

# *Rubus idaeus* L.

**Standardized Common Name:** Raspberry

**Other Common Names:** American Raspberry (subsp. *strigosus*), Red Raspberry

**Family:** Rosaceae

**Taxonomy:** *Rubus* is a cosmopolitan genus of often thorny shrubs, producing brambles and numerous edible fruits. One estimate is that there are about 250 species, but species boundaries in portions of the genus pose a serious taxonomic problem, as both asexual reproduction and hybridization are common. *Rubus idaeus* belongs to Subg. *Idaeobatus* and ranges from Eurasia to North America. The strictly North American subsp. *strigosus* (Michx.) Focke, also known as *R. idaeus* var. *strigosus* (Michx.) Maxim or sometimes as *R. strigosus* Michx., is included in commercial Raspberry. Hybridization occurs in North America between *R. idaeus* and the Black Raspberry, *R. occidentalis* L.

**Description:** Rhizomatous shrubs spreading by underground suckers or stolons; stems (canes) biennial, erect, arching, to 2 m high, usually prickly, bearing fruit in the second year. Leaves alternate, stipulate, mostly pinnately compound, those of first-year canes with (1–)3–7 leaflets, those of second-year canes mostly with 3 leaflets; rachis 2–7 cm long, prickly, upper surface furrowed; lateral leaflets sessile, terminal leaflet petiolate; leaflet blades ovate to oblong or lanceolate-oblong, 3–12 cm long, terminal leaflet sometimes shallowly lobed; bases cordate, especially on terminal leaflet, to rounded, often asymmetrical; apices acute to acuminate; margins serrate or rarely lobed; leaves whitish and woolly-pubescent beneath with occasional prickles on midrib, nearly glabrous above. Inflorescence a few-flowered raceme, terminal or axillary, with leafy bracts; flowers pedicellate, drooping. Hypanthium present, short, flat, not fused to carpels; receptacle large, convex; calyx lobes 5, lanceolate, usually bristly; corolla ca. 1 cm in diameter, petals 5, narrow, erect; stamens numerous, white; carpels numerous, separate. Fruit an aggregate of small 1-seeded drupelets, nearly globose to broadly conical, red or rarely yellow, hirsute, dispersed as a unit.

**Parts in Commerce:** Leaves

## **Identification:**

- Compound, usually with 3 leaflets, sometimes with 5–7 or rarely 1; only the terminal leaflet is long-stalked
  - Petiole with small prickles; upper side grooved

- Leaflets 3–12 cm long, usually more or less ovate
- Leaflet bases rounded to subcordate or cordate, often asymmetrical; terminal leaflet more likely to have a cordate base
- Apices acute to acuminate
- Margins serrate, rarely lobed
- Upper surface green, often pubescent but not densely so
- Lower surface appearing white, densely pubescent with tangled white hairs, sometimes with small prickles at base of midrib
- Main secondary veins parallel on each side of leaflet, running diagonally from midrib to marginal teeth, occasionally forking; tertiary venation between secondary veins regular, inconspicuous
- Taste weakly astringent and bitter

***Rubus fruticosus* L. (Blackberry):** The leaves of the blackberry are also used medicinally and found in commerce. The blackberry, which belongs to Subg. *Rubus*, is taxonomically very complex. It usually reproduces asexually, so that only slightly different varieties or “biotypes” can remain morphologically distinct, but on occasion cross-breed to create new biotypes. Practically every European variant, no matter how minute, has been described as a species or “agamospecies” at least once or twice. By one estimate over 650 species of blackberry exist in Europe alone (and over 2000 species names have been published), almost all segregated from *R. fruticosus*. Other treatments reduce this to a slightly more reasonable number of several dozen “circle-species,” but these have no biological meaning. *R. fruticosus*, which makes up most of the commercial blackberry market, is used in a collective sense and refers to most of the blackberries (the present work favors this approach). Within this great number of biotypes, all characters may be variable, including those of the stems, flowers, and fruits as well as those of the leaves. The leaves bear considerable resemblance to those of *R. idaeus*; their general features are as follows:

- Leaves palmately compound, sometimes with lateral leaflets divided; leaflets usually 5–7, occasionally 3
- Leaflets sessile or short-stalked; terminal leaflet of-

ten distinctive, sometimes with longer stalk; rarely all leaflets long-stalked

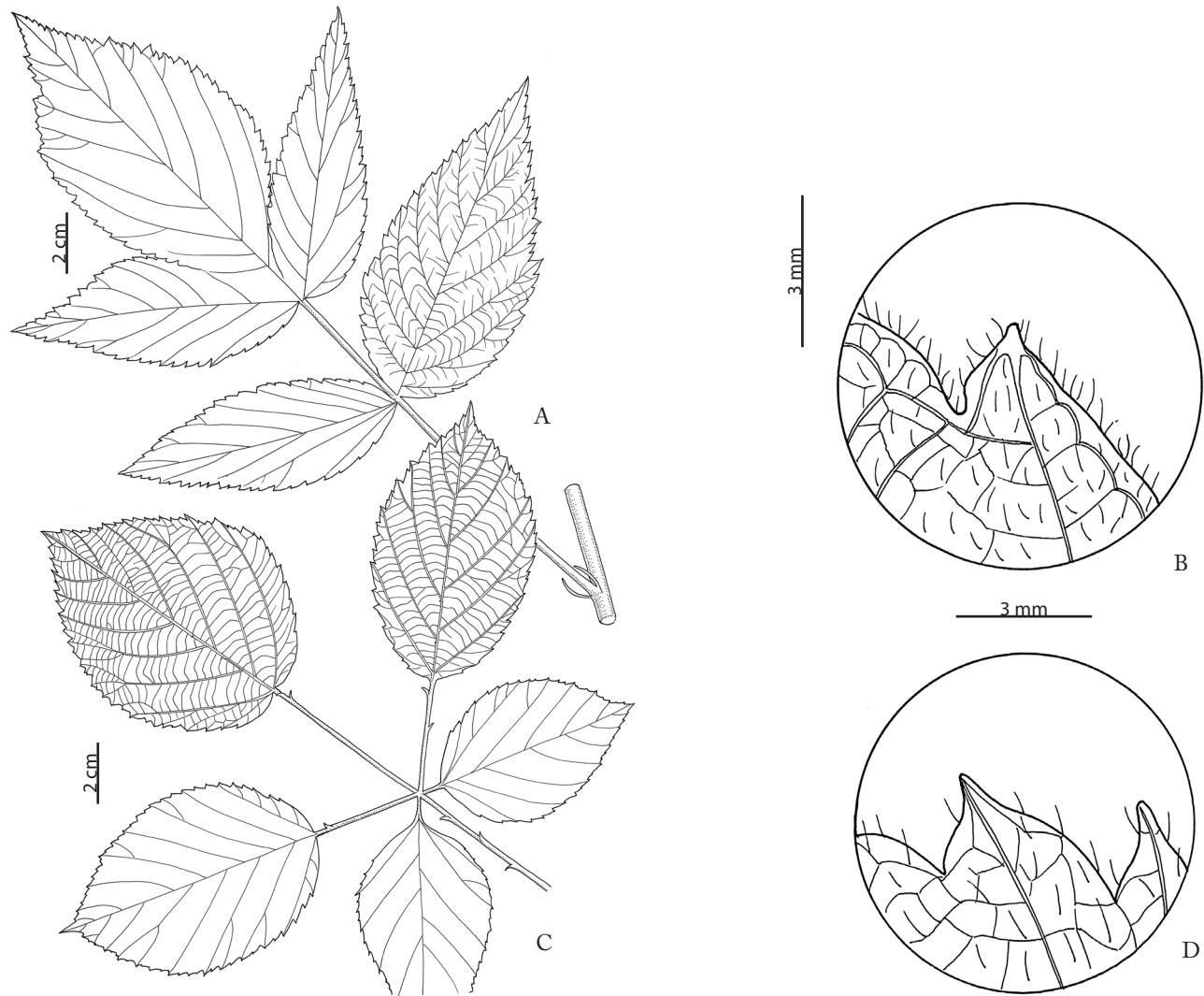
- Stipules small, linear, attached to base of petiole
- Petiole often grooved above, often bearing prickles
- Leaflets often broadly ovate, sometimes obovate or elliptical
- Leaflet bases cordate, especially on terminal leaflet, to rounded or somewhat wedge-shaped or rarely truncate
- Leaflet apices acute to acuminate
- Margins regularly or irregularly serrate
- Upper surface green, often somewhat pubescent, sometimes bearing stellate hairs, rarely woolly-pubescent with gray hairs
- Lower surface more or less pubescent, often woolly-pubescent with white hairs, but sometimes almost hairless, often varying on a single plant
- Taste astringent

#### References:

Heslop-Harrison Y. *Rubus*. In: Tutin TG, Heywood VH, Burges NA, et al., eds. *Flora Europaea*. Vol. 2. Cambridge: Cambridge University Press; 1968:7–25.

Weber HE. The present state of taxonomy and mapping of blackberries (*Rubus*) in Europe. *Acta Bot Fennica*. 1999;162:161–168.

Wichtl M, ed. *Herbal Drugs and Phytopharmaceuticals*, 3<sup>rd</sup> English ed. Stuttgart: medpharm Scientific Publishers and Boca Raton, FL: CRC Press; 2004:526–530.



**Figure 61:** a–b, *Rubus idaeus* leaf and close-up of upper surface, with exceptional lobing of terminal leaflet; c–d, *R. fruticosus* leaf and close-up of lower surface.