

Dioscorea villosa L.

Standardized Common Name: Wild Yam

Other Common Names: Colic Root, North American Wild Yam, Rattlebox, Rheumatism Root

Family: Dioscoreaceae

Taxonomy: *Dioscorea*, the yam genus, includes about 850 species of tropical and subtropical vines. In the broad sense, *D. villosa* includes all of the native wild yams of the United States except the southeastern *D. floridana* Bartlett. Most authors in recent decades divide it into two species, *D. villosa* and *D. quaternata* J. F. Gmel., but authors differ on which of these is the common and widespread plant. The different forms are correlated with different habitats (lowland bogs versus rocky hilltops) and a whole range of intermediates is found; thus any division into two species is somewhat arbitrary. On the other hand, a few authorities subsume *D. floridana* into *D. villosa* as *D. villosa* var. *floridana* (Bartlett) H. E. Ahles, despite consistent morphological differences that do appear to warrant its preservation as a separate species.

Description: Rhizomatous perennial herb. Rhizomes long, 0.5–2.0 cm in diameter, unbranched to crowded with short branches, brownish, with cup-shaped stem scars hardly elevated from surface. Stems climbing, twining upward from right to left, terete to narrowly winged or polygonal. Leaves alternate or whorled below, alternate above, long-petioled, cordate, 3–13 cm long, breadth about equaling length; base cordate or with basal lobes truncate; apex acuminate or acute, sometimes bent; margins entire or slightly undulate; main veins usually 9–11, arcuate; pubescence variable, occasionally glaucous. Inflorescences unisexual, solitary, cymose; male cymes 1–3-flowered, female cymes 4–18-flowered. Flowers greenish white; perianth usually rotate-campanulate, with 6 tepals; male flowers 1–3 mm in diameter, female flowers 2–4 mm in diameter; stamens or staminodes 6; ovary inferior, style branches 2. Fruit a capsule, ovate to obovate or obreniform, 1–3.5 cm broad, 3-winged, flattened; seeds 2 per locule.

Parts in Commerce: Rhizome

Identification:

- Long, seldom branched pieces or knotty contorted pieces with frequent short branches, 0.5–2.0 cm thick
- Branching laterally
- Not jointed at nodes

- Slightly flattened to cylindrical
- Outer surface pale brown to yellowish brown, not strongly yellow, and rough; inside whitish to yellowish
- Upper surface with small circular stem scars, not raised much above surface
- Lower surface with numerous slender, tough roots or sharp projections where roots were present
- Fracture very tough
- In cross-section, has thin yellow epidermis; narrow cortex; broad stele consisting of pale starchy parenchyma with numerous scattered, small, yellowish vascular bundles
- Taste at first starchy and tasteless, then somewhat bitter or acrid

Adulterants: The other native species of *Dioscorea* in the United States, *D. floridana*, may easily be confused with *D. villosa*, though its range is limited. This species has rhizomes with articulated nodes; each node bears a deciduous scale that leaves a linear scar. The rhizomes are unbranched and may be distinctly yellowish. Several exotic species naturalized in Florida, though larger and more conspicuous than the native species, have large vertically oriented tubers rather than horizontal rhizomes.

References:

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- Bartlett HH. The source of the drug Dioscorea, with a consideration of the Dioscoreae found in the United States. *U.S.D.A. Bur Pl Industry Bull.* 1910;189:1–29.
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