

**WEBERBAUERA** Gilg & Muschler, Bot. Jahrb. Syst. 42: 481. 1909.

Tribe: Thelypodieae Prantl in Engler & Prantl, Nat. Pflanzenfam. III. 2: 155. 1891.

Name derivation: For August Weberbauer (1871–1948), German botanist and explorer who collected extensively in Peru and became professor of botany at the University of San Marcos, Peru.

Type species: *W. densiflora* (Muschler) Gilg & Muschler (based on *Braya densiflora* Muschler; = *W. spathulifolia* (A. Gray) O. E. Schulz).

*Alpamina* O. E. Schulz, Pflanzenreich IV. 105(Heft 86): 191. 1924. Type species: *A. trichocarpa* (Muschler) O. E. Schulz (based on *Eudema trichocarpum* Muschler).

*Pelagatia* O. E. Schulz, Pflanzenreich IV. 105(Heft 86): 192. 1924. Type species: *P. bracteata* O. E. Schulz.

*Stenodraba* O. E. Schulz, Pflanzenreich IV. 105(Heft 86): 186. 1924. Lectotype species (designated by Ravenna, 1981): *S. chillanensis* (Philippi) O. E. Schulz.

**Herbs** perennial, usually caespitose, with simple or branched woody caudex usually covered with petiolar remains of previous years. **Trichomes** simple or forked, short-stalked sessile and malpighiaceus. **Multicellular glands** absent. **Stems** ascending, sometimes prostrate to decumbent, often simple. **Basal leaves** petiolate, rosulate and often terminate caudex branches, simple, entire or variously toothed to pinnately dissected; cauline leaves petiolate or sessile and cuneate to attenuate, not auriculate, entire or dentate. **Racemes** few- to several-flowered, bracteate or ebracteate, corymbose, elongated in fruit; rachis straight; fruiting pedicels ascending to divaricate, persistent. **Sepals** ovate to oblong, free, deciduous or rarely persistent, erect or rarely spreading, equal, base of inner pair not saccate. **Petals** white, rarely violet, lavender or yellow, erect at base with flaring blade, longer than sepals; blade spatulate to oblong, apex obtuse; claw undifferentiated from blade or rarely distinct and glabrous, entire, unappendaged. **Stamens** 6, slightly exserted, erect, slightly tetradynamous; filaments filiform, wingless, unappendaged, not dilated at base, glabrous, free; anthers ovate to oblong, not apiculate at apex. **Nectar glands** confluent and subtending bases of all stamens; median nectaries present; lateral nectaries semiannular. **Ovules** 5–50 per ovary; placentation parietal. **Fruit** dehiscent, capsular siliques, linear to oblong, terete or slightly latiseptate or angustiseptate, not inflated, sessile or subsessile, unsegmented; valves papery, usually with a prominent midvein, glabrous or pubescent, not keeled and rounded, smooth or torulose, wingless, unappendaged; gynophore absent or rarely to 0.5 mm; replum rounded, visible; septum complete or rarely perforate, membranous, veinless; style obsolete or distinct and to 2.5 mm, stout or filiform, persistent, glabrous; stigma capitate, entire, not appendaged. **Seeds** uniseriate or rarely subbiseriate, wingless, oblong, plump; seed coat minutely reticulate, not mucilaginous when wetted; cotyledons incumbent.

Twenty-one species: Argentina, Bolivia, Chile, Peru.

References: Al-Shehbaz (1990, 2004).

KEY TO THE SPECIES

1. Plant, including fruit, densely covered with malpighiaceus trichome; petals often pubescent ..... 14. *W. trichocarpa*
1. Plants glabrous or with simple and/or stalked forked trichomes, rarely with malpighiaceus

- trichomes only on basal leaves; fruit glabrous or rarely sparsely pubescent with simple trichomes; petals glabrous.
2. Inflorescence bracteate throughout, rarely uppermost flowers ebracteate.
    3. Petals violet,  $6.5-7.5 \times 3-3.5$  mm .....8. *W. violacea*
    3. Petals white,  $2-3.5(-5) \times 0.7-2(-2.5)$  mm.
      4. Plants densely scabrous with appressed antrorse trichomes, all leaves entire .....9. *W. scabrifolia*
      4. Plants glabrous or pilose with spreading trichomes, at least some leaves dentate, repand, lyrate, or pinnatifid.
        5. Basal leaves not ciliate at base, sometimes glabrous or with forked trichomes .....1. *W. spathulifolia*
        5. Basal leaves conspicuously ciliate (at least basally) or densely covered with simple trichomes.
          6. Fruit apex attenuate; style 1–3 mm long; petals 3.5–5 mm long... 7. *W. herzogii*
          6. Fruit apex obtuse; style to 0.2 mm long; petals 2.5–3.5 mm long.
            7. Basal and lowermost cauline leaves lyrate-pinnatifid, ciliate; stems and leaves glabrous; cauline leaves and bracts entire or repand; seeds 3–5 per locule..... 10. *W. bracteata*
            7. Basal and lowermost cauline leaves denticulate or dentate, not ciliate; stems and leaves densely pilose or hirsute; cauline leaves and bracts coarsely dentate; seeds 6–15 per locule.
              8. Cauline leaves and bracts sessile; stems retrorsely pilose; fruits glabrous; pedicels pilose; petals 2–2.5 mm wide .....11. *W. dillonii*
              8. Cauline leaves and bracts petiolate; stems hirsute; fruits hirsute; pedicels glabrous; petals 0.7–1 mm wide .....12. *W. peruviana*
  2. Inflorescences ebracteate, rarely lowermost few flowers bracteate.
    9. Sepals persistent; fruit sparsely with retrorse simple trichomes ..... 6. *W. retropilosa*
    9. Sepals soon caducous; fruit glabrous.
      10. Petals yellow; fruit septum perforate; leaves adaxially densely sericeous .....3. *W. perforata*
      10. Petals white; fruit septum complete; leaves glabrous or differently pubescent.
        11. Basal leaves numerous; petioles persistent, straw colored, 3–3.5 cm long, ca. as long as blade, overlapping and forming a dense crown ..... 2. *W. densifolia*
        11. Basal leaves few to several; petiole soon caducous or if persistent, then not straw colored, less than 3 cm long, shorter than blades, not forming a dense crown.
          12. Basal and cauline leaves not ciliate, sometimes glabrous or with some branched trichomes.
            13. Leaves fleshy, glabrous; petals 6.5–8 mm long; caudex thick, 1.5–2 cm in diam. .... 5. *W. smithii*
            13. Leaves not fleshy, often pubescent or rarely glabrous; petals 2–3.5(–4) mm long; caudex slender, almost always less than 1 cm in diam.
              14. Basal leaves filiform to narrowly linear; cauline leaves coarsely dentate-serrate; trichomes minute, 0.03–0.1(–0.15) mm. 4. *W. minutipila*
              14. Basal leaves oblong, ovate, lanceolate, or spatulate, very rarely linear; cauline leaves entire to repand or dentate; trichomes coarser,

- (0.2–)0.4–0.7(–1.1) mm long ..... 1. *W. spathulifolia*
12. Basal and cauline leaves ciliate with simple trichomes.
15. Basal leaves pinnatifid; inflorescence 1–3-flowered; petals less than 2 mm long; stems less than 2 cm tall ..... 13. *W. cymosa*
15. Basal leaves entire, rarely dentate or sinuate; inflorescence usually several to many flowered; petals 2–5.5 mm long; stems more than 2 cm tall.
16. Basal leaves semiterete, thick, linear ..... 19. *W. suffruticosa*
16. Basal leaves flat, thin, oblong to oblanceolate or spatulate, rarely linear-lanceolate.
17. Style obsolete or rarely to 0.6 mm long in fruit.
18. Fruit torulose; infructescence lax racemes; fruiting pedicel slender, divaricate, 4–8(–12) mm long; basal leaves entire, to 1.5 mm wide ..... 18. *W. lagunae*
18. Fruit smooth; infructescence usually dense, subumbellate; fruiting pedicels stout, subappressed, 1.5–4.5(–7) mm long; basal leaves usually dentate, 2–4.5(–6) mm wide .....  
.....15. *W. colchaguensis*
17. Style 1–3 mm long in fruit, if shorter then fruits conspicuously flattened.
19. Leaves abaxially with trichomes shorter than those adaxially or along margin; fruit torulose; stems usually leafless; petioles of basal leaves stout, swollen ..... 20. *W. imbricatifolia*
19. Leaves abaxially glabrous; fruit smooth; stems few leaved; petioles of basal leaves slender, not swollen.
20. Basal leaves entire; petals (3.5–)4–5 mm long; style (0.8–)1.5–2 mm long in fruit ..... 17. *W. stenophylla*
20. Basal leaves dentate; petals 2.5–3.5 mm long; style 0.5–0.9(–1.1) mm long in fruit ..... 15. *W. chillanensis*

**1. *Weberbaueria arequipa*** Al-Shehbaz & Montesinos, Novon 19: 281. 2009. TYPE: Peru, Arequipa. Arequipa Prov., District San Juan de Tarucani, Tico Tico, 4181 m, river bed, 16°06'30"S, 70°59'16"W, 3 Apr 2006, *D. B. Montesinos & L. P. Mondragón* 936 (holotype, WAG!; isotypes, MO!, USM).

Herbs annual, ca. 6 cm tall; trichomes absent except a few simple ones at base of petioles; stems decumbent, glabrous, several branched above base. Cauline leaves oblanceolate, petiolate, 8–12 × 3–5 mm, petioles 2–4 mm, blade glabrous, base attenuate, margin dentate. Racemes ebracteate, elongated slightly in fruit; rachis straight; fruiting pedicels mostly divaricate, 2–4(–5) mm, straight, slender. Sepals green, oblong, 1.1–1.3 × 0.6–0.8 mm, glabrous, membranous at margin, not saccate at base; petals white, narrowly obovate, 1.8–2 × 0.7–0.9 mm, not clawed; filaments white, 1–1.5 mm; anthers ovate, ca. 0.4 mm; ovules 4 per ovary. Fruits oblong to lanceolate, 5–7 × 1.3–1.6 mm, not torulose, straight; valves with an obscure midvein, glabrous; style 0.3–0.5 mm; stigma entire. Seeds dark brown, oblong, uniseriate, 1.3–1.6 × 0.9–1 mm; cotyledons incumbent.

Flowering: Mar–Apr.

Habitat: river beds.

Elevation: 4000–4200 m.

Distribution: Peru (Arequipa).

Known only from the type collection.

**2. *Weberbaueria bracteata*** (O. E. Schulz) J. F. Macbride, *Candollea* 5: 356. 1934; *Pelagatia bracteata* O. E. Schulz in Engler, *Pflanzenreich* IV. 105(Heft 86): 192. 1924. TYPE: Peru, Dep. Ancash, Prov. Pallasca, Cordillera of Pelagatos, 4600 m, 23 Jan 1920, A. *Weberbauer* 7234 (holotype, B!; isotypes, F!, G!).

Plants caespitose; caudex simple, thick, 6–12 cm in diam. Trichomes simple. Stems decumbent, simple, 3–6 cm tall, glabrous. Basal leaves rosulate, petiolate; blade oblanceolate to spatulate, 1.5–4 cm × 4–9 mm, glabrous on both surfaces or sometimes pubescent adaxially, margin lyrate-pinnatifid with 2–4 lobes on each side, ciliate with trichomes 0.3–0.9 mm; cauline leaves petiolate; blade obovate to spatulate, 7–13 × 2–4.5 mm, reduced in size upward, entire or rarely repand, ciliate, apex rounded. Racemes bracteate throughout, elongated in fruit; fruiting pedicels 3–7 mm, straight or curved, ascending and base subappressed. Sepals oblong to ovate, 1.5–2.2 × 1–1.1 mm, caducous, glabrous, margin membranous, apex rounded; petals white, spatulate, 2.5–3 × ca. 1 mm, attenuate to claw-like base, apex rounded; filaments white, 1.5–2 mm; anthers oblong, 0.6–0.7 mm. Fruit oblong, 6–9 × 1.5–2 mm, ascending, straight, terete; valves smooth, glabrous, with a conspicuous midvein; style to 0.2 mm. Seeds 3 to 5 per locule, brown, oblong, 1.4–1.6 × 0.6–0.7 mm, uniseriate; funicle base broad.

Flowering: Jan.

Elevation: ca. 4600 m.

Distribution: Peru (Ancash).

Known only from the type collection.

**3. *Weberbaueria chillanensis*** (Philippi) Al-Shehbaz, *J. Arnold Arbor.* 71: 244. 1990; *Draba chillanensis* Philippi, *Anal. Univ. Chile* 2: 377. 1862; *Stenodraba chillanensis* (Philippi) O. E. Schulz in Engler, *Pflanzenreich* IV. 105(Heft 86): 188. 1924. TYPE: Chile, [Región IX], Termas de Chillán, *Philippi s.n.* (SGO).

Plants caespitose; caudex several branched, the branches terminated in rosettes and basally covered with petiolar remains of previous years. Trichomes simple and stalked forked. Stems subdecumbent to ascending, glabrous, (3–)6–14(–20) cm tall. Basal leaves rosulate, petiolate; blade spatulate to oblanceolate, sometimes linear-lanceolate, (0.5–)1.4–3(–4) cm × (1–)2–3.5(–6) mm, base attenuate, margin dentate or rarely entire, ciliate with simple and long-stalked forked trichomes to 1 mm, apex obtuse to subacute; cauline leaves few, linear-lanceolate, 0.7–1.5(–3) × 1–1.5 mm, entire, ciliate. Racemes corymbose, ebracteate, elongated in fruit; fruiting pedicels (4–)6–11(–18) mm, straight, divaricate-ascending, glabrous. Sepals spreading, oblong to ovate, 2–2.6(–3) × 1.2–1.5 mm, caducous, sparsely pubescent to glabrous, margin scarios; petals white drying lavender in center, spatulate to oblanceolate, 2.5–3.5 × 1.2–1.5 mm, attenuate to clawlike base, apex rounded; filaments white, 2.2–3 mm; anthers oblong, 0.7–0.8 mm. Fruit linear, 9–19(–22) × 1.5–1.8(–2.2) mm, divaricate-ascending, straight, latisepate; valves smooth, glabrous, with a prominent midvein; style 0.5–1.1(–1.6) mm. Seeds dark reddish brown, oblong, 1.4–1.6 × 0.7–1 mm, uniseriate; funicle usually thickened at base.

Flowering: Dec–Jan.

Elevation: 2000–2850 m.

Distribution: Argentina (Mendoza, Neuquén), Chile (Región VIII, IX).

Specimens examined: **ARGENTINA. Mendoza:** Dep. Malargüe, Paso Pehuenche, Boelcke et al. 10370 (BAA, BAB, SI); Baños del Azufre, 19 Jan. 1941, *Castellanos s.n.* (BA); Baños del Azufre, 35°18'S, 70°33'W, *Prina et al.* 2225 (IBONE, MO, SI, SRFA); Ruta 224 al pié del Cerro Campanario, 35°57'37"S, 70°22'43"W, *Prina et al.* 2308 (IBONE, MO, SI, SRFA); Mirador de Valle Hermoso, 35°07'22"S, 70°11'00"W, *Prina et al.* 2393 (IBONE, MO, SI, SRFA). **Neuquén:** Dep. Minas, Paso del Macho, Bajada a la laguna, 36°26-27'S, 70°46'W, Boelcke et al. 13946 (BAA). **CHILE. Región VIII:** Prov. Curicó, Cajón del Azufre, Feb. 1891, *Albert s.n.* (SGO); Cordillera Curicó, *Reiche s.n.* (B, CONC); Baños, *Vidal s.n.* (SGO); Volcán Peteroa, *Werdermann 604* (B, BM, CAS, E, F, G, GH, K, M, MO, NY, S, SI, U, UC, Z); Prov. Talca, Cordillera Talca, Laguna de aguas calientes, *Philippi 1615a* (SGO); Maule, Paso Pehuenche, *Ruthsatz 7176, 7177* (MO); Prov. Linares, Thermae Longavi, *Schönemann 2277* (SGO). **Región IX:** Prov. Ñuble, Cordillera de Chillán, *Jaffuel 3722* (GH), Feb. 1892, *Philippi s.n.* (K, SGO).

- 4. *Weberbaueria colchaguensis*** (Barnéoud) Al-Shehbaz, J. Arnold. *Arbor.* 71: 241. 1990; *Cardamine colchaguensis* Barnéoud in C. Gay, *Fl. Chile* 1: 115. 1846; *Arabis colchaguensis* (Barnéoud) Turczaninow, *Bull. Soc. Imp. Naturalistes Moscou* 27(2): 293. 1854; *Sisymbrium colchaguensis* (Barnéoud) Weddell ex Fournier, *Rech. Anat. Tax. Fam. Crucif.* 135. 1865; *Hesperis colchaguensis* (Barnéoud) Kuntze, *Rev. Gen. Pl.* 2: 934. 1891; *Stenodraba colchaguensis* (Barnéoud) O. E. Schulz, *Notizbl. Bot. Gart. Berlin Dahlem* 11: 644. 1932. TYPE: Chile, [Región VII], Colchagua, cordillera del Cajón del Azufre, cerca de volcán de Talcarégue, 8000–9000 ft. [2438–2743 m], *Gay 171* (holotype, P!, fragments BAA!; isotype, G!).
- Erysimum pusillum* Gillies ex W. J. Hooker & Arnott, *Bot. Misc.* 3: 140. 1833, not *E. pusillum* Bory & Chuberti in Bory, *Exp. Sci. Morée, Bot.* 3(2): 190. 1832; *Braya pusilla* A. Gray, *U.S. Explo. Exped. Phan.* 15(1): 57. 1854; *Sisymbrium pusillum* Weddell ex Fournier, *Rech. Anat. Tax. Fam. Crucif.* 131. 1865, not *S. pusillum* Villars, *Fl. Delph in Gilibert, Syst. Pl. Europ.* 1: 69. 1785; *Hesperis pusilla* Kuntze, *Rev. Gen. Pl.* 2: 935. 1891; *Weberbaueria pusilla* O. E. Schulz in Engler, *Pflanzenreich IV.* 105(Heft 86): 194. 1924; *Stenodraba pusilla* Boelcke, *Dansk. Bot. Ark.* 22: 143. 1968. TYPE: Chile, el Cerro de la Porcura and la Cumbre de los Andes, 12,000 f [3656 m], *Gillies 8* (holotype, E!).
- Draba andina* Philippi, *Linnaea* 28: 669. 1856; *Stenodraba andina* (Philippi) O. E. Schulz in Engler, *Pflanzenreich IV.* 105(Heft 86): 187. 1924. TYPE: Chile, [Región VIII], “in adibus prope oppidum Linares,” *Germain s.n.* (holotype, SGO).
- Draba patagonica* Philippi, *Linnaea* 28: 669. 1856; *Stenodraba andina* var. *patagonica* (Philippi) andina (Philippi) O. E. Schulz in Engler, *Pflanzenreich IV.* 105(Heft 86): 188. 1924; *S. patagonica* (Philippi) Ravenna, *Nord. J. Bot.* 1: 141. 1981; *S. pusilla* Boelcke var. *patagonica* (Philippi) Boelcke, *Fl. Patagonica* 4a: 530. 1984. TYPE: Chile, [Región XI], Volcani de Osorno, March 1852, *Philippi s.n.* (holotype, SGO).
- Arabis drabaeformis* Schlechtendal, *Flora* 39: 410. 1856. TYPE: Chile, [Región X], Cordillera de Ranco, *Lechler 2958* (holotype, HAL; isotypes, G!, P!).
- Stenodraba andina* var. *hirticaulis* O. E. Schulz in Engler, *Pflanzenreich IV.* 105(Heft 86): 188. 1924. TYPE: Chile, “Gipfel des Berges Pichiguan,” *Philippi 67* (holotype, B!).

*Stenodraba andina* var. *stylosa* O. E. Schulz in Engler, Pflanzenreich IV. 105(Heft 86): 188.

1924. TYPE: Chile, [Región X], Volcán Lanín, 1800 m, Apr 1897, *Neger s.n.* (holotype, B!; isotype, M!).

Plants caespitose; caudex much branched, slender, the branches terminated in rosettes and basally covered with petiolar remains of previous years. Trichomes to 1 mm, short stalked and forked. Stems subdecumbent to ascending or erect, simple or rarely branched, (1.5–)3–13(–22) cm tall, glabrous or pubescent. Basal leaves rosulate, short to long petiolate; petiole to 1 cm, persistent, ciliate; blade oblanceolate to spatulate or obovate, rarely oblong, (5–)7–22(–25) × 2–4.5(–6) mm, base cuneate to attenuate, margin entire or repand to dentate, rarely sinuate, ciliate with simple trichomes 0.6–1 mm, apex obtuse to rounded; cauline leaves few, subsessile; blade oblong to elliptic or ovate, 2–4(–8) × 1–2.5 mm, ciliate and pubescent with simple trichomes. Racemes ebracteate or rarely lowermost flowers bracteate, in fruit subumbellate or rarely elongated, to 4 cm; fruiting pedicels 1.5–4.5(–7) mm, straight, erect and subappressed to rachis, rarely ascending-divaricate, stout, glabrous or pubescent. Sepals oblong, 1.7–2.5 mm, caducous, pubescent or glabrous, margin scarious, apex obtuse; petals white, sometimes with a touch of lavender abaxially, oblong-oblanceolate, 2–3.5 mm, apex rounded; filaments white, 1.4–1.5 mm; anthers 0.3–0.7 mm. Fruit linear to oblong, (4–)5–10(–13) × 1.4–2(–2.2) mm, terete; valves smooth, glabrous; style obsolete to 0.2(–0.6) mm. Seeds 3–6 per locule, dark brown, oblong to ovoid, 1.1–1.4(–1.6) × 0.6–0.8(–1) mm, uniseriate to subbiseriate; funicle expanded at base or filiform throughout.

Flowering: Apr–Jun.

Habitat: hillside, rocky area.

Elevation: 500–3700 m.

Distribution: Argentina (Chubut, Mendoza, Neuquén, Río Negro), Chile (Región IV, Santiago, VI, VII, X, XI, XII).

Specimens examined: **ARGENTINA. Chubut:** Dep Rio Senquerr, alto Rio Senquerr, Lg. Fontana, Ea La Pepita, Soriano 2626 (BAA); Dep Tehuelches, Cerro al N Lg. Verde, Soriano 4219 (BAA). **Mendoza:** Atuel Valley, near road to Volcán Orero; *Böcher, Hjerting & Rahn 1872* (C); Laguna Atuel, *Böcher et al. 1976* (BAA, C, MO); El Angulo, Hjerting, Petersen & Rahn 452 (BAA, C), *Böcher et al. 1911* (BAA, C); Piedra del Burrero, Val Tordilla, *Wilczek 425* (G); Cajón del burro, *Wilczek 439* (G, US); Dep San Carlos, Laguna Diamante, Covas 1086 (SI); Dep San Rafael, Sosneao, Co. Volcan Overo, Leal 16897 (BAA). **Neuquén:** Pino Hachado, Feb. 1920, *Hauman s.n.* (BA); Los Lagos, Filo Machete al Co. Rothleugal, *Dierre 929* (LIL); Dep Picunches, Paso Pino Hachado, Nicora 7449 (BAA); Mallín, Boelcke & Correa 6968 (BAA); Co. ronador, entre Mallín Chileno y Refugio, Boelcke & Correa 5722 (BAA); Dep Chos Malal, extremo NW de la Pampa Ferraina, Boelcke et al. 11370 (BAA); cajón del A. del Cruce, 36°43'S, 70°23'W, Boelcke et al. 11226 (BAA); PNNH, refugio Cerro Colorado, Boelcke 9024 (BAA); Pampa Linda, Ventisqueros del Tronador, Boelcke et al. 10450 (BAA); Volcan Huanque, S del Epulafquen, Eskuche & Klein 849 (BAA); Dep Ñorquín, Copahue, 1 km antes del pueblo, Troiani & Steibel 15824 (SI, SRFA). **Río Negro:** Cordón del Río Colorado, Cerro Gorra, 19 Feb. 1940, *Moreau s.n.* (BA); Cerro Dormillón, 2 Feb. 1940, *Moreau s.n.* (BA); Parque Nac. Nahuel Huapi {PNNH}, Cerro Rigi, *Pedersen 1599* (C), 23 Jan. 1940, *Moreau s.n.* (BA); PNNH, Co. Catedral, 4 March 1943, *Moreau s.n.* (BA); PNNH, Hito Mirador, 19 Feb. 1943, *Moreau s.n.* (BA); PNNH, Hito Millaqueo, 20 Feb. 1943, *Moreau s.n.* (BA); Cerro Lopez, Parodi 11500 (BAA). **CHILE. IV:** Prov. Coquimbo, Cordillera de Combarbalá, Quebrada Pacho Tapia, [31°19'S, 70°48'W], *Jiles 6117* (CONC); El Drecho, [31°19'S, 70°49'W], *Jiles 4799* (CONC);

Prov. Choapa, La Vega Redonda, E of La Vega Escondida, *Morrison 16996* (DS, G, K, MO, S, SI, UC). **Santiago:** Rio Blancos, *Frödin 580* (UPS); Mina Disputada, [33°9'S, 70°17'W], Sparre 11032 (CONC). **VI: Colchaqua:** Las Damas, *Philippi 91b* (SGO); Valle Hermoso, *Philippi 91a* (SGO). **VII: Curicó:** El Valle de los Ciegos, near volcano of Peteroa, *Bridges 1120* (BM, E); Paso Vergara, [35°12'S, 70°31'W], Marticorena & Matthei 1002 (CONC). **Talca:** Cordillera de Talca, *Philippi 91c* (SGO). **Linares:** Cordillera de Maule, *Germain s.n.* (BM); Linares, *Philippi s.n.* (B, F, G); Paso Pehuenche, *Ruthsatz 7141* (MO). **X:** Prov. Cautín, Villarrica, *Neger s.n.* (M). **XI:** Prov. Osorno, Paso Puyehue, *Sparre & Constance 10812* (UC); cerro del Mirador (Puyehue), *Ruthsatz 7848* (MO). **XII:** Cerro Agudo, 50°49'S, 72°57'W, *Arroyo & Squeo 870017* (CONC); same area, 50°49'S, 73°03'W, *Arroyo & Squeo 870045* (CONC), *Arroyo & Squeo 87116* (CONC); Parque Nacional Torres del Paine, Cerro Daudet, 50°47'S, 73°05'W, *Arroyo & Squeo 870136* (CONC). **Ultima Esperanza:** Senos de Catherine, 51°12'S, 73°10'W, Arroyo 92368 (CONC).

**5. *Weberbaueria cymosa*** Al-Shehbaz, J. Arnold *Arbor. 71: 239. 1990.* TYPE: Bolivia, Dep. La paz, Murillo, near Palca, base of Illimani, 4800–5000 m, 25 Feb 1979, A. Ceballos, A. Charpin, J. Fernández Casas, & E. Valdéz-Bermeijo 543 (holotype, G!).

Plants small, caespitose; caudex simple, 4–6 m in diam. Trichomes simple, 0.3–0.5 mm. Stems decumbent, slender, glabrous, simple, 1–2 cm tall. Basal leaves rosulate, petiolate; petiole 3–8 mm, glabrous; blade ovate to lanceolate or oblong in outline, 5–15 cm × 2–3 mm, pinnatifid; lateral lobes 3–5 on each side, oblong to ovate, 0.8–1.2 × 0.4–0.6 mm, obtuse, margin ciliate with simple trichomes; cauline leaves subsessile, narrowly oblong, 2.5–4 × 0.8–1.3 mm, entire, ciliate, apex obtuse to rounded. Racemes ebracteate, 2- or 3-flowered an appearing cymose; fruiting pedicels 2.5–5 mm, straight. Sepals oblong, 1.5–1.6 × ca. 0.7 mm, caducous, glabrous, margin scarious; petals white, spatulate, ca. 1.4 mm; filaments ca. 1.3 mm; anthers oblong, 0.3–0.4 mm. Fruit oblong, 4–5.5 × ca. 1.5 mm, straight, terete; valves smooth, glabrous, obtuse at apex; style obsolete to 0.3 mm. Seeds (immature) 4 or 5 per locule, brown, uniseriate, ovoid, ca. 1.2 × 0.7 mm.

Flowering: Feb.

Elevation: 4800–5000 m.

Distribution: Bolivia (La Paz).

Specimens examined: **BOLIVIA. La Paz:** Prov. Murillo, La Paz-El Alto-Valle de Zongo, 16°17'S, 68°7'W, *Beck 21752* (LPB, MO).

**6. *Weberbaueria densifolia*** Al-Shehbaz, J. Arnold *Arbor. 71: 229. 1990.* TYPE: Argentina, Prov. Catamarca, Dep. Santa María, Sierra del Aconquija, 4600 m, 20 Feb 1925, S. Venturi 6610 (holotype, US!).

Plants caespitose, 4–6 cm tall; caudex simple, short, densely covered with numerous petiolar remains of previous years. Trichomes 0.2–0.4 mm, straight, simple or asymmetrically forked. Stems decumbent, simple, glabrous. Basal leaves numerous, rosulate, petiolate; petiole persistent, 3–3.5 cm × 2–3 mm, erect to spreading, densely overlapping, straight; blade lanceolate, 2–3 cm × 4–6 mm, pubescent, base attenuate, margin pinnatifid to sinuate or dentate-repand, apex obtuse to acute; cauline leaves few, short petiolate; blade oblong, 8–11 × 4–6 mm, entire to repand. Racemes ebracteate, glabrous; fruiting pedicels 3–5 mm, straight, erect to

slightly ascending, subappressed. Sepals oblong, 2–2.5 × ca. 1 mm, sparsely pubescent with irregularly forked trichomes below apex; petals white, spatulate, clawed, 3–3.5 × ca. 1.5 mm, rounded at apex; filaments 1.5–2.5 mm; anthers oblong, ca. 0.5 mm. Fruit narrowly oblong, 5–6 × 1.2–1.4 mm, ascending to subappressed to rachis, straight, terete; valves subtorulose, glabrous; style 0.5–0.7 mm. Seeds oblong, ca. 1.3 × 0.7 mm, uniseriate.

Flowering: Dec.

Habitat:

Elevation: 4200–4600 m.

Distribution: Argentina (Catamarca, Jujuy), Bolivia.

Specimens examined: **ARGENTINA. Catamarca:** Catamarca, *Rodriguez 1360* (MO, SI).

**Jujuy:** Humahuaca, 10 km de Cianzo camino a Santa Ana, Abra de Zenta, ruta prov. 73, 651°02'W, 23°10'S, *Morrone et al. 2507* (SI). Dep. Valle Grande: Abra Colorado, 20 km O de Caspalá, *Fabris 3697* (LP). **BOLIVIA.** without locality, *Navarro Sánchez 1147* (MO).

**7. *Weberbaueria dillonii*** Al-Shehbaz, *Novon* 14: 261. 2004. TYPE: Peru, Dep. La Libertad:

Prov. Bolívar, Ascenso ao Nevado de Cajamarquilla, 3000 m, 7°08'S, 77°42'W, 10 Nov 2001, *I. Sánchez V., M. Dillon & G. Iberico 11172* (holotype, MO !; isotypes, CPUN, F).

Plants perennial, pubescent throughout except for petals and fruits; caudex simple, with petiolar remains of previous years. Trichomes simple, mostly retrorse. Stems 15–25 cm, erect or ascending, densely pilose with appressed retrorse trichomes, usually a few from the base, branched above. Basal leaves rosulate; petiole 1–3 cm, pubescent as stems; leaf blade oblong to oblanceolate, 2–6 × 0.7–1.5 cm, densely and retrorsely pilose on both sides, base cuneate to attenuate, margin denticulate, apex subacute; middle cauline leaves sessile, oblong to ovate, 1–2 cm × 4–8 mm, base cuneate, margin coarsely dentate, apex acute, pubescent as basal leaves. Raceme 20–50-flowered, bracteate throughout, dense, slightly elongated in fruit; bracts sessile, cuneate to subauriculate at base, similar to cauline leaves but progressively smaller upwards; fruiting pedicels 4.5–6.5 mm, sigmoid and slightly recurved, retrorsely pubescent. Sepals oblong, 2.5–3 × 0.7–1 mm, not saccate at base, sparsely pubescent below apex, ascending; petals white, broadly obovate, 3–3.5 × 2–2.5 mm, not clawed, apex rounded; filaments 2–2.5 mm; anthers oblong, ca. 0.5 mm. Fruits linear, 8–12 × 1.5–2 mm, glabrous, curved, slightly flattened at a right angle to the septum; valves smooth, not veined; septum complete; style 0.1–0.2 mm; stigma entire. Seeds 8 to 10 per locule, oblong, brown, 1–1.3 × 0.6–0.7 mm; cotyledons incumbent.

Flowering: Nov.

Elevation: ca. 3000 m.

Distribution: Peru (La Libertad).

Known only from the type collection.

**8. *Weberbaueria herzogii*** (O. E. Schulz) Al-Shehbaz, *J. Arnold Arbor.* 71: 236. 1990;

*Sarcodraba herzogii* O. E. Schulz, *Notizbl. Bot. Gart. Berlin-Dahlem* 10: 563. 1929. TYPE: Bolivia, “Felsplatten der Hügel über dem Titicacasee bei Guagqui,” Nov 1911, ca. 3900 m, *T. Herzog 2510* (holotype, B!; isotypes G!, S!, Z!).

Caudex simple or rarely few branched, slender. Trichomes 0.4–1 mm, simple. Stems decumbent to erect, simple, (1.5–)3–12 cm tall, hirsute with spreading to reflexed simple trichomes, rarely subglabrous or with some forked trichomes in the raceme axis. Basal leaves



petiolate; petiole (0.5–)0.7–2 cm, ciliate; blade broadly obovate to spatulate, (1–)1.5–3.5 cm × (4–)5–10 mm, glabrous, margin entire to repand or rarely dentate, ciliate, apex rounded; cauline leaves 3–11(–20) × (4–)5–10 mm, entire to repand or dentate. Racemes bracteate, elongated or rarely not elongated in fruit; bracts entire or 3-toothed; fruiting pedicels (3–)4–10 mm, straight, divaricate; receptacle often 4-angled, expanded. Sepals oblong to ovate, (2.2–)3–4 × 1.5–2 mm, caducous, sparsely pubescent to glabrous, margin scarious, apex obtuse; petals white, spatulate to broadly obovate, 3–5 × 1.5–2 mm, attenuate to clawlike base; filaments white, 2.2–4 mm; anthers oblong, 0.6–0.9 mm. Fruit linear to oblong, (5–)8–18 × 1.6–2.1 mm, straight, terete, attenuate to style; valves smooth, glabrous, with obscure to prominent midvein; style slender, 1–3 mm. Seeds light brown, oblong, 1.5–1.8 × 0.8–1 mm, subbiseriate; funicle differentiated into broad base and filiform distal portion.

Flowering: Dec–Feb.

Habitat: Sandy patches between grasses.

Elevation: 3100–4700 m.

Distribution: Argentina (Jujuy), Bolivia (La Paz, Potosí), Peru (Puno).

Specimens examined: **ARGENTINA. Jujuy:** Dep. Humahuaca, Esquinas blancas, between Tres Cruces and Humahuaca, *Ruthsatz 13/18* (BAA, GH); 10 km de Cianzo camino a Santa Ana, Abra de Zenta, ruta prov. 73, 23°10'S, 65°02'N, *Morrone et al. 2468, 2506* (SI), *Zuloaga et al. 9188* (SI); Tres Cruces, Puente del Diablo, *Fabris & Marchionni 1757* (LP). Dep. Tumbaya, Abra de Lipan, *Cabrera et al. 31702* (SI); camino de Purmamarca al Abra de Lipan, Agua Blanca, *Kiesling et al. 5236* (SI). **Salta:** Depto. Los Andes, Abra de Acay a La Poma, Ruta Nac. 40, *Zuloaga et al. 11201* (MO, SI). **BOLIVIA. La Paz:** 5 km E of villa santa Fe, ca. 100 km No of Oruro, *Conrad 2692* (MO); 2 km W of Villa Santa Fe, *Conrad 2709* (MO); Prov. Ingavei, Guaqui, *Asplund 2226* (S, UPS); Prov. Murilloa, NW La Paz, 6 km arriba del Lago Challapata, *Beck 17901* (MO); Prov. Inquisivi, Quime 25 km hacia Caxta, *Beck 17249* (LPB, MO). Desaguadero, SE end of Lake Titicaca, *Hill 18* (K). **Potosí:** Orocoro, near Ventilla, *Ceballos 252* (G, SI); Potosí, *Cárdenas 173* (GH), 399 (US); Miraflos, *D'Orbigny 1347* (P); Frias, ca. 25 km N of Yocalla towards Ventanilla, *Wood 11743* (K, MO). **PERU: Puno:** Puno, *Shepard 38* (CONC, GH, US), *Soukup 106* (F); Santa Lucía, *Sharpe 89* (K), *Sharpe 143* (F, K).

**9. *Weberbaueria imbricatifolia*** (Barnéoud) Al-Shehbaz, J. Arnold Arbor. 71: 247. 1990; *Draba imbricatifolia* Barnéoud in C. Gay, Fl. Chile 1: 158. 1846; *Braya imbricatifolia* (Barnéoud) A. Gray, U.S. Expl. Exped. Phan. 15(1): 58. 1854; *Sisymbrium imbricatifolium* (Barnéoud) Weddell, Chloris Andina 2: t. 58B. 1857; *Hesperis imbricatifolia* (Barnéoud) Kuntze, Rev. Gen. Pl. 2: 934. 1891; *Stenodraba imbricatifolia* (Barnéoud) O. E. Schulz in Engler, Pflanzenreich IV. 105(Heft 86): 190. 1924. TYPE: Chile, Región IV, Cordillera de Coquimbo, 12,000 ft. [3658 m], *Gay s.n.* (holotype, P!; isotype, B!).

*Stenodraba imbricatifolia* var. *glabrata* O. E. Schulz in Engler, Pflanzenreich IV. 105(Heft 86): 190. 1924. TYPE: Chile. *Leybold 2974* (holotype, B!; isotype, W!).

Plants caespitose, scapose; caudex woody, several branched, the branches terminated in rosettes and basally covered with petiolar remains of previous years. Trichomes simple and stalked branched. Stems glabrous, (0.6–)1–4(–6) cm tall. Basal leaves rosulate, petiolate; petiole persistent, thick, 0.5–3(–5) mm; blade oblong to rarely oblanceolate, (2–)7–15 cm × (0.5–)1.5–2 mm, abaxially with minute and branched or rarely simple trichomes, rarely glabrescent, adaxially densely hispid with simple trichomes to 1 mm, margin entire, ciliate, apex rounded; cauline leaves absent or rarely 1 or 2. Racemes corymbose, ebracteate, elongated in fruit; fruiting

pedicels 3–7(–10) mm, straight, divaricate to ascending, glabrous. Sepals erect, oblong to ovate, (2–)2.5–3.5 × 1–1.5 mm, caducous, pubescent, margin scarious; petals white, broadly spatulate, 3.5–5 × 1.5–2 mm, attenuate to a short claw, apex rounded; filaments white, 3–4 mm; anthers oblong, ca. 1 mm. Fruit linear, (7–)9–14(–16) × 1.2–1.5 mm, terete; valves slightly torulose, glabrous; style slender, 1–2(–3) mm. Seeds brown, oblong, ca. 1.2 × 0.8 mm, uniseriate.

Flowering: Nov–Feb.

Elevation: 2800–4200 m.

Distribution: Argentina (Mendoza, San Juan), Chile (Región III, IV, V, VI).

Specimens examined: **ARGENTINA. Mendoza:** Valle del Río Pachón, Wingenroth 259 (SI).

**San Juan:** Dept. Iglesia, 31 km W of Arrequintín, 15 Feb. 1985, *Hunziberg & Gamarro s.n.* (OS, SI); Quebrada Agua Negra, Cabrera et al. 31277 (BACP, SI); Paso del Agua Negra, Roig et al. 11891 (BACP); Valle Río Las Taguas, Las Yaretas, 6 Jan 2000, Gajardo s.n. (SI); Zona del Río de Las Taguas, Quebrada Potrerillos, 29°21'S, 69°58'W, Teillier & Márquez 4488 (SI); Dep Calingasta, Río Blanco, camino a El Pachón, 31°50'S, 69°50'W, Kiesling et al. 8127 (SI); W de Barreal, El Pachón, Kiesling & Saenz 1315, 1342 (SI). **CHILE. III. Huasco:** Cuenca de El Transito, Quebrada de la mina Fortuna, 28°37'S, 69°53'W, Teillier 5052 (CONC). **IV:** Prov. Coquimbo, Valle del Elqui, bega Piuquenes de Baños del Toro, 19 Jan 1979, Osorio s.n. (SGO); Cordillera de Combarbalá, Laguna Tibia, 31°17'S, 70°45'W, *Jiles* 4864 (CONC, M); Cordillera Ovalle, Quebrada Calabozos, 30°38'S, 70°17'W, *Jiles* 2931 (CONC, M), Rio Clara, *Ruthsatz* 6306, 6337 (MO); Rio Hurtado, *Ruthsatz* 6459 (MO); Elqui, Cord. Doña Ana, Quebrada Las Mangueras, 29°48'S, 69°58'W, *Arancio* 92138 (CONC, MO, UPS). Prov. Choapa, Cordillera de Illapel, Vega Negra, *Volckmann s.n.* (SGO); La Polcura, *Philippi* 2279 (SGO). **V:** Prov. Petorca, 5 km S of Junta de Piuquenes, Río Sobrante, *Morrison* 17290 (DS, K, UC). **VI:** Prov. Santiago, Andes of San José, *Gay* 1028 (SGO).

**10. Weberbaueria lagunae** (O. E. Schulz) Al-Shehbaz, *J. Arnold Arbor.* 71: 246. 1990;

*Stenodraba suffruticosa* (Barnéoud) O. E. Schulz var. *lagunae* O. E. Schulz, *Notizibl. Bot. Gart. Berlin-Dahlem* 10: 469. 1928. TYPE. Chile, Vallenar, Cordillera Laguna Chica, ca. 4000 m, Jan 1924, *Werdermann* 262 (holotype, B!; isotypes, BM!, CONC!, E!, F!, G!, GH!, K!, MO!, UC!).

Plants caespitose, scapose; caudex several branched, the branches terminated in rosettes and basally covered with petiolar remains of previous years. Trichomes simple. Stems ascending, glabrous, often purplish, leafless or rarely 1-leaved, 2–5(–10) cm tall. Basal leaves rosulate, petiolate; petiole persistent, thick, subterete, 1–5 mm; blade narrowly oblanceolate to oblong-oblanceolate, 4–10(–15) × (0.5–)1–1.5 mm, abaxially glabrous, adaxially densely hispid and ciliate with simple trichomes to 1 mm, base attenuate, margin entire, apex rounded; cauline leaves few, linear-lanceolate, 0.7–1.5(–3) × 1–1.5 mm, entire, ciliate. Racemes corymbose, ebracteate, few flowered, elongated considerably in fruit; fruiting pedicels 4–8(–12) mm, divaricate or sometimes divaricate-ascending, glabrous. Sepals oblong, 1.5–2 × 0.8–1 mm, caducous, sparsely pubescent with straight trichomes; petals creamy white with abaxial lavender area, oblong, 1.5–1.7 × 0.4–0.8 mm, undifferentiated into a blade and claw; filaments 1.2–1.5 mm; anthers oblong, 0.5–0.6 mm. Fruit linear, 7–11 × 0.9–1.2 mm, cuneate at both ends, terete; valves torulose, glabrous; style 0.3–0.4 mm. Seeds brown, oblong, 1.2–1.3 × ca. 0.7 mm, uniseriate; funicle usually thickened at base.

Flowering: Jan.

Habitat: dry rocky slopes, sod-covered gravelly banks.

Elevation: 3800–4000 m.

Distribution: Chile (Región III).

Specimens examined: **CHILE. Región III:** Prov. Huasco, vicinity of Laguna Chica, *Johnston 5950* (GH); vicinity of Laguna Valeriano, *Johnston 6065* (CONC, GH, US).

**11. *Weberbaueria minutipila*** Al-Shehbaz, J. Arnold Arbor. 71: 231. 1990. TYPE: Peru, Dep. Puno, Prov. San Román, Puno-Arequipa road at km 112.8, ca. 4 km (air) E of Tinocopalca (km 119.5), ca. 10 km W of road turnoff to Sta. Lucía (at km 101), ca. 4000 m, 12 Jan 1963, *H. H. & C. M. Iltis and D & V. Ugent 1455* (holotype, GH!; isotype, WIS).

Caudex simple, slender covered with petiolar remains of previous years. Trichomes 0.03–0.15 mm, simple and forked. Stems decumbent to ascending, puberulent or glabrescent, simple, 2–7 cm tall. Basal leaves petiole (3–)5–8(–10) mm, strongly flattened at base, straw colored, glabrous; blade filiform to narrowly linear, rarely linear-lanceolate, (1–)2–3(–4.5) cm × 0.5–1.5(–2.5) mm, longitudinally plicate to flat, pubescent or glabrescent, margin entire or rarely dentate, apex acute; cauline leaves subsessile to short petiolate; blade obovate to lanceolate, (3–)4–8(–10) × 1.5–3.5(–5) mm, dentate-serrate or rarely sublaciniate. Racemes ebracteate, slightly elongated in fruit; fruiting pedicels 2.5–3.5(–5) mm, straight, ascending and subappressed. Sepals oblong, 1.5–2 × 0.7–1 mm, caducous, glabrous or sparsely puberulent below apex, margin narrowly scarious, drying lavender; petals white, spatulate, 2–2.7 × 1–1.2 mm, attenuate to clawlike base, apex rounded; filaments white, 1.1–1.5 mm; anthers oblong, 0.4–0.5 mm. Fruit narrowly oblong, 6–9 × ca. 1 mm, terete; valves subtorulose, glabrous; style 0.2–0.3 mm. Seeds 3 or 4 per locule, brown, ovoid, ca. 1 × 0.7 mm, unbiseriate; funicle slightly expanded at base.

Flowering: Dec.

Habitat: shale barren with rock-chip covered bare ground.

Elevation: 4000–4200 m.

Distribution: Bolivia (La Paz), Peru (Arequipa).

Specimens examined: **BOLIVIA. Dep. La Paz:** Prov. Murillo, 14 km N of La Paz, Mina Milluni, 15 km hacia Tuni Condoriri, *Beck 3832* (GH); Valle Chuquiaguillo, *Asplund 1888* (S, UPS). **PERU. Dep. Arequipa:** Prov. Arequipa, S of Sta. Lucía on road from Puno to Arequipa, ca. 4–5 km E of Sta. San Lucía, *Iltis & Ugent 1415* (WIS).

**12. *Weberbaueria perforata*** Al-Shehbaz, Ann. Missouri Bot. Gard. 77: 841. 1990. TYPE: Peru, Dep. Cuzco: Ocangate, 71°24'W, 13°38'S, 4700 m, 11 May 1957, *R. Hirsch P1255* (GH!).

Plants caespitose, forming dense cushions; caudex simple or few branched, densely covered with petiolar remains of previous years. Trichomes simple. Stems decumbent, slender, ca. 7 cm tall. Basal leaves petiolate, rosulate; petiole 6–16 mm, persistent, stramineous, becoming papery; blade spatulate, 1–3 cm × 2–6 mm, densely pubescent adaxially with trichomes to 2 mm, glabrous abaxially, margin entire, ciliate, apex obtuse to rounded; cauline leaves linear to narrowly oblanceolate, 4–12 × 0.5–1 mm, adaxially pubescent. Racemes ebracteate, few flowered, slightly elongated in fruit; fruiting pedicels 3–5 mm, straight, divaricate-ascending, glabrous to sparsely pubescent. Sepals yellow, oblong, 2–2.5 × ca. 1.5 mm, caducous, glabrous;

petals yellow, broadly spatulate to suborbicular, 2.5–3 × 1.6–2 mm; claw 1.2–1.8 mm; filaments 1.8–2.2 mm; anthers oblong, 0.6–0.8 mm. Fruit oblong, 4–7 × 1.5–2 mm, terete; valves smooth, glabrous; septum with a central perforation; gynophore 0.3–0.4 mm; style 0.2–0.3 mm. Seeds oblong, ca. 1 mm.

Flowering: Apr–May.

Elevation: ca. 4700 m.

Distribution: Peru (Cuzco).

Known only from the type collection.

**13. *Weberbaueria peruviana*** (de Candolle) Al-Shehbaz, Novon 14: 264. 2004. Basionym:

*Sisymbrium peruvianum* de Candolle, Syst. Nat. 2: 477. 1821. *Hesperis peruviana* (DC.)

Kuntze, Rev. Gen. Pl. 2: 935. 1891. TYPE: Peru, *H. Ruiz & J. A. Pavón s.n.* (holotype, BM; isotype, B, G-DC).

*Arabis bracteata* Weddell, Ann. Sci. Nat. Bot. V. 1: 291. 1864. TYPE: Bolivia, La Paz. Prov.

Larecaja, vicinity of Sorata, 3900–4500 m, *G. Mandon 901* (holotype, P!, photo MO, fragment F; isotypes, G!, GH!, K!, NY!, P!).

*Sisymbrium anomalum* Weddell, Ann. Sc. Nat. Ser. V. 1: 289. 1864. TYPE: Bolivia, La Paz. Prov.

Omasuyos, vicinity of Achacache, 3925 m, March 1856, *G. Mandon 909* (holotype, P!; isotype, P!).

Plants annual or rarely perennial, hirsute to nearly hispid throughout except pedicels and sometimes sepals. Trichomes simple, spreading, to 1 mm. Stems several from base, (3–)10–45(–60) cm, decumbent or ascending, hirsute, sometimes branched above. Basal leaves not rosulate, soon withering; cauline leaves with petioles 0.3–1(–2) cm; leaf blade oblong to oblanceolate, 1–5(–7) × 0.5–2(–3) cm, hirsute, base cuneate to attenuate, margin coarsely dentate, apex subacute. Raceme many flowered, bracteate throughout, rarely uppermost flowers ebracteate, elongated in fruit; bracts as cauline leaves but progressively smaller upward, rarely absent in uppermost parts; fruiting pedicels 2.5–10 mm, straight or slightly recurved, glabrous, ascending, divaricate, or slightly reflexed. Sepals oblong, 1.5–1.8 × 0.5–0.7 mm, not saccate at base, glabrous or sparsely pubescent below apex, ascending; petals white, narrowly spatulate, 2–2.5 × 0.7–1 mm, not clawed, apex obtuse; filaments 1.5–2 mm; anthers ovate, 0.2–0.4 mm. Fruits linear, (8–)10–25(–30) × 1.2–2 mm, sparsely to densely hirsute, straight, terete or slightly flattened parallel to the septum, apex obtuse; valves with obscure midvein; septum complete; style 0.1–0.2 mm; stigma entire. Seeds 6 to 15 per locule, oblong, brown, 0.9–1.1 × 0.5–0.6 mm.

Flowering: Nov–May.

Habitat: among and under rocks, cloud-covered grassy mountain slopes, gravel debris, rock outcrop.

Elevation: 2850–4800 m.

Distribution: Argentina (Catamarca, Jujuy, Salta, Tucumán), Bolivia (Chuquisaca, Cochabamba, La Paz, Oruro, Potosí), Peru (Arequipa, Ayacucho, Cuzco, Huancavelica, Junín, Lima, Puno, Tacna).

Specimens examined: **ARGENTINA. Catamarca:** Dep. Ambato, Sierra de Ambato (Falda E., subiendo desde El Rodeo hacia el Cerro Manchado), cerca de la Casa de Piedra del Primer Campo, *Hunziker 20988* (BAA, MO, NY), *Hunziker 20991* (BAA); Cerro Overo, *Brücher 95017* (M); Besteigung des Acongüija, *Brücher 9446* (M). **Jujuy:** Humahuaca, Mina Aguilar, 14 km N of Molina de Minera Aguilar, *Hunziker et al. 10568* (BACP, SI). **Salta:** Santa Victoria, De Abra de Lizoite a Santa Victoria, cerca de Lizoite, *Kiesling et al. 3921* (SI); road from La Quiaca to Santa Victoria at km 5.2 E of Abra de Lioite, *Hawkes et al. 3818* (BAA); 43.7 km from Santa Victoria on road to La Quiaca, 26°43'S,

65°42'W, *Hawkes et al.* 3902 (BAA, C). **Tucumán:** Dept. Tafi, cumbers Calchaquíes, Co. Bayo, 22°13'S, 65°12'W, *Gómez-Sosa & Múlgura* 204 (BACP, MO, P, SI); Sierra Colchagués, La Puerta, Burkart 5316 (SI); Calchaquies, Cordillera de la Viscachita, *Sparre* 9666 (MO); El Alazán, *Sparre* 8588 (BAA, C); Cumbre de Chaquivil, *Olea* 218 (GH, NY, UC); La Puerta, *Parodi* 10930 (BAA); Quebrada Real, Dinelli 488 (BAA). **BOLIVIA. Chuquisaca:** Prov. Zudañez, Cordillera de los Sombreros, along Icla and Azurduy road, *Wood & Carretero* 16149 (K, MO). **Cochabamba:** between Caracolla and Cochabamba, Pongo, Kulku Mayu, *Fernández-Casas* 7704 (NY). Prov. Quillacollo, camino Sipe Sipe a Kami, cuenca del valle de Cochabamba, *Beck et al.* 18064 (MO); Mt. Tunari, *Cutler* 7658 (F). **La Paz:** Ulmapalca, La Fabulosa, 80 miles N of Lapaz, *Brooke* 6333 (NY); between Corocoro and Viacha, *H. & H. Doppelbaur* 592 (MO). Prov. Bautista Saavedra, Kanton, Amarete, km 2.5, between Amarete and Zeltplatz Charasani, *Krach* 8303 (M); Apolobamba, Santa Elena, *Fuentes et al.* 13520 (MO). Prov. Ingavi, Guaqui Desaguadero, *Asplund* 2325 (A, S). Prov. Inquisivi, Cordillera Tres Cruces, glacier Atoroma-Tres Cruces, *Jordan* 114 (BACP, GH, MO). Prov. Larecaja, Sorata 31 km hacia La Paz, *Beck* 11175 (MO); 47.2 km NE of Peñas on road to Valle Hichucota, *Solomon* 4957 (GH, MO). Prov. Los Andes, road of Mina Fabulosa, *Feuerer* 10580 (M). Prov. Murillo, Zongo valley, 10.7 km below dam at Lango Zongo, 68°07'W, 16°13'S, *Solomon*, 13135 (MO); between El Alto and Quiguincho, *Ceballos et al.* 76 (G, SI); La Rinconada, *Asplund* 2379 (A, S). Prov. Omasuyos, del camino principal a Peñas 47 km via Mina Fabulosa, *Beck* 2900 (BACP, GH, MO), *Beck* 2904 (BACP, GH); between Achacach and Sorata, *Fernández-Casas & Molero* 6501 (MO, NY). Prov. Sud Yungas, camino de La Paz a Lambate, Pie del Abra Illimani, cerca de la mina Bolsa Blanca, *Beck* 18165 (MO). **Oruro:** Prov. Abaroa, Challapat, *Asplund* 3249 (S). Prov. Sajama, Curahura de Carangas, 10 km SW on backroad, 68°25'W, 17°50'S, *Johns* 83-39 (F, LPB, MO); Curahuara de Carangas, 2 km hacia Turco, *Beck* 21019 (LPB, MO). **Potosí:** 10 km S of Potosí, *West* 6359 (GH, MO, UC). Prov. Tomás Frias, Cerranía del Khare-Khare, arriba de la Ciudad de Potosí, *Schultz* 163 (MO). **PERU. Arequipa:** Calloma, road Chivay to Sibaya, van der Werff et al. 20975 (B, F, GH, K, MO, US). **Ayacucho:** Prov. Luncanas, Pampa Galeras, *Tovar* 6704 (MO); Pampa de Chupas, *Soukup* 5505 (US). **Cuzco:** Espinar, Yauri, 5 km de Yauri, *Núñez et al.* 7826 (GH, MO); Prov. Urubamba, Distr. Chichero, Cuper, Qoriwayrachina, 72°0'W, 13°25'S, *C. & E. Franquemont* 314 (F). **Huancavelica:** Morococha, *Grant* 7573 (A, F, UC); Visco, *Macbride & Featherstone* 597 (F, NY); Castrovirreyna, Choclococha, *Tovar* 2880 (UC). **Junin:** Prov. Yauli, Morococha, *Asplund* 11599 (G). **Lima:** Prov. Huarochiri, Distr. Mariatana, Wankalasila, *Cerrate et al.* 4402 (F); Cueva de Mortero, *Cerrate et al.* 4809 (F); Distr. Huarochiri, laguna de Tuctucocha, *Cerrate* 1866 (GH). **Puno:** Macusani, road from Ollachea to Macusani, 70°30'W, 13°53'S, *M. & K. Weigend* 2000/120 (MO, NY); Santa Lucia, *Sharpe* 138 (K); San Antonio de Esquilache, *Stafford* 1318 (K). Prov. Lampa, on San Roman border, at road and railroad crossing of stream draining Lago Jaracocha, ca. 9 km SW of Santa Lucia, *H. & C. Iltis with D. & V. Ugent* 1429 (GH, K, UC); Hacienda Tincopalca, *Petersen & Hjerting* 1094 (BAA). **Tacna:** Prov. Tarata, Corillera del Barroso, *Torre et al.* 2135 (MO).

**14. Weberbaueria retropila** Al-Shehbaz, J. Arnold Arbor. 71: 234. 1990. TYPE: Bolivia, Dep.

La Paz, Prov. Pacajes, Charaña, 4000 m, 2 Mar 1921, *Asplund s.n.* (holotype, US!).

Caudex simple, slender, ca. 2 mm in diam. Trichomes stalked, forked, T- or Y-shaped. Stems subdecumbent to ascending, simple, 2.5–5.5 cm tall. Basal leaves not rosulate, caducous, petiolate; petiole to 1 cm; blade oblanceolate to spatulate, 1.3–2.5 cm × 4–7 mm, sparsely pubescent, margin dentate-crenate, apex obtuse; cauline similar to basal but smaller. Racemes ebracteate, slightly elongated in fruit; fruiting pedicels 2–3.5(–6) mm, glabrous. Sepals purplish, oblong, 2–2.5 × 1–1.2 mm, persistent, glabrous or subapically sparsely pubescent, margin scarios, apex obtuse; petals white, spatulate, 3–3.5 × 1–1.5 mm, attenuate to clawlike base;

filaments white, 1.5–1.8 mm; anthers ovate, 0.4–0.5 mm. Fruit linear-oblong, 5–8(–10) × 1.5–1.8 mm, straight, terete; valves slightly torulose, sparsely and retrorsely pubescent with simple trichomes 0.1–0.25 mm, midvein inconspicuous; style 0.5–0.8 mm. Seeds 3 or 4 per locule, dark brown, ovoid, 1.4–1.5 × 0.9–1 mm, uniseriate; funicle slightly expanded proximally.

Flowering: Mar.

Elevation: 4000–4100 m.

Distribution: Bolivia (La Paz).

Specimens examined: **BOLIVIA. Dep. La Paz:** Prov. Pacajes, Charaña, *Asplund 2700* (S, UPS).

**15. *Weberbaueria scabrifolia*** Al-Shehbaz, *Novon* 14: 264. 2004. TYPE: Peru, Dept. Huáncayo: Prov. Dos de Mayo, road from Pachas to Llata, 4030 m, 9°42'S, 76°47'W, flat puna, 18 Mar 2001, *M. Weigend, K. Weigend, M. Binder & E. Rodriguez 5220* (holotype, M!; isotypes, MO!, NY!).

Perennial herbs; caudex slender, with leaf remains of previous years; trichomes simple, appressed, antrorse. Stems 2 to 5 from base, unbranched, 3–6 cm, decumbent or ascending, densely pubescent with appressed, antrorse trichomes to 0.6 mm and to 0.04 mm wide at base. Basal leaves rosulate; petiole 4–10 mm, ciliate; leaf blade oblong, 7–20 × 3–9 mm, abaxially glabrous, adaxially scabrous with antrorse, appressed trichomes to 0.4 mm and to 0.12 mm wide at base, base cuneate, margin entire, apex obtuse; cauline leaves sessile or nearly so, oblanceolate to linear, 5–10 × 1–4 mm, base attenuate, margin entire, upper ones and bracts ciliate and glabrous except midvein, trichomes longer and narrower than those of basal leaves. Raceme 10- to 27-flowered, bracteate throughout, dense, slightly elongated in fruit; bracts sessile, similar to cauline leaves but progressively smaller upwards; fruiting pedicels 4–7 mm, straight, suberect to ascending, antrorsely pubescent. Sepals oblong, 2.5–3 × ca. 1 mm, not saccate at base, sparsely pubescent, ascending; petals white, spatulate, 3.5–4 × ca. 1.5 mm, apex rounded, claw ca. 1.5 mm; filaments ca. 2.5 mm; anthers oblong, ca. 0.5 mm. Fruits linear to oblong-linear, 5–9 × ca. 1.5 mm, glabrous, curved, terete; valves smooth, with obscure midvein; septum complete; style ca. 1 mm; stigma entire; seeds 5 to 12 per locule, oblong, brown, ca. 1 × 0.5 mm; funicles thickened at base; cotyledons incumbent.

Flowering: Mar.

Habitat: puna.

Elevation: ca. 4000 m.

Distribution: Peru (Huáncayo).

Known only from the type gathering.

**16. *Weberbaueria smithii*** Al-Shehbaz, *J. Arnold Arbor.* 71: 233. 1990. TYPE: Peru, Dep. Ancash, Prov. Yungay, Huascarán National Park, Llanganuco Sector, Quebrada Ancosh at Portachuelo, 77°35'W, 9°03'S, 31 Dec 1984, *D. N. Smith & K. Godwin 8894* (holotype, MO!).

Caudex simple, woody, thick and 1.5–2 cm in diam., base with petiolar remains of previous years. Trichomes simple or absent. Stems decumbent, simple, 4–7 cm tall. Basal leaves petiolate, rosulate, glabrous, fleshy; petiole thick, 1–2.5 cm; blade broadly spatulate, 2–4.5 cm × 6–13 mm, base attenuate, margin entire, apex obtuse to acute; cauline leaves subsessile; blade oblanceolate, 1–1.8 cm × 3–5 mm, attenuate to a broad base, margin entire, apex subacute, with a few trichomes. Racemes ebracteate, elongated in fruit; fruiting pedicels 6–10 mm, straight, divaricate-ascending. Sepals oblong, 4.2–5.5 × 2.2–2.6 mm, caducous, glabrous, margin

narrowly scarious, apex obtuse; petals creamy white, spatulate, 6.5–8 × 2.8–3 mm, attenuate to a broad clawlike base, apex rounded; filaments white, 3.5–4 mm; anthers oblong to ovate, 1–2 mm. Fruit linear to oblong, 5–15 × 1.5–2 mm, terete, obtuse and abruptly ending in style; valves smooth, thick, glabrous, with obscure midvein; style 1–1.5 mm. Mature seeds not seen.

Flowering: Dec.

Habitat: cracks of exposed rocks, rock outcrop in grasslands, bare needle-ice zone.

Elevation: 4700–4900 m.

Distribution: Peru (Ancash).

Specimens examined: **PERU. Dep. Ancash:** Prov. Yungay, Huascarán National Park, Llanganuco Sector, Quebrada Ancosh at Portachuelo, *Smith 11298A* (MO).

**17. *Weberbaueria spathulifolia*** (A. Gray) O. E. Schulz in Engler, *Pflanzenreich* IV. 105(Heft 86): 193. 1924; *Sisymbrium spathulifolium* A. Gray, U.S. Expl. Exped. Phan. 15(1): 60. 1854; *Hesperis spathulifolia* (A. Gray) Kuntze, *Rev. Gen. Pl.* 2: 935. 1891. TYPE: Peru, [Junín], Orbajillo, Wilkes Expedition, *anonymous* (holotype, US!; isotype, NY!).

*Arabis spathulata* Walpers in Meyen, *Observ. Bot.* 248. 1843, not *A. spathulata* de Candolle, *Syst. Nat.* 2: 227. 1821, not *A. spathulata* Nuttall in Torrey & A. Gray, *Fl. N. Amer.* 1: 81. 1838. TYPE: Peru, Altos de Toledo, Apr 1831, *Meyen s.n.* (not seen).

*Sisymbrium orophilum* Weddell, *Ann. Sci. Nat. Bot.* 5(1): 288. 1864; *Hesperis orophila* (Weddell) Kuntze, *Rev. Gen. Pl.* 2: 935. 1891. TYPE: Bolivia, Prov. Larecaja, vicinity of Sorata, near Anilaya, Juriguana, 4500 m, *Mandon 914 bis* (holotype, P!; isotypes, BM!, G!, K!).

*Sisymbrium oliganthum* Weddell, *Ann. Sci. Nat. Bot.* 5(1): 289. 1864. TYPE: Bolivia, rochers de La Laucha, Corillera de La Paz, 1851, *Weddell s.n.* (holotype, P!).

*Sisymbrium septaceum* Weddell, *Ann. Sci. Nat. Bot.* 5(1): 289. 1864. TYPE: Bolivia, Potosí, *D'Orbigny 1447* (holotype, P!, fragments BAA!).

*Braya densiflora* Muschler, *Bot. Jahrb. Syst.* 40: 275. 1908; *W. densiflora* (Muschler) Gilg & Muschler, *Bot. Jahrb. Syst.* 42: 481. 1909. TYPE: Peru, Hacienda Arapa, Yauli, Lima-Oroya rd., 4400 m, *A. Weberbauer 304* (lectotype (see Al-Shehbaz, 1990), B; isolectotype, G!).

*Weberbaueria spathulifolia* var. *integrifolia* O. E. Schulz, *Publ. Field Mus. Nat. Hist. Bot. Ser.* 8: 80. 1930. TYPE: Peru, [Dep. Lima], Río Blanco, 8–19 May 1922, 1500 ft [4572 m], *J. F. Macbride & Featherstone 811* (holotype, B!; isotypes, F!, GH!).

Caudex simple or sometimes branched, slender, less than 1 cm in diam., usually covered with petiolar remains of previous years. Trichomes (0.2–)0.4–0.7(–1) mm, short stalked and submalpighiaceous or long stalked and forked, sometimes simple, rarely absent. Stems decumbent, simple, (2–)4–23(–43) cm tall. Basal leaves petiolate; petiole (0.5–)1–4.5 cm; blade oblong or lanceolate to spatulate, rarely linear or ovate, (1–)2–6(–7) cm, (2–)3–9(–11) mm wide, thin, pubescent or glabrous, margin entire or repand to dentate, rarely lyrate-pinnatifid, apex obtuse or rarely acute; cauline leaves sessile to short petiolate; blade oblong to obovate or lanceolate, 5–13(–18) × 2–8(–15) mm, entire to repand or dentate. Racemes bracteate or ebracteate, in fruit lax to compact, (0.5–)1–9(–17) cm; fruiting pedicels (2–)3–6(–8) mm, straight or curved, ascending and base subappressed. Sepals oblong to ovate, (1.5–)2–2.5(–3) × 1–1.4(–1.7) mm, caducous, sparsely pubescent to glabrous, margin scarious, apex obtuse; petals white, spatulate, 2–3.5(–4) × 1.5–1.8(–2) mm, attenuate to clawlike base; filaments white, 1.5–2.5 mm; anthers oblong to ovate, 0.4–0.7 mm. Fruit linear to oblong, (6–)8–15(–20) ×

1.5–1.8(–2) mm, divaricate to erect and subappressed to rachis, straight or curved, terete, usually abruptly ending in style; valves smooth, glabrous, obscurely to conspicuously veined; style 0.2–0.8(–1.5) mm. Seeds light to dark brown, oblong to ovate, (0.8–)1–1.4 × (0.5–)0.6–0.8 mm, subbiseriate; funicle usually differentiated into broad base and filiform distal portion.

Flowering: Dec–Feb.

Habitat: sand or clay in puna-grassland, boggy areas, valley bottoms, moraine, calcareous cliffs, dry steep slopes, rocky places.

Elevation: 3600–4800 m.

Distribution: Argentina (Catamarca, Jujuy, La Rioja, Tucumán), Bolivia (La Paz, Oruro, Potosí), Chile (Región I), Peru (Ancash, Cuzco, Huancavelica, Junín, Lima, Moquegua, Pasco, Puno).

Specimens examined: **ARGENTINA. Catamarca:** Dep. Andalagala, Cerro Yutuyaco, *Sleumer* 2721 (BAA, LIL); Río Potrero, *Sleumer* 1905 (B), *Cabrera & Frangi* 20700 (BAA, LP); Cerro de la Tambilla, *Jörgensen* 1837 (SI). **Jujuy:** Dep. Humahuaca, Mina Aguilar, *Sleumer* 3402 (LIL), *Cabrera et al.* 19015 (LP). Cochino, ruta prov. 74, 47 km de Mina Pirquitas, camina Abra Pampa, sierras de Quichagua, 66°13'W, 22°55'S, *Morrone et al.* 2632, 2644 (SI); Mina Piraquitas, *Schwabe* 721 (BAA). **La Rioja:** Sierra Famatina, Cueva de Pérez, *Hieronymus & Niederlein* 376 (B). **Tucumán:** Cumbres Calchaquíes, *Haloy* 734 (BACP). **BOLIVIA. La Paz:** Prov. Aroma, Huaraco Pendiente, *Fisel U-188* (GH), *Fisel U-472* (LPB); Prov. Larecaja, vicinity of Combaya, *Mandon* 914 (BM, G, P, K); Prov. Murillo, La Cumbre, road to Undavi, *Solomon* 5029 (MO); ca. 15 km NNE of La Paz, *Beck* 9130 (MO); 17 km SE of Collana on La Paz-Calacoto rd., *Beck* 4290 (GH); La Paz, ca. 10 km hacia los Yungas, *Beck* 11139 (LPB, MO, NY); Cordillera Real, laguna Larankhota hacia el cerro Wila Manquilizani, *Beck* 14882 (LPB, MO); Prov. Pacajes, Charaña, *Asplund* 2664 (S, UPS), *Asplund* 6201 (US); Corocoro, *Asplund* 2418 (S, UPS); Panacachi, *Asplund* 2582 (S). **Oruro:** Prov. Abaroa, Challepata, *Asplund* 3293 (UPS). **Potosí:** Prov. Frías, Cerro Potosí, *Petersen & Hjerting* 1030 (BAA, C, LIL), *Cárdenas* 398 (CONC, US). **CHILE. I:** Tarapacá, Portezuelo de Chapinquiña, faldeos al lado N del Campamento, [18°19'S, 69°28'W], *Marticorena et al.* 109 (CONC). **PERU. Ancash:** Prov. Bolognesi, between Tallenga and Pachapaque, *Cerrate* 749 (GH); road from Chiquián to Huallanca, 9°51'S, 77°4'W, *Weigend et al.* 5201 (NY). Prov. Carhuás, Huascarán National Park (HNP), Quebrada Ishinca, *Smith Valencia & Gonzales* 9440 (MO); Prov. Huaylas, HNP, Quebrada Los Cedros, *Smith, Valencia & Minaya* 9924 (F, GH, MO); Prov. Huaraz, HNP, Quebrada Shallap, 77°22'W, 9°29'S, *Smith Valencia & Gonzales* 9670 (F, MO); Prov. Recuay, HNP, pass between Nevado Pasto Ruri and Nevado Rarí, *Smith & Escalona* 10182 (MO); Quebrada Quena Ragra, *Smith Valencia & Torres* 11730 (MO); Quebrada Queshque, *Smith Valencia & Torres* 11845 (MO); Río Pachacoto drainage, 15 mi from hwy, *Smith, Stein & Todzia* 9373 (GH, MO); HNP, Rio Pachacoto, *Todzia, Stein & Smith* 2593 (MO). **Huancavelica:** Visco, *Macbride & Featherstone* 590 (F, G, NY); Prov. Huancavelica, Bunbunya, *Tovar* 219 (GH). **Junín:** between Cerro de Pasco and La Quinoa, *Asplund* 11871 (S); Morococha, 15 Feb. 1949, *Haapala s.n.* (H); Ondores, *Pattersson* 293 (S); Vicinity of Oroya, *Kalenborn* 132 (GH, NY), 132a (US); between Tarma and La Oroya, *Weberbauer* 2550 (B). **Lima:** Río Blanco, *Macbride* 2991 (CONC, F, NY); Saltacuna, *Soukup* 1940 (US); Ticlio Bajo, *Diers* 979 (GH); Prov. Huarochiri, Casapalca, *Asplund* 11425 (S); Prov. Yungas, Huacrococha, 17 km to Tupe, *Cerrate* 1226 (GH). **Moquegua:** Prov. Moquegua, above Torata, *Weberbauer* 7471 (BM, CONC, F, G, US). **Pasco:** Prov. Cerro, Cerro de Pasco, *Asplund* 11779 (S), *Macbride* 3065 (CAS, CONC, F, US). **Puno:** Prov. Carabaya, Antapampa, *Vargas* 6837 (F); San Antonio, *Saundeman* 3954 (K); rd from Rosario to Macusani, M. & K. *Weigend* 2000/69 (NY). **Cuzco:** Cuzco, *Stafford* 512 (BM, K).



**18. *Weberbaueria stenophylla*** (Leybold) Al-Shehbaz, J. Arnold Arbor. 71: 245. 1990; *Draba stenophylla* Leybold, Anal. Univ. Chile 16: 679. 1859; *Stenodraba stenophylla* (Leybold) O. E. Schulz in Engler, Pflanzenreich IV. 105(Heft 86): 189. 1924. TYPE: Chile, Cord. Santiago, Cerro Colorado, Mapocho Valley, 6000–7000 ft. [1829–2134 m], *Leybold s.n.* (holotype, see Al-Shehbaz, 1990).

*Draba leyboldii* Philippi, Linnaea 33: 10. 1864; *Stenodraba stenophylla* var. *leyboldii* (Philippi) O. E. Schulz in Engler, Pflanzenreich IV. 105(Heft 86): 189. 1924. TYPE: Chile, Cordillera Doña Rosa, *Volkman s.n.* (holotype, SGO!).

*Draba cauquenensis* Philippi, Anal. Univ. Chile 81: 330. 1893. TYPE: Chile, Hacienda de Cauquenes, Cajón del Arriero, *Dessauer s.n.* (lectotype designated by Al-Shehbaz (1990), SGO; isolectotypes, B!, M!).

Plants caespitose; caudex slender, several branched, the branches terminated in rosettes and basally covered with petiolar remains of previous years. Trichomes simple. Stems subdecumbent to erect, glabrous, (3–)5–13 cm tall. Basal leaves rosulate, petiolate; blade narrowly oblanceolate to rarely spatulate, (1–)1.5–4.5 cm × (1–)1.5–2(–3) mm, base attenuate into a conspicuous petiole, margin entire, ciliate with simple trichomes to 1 mm, apex obtuse to subacute; cauline leaves few, subsessile, oblong-lanceolate, 4–10(–14) × 1–1.5 mm, entire, usually ciliate.

Racemes corymbose, ebracteate, elongated in fruit; fruiting pedicels 5–8(–10) mm, straight, divaricate-ascending, glabrous. Sepals green to lavender, oblong, 2.5–3 × 1–1.5 mm, caducous, glabrous, margin scarious; petals white, broadly obovate, (3.5–)4–5 × 2–2.5 mm, clawed, apex rounded; filaments white, 2.5–4 mm; anthers oblong, ca. 0.8 mm. Fruit oblong to linear, 7–12 × ca. 1.5 mm; valves smooth, glabrous; style slender, (0.8–)1.5–2) mm. Mature seeds not seen.

Flowering: Dec–Feb.

Elevation: 2000–3000 m.

Distribution: Chile (Santiago, Región VII).

Specimens examined: **CHILE. Santiago:** Los Perales, [33°50'S, 71°21'W], Montt 1671 (CONC).; San Gabriel, (Cajón del Maipo), [33°26'S, 70°14'W], Gunckel 20774 (CONC). **VII:** **Curicó:** Laguna de Teno, 35°10'S, 70°35'W, Marticorena & Matthei 910 (CONC); Paso Vergara, [35°12'S, 70°31'W], Marticorena & Matthei 1002 (CONC); Ades de Curicó, Vidal s.n. (SGO); El Valle de los Ciegos, near volcano of Petrerua, Bridges 1121 (BM, E, GH, K); Prov. Talca, Cordillera de Talca, Reiche s.n. (B); Turrieta, Cordillera de Talca, Philippi 1612 (SGO); Prov. Linares, Hacienda de Cauquenes, La Chapa, Dessauer s.n. (M); parte superior Río Teno, [35°45'S, 70°47'W], 29 Dec 1971, Zöllner s.n. (CONC).

*Marticorena & Matthei 1002* is a mixed collection of this species and *Weberbaueria colchaquensis*.

**19. *Weberbaueria suffruticosa*** (Barnéoud) Al-Shehbaz, J. Arnold Arbor. 71: 247. 1990; *Draba suffruticosa* Barnéoud in C. Gay, Fl. Chile 1: 157. 1846; *D. imbricatifolia* Barnéoud var. *suffruticosa* (Barnéoud) Reiche, Fl. Chile 1: 116. 1896; *Sisymbrium suffruticosum* (Barnéoud) Fournier, Rech. Anat. Tax. Fam. Crucif. 132. 1865; *Hesperis suffruticosa* (Barnéoud) Kuntze, Rev. Gen. Pl. 2: 935. 1891; *Stenodraba suffruticosa* (Barnéoud) O. E. Schulz in Engler, Pflanzenreich IV. 105(Heft 86): 190. 1924. TYPE: Chile. Cordillera Ovalle, 12,000 ft. [3658 m], *Gay s.n.* (holotype, P!, isotype, B!).

Plants caespitose, scapose; caudex branched, the branches slender, terminated in rosettes and basally covered with petiolar remains of previous years. Trichomes simple. Stems glabrous, 1–5 cm tall. Basal leaves rosulate, petiolate; petiole and midrib persistent; blade linear, thick, usually semiterete, (3–)4–8 × 0.5–0.8 mm, abaxially glabrous, adaxially densely hispid with straight trichomes to 1 mm; margin somewhat incurved, entire, ciliate, apex obtuse to subacute; cauline leaves absent or rarely 1 or 2. Racemes corymbose, ebracteate, elongated in fruit; fruiting pedicels (6–)8–12 mm, straight, divaricate, glabrous. Sepals erect, oblong, 3.5–4 mm, caducous, usually pubescent, margin scarious; petals white, broadly spatulate, 4.5–5.5 × ca.1.5 mm, attenuate into a distinct clawlike base, apex rounded; filaments 3–3.5 mm; anthers oblong, ca. 1 mm. Fruit linear, 11–16 mm, subterete; valves somewhat torulose, glabrous; style (1.5–)2–3 mm. Seeds brown, oblong, ca. 1.5 × 0.8 mm, uniseriate; funicle usually thickened at base.

Flowering:

Habitat:

Elevation: 3300–3700 m.

Distribution: Chile (Región IV).

Specimens examined: **CHILE. Región IV:** Prov. Limarí, Sotaquí, *Gay 1029* (SGO); Cordillera de Doña Rosa, *Volckman s.n.* (SGO); Quebrada Larga, [30°44'S, 70°23'W, *Jiles 3408* (CONC).

**20. *Weberbaueria trichocarpa*** (Muschler) J. F. Macbride, *Candollea* 5: 356. 1934; *Eudema trichocarpum* Muschler, *Bot. Jarhb. Syst.* 40: 276. 1908; *Brayopsis trichocarpa* (Muschler) Gilg & Muschler, *Bot. Jahrb. Syst.* 42: 4484. 1909; *Alpaminia trichocarpa* (Muschler) O. E. Schulz in Enger, *Pflanzenreich IV. 105*(Heft 86): 191. 1924. TYPE: Peru, above Lima, near Alpamina (Alpamia in original publication), 4500 m, 2 Mar 1904, *A. Weberbauer 5119* (holotype, B!).

Plants caespitose; caudex simple or sometimes branched, usually covered with petiolar remains of previous years. Trichomes malpighiaceae, 0.5–1.1 mm, parallel to the long axis of organs they cover. Stems decumbent, rarely ascending or procumbent, simple, (1–)2–4.5(–6) cm tall. Basal leaves petiolate; petiole 5–10(–13) cm, to 4 mm wide at base, margin somewhat membranous; blade linear to linear-lanceolate, (1–)2–4(–4.5) cm × (1.5–)2–3.5 mm, densely pubescent on both surfaces, base attenuate, margin entire, apex acute; cauline leaves short petiolate; blade obovate to lanceolate, 5–9(–11) × 1.5–3(–3.5) mm, entire. Racemes ebracteate, often 3-flowered, umbellate; fruiting pedicels (6–)7–15(–17) mm, densely pubescent, straight. Sepals oblong, 3.5–4 × 1.5–2 mm, caducous or persistent, densely pubescent outside, margin scarious, apex obtuse; petals pinkish, spatulate, 5–6.5 × 1.5–2.2 mm, attenuate to exteriorly pubescent clawlike base, apex rounded; filaments white, 3–4 mm; anthers narrowly oblong, 0.8–1.1 mm. Fruit linear to oblong, 7–13(–17) × 1.7–2.4(–2.6) mm, terete; valves smooth, densely pubescent, midvein obscure; style (0.4–)0.6–0.8(–1) mm. Seeds light to dark brown, oblong to ovate, 1–1.2 × 0.6–0.7 mm, biseriate; funicle usually differentiated into broad base and filiform distal portion.

Flowering: Mar.

Habitat: limestone cliffs and slopes.

Elevation: 4200–4800 m.

Distribution: Peru (Ancash, Lima, Pasco).

Specimens examined: **PERU. Dep. Ancash:** Prov. Pallasca, Conchucós, *Weberbauer 7229* (B, CONC, F, GH), *Weberbauer 7229a* (F, GH). **Dep. Lima:** Río Blanco, *Macbride 2990* (CONC, F, GH, MO, NY, US). **Dep. Pasco:** Cerro de Pasco, *Asplund 11778* (S), *Asplund 11835* (S), *Macbride 3073* (CAS, F, GH, MO, NY, US).

**21. *Weberbaueria violacea*** Al-Shehbaz, Novon 14: 266. 2004. TYPE: Peru, Dep. Cajamarca: Prov. Cajabamba, Cajabamba-Luchubamba, jalca, 3800 m, 17 Nov 1983, A. *Sagástregui A. et al. 11175* (holotype, MO!; isotype, HUT).

Perennial herbs, subglabrous or sparsely pubescent along petiole and at base of cauline leaves; trichomes simple, spreading, to 1.5 mm caudex thick, simple. Stems 4–15 cm, decumbent or ascending, unbranched, glabrous. Basal leaves rosulate; petiole 0.5–3.5 cm, ciliate; leaf blade spatulate, 1.5–3.5 × 1–2.2 cm, glabrous, base cuneate to attenuate, margin entire or denticulate, apex rounded; cauline leaves sessile, oblong, 6–20 × 1–5 mm, base cuneate, margin entire or denticulate, apex subacute, sparsely pubescent at base. Raceme 20- to 35-flowered, bracteate throughout, dense; rachis straight, glabrous; bracts sessile, similar to cauline leaves but progressively smaller upwards; flowering pedicels 7–10 mm, erect to ascending, straight, subappressed, glabrous. Sepals oblong, 4–5 × 1.5–2 mm, not saccate at base, glabrous or with a few trichomes below apex, ascending; petals violet, broadly obovate, 6.5–7.5 × 3–3.5 mm, not clawed, apex rounded; filaments 2–3 mm; anthers oblong, 0.6– mm; style 1.4–2 mm. Fruits and seeds not seen.

Flowering: Nov.

Elevation: ca. 3800 m.

Distribution: Peru (Cajamarca).

Known only from the type gathering.