



# Cultivation Notes

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## Goldenseal

*Hydrastis canadensis*

A Rare New England Native Plant

By Anne B. Wagner

Family RANUNCULACEAE

Ambling along Sydney Eddison's Primrose Path during a RIWPS garden tour in 1993, I was astonished to see Goldenseal among the Cowslips, Anemones, Primroses, and Bellworts. It was the first time I'd seen this rare medicinal plant incorporated into a spring woodland garden. "You have to baby along the thread-like roots," Mrs. Eddison advises when propagating Goldenseal, "but once established, it pops up everywhere!" While not showy, Goldenseal is effective as a taller groundcover in woodland gardens and works well when planted with its natural companions — baneberries (*Actaea* spp.), Solomon's Seal (*Polygonatum pubescens*), Blue Cohosh (*Caulophyllum thalictroides*, also a threatened native), Black Snakeroot (*Cimicifuga racemosa*), and bellworts (*Uvularia* spp.). Additional candidates include ferns, Bloodroot (*Sanguinaria canadensis*), Jack-in-the-pulpit (*Arisaema triphyllum*), and trilliums.

Propagating and cultivating Goldenseal in our gardens is one way to conserve and perpetuate this threatened native whose roots are so valuable in the international trade of medicinal herbs. One pound of Goldenseal (about 200 roots) currently sells for over \$125. An estimated 6 million roots were traded in one recent year, and intensive harvesting along with habitat destruction has depleted wild populations. In fact, twenty-five states list Goldenseal as rare, threatened or endangered. In an effort to monitor and regulate its trade, the U.S. Fish and Wildlife Service listed *Hydrastis* in 1997 with the Convention in International Trade in Endangered Species (CITES). Now, export permits are required for "roots, rhizomes and recognizable parts" of Goldenseal. Meanwhile, the medicinal herb industry in North America is campaigning on several fronts to support research into sustainable commercial propagation and cultivation.

Goldenseal has long been a popular folk medicine, appreciated especially for its perceived action on mucous membranes (from the Greek *hydrastis* meaning "water action"). Cherokee Indians taught settlers to use Goldenseal to treat eye inflammations, skin lesions, mouth ulcers, and digestive ailments. The bright yellow roots also produce a beautiful dye. Active ingredients in Goldenseal include the powerful alkaloids hydrastine and berberine, both of which have antibacterial properties, act as mild sedatives, and affect smooth muscle. Over 500 pharmaceuticals worldwide contain Goldenseal derivatives and demand continues to rise. Expanded commercial cultivation is the only sustainable method to meet the demand.

RIWPS members are probably not involved in world trade of Goldenseal, and Rhode Island is not Goldenseal's native home, but we can perpetuate this scarce plant and contribute to cultivation knowledge by propagating and growing Goldenseal in our gardens.

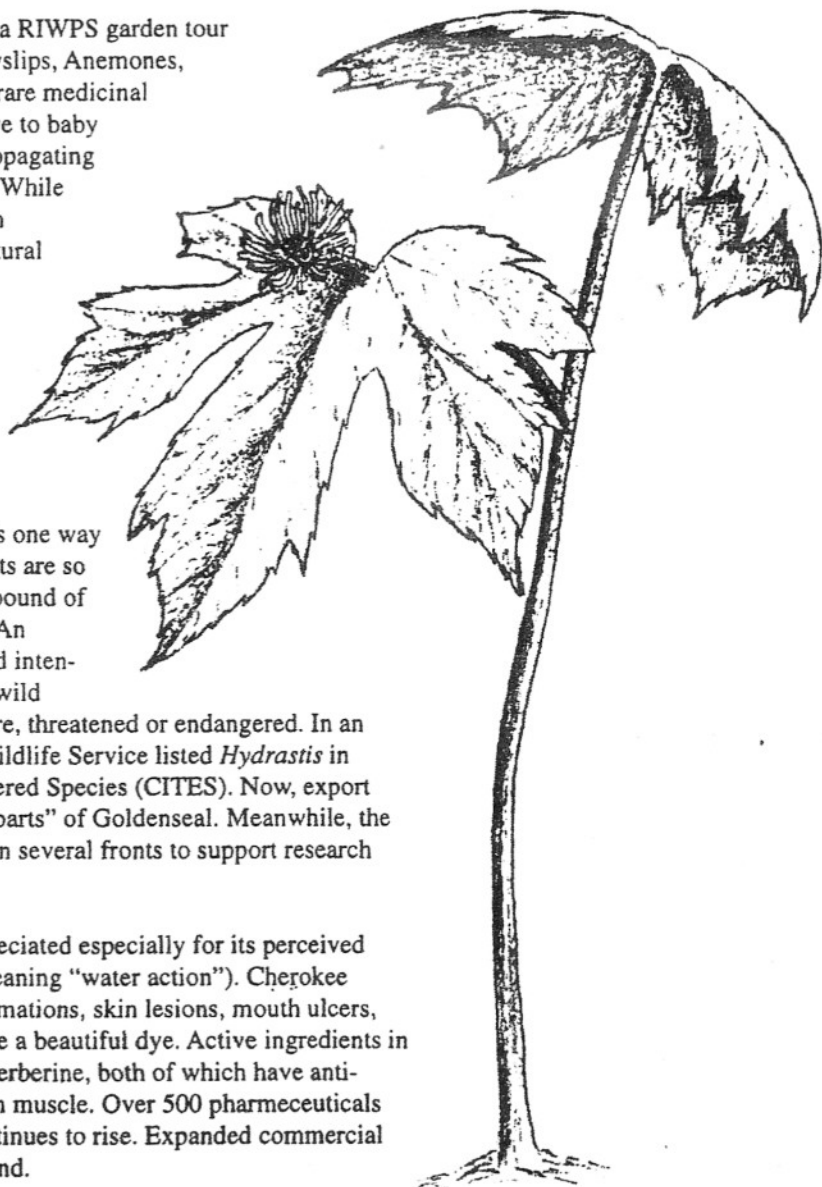


Illustration by R. Enser

## CULTIVATION NOTES

*Hydrastis canadensis* L. Goldenseal; Yellow Root; Yellow Puccoon

Rare perennial herb native to rich, old-growth, deciduous woodlands of eastern North America; VT, CT, Ontario west to MN, south to NC, GA, and AR. Knotted 2-3 inch rhizome with bright yellow tissue produces a mass of fibrous roots and bears seal-like scars from previous flower stems. A hairy, 8-12 inch stem forks at the top to produce two wrinkled, downy, palmate leaves deeply dissected into 3-5 lobes with double-toothed margins. The solitary flower borne on a short stalk blooms in April to early May. The flower lacks petals and is comprised of feathery stamens surrounding a cluster of ovoid pistils, which ripen into a conspicuous, inedible, red, raspberry-like fruit. **Caution! All parts of this plant are considered toxic. Do not ingest.**

**Cultivation:** Requires 70-75 per cent shade in rich, moist, friable, pH-neutral to slightly acid soil with excellent drainage. Good air circulation is essential. Prepare site by incorporating leaf mold or old compost to a depth of ten inches, and add a handful of bonemeal per plant. Keep free of weeds and mulch heavily with shredded leaves. Do not plant among shallow-rooted maples and conifers.

**Propagation:** Goldenseal is notorious for being difficult to propagate, yet in the right location it readily self-sows. Therefore, you may prefer to start by purchasing nursery-propagated plants.

**Propagation from root cuttings:** In fall, lift a dormant plant and sever a root. Replant the mother plant. Cut the root so that each piece contains an eye (bud) and some rootlets. Plant 1-2 inches deep in prepared garden site, or in a pot of humusy soil amended with sand or grit to provide good drainage. Cover with a thin layer of soil and mulch deeply with chopped leaves. Place pots in a shady location, and do not allow the soil to dry out. Transplant pot-grown roots to garden the following fall.

**Propagation from seed:** In late summer, harvest the raspberry-like fruit. Soak in water overnight, then gently mash with the back of a spoon until the shiny black seeds separate from the pulp. Sow seeds immediately in a pot of damp, humus-rich soil amended with sand. Cover thickly with finely shredded leaves, insert dated label and place in shady location. Plunging the pot into the ground on the north side of the house is a good strategy. During dry spells, water with chlorine-free water. Allow two full years for germination as Goldenseal seeds appear to require double dormancy (i.e., two cycles of alternating warm-cold-warm periods.) Grow on in pots for two more years before setting roots out in a permanent site. Established plants self-sow.

**Never dig Goldenseal from the wild.  
Limit seed collection to 10 per cent or less of available fruits.**

## Nursery Sources:

Gardens of the Blue Ridge • P.O. Box 10, Pineola, NC 28662.

Johnny's Selected Seeds • 1 Foss Hill Road, RR 1, Box 2580, Albion, ME 04910-9731.

*Catalog available. Order roots in spring for delivery in fall. Includes a cultivation fact sheet.*

New England Wildflower Society, Garden-in-the-Woods • 180 Hemenway Rd., Framingham, MA 01701-2699.

*Stratified seed sometimes available through catalog in January. Catalog \$2.50. Plants may be available in the sales area in April and May, or at the annual Plant Sale in June.*

Nichol's Garden Nursery • 1190 North Pacific Highway, Albany, OR 97321-4580.

*Catalog available. Order roots in spring for delivery in fall.*

Wall-Sweep Herb Farm • 317 Mt. Bethel Road, Port Murray, NJ 07865. Catalog \$2

R.I. Wild Plant Society Annual Plant Sale • 1st Saturday in June. Plants may be available.

## References:

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