

Scrophulariaceae (Figwort Family) Traits, Key, & Comparison Charts for Newfoundland and Labrador

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Scrophulariaceae Family Traits

- Tall, terrestrial biennial or perennial herbs of disturbed land or forest borders, or low creeping amphibious annual herbs of brackish shores and mudflats.
- Leaves simple, basal and sometimes tufted, (*Limosella*) or cauline and alternate or opposite.
- Flowers solitary, or numerous in an open panicle or a dense, spike-like panicle; symmetry regular (radial) in *Limosella*; or irregular (zygomorphic, bilateral) to slightly irregular in *Scrophularia* and *Verbascum*.
- Calyx and corolla both 5-lobed.
- Stamens 4, sometimes also with 1 staminode (*Scrophularia*); or stamens 5 (*Verbascum*).
- Ovary superior, with 2 carpels, locules 2, at least at the base.
- Fruit a capsule; seeds numerous.

Key to Scrophulariaceae Species in Newfoundland and Labrador

- 1a. Plants tall, terrestrial, to 2 m tall; stems erect; leaves basal and/or cauline; flowers numerous in open panicles or in dense spike-like panicles; corolla yellow, yellow-green, or brown. **2**
- 1b. Plants small, amphibious, less than 1 dm tall; stems horizontal, creeping, aerial stems lacking; leaves all basal; flowers solitary, on ascending peduncles; corolla white, pink, or pale lavender (*Limosella*). **3**
 - 2a. Plants 0.3–1 m tall, stem and leaves glabrous; leaves cauline, opposite, and petiolate; petioles short, 2–3 cm long, usually 1/4–1/8 the length of the blade, narrowly winged; blades ovate, about 6–13 cm long, bases shallowly cordate to nearly truncate, apices acute, margins serrate; flowers in open panicles with stiff, ascending branches, each ending in cymes of 3–7 leathery, yellow-green and brown flowers; capsules ovoid, glabrous. ***Scrophularia nodosa*** (knotty figwort)
 - 2b. Plants to 2 m tall, stem and leaves very hairy (woolly); leaves basal (in rosettes) and cauline (these alternate); basal and lower to mid cauline leaves petiolate; upper cauline leaves sessile; blades oblong to oblanceolate, 8–50 cm long, bases decurrent and winged along the stem, apices acute to obtuse, margins crenate to nearly entire; flowers in tall, dense, spike-like panicles, bearing crowded clusters of flowers; capsules ovoid, woolly. ***Verbascum thapsus*** (common mullein)
- 3a. Leaves all filiform to linear, 1–3.5 cm long × 1–2 mm wide, often in tufts; corolla about 3 mm wide, lobes rounded; pedicels 1–2 cm long, curving downward in fruit. ***Limosella australis*** (southern mudwort)
- 3b. Leaves 1.5–10 cm long, with long petioles and elliptic to lanceolate blades, 0.5–3 cm wide, the blades often floating in submerged plants; corolla about 2 mm wide, lobes acute; pedicels to 6 cm long, spreading in fruit. ***Limosella aquatica*** (water mudwort)

Scrophulariaceae Comparison Charts

Scrophulariaceae Chart 1 (of 2): <i>Scrophularia</i> and <i>Verbascum</i>		
Species:	<i>Scrophularia nodosa</i>	<i>Verbascum thapsus</i>
	knotty figwort, woodland figwort, common figwort	common mullein, flannel plant,
Plants	perennial, 0.3-1 m tall, with a tuberous, nodular root	biennial, to 2 m tall , with a deep taproot
Stems	4-angled in cross-section , with acute angles and flat sides, glabrous	rounded (terete) in cross-section, densely hairy (tomentose)
Leaves	all leaves cauline, opposite, petiolate and glabrous ; about 6–13 cm long × up to 9 cm wide; blades ovate, bases shallowly cordate to truncate , apices acute; margins serrate	leaves basal and cauline (alternate), densely hairy (woolly) ; basal and lower leaves 8–50 cm long, petiolate; blades oblong, upper leaves smaller, sessile; bases decurrent and winged ; margins crenate to nearly entire
Petioles	2–3 cm long, with winged margins; usually 1/4–1/8 as long as the blade	5–25 mm long, on basal and lower cauline leaves
Inflorescence	an erect, somewhat narrow panicle , with erect to ascending branches bearing cymose clusters of 3–7 flowers with bilateral symmetry	tall, cylindric, spike-like panicle , 20–50 cm long × 2 cm wide, densely-flowered; flowers slightly bilateral in symmetry
Pedicels	thickish, glandular-hairy , free from the rachis	short, 1–5 mm long, woolly, ± fused (adnate) to the rachis
Calyx	5-lobed, glabrous; calyx tube short and wide, lobes rounded at the apex	5-lobed, woolly, 8–12 mm long, lobes lanceolate, acuminate at the apex
Corolla	7–10 mm long , 5-lobed, greenish-yellow and brown ; the tube globose, with 2 upper, 2 lateral, and 1 lower reflexed lobe, broader than long	14–25 mm across , 5-lobed, yellow ; the tube short, with 2 upper, 2 lateral, and 1 lower rounded lobe; corolla lobes hairy on the lower surface
Stamens	4 fertile; filaments glabrous ; anthers broad (fan-shaped); with a 5th chocolate-brown rudimentary stamen fused (adnate) to the corolla below the upper lobes	5, all fertile ; filaments of 2 lower stamens glabrous, filaments of the 3 upper stamens hairy, with yellow hairs ; lower anthers fan-shaped
Capsule	ovoid, about 5 mm long, glabrous	ovoid, 7–10 mm long, woolly
Habitat	introduced; disturbed roadsides, forest margins; in western Nfld. and the Avalon Peninsula, eNfld.	introduced, very uncommon; disturbed areas, roadsides; known from w/neNfld.

Scrophulariaceae Chart 2 (of 2): <i>Limosella</i>		
Species:	<i>Limosella aquatica</i>	<i>Limosella australis</i>
	water mudwort, northern mudwort	southern mudwort, Atlantic mudwort, Welsh mudwort, delta mudwort
Plants	annuals; stems decumbent, often branched and forming mats	annuals; stems decumbent, creeping, forming dense mats
Leaves	fleshy, in basal rosettes of 10–20 leaves; 1.5–10+ cm long, tapering to a long petiole; blades flat, elliptic to lanceolate, 0.5–3 cm wide ; floating in submerged plants	fleshy, in basal tufts of up to 10 leaves; leaves 1–3.5 cm long, ± circular (terete) in cross-section, filiform to linear, 1–2 mm wide , not differentiated into a petiole and blade
Flowers	solitary; shorter than the leaves; pedicels to 6 cm long, spreading in fruit	solitary; shorter than the leaves; pedicels 1–2 cm long, curving downward in fruit
Calyx	campanulate, 5-lobed; the tube 1–2 mm long, lobes 1 mm long	campanulate, 5-lobed; the tube 1–2 mm long, lobes 0.5–1 mm long
Corolla	about 2 mm wide; 2–3 mm long, with 5 acute lobes , white to pink or pale lavender	about 3 mm wide; 2–4 mm long, with 5 rounded lobes , white to pale lavender
Style	0.2–0.4 mm long	1 mm long
Capsule	ellipsoid to globose, 2.5–4 mm long	globose, 2–3 mm long
Habitat	brackish (to fresh) shores, shallow water, wet sand, or mud flats	
Range	rare; known from c/sLab.; last reported from insular Nfld. in 1924; probably extirpated on the Island.	rare; known from 2 sites in w/ncNfld. and 2 sites in Labrador (Lake Melville, cLab., and Lake Ashuanipi, swLab.).

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