

Euphorbiaceae

spurge family

Worldwide, the spurges total about 7500 species in 300 genera. Nova Scotia's flora contains only nine species. Many are trees or shrubs, while ours are all herbaceous annuals or perennials. Leaves are simple and may be alternate, opposite or whorled. Flowers are regular and always unisexual, the perianth small and inconspicuous. Sepals distinct or connate and may be in one or two whorls, or absent. The fruit is a dehiscent capsule known as a schizocarp.



Generally the plant's latex is mildly to violently poisonous. Several are ornamentals or houseplants, the Castor-bean Plant, Poinsettia and Croton for example.

Key to genera

- | | |
|--|-------------------|
| Leaves mostly alternate; stipules absent or vestigial; glands of the involucre without appendages. | <i>Euphorbia</i> |
| Leaves opposite; stipules present; glands of the involucre with coloured appendages. | <i>Chamaesyce</i> |

Chamaesyce Gray

sandmats

Historically these plants were a subgenus of *Euphorbia*, now separated on the basis of flower and leaf forms. Generally with opposite leaves and unisexual flowers, although most species are monoecious. Flowers arranged in pseudanthia called cyathia, of greatly reduced flowers. The involucral bracts may be petal-like and variously coloured.

Key to species

- | | |
|---|---------------------------------|
| A. Young stem and leaves glabrous. | B |
| B. Leaves entire; limited to seashores and other saline habitats. | <i>Chamaesyce polygonifolia</i> |
| bb. Leaves toothed, at least distally; not limited to saline habitats. | <i>C. glyptosperma</i> |
| aa. Young stems pubescent or ciliate; leaves pubescent at least when young. | C |
| C. Ovary and schizocarp smooth. | <i>C. vermiculata</i> |
| cc. Ovary and schizocarp pubescent. | <i>C. maculata</i> |

***Chamaesyce glyptosperma* (Engelm.) Small**
euphorbe côtelée

An annual species, it is freely branching and reclining from the prostrate base. Generally smooth, although the oblong or ovate leaves may be puberulent at the apices. The involucre bears 1–5 stamens. Schizocarps are sharply three-angled.

Flowers from June until October.

Grows on dry, sandy soil. Associated with railway beds.

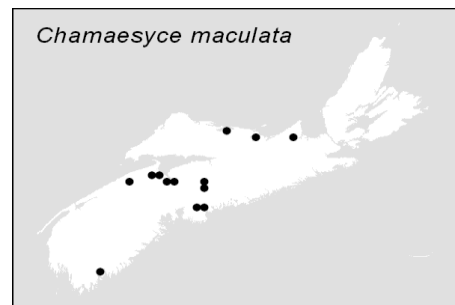
Historically collected from the South Maitland rail siding. Recently collected from Annapolis Royal, Annapolis Co. and from Amherst, Cumberland Co.

Ranges from NS to BC south to CA, TX and NY. Introduced here.

***Chamaesyce maculata* (L.) Small**
Spotted Sandmat; euphorbe maculée



Photo by Sean Blaney



Another prostrate plant, this species bears small ovate leaves on very short petioles. Leaves are also finely serrate. Freely branching, their stems are sparsely hirsute. Schizocarps are rugose and distinctly lobed.

Flowers June through September.

Generally where there is low competition from sod or taller species. Dry, open soils.

Occasionally introduced and spreading, from Kings and Shelburne counties, to Strait of Canso and the Northumberland.

Ranges throughout the continent but for the north and the three prairie provinces. Introduced to NS.



Photo by Martin Thomas

***Chamaesyce polygonifolia* (L.) Small**
Seaside Sandmat; euphorbe à feuilles de renouée



Photo by Sean Blaney



Photo by Martin Thomas

A reclining species, it has a much reduced terminal cyathium on most branches. The leaves are linear and succulent, glossy and almost-needlelike, covered in resin dots. Plants and fruits are smooth.

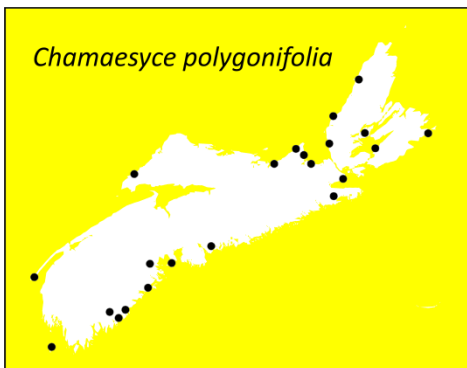
Flowers from July until frost.

Sandy beaches above the highwater mark, dunes and flats, always in saline habitats.

More common in southwestern counties, but found around the entire coast, including Cape Breton and smaller offshore islands.

Eastern ranging, Magdalen Islands, to Great Lakes south to MS and FL.

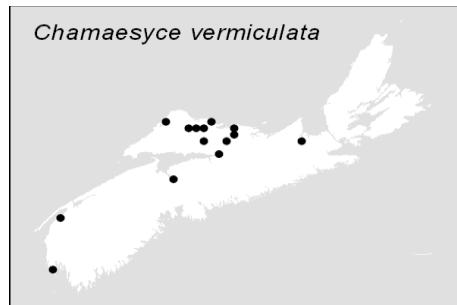
Recently designated at-risk, with YELLOW-status.



***Chamaesyce vermiculata* (Raf.) House**
Wormseed Sandmat; euphorbe vermiculée



Photo by Sean Blaney



Sprawling from a basal rosette, this species bears ovate leaves with finely serrate margins. Stems may be armed with sparse straight pubescence. Ovary and fruit are glabrous.

Flowers from July until frost.

Associated with rail lines.

Yarmouth County, northeastward to the Northumberland Strait.

NS to ON and MI, south to IL and VA; AZ and NM.
 Introduced to NS.

***Euphorbia* L.**
spurges

These species are cosmopolitan, totalling 1500 species. As with *Chamaesyce*, they are typified by the very small unisexual flowers. Each pistillate flower bears a single pistil and is surrounded by several staminate flowers, each with a single stamen. All flowers are inserted into a lobed and glandular involucre forming a cyathium, functionally imitating a single flower — a character unique to this family. Ovary has three locules, ovules and styles. Schizocarp is three-lobed. Plants contain a very bitter latex.

Key to species

- | | |
|--|------------------------------|
| A. Glands of the involucre ovate, elliptic or nearly round in cross-section. | <i>Euphorbia helioscopia</i> |
| aa. Glands kidney-shaped or crescent-shaped, concave side outside. | B |
| B. Rays of the cyathium 3–5; annual. | C |
| C. Seeds pitted; tubercles absent. | <i>E. peplus</i> |
| cc. Seeds smooth; tubercles present. | <i>E. exigua</i> |

bb. Rays of the cyathium >5; colonial perennials.

D. Main leaves 3–8cm long, >4mm wide; plants >30cm tall.

dd. Main leaves <3cm long; <3mm wide; plants <30cm tall.

D

E. esula

E. cyparissias

***Euphorbia cyparissias* L.**

Cypress Spurge; euphorbe cyprès

Arising from a creeping rootstock, the stems of this herb may also have weakly ascending branches near the top. Leaves are linear and sessile. The inflorescence is a terminal cyathium, although a few solitary flowers may arise from the leaf axils on ascending pedicels. Each flower has two connate sepals and no petals. Seeds flat.

Flowers in August.

A garden escape often persisting in cemeteries, old gardens and escaping roadside.

Scattered localities especially in the western half of NS.

Naturalized after introduction from Europe from NF to BC; absent in AB; variously south to CA, TX and GA.

***Euphorbia esula* L.**

Leafy Spurge; euphorbe ésole

Vigorously colonial, this species is considered to be noxious in its spread. Plants smooth, leaves narrowly lanceolate, with a single raised midrib. Leaves interspersed with many lateral pedicels below the terminal cyathium.

Flowers throughout the summer.

Grows on sandy soil, banks, roadsides, old fields.

Pictou Co. collection and a report from Wilmot and Annapolis Royal.

Ranges across Canada to YT, south to CA, CO and VA. Introduced.

Euphorbia exigua* L.*euphorbe exiguë**

Annual species, its height may reach to 30cm in height, often branching from the base. Cauline leaves are linear and sessile, but decreasing in size towards the inflorescence. Seeds are grey.

Flowers from July to frost.

Fallow soils and roadsides.

No extant collections and perhaps not persisting. North Sydney.

Ranges from NS; ON; BC; NY to WVA; CA; TX. Adventive from Europe.

Euphorbia helioscopia* L.*Sun Spurge; euphorbe réveille-matin**

Photo by Ross Hall

An attractive garden plant with glaucous ovate cauline leaves, whorled just beneath the cyathium. All leaves are obovate, finely serrate on the margins. The cyathium is lightly hirsute on the peduncles. Involucral cup bears round white glands.

Flowers from July to September.

Also a species of waste ground and fallow soil.

Widely distributed where it has escaped from gardens.

Introduced from Europe and throughout North America.

NOTE: Fatally poisonous if enough is ingested.

Euphorbia peplus* L.*Petty Spurge; euphorbe des jardins**

An annual herb, from 10–30cm tall. It bears oblong cauline leaves, to 20mm long. Ovate leaves subtend the cyathium, which is sparsely rayed. Fruit bear two longitudinal ridges along each valve.

Flowers from June until frost throughout its range.

Fallow soils and waste ground.

An occasional collection made from Windsor and Pictou, but perhaps best treated as an historic occurrence.

Ranges from NS to AK and throughout the US, but for the Great Plains, after introduction from Europe.