

FLIGHT HABITS OF *ANTHOCARIS*

by WILLIAM H. EVANS

For fourteen years I have lived on a "flyway" of *Anthocaris reakirtii* Edw. in the Verdugo Mountains in Los Angeles County, California, and have been able to make careful observations on the flight habits of this species. From my back yard, which is in the bottom of a steep, narrow canyon that branches off from the north side of La Tuna Canyon at an elevation of 1160 feet and extends back one thousand feet to a ridge of 1475 feet above sea level, I have an unobstructed view of the slopes and ridges which rise to forty feet on the east side and over one hundred feet on the west.

Since *A. reakirtii* males fly up and down this canyon from one to three feet above the lowest part of the canyon floor, most of them pass through my yard—in fact, only about two per cent of all the males observed here have failed to fly through the yard, and these strayed only fifteen or twenty feet up the slope while chasing each other or pursuing females, returning to the vicinity of the dry stream bed a short distance away and continuing their flight either up or down the canyon. I have never seen males fly over the ridges on either side. Apparently they never cross the ridge at the head of the canyon, for those that fly up the canyon always return within five or ten minutes. After leaving the side canyon, they fly along the north side of the main canyon a few feet from the base of the slope. The direction of the wind seems to have no effect on the flight of *A. reakirtii*.

The females frequently fly up and down the slopes and over the ridges as well as in the canyon bottoms. Most of their eggs are laid on species of *Brassica* and other Cruciferæ growing in the lower parts of the canyons; therefore, the greatest number of *A. reakirtii* emerge there, and males have the best chance of finding females by flying up and down the canyons. Since males outnumber females about ten to one, many males never find mates.

These descriptions of flight habits are based on observations of over 1500 *A. reakirtii* males. During my first thirteen years in this canyon, between fifty and one hundred males flew through the yard each spring. Last year (1953) was exceptional: in my yard, between January 21 and March 29, I caught 500 males by using a decoy specimen on my net (*Lepid. News*, vol.6:p.100), and I saw 64 other males and 52 females.

The large late-spring form of *A. sara* Bdv. is not abundant in this canyon; in fact, some years it does not appear at all. *A. sara* males follow the same route through the canyon as *A. reakirtii*, but fly faster and a foot or two higher than the latter, and sometimes cross the ridge at the head of the canyon.

In several other localities I have seen both of these species flying along stream beds and the bases of slopes; however, there is no reason to give details on these places. In the case of these nonmigratory species, careful observations over a period of many years in one locality are more valuable than brief observations in a number of widely scattered areas.

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