

Rorippa beckii (Brassicaceae), a New Species from Bolivia

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Rorippa Scopoli is a well-defined genus of about 80 species distributed on all continents except Antarctica. Nearly 25 species are indigenous to Europe and Asia, 23 to North America, 12 to Africa, 11 to South America, and the remainder to Australia, New Zealand, New Guinea, and Polynesia (Al-Shehbaz, 1988). Many authors have treated *Rorippa* and *Nasturtium* R. Brown as distinct genera. As shown by Al-Shehbaz & Rollins (1988), however, all of the alleged differences between the two genera show no consistent pattern if the complex is examined critically on a worldwide basis. The South American species of *Rorippa* are distributed primarily along the Andes, where they grow in wet habitats at altitudes of up to 4,000 m.

Rorippa beckii Al-Shehbaz, sp. nov. TYPE: Bolivia. Depto. La Paz: Prov. Ingavi, [Puerto] Guaqui, 3,810 m, en la orilla de lago Titicaca, [16°35'S, 68°51'W], 27 Apr. 1989, S. G. Beck, E. Gómez & Z. Rúgolo 18139 (holotype, LPB; isotype, MO). Figure 1.

Herba perennis glabra, a basi ramosa, 5–10 cm alta; folia basales petiolata, pinnatisecta, subcarnosa, lobis lateralibus 3- vel 6-jugis, oblongis vel ovatis, sinuatis vel dentatis; racemi ad apicem bracteati, bractae pinnatisectae; sepala erecta oblonga, 1–1.1 mm longa; petala alba, spatulata, 1–1.3 mm longa; pedicellae fructiferae arcuatae, recurvati, 3–4 mm longae; siliquae oblongae, obtusae, teretae, 4–7 mm longae, 2–2.5 mm latae; styli obsoleti; semina late ovata vel suborbiculata, compressa, biseriata, colliculata, 0.8–1 mm longa.

Perennial herbs, glabrous throughout, rooting from the lowermost nodes. Stems branched from the base, subdecumbent, 5–10 cm tall. Basal leaves petiolate, pinnatisect, somewhat fleshy, 1.5–3.5 cm long; lateral lobes in 3–6 pairs, oblong to ovate, sinuate to irregularly dentate or subentire, 3–5 mm long, 2–3 mm wide, progressively increasing in size toward leaf apex, the uppermost pair slightly smaller than the terminal lobe; petioles glabrous, slightly expanded at base, 5–10 mm long. Cauline leaves similar to basal but gradually decreasing in size upward and often with fewer lateral lobes. Inflorescences corymbose racemes, elongated considerably in fruit, bracteate throughout; bracts finely pinnatisect, with 2 or 3 pairs of lateral lobes, the petioles longer than

pedicels. Sepals erect, ovate, glabrous, caducous, pale purple, scarious at margin, nonsaccate at base, 1–1.1 mm long. Petals spatulate, white, entire, 1–1.3 mm long, 0.3–0.5 mm wide. Filaments erect, white, 1–1.2 mm long; anthers ovate, 0.15–0.2 mm long. Lateral nectar glands minute, median glands absent. Fruiting pedicels glabrous, strongly recurved, arcuate, 3–4 mm long. Fruits oblong, terete, obtuse at both ends, 4–7 mm long, 2–2.5 mm wide; septum complete; replum twisted after fruit dehiscence; style obsolete; stigma entire. Seeds broadly ovate to suborbicular, compressed, yellowish brown, finely colliculate, biseriately arranged in each locule, 0.8–1 mm long; cotyledons accumbent.

Rorippa beckii, which is named after Stephan G. Beck, is readily distinguished from all other New World members of *Rorippa* in having bracteate inflorescences, minute white flowers, obsolete styles, and strongly recurved fruiting pedicels. It is somewhat related to *R. nana* (Schlecht.) Macbride and *R. austroamericana* Martínez-Laborde, which it resembles in habit, leaves, flowers, and seed morphology. However, the last two have ebracteate inflorescences, conspicuous styles, and straight, divaricate fruiting pedicels. They were placed by Martínez-Laborde (1983, 1985) in the independent sect. *Kardamoglyphos* (Schlecht.) Martínez-Laborde. It is doubtful, however, that the present sectional classification of the genus is practical.

The presence of bracteate inflorescences in *Rorippa* is very rare and has been reported by Stuckey (1972) and Jonsell (1973) in the eastern Asiatic (China, Japan, and adjacent U.S.S.R.) *R. cantoniensis* (Lour.) Ohwi, which they recognized as *R. microsperma* (DC.) L. H. Bailey. It has also been reported by Jonsell (1974) in the widespread, tropical African *R. cryptantha* (Hochst. ex A. Rich.) Robyns & Boutique and in the Madagascan *R. millefolia* (Baker) Jonsell. Bracteate inflorescences are not known elsewhere in the genus, and they probably evolved independently in *Rorippa* in Asia, Africa, and South America. *Rorippa beckii* is very distinct from these Old World taxa and is readily distinguished by its strongly recurved pedicels 3–4 mm long, white flowers, minute anthers to 0.2 mm long, obsolete styles, and glabrous leaves. In contrast, the

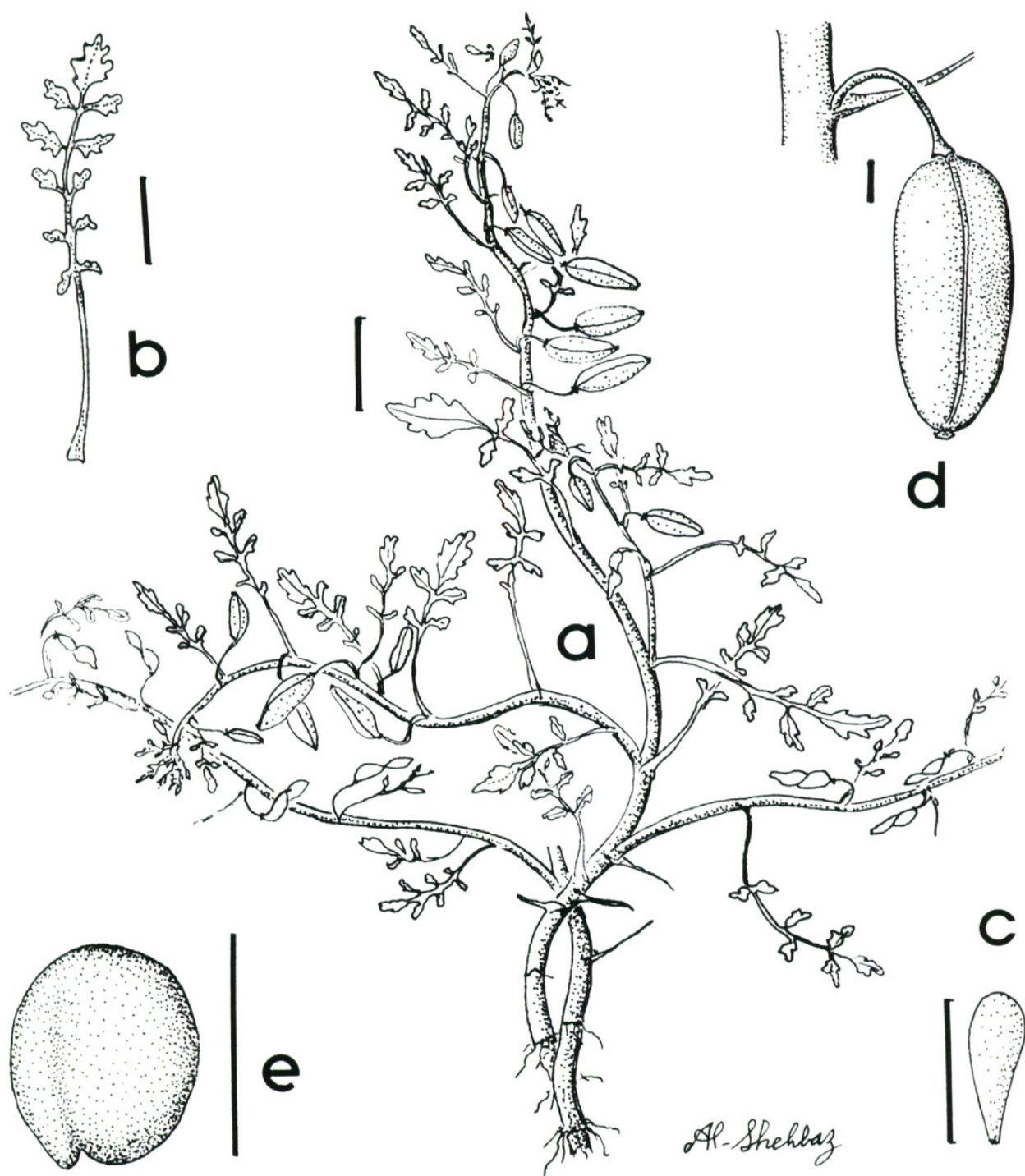


Figure 1. *Rorippa beckii*. —a. Habit. —b. Basal leaf. —c. Petal. —d. Fruit and fruiting pedicel. —e. Seed. Scales a, b = 1 cm; c–e = 1 mm. Drawn from the isotype at MO.

other species mentioned above have erect to ascending pedicels 1–2 mm long, yellow flowers, larger anthers 0.5–0.7 mm long, distinct styles, and almost always pubescent leaves.

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