

Eleutherococcus senticosus (Rupr. & Maxim.) Maxim.

Standardized Common Name: Eleuthero

Other Common Names: Ciwujia, Siberian Ginseng, Thorny Ginseng, Ussurian Thorny Pepperbush, Wild Pepper

Family: Araliaceae

Taxonomy: *Eleutherococcus* includes about 30 species in eastern Asia, several of which have been used medicinally. *Eleutherococcus senticosus* ranges from China to Siberia, Korea and Japan. A frequently encountered synonym is *Acanthopanax senticosus* (Rupr. & Maxim.) Harms.

Description: Shrub, 1–5(–6) m high; stems multiple, seldom branching; at least the young branches densely covered with long prickles; prickles slender, often pointing downward. Leaves alternate, palmately compound, with 5 (rarely 3) leaflets; petioles prickly or bristly; leaflets elliptic-ovate to oblong, 7–13 cm long, borne on short petiolules; bases cuneate; apices short-acuminate; margins biserrate. Inflorescences terminal umbels, single or in groups of 2–4, many-flowered, 3–4 cm in diameter. Flowers whitish, tiny (c. 1.5 mm long), borne on pedicels 1–2 cm long; calyx completely fused or shallowly 5-toothed; petals 5; stamens 5; ovary 5-loculed with styles fused into a column. Fruit a berrylike drupe, black, ovoid to subglobose, (6–)8–10 mm long, usually with 5 pyrenes (“seeds”); pyrenes flattened.

Parts in Commerce: Roots and rhizome

Identification:

- Rhizome irregularly shaped, roughly cylindrical, 1.4–4.2 cm in diameter
- Roots cylindrical, contorted, occasionally branching, to 12(–15) cm long, 0.3–1.5 cm in diameter
- Outer surface grayish to blackish brown, sometimes peeling off and exposing grayish-yellow surface
- Rhizome longitudinally wrinkled and furrowed; root surfaces wrinkled to nearly smooth; lenticels transversely oriented
- Fracture hard, coarsely fibrous
- Fractured surface yellowish
- Root in cross-section contains narrow brown cork

(usually 5–7 cell layers thick); narrow yellowish ring of cortex and phloem with scattered small groups of small brown secretory canals; cambium; large yellowish cylinder of multiradiate xylem with narrow rays of parenchyma

- Rhizome has pith at center; bark is thicker than root bark (c. 2 mm) and phloem is more fibrous than in root; older xylem is pale brown
- Bark does not separate readily from xylem
- Odor characteristic, slightly aromatic or acrid
- Taste bitter, astringent, slightly pungent

Adulterants: *Periploca sepium* Bunge (*Periploca sepium* or Chinese silk vine) is an unrelated Chinese species that has been reported as an adulterant of *E. senticosus*. Although its Chinese name is similar and it is sometimes substituted for *E. senticosus*, it is considered to be relatively toxic. The root bark, including cork, cortex and phloem, is 2–4 mm thick, whereas the bark of *E. senticosus* is <2 mm thick, especially on the roots. The outer surface is grayish to yellowish brown; the cork is soft and often scaly and peeling. The root diameter is often 1–2 cm, whereas roots of *E. senticosus* are <1.5 cm (and usually <1 cm) in diameter.

References:

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