Trillium

Trillium ovatum

By Ellen Horowitz

JOHN R. SHARKEY

Scientific name

Trillium is Latin for "triple," referring to the plant's three leaves and three petals.
Ovatum is Latin for "oval" or "egg-shaped," a reference to the shape of the leaves.

In the moist forested foothills and valleys of western Montana, spring is announced each year by the elegant white blossoms of trillium. These understated beauties begin to bloom in late April at low elevations. Their flowering progresses through June as spring conditions slowly climb the mountains.

Like most native wildflowers of the West, trillium are perennials. What sets them apart is their longevity. One plant in Oregon grew to be 72 years old.

The lives of these simple-looking flowers are surprisingly complex.

Identification

Of the roughly 40 species of trillium that exist in North America, Montana is home to just one, *Trillium ovatum*. Easy to recognize, this plant consists of a single flower with three white (usually) petals perched atop a stem supporting a whorl of three green leaves. It's not uncommon to find a trillium with purplish-pink or rose-colored petals. Some biologists believe the color change alerts insects that the flower is past the pollination stage, that it's "closed for business."

Life history

If you're lucky enough to encounter a patch of trillium on a walk in the woods, you may notice considerable differences in plant size. A trillium's height, as well as the shape and dimension of the leaves, reveals the plant's relative age (whether young, middle aged, or mature). Mature trillium stand more than a foot tall. Their leaves measure up to five inches long, and flowers reach one and one-half inches in diameter.

For the past 14 years, Tarn Ream of Missoula has studied the complex lives of these forest-dwelling plants. She says that *Trillium ovatum* grow only from seeds, which take two years to germinate. For the first few years, the immature plant bears just one leaf. Eventually it reaches the status of a three-leaf juvenile. Ream's research shows that a trillium in Montana takes at least 18 years to produce its first flower. In addition, each year more than one-quarter of mature plants in a given area take a break from blooming and do not produce a flower. The reason remains a mystery.

Common names

Among the common names for Montana's species of trillium are western trillium and Pacific trillium. In some parts of the country, trillium are known as wake-robin because they bloom roughly when robins return in spring. Trillium are also called bethroot or birthroot for the traditional Native American use of the plant's root, an infusion used to promote menstruation. Many botanists continue to place trillium in the Liliaceae family, yet others classify it as a member of a new family, Trilliaceae.

Pollination and dispersal

Trillium rely on beetles and bees for pollination. An insect feasting on the pollen is dusted with fine, powdery grains. The insect inadvertently transfers this pollen to the stigma of the next trillium flower it visits, cross-pollinating that plant.

Ants help disperse and germinate trillium seeds. On the outside of each brown seed is a bright yellow cap-like extension called an elaiosome. Ants bite into this delectable, fleshy covering and haul the seed back to their nest. After dining on the fatty, protein-rich elaiosome, the insects discard the intact seed into their refuse pile, where it eventually germinates.

Ream says trillium seeds are dispersed even farther by deer feeding on the seed-containing fruit. Research also indicates that deer can cause trillium populations to decline if they overbrowse the vegetation. The slow-growing plants are extremely sensitive to habitat loss, indiscriminate picking, and overharvesting for medicinal or garden use.

Considering the plant's remarkable longevity and late age of first flowering, it's hard not to think of trillium in terms of human life spans. The sight of one always causes me to stop and reflect on the majestic woodland elder with the respect it is due.

Writer Ellen Horowitz lives in Columbia Falls.