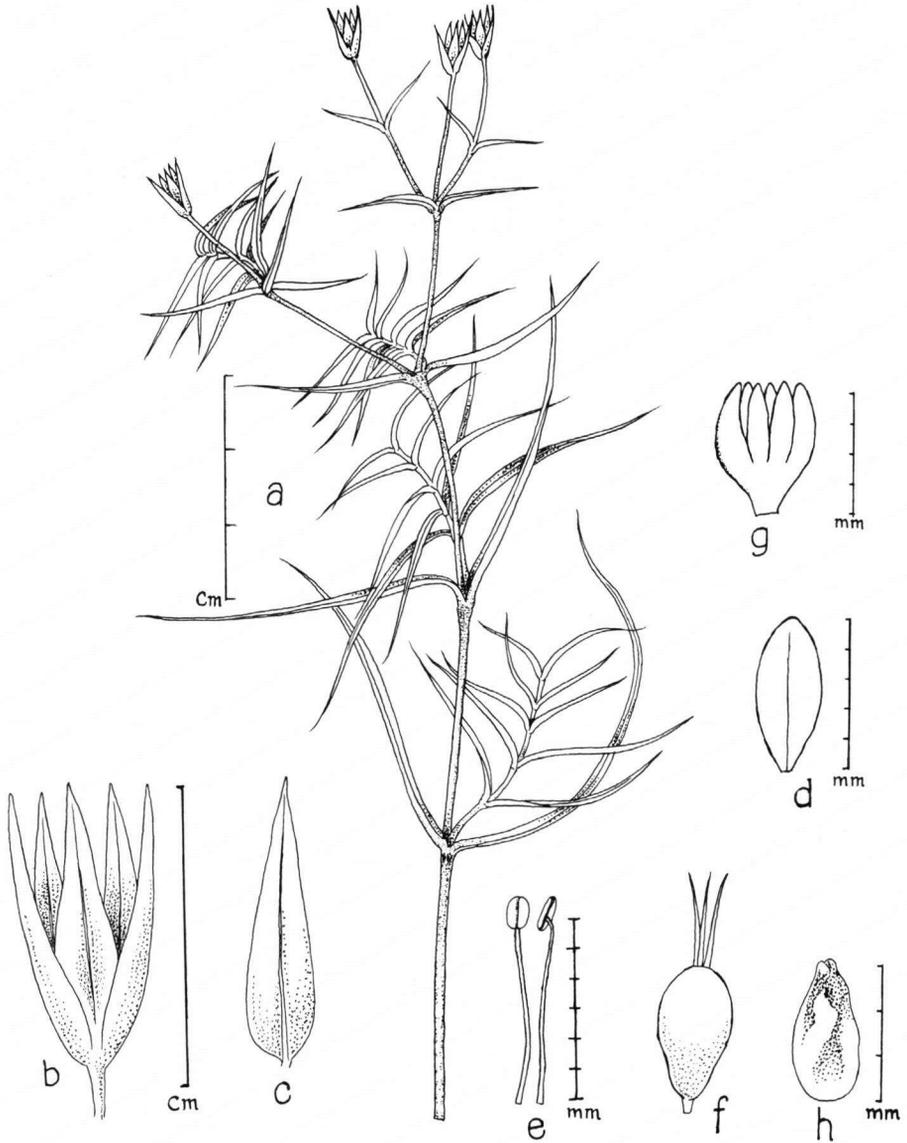


Fig. 1. *Arenaria curvifolia* Majumdar — a. Habit; b. Calyx; c. open sepal; d. petal; e. stamens; f. capsule before dehiscence; g. capsule after dehiscence; h. seed.

long. *Sepals* 5, ovate-lanceolate, glabrous, 1-veined, acuminate, 8–10 mm long. *Petals* 5, white, entire, 5–6 mm long, oblong, obtuse to subacute. *Stamens* 4–6 mm long, hypogynous; anther elliptic, dorsifixed, 0.8–1.0 mm long. *Ovary* globose, 1–2 mm diameter, styles 3. *Capsule* obovate, c. 4–5 mm long, dehiscent longitudinally into 6 subacute valves. *Seed* brown, 3 mm long, ovate-oblong, surface rough, uneven, concave face earshaped, thin on one side.

INDIA: W. H i m a l a y a. Uttar Pradesh: Garhwal, near Kuari Pass, 11–12,000 ft. (3340–3650 m), 10.9.85, *J. F. Duthie 3858 A* (holotype, CAL); *J. F. Duthie 3858 B* (isotype, BSI); *3858 C* (isotype, BM); Garhwal, Rocks E. of Dakhwani, 11–12,000 ft (3340–3650 m), 11.9.85, *J. F. Duthie 3863 (b)* (DD).

AFFINITIES

The species resembles *Arenaria kashmirica* Edgew., from which it differs in having branches arising from the upper nodes, leaves upto 50 mm long, usually curved, petals smaller than sepals, calyx glabrous, and capsule 6-valved.

A. kashmirica Edgew. has, however, been transferred to the genus *Minuartia*, on account of its having 3 valved capsules, and it is now called *Minuartia kashmirica* (Edgew.) Mattfeld.

The true systematic position of this new species is yet to be determined.

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