

NOTES ON COLLECTING *ANTHOCARIS MIDEA* AND
EUCHLOE OLYMPIA

by F. R. ARNHOLD

After reading Dr. RAWSON's item "Hilltops and *Anthocaris*" (*Lep. News* vol. 5: p. 70), I feel that I should relate my experience with *A. midea* and especially *Euchloe olympia*. I have taken *E. olympia* in Missouri, Minnesota, and Wisconsin. Unfortunately I am unable to give their complete life history, altho I have tried to study their habits fairly closely.

E. olympia is found in local and favored spots, on hillsides and the crests of steep and narrow ridges. In Missouri I find that their time of flight overlaps with *A. midea*, and both may be taken in the same location at the same time; however *E. olympia* shows up a few days to a week before *A. midea*. Their time of flight is when the wild plums are in bloom. Both are Cruciferae feeders, feeding on *Arabis* (rock cress).

In Missouri, where the St. Louis collectors consider *E. olympia* a choice species of Lepidoptera, I have taken them at Meremec Highlands and at Rankin. There I found *E. olympia* on the crests of the narrow rocky ridges. On top of these ridges there is a good view of the steep hillsides. From this vantage point the males were observed flying up the side of the ridges within a foot or two of the ground, evidently in search of females. Upon reaching the crest they would fly parallel with the crest rather than down the other side. Upon seeing another of its kind not too far from its line of flight, it would go over to investigate. If it was another male there would be a minor dispute and then each went on its way again. The female would fly in a similar manner, somewhat slower, searching for the food plant.

The females were observed to deposit only one egg at a time on the tender leaves of the flower stem of rock cress, which grows on these narrow rocky ridges. One female was observed depositing an egg and then, after hunting around for approximately 30 seconds, came back and deposited another egg on the same plant before leaving for another place. I lifted a number of plants of rock cress that had similar eggs on them and transplanted them in St. Louis. I placed a large screen cage over the whole patch. Unfortunately I had to farm these out, and not being around to look after them, I missed out on being able to give an account of the larva. When the adults emerged the following spring there was one *A. midea* with them. We can therefore assume that both species are single brooded in that area.

In Minnesota, I took *E. olympia* in larger numbers than in Missouri. The location was a non-glaciated area at Dresbach, Minn., approximately 8 miles north of La Crosse, Wisconsin, on highway #61. Here there are rocky ridges that run back from the bluffs facing the Mississippi River. These ridges rise to about 500 feet above the river valley, and in many cases are very thinly wooded or entirely bare of trees. On top of these ridges *E. olympia* acted like they did in Missouri, and I also noticed that they preferred the leeward side of the ridges. The wind blows quite strongly on top of these in spring. Some, on approaching the crest of the ridge, would be picked up by a strong gust of wind and blown as much as a hundred feet out over the valley, where they were noticed to return to the slope and start up again. However I

never came across a single specimen in the valley, while they were plentiful on top of these ridges.

The location in Wisconsin happens to be the writer's back yard at his residence on Lake Wissota. It is a prairie-like area north of Chippewa Falls, Wis., and was heavily glaciated. It was at some time in the prehistoric past a lake formed by the receding glaciers. In more recent times it was covered with a pine forest, and at present no trees are left except a few on waste land and along the streams. It is all sand and gravel with a thin layer of topsoil. The elevation is 960 feet above sea level. *E. olympia* flies on top and the sides of the bank bordering the lake. The banks of the lake are rather steep and about 65 feet high in most places. The winds are rather brisk in spring and set up considerable turbulence on top and sides of this bank, while there is nearly always a narrow band of calm either on top or on the side of the bank depending on the wind direction. This band of calm seems to be their line of flight, and they travel parallel with the bank. Rock cress can also be found growing on the bank.

So far I have only taken *Anthocaris midea* in Missouri at the following locations: Meremec Highlands, Rankin, Glencoe and Bagnell. Bagnell is near the Lake of the Ozarks. *A. midea* was observed to go farther afield from the ridges and could be taken at lower elevations, and some were even seen flying across the valleys between the ridges. However they were found in greater numbers on the hilltops, males predominating.

Since their food plant prefers to grow on the ridges, I wonder if they do not consider these their private domain, and could it be that the males prefer the hilltops as a sort of lovers' lane?

Route 3, Chippewa Falls, Wisconsin, U. S. A.

LURING ANTHOCHARIS SARA INTO THE NET

After missing about one out of every four males of *Anthocharis sara* Bdv. which flew rapidly and erratically through our patio in La Tuna Canyon, I decided the only way to get a good series of these adept net-dodgers was to use a decoy in order to take advantage of their habit of chasing one another. Into the lower side of the thorax of a recently killed male, whose wings were spread out horizontally, I inserted one end of a green-colored pipe-cleaner which I had wrapped around the winged nut that fastens my net hoop to the handle, and had bent so that the specimen rested in the center of the net opening.

As soon as the next male *sara* came within several feet of the net, he dived toward the decoy specimen, and was easily captured by a gentle flip of the net. Since all the males followed approximately the same route along the terrace, I stood in one spot, or sat in a garden chair, holding the net in their line of flight. Every male that came within five feet flew down to investigate the dead specimen.

The system worked so well that few specimens escaped, and I netted over sixty males during May 1952. Only fifteen females were seen during this period.

Although I have not tried this system on other species, I imagine it might bring good results with some of them.

WILLIAM H. EVANS, 8711 La Tuna Canyon Road, Sun Valley, Calif., U. S. A.