

## Caryophyllaceae (Pink Family) Traits and Key

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Caryophyllaceae Family Traits .....	1
Key to the Caryophyllaceae of Newfoundland and Labrador. ....	3
References. ....	16

**Note:** Traits and measurements included in this document are based on the references listed on pg. 2 and on personal observations of plants in Newfoundland and Labrador. Traits included in the keys are those I find most useful for field identification; for full descriptions, please refer to the references. Comparison Charts are presented in a separate file, titled *Caryophyllaceae Comparison Charts*, which will be uploaded in August.

### Caryophyllaceae (Pink Family) - Key Traits

(relative to species found in Newfoundland and Labrador)

- Herbaceous annuals, biennials, or perennials; plants low and caespitose or mat-forming, or erect; stems may be glabrous, pubescent, or glandular-pubescent.
- Leaves opposite (whorled in *Spergula*), often decussate; bases of cauline leaves connate (fused) around the stem, causing the nodes to appear swollen.
- Leave simple, entire; cauline leaves linear-subulate, lanceolate, elliptic, or ovate; basal leaves, when present, lanceolate or oblanceolate. Leaves thin (membranaceous) or somewhat fleshy (succulent)
- Stipules lacking in most genera (present in *Spergula* and *Spergularia*).
- Flowers terminal or axillary, solitary or in few- to many-flowered cymes; flowering stems simple or branched, to 1 m tall. Flowers have regular (actinomorphic) symmetry.
- Flowers may be bisexual (most) or unisexual (monoecious or dioecious), or a mixture of bisexual and unisexual flowers.
- Sepals and petals usually 5, occasionally 4, petals rarely absent. Sepals are distinct (most species) or connate into a calyx (*Dianthus*, *Saponaria*, *Silene*, *Viscaria*). Calyx tubes often have prominent dark green or purple veins, pale areas between the main veins are called commissures. Calyx tubes of some *Silene* species are often inflated. Petals may be unlobed, emarginate, or shallowly to deeply bifid at the apex; petals of species with a calyx tube are differentiated into a distinct claw (contained with the calyx tube) and the limb, which extend outward, perpendicular to the tube; petals may be white, various shades of pink, or red. The length of the sepals is listed for flowering plants, sepals may be slightly longer in fruiting plants.
- Stamens usually 10; fewer in *Scleranthus* (2–5) and *Spergularia* (2–4 or 6–10), or 5–10 in some *Stellaria* species.

- The pistil is composed of 2–5 connate carpels; the number of style branches is equal to the number of carpels in the ovary. Placentation is either free-central or basal. A carpophore (stalk between the ovary and the receptacle) is present in most species of *Silene*.
- Nectar is produced by a nectar disk or by nectaries between the stamens, situated at the base of the ovary; flowers are insect-pollinated; seeds with a strophile (*Moehringia*) are dispersed by ants.
- The fruit is mainly a loculicidal capsule with 1 locule; dehiscence occurs along the suture lines between carpels, producing 2, 3, or 5 valves (equal to the number of carpels); valves in some species of *Cerastium* and *Silene* are further divided (bifid), producing 6 or 10 apical teeth. In *Scleranthus*, the fruit is an indehiscent utricle adnate to the persistent calyx.
- Seeds are small (usually less than 1.5 mm across), and number 1 (in *Scleranthus*) to over 100/capsule. *Honckenya peploides* has the largest seeds, each measuring 2–4 mm across.
- The ant-dispersed seeds of *Moehringia* bear a fleshy strophiole near the hilum (the scar indicating the former attachment of the funiculus). A strophiole is similar to an aril, but develops from the testa (outer seed coat) of the seed, while an aril is derived from the funiculus (the stalk attaching a developing seed to placental tissue in the ovary).



***Sabulina rubella***, reddish sandwort, Burnt Cape E.R.

## Key to Caryophyllaceae in Newfoundland and Labrador

- 1a. Plants with stipules; leaves opposite, appearing whorled in some species; clusters of axillary leaves often present at nodes; leaves linear, succulent, appearing  $\pm$  terete, rounded on the lower surface; fruiting pedicels are abruptly reflexed; capsules ovoid, 3.5–5.2 mm long. .... **2**
- 1a. Plants without stipules; leaves opposite, never appearing whorled; axillary leafy clusters absent; leaves of various shapes, linear to expanded, not terete nor succulent; fruiting pedicels not reflexed at dehiscence; capsules of various shapes and sizes. .... **4**
- 2a. Stipules 4 per node; axillary clusters 2 per node, each with 8–15 leaves; stems and leaves stipitate-glandular, leaves appearing terete due to strongly revolute margins; flowers with white petals and 5 styles. .... *Spergula arvensis* (corn spurrey)
- 2b. Stipules 2 per node; axillary clusters usually absent, or if present, with 2–4 leaves per cluster; stems and leaves glabrous or stipitate-glandular; leaves rounded on the lower surface, flattish on the upper surface; flowers with white or pink petals and 3 styles (*Spergularia*). .... **3**
- 3a. Plants in coastal brackish or saline habitats; stems, leaves, pedicels, and sepals usually glabrous, blades linear, 1.5–4.5 cm long, fleshy, blunt at the apex; axillary leaf clusters lacking; stipules small, less than 3 mm long, dull, broadly deltate with obtuse to acute apices; pedicels glabrous to rarely stipitate glandular; petals white to pinkish,  $\pm$  ovate; stamens 2–4; capsules up to 2 times longer than the sepals. .... *Spergularia canadensis* var. *canadensis* (Canada sand spurrey)
- 3b. Plants of roadsides and disturbed habitats; stems, pedicels, sepals, and lower leaves stipitate-glandular; upper leaves glabrous, blades filiform to linear, 0.4–1.5 cm long, slightly fleshy, apiculate to spine-tipped at the apex; axillary leaf clusters present, usually with 2–4 leaves per cluster; stipules conspicuous, 3.5–5 mm long, shiny, with long-acuminate apices; petals pink, elliptic, ovate, to obovate; stamens 6–10; capsules equal to or slightly longer than the sepals. ....  
..... *Spergularia rubra* (red sand spurrey)
- 4a. Low, spreading, multi-branched annuals or biennials with linear to subulate leaves to 2.4 cm long; flowers lacking petals, styles 2; fruit a 1-seeded utricle surrounded by the urn-shaped (urceolate) persistent hypanthium and crowned by 5 persistent, green and white-margined calyx lobes. .... *Scleranthus annuus* (annual knawel)
- 4b. Low to tall plants of various shapes and leaf sizes; perennials or annuals (few); leaves of various shapes and sizes; flowers usually with petals (occasionally absent); styles 2–5, fruit a capsule with 2–many seeds. .... **5**
- 5a. Plants with 4–5 distinct sepals, not connate (fused together); sepals free from the capsule; petals distinct, not differentiated into limbs and claws, or petals lacking. .... **6**
- 5b. Plants with a calyx of 5 connate sepals; the calyx tube ending in 5 distinct lobes; calyx usually persistent around the capsule, sometimes inflated; petals distinct, with spreading limbs and long claws. .... **44**

- 6a. Plants restricted to sandy or gravely coastal beaches; stems and leaves succulent, glabrous; leaves noticeably decussate, with alternate pairs arranged at right angles to the previous pair; leaves oblanceolate to broadly ovate, apices acute to apiculate; flowers solitary, terminal or axillary; functionally unisexual (except for an occasional bisexual flower): the staminate flowers with 10 fertile stamens and reduced, non-fertile ovaries; the pistillate flowers with fertile ovaries, non-fertile stamens, petals reduced or lacking; petals oblanceolate to broadly ovate, 2.5–6 mm long in staminate flowers, 2 mm long or less in pistillate flowers; styles 3–5; capsules broadly ovoid to depressed-globose, to 1 cm long, slightly wider than long; dehiscing by 4 or 5 valves (*Honckenya peploides*). ..... 7
- 6b. Plants of a variety of habitats, rarely on sandy shores; stems and leaves not or only slightly succulent, glabrous or pubescent; leaves ranging from subulate to obovate, with acuminate to rounded apices; flowers solitary or in cymes, terminal or axillary; bisexual; petals of various shapes; stamens 4, 5, 8, or 10; styles 3 or 5; capsule of various shapes, 0.2–2 cm long, dehiscing by 3, 4, or 5 valves, or 6 or 10 teeth. .... 8
  
- 7a. Stems firm, stout, 3–6 mm wide; leaf blades lanceolate to ovate, 1.2–2.8 cm long by 0.7–1.5 cm wide; mid-stem internodes 1–5.5 cm long; sepals ovate, 4–7 mm long, apex obtuse to acute; capsules fleshy, 8–12 mm across; plants of Nfld. and Labrador. ....  
..... *Honckenya peploides* subsp. **robusta** (eastern seabeach sandwort)
- 7b. Stems weak, slender, to 2.5 mm wide; leaf blades elliptic, ovate, or obovate, to 2 cm long, usually less than 1 cm wide; mid-stem internodes to 3 cm long; sepals ovate, 3.5–6 mm long, apex apiculate; capsules thin and papery (chartaceous), 5–8 mm across; plants of central and northern Labrador. .... *Honckenya peploides* subsp. **diffusa** (northern seabeach sandwort)
  
- 8a. Flowers with petals. .... 9
- 8b. Flowers lacking petals, or petals rudimentary (< 1 mm long). .... 58
  
- 9a. Petals either bifid to about the middle or deeply divided nearly to the base; capsules cylindrical, often curved upward at the tip, opening by 6–10 apical teeth, or capsules conical, ellipsoid, or ovoid, opening by 3 valves or 6–10 teeth. .... 10
- 9b. Petals either entire, with rounded to acute apices, or shallowly notched or emarginate at the apex; capsules ellipsoid or ovoid, opening by 3–5 valves, or 4–10 teeth. .... 29
  
- 10a. Flowers with bifid petals divided to about the middle; capsules cylindrical, curved upward at the apex or straight; opening by 6–10 apical teeth; stems terete ( $\pm$  round) in x.s., not 4-angled; plants pubescent with non-glandular and glandular hairs; the hairs are colorless (appearing white) or fuscous (dingy brownish-grey); sepal margins scarious (thin, dry, and colourless), narrow to broad; stamens 5–10, anthers yellow; styles usually 5 (3 in *C. cerastoides*) (*Cerastium*). .... 11
- 10b. Flowers with petals divided nearly to their base, appearing as 10 petals; capsules ovoid or globose, usually opening by 3 valves or 6 teeth; stems 4-angled; plants mostly glabrous, or with a single line of soft white hairs along internodes and pedicels; sepal margins very narrowly scarious; stamens 3, 5, or 10, anthers yellow or orange, becoming dark red at maturity; styles 3 (*Stellaria*). .... 22

- 11a. Stamens 5; flowers 3–30+ in open cymes..... **12**
- 11b. Stamens 10; flowers in few- to many-flowered cymes. .... **13**
- 12a. Stamens 5; annual plants, ± erect, not forming mats; flowering stems to 2 dm tall; stems, pedicels, and sepals densely pubescent and viscid, with short glandular and non-glandular hairs; cauline leaves oblong to ovate, 5–18 mm long × 2–5 mm wide, apex obtuse to rounded; sepals 3–5 mm long, narrowly lanceolate, apices acute; petals shorter, 2–3 mm long, apices entire to shallowly notched; capsules 4.5–6.5 mm long; introduced plants of dry sandy or gravely disturbed ground in Nfld. ....  
 ..... ***Cerastium semidecandrum*** (five-stamen chickweed)
- 12b. Stamens usually 10, occasionally 5; perennial plants forming tufts or mats; flowering stems to 4.5 dm tall; stems, pedicels, and sepals softly pubescent, usually with non-glandular hairs, occasionally with viscid glandular hairs; cauline leaves lanceolate to ovate, 10–25+ mm long × 3–8 mm wide, apex acute to obtuse; sepals and petals 5–7 mm long, apex of sepals acute, bifid ½ to nearly halfway to the base; capsules 9–13 mm long; introduced plants of grassy disturbed ground in Nfld. and Labrador. ....  
 ..... ***Cerastium fontanum*** subsp. ***vulgare*** (common mouse-ear chickweed)
- 13a. Styles 3; plants to 1 dm tall; stems glabrous, except for lines of small hairs on the internodes; leaves oblong to lanceolate, slightly fleshy, 2–12 mm long × 1–3 mm wide, apices obtuse; flowers 1–3 in a cyme; pedicels 5–35 mm long; pedicels and sepals glandular-pubescent; sepals narrowly lanceolate, 4–5 mm long, with obtuse apices; petals shallowly bifid, 5–8 mm long; capsules straight, 7–10 mm long, opening by 6 (rarely 12) teeth; known provincially only from Barr'd Harbour Hill, nwNfld. .... ***Cerastium cerastoides*** (starwort chickweed)
- 13b. Styles 5; plants 0.5–4.5 dm tall; stems, leaves, and pedicels pubescent with glandular and/or non-glandular hairs; linear-lanceolate to obovate or nearly orbicular, not fleshy, 4–30 mm long × up to 8 mm wide, apices acute to obtuse; flowers solitary or in 2 to many-flowered cymes; pedicels to 55 mm long; sepals narrowly lanceolate to oblong-ovate, 3–11 mm long, with acuminate to obtuse apices; petals bifid, 3–18 mm long; capsules curved or straight, 7–18 mm long, opening by 10 teeth. .... **14**
- 14a. Native plants of primarily basic soils (limestone or serpentine barrens), Arctic-alpine habitats, or tundra; flowering stems to 3 dm tall; flowers solitary or in 2–20-flowered cymes; capsules 8–18 mm long, usually curved at the apex (± straight in *Cerastium arcticum* and *C. terrae-novae*). .... **15**
- 14b. Introduced plants of roadsides, human-disturbed ground, fields, or abandoned homesteads; flowering stems to 4.5 dm tall; flowers in 3–50-flowered cymes; capsules 7–15 mm long, curved at the apex. .... **20**
- 15b. Flowers solitary or 2–4 in simple cymes; sepals 7.5–11 mm long; petals 9–18 mm long; capsules 12–18 mm long. .... **16**
- 15b. Flowers solitary or 2–20 in branched cyme; sepals 3–7 mm long; petals 6–12.5 mm long; capsules 7.5–13 mm long. .... **18**

- 16a. Flowering stems pubescent with glandular and long, straight, non-glandular hairs, white to dingy greyish-brown (fuscous); leaves pubescent with non-glandular hairs, lower stem leaves spatulate to oblanceolate; upper stem leaves broadly elliptic, ovate, or obovate to nearly orbicular, 5–22 mm long × 2–8 mm wide, with obtuse to rounded apices; bracts subtending flowers 4–9 mm long, with narrow scarious margins less than 0.3 mm wide; sepals 8–11 mm long, apices acuminate; petals 12–18 mm long; capsules conical, ± straight, 14–18 mm long; plants of Labrador. .... ***Cerastium arcticum*** (arctic chickweed)
- 16b. Stems and leaves tomentose, with short glandular hairs and long, tangled, white, non-glandular hairs; leaves lance-elliptic, ovate, oblanceolate, to obovate, 10–18 mm long × 5–7 mm wide, apices acute to obtuse; bracts subtending flowers 2.5–3 mm long, with scarious margins 0.3–0.8 mm wide; sepals 7.5–10 mm long, apices acute to obtuse; petals 9–15 mm long; capsules cylindrical, curved, 12–16 mm long; plants of Nfld. and Labrador (*Cerastium alpinum*). ..... **17**
- 17a. Flowering stems about 6–10 cm tall; flowers usually solitary, occasionally 2–3 in cymes; leaves densely pubescent, apices obtuse, with tufts of long, silvery-white, tangled hairs to 1.6 mm long; petals about twice as long as the sepals. ....  
..... ***Cerastium alpinum*** subsp. ***lanatum*** (woolly alpine chickweed)
- 17b. Flowering stems 5–20 cm tall; flowers usually 2–4 in cymes; leaf pubescence evenly distributed, not dense; leaf apices rounded; lacking tufts of long white hairs at the apices; petals 1.5–2 times as long as the sepals. .... ***Cerastium alpinum*** subsp. ***alpinum*** (alpine chickweed)
- 18a. Plants mat-forming; stems usually to 2 dm tall; flowers 4–10+ in cymes; stems and leaves pubescent, stems glandular-pubescent toward the apex; leaves linear-lanceolate, lanceolate, to oblong, 4–30 mm long × 0.5–6 mm wide, apices acute to acuminate; pedicels to 3 cm long; sepals lanceolate to elliptic, finely pubescent and often glandular; capsules slightly curved, 7.5–11 mm long. ....  
..... ***Cerastium arvense*** subsp. ***strictum*** (matted field chickweed)
- 18b. Plants tufted or mat-forming; stems to 3 dm tall; flowers solitary or 2–10 in cymes; plants pubescent to densely glandular pubescent; lower cauline leaves oblanceolate to spatulate, mid to upper cauline leaves lanceolate, elliptic, or oblong, 5–20 mm × 1–5 mm wide, apices acute or obtuse; pedicels to 5.5 cm long; sepals lanceolate or oblong, apices acute or acuminate; capsules straight or curved, 8–13 mm long. .... **19**
- 19a. Plants forming mats, green; stems to 2.5 dm long, with 2–7 pairs of leaves; mid to upper stems, leaves, pedicels, and sepals densely glandular pubescent, usually with white hairs; mid and upper cauline leaves lanceolate, elliptic, or oblong, 5–20 mm long × 2–5 mm wide, the acute apices pubescent with long, straight, usually white hairs; flowers solitary, or 3–10 in open cymes; bracts lanceolate, lower bracts herbaceous, upper bracts with scarious margins; pedicels about 1–4+ cm long; sepals lanceolate, 3–7 mm long, apices acuminate; petals 6–8(–12) mm long; capsule curved, 8–12 mm long; seeds usually less than 1 mm across, with the outer seed coat (testa) tight, not removed by rubbing the seed between two fingers; plants of calcareous barrens and ledges, Nfld. and Labrador. .... ***Cerastium beeringianum*** (Bering sea chickweed)

- 19b. Plants tufted, stems and sepals purplish or fulvous (tawny or brownish-yellow); new leaves often purple-tinged; stems to 1.5 dm tall, with 5–10 pairs of leaves; stems, leaves, pedicels, and sepals densely glandular-pubescent; leaves elliptic to oblong, 5–14 mm long × 1.5–3.5 mm wide, with obtuse apices; flowers solitary or in 2–3-flowered cymes; bracts lanceolate-ovate, with narrow, scarious margins; pedicels 1–2.5 cm long; sepals oblong, 5.5–6.5 mm long, apices acute; petals 7–10 mm long; capsules straight, 9–13 mm long; seeds 1.3–1.7 mm across, with the outer seed coat (testa) loose, easily removed by rubbing the seed between two fingers; endemic to serpentine barrens in Nfld. .... ***Cerastium terrae-novae*** (Newfoundland chickweed)
- 20a. Plants often forming extensive mats, a persistent garden escape; stems and leaves densely white-tomentose with non-glandular hairs; cymes with 3–13 flowers; pedicels 1–4 cm long; petals 10–18 mm long, 2–2.5 times as long as the sepals; styles 3. ....  
..... ***Cerastium tomentosum*** (snow-in-summer)
- 20b. Plants tufted or mat-forming, weeds of European origin; stems and leaves densely pubescent with glandular and/or non-glandular hairs, but not white-tomentose; cymes with 3–50+ flowers; pedicels to 10 cm long; petals 3–7 mm long shorter or equal in length to the sepals; styles 5. .... **21**
- 21a. Cauline leaves elliptic, oblong, to broadly ovate, 1–2.5 cm long × 3–8 mm wide, apex broadly acute to obtuse; stems, leaves, sepals, and pedicels usually densely pubescent with non-glandular hairs, occasionally glandular and viscid; pedicels to 10 mm long; sepals and petals 5–7 mm long, petals bifid in the upper third; capsules 9–13 mm long, curved. ....  
..... ***Cerastium fontanum*** subsp. ***vulgare*** (common mouse-ear chickweed)
- 21b. Cauline leaves elliptic, ovate, to broadly ovate, 5–20 mm long × 2–8 mm wide, apex obtuse, to rounded; leaves pubescent with mainly non-glandular hairs; stems, sepals, and pedicels densely glandular-pubescent; pedicels to 5 mm long; sepals 4–5 mm long, the apex with glandular and non-glandular white hairs; petals slightly shorter, 3–5 mm long, bifid in the upper ¼ to ½; capsules 7–10 mm long, curved. .... ***Cerastium glomeratum*** (sticky chickweed)
- 22a. Plants with a slender taproot, lacking rhizomes; stems and pedicels with a single line of soft hairs along internodes and pedicels; lower leaves petiolate, upper leaves nearly sessile, blades elliptic to broadly ovate; to 4 cm long × up to 2 cm wide; flowers 5 or more in terminal cymes; flowers small, 2–5 mm across; sepals 4.5–5 mm long, glandular-pubescent on the lower surface; petals 1–4 mm long, equal or shorter than the sepals; petals sometimes lacking; stamens 3–5. ....***Stellaria media*** (common chickweed)
- 22b. Plants rhizomatous, stems and leaves glabrous or nearly so; all leaves sessile, blades linear-lanceolate, lanceolate, elliptic, to oblanceolate, to 6 cm long × up to 1 cm wide; flowers solitary or in open cymes of 2–30 flowers; flowers 5–12 mm across; sepals lanceolate, 2.5–7 mm long, glabrous on lower surface; petals 1–8 mm long, shorter to slightly longer than the sepals; petals usually present (sometimes absent in *Stellaria borealis*); stamens 5–10. .... **23**
- 23a. Plants of wet areas: salt marshes, freshwater marshes, stream margins, or shores; leaves thin or somewhat succulent, usually less than 2 cm long; sepals 2.5–5 mm long; capsules green, 2.5–5 mm long. .... **24**

- 23b. Plants or fields, meadows, open woodland, or barrens; leaves not succulent, <1–6 cm long; sepals lanceolate, 2–7 cm long; capsules green to blackish, 3–7 mm long. .... **26**
- 24a. Leaves thin, linear-lanceolate to elliptic, 0.5–2 cm (rarely –3 cm) long × 2–10 mm wide; flowers 2–5 in axillary cymes; sepals 2.5–3.5 mm long; petals 1.5–3 mm long, shorter than to barely equal the sepals; capsule green, 2.5–3.5 mm long; plants of Nfld. ....  
 ..... ***Stellaria alsine*** (bog chickweed)
- 24b. Leaves somewhat succulent, linear-lanceolate, lanceolate, ovate, or broadly elliptic; to 1.5 cm long × 1–5 mm wide; flowers usually solitary, terminal or axillary; sepal 3–5 mm long; petals equal in length to slightly longer than the sepals; capsules straw-coloured (stramineous), 4–5 mm long; plants of Nfld. and Labrador. .... **25**
- 25a. Plants of freshwater habitats; leaves linear-lanceolate, lanceolate, or elliptic, usually 2–8 mm long (occasionally to 15 mm long) × up to 2 mm wide, apices obtuse to acuminate; flowers terminal or axillary; bracts foliaceous, to 1 cm long; sepals lanceolate, 3–3.5 mm long; petals 2.5–5 mm long, equal to slightly longer than the sepals; stamens 10; capsules longer than the sepals. ....  
 ..... ***Stellaria crassifolia*** (fleshy stitchwort)
- 25b. Plants of saltmarshes and marine coastal areas; leaves lanceolate-ovate, ovate, to broadly elliptic, 4–15 mm long × 1–5 mm wide, apices obtuse to acute; flowers axillary; bracts lacking; sepals narrowly lanceolate, 4–5 mm long; petals 4–6 mm long, equal to slightly longer than the sepals; stamens 5 or 10; capsules equal in length to the sepals. ... ***Stellaria humifusa*** (saltmarsh starwort)
- 26a. Leaves lanceolate to lance-ovate, 1–6 cm long × 2–3 mm wide, widest below the middle; flowers 5–6 mm across; sepals 2–3.3 mm long, petals white or translucent, 1–3 mm long, sometimes absent; stamens 5; capsules dark brown, 3–4.5 mm long, opening by 3 valves. ...  
 ..... ***Stellaria borealis*** subsp. ***borealis*** (boreal starwort)
- 26b. Leaves linear-lanceolate, narrowly elliptic, to narrowly oblanceolate; <1–4 cm long × 1–6 mm wide; flower 5–12 mm across; sepals 2–7 mm long; petals white, 2–8 mm long, stamens 5–10; capsules green to blackish, 3–7 mm long, opening with 3 valves, splitting into 6. .... **27**
- 27a. Plants of coastal barrens, beaches, dunes, meadows, and open woods; often on limestone substrates; leaves linear-lanceolate to lanceolate, firm, often glaucous, usually to 2.6 cm long × 1–4 mm wide, widest at the base; cymes few-flowered, terminal and axillary; sepals lanceolate to lance-ovate, broadly acute, 3.5–5 mm long; petals 3–8 mm long; capsules blackish, 4–6 mm long. ....  
 ..... ***Stellaria longipes*** subsp. ***longipes*** (longstalk stitchwort)
- 27b. Plants mainly of grassy meadows, fields, and disturbed areas; leaves narrowly lanceolate, elliptic, or oblanceolate, to 4 cm long; cymes many-flowered, terminal or axillary, with divergent, dichotomous branches; sepals lanceolate to ovate, 2–7 mm long, equal to or slightly longer than the petals; capsules green, stramineous, or blackish, longer than the sepals..... **28**



- 28a. Leaves linear to narrowly lanceolate, elliptic, or oblanceolate, blades 1–3 mm wide, mostly uniform in width or long attenuate to the base; cymes axillary, bracts without ciliate margins; sepals 2–4 mm long; petals 2–3.5 mm long; stamens 5–10; capsules stramineous or blackish, 3–6 mm long. .... ***Stellaria longifolia*** (longleaf stitchwort)
- 28b. Leaves lanceolate to narrowly elliptic, blades 1–6 mm wide, widest below the middle or near the base; cymes terminal, with divergent, dichotomous branches; bracts with ciliate margins, sepals and petals 3–7 mm long; stamens 10; capsules green to stramineous, 5–7 mm long. .... ***Stellaria graminea*** (common stitchwort)
- 29a. Plants ascending to erect, stems, to 3 dm tall; leaves flat and membranaceous, bases not connate around the stem, blades elliptic, ovate, lanceolate, or oblanceolate, 0.6–5 cm long × 5–10 mm wide; styles 3; capsules ellipsoid to ovoid, opening by 6 teeth; seeds bearing a small, spongy appendage (strophiole) at the hilum (scar marking the former attachment of the seed to the ovary) (*Moehringia*). .... **30**
- 29b. Plants low, mat-forming or caespitose; leaves slightly succulent, noticeably connate at the base, blades linear, subulate, or bristle-like, 0.2–1.5 cm long by less than 3 mm wide; styles 3, 4, or 5, capsules ellipsoid to ovoid, opening by 3 valves or 6 teeth; seeds without a strophiole. .... **31**
- 30a. Stems to 3 dm tall, densely pubescent with short, retrorse hairs; leaf blades lanceolate, elliptic, or ovate, to 3 cm long × up to 1 cm wide; finely pubescent on the upper surface, margins, and lower surface veins, apices obtuse to rounded, minutely mucronate; sepals ovate, about 2–3 mm long; petals twice as long as the sepals; filaments finely hairy toward the base; capsules 3–5 mm long. .... ***Moehringia lateriflora*** (grove sandwort)
- 30b. Stems to 1.8 dm tall, minutely pubescent with short, peg-like trichomes; leaf blades lanceolate, about 1.5–5 cm long × less than 1 cm wide, apices acute to acuminate; sepals lanceolate, 3–6 mm long; petals shorter than to slightly longer than the sepals; filaments not hairy; capsules 5 mm long. .... ***Moehringia macrophylla*** (largeleaf sandwort)
- 31a. Petals white, their bases cuneate to rounded, gradually tapering to a short green claw or base; leaves of various shapes, mainly subulate or linear, slightly fleshy, apices acute to apiculate or blunt to rounded; sepals 2.5–4.5 mm long, lanceolate, elliptic, oblong, ovate, or obovate, with acute to acuminate or obtuse to rounded apices; stamens 10, anthers pink or yellow; styles 3, capsule opening by 3–4 valves or 6 teeth. .... **32**
- 31b. Petals white, clawed, their rounded to nearly truncate bases abruptly narrowing to short white or yellow claws; leaves subulate to linear, usually fleshy, with apiculate or mucronate apices; sepals 1.5–3 mm long, broadly elliptic to ovate, with obtuse apices; stamens 4, 5, 8, or 10, anthers white to pale yellow; styles 4–5; capsules opening by 4–5 valves (*Sagina*). .... **38**
- 32a. Plants forming low spreading mats, 2–8 cm tall; leaves elliptic, lanceolate, or oblanceolate, with acute apices, to 12 mm long × 1–3 mm wide; stamens 10, anthers pink; capsules ellipsoid, olive green to blackish at the tip, opening by 6 teeth. ....  
..... ***Arenaria humifusa*** (creeping sandwort)

- 32b. Plants caespitose or forming low spreading mats, flowering stems 2–30 cm tall; leaves of various shapes (subulate to oblanceolate), to 15 mm long × less than 2 mm wide; stamens 10, anthers pink or yellow; capsules ovoid to ellipsoid, green, opening by 3–4 valves. .... **33**
- 33b. Plants forming low spreading mats, from stout woody taproots; marcescent leaves numerous or few on stem bases in mats; leaves 4–10 mm long; pedicels densely stipitate-glandular; sepals 3–4.5 mm long, apices obtuse to rounded; petals white, rarely pink- or lilac-tinged, 1.4–2 times longer than the sepals; anthers yellow; capsules ellipsoid (*Cherleria*). ..... **34**
- 33a. Plants mainly caespitose, from non-woody taproots; marcescent leaves absent; leaves 4–15 mm long; pedicels glabrous or densely pubescent; sepals 2.5–4.5 mm long, apices acute to obtuse; petals white, 1.3–10 mm long; anther yellow or pink; capsule ovoid to ellipsoid. .... **35**
- 34a. Plants of serpentine barrens in Nfld., typically with marcescent leaves at the base; leaves linear, 4–8 mm long × less than 0.8 mm wide, terete to slightly 3-angled in x.s., blunt at the apex; flowering stems 4–6 cm tall, flowers solitary, terminal; pedicels to 1.5 cm long; sepals broadly lanceolate to ovate, densely stipitate-glandular; petals white, rarely lilac, spatulate to obovate, 4.5–8 mm long, usually rounded at the apex; capsules 6–10 mm long. ....  
..... *Cherleria marcescens* (serpentine sandwort)
- 34b. Plants of Arctic-alpine habitats, often calcareous, gravelly or rocky slopes and snowbeds in Labrador and nwnfld.; marcescent leaves few if any at stem bases; leaves elliptic, oblong, or spatulate, 5–10 mm long × 0.7–2 mm wide, flat, acute at the apex; flowering stems 2–10 cm tall; with terminal cymes of 3–5-flowers; pedicels to 1 cm long; sepals oblong to lanceolate; glabrous or sparsely stipitate-glandular; petals white, rarely pink, oblong to oblanceolate, about 5–7.5 mm long, emarginate or irregular at the apex; capsules to 5.5 mm long. .... *Cherleria biflora* (mountain sandwort)
- 35a. Leaves linear, 4–12 mm long × 0.5 mm wide; flowers usually 3–5 in terminal cymes; pedicels and sepals glabrous; sepals elliptic, oblong, or obovate, 2–4.5 mm long, apices obtuse to rounded; petals oblanceolate to obovate, about 4–10 mm long, about 2 times longer than the sepals, apices rounded to emarginate; stamens with yellow anthers. ....  
..... *Mononeuria groenlandica* (Greenland sandwort)
- 35b. Leaves linear to subulate, 1.5–15 mm long × up to 2 mm wide; flowers terminal, solitary or in few-flowered cymes; pedicels and sepals glabrous or stipitate-glandular; sepals elliptic or lanceolate to ovate, 2.5–3.2 mm long, apices acute to acuminate; petals lanceolate-ovate, elliptic, oblong, or oblanceolate, slightly shorter to slightly longer than the sepals, apices rounded; stamens with pink anthers (*Sabulina*). ..... **36**
- 36a. Plants stipitate-glandular; leaves subulate, to 1.4 cm long × up to 1.3 mm wide, with acute to apiculate apices; lower surface prominently 3-veined; flowers solitary or in few-flowered cymes; pedicels short, to 1.5 cm long; sepals ovate, 2.5–3.2 mm long, 3-veined (prominent in fruit); petals lanceolate, elliptic, to oblanceolate, about 2–4 mm long, apices acute to obtuse; capsules 4–4.5 mm long, longer than the sepals. ....  
..... *Sabulina rubella* (reddish sandwort)

- 36b. Plants glabrous; leaves linear to subulate, to 1.5 cm long by up to 2 mm wide, with ± rounded apices, lower surface prominently 1-veined or weakly 3-veined; flowers solitary or in 7–15-flowered cymes; pedicels to 3 cm long; sepals lanceolate to ovate, glabrous, 1–3-veined (prominent in fruit); petals lanceolate, oblong, or oblanceolate, apices blunt to rounded; capsules 3.5–4.5 mm long, shorter or equal in length to the sepals. .... **37**
- 37a. Plants of Nfld. and Labrador; flowering stems to 30 cm tall, with 7–15 flowers in open cymes; leaves 4–15 mm long × up to 2 mm wide; sepals 2.5–3.2 mm long, lanceolate, apices acute to apiculate; petals lanceolate to oblanceolate, about 2–2.6 mm long, with rounded apices; capsules 3.5–4.5 mm long, slightly longer than the sepals; plants of limestone and serpentine barrens. ....  
..... ***Sabulina dawsonensis*** (Dawson sandwort)
- 37b. Plants of Arctic-alpine Labrador; flowering stems usually to 12 cm tall; flowers terminal and solitary, or in 2–3-flowered cymes; leaves 4–10 mm long × up to 1.5 mm wide; sepals 2.5–3.2 mm long, broadly elliptic or lanceolate to ovate, apices acute to acuminate; petals lanceolate, oblong, or oblanceolate, with rounded apices, 2.5–3.7 mm long; capsules 2.5–3.2 mm long, shorter or equal in length to the sepals; plants of acidic gravels, sedge meadows, or tundra. ....  
..... ***Sabulina stricta*** (bog sandwort)
- 38a. Tufted plants with prostrate to ascending stems 2–20 cm long, bearing rounded clusters of small, fleshy, bulb-like leaves in axils of the linear to subulate cauline leaves; basal leaves linear, about 15–30 mm long, upper cauline leaves subulate, 1–1.5 mm long; flowers usually 5-merous (plants occasionally with both 4- and 5-merous flowers); sepals 2–3 mm long, with obtuse apices; petals 3–4.5 mm long, noticeably longer than the sepals; stamens usually 10 (8 in 4-merous flowers); capsules 3–4 mm long; sepals appressed to the capsule valves after dehiscence (*Sagina nodosa*). .... **39**
- 38b. Plants caespitose, tufted, or forming mats; lacking clusters of small, bulb-like leaves at stem nodes; flowers 4- or 5-merous; sepals 1.5–2.5 mm long, with obtuse to rounded apices; petals about 1–3 mm long or absent; stamens 4–10; capsules 2–3.5 mm long; sepals appressed or spreading after capsules dehisce. .... **40**
- 39a. Plants glandular-pubescent on stems, basal leaf margins, pedicels, and backs of sepals. ....  
..... ***Sagina nodosa*** subsp. ***nodosa*** (knotted pearlwort)
- 39b. All plant parts glabrous (or slightly pubescent at nodes or upper portion of pedicels).....  
..... ***Sagina nodosa*** subsp. ***borealis*** (northern knotted pearlwort)
- 40a. Plants glabrous; flowers 4- or 5-merous; sepals 1.5–2.5 mm long, spreading or appressed after the capsules dehisce; stamens usually 4 or 10 (occasionally 5 or 8). .... **41**
- 40b. Pedicels and sepals glandular-pubescent, at least partially; flowers usually 5-merous; sepals 2–2.5 mm long, not spreading after the capsules dehisce; stamens usually 10 (or 5–8). ... **43**
- 41a. Plants tufted or forming spreading mats; leaves mostly linear, 8–17 mm long, upper cauline leaves progressively shorter; flowers 4-merous (occasionally with some 5-merous flowers); sepals widely spreading after capsules dehisce; petals white or translucent, usually less than 1 mm long, or petals lacking; stamens 4 (sometimes 8); capsules usually 2–2.5 mm long; pedicels curved

downward in fruit, becoming erect before capsules dehisce; introduced plants of Nfld. and  
Labrador, often found on rocky coastal shores and ledges. ....  
..... ***Sagina procumbens*** (procumbent pearlwort)

- 41b. Plants caespitose, tufted, in low cushions; leaves linear to subulate, 4–20 mm long; flowers 4- or 5-merous; sepals appressed to capsules after dehiscence; petals white, 1.5–2 mm long; stamens usually 10 (occasionally 5 or 8); capsules 2–3 mm long; pedicels remaining erect or curved downward before capsules dehisce; native plants of Nfld. or Labrador. .... **42**
- 42a. Plants usually tufted or forming small mats; flowers mostly 5-merous; sepals green, 2–2.5 mm long, with white hyaline margins; flowers axillary or terminal; petals 1.5–2 mm long, usually shorter than the sepals; stamens 10 (occasionally 5); capsules 2.5–3 mm long; pedicels curved downward in fruit, becoming erect before capsules dehisce; plants of Nfld., known only from the Highlands of St. John. .... ***Sagina saginoides*** (Arctic pearlwort)
- 42b. Plants caespitose or forming low cushions; flowers mostly 4-merous; sepals purplish, or at least with purple hyaline margins; flowers terminal; sepals and petals 1.5–2 mm long; stamens 10 (occasionally 8); capsules 2–3 mm long; pedicels long, erect to spreading, extending well beyond the leaves, not curved downward in fruit; plants of coastal Labrador. .... ***Sagina nivalis*** (snow pearlwort)
- 43a. Plants perennial, growing in tufts or dense cushions; basal leaves linear or linear-subulate, 2–13 mm long, slightly succulent; cauline leaves subulate, 3–9 mm long, decreasing in size toward the apex; flowers terminal, borne close to the leaves on short pedicels; sepals purplish, or at least with purple hyaline margins; petals elliptic to ± obovate, 2.5–3 mm long, usually longer than the sepals; stamens 8 or 10; capsules 3–3.5 mm long; native perennial plants of sandy, gravelly, or rocky habitats in Nfld. and Labrador. .... ***Sagina caespitosa*** (tufted pearlwort)
- 43b. Plants annual, with erect to spreading stems; leaves linear-lanceolate to subulate, succulent, lower cauline leaves 9–20 mm long, upper cauline leaves shorter, 4–7 mm long; flowers axillary, pedicel elongating in fruit; sepals green, with obtuse to rounded apices; petals ovate, 1–2 mm long, shorter or about equal in length to the sepals; stamens 5 (occasionally 10); capsules 2.5–3 mm long; introduced annual plants of disturbed areas (roadsides, sidewalk cracks, etc.), reported from St. John's, Nfld. .... ***Sagina japonica*** (Japanese pearlwort)
- 44a. Leaves in basal rosettes, the blades narrowly lanceolate to oblanceolate, 1–5 cm long × up to 5 mm wide, with acute to acuminate apices; flowering stems with 2–5 pairs of narrow lanceolate leaves, 1–4 cm long × 2–7 mm wide; flowers 5-merous; stems and calyx usually red-violet (green in albino plants); flowers in dense, terminal, branched cymes of 6–30 flowers; petals pink to magenta, the limbs 2-lobed, divided less than half the length of the limb, coronal appendages absent; stamens 5; native plants of serpentine and limestone barrens. .... ***Viscaria alpina*** (alpine campion)
- 44b. Leaves mainly cauline or, in Arctic species, mainly basal; basal leaves, when present, not in rosettes; flowers 4- or 5-merous; stems green or reddish; flowers mostly terminal, solitary or in cymes, or flowers axillary, 1 per node (*Silene dichotoma*); calyx tubular to inflated, with or without pale commissures (areas of thin tissue) between the prominent veins; petals white, pink, or red, occasionally with pale spots or darker markings; coronal appendages present or absent; stamens 10; plants native or introduced, of various habitats. .... **45**

- 45a. Cauline leaves elliptic or lanceolate-ovate, 3–11 cm long × 1.5–4.5 cm wide, glabrous; flowers 5-merous; petals white to pale pink, limbs oblanceolate-obovate, entire and rounded, or emarginate at the apex, coronal appendages 2 per petal; styles 2 (rarely 3); capsules 1.5–2 cm long, ovoid, opening by 4 (rarely 6) teeth. .... ***Saponaria officinalis*** (bouncing bet)
- 45b. Cauline leaves linear to ovate, to 10.5 cm long × up to 2.6 cm wide; glabrous or pubescent; flowers 4- or 5-merous; petals white, pink, or red; limbs oblanceolate to obovate, notched, bifid, or coarsely toothed at the apex; coronal appendages 2, 4, or absent; style 2, 3, or 4–5; capsules to 2.4 cm long, ellipsoid or ovoid, opening by 4–5 valves or 5, 6, or 10 teeth. .... **46**
- 46a. Flowers unisexual or bisexual; leaves connate only at the base; calyx cylindrical to nearly globose, often inflated and marked with prominent darker veins, commissures between the sepals pale, with 1 vein; petals pink, red, or white; limbs obovate and notched or bifid at the apex, or divided into 4 narrow lobes, coronal appendages 2 per petal; carpophores usually present, <1–6 mm long (absent in *Silene dioica*); styles 3 or 5; capsules ellipsoid, ovoid, or globose, dehiscent by 6–10 teeth; plants native or introduced, found in a variety of habitats (*Silene*). .... **47**
- 46b. Flowers all bisexual; leaf bases connate for 1–6 mm around the stem, making the nodes appear swollen; calyx cylindrical, not inflated; petals deep pink, red, or purple, dotted or marked with white, pale pink, or red; limbs oblanceolate to broadly obovate, coarsely toothed at the obtuse to rounded apex, coronal appendages absent; styles 2; capsules cylindrical, dehiscent by 4 recurved teeth; plants introduced, found in fields, roadside, and other disturbed areas. (*Dianthus*). .... **56**
- 47a. Petals solid pink or red. .... **48**
- 47b. Petals white, occasionally tinged with pink but not completely pink. .... **52**
- 48a. Petals bright red, with 2 red coronal appendages per petal, each 2–3 mm long; flowers 10–50 in dense terminal cymes; flowers bisexual; the calyx of fruiting plants club-shaped (clavate), 1.2–1.7 cm long; styles 5; an occasional garden escape in Nfld. .... ***Silene chalconica*** (Maltese cross)
- 48b. Petals pink, with or without coronal appendages; flowers solitary or 3–30 in simple, open cymes; flowers unisexual or bisexual; the calyx of fruiting plants often inflated, 0.5–1.7 cm long; styles 3 or 5; native or introduced species. .... **49**
- 49a. Plants to 3 dm tall, mat-forming or erect; flowers solitary; petals to 3.5 mm long; coronal appendages small or inconspicuous, less than 0.3 mm long; styles 3 or 5; native plants or Arctic-alpine barrens or tundra. .... **50**
- 49b. Plants 3–9 dm tall, erect; flowers solitary or in simple cymes of up to 30 flowers; petals 10–15 mm long; coronal appendages 1–4 mm long; styles 5; introduced plants of roadsides and disturbed habitats. .... **51**

- 50a. Plants forming low, dense mats or cushions, 3–6 cm tall; cauline leaves in several overlapping pairs; blades lanceolate, to 1 cm long by up to 1.5 mm wide; flowers unisexual (monoecious) or occasionally bisexual; calyx not inflated, veins inconspicuous; petals pink, usually shallowly notched at the apex; styles 3 in pistillate flowers; plants of calcareous habitats; present in Nfld. and Labrador. .... ***Silene acaulis*** (moss campion)
- 50b. Plants erect, to 30 cm tall; leaves mainly basal, linear-lanceolate, 1–5 cm long × 2–5 mm wide; cauline leaves in 1–3 pairs, linear to lanceolate, to 2.5 cm long by 2–4 mm wide; flowers bisexual; calyx obovoid to globose, highly inflated, with 20 dark purple veins alternating with white to pale green or pink commissures; petals dingy pink, styles 5; plants of acidic or calcareous habitats in Labrador. ....  
..... ***Silene uralensis*** subsp. ***uralensis*** (nodding campion)
- 51a. Stems pubescent with long, soft hairs; cauline leaves elliptic to ovate, 3–13 cm long; flowers solitary and terminal, or in terminal and axillary simple cymes of 2–3 flowers; plants unisexual (dioecious); staminate flowers with a cylindrical calyx; pistillate flowers with a lanceoloid calyx, 10–15 mm long, often reddish-tinged with 8–12 veins; limb of petals obovate, bifid for about half their length; coronal appendages 4 per petal, white; about 1 mm long; capsules urn-shaped (urceolate), opening by 10 recurved teeth. .... ***Silene dioica*** (red campion)
- 51b. Stems glabrous to minutely hairy; cauline leaves narrowly lanceolate, 3–8 cm long; flowers terminal in simple to compound cymes of 3–30 flowers; plants bisexual; calyx ellipsoid to urceolate, 6–10 mm long; green to purplish, with 10 prominent darker veins; petals deeply divided into 4 linear lobes of unequal length; coronal appendages 2 per petal, about 4 mm long, each deeply incised into 2 narrow segments; capsules ovoid, opening by 5 recurved teeth. ....  
..... ***Silene flos-cuculi*** subsp. ***flos-cuculi*** (ragged robin)
- 52a. Native plants of tundra in northern Labrador; perennials; stems to 2 dm tall; flowers usually solitary, occasionally in cymes of 2–3 flowers; calyx ellipsoid to broadly ovoid and inflated, with 10 prominent dark reddish-purple veins alternating with pale green to pale reddish-purple commissures. .... ***Silene involucrata*** subsp. ***involucrata*** (greater Arctic campion)
- 52b. Introduced plants of roadsides and disturbed ground in Newfoundland or Labrador; annuals, biennials, or short-lived perennials; stems 2–10 dm tall; flowers either several, axillary, with 1 flower at each node, or flowers 3–40 in open terminal cymes; calyx ellipsoid to ovoid, somewhat to very inflated, veins prominent, 10–20, green or reddish-purple, alternating with pale commissures. .... **53**
- 53a. Flowers nocturnal or vespertine (open during dusk), fragrant, white, often pink-tinged; stems densely pubescent, glandular-pubescent to viscid upward and in the inflorescence, leaves pubescent on both surfaces; cauline leaves lanceolate to broadly elliptic, 1–12 cm long by up to 4 cm wide; flowers 3–many in open cymes. .... **54**
- 53b. Flowers diurnal, open during the day, not fragrant, white, rarely pink-tinged; stems and leaves glabrous or pubescent; cauline leaves lanceolate, elliptic, or oblanceolate, 1–8 cm long by up to 3 cm wide; flowers 1 per node or in multi-flowered open cymes. .... **55**

- 54a. Flowers nocturnal, bisexual; densely pubescent, viscid near the stem apex; petal limbs relatively narrow, bifid for about half their length, the lobes linear to  $\pm$  oblanceolate; calyx with 10 prominent veins; fruiting calyx 1.5–2.4 cm long  $\times$  up to 1 cm wide, fusiform (widest at the middle, tapering at each end) and constricted at the base around the 1–3 mm carpophore; calyx lobes very narrow, 5–10+ mm long; the stamens and 3 styles shorter than the calyx tube; capsules ovoid, opening by 6 teeth. .... ***Silene noctiflora*** (night-flowering catchfly)
- 54b. Flowers vespertine, unisexual and dioecious (staminate and pistillate flowers on different plants); stems bearing coarse, stiff hairs (hirsute), glandular-pubescent near the stem apex; petal limbs broad, bifid for more than  $\frac{1}{2}$  their length, the lobes obovate; the tubular calyx of staminate flowers with 10 veins; pistillate flowers have an ovoid calyx, widest at the rounded to truncate base, 1–2 cm long  $\times$  up to 1.5 cm wide and inflated in fruit, with 20 veins, calyx lobes narrow, to 6 mm long; the stamens and 4–5 styles slightly longer than the calyx tube; capsule ovoid, opening by 10 teeth. .... ***Silene latifolia*** (white campion)
- 55a. Plants perennial, glabrous and glaucous; flowering stems usually several, not branched below the 5–40-flowered, branched, open cymes; cauline leaves oblanceolate on the lower stem, lanceolate above, 2–8 cm long; flowers bisexual (plants sometimes also with pistillate flowers), borne on pedicels up to 3 cm long; fruiting calyx ovoid to obovoid, strongly inflated; 1.2–1.8 cm long  $\times$  up to 1.1 cm wide, terminating in 5 short, broadly triangular lobes; calyx surface with small reticulate green or reddish-purple veins on a paler background; petal limbs obovate, deeply bifid nearly to the base of the limb; the stamens and 3 styles exerted, extending well beyond the calyx tube; capsule ovoid to globose, opening by 6 teeth. .... ***Silene vulgaris*** (bladder campion)
- 55b. Plants annual or biennial, pubescent, with long, slender, stiff hairs; flowering stems often forked into 2 branches of equal length; cauline leaves oblanceolate to elliptic, 1.5–5 cm long; flowers bisexual, with 1 flower at each node; flowers secund, borne on short, nodding pedicels; fruiting calyx ellipsoid, ascending, not inflated but persistent in fruit, 1–1.5 cm long  $\times$  up to 4 mm wide, calyx lobes narrow, lanceolate, calyx with 10 prominent veins; petal limbs obovate, bifid for about  $\frac{1}{2}$  to  $\frac{3}{4}$  their length; the stamens and 3 styles included within the calyx tube; capsule ellipsoid, opening by 6 spreading teeth. .... ***Silene dichotoma*** subsp. ***dichotoma*** (forked catchfly)
- 56a. Plants to 4 dm tall; flowers terminal and usually solitary, not subtended by bracts; leaves linear to narrowly oblanceolate, to 2.6 cm long; obtuse at the narrow apex; calyx 10–17 mm long; petals obovate with irregularly toothed apices, of various shades of pink or white, with white or pale spots and marked with a narrow, irregular, red band near the base of the limbs, forming a ring around the throat of the flower. .... ***Dianthus deltoides*** subsp. ***deltoides*** (maiden pink)
- 56b. Plants to 7 or 8 dm tall; flowers in terminal clusters of 3–20, subtended by long attenuate bracts about as long or slightly longer than the calyx; leaves linear to ovate, 2–10.5 cm long, apices acute to long attenuate; calyx 11–20 mm long; petals oblanceolate or rhombic to broadly obovate, coarsely toothed at the apex, pink, red, or white, variously marked. .... **57**



- 57a. Plants pubescent; leaves linear to narrowly lanceolate, ascending, apices long attenuate; flowers 3–6, arranged in obconical clusters; petals pink, dotted with white or pale pink; petal limbs oblanceolate to narrowly rhombic; coarsely toothed at the obtuse apex. .... *Dianthus armeria* (Deptford pink)
- 57b. Plants glabrous; leaves lanceolate to ovate, spreading laterally, apices acute; flowers usually 5–20, arranged in broad, dense heads; petals pink, red, or white, variously marked with red or shades of pink; petal limbs broadly obovate, coarsely toothed at the broad apex. .... *Dianthus barbatus* (Sweet William)
- 58a. Plants tufted or forming low, spreading mats; leaves succulent, linear, 0.8–1.7 cm long, with apiculate apices; flowers usually 4-merous; sepals 1.5–2.5 mm long, apices obtuse to rounded; stamens 4 (occasionally 8); styles 4; capsules opening by 4 valves; sepals spreading after the capsules dehisce. .... *Sagina procumbens* (procumbent pearlwort)
- 58b. Plants erect or decumbent; leaves with thin, non-succulent blades, lanceolate to ovate, 1–6 cm long, with acute to acuminate apices; flowers usually 5-merous; sepals 2–5 mm long, apices acute to acuminate; stamens 3–5; styles 3, capsules opening by 3 valves or 6 teeth; sepals not spreading after the capsules dehisce. .... **59**
- 59a. Plants with erect to ascending flowering stems, 2.5–5 dm tall; leaves sessile, the blades lanceolate, 1–6 cm long × 2–8 mm wide, with acuminate apices; sepals lanceolate, 2–3.3 mm long; stamens 5; capsules 3–4.5 mm long, opening by 3 valves. .... *Stellaria borealis* subsp. *borealis* (boreal starwort)
- 59b. Plants with decumbent to ascending, somewhat pubescent stems, often forming extensive mats, <1 to 4 dm long; lower leaves petiolate, leaf blades ovate to broadly ovate, to 4 cm long × up to 2 cm wide, with acute apices; sepals lanceolate to ovate, 4.5–5 mm long, pubescent; stamens 3–5, capsules 3–5 mm long, opening by 6 teeth. .... *Stellaria media* (common chickweed)

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