

Ericaceae Heath family

Epigaea repens L.

trailing-arbutus

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Other common names. mayflower, ground-laurel, gravel weed, mountain pink, winter pink, crocus, gravel plant.

Growth habit, distribution, and use. Trailing-arbutus is an evergreen, prostrate, creeping shrub that grows in patches up to 60 cm in diameter (Bailey 1949). It is found growing in woodlands on acid, sandy soils from Florida to Mississippi, north to New England, southeast to New York, Pennsylvania, West Virginia, and Ohio. The variety *glabrifolia* Fern. ranges north from the higher parts of the Appalachian Mountains to Newfoundland, Nova Scotia, and Labrador and west to Saskatchewan (Fernald 1950). Although it is difficult to grow, trailing-arbutus has been planted as an ornamental since 1736 (Barrows 1936; Lemmon 1935). In some parts of its range it has become locally rare (Clay 1983). The blossoms are quite fragrant, and the fruits are sometimes eaten by small game. An infusion of the above-ground parts was used by the Cherokees to treat diarrhea in children (Jacobs and Burlage 1958).

Flowering and fruiting. The flowers are spicy smelling, pink to white in color, and bloom from March to May, although specimens have been known to bloom as early as January at low elevations in the southern part of its range (Stupka 1964). Flowering usually begins when plants are 3 years old (Steffek 1963). Flowering is normally dioecious, but perfect flowers may occasionally be found (Bailey 1949; Barrows 1936; Fernald 1950). Double-flowered forms and fall-blooming forms have been reported (Fernald 1950). The fruit is a 5-lobed, hairy, dehiscent capsule about 6 mm in diameter (Bailey 1949; Fernald 1950; Steffek 1963). The seeds are embedded in a sticky, white, fleshy pulp within the capsule (Barrows 1936; Clay 1983; Steffek 1963). A sample of 155 wild fruits contained an average of 241 (range: 29 to 415) tiny, shiny, brown, hard seeds per capsule (figure 1). In June and July, as the capsules ripen, the sutures split open and many of the seeds are ejected with some force (Blum and Krochmal 1974). As the sutures begin splitting, ants will commonly enter the fruits and rapidly remove all seeds (Clay 1983).

Collection of fruits; extraction and storage of seeds. Capsules should be collected after they are mature and before they eject their seeds. Small collections of capsules can be air-dried in open containers until seeds are ejected. The empty capsules can be separated by screening. One sample of cleaned seed contained 22,700 seeds/g (643,750/oz) (Blum and Krochmal 1974). Storage of seed for more than 1 year is not recommended, but short-term storage at room temperature or in a refrigerator is satisfactory (Barrows 1936).

Germination tests. Germination is epigeal and has been reported to require no pretreatment (Blum and Krochmal 1974). To secure complete germination on moist filter paper in

petri dishes; however, Lincoln (1980) found it necessary to stratify seeds for 30 days at 5 to 8 °C and then germinate them at alternating temperatures of 15 to 25 °C or 20 to 30 °C with light at the higher temperature. This procedure yielded germination values of 92 and 90%, respectively.

Nursery and field practice. The seeds of trailing-arbutus are so small that sowing in small pots or trays filled with acid soil, sand, and peat moss or leaf mold mixtures is recommended (Blum and Krochmal 1974). The seeds should be scattered on top of the mixture, and the container should be covered with a glass plate or plastic bag to maintain a high humidity. With this method, germination took place over a period of 22 to 66 days, with most germination occurring in 30 days (Barrows 1936). There are other reports of good germination within 3 to 5 weeks of time (Dirr and Heuser 1987).

When the seedlings have 3 to 5 leaves above the cotyledons, they may be transplanted to individual pots. High humidity should be maintained until the plants are well established (Barrows 1936). In 1 year, the plants develop into rosettes about 10 cm (4 in) in diameter (Blum and Krochmal 1974). Plants will tolerate a fairly wide range of acidity. Wild plants in Connecticut grew on soils ranging in pH from 7.67 to 4.65, but the larger plants occurred on the more acid soils (Barrows 1936; Coville 1911; Lemmon 1935; Steffek 1963).

Trailing-arbutus thrives best in association with mycorrhizal fungi. Including soil that was collected near healthy wild plants in soil mixtures will introduce the necessary fungus (Barrows 1936; Coville 1911, 1915). The mycorrhizal fungus also appears to be essential for propagation from cuttings (Barrows 1936). Stem cuttings taken in August have given 94% rooting in a sand&peat mixture without any treatment (Dirr and Heuser 1987).

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