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OPINION

OP-ED

Fluttering Into Oblivion

By Rick Cech

WARD POUND RIDGE RESERVATION, a 4,700-acre preserve in Cross River, is one of the finest places in the Northeast to find butterflies. Today, as in earlier times, a watchful visitor will be impressed by the luxuriant chaos of a busy meadow in mid-July when the number and variety of species of butterflies reach their peak.

In this busy jumble, scores of butterflies can be observed jostling for position on dogbane and milkweed blossoms. Elegant, gliding monarchs and swallowtails will land to sip nectar alongside smaller, fast-darting skippers. In all, more than 80 butterfly species have been recorded at the reservation, including more than 65 percent of all the species that commonly reside in New York State.

The management program at the reservation tries to maintain the original environmental character of the property by not disturbing the integrity of habitats and not using pesticides and herbicides. Even mowing at the reservation is scheduled so as to avoid disrupting the butterflies' life cycle.

But despite all this, not all is well at Ward Pound Ridge. During the last 20 years, butterfly life in the park has declined. According to data collected as part of the North American Butterfly Association summer census, the average annual species count has fallen by some 15 percent, to 37 in 2003-05 from 44 in 1988-90. Several species that were common until recently now occur in greatly reduced numbers, and perhaps as many as six species seem to have disappeared altogether.

These losses are surprising because they have no obvious cause and they involve invertebrates, which are well known for their prodigious reproductive capacity and ability to adapt. So is this decline some sort of isolated anomaly, unique to Pound Ridge?

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Sadly, it is not. While available United States census information is not yet robust enough to support detailed comparisons, we do have some sources of parallel data. In Britain, for example, where butterfly study has been in vogue since before the Victorian era, a painstaking, 16-year study of butterfly populations was released in 2004. It showed that about 70 percent of the country's 58 resident butterfly species had declined at least to some extent, and that species as a whole had disappeared from 13 percent of the tracts where they once lived. Oth-

Across the region, butterflies are disappearing.

er studies in Europe have yielded similar results.

The loss of butterfly species from seemingly intact habitats in the metropolitan area is not unprecedented. Other species that now seem to have disappeared from the region include the bronze copper, which was once found at Troy Meadows in East Hanover, N.J.; the small but spectacularly bright green Hessel's hairstreak that once thrived in Long Island's cedar swamps; and colonies of northern metalmark that use to call southwestern Connecticut home.

So, what is happening? Without well-controlled studies, we cannot be precise. But several likely causes come to mind. First, there are the deer. With historic predators eliminated, white-tailed deer populations have surged, gnawing literally to the root many specialized plants upon which butterflies survive.

Second, a bevy of invasive plants like black swallowwort, purple loosestrife and fox grape now crowd the reservation's meadows and the metropolitan area, choking out both host plants and nectar sources and in some cases proving toxic to caterpillars.

Third, growing populations of earth-

worms are depleting leaf litter and altering the delicate chemical composition of soils in many locations, eliminating suitable habitat for low-growing herbs on which butterflies depend.

An additional threat in the region is the European paper wasp (*Polistes dominulus*). This stowaway, most likely on cargo shipments from Europe and other parts of the world, resembles a long-legged yellow jacket. Since first being observed near Boston around 1980, it has formed colonies as far west as British Columbia. Aggressive and prolific, it builds small, tactical nests near human habitation and feeds on soft food like butterfly and moth caterpillars.

And then, of course, there's global warming, with its volatile climate changes affecting the survival rate of butterflies, and the increased use of pesticides. A generation ago, the careless spraying of DDT in apple orchards and elsewhere caused near-catastrophic environmental damage. While the use of DDT is now banned in the United States, other harmful pesticides, including those used to control mosquitos, are increasingly common here.

With all the different issues contributing to butterflies' disappearance, there are no easy solutions. Governments and conservation groups need to work to reduce deer browsing, eradicate certain invasive plants and propagate important host and nectar plants in gardens where conditions can be controlled. More novel and complex issues affecting butterfly populations will require continued investigation, research and financing. On a more personal level, individuals can grow plants that butterflies or their larvae feed on.

Butterflies will not perish from the earth — fossil evidence suggests that butterflies have existed for at least 40 million to 50 million years. But some species will continue to decline sharply as humans continue to lumber forward, ever faster, through butterfly meadows and other habitats, still clumsy and reckless. How long will this continue until we recognize the gravity of our actions? □