

VNPS Piedmont Chapter WILDFLOWER of the WEEK

WILDFLOWER #54 answer: LYRE-LEAVED ROCK CRESS (*Arabidopsis lyrata*)

Remember yellow fumewort, alternate host for the falcate orangetip butterfly? Here is one of the primary host plants, an early-blooming member of the Mustard family.

Across the northern hemisphere, it grows in local patches where the soil is thin and competition is sparse. You find it either on rocky outcrops or on sandy beaches. In North America the range is nearly disjunct, jumping from eastern states to the Great Lakes.

You can recognize this plant by the basal rosette. The pinnately compound leaves have lobes that curve like the sides of a lyre. Simple linear leaves grow along the stalk. Like other mustards, its four-parted flowers make seeds in a *siliqua*, a narrow pod pointing upward.

This delicate native has several survival tricks. Vulnerable to trampling and invasive species, it counters with quick seedset. In the center of its range, it has a wide variety of pollinators; but at the edges, it is self-fertile, assuring pollination. Trichomes (little glandular hairs) on the leaves contain noxious chemicals called glucosinolates – the same compounds that give cabbage its smell. They deter the Diamond-backed moth, *Plutella xylostella*, who specializes in eating it. Plants without trichomes are bigger; there is an adaptive trade-off between investing in trichomes and growth.

A sister species, *A. thaliana*, was the first plant to have its whole genome sequenced. *A. lyrata* has a far bigger genome and a much narrower habitat. Researchers learn a great deal about mutation and selection by comparing these two, taking advantage of their short reproductive cycles.

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Clues: Hooded flowers form a sort of pinwheel over ferny leaves.



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