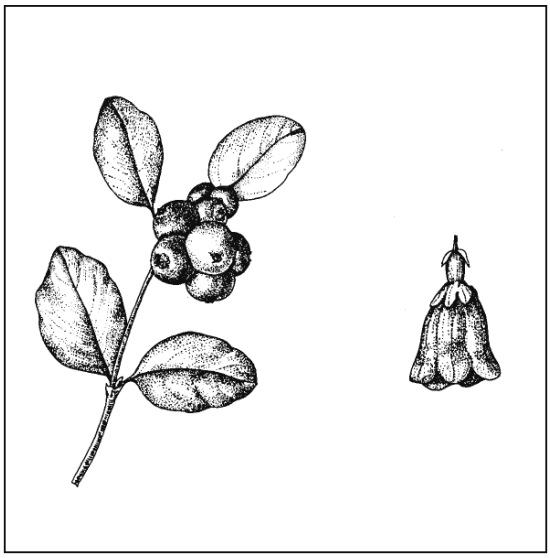
***Symphoricarpos albus* (L.) Blake** common snowberry
CAPRIFOLIACEAE

Synonyms: *Symphoricarpos racemosus* Michx.
Symphoricarpos rivularis Suksdorf
Viburnum album L.



General Description.—Common snowberry, also known as snowberry, waxberry, and white coralberry, is a deciduous shrub. The slender, branchy, multiple stems are usually low (0.5 to 1 m) and arching or straight, but sometimes reaching as much as 2 m in height. The stems rarely exceed 2.5 cm in thickness. The bark is yellow-gray in young stems, tan to grayish-brown in older ones, becoming scaly or splitting lengthwise in larger stems. Stem wood is soft and greenish-white. The opposite-branching twigs are slender and flexible. Thin, papery leaves are opposite, simple, short-stalked, and round to oblong-elliptic with margins entire, lobbed, or wavy-toothed. Petioles are 3 to 4 mm long. The perfect flowers are solitary to several in terminal or lateral spikes. The five-lobbed corolla is pink and white, tubular or bell-shaped, and about 6 mm long. Fruits are white, spongy, berry-like drupes 6 to 12 mm in diameter. Each contains two white, flattened, elliptical nutlets with one seed per nutlet. Chromosome number is 2n = 54 or 72 (Gilbert 1995, Grimm 1966, McWilliams 2000, Soper and Heimburger 1982, Stephens 1973, Welsh and others 1987).

Range.—Common snowberry is native from Nova Scotia to southern Alaska, throughout the northern half of the United States, and in California, Utah, Colorado, New Mexico, Tennessee, and North Carolina (McWilliams 2000, Natural Resources Conservation Service 2003). It does not occur in Nevada and Kansas, and is reported to be only naturalized in Utah (Welsh and others 1987). The species was introduced to Great Britain in 1817 and has naturalized widely in the United Kingdom, Ireland, and northern Europe (Binggeli 1998, Gilbert 1995). There are two varieties, *albus* and *laevigatus* (Fern.) Blake. Variety *laevigatus*, a coarser and taller (up to 2 m) plant, and has a Western distribution. Variety *albus* occurs intermittently across the Continent (Natural Resources Conservation Service 2003). Both are cultivated and naturalized in many places, making determination of distribution somewhat complicated.

Ecology.—Common snowberry grows best in full sunlight or light shade on well-drained, moist, fertile soils. It does survive and grow slowly in medium shade. The species grows in many types of open forests, forest edges, shrublands, riparian vegetation, and fencerows. It does not grow in swampy sites, deserts, and mountain tops above the tree line. Common snowberry grows in soils with mildly acidic pH (6.0) and mildly alkaline conditions (pH's of 7.8) and does very well on soils derived from limestone; less aggressively on soils derived from granite. It tolerates poor fertility and has been used to revegetate disturbed sites. Common snowberry in interior Western United States grows at elevations from 800 to 2,800 m. It grows at much lower elevations in other areas of North America. Because it sprouts readily from rhizomes, common snowberry is resistant to fire and browsing. It may increase dramatically in density after logging opens the forest canopy (Gilbert 1995, McWilliams 2000, Natural Resources Conservation Service 2003).

Reproduction.—Common snowberry blooms between early May and late July depending on

location and matures fruits in August to October (Grimm 1966). The flowers are pollinated by a range of bees, wasps, and syrphids (Gilbert 1995). Fruit and seed production can be abundant, especially when plants grow in full sun on fertile sites. Normally a good seed crop is produced every year. Fruits remain on stems until midwinter or early spring, if not eaten. Numbers of seeds per gram vary from 119 to 250 for var. *albus* and from 86 to 144 for var. *laevigatus*. Germination may be as high as 87 percent if exacting conditions of pretreatment are met. Germination is epigeal (Walker 2003). Seeds are dispersed by birds and mammals. Seedlings are relatively uncommon. However, vegetative reproduction is common by sprouting of underground stems that run horizontally at a depth of 2 to 5 cm for up to 60 cm before turning up to form new tops. Stems layer when they come in contact with the ground, and severed stems lying on the ground will also take root (Gilbert 1995).

Growth and Management.—Planted common snowberry reached 30 cm in height during the first year (Center for Urban Horticulture 2002). Shoot extension of plants in England is reported at 0.6 m per year. Individual stems have been aged up to 34 years old in England (Gilbert 1995). By suckering, plants may survive indefinitely. Fruits may be collected by hand picking or flailing the plants with a tarp spread underneath. The fruit is then macerated and water is used to float off the pulp and empty seeds. The residue is then dried and cleaned. The air-dried seeds can be stored at 5 °C for up to 5 years. Pretreatments are necessary for acceptable germination. Warm stratification for 3 to 4 months at 22 to 30 °C followed by cold stratification at 5 °C for 4 to 6 months is recommended. Sowing in the late fall can be used instead of the cold treatment. Sown seeds should be covered with about 6 mm of soil and 2 cm of mulch. Seedlings for planting can be grown successfully from cuttings, wildlings, and pieces of stem with roots collected in the spring. Transplant establishment success of bareroot and containerized nursery stock is as high as 90 percent when done properly (Walker 2003).

Benefits.—Common snowberry helps protect the soil, provides food and cover for wildlife, browse for livestock, and adds beauty to the landscape, especially in fall and winter when the white fruits are on the shrubs. Containing 4 to 13 percent protein, depending on tissue and season, it provides important early-season browse for cattle and domestic sheep. It is also browsed by most wild ungulates. It is generally unpalatable to horses and moose. The fruits are consumed by both black and grizzly bears and are eaten by a number of birds and small mammals (McWilliams 2000). Some sources refer to the fruits as being toxic to humans (Gilbert 1995, Moerman 1986). The toxic agent appears to be the isoquinoline alkaloid chelidonine and causes mild symptoms of vomiting, dizziness, and sedation in children (Canadian Biodiversity Information Facility 2003). The fruits were reported to have been eaten but not favored by Native Americans (McWilliams 2000). Various tissues were used by Native Americans as a diuretic, to treat gonorrhea, and for sore eyes (Moerman 1986). Common snowberry is planted as an ornamental and in conservation plantings for wildlife amenity, soil stabilization, and strip mine reclamation in temperate areas around the world (Gilbert 1995).

References

Binggeli, P. 1998. Plants of the Pacific Northwest in Western Europe. Botanical Electronic News ISSN 1188-603X. http://www.ou.edu/cas/botany-micro/ben/ben195.html. p. 1-4

Canadian Biodiversity Information Facility. 2003. Notes on poisoning: *Symphoricarpos albus*. http://sas.agr.gc.ca/pls/pp/ppack.info?p_psn=122&p_type=all&p_sci=sci&p_x=px. 5 p.

Center for Urban Horticulture. 2002. Does mulch improve plant survival and growth in restoration sites? Fact sheet 38. University of Washington, College of Forest Resources. http://www.cfr.washington.edu/Research/fact_sheets/38-mulch.pdf. 2 p.

Gilbert, O.L. 1995. *Symphoricarpos albus* (L.) S.F. Blake (*S. rivularis* Suksd., *S. racemosus* Michaux). Journal of Ecology 83(1): 159-166.

Grimm, W.C. 1966. Recognizing native shrubs. The Starkpole Company, Harrisburg, PA. 319 p.

McWilliams, J. 2000. *Symphoricarpos albus*. In: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory. Fire Effects Information System. http://www.fs.fed.us/database/feis/plants/shrub/symalb/all.html. 32 p.

Moerman, D.E. 1986. Medicinal plants of Native America. Technical Reports 19. University of

Michigan Museum of Anthropology, Ann Arbor, MI. 534 p.

Natural Resources Conservation Service. 2003. Plants profile*: Symphoricarpos albus* (L.) Blake http://plants.usda.gov/cgi_bin/plant_profile. cgi?symbol =SYAL. [not paged].

Soper, J.H. and M.L. Heimburger. 1982. Shrubs of Ontario. Royal Ontario Museum, Toronto, Ontario, Canada. 495 p.

Stephens, H.A. 1973. Woody plants of the North Central Plains. The University Press of Kansas, Lawrence, KS. 530 p.

Walker, S.C. 2003. *Symphoricarpos* Duham., snowberry. U.S. Department of Agriculture, Forest Service, Washington, DC. http://wpsm. net/Symphoricarpos.pdf. 10 p.

Welsh, S.L., N.D. Atwood, S. Goodrich, and L.C. Higgins, eds. 1987. A Utah flora. Great Basin Naturalist Memoirs 9. Brigham Young University, Provo, UT. 894 p.

John K. Francis, Research Forester, U.S. Department of Agriculture, Forest Service, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan, PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984