

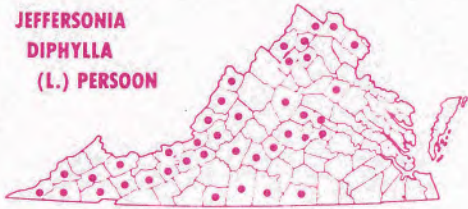
... Twinleaf uses

The rhizome, harvested in the fall, has been used to treat various ailments including rheumatism, as suggested by one of its vernacular names, rheumatism-root. Native Americans, according to author D. E. Moerman, used this plant to treat a range of ailments, from dropsy to urinary problems and diarrhea, and applied it as a poultice for sores and ulcers.

... Where to See *Jeffersonia diphylla*

Twinleaf grows in moist, deciduous woods or on partially rocky slopes and outcrops, typically on calcareous substrates at relatively low elevations. It is native from western New York and southern Ontario to Minnesota and south to Alabama and Georgia. It is indigenous, but not common, over the western two-thirds of Virginia, but absent from the coastal plain. It flowers in late March and early April in Virginia southward and late April to early May in the more northern parts of its range.

**JEFFERSONIA
DIPHYLLA
(L.) PERSOON**



Map source - *Atlas of the Virginia Flora, III* (1992)

To see and learn more about interesting species of plants native to Virginia, visit our Website (<http://www.vnps.org>) and contact your local chapter of VNPS for the times and dates of programs and wildflower walks in your area.

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• Color photo by VNPS photo contest winner Carolyn C. Bates •

Gardeners should not collect twinleaf in the wild and should be certain that native plants purchased are nursery-propagated, not wild-collected. For a list of retail sources of nursery-propagated plants and responsibly collected seed, send a SASE to:

Virginia Native Plant Society
Blandly Experimental Farm
400 Blandly Farm Lane, Unit 2
Boyce, VA 22620
540-837-1600

Virginia Native Plant Society



Conserving Wild Flowers and Wild Places
Blandly Experimental Farm
400 Blandly Farm Lane, Unit 2
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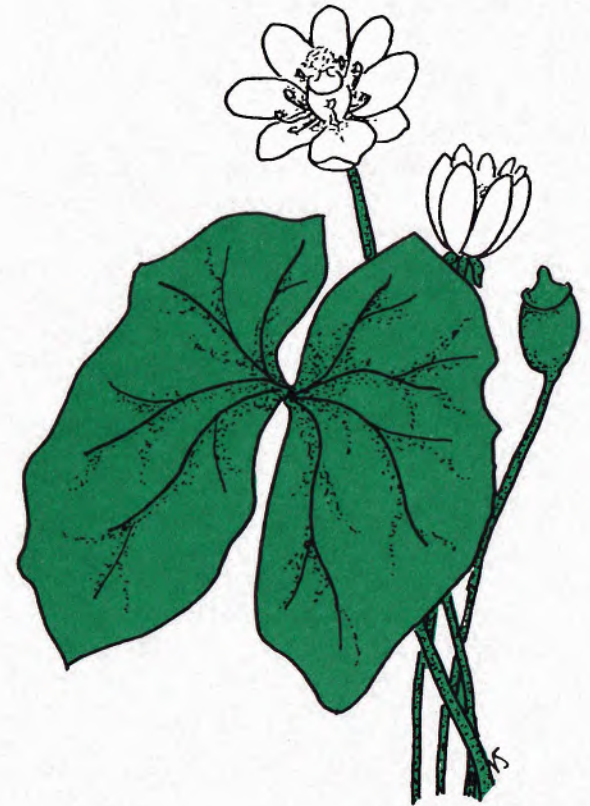
Twinleaf

Jeffersonia diphylla

1999 Virginia Wildflower of the Year

Twinleaf

Jeffersonia diphylla



1999 Virginia
Wildflower of the Year

Virginia Native Plant Society

Twinleaf

Twinleaf, *Jeffersonia diphylla*, is among the earliest of the ephemeral floral gems that dot the forest floor in spring. It is a little plant with anemone-like, fleeting, white flowers and distinctive, deeply two-parted leaves. Superficially resembling bloodroot, which blooms about the same time, it is less showy and brilliantly white, though more stately and much rarer. Twinleaf is one of Virginia's woodland aristocrats.

Twinleaf is also called American twinleaf, *Jeffersonia*, or one of several other common names (rheumatism-root, helmet-pod, ground squirrel-pea, yellowroot). Linnaeus, the first to name this plant, described it as *Podophyllum diphyllum*, a sister species of the mayapple, on the basis of specimens collected in Virginia. Forty years later, American botanist Benjamin Smith Barton saw twinleaf growing in William Bartram's garden, recognized its distinctiveness, and renamed it *Jeffersonia diphylla*, honoring Thomas Jefferson for his knowledge of natural history. Jefferson, already one of Virginia's famous statesmen, was George Washington's Secretary of State and would soon become the nation's third president. Superficially, the plant appears two-leaved, hence *diphylla*.

Jeffersonia belongs to the barberry family, Berberidaceae, which, with 15 genera and about 650 species, is widespread in the north temperate zone. Of these, eight genera and 33 species are indigenous to the continental United States and Canada, including such well-known plants as blue cohosh, mayapple, Oregon-grape, and umbrella-leaf. The species of this family are perennial herbs or shrubs. Species of *Berberis* (barberries, Oregon-grapes [*Mahonia*]), *Epimedium*, *Nandina*, and *Podophyllum* are commonly cultivated.

Twinleaf, found only in eastern North America, is one of only two species of *Jeffersonia* in the world. The other one, *J. dubia*, occurs only in Manchuria. Two other genera of this family, as well as genera of other plant families, display this type of disjunct, eastern American/eastern Asian pattern of distribution, which has long intrigued botanists.

.....In the Wild

Twinleaf is a dainty but hardy perennial with a knobby, yellowish-brown, horizontal rhizome (rootstock) and mop-like fibrous roots; several, erect, long-stemmed leaves; and one, long, leafless flower stalk topped by a single white bloom. Both the leaf and flower stalks attach to the base of the plant. The plant is 6-8 inches high at flowering time but reaches up to 18 inches as the pear-shaped capsule with a hinged, helmet-like lid matures and the stalk elongates in early summer. The unique leaf blade, like a butterfly with wings spread, is so deeply parted lengthwise into angular, oval halves as to suggest two blades. Leaflets are 4-6 inches long, 1-2 inches wide, smooth, bluish-green above, and whitened beneath.

The delicate white flowers are about an inch across and usually have eight narrowly elliptical petals and four shorter, petal-like sepals that soon fall. There are eight stamens and one pistil that ripens into a leathery, capsule-like fruit with many seeds. The flowering time passes so quickly that only the most vigilant observers catch this early wildflower in bloom. The capsule lid pops up once the seeds are ripe. The seeds, having jagged, fleshy outgrowths called elaiosomes, are adapted for attracting ants and facilitating seed dispersal. Ants carry the seeds back to their nests to feed their larvae the oil-rich elaiosomes, leaving the seeds unaffected and ready to germinate in the warm, moist soil of the nests. In this manner, they gradually spread twinleaf through the woodland. The plants also spread vegetatively, forming clones by means of the underground rhizomes.



.....In the Garden

Jeffersonia is ideal for a lightly shaded rock or deciduous woodland garden of native wildflowers in zones 4-8. It is a delight in large clumps and spreads naturally by rhizome or seed once established. Its ephemeral white flowers, among the first to brighten the garden in spring, and its interesting leaves and capsules, which persist well into summer, not to mention its heritage especially for Virginians, always stimulate conversation. The long-stemmed, pipelike pods are a novelty.

The plant is relatively easy to grow in moist, sandy garden soil liberally supplied with well decayed organic matter (such as leaf mold and peat moss,) and perhaps some lime. In nature, it thrives under a range of pH conditions (4.5-7) but seems to prefer

calcareous soil. Yet pioneer wildflower gardening authorities Clarence and Eleanor Birdseye found that it did best in their garden in acidic (pH. 4.5), humus-rich soil. Other authorities recommend a neutral soil. Cover with leaves in winter.

Propagation is best done by dividing rhizomes in the fall or early spring. Sowing **freshly ripened seeds** in the fall in a cold frame or cool greenhouse may or may not work. The elaiosomes should be removed to prevent ants from carrying off the seeds. New seedlings should be set out, well spaced, in early spring or fall. Allow at least three years from seed to flower. The plant is relatively pest- and disease-free. It can also be grown in pots in a cool greenhouse.