

Six New Species of *Draba* (Brassicaceae) from the Himalayas

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ABSTRACT. *Draba nylamensis*, *D. kongboiana*, and *D. sunhangiana* from Tibet (Xizang), China, *D. macbeathiana* from Nepal, *D. bagmatiensis* from Nepal and adjacent Sikkim (India), and *D. himachalensis* from India are described, and their distinguishing characters from the nearest relatives are discussed.

Key words: Brassicaceae, China (Tibet), *Draba*, India, Nepal.

During recent visits to various herbaria and continuing work on the treatment of Brassicaceae (Cruciferae) for the flora of Nepal, I discovered the following six new species of *Draba*. They are described herein to make their names available for the *Flora of Nepal* and other works in progress. Illustrations of these species and scanning-electron microscopy of the trichomes will be published in a forthcoming revision of *Draba* for the Himalayas and Central Asia.

Draba nylamensis Al-Shehbaz, sp. nov. TYPE: China. Xizang (Tibet): Nylam Xian, Nylam, rocky slopes, 3800 m, 23 June 1975, *Qinghai-Xizang Team 5820* (holotype, KUN; isotypes, KUN, PE).

Herba biennis, 12–30 cm alta. Caules erecti, distaliter glabri, basaliter dense hispidi, pilis simplicibus usque 2 mm longis. Folia basalia rosulata, subsessilia, oblanceolata vel oblongo-oblanceolata, 0.6–3 cm \times 2–8 mm, subtus pilis stipitato-stellatis praeditis, supra pilis plerisque simplicibus hispidis minoribus stipitato-stellatis praeditis. Folia caulina (8–)10–13, sessilia, nonauriculata, oblonga vel lanceolata. Pedicelli fructiferi 1–2 cm longi, pilis stipitato-stellatis, sparsis. Sepala 2.5–3 mm longa. Petala flava, spatulata, 6–7.5 \times 2–2.5 mm. Ovarium glabrum, 60–70-ovulatum. Fructus immaturi lineares, glabri, 2.5–3 cm longi, compressi. Semina ignota.

Biennial herbs 12–30 cm tall. Stems solitary or rarely few from base, erect, simple at base, branched distally, densely hispid basally with subsetose simple trichomes to 2 mm long, these sometimes mixed with fewer, smaller, stalked forked trichomes, glabrescent distally. Basal leaves forming dense rosettes, subsessile; leaf blade oblanceolate to oblong-oblanceolate, 0.6–3 cm \times 2–8 mm, abaxially densely pubescent with stalked, 4-rayed stel-

late trichomes with simple rays, sometimes these mixed along midvein with much coarser, fewer, simple or forked trichomes, adaxially with predominantly simple trichomes mixed with fewer, much smaller stalked forked ones, base cuneate, margin entire or 1–3-toothed, ciliate with simple trichomes to 2 mm long, apex subobtusate. Cauline leaves 10 to 13, rarely as few as 8, sessile, not auriculate, oblong-lanceolate to oblong, with indumentum similar to basal leaves, margin minutely 1–3-toothed, apex obtuse to subacute. Racemes 6–15-flowered, ebracteate, elongated considerably in fruit; rachis straight. Fruiting pedicels 1–2 cm long, divaricate-ascending, slightly curved upward or straight, slender, sparsely pubescent with stellate stalked trichomes. Sepals oblong, 2.5–3 \times 1–1.5 mm, erect, abaxially pubescent with stalked stellate trichomes and fewer simple ones, base of lateral pair not saccate, margin narrowly membranous. Petals yellow, spatulate, 6–7.5 \times 2–2.5 mm, apex obtuse to subemarginate. Median filaments 3.5–4 mm long, lateral filaments 2–3 mm long; anthers ovate, ca. 0.5 mm long. Ovules 60 to 70 per ovary. Immature fruit linear, 2.5–3 cm \times ca. 1 mm, not inflated, latiseptate, not twisted, straight; valves glabrous, with obscure midvein, base and apex subobtusate; style obsolete. Mature seeds not seen. Flowering June.

Rocky slopes, grassy slopes; 3650–3800 m.

Draba nylamensis is most closely related to *D. stenocarpa* J. D. Hooker & Thomson (Afghanistan, China, India, Kashmir, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan, Uzbekistan), which it resembles in habit, flower color, and indumentum. However, it is readily distinguished by having (8–)10–13-leaved stems, glabrous fruits, sepals 2.5–3 mm long, petals 6–7.5 mm long, and fruiting pedicels sparsely pubescent with stellate trichomes. By contrast, *D. stenocarpa* has 2–4(–6)-leaved stems, antrorsely puberulent fruits, sepals 1.5–2 mm long, petals 3–4 mm long, and glabrous fruiting pedicels rarely with few scattered simple trichomes. Although only immature fruits of *D. nylamensis* have been examined, they appear to be distinctly longer (2.5–3 cm) and with more ovules per ovary (60 to 70) than those of *D. stenocarpa*,

which has fruits (0.6–)0.9–2(–2.5) cm long and ovules 32 to 48 per ovary.

Paratypes. CHINA. **Xizang:** Nylam Xian, Nylam, 3760 m, 13 June 1966, *Zhang Yongtian & Lang Kaiyong* 3949 (PE); Kharba, 11 June 1922, *E. J. Norton* 85 (K).

Draba macbeathiana Al-Shehbaz, sp. nov. TYPE: Nepal. Thorong La, Marsyandi Valley, stable scree at the top of the pass, 17,300 ft., 25 July 1983, *R. J. D. McBeath* 1484 (holotype, E).

Herba perennis, ca. 6 cm alta. Caules erecti, tomentosi, pilis furcatis et stellatis praeditis. Folia basalia rosulata, petiolata, oblanceolata, 5–15 × 2–5 mm, pilosa, pilis stipitato-stellatis, 3- vel 4-radiatis praeditis. Racemi 3–6-flori, ebracteati, laxi. Pedicelli fructiferi 1–2 cm longi, divaricati vel leviter reflexi. Sepala 1.5–2 mm longa. Petala flava, spatulata, ca. 3 × 1 mm. Ovula 12–14. Fructus oblongi, pubescentes, 8–10 × 3–4 mm, compressi, basi et apice obtusi. Semina oblonga, ca. 1 × 0.5 mm.

Perennial herbs ca. 6 cm tall, laxly branched. Caudex covered with leaf remains of previous years, many branched, ultimate branches terminated in few rosettes. Stems erect, simple, tomentose with stalked, forked and stellate trichomes. Basal leaves rosulate, persistent; petiole to 10 mm long, ciliate with simple and stalked forked trichomes; leaf blade oblanceolate, 5–15 × 2–5 mm, pilose with stalked, 3- or 4-rayed stellate trichomes with simple, soft rays, base cuneate to attenuate, margin 1- or 2-toothed on each side, apex acute. Cauline leaves few, similar to basal leaves. Racemes 3–6-flowered, ebracteate, elongated in fruit. Fruiting pedicels 1–2 cm long, horizontal to slightly reflexed, straight, slender, tomentose all around; adaxially with a well-developed axillary gland. Sepals oblong, 1.5–2 × ca. 1 mm, erect, abaxially sparsely pubescent with stalked stellate trichomes, base of lateral pair not saccate, margin not membranous. Petals yellow, spatulate, ca. 3 × 1 mm, apex subemarginate. Filaments 1.5–2 mm long; anthers ovate, ca. 0.4 mm long. Ovules 12 to 14 per ovary. Fruit oblong, 8–10 × 3–4 mm, compressed, latiseptate, twisted; valves pubescent, not veined, base and apex obtuse; style 0.5–0.6 mm long. Seeds brown, oblong, ca. 1 × 0.5 mm.

Draba macbeathiana, which is named after the collector of the holotype, is known only from the type collection above. It is closely related to *D. humillima* O. E. Schulz (Xizang, China, and Sikkim, India), which it resembles in indumentum, flower color and size, and fruit shape. It is readily distinguished by being nonpulvinate and laxly branched and by having toothed, acute leaves, horizontal to slightly reflexed, slender fruiting pedicels 10–20 mm long and adaxially with a well-devel-

oped axillary gland, sepals with stellate trichomes, 12–14-ovuled ovaries, and compressed, twisted, pubescent fruits. By contrast, *D. humillima* is densely pulvinate with entire, obtuse leaves, divaricate-ascending, stout fruiting pedicels 2–5(–8) mm long and adaxially eglandular, sepals with simple trichomes, 16–24 -ovuled ovaries, and inflated, untwisted glabrous fruits.

Draba kongboiana Al-Shehbaz, sp. nov. TYPE: China. Tibet [Xizang]: Kongbo, Nyima La, 14,500 ft., 29°28'N, 94°52'E, 28 June 1947, *F. Ludlow, G. Sherrieff & H. H. Elliot* 15329 (holotype, BM; isotypes, E, TI).

Herba perennis, 3–11 cm alta, caespitosa, scaposa. Caules erecti, dense pubescentes, basi pilis simplicibus et stellatis. Folia basalia rosulata, persistentia, spatulata vel oblanceolata, 5–15 × 1.5–4 mm, inferne pilis stellatis, sessilibus vel brevi-stipitatis, 3- vel 4-radiatis, superne pilosi pilis simplicibus; petiolis (5–)10–20 mm longis, ciliatis, suberosis. Folia caulina carentia. Racemi 8–17-flori, ebracteati. Pedicelli fructiferi 7–15 cm longi, pilis stellatis. Sepala 2–3 mm longa. Petala flava, late obovata, 5–7 × 3–5 mm, apice emarginata. Ovula 12–16. Fructus oblongi vel oblongo-ovati, puberuli, 4–6 × 1.5–2 mm, compressi; stylus 0.4–0.6 mm longus. Semina ovata, ca. 1 × 0.6 mm.

Perennial herbs 3–11 cm tall, densely caespitose, scapose. Caudex covered with petioles of previous years, few branched, ultimate branches terminated in rosettes. Stems erect, simple, densely pubescent throughout with stellate trichomes mixed at least basally with simple ones. Basal leaves rosulate, persistent; petiole (5–)10–20 mm long, persistent, thickened, corky, ciliate with simple trichomes; leaf blade spatulate or oblanceolate, 5–15 × 1.5–4 mm, abaxially densely pubescent with sessile or short-stalked, 3- or 4-rayed stellate trichomes with unbranched rays, adaxially pilose with primarily simple trichomes, margin not ciliate, without setose or subsetose trichomes, base attenuate, margin entire, apex obtuse. Cauline leaves absent. Racemes 8–17-flowered, ebracteate, elongated considerably in fruit. Fruiting pedicels 7–15 mm long, ascending, straight, densely pubescent with stellate trichomes. Sepals oblong-ovate, 2–3 × 1–1.5 mm, erect, abaxially sparsely pubescent with simple and forked trichomes, base of lateral pair not saccate, margin narrowly membranous. Petals deep yellow, broadly obovate, 5–7 × 3–5 mm, apex emarginate; claw 1–2 mm long. Filaments 2–3 mm long; anthers oblong, 0.6–0.8 mm long. Ovules 12 to 16 per ovary. Fruit oblong to oblong-ovate, 4–6 × 1.5–2 mm, not inflated, latiseptate, not twisted; valves puberulent with simple trichomes sometimes mixed with much fewer forked ones, not veined,

base and apex obtuse to subacute; style 0.4–0.6 mm long. Seeds brown, ovate, ca. 1×0.6 mm. Flowering May and June.

Grassy slopes, alpine grasslands, rocky areas at altitudes 4400 to 4900 m.

Draba kongboiana is mostly closely related to *D. olgae* Regel & Schmalhausen (China, Kyrgyzstan, Pakistan, Tajikistan) from which it differs by having stems densely pubescent throughout with stellate and fewer simple trichomes, well-developed, persistent petioles (5–)10–20 mm long that become thickened and corky, abaxial leaf surface pubescent with 3- or 4-rayed stellate trichomes with unbranched rays, non-ciliate leaf margins, densely pubescent fruiting pedicels, deep yellow petals, and oblong anthers 0.6–0.8 mm long. *Draba olgae* has stems glabrous throughout or only sparsely pubescent basally, sessile leaves or with petioles to 1 mm long that never become thickened or corky, basal leaves abaxially pubescent with 3–5-rayed stellate trichomes at least one ray of which is branched, leaf margins distinctly ciliate with setose or subsetose simple trichomes, glabrous fruiting pedicels, pale yellow petals soon turning whitish, and ovate anthers 0.3–0.4 mm long.

Because of similarities in habit (scapose perennials with leafless stems) and flower color and size, it is easy to confuse *Draba kongboiana* with *D. oreades* Schrenk, a species widely distributed in the Himalayas and western China, west into Central Asia, and north into Russia and Mongolia. However, the new species has abaxial leaf surfaces pubescent with stellate instead of primarily simple trichomes, fruiting pedicels densely pubescent all around instead of glabrous adaxially, oblong instead of ovate anthers, and puberulent instead of glabrous fruits. *Draba kongboiana* also resembles *D. jucunda* W. W. Smith, a Chinese endemic known only from southeastern Xizang and northwestern Yunnan, in having yellow petals 5–7 mm long and puberulent fruits, but it differs in having thick, non-scurulose instead of scurulose caudices, petiolate instead of sessile basal leaves, short (0.4–0.6 mm long) instead of long (1.5–2.5 mm) styles, and fruiting pedicels pubescent all around instead of glabrous adaxially.

Paratypes. CHINA. **Xizang:** Lang La, Kymidong Dzong, Lilung, F. Ludlow & G. Sherriff 1842 (BM, E); Lang La, 28°58'N, 93°42'E, F. Ludlow, G. Sherriff & G. Taylor 4284 (BM).

Draba sunhangiana Al-Shehbaz, sp. nov. TYPE: China. SW Tibet [Xizang]: Burang Xian, Kangrinboque Feng, grassland on slope, 4700 m, 25 Aug. 1990, Y. Fei, H. Sun [Sung Hang], D. Z. Li & B. Bai 447 (holotype, KUN 584594; isotype, KUN).

Herba perennis, 5–15 cm alta, caespitosa. Caules erecti, ramosi, pilis crispis, simplicibus, furcatis, stellatis, radiis inaequalibus. Folia basalia rosulata, lanceolata, 4–10 \times 1–3 mm, inferne pilis stellatis, stipitatis, 3–5-radiatis, crispis, superne pilosi pilis simplicibus, crispis; petiolis 1–4 mm longis, ciliatis. Folia caulina 2–6, ovata vel anguste oblonga, 4–8 \times 1.5–4 mm. Racemi 3–25-flori, ebracteati, fructiferi subumbellati. Pedicelli fructiferi 0.5–1.5(–2.4) mm longi, glabri. Sepala ca. 0.7 \times 0.4 mm. Petala alba, oblanceolata, ca. 1.5 mm longa. Ovula 14–20. Fructus ovati vel ovato-lanceolati, puberuli, 2.5–4(–5) \times 1.5–2 mm, glabri, basi inflati, obtuse, apice acuti; stylus 0.1–0.3 mm longus. Semina ovata, 0.4–0.5 \times 0.2–0.4 mm.

Perennial herbs 5–15 cm tall, caespitose. Caudex slender, covered with leaf remains of previous years, branched, ultimate branches terminated in rosettes. Stems erect, branched above, pubescent with a mixture of crisped, simple, forked, and short-stalked stellate trichomes with unequal rays. Basal leaves rosulate; petiole 1–4 mm long, ciliate; leaf blade lanceolate, 4–10 \times 1–3 mm, abaxially pilose with short-stalked, 3–5-rayed stellate trichomes the rays of which are unequal, simple, and crisped, adaxially pilose with simple, crisped trichomes, base attenuate, margin entire, not ciliate, apex subacute. Cauline leaves 2 to 6, sessile; leaf blade ovate to narrowly oblong, 4–8 \times 1.5–4 mm, pubescent as basal leaves, base obtuse, margin entire or obscurely denticulate, not ciliate, apex subobtusate. Racemes 3–25-flowered, ebracteate, subumbellate, not elongated in fruit; rachis straight. Fruit- ing pedicels 0.5–1.5(–2.4) mm long, divaricate, straight, glabrous. Sepals oblong, ca. 0.7 \times 0.4 mm, erect, sparsely pilose. Petals white, oblanceolate, ca. 1.5 mm long. Filaments ca. 0.7 mm long; anthers ovate, ca. 0.1 mm long. Ovules 14 to 20 per ovary. Fruit ovate to ovate-lanceolate, 2.5–4(–5) \times 1.5–2 mm, basally inflated, latiseptate, not twisted; valves glabrous, not veined, base obtuse, apex acute; style 0.1–0.3 mm long. Seeds brown, ovate, 0.4–0.5 \times 0.2–0.4 mm.

Draba sunhangiana is named in honor of Sun Hang, one of the collectors of the type gathering and director of the KUN herbarium. It is readily distinguished from all of the Chinese, Central Asian, and Himalayan species by having crisped trichomes and subumbellate fruiting racemes. The type collection of *D. sunhangiana* consists of two plants with fully mature fruits and only a few flowers, the color of which was not recorded. The two species of Himalayan, Chinese, and Central Asian *Draba* that resemble the new species in fruit shape and size are the white-flowered *D. glomerata* Royle (China, India, Kashmir, Nepal, Pakistan) and yellow-flowered *D. korshinskyi* (O. Fedtschenko) Pohle

(Afghanistan, China, Kashmir, Pakistan, Tajikistan). From these two species *D. sunhangiana* is easily distinguished by having stellate trichomes with unequal, unbranched, crisped rays, adaxial leaf surface pilose with crisped simple trichomes, 14–20-ovulate ovaries, and smaller seeds $0.4\text{--}0.5 \times 0.2\text{--}0.4$ mm. From *D. glomerata*, *D. sunhangiana* also differs by having glabrous fruiting pedicels and basally inflated fruits, and from *D. korshinskyi* it differs by having leafy stems pubescent throughout. In *Draba glomerata* both leaf surfaces are uniformly tomentose with sessile or subsessile, 4-rayed stellate trichomes the rays of which are straight and with 1 or 2 lateral branches on each side, the fruiting pedicels are tomentose all around with stellate trichomes, the ovaries are (6)–8–12-ovuled, the fruits are not inflated basally, and the seeds are $0.7\text{--}1 \times 0.5\text{--}0.7$ mm. In *D. korshinskyi* the stems are leafless and glabrous throughout or at least along the distal half, the leaves are tomentose with a mixture of simple trichomes and stellate ones with straight, not crisped rays, the ovaries are 8–12-ovuled, and the seeds are $1\text{--}1.2 \times 0.6\text{--}0.7$ mm.

Draba himachalensis Al-Shehbaz, sp. nov. TYPE: India. Himachal Pradesh: above Chandratul Lake, exposed mt. ridge in scree, 5100 m, 18 Aug. 1988, R. McBeath 2154 (holotype, E).

Herba perennis, 0.5–1 cm alta, pulvinata, scaposa, tomentosa, canescens; pilis stellatis, 4–6-radiatis, radiis tenuibus, ramosis. Folia basalia rosulata, obovata vel spatulata, $2\text{--}4 \times 1\text{--}1.5$ mm, tomentosa, integra. Folia caulina carentia. Racemi 2–4-flori, ebracteati, racemi fructiferi folia paulo longiores. Pedicelli fructiferi 1–2.5 mm longi, tomentosi vel apice glabri. Sepala ca. 1.2×0.7 mm. Petala alba, obovata, $1.2\text{--}1.5 \times \text{ca. } 0.9$ mm. Ovula 10–14. Fructus orbiculares, glabri, 2–3 mm diametro, compressi, basi et apice rotundati; stylus ca. 0.1 mm longus. Semina ovata, $0.5\text{--}0.6 \times 0.3\text{--}0.4$ mm.

Perennial herbs 0.5–1 cm tall, pulvinate, scapose, canescent, tomentose throughout with short-stalked, 4–6-rayed stellate trichomes with finely branched rays. Caudex covered with leaves of previous years, many branched, ultimate branches terminated in rosettes. Stems erect, simple, tomentose. Basal leaves rosulate; petiole 2–3 mm long, ciliate with coarse, forked trichomes; leaf blade obovate to spatulate, $2\text{--}4 \times 1\text{--}1.5$ mm, uniformly tomentose on both surfaces, base attenuate, margin entire, apex obtuse. Cauline leaves absent. Racemes 2–4-flowered, ebracteate, somewhat elongated, in fruit only slightly taller than rosette. Fruiting pedicels 1–2.5 mm long, divaricate, straight, tomentose all around or glabrescent distally. Sepals oblong, ca. 1.2×0.7 mm, erect, abaxially sparsely tomentose,

base of lateral pair not saccate, margin narrowly membranous. Petals white, obovate, $1.2\text{--}1.5 \times \text{ca. } 0.9$ mm, apex rounded. Filaments 0.7–1 mm long; anthers ovate, ca. 0.4 mm long. Ovules 10 to 14 per ovary. Fruit orbicular, 2–3 mm diam., not inflated, latiseptate, not twisted; valves glabrous, not veined, base and apex rounded; style ca. 0.1 mm long. Seeds brown, ovate, $0.5\text{--}0.6 \times 0.3\text{--}0.4$ mm.

Draba himachalensis is most closely related to *D. glomerata*, which it resembles in habit, indumentum, flower color, and fruit size. However, it differs by having leafless scapes, 2–4-flowered racemes, obovate, apically rounded petals 1.2–1.5 mm long, orbicular fruits rounded at apex, and smaller seeds $0.5\text{--}0.6 \times 0.3\text{--}0.4$ mm. *Draba glomerata* has 1–3(–5)-leaved scapes, (3)–5–10-flowered racemes, spatulate, apically subemarginate petals (1.8)–2–2.7(–3) mm long, ovate or rarely oblong-ovate fruits acute at apex, and seeds $0.7\text{--}1 \times 0.5\text{--}0.7$ mm.

The flowering raceme in *Draba himachalensis* hardly emerges from the basal rosette, and only when the fruits mature does it become slightly taller than the rosette. By contrast, in *D. glomerata* the raceme is distinctly taller than the rosette both in flower and fruit.

Draba bagmatiensis Al-Shehbaz, sp. nov. TYPE: Nepal. Ganesh Himal, Bagmati Zone, Rasuwa District, Paldol Base Camp, 4400 m, sandy soil, 3 Aug. 1994, $28^{\circ}13'N$, $85^{\circ}12'E$, F. Miyamoto, K. R. Rajbhandari, S. Akiyama, M. Amano, H. Ikeda & H. Tsukaya 9400056 (holotype, TI; isotype, MO).

Herba perennis, 1–6 cm alta, caespitosa; pilis stellatis, 4-radiatis, radiis tenuibus, ramosis. Folia basalia rosulata, oblanceolata vel oblonga, $2\text{--}10 \times 0.5\text{--}3$ mm, tomentosa, integra vel dentata. Folia caulina 2–5, sessilia, ovata vel oblonga, $2\text{--}7 \times 1\text{--}3$ mm. Racemi 5–13-flori, floribus basibus bracteatis. Pedicelli fructiferi 1–5 mm longi, tomentosi, saepe recurvati. Sepala $0.8\text{--}1 \times 0.4\text{--}0.5$ mm. Petala alba, spatulata, $1.2\text{--}2 \times 0.5\text{--}1$ mm. Ovula 16–20. Fructus anguste elliptici, puberuli, $3\text{--}5 \times 1.2\text{--}1.7$ mm, compressi; stylus 0.1–0.4 mm longus. Semina ovata, $0.5\text{--}0.7 \times 0.3\text{--}0.5$ mm.

Perennial herbs 1–6 cm tall, caespitose. Caudex slender, covered with petiolar remains of previous years, few to many branched, ultimate branches terminated in rosettes. Stems several to many, simple, ascending, tomentose with subsessile stellate trichomes. Basal leaves rosulate; petiole to 3 mm long; leaf blade oblanceolate to oblong, $2\text{--}10 \times 0.5\text{--}3$ mm, tomentose with sessile, 4-rayed stellate trichomes the rays of which with 2 lateral branches, base cuneate, margin entire or 1-toothed on each

side, often ciliate at least near base, apex obtuse. Cauline leaves 2 to 5, sessile; leaf blade ovate to oblong, $2\text{--}7 \times 1\text{--}3$ mm, pubescent as basal leaves, obtuse, margin entire, not ciliate at base, apex subacute. Racemes 5–13-flowered, lowermost flowers bracteate. Fruiting pedicels 1–5 mm long, horizontal, often recurved, forming a distinct angle with fruit, tomentose all around with subsessile, stellate trichomes. Sepals oblong, $0.8\text{--}1 \times 0.4\text{--}0.5$ mm, erect, caducous, abaxially pilose, base of lateral pair not saccate, margin membranous. Petals white, spatulate, $1.2\text{--}2 \times 0.5\text{--}1$ mm, caducous, apex subemarginate or rounded; claw absent. Filaments 0.8–1 mm long, caducous; anthers ovate, 0.1–0.2 mm long. Ovules 16 to 20 per ovary. Fruit narrowly elliptic, $3\text{--}5 \times 1.2\text{--}1.7$ mm, not appressed to rachis, latiseptate, untwisted; valves puberulent with simple trichomes; style 0.1–0.4 mm long. Seeds ovate, $0.5\text{--}0.7 \times 0.3\text{--}0.5$ mm.

Draba bagmatiensis is most closely related to *D. lasiophylla* Royle (Bhutan, China, India, Kashmir, Kazakhstan, Kyrgyzstan, Nepal, Tajikistan, Uzbekistan), from which it is easily distinguished by having horizontal, often recurved fruiting pedicels forming a distinct angle with fruit, sepals 0.8–1 mm long, petals 1.2–2 mm long, elliptic, untwisted fruits not appressed to rachis, puberulent fruit valves with

simple trichomes, and seeds 0.5–0.7 mm long. By contrast, *D. lasiophylla* has erect to ascending fruiting pedicels often subappressed to rachis and forming a straight line with fruit, sepals 1.2–1.8 mm long, petals 2–3.5 mm long, lanceolate to lanceolate-oblong twisted fruits often subappressed to rachis, tomentose fruit valves with branched trichomes, and larger seeds 0.8–1.1 mm long. The fruits in *D. lasiophylla* are twisted two or three turns and rarely are they twisted one or half a turn. Both *D. lasiophylla* and *D. bagmatiensis* are closely related to *D. oaricarpa* O. E. Schulz (Pakistan, Nepal, Tibet, Sikkim) and differ in having caducous floral parts. The last species is easily distinguished by having persistent sepals, petals, and stamens that often persist well after fruit dehiscence.

Paratypes. INDIA. **Sikkim:** west district, opposite Lambi, above Thangshing, 4130 m, $27^{\circ}31'N$, $88^{\circ}11'E$, 20 July 1992, fine scree by stream, *D. G. Long*, *R. McBeath*, *H. Noltie* & *M. Watson* 540 (CAS, E).

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