

SFI Biodiversity Species Fact Sheet

West Virginia White (*Pieris virginienis*)

Globally Imperiled Butterfly Species; State Rank: S2 (imperiled) Global Rank: G2G3 (imperiled to vulnerable)

Identification

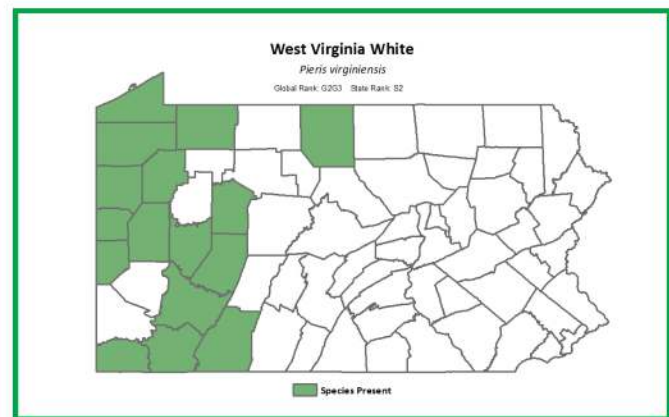
The West Virginia White is a relatively small butterfly, measuring approximately 1.5 inches (3.5cm) in wingspan. The wings are dusky white, somewhat translucent, with few dark markings on the upper surface. There is gray scaling along the wing edges and wing base on the upper side. Females are slightly grayer than males. The underside of the hindwings is faintly gray along the veins.



Photo Credit: Pete Woods

Biology-Natural History

The West Virginia White has four distinct life stages: egg, larva, pupa and adult. There is one brood per year. Adults appear from mid-April through early June (depending on latitude and altitude). The adults are short lived, typically only 5-10 days. They mate quickly upon emergence from the pupa and females lay eggs (oviposit) on the leaves of the larval food plants, usually toothworts, native mustards of the genus *Dentaria*. The brief egg stage (5-10 days) is followed by a relatively short larval stage (5 instars; 10-20 days), and an extended pupa stage (10-11 months in most cases). The larvae hatch and develop quickly, feeding on toothworts (*Dentaria diphylla*, *D. heterophylla* and sometimes *D. laciniata*) and rock cress (*Arabis laevigata*).



Distribution & Habitat

The West Virginia White occurs only in mature, mesic deciduous forest and northern pine-hardwood forests including northern hardwood forests and hardwood swamps, where hostplants are abundant. Typically, the canopy is dominated by beech and maple.

Conservation Concerns

The invasive plant, garlic mustard, disrupts the West Virginia White life cycle. The butterfly uses plants in the mustard family as a larval host plant. Larvae feeding on garlic mustard either die or do not develop properly which causes a decrease in the population. Garlic mustard is aggressive and can out-compete native mustard species. Another primary threat is loss of habitat, through logging and clearing for agriculture or residential development. The continued fragmentation of mature forests, rampant spread of invasive plant species into undisturbed forest remnants, excessive deer browsing, and spongy moth control efforts all pose imminent threats to the long-term survivability of this species. Additionally, warmer, drier springs mean spring ephemeral host plants die back quickly, leaving little time for the West Virginia White's eggs to develop to maturity.

Management Practices

Targeted removal of invasive garlic mustard should benefit the West Virginia White by allowing the native host plants to thrive. The species usually benefits from the designation of Special Areas or Roadless Areas aimed at protecting old growth hardwoods. Connectivity of habitat is important as the West Virginia white will not travel large open distances from one patch of habitat to another. The recent invasion of hardwood forests by garlic mustard has prompted an intensive effort to begin controlling and hopefully eliminating this species from high quality forest tracts. If anyone observes this species they should call the jurisdictional agency, DCNR Bureau of Forestry at 717-787-3444.