

ENVIRONMENTAL ADVISORY COUNCIL

The Importance of Woodland Conservation to our Birds

by Dr. Jonathan Wilson, Haverford College Department of Environmental Studies, and
EAC Member; Philip Witmer, Vice President BirdTownPA, EAC Associate Member

The Township's trees, both at individual scale and in larger woodlands, enhance our environment in many ways, from landscape shade in the summer to absorbing carbon dioxide through photosynthesis. Previous articles by the EAC have focused on the importance of preserving our woodlands

Median Population Trends — West. Suburban Phila.*

Wood Thrush	↓	34%
Carolina Chickadee	↓	48%
Baltimore Oriole	↓	38%
Scarlet Tanager	↓	43%

*Cornell Lab Of Ornithology



Pugh Road Wooded Property; Photo By Jennifer Cox

and tree canopy because of their vital role in reducing flooding and stormwater runoff and in sequestering greenhouse gases and moderating climate extremes. 70% of the woodlands in Pennsylvania and the overwhelming majority of woodlands in our Township are on private property, and their conservation is crucial for these, and other, environmental reasons. One of the less-appreciated roles that our trees play is habitat; they are home to a diverse range of animals, including birds. Many bird species have experienced a steep population decline in recent decades, up to 60%, or greater, in the last 50 years. Therefore, in addition to the many other roles they play in our Township as part of our natural landscape and stormwater management “green infrastructure”, preserving Township woodlands is important to stemming the further loss of birds.

Local habitat conservation can play a vital role in supporting diverse and abundant bird populations. Although deforestation of tropical forests in overwintering sites is a factor largely beyond our control, research has shown that forest-dwelling tropical migrant birds (vireos, warblers, tanagers, thrushes, and flycatchers) that visit our area in the summer, have declined much more sharply in areas of forest fragmentation than in areas of continuous forest. This decline is because forest fragments and smaller, less connected woodland areas have more “edge” per unit area, which allows for increased predation and parasitism. For example, more

frequent cowbird parasitism of bird nests and increased predation of eggs occur because nests and eggs are not protected by a larger woodland buffer. Although some birds have evolved responses to these challenges (robins and cardinals recognize and remove cowbird eggs from their nests), many birds have not. Therefore, the more fragmentation and reduction of our local woodlands

takes place, the greater the loss of birds, and we have already observed populations in decline in our area. For example, the Cornell Lab of Ornithology has recorded a 34% decline in wood thrush, frequently heard in the woodlands of the Trout Creek watershed, 34% from 2007-2021 in the western Pennsylvania suburbs, with other songbirds such as orioles, chickadees, and tanagers recording similar losses. This ongoing loss of birds has cascading effects on our local ecosystems and gardens. For example, each individual songbird consumes up to a thousand caterpillars a day (Leslie Jones Sauer, Once and Future Forest). With fewer birds, our environment loses an important form of insect predation control.

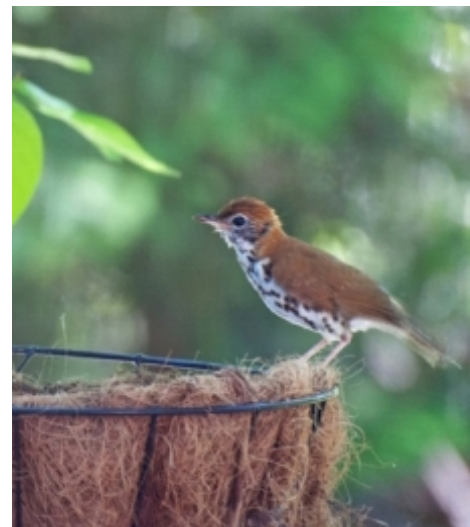
Reducing the number and density of trees in our wooded areas also has negative effects on the environment and bird populations in other ways. First, the close proximity of woodland trees to each other acts as a stabilizing influence on soils and trees, allowing trees to intertwine their roots to support each other during storms. According to Doug Tallamy (The Nature of Oaks), thinning out trees in a woodland does not protect them, but rather decreases their resiliency from winds during storms, increasing tree fall and further loss of habitat. Second, clearing of trees and disturbance of the forest floor leaf litter increases the spreading of invasive plant and animal species, which thrive on sunlight and disturbed soil. Many of these woodland invaders are now supplanting natural regeneration of forests

and hindering regrowth of native shrubs and wildflowers, which play an essential role in supporting our birds and other wildlife.

There is much that we can do to preserve these interconnected populations of birds and trees in our area. Property owners who are fortunate enough to have woodlands or woodland borders on their land can help preserve our bird population through action and vigilance, including the following:

- ...reducing the amount of any woodland disturbance on their properties; keeping woodland patches intact and connected, wherever possible.
- ...directing arborists to leave the dead snags of trees to provide habitat for woodpeckers and other birds.
- ...avoiding compaction of tree roots from heavy equipment and mowing.
- ...promptly pruning any broken branches on trees.
- ...leaving woodland floor leaf litter wherever possible; and,
- ...where tree removal is necessary, replanting canopy trees with shade tree species native to our woodlands and protecting volunteer seedlings from deer browse.

Any or all of these actions will contribute to greater forest health and stronger bird populations in our area.



Wood Thrush; Photo By Bonnie Witmer