

## THE ROSES—*ROSA*

There are about 120 (100–150) native roses in the Northern Hemisphere, of which 7 are native in Michigan (Voss and Reznicek 2012); worldwide there are 2,050 species (Judd et al. 2008). *Rosa* is a member of the subfamily Rosoideae of the Rosaceae. Although roses of the garden are familiar to everyone, less well known are the native wild roses of Michigan and the western Great Lakes Region. They are all “single-flowered,” with 5 petals, whereas most cultivated garden roses are “double,” that is, some or all of the stamens form extra petals. The universal name *rose* is derived from the ancient Greek word for the rose flower; later, in England, the word *rose* was derived from a Celtic word meaning “red” (Coates 1992). However, rose breeding throughout the world, especially in England, has produced an enormous variety of colors as well as fragrances. Thus, not only the rosarian of today has cause to ponder the statement “A rose is neither red nor sweet, though we may think it so.”

The first record of a cultivated English rose dates from the reign of William Rufus (1087–1100), but the roses Sir William sought in the nunnery at Romsey most certainly were not derived from wild rose stock. According to English garden historian Alice Coates (1992), there were only 5 English wild briars. These native roses played only a minor role in the development of English garden forms. The spectacular advance in English rose growing in the early nineteenth century was due to the arrival of various Chinese garden roses, which brought with them the property of perpetual blooming. By 1826 an English catalog listed 1,393 species and varieties, and they continued to increase greatly.

Seven wild roses are native in Michigan, and we describe 4 of the most widely distributed together with the multiflora rose, *Rosa multiflora*, a native of Japan and Korea. It was introduced before 1868 (Rehder 1940) for wildlife habitat and erosion control and has spread out of control. Prior to European settlement, native rose species likely had more typical or distinctive ecological homes (e.g., *R. palustris* in wetland ecosystems or *R. carolina* in primarily dry to dry-mesic upland ecosystems). However, great disturbances to natural landscapes by humans, together with the ease of dispersal of seeds by birds and mammals and hybridization among native species, led to their wide occurrence today in open and disturbed sites of diverse kinds (see “Site-Habitat” sections under individual species).

Although rose species grow today in a range of soil-site conditions from wet to dry, from basic to acid, and in open to moderately shaded situations, they show a preference for rooting and persistence in circumneutral to basic soils and substrates. Such situations may be microsites where favorable seasonal water table fluctuations occur or where roots reach capillary fringes supplying circumneutral water in sites with acidic upper horizons. Rose spe-

cies, like those of numerous other genera, occur together with species tolerating or requiring acidic soils together with those that typically grow in circumneutral or basic soils.

Native rose species are characterized by upright, arching, or trailing stems, usually armed with prickles. The alternate deciduous leaves are pinnately compound with serrate leaflets. The native species have narrow but prominent stipules; stipules of all species are fused to the petiole for most of their length. Stems are circular in cross section, with prickles commonly in pairs below the nodes; bristles often occur on flowering and nonflowering shoots. The pith is relatively large and brown. Winter buds are small and solitary, with 3 or 4 scales exposed; the terminal bud is present. Leaf scars are very narrow, extending about halfway around the stem; there are 3 bundle scars. Flowers are “single” (not “double,” as in most garden roses), with 5 petals of pale pink to deep rose color. A reddish, fleshy receptacle or hypanthium, the hip, encloses several to many achenes and is usually persistent long into winter. Sepals often crown the apex of the hip and are quickly deciduous or persistent into winter (*R. blanda*). Asexual reproduction and clone-forming is by rhizomes, roots, and layering. The reader is directed to excellent treatments of native and introduced rose species and hybrids in Michigan (Voss and Reznicek 2012), Minnesota (Rosendahl 1965), Ontario (Soper and Heimburger 1982), Ohio (Braun 1989), and the northeastern United States and adjacent Canada (Gleason and Cronquist 1991).

## KEY TO SPECIES OF ROSA

1. Wetland habitat, wet to wet-mesic, poorly to somewhat poorly drained sites; flowers very fragrant . . . *Rosa palustris*, p. 240
1. Upland habitat, dry to dry-mesic, well-drained sites; flowers not or markedly less fragrant.
  2. Medium shrub, 0.7–3 m; an introduced species occurring primarily in southern lower Michigan; stout recurved prickles at and between the nodes; stipules conspicuously fringed or comblike-serrate (i.e., deeply pinnatifid); stems spreading to form impenetrable thickets . . . *Rosa multiflora*, p. 238
  2. Low shrub, 0.2–1.5 m; native species; prickles not stout, straight; stipules entire, not conspicuously fringed or comblike-serrate; erect shrub not forming impenetrable thickets.
    3. Stems with few prickles, only on nodes of lower branches; frequent to locally common throughout the state . . . *Rosa blanda*, p. 234
    3. Stems with numerous prickles; not frequent throughout the state.
      4. Stems densely covered with prickles; leaflets often double serrate; rare in southern lower Michigan . . . *Rosa acicularis*, p. 232
      4. Stems with fewer prickles; leaflets coarsely serrate; common to abundant in southern lower Michigan, rare in northern lower Michigan, absent in upper Michigan . . . *Rosa carolina*, p. 236

## ROSACEAE

*Rosa acicularis* Lindley

### Prickly Wild Rose

**Size and Form.** Low, erect, bushy shrub, 0.3–1 m, taller in shade; plant very prickly, clones of few stems formed by rhizomes.

**Leaves.** Alternate, deciduous; pinnately compound, leaflets 5–7, short-stalked; elliptic to ovate or obovate, oval, leaflets 1.5–5 cm long, 1–2.5 cm wide; usually acute; cuneate or rounded to subcordate; margin coarsely serrate, usually doubly serrate toward apex, frequently glandular-serrulate, teeth pointed outward; dull green and glabrous above, paler and somewhat pubescent and usually more or less resinous-glandular beneath; petiole and leaf rachis usually minutely pubescent and glandular; stipules simple, narrow at base, adnate and broadened at the free end, stipule pair to 1.5 cm wide, pubescent, the margins glandular.

**Stems-Twigs.** Slender, flexible, round, greenish, becoming somewhat reddish, densely covered with slender, straight, unequal-sized prickles, 3–6 mm long, those near the nodes often longer and stouter than others; flower-bearing shoots prickly; leaf scars long, narrow, and linelike, extending about halfway around the stem; bundle scars 3; pith relatively large, round, brown, continuous.

**Winter Buds.** Terminal bud present; buds small, 2–3 mm long, solitary, sessile, ovoid, with several scales exposed.

**Flowers.** Late May–July; bisexual, pink to deep rose, 5–7 cm wide, fragrant, usually solitary on short, prickly lateral shoots from stems of the previous year, occasionally in clusters of 2 or 3, pedicels glabrous, rarely glandular-hispid, 1–2 cm long; sepals usually simple, somewhat broadened at the tip, 2–3 cm long, glandular outside, often finely pubescent within, erect and persistent; petals 2–3 cm long. Insect pollinated.

**Fruit.** A fleshy hip enclosing an aggregate of achenes; the achenes are bony, thick, very light-colored; August–September; hip fleshy, ellipsoid, pear-shaped or nearly globular, calyx persistent, red and translucent, glabrous, about 2 cm long, 1.5 cm wide; seeds ca. 17,250/lb (37,950/kg).

**Distribution.** Common in northern lower Michigan and upper Michigan, rare in southern lower Michigan. County occurrence (%) by ecosystem region (Fig. 19): I, 8; II, 43; III, 86; IV, 75. Entire state 34%. It has the widest

range of North American rose species, from NS and QC to AK, s. throughout the Rocky Mountains to NM, w. Great Lakes Region to New England. In the Southwest, it ranges between altitudes of 1,370 to 3,050 m.

**Site-Habitat.** Almost any upland site with high light irradiance and circumneutral to mildly basic soils or substrates; rocky lakeshores and cliffs, talus accumulations, forest and field edges, cutover forests, roadsides, fencerows, meadows, prairies, dunes. Of particular prominence in cobble, sandy, and bedrock sites and lakeshores of northern lower and upper Michigan, especially the harsh shorelines and cliffs of Lake Superior. It occurs in sites with little to no soil development in cracks, joints, depressions of bedrock, and talus. In the latter sites, it occurs with stunted tree conifers and hardwoods, willows, ninebark, mountain alder, wild red raspberry, thimbleberry, and blueberries.

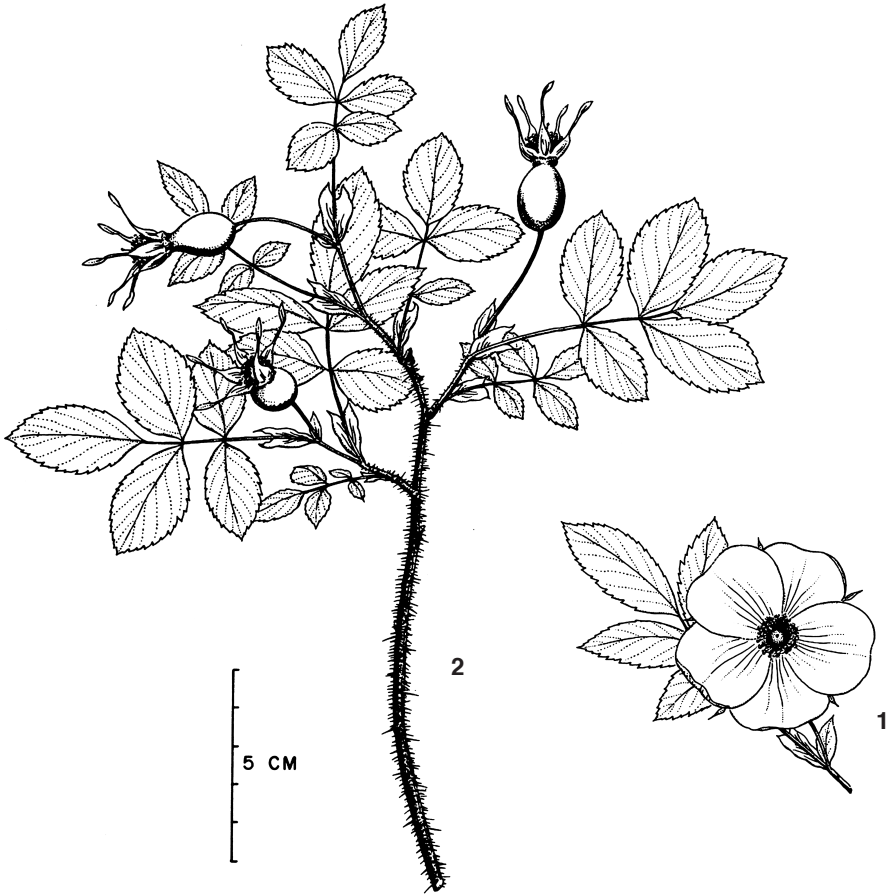
**Notes.** Shade-intolerant, persisting in light shade. Flowers earlier than *R. blanda*. *R. acicularis* is circumboreal in distribution. As a native of Eurasia, it is an octoploid ( $2n = 56$ ), whereas our native species, a hexaploid ( $2n = 42$ ), is considered a subspecies and differs from the Eurasian taxon in various morphological characteristics (Voss and Reznicek 2012). Many varieties and forms have been described. It readily forms hybrids with *Rosa blanda*. *Acicularis* means “needlelike,” that is, with many needlelike prickles. It is Alberta’s provincial floral emblem.

**Chromosome No.**  $2n = 42$ ,  $n = 21$ ;  $x = 7$

**Similar Species.** In Michigan and the upper Great Lakes Region, the smooth wild rose, *Rosa blanda* Ait., is the most similar. The sim-



**Prickly Wild Rose**



1. Flowering shoot,  $\times 1/2$   
2. Fruit, the hip encloses the true fruit, an achene,  $\times 1/2$

**KEY CHARACTERS**

- low, erect, bushy shrub, usually  $<1$  m
- leaves pinnately compound; leaflets usually 5; margin rather coarsely serrate, blades glabrous above, minutely pubescent beneath; petiole and rachis usually minutely pubescent and glandular; stipules with glandular margins
- stems densely covered with slender, straight prickles; flowering shoots prickly
- flowers pink to deep rose with glabrous pedicels
- fruit an achene enclosed in a red hip, ellipsoid, elongated at base

Distinguished from the smooth rose, *Rosa blanda*, by its low form, usually  $<1$  m; leaflets usually 5; margin rather coarsely serrate, whole plant very prickly; twigs with dense, straight prickles, lateral floral shoots prickly, hip ellipsoid; of rare occurrence in southern lower Michigan.

ilar prairie rose, *R. arkansana* Porter, reported from 15 Michigan counties, is dominant in the Great Plains south to Texas and is widely

distributed by varieties and hybrids from New York across the northern United States and adjacent Canada to British Columbia.

## ROSACEAE

*Rosa blanda* Aiton

### Smooth Wild Rose, Meadow Rose

**Size and Form.** Low, erect, bushy shrub 0.2–1.5 m; spreading widely by long-lived rhizomes and forming clonal clumps by root-collar sprouting.

**Leaves.** Alternate, deciduous; pinnately compound, leaflets 5–7; short-stalked; elliptic-oblong to oval or obovate, 1–4.5 cm long, about half as wide; acute to rounded; cuneate to rounded; margins coarsely serrate to just below the middle; dull green and nearly glabrous above, pale and finely pubescent beneath; petiole and rachis finely pubescent; stipules generally pubescent above and beneath, margins entire, the adnate portion gradually broadened toward the free end.

**Stems-Twigs.** Slender, flexible, round, reddish-purple; larger stems at the base armed with a few slender, straight prickles; vigorous indeterminate current shoots often densely prickly on the lower part, becoming unarmed or with few prickles on the upper vegetative and flowering shoots; leaf scars long and narrow, linelike, extending about halfway around the stem; bundle scars 3; pith relatively large, round, brown, continuous.

**Winter Buds.** Terminal bud present; buds small, 2–3 mm long, solitary, sessile, ovoid, red, with 3–4 scales exposed.

**Flowers.** May, peaking in June; bisexual, pale or bright pink, solitary or in pairs or clusters of 3–5 at the ends of current shoots; pedicels glabrous, generally 1–2 cm long; calyx tube glabrous, calyx lobes lanceolate, erect and persistent on hip; petals, 2–3 cm long. Insect pollinated.

**Fruit.** A fleshy hip enclosing an aggregate of achenes; the many achenes slender, light brown, about 4 mm long; August–October; hip fleshy, subglobose, more or less erect, round or somewhat elongated, sepals persistent; scarlet to red, glabrous, 0.8–1.5 cm wide; seeds 45,000/lb (99,000/kg).

**Distribution.** Frequent to locally common throughout the state. County occurrence (%) by ecosystem region (Fig. 19): I, 61; II, 77; III, 100; IV, 100. Entire state 73%. Ranging in North America from NS to AK and NT, s. to MT, the Great Plains, w. Great Lakes Region and New England, s. to VA.

**Site-Habitat.** Almost any upland site with high light irradiance, mostly circumneutral to basic sites; open forests, meadows, rock

outcrops, gravelly shores of lakes, dunes, roadsides, fencerows. Associates include a wide variety of pioneer species in communities of these sites.

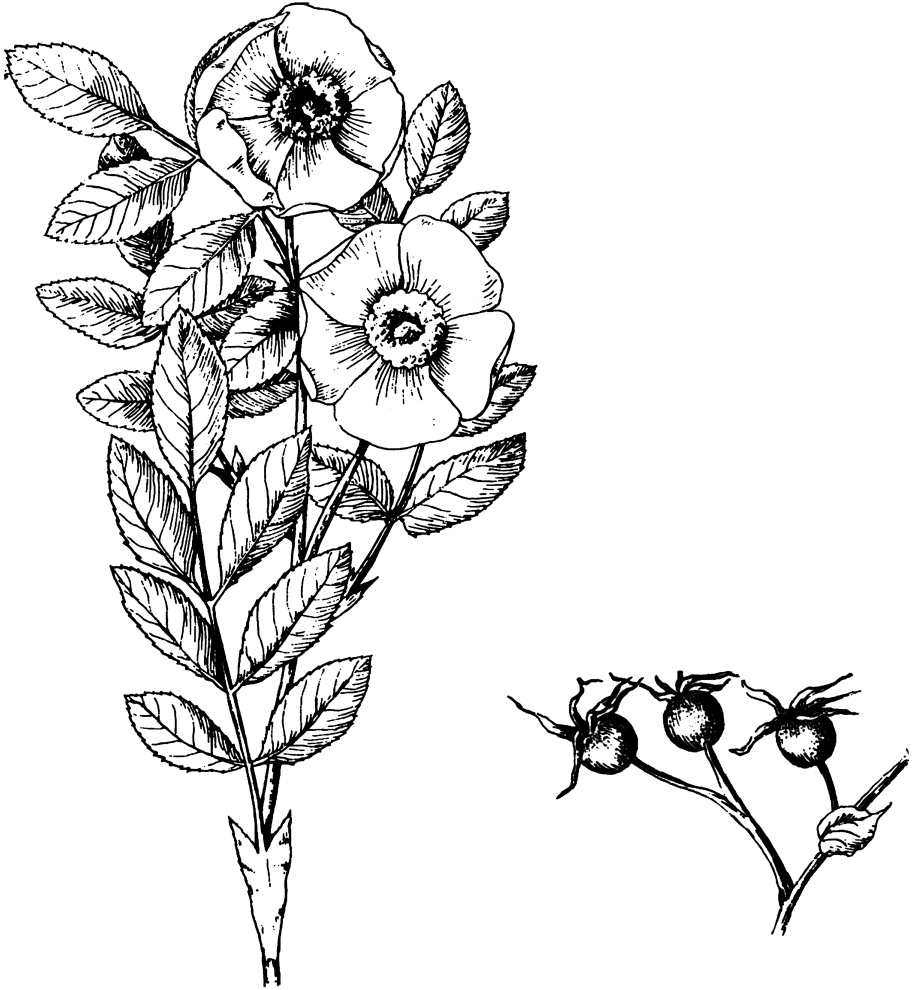
**Notes.** Highly shade-intolerant, persisting in light shade. Highly variable morphologically and readily hybridizing with *Rosa acicularis* and *R. palustris* (Voss and Reznicek 2012). Only the basal part of the stems is prickly because it remains in the juvenile phase of physiological development. The name *blanda* denotes the scarcity of prickles on the leafy flower-bearing shoots.

**Chromosome No.**  $2n = 14, n = 7; x = 7$

**Similar Species.** In Michigan and the upper Great Lakes Region, the prickly wild rose, *Rosa acicularis*, is the most similar.



Smooth Wild Rose, Meadow Rose



1. Flowering shoot,  $\times 1/2$
2. Fruiting shoot, hip  $\times 1/2$

KEY CHARACTERS

- low, erect, bushy shrub 0.2–1.5 m
- leaves pinnately compound, leaflets 5–7, margin coarsely serrate, rachis finely pubescent; stipules generally pubescent, margins entire
- stems prickly at base whereas upper part of stems and leafy flowering branches unarmed or nearly so
- hip scarlet to red, subglobose, sepals persistent on the hip into winter

Distinguished from the prickly wild rose, *Rosa acicularis*, by its larger habit to 1.5 m; leaflets 5–7, margin coarsely serrate, stems generally smooth except prickly on lower part of stems, lateral flower-bearing shoots unarmed or nearly so; hip subglobose; frequent in southern lower Michigan.

## ROSACEAE

*Rosa carolina* Linnaeus

### Pasture Rose

**Size and Form.** Low, slender, little-branched shrub, usually 0.3–0.6 m (1); forming clones by basal sprouting and rhizomes.

**Leaves.** Alternate, deciduous, pinnately compound; leaflets 5–7, sessile or short-stalked; elliptic-lanceolate to nearly orbicular, 1.5–5 cm long, 0.8–2 cm wide; acute or rounded; rounded or cuneate; margin coarsely and sharply serrate with ascending teeth; dull green and glabrous above, paler and glabrous or pubescent on main veins beneath; leaf rachis more or less pubescent, glandular, and prickly; stipules narrow, flat, not fringed, 3 mm wide, 12–10 mm long, nearly glabrous, entire or with a few glandular teeth, attached to the petiole for nearly their entire length.

**Stems-Twigs.** Slender, green to reddish-brown, glabrous; prickles arranged singly around the stem at nearly right angles, at nodes often paired, slender, straight, needle-like, round to the base, to 10 mm long, prickles numerous between the nodes, more or less deciduous; leaf scars long and narrow, linelike, extending about halfway around the stem; bundle scars 3; pith relatively large, brown, round.

**Winter Buds.** Terminal bud present; buds small, solitary, sessile, red, generally glabrous, with 3–4 scales exposed.

**Flowers.** Mid-June to July; bisexual, pink, mostly solitary, up to 7 cm wide; pedicels generally 1–2 cm long, glandular-hispid; calyx tube glandular-hispid, calyx lobes lanceolate, often expanded at the tip, either entire or more or less lobed, tardily deciduous from mature fruit; petals 2–3 cm long. Insect pollinated.

**Fruit.** A fleshy hip enclosing an aggregate of achenes; the many achenes are bony, light-colored; September, persisting into winter; hip subglobose; bright red, glandular-hispid, 1–1.5 cm wide.

**Distribution.** Common in southern lower Michigan, rare in northern lower Michigan; absent in upper Michigan. County occurrence (%) by ecosystem region (Fig. 19): I, 79; II, 20; III, 0; IV, 0. Entire state 43%. Widely distributed in e. North America from NS to ON, s. from New England and the w. Great Lakes Region s. to FL, w. to TX.

**Site-Habitat.** Mainly upland sites. Open to lightly shaded, fire-prone, dry and dry-mesic sites with mostly circumneutral to basic sub-

strates but also occurring in natural communities with seasonally fluctuating water tables and wet-mesic soils, prairies, oak and pine barrens, dunes. In addition, spreading to other open and disturbed sites: forest and field edges, meadows, roadsides, railroad rights-of-way, fencerows. Many associated tree and shrub species of seasonally wet to dry ecosystems; the oak barrens alone support 21 shrub associates rooting in either acidic or circumneutral soils or substrates.

**Notes.** Shade-intolerant, persisting in light shade; tolerating fluctuating hydrology from seasonally wet to summer drought. A variable species with two subspecies reported.

**Chromosome No.**  $2n = 28, n = 14; x = 7$

**Similar Species.** In eastern North America, *Rosa palustris* is similar in some morphological characteristics, though not in habitat.



Pasture Rose



1. Vegetative and flowering shoots,  $\times 1/2$
2. Leaf blade margin,  $\times 2$
3. Stem with prickles,  $\times 2$
4. Fruiting shoot, hip, reduced
5. Winter lateral bud, leaf scar, prickles, enlarged
6. Winter twig with fruit, hip,  $\times 1/2$

KEY CHARACTERS

- low, slender, little-branched shrub, 0.3–0.6 m
- leaves pinnately compound, leaflets 5–7, elliptic-lanceolate to nearly orbicular, margins coarsely serrate; stipules narrow, about 1 cm long, flat, not fringed
- stems with many prickles arranged singly around the stem or paired at the nodes; slender, straight, needlelike, round
- flowers pink, hips red, persisting into winter



## ROSACEAE

*Rosa multiflora* Murray

### Multiflora Rose, Japanese Rose

**Size and Form.** Vigorous, erect, shrub with long reclining, climbing, arching, or spreading stems to 3 m; forming dense, nearly impenetrable clones by rhizomes, tip rooting, and layering.

**Leaves.** Alternate, late deciduous, pinnately compound, leaflets usually 7 (5–9), sessile or short-stalked, elliptic to obovate 1.5–4 cm long and about half as wide; acute; cuneate to rounded; margin sharply serrate, teeth with red tips; dull green or slightly lustrous and glabrous above, paler and soft pubescent beneath; stipules long, slender, conspicuously fringed or comblike-serrate and glandular-ciliate; petiole and rachis often prickly and softly pubescent.

**Stems-Twigs.** Stout, vigorous, long, flexible, round, reddish to green, glabrous, prickles on older main stems stout, recurved, those at nodes 5 mm long; prickles on indeterminate shoots solitary, slender; leaf scars long and narrow, linelike, extending about halfway around the stem; bundle scars 3; pith relatively large, brown, round, continuous.

**Winter Buds.** Terminal bud present; buds small, 2–3 mm long, solitary, sessile, blunt pointed, glabrous, red; located 2–4 mm distal to the paired prickles at a node, occasionally at right angles to the stem; 4–5 scales exposed.

**Flowers.** May–June; bisexual, usually white, fragrant, several to many in large flat-topped clusters with usually many flowers; pedicels glandular, sepals 5–7 mm long, glandular, the outer with toothlike lobes, eventually deciduous; petals 1–2 cm long. Insect pollinated.

**Fruit.** A fleshy hip enclosing an aggregate of achenes; the achenes are bony, light-colored; August through winter; hip small, about 3.5 mm long and 5 mm wide, ellipsoid to obovoid, red, glossy, smooth, in drooping or erect clusters; seeds ca. 66,000/lb (145,200/kg).

**Distribution.** Increasingly common and locally abundant in southern lower Michigan, rare elsewhere. County occurrence (%) by ecosystem region (Fig. 19): I, 58; II, 23; III, 14; IV, 12. Entire state 34%.

**Site-Habitat.** Widely planted for wildlife habitat (see “Notes”) and spreading to open, dry-mesic upland sites with circumneutral to moderately basic soils, forest and field edges, naturally open or cutover oak or oak-pine forests, roadsides, fencerows, meadows,

pastures, prairies, dunes. Associates include a great many shade-intolerant and midtolerant species over its wide planted and naturalized range.

**Notes.** Shade-intolerant, persisting in light shade; requiring higher soil fertility than any native rose species (Gill and Healy 1974). A native in Japan and Korea, it was introduced before 1868 for bank stabilization, as “living fences,” and for wildlife food and cover. In a study of food-producing plants in Michigan, it received more use by wildlife than any other plant (Gysel and Lemmien 1964). It escaped cultivation and spread widely in the Midwest and eastern United States and adjacent Canada. Closed forests and shaded understories restrict its invasion except along edges. At one time distributed by state nurseries, it has become a serious invasive pest in some areas. The combination of dense, clonal thickets and stout prickles prevents penetration beyond its edges (Fralish and Franklin 2002).

**Chromosome No.**  $2n = 14, n = 7; x = 7$

**Similar Species.** In Japan a variety from China with pink to deep rose flowers is cultivated, *Rosa multiflora* var. *adenochaeta* (Satake et al. 1993). In China, among varieties reported, *R. multiflora* var. *cathayensis* Rehder & E. H. Wilson has pink flowers and *R. multiflora* var. *multiflora* has white petals (Flora of China 2014).



## Multiflora Rose, Japanese Rose



1. Leaf,  $\times 1$
2. Shoot with leaves, reduced
3. Winter branch with fruiting shoots, hip, reduced
4. Hips,  $\times 1$
5. Winter lateral bud and leaf scar, enlarged
6. Winter twig, reduced

### KEY CHARACTERS

- vigorous shrub with long, climbing, arching, or spreading branches to 3 m; forming dense, nearly impenetrable thickets
- leaves late deciduous, pinnately compound, leaflets elliptic to obovate rachis often prickly; stipules narrow, lobes conspicuously fringed or comblike and glandular-ciliate
- twigs glabrous with stout, recurved prickles
- flowers white, fragrant, in flat-topped clusters with few to many flowers

## ROSACEAE

*Rosa palustris* Marshall

### Swamp Rose

**Size and Form.** Erect, much-branched, medium shrub, 0.7–2 m; clone-forming by rhizomes and layering.

**Leaves.** Alternate, deciduous, pinnately compound, leaflets usually 7 (5–9), narrow elliptic to oblanceolate, 2–7 cm long and <3 cm wide; usually acute, sometimes rounded; long-cuneate; finely and evenly serrate almost to the base, 20 or more teeth per side; dull green or slightly lustrous and glabrous above, pale and minutely pubescent on main veins beneath; petiole and leaf rachis softly pubescent, often with small prickles; stipules long, narrow, 1–3 cm long, with toothlike lobes only diverging 4–6 mm from the petiole.

**Stems-Twigs.** Slender, round, green to deep red, glabrous; internodal prickles none, usually a pair of recurved, broad-based, stout prickles at each node, 3–6 mm long; lacking internodal bristles; flower-bearing shoots often unarmed; leaf scars long and narrow, linelike, extending about halfway around the stem; bundle scars 3; pith relatively large, brown, round, continuous.

**Winter Buds.** Terminal bud present; buds small, 2–3 mm long, solitary, sessile, red, smooth or sparingly glandular-bristly, 3–4 scales exposed.

**Flowers.** June, peaking late July; bisexual, pink, very fragrant, in clusters of 2–5, sometimes solitary; pedicels 1–2 cm long; calyx tube glandular-hispid, calyx lobes attenuate, 1.5–2.5 cm long, often pinnately lobed, tomentose within and on outer margins, reflexed and wide-spreading after flowering, late deciduous; petals 2–3 cm long. Insect pollinated.

**Fruit.** A fleshy hip enclosing an aggregate of achenes; achenes bony, thick, light-colored; August–September; hip depressed-globose to oblong, red, glandular-hispid, 7–12 mm wide.

**Distribution.** Common throughout the state. County occurrence (%) by ecosystem region (Fig. 19): I, 95; II, 67; III, 100; IV, 62. Entire state 82%. Widely distributed in e. North America, NS to ON, s. from New England to FL and from w. Great Lakes Region to LA, MS, AL.

**Site-Habitat.** A wetland species. Open to moderately shaded, wet to wet-mesic sites with circumneutral to moderately basic soils or substrates; wetlands; fens, conifer and conifer-hardwood swamps, wet-mesic lake and stream

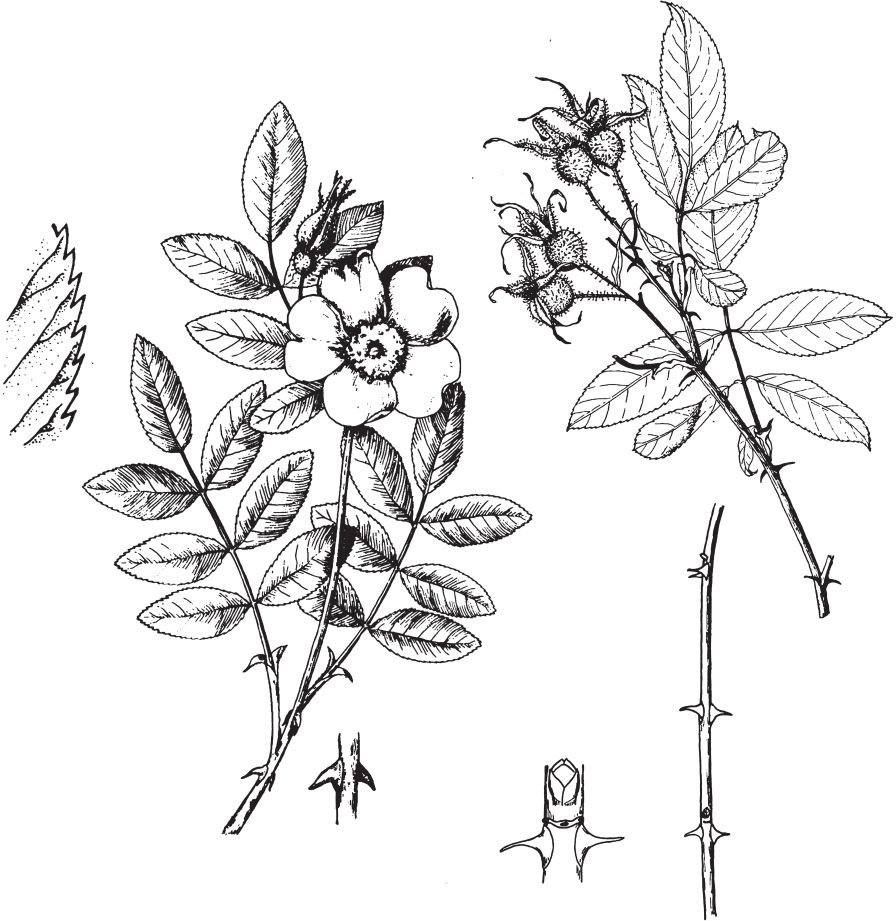
margins; southern shrub carr, inundated shrub swamp, roadside ditches. Associates include a wide variety of pioneer species in open and lightly shaded wet and wet-mesic sites. For example, there are 20 likely associates in the southern shrub carr and 30 trees and shrubs in the rich tamarack swamp.

**Notes.** Moderately shade-tolerant. Shallow-rooted and tolerant of low oxygen availability in wetlands. Hybrids with *Rosa blanda* may be called *R. × palustriformis* Rydb (Voss and Reznicek 2012).

**Chromosome No.**  $2n = 14$ ,  $n = 7$ ;  $x = 7$



Swamp Rose



1. Flowering and fruiting shoots,  $\times 1/2$
2. Leaf blade margin,  $\times 2$
3. Stem with prickles,  $\times 1$
4. Fruiting shoots, hip,  $\times 1/2$
5. Winter lateral bud, leaf scar, prickles, enlarged
6. Winter twig, reduced

KEY CHARACTERS

- erect, much-branched, medium shrub to 2 m
- leaves pinnately compound, leaflets narrow elliptic to oblanceolate, very finely and evenly serrate almost to the base
- stems lacking internodal prickles, usually a pair of recurved, broad-based prickles at each node, lacking internodal bristles
- flowers pink, calyx lobes wide-spreading after flowering, deciduous
- fruit an achene, many enclosed in a red hip
- habitat open to lightly shaded, circumneutral to medium basic wetlands