

BRASSICACEAE

by

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Annual or perennial herbs, rarely woody plants. Leaves alternate, simple or compound, partly arranged in basal rosettes. Stipules wanting. Inflorescence consisting of racemes. Bracts usually wanting. Flowers hermaphrodite, actinomorphic. Sepals 4, deciduous or rarely persistent, the outer 2 median, the inner 2 lateral and often saccate at the base. Petals 4, cruciate, sometimes rudimentary or wanting, usually clawed. Stamens 6, tetradynamous (2 stamens of the outer series smaller than the 4 of the inner series); filaments sometimes winged or provided with scale-like appendages; anthers cordate or sagittate at the base, sometimes with elongate connective. Nectar glands attached to the receptacle near the bases of the filaments. Ovary superior, bi-locular by a false septum; style simple or rarely wanting; stigma discoid or more or less 2-lobed. Ovules numerous, anatropous or campylotropous, on 2 parietal placentas. Fruit a siliqua or silicle, usually 2-locular, bivalved or rarely indehiscent. Seeds attached to both sides of the septum. Embryo large, the cotyledons incumbent, accumbent or conduplicate. Endosperm wanting.

About 3000 species in 350 genera, widely distributed, especially in the temperate and cold regions of the northern hemisphere.

Key to the genera:

1. Fruit transversely 2-jointed, indehiscent; flowers pale purplish to white; leafblades entire in the lower half, crenate-dentate in the upper half; plants of sandy seashores *Cakile*
Fruits a siliqua or a silicle; not this combination of characters 2
2. Flowers yellow; siliqua linear, 3—4 cm long, tapering into the 4—7 mm long beak *Brassica*
Flowers white; silicle orbicular, 3—3.5 mm, laterally compressed, shallowly notched and slightly winged at the apex *Lepidium*

Brassica Linnaeus, Spec. Plant. 666. 1753

Annual or biennial herbs; stems erect or ascending. Basal leaves in rosettes, pinnatifid; upper leaves petiolate, sessile or amplexicaul. Inflorescence consisting of terminal racemes. Outer sepals oblong and subcucullate at the apex; inner ones ovate and somewhat saccate at the base. Petals obovate, clawed, yellow or rarely white. Stamens 6; filaments filiform; anthers somewhat acute or obtuse. Lateral nectar glands prismatic, sometimes very small, the median one semiglobose, oblong or filiform, often rather large. Ovary sessile or stipitate, cylindric; style long; stigma capitate or bilobed. Ovules 5—45. Siliqua linear or oblong, terete or 4-sided, tapering into the linear beak; valves convex; beak with 1 or 2 seeds. Seeds in one row in each locule, globose, pendulous, those in the beak usually erect. Cotyledons conduplicate.

About 40 species, natives of the Mediterranean region.

Brassica integrifolia (West) O. E. Schulz

O. E. SCHULZ in URBAN, Symb. Ant. 3: 509. 1903; URBAN, Symb. Ant. 4: 256. 1905; BOLDINGH, Fl. D.W. Ind. Isl. 1: 72. 1909; Fl. Ned. W. Ind. Eil. 195. 1913; FAWCETT & RENDLE, Fl. Jamaica 3(1): 240. 1914; BRITTON & MILLSPAUGH, Bahama Fl. 147. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 327. 1924; LEON & ALAIN, Fl. Cuba 2: 197, fig. 84A. 1951; GOODING *et al.*, Fl. Barbados 163. 1965; FOURNET, Fl. Guadeloupe & Martinique 522. 1978; — *Sinapis integrifolia* WEST, Bidr. St. Croix 296. 1793; — *Brassica integrifolia* (WEST) O. E. SCHULZ ssp. *domingensis* (TASS.) O. E. SCHULZ, in URBAN, Symb. Ant. 3: 504. 1903; URBAN, Symb. Ant. 8: 242. 1920; — *Brassica willdenovii* Boiss., Ann. Sci. Nat. sér. 2. 17: 88. 1842; ADAMS, Flowering plants of Jamaica 308. 1972; — *Sinapis brassicata* LINNAEUS, Syst. Nat. ed. 12. 231. 1767; GRISEBACH, Fl. Br. W. Ind. Isl. 14. 1859 [‘1864’].

Annual herb, up to 1 m high; stems glabrous or sparingly pilose in the lower part. Leaves glabrous or sparingly pilose underneath, the basal leaves broadly obovate to elliptic-obovate, often deeply lobed near the base, up to 15 × 12 cm, coarsely dentate, rounded at the apex, cuneate at the base; petiole up to 8 cm long; lower cauline leaves oblong, dentate, upper leaves broadly linear, somewhat obtuse at the apex, narrowed at the base, petiolate or nearly sessile. Racemes elongated, in fruit up to 30 cm long; pedicels filiform, 6—10 mm long, elongated in fruit. Outer sepals 4 × 1—1.5 mm, obtuse at the apex; inner sepals 4 × 2 mm, acutish at the apex. Petals obovate, long-clawed, rounded at the apex, 6 × 2.5 mm, yellow. Stamens: filaments filiform, those of the outer 2 stamens 3 mm long, those of the inner 4 stamens 1.5 mm long; anthers obtuse to acutish at the apex, sagittate at the base, 1.5 mm long. Ovary sessile, tapering into the style; stigma capitate. Ovules 12—18. Siliqua erect, spreading, 3—4 cm long, 1—2 mm in diam.; beak 4—7 mm long. Seeds brown, 1—1.2 mm in diam.

Native of Asia; nowadays widely distributed.

Weed on waste and cultivated grounds.

Vernacular names: mustard, mustard salade (Windward Group).

SABA: Bottom Hill, 300—350 m (Stoffers 3146, fl. & fr. Ap.); Windwardside (Arnoldo 928, fl. & fr. Aug.; Boldingh 1884, fl. & fr. July); road to Hellsgate (Arnoldo 746, fl. & fr. Aug.).

ST. EUSTATIUS: without loc. (v. Groll-Meyer 292, fl. & fr.; 141, fl. & fr.).

Cakile P. Miller, Gard. Dict. Abr. ed. 4. 1754

Annual or rarely biennial, glabrous, fleshy, branching herbs. Leaves pinnatifid or undivided. Inflorescence consisting of terminal racemes. Bracts wanting. Flowers white or pale purple. Outer sepals linear, inner two broadly oblong. Petals obovate, clawed. Stamens 6; filaments filiform; anthers oblong, obtuse. Lateral nectar glands small, bilobed, the median distinct. Ovary cylindrical, transversely 2-jointed; the lower joint 1-locular, small; the upper one 1-locular, larger; style wanting; stigma terminal, capitate. Ovules solitary or rarely 2 in each locule, pendulous in the lower, erect from the base in the upper joint. Siliqua transversely 2-jointed, elongated, flattened or ridged, indehiscent; each joint usually 1-seeded. Seeds oblong; cotyledons accumbent.

Four species in Europe, Northern Africa, Western Asia, North- and Central America, and Australia.

Cakile lanceolata (Willd.) O. E. Schulz

SCHULZ, in URBAN, Symb. Ant. 3: 504. 1903; URBAN, Symb. Ant. 4: 256. 1905; BOLDINGH, Fl. D.W. Ind. Isl. 1: 72. 1909; Fl. Ned. W. Ind. Eil. 194. 1913; FAWCETT & RENDLE, Fl. Jamaica 3(1): 245, fig. 103. 1914; URBAN, Symb. Ant. 8: 242. 1920; BRITTON & MILLSPAUGH, Bahama Fl. 149. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 329. 1924; QUESTEL, Fl. Isl. St. Bartholomew 109. 1941; LEON & ALAIN, Fl. Cuba 2: 195, fig. 83A. 1951; GOODING *et al.*, Fl. Barbados 163. 1965; ADAMS, Flowering plants of Jamaica 307. 1972; FOURNET, Fl. Guadeloupe & Martinique 519, fig. 247. 1978; — *Raphanus lanceolatus* WILLDENOW, Spec. Plant. 3(1): 562. 1800; — *Cakile aequalis* L'HERITIER ex DECANOLLE, Syst. 1: 185. 1824; GRISEBACH, Fl. Br. W. Ind. Isl. 14. 1859 ['1864']; DUSS, Fl. phan. Ant. franç. 10. 1897.

Strongly branched, erect or ascending, annual herb, up to 50 cm high. Basal and lower cauline leaves up to c. 10 cm long; blades broadly oblong to elliptic, obtuse to subacute at the apex, tapering into the petiole, 3.5—10 × 2—4.5 cm, margin entire in the lower half, crenate-dentate in the upper half; petioles 2—2.5 cm long, slightly winged; upper leaves narrowly obovate to linear-oblong, obtuse or subacute at the apex, tapering into the petiole, up to 5 × 1.5

cm, entire in the lower, crenate-dentate in the upper half; petiole up to 1 cm long, slightly winged. Racemes elongated; pedicels 2 mm long. Sepals hairy near the apex, the outer two linear, obtuse and subcuculate at the apex, 3.5×1 mm; inner two oblong, acutish at the apex, $3.5-4 \times 1.5$ mm. Petals pale-purplish to white; laminae $5-7 \times 2-2.5$ mm, somewhat emarginate, the claw 2 mm long. Lateral nectar glands minute, bilobed; the median stipiform. Stamens with filiform filaments, those of the two outer 3.5 mm long with 1 mm long anthers, those of the inner four 5 mm long and with 1 mm long anthers. Ovary sessile, cylindrical, transversely 2-jointed. Ovules 1 or 2 in each joint. Racemes elongated in fruit, up to 30 cm long; pedicels with fruit stout and up to 6 mm long. Fruit 2—3.5 cm long and 4 mm in diam., somewhat terete and sulcate; lower joint obconical-cylindrical, the upper joint dagger-shaped, 2—4 times as long as the lower one, obtuse at the apex. Seeds oblong, brownish, $4 \times 1.5-2$ mm.

West Indies, Venezuela, and Colombia.

On sandy coasts.

ARUBA: Sea Grape Grove (Stoffers 6257, fl. & fr. March); Rif (Suringar s.n., fr. Feb. [L]).

SABA: between Hellsgate and Mary's Point (Boldingh 2044, fl. & fr. July).

ST. EUSTATIUS: Turtle Bay (Suringar s.n., fl. Ap. [L]).

ST. MARTIN: Low Lands (Stoffers 2692, fl. & fr. Ap.); Airfield (Stoffers 2409, fl. & fr. March); Simson Bay (Arnoldo 1230, fr. March); between Simson Bay and Simson Bay Lagoon (Stoffers 2501, fl. March).

Lepidium Linnaeus, Spec. Plant. 643. 1753

Annual or perennial herbs, glabrous or pubescent with simple trichomes. Leaves sessile or the lower petiolate, entire or pinnatifid to lobed. Inflorescence consisting of terminal racemes, congested in flower, elongating in fruit. Flowers small. Sepals short, equal at the base. Petals white or rarely rosy or yellow, sometimes reduced or even wanting. Stamens 6—2; filaments filiform, rarely dilated at the base; anthers oblong. Nectar glands small. Ovary sessile, 2-locular; style present but often very small; stigma semi-capitate or 2-lobed. Ovules solitary in each locule, pendulous. Silicles compressed, oblong to orbicular, 2-valved, dehiscent, apex scarcely notched and barely winged to deeply notched and prominently winged, valves keeled. Seeds pendulous from near the top, ovate or ellipsoid. Cotyledons incumbent or rarely accumbent.

About 130 species in temperate and warm regions of the world.

Lepidium virginicum L.

LINNAEUS, Spec. Plant. 645. 1753; GRISEBACH, Fl. Br. W. Ind. Isl. 14. 1859 [1864]; DUSS, Fl. phan. Ant. franç. 9. 1897; URBAN, Symb. Ant. 4: 255. 1905; BOLDINGH, Fl.

D.W. Ind. Isl. 1: 72. 1909; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 214. 1909; BOLDINGH, Fl. Ned. W. Ind. Eil. 194. 1913; FAWCETT & RENDLE, Fl. Jamaica 3(1): 242, fig. 101. 1914; BRITTON & MILLSPAUGH, Bahama Fl. 146. 1920; URBAN, Symb. Ant. 8: 241. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 326. 1924; WILLIAMS, Fl. Trinidad & Tobago 1: 26. 1929; QUESTEL, Fl. Isl. St. Bartholomew 109. 1941; LEON & ALAIN, Fl. Cuba 2: 196, fig. 83B. 1951; GOODING *et al.*, Fl. Barbados 164, fig. 8. 1965; ADAMS, Flowering plants of Jamaica 309. 1972; FOURNET, Fl. Guadeloupe & Martinique 520, fig. 249. 1978.

Erect, annual herb, up to 50 cm high; stems somewhat striate and slightly angled. Leaves glabrous or somewhat pubescent; the lower ones spatulate or obovate in outline, tapering into the petiole, up to 9 cm long; the lobes dentate; petiole up to 1.5 cm long; upper leaves linear-oblong or oblanceolate to lanceolate, acutish at the apex, up to 4 cm long, irregularly toothed or serrate to almost entire, sessile or short-petiolate. Racemes many-flowered, in fruit up to 15 cm long; pedicels 3.5 mm long, in fruit lengthening to 6 mm. Sepals slightly concave and margin whitish, glabrous or sparsely pubescent; the outer ones oblong, rounded at the apex, 1×0.5 mm; the inner ones orbicular, about 1×1 mm. Petals spatulate, rounded at the apex, $1.5-2 \times 1$ mm, white, slightly exceeding the sepals, sometimes wanting in the later flowers. Stamens 2(—4); filaments about 1 mm long; anthers very small. Ovary laterally compressed; style very short or almost wanting; stigma semi-capitate. Silicles laterally compressed, orbicular, 3—3.5 mm in diam., shallowly notched, slightly winged at the apex. Seeds more or less ovate, 2×1 mm, brown, wingless. Cotyledons accumbent.

North America from Canada to Texas, West Indies; introduced into Europe.

Rather common weed on waste and cultivated grounds.

SABA: Windwardside (Arnoldo 583, fr. Aug.); along road between The Bottom and Windwardside, 200 m (Boldingh 1363, fl. & fr. July; 1292, fl. & fr. July); Hellsgate (Stoffers 3386, fl. & fr. May); Small Rendez-Vous (Stoffers 2930, fl. Ap.); The Ladder (Suringar s.n., fl. & fr. Ap. [L]); Peperpot (Suringar s.n., fl. Ap. [L]); without loc. (Boldingh 2172A, fl. & fr.).

ST. EUSTATIUS: along road near Glass Bottle (Boldingh 885, fl. & fr. June); slope of The Quill (Suringar s.n., fr. Ap. [L]).

ST. MARTIN: Milldrum Hill, 200—300 m (Boldingh 3121, fl. & fr. Sept.); mountain between Mont des Accords and Sentry Hill, 200—300 m (Boldingh 2901, fl. & fr. Aug.); hills along northern side of Cul de Sac (Boldingh 3004, fl. & fr. Aug.); Philipsburg (Arnoldo 1256, fl. & fr. March); between Simson Bay and Simson Bay Lagoon (Stoffers 2511, fl. & fr. March).