

Rhamnus cathartica L.

Standardized Common Name: Buckthorn

Family: Rhamnaceae

Taxonomy: *Rhamnus* includes over 100 species of trees and shrubs, of which about a dozen are native to Europe. This group has been divided into two genera, *Rhamnus* and *Frangula* (e.g., *Frangula purshiana* Cooper, Cascara Sagrada), in most recent floristic treatments. Species boundaries are occasionally difficult, and modern taxonomic work is somewhat limited. *Rhamnus cathartica* ranges from Europe to western China and has been naturalized in the eastern United States. It is known to hybridize with other species.

Description: Shrub to 6 m high or small tree. Twigs greyish, often tipped with a small needlelike thorn. Leaves mostly opposite or subopposite, stipulate with stipules falling early, petiolate, elliptical to ovate or oblong-elliptic, 2–8(–10) cm long, glabrous to pubescent; base cuneate to rounded or subcordate; apex obtuse to somewhat acuminate; margins crenate; venation pinnate, with 2–5 pairs of arcuate secondary veins, conspicuous beneath. Inflorescences lateral, cymose. Flowers small, mostly unisexual, occasionally bisexual; sepals 4, basally fused; nectar disk present inside calyx; petals 4; stamens 4, opposite petals rather than alternating with them; ovary 4-loculed, with 1 ovule per locule. Fruit a drupe, berry-like, 6–8 mm in diameter, black at maturity, with 3–4 pyrenes.

Parts in Commerce: Fruit

Identification:

- Nearly spherical, (4–)6–8(–9) mm long
- Juicy when fresh
- Pedicel 5–10 mm long, longitudinally wrinkled
- Circular attachment of pedicel with a raised ring-shaped, sometimes pale edge
- Fruit surface blackish to blackish-red, glabrous, wrinkled when dry
- Flesh greenish-yellow; most of fruit volume occupied by mature pyrenes (“seeds”)
- Pyrenes (3–)4 per fruit, not 2
- Pyrenes dark brown to greenish, plump, roughly triangular in cross-section with two flattened sides and one rounded side, or irregularly rounded with a single narrow longitudinal ridge along one side
- Taste initially sweet, then bitter and nauseating; colors saliva reddish

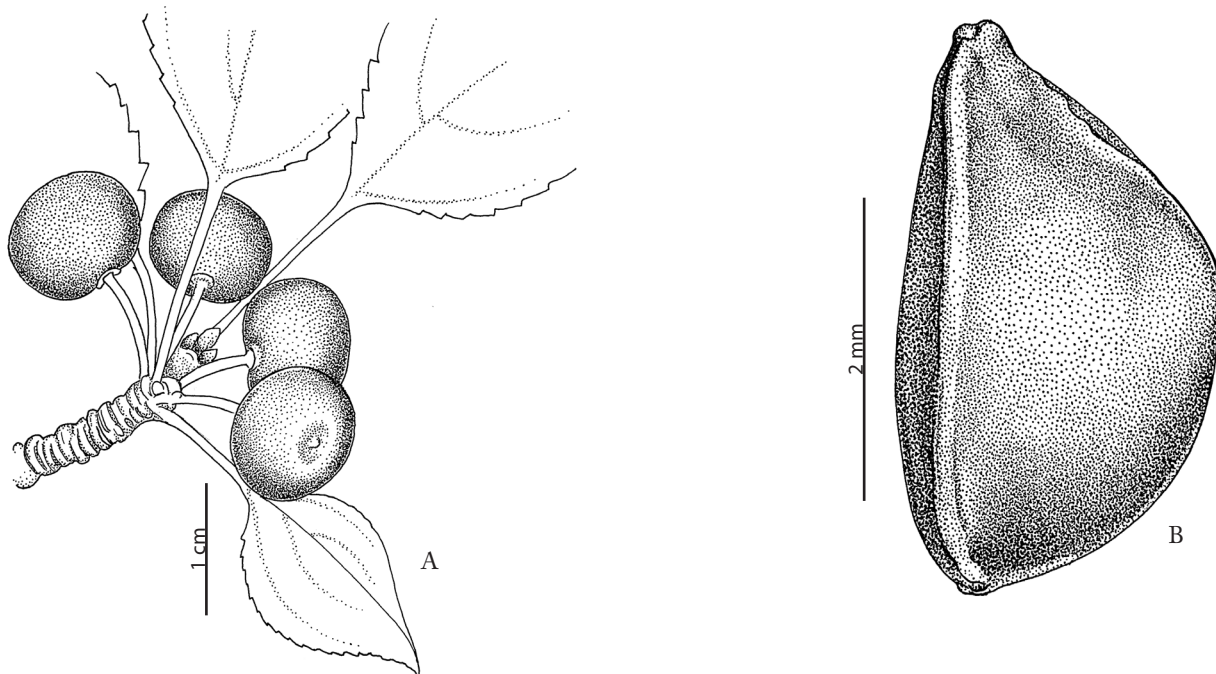


Figure 59: a–b, *Rhamnus cathartica* infructescence and pyrene.

Adulterants: *Frangula alnus* Mill. (Frangula, also known as *Rhamnus frangula* L.) is a reported adulterant. The fruit becomes blackish at maturity, but may be distinctly red rather than blackish red. The seeds are laterally compressed or flattened, with the maximum breadth almost equalling the length; the shape is somewhat triangular-ovate, with a blunt apex. The narrow end of the seed bears two yellowish to orangish, slightly asymmetrical projections, separated by a shallow cleft.

References:

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