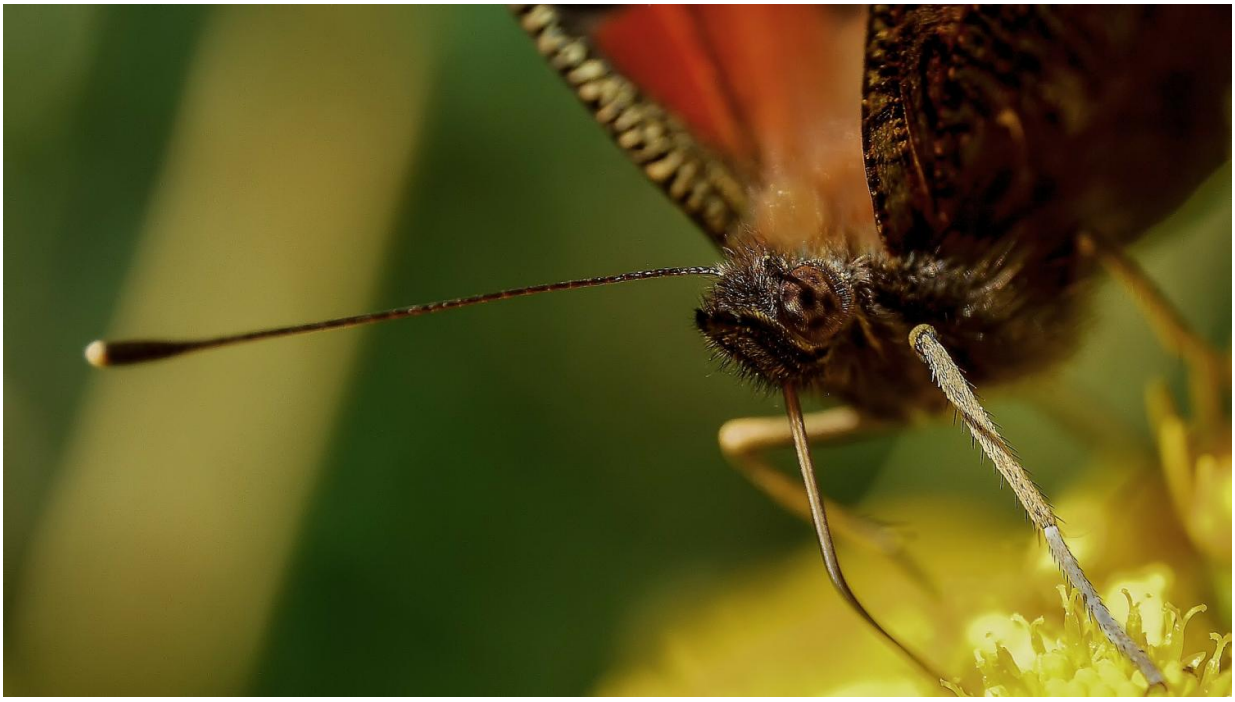
Zoologist bemoans the continuing loss of butterfly species

July 15 2016, by Bob Yirka



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(Phys.org)—Jeremy Thomas, a zoologist with the University of Oxford, has written a Perspective piece for the journal *Science* offering an overview of the declining numbers of butterfly species around the globe and the reasons for it. He also notes that because of the unique requirements of butterflies, many could be saved if some effort were put forth.

Butterflies hold a unique place in the world of insects, at least for humans. They do not really do anything useful, yet they consistently rate as one of the most popular of all the bugs, showing up in songs, poetry and children's books. People simply like them because they are so beautiful. But like so many other things in life, their beauty may be ephemeral—many species have already gone extinct, and many more are headed that way.

It is because of the way humans use the land, Thomas notes—we destroy their natural habitat and then cover it over with buildings, homes or crops, leaving little for butterfly larvae to eat. The adults are fine, he adds; they move from plant to plant, eating whatever they find. But the larvae for a single species depend on a certain type of plant, or maybe two. And if that plant is unavailable, the larvae die. There is another problem, Thomas points out—most species of butterfly, unlike the migrating monarchs, do not travel far—some never move any farther than a few acres. That means it does not take much to wipe them out. A single housing community, for example, can signal the end for the butterflies that once lived there. He offers some sobering statistics: In a Bavarian reserve, scientists have been tracking butterflies for almost 200 years—back in the 19th century, there were 117 species living there; today, despite efforts to save them, there are just 71.

But it is not all doom and gloom. Scientists know more about butterflies than just about any other type of insect, and one thing they have learned is that to save them, all it takes is the proper mix of vegetation and sometimes ants. And better yet, it can be done in conjunction with human settlements—people can find out which types of butterflies could or used to live in their area, figure out what sorts of plants their larvae need, and then simply plant those in their yards—then invite local butterfly groups to bring some over.

More information: J. A. Thomas. Butterfly communities under threat,

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Summary

Butterflies are better documented and monitored worldwide than any other nonpest taxon of insects (1). In the United Kingdom alone, volunteer recorders have sampled more than 750,000 km of repeat transects since 1976, equivalent to walking to the Moon and back counting butterflies (2). Such programs are revealing regional extinctions and population declines that began before 1900 (3, 4). In a recent study, Habel et al. report a similar story based on inventories of butterflies and burnet moths since 1840 in a protected area in Bavaria, Germany (5). The results reveal severe species losses: Scarce, specialized butterflies have largely disappeared, leaving ecosystems dominated by common generalist ones. Similar trends are seen across Europe (6) and beyond, with protected areas failing to conserve many species for which they were once famed.