

Trout Lily & Trillium: Early Bloomers In The Light

by R. Kelly Coffey

Early spring offers a short window of opportunity for many woodland plants known as spring ephemerals. In their habitat beneath the forest canopy, they must emerge, bloom, and complete their life cycles before the trees leaf-out and block the warm sun. Two familiar spring ephemerals are the trout lily (*Erythronium americanum*) and the trilliums.

Many explanations exist for the origin of the name "trout lily" and all are plausible. The spotted leaves resemble the mottled scales of a trout. Trout lilies are common along streams, and usu-



A low-lying colony of blooming trout lilies creates a yellow carpet on the forest floor.

Naturalist's Notebook

ally emerge at the same time that trout become active and fishing season opens. The Cherokee chewed the root of the trout lily and spat into the stream, claiming that substances in the root encouraged trout to bite.

Clones From Corms

A colony of trout lilies can appear to be nothing more than narrow leaves lying flat on the ground, with no apparent stems. Individual plants that will eventually flower emerge with a pair of leaves, while non-blooming plants - the majority by far - have only one leaf. The flowers are bright yellow with pointed petals bending behind the bloom, hence another popular name for the plant: dogtooth violet.

Although some plants bloom and produce seed, trout lilies frequently spread via buds from the corms (an underground root, like stems.) The result is large colonies of trout lilies that are genetically identical. Distinct colonies of trout lilies can be identified by examining the spotted pattern on the leaves;

i.e. those belonging to the same colony will have an almost identical pattern of leaf spots.

These colonies of diminutive plants that emerge for a few weeks in the spring appear to be seed-generated annuals, but the corms actually remain alive and functioning throughout the year. If asked to name the oldest living thing in a typical Appalachian wooded area, most people would probably point to the largest tree. Trout lily colonies, in fact, can exist for over a hundred years and are often older than the trees above them, especially in areas that have been cut-over in the 20th century.

Many forest trees depend on trout lilies for a major nutrient - phosphorus. Trout lilies absorb the tiny amounts of phosphorus picked up by rainwater as it runs off soil and rocks. The plants concentrate the nutrient in the leaves, making it available to surrounding trees when the leaves die and dissipate into the soil. Thus, trout lily colonies are important phosphorus "sinks" in the Appalachian forest ecosystem.

Trillium cernuum also has a white bloom, with its distinction being that its bloom hangs below the leaves, leading to the common name "nodding trillium." The various species otherwise have very similar characteristics, resulting in the common practice of referring to each simply as "a trillium."

Due to its astringent characteristics, trillium root has traditionally been used to stop the flow of blood. A poultice made with the leaves was often applied to sores and other skin-related afflictions. It was believed to aid in childbirth, resulting in other names for the plant such as "birthroot" and "squaw root."

Ironically, both trillium and trout lily (two of the most beautiful wildflowers) attract flies. Flies apparently view the mottled leaves of trout lily as decaying flesh. Red trillium, despite its pleasing appearance, produces a bad odor. As a result, the flies drawn to *T. erectum* act as major pollinators of the plant.

After pollination has occurred and seed falls to the ground, another insect helps disperse it. Trillium seeds are attached to the plant by an appendage known as a *strophiole*. The strophiole remains on the seed after it drops. Ants carry the seed to their nest in order to eat the strophiole, but they leave the seed intact to sprout the following year.

Trilliums are often sought by collectors, who dig them up for transplanting in gardens. This practice is illegal on national forest and park land.

Sets of Three

Trilliums are well-known associates of the trout lily, emerging and blooming at the same time, and generally found in the same locations. The prefix "tri" refers to the fact that parts of the plant occur in threes or multiples of three: three leaves, three petals, three sepals, six stamens, a three-sided pistil, and a six-lobed berry. Four species are common in the southern Appalachians, each distinguished by the color of its bloom: *Trillium grandiflorum* (white), *Trillium erectum* (red), and *Trillium undulatum* (white with pink center).

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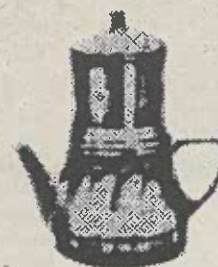
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