Wandering the Woods with Matt

Nomad bee
(genus *Nomada*)

on Spring Beauty
(*Claytonia virginica*)

Observed 5/2/2020

at Hickory Valley Park

adjacent to PHLT's
Pomeroy Nature Preserve

The observation this week is of a Nomad bee (genus *Nomada*) on spring beauty (*Claytonia virginica*) at Hickory Valley Park, very close to the Pomeroy Nature Preserve, on May 2nd, 2020.

Spring beauty is one of many spring ephemeral wildflowers that I look forward to seeing as I visit PHLT preserves this time of year. There are two species of *Claytonia* that occur in our region. Both species have identical flowers of 5 petals with faint to dark purple veins, but *C. caroliniana* has short and wide leaves, while *C. virginica* has long and narrow leaves. The latter species of spring beauty has special significance to me as it was a species my wife studied as she pursued her PhD in pollination ecology. I have fond memories of sitting quietly in sun-dappled forests, tracking insect pollinators as they visited dense patches of spring beauty and other wildflowers.

I saw my first spring beauty in Monroe County on April 28th at the Pomeroy Nature Preserve, where it occurs in high densities. It is a common spring wildflower throughout most of its range from Minnesota to Maine and south to Texas, favoring richer soils than those that are typically found in the Poconos. An interesting feature of this species is that the color of its pollen varies from a very light pink, almost white,

to a deep pinkish-purple color. In the photo, observe how the color of the anthers (the business end of the stamens) and the veins differ on each of the two flowers.

The insect on the flower is a nomad bee. If you are thinking that it doesn't really look like a bee, well, good observation! These bees, also know as cuckoo bees, have evolved to be kleptoparasitic on other bees, both social as well as solitary. The nomad bee steals into their hosts' nests and lays their eggs there, utilizing resources that the host has collected for its own offspring. (Just as cuckoos and cowbirds parasitize nests of other birds.) Because of this behavior, nomad bees do not need to collect pollen to feed their young. They don't have special sacs for carrying pollen and most species have lost their hairs (which in other bee species are often used to gather pollen), hence their wasp-like appearance.

However distasteful some people may find this lifestyle (and the appropriateness of ascribing human moral judgments to insect behavior certainly can be debated), it has been an extraordinarily successful evolutionary strategy for the nomad bees. There are more than 850 described species of nomad bee, and they occur worldwide.

The particular nomad bee photographed on the spring beauty flower was probably sipping nectar. As mentioned above, they do not collect or eat pollen.