

VNPS Piedmont Chapter WILDFLOWER of the WEEK

WILDFLOWER #78 answer: BEECHDROPS (*Epifagus virginiana*)

The genus name *Epifagus* tells us that beechdrops grow upon (*epi*) beech trees (*Fagus*). When you see beechdrops on the ground, look around and up; you will always find a beech tree, and usually more than one. Conversely, if you see beech trees in early fall, check the ground near them for these lovely little flowers.

The flowers are tubular, striped purple, red, or brown. The showier, upper flowers rarely set seeds, though they produce a lot of pollen. Winter ants (*Prenolepis imparis*) are by far the most common visitor to these flowers, where they collect pollen, but ant-pollinated and even hand-pollinated chasmogamous (open) flowers set few seeds. Almost all, maybe all, seeds are produced by less conspicuous cleistogamous (closed) flowers lower on the flower stalk, which self-fertilize. Rain disperses the seeds.

Yes, these are true flowers, though beechdrops are parasitic. Brown scales are all that remain of a photosynthetic ancestor's leaves. Aroused by a chemical signal from a beech tree root, a seed germinates and grows underground for a few years, tiny and butter-yellow, using stored nutrients. Then it grows a *haustorium*, a temporary organ. Penetrating the beech root, the haustorium draws water and nutrients until the plant develops tubers, which form permanent connections. Even then, these opportunists do not use enough nutrients from the beech tree to harm it.

The postglacial spread of beechdrops followed the migration of beech, but only where beech trees established large populations. This suggests that the plant depends for survival not only on a beech tree, but also on a dense population of beech trees. For this reason ecologists call beechdrops one sign of a healthy forest.

WILDFLOWER #79

Clues: Don't confuse this native beauty with its tougher, spinier European cousin.



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