



## Wandering the Woods with Matt

Parasitic plants

(Genus *Monotropa*)

Observed September 2020

I think parasitic plants are cool. Well, to be honest, I think most plants are cool. And insects, spiders, mites, fungi... But parasitic plants are *especially* cool. They do things most other plants can't. And when you see one in the woods, they look strikingly different from other plants. But they still do "plant" things, like making flowers, getting pollinated, producing fruit and seeds.

A Nature Mystery in our August 2020 newsletter featured the dodder vine, a genus of parasitic plants that tap into other plants above ground. In this post, I'll focus on two plants in the genus *Monotropa*, which parasitize other plants by tapping into their roots.

Photo 1 is of *Monotropa uniflora*, taken at the Upper Paradise Nature Preserve

Indian pipe, (*Monotropa uniflora*) will be a familiar plant to some of you. It is common in our woods, pure white, with a flower that nods downwards (looking somewhat like a pipe, and perhaps giving rise to the common name). After the plant is pollinated, the plant straightens and the fruit points directly upwards. It can look completely different at this stage.

Photo 2 is of *Monotropa uniflora* in fruit from Pike County

The most obvious feature of indian pipe is that it is pure white, not green or greenish like almost all other plants. Plants are green because they contain chlorophyll, which they use to convert sunlight into sugar. Indian pipe gets its sugar by taking it (stealing it, if you prefer) from other plants, by hooking into their root systems. Because it doesn't need to photosynthesize, Indian pipe has evolved not to produce chlorophyll. Without chlorophyll, it is not green.

Photo of *Monotropa hypopitys* (pinesap) at Hilliard Conservation Easement

Pinesap is a plant that I saw for the first time a few weeks ago. It has a larger range than Indian pipe, found in temperate regions of both continents of the Northern Hemisphere, but generally less common than Indian pipe over much of its range. Each stem has multiple flowers and the two populations that I saw were noticeably pinkish. Pinesap parasitizes the roots of trees.

