

RETRIEVING MARKED *ANTHOCARIS REAKIRTII*

by WILLIAM H. EVANS

At the suggestion of Dr. C. L. REMINGTON, I have been marking specimens of *Anthocaris reakirtii* Edw. with cellulose paint and releasing them in order to learn more about their flight habits. In my previous studies of unmarked specimens (*Lepid. News*, vol. 8: p. 10), it had been possible to keep track of all the males that made the short round trip to the head of the small canyon back of my house; however, there had been no way to determine if those which flew out of this side canyon into the main part of La Tuna Canyon ever returned to my yard.

By using a different color paint each day and by painting the small dot in a different position on the hind wing of each butterfly, it was possible to identify each individual. Immediately after netting each male when he flew at the dead decoy specimen on my net (*Lepid. News*, vol. 6: p. 100), I transferred him to a small transparent plastic box which I then covered with a cardboard box. While the butterfly settled down to rest in the darkened container, I wrote in my notebook the time of capture, number of the specimen, and the color and location of the spot to be painted on the underside of one hind wing. After two or three minutes in the dark, the sleeping butterfly could be held with a large pair of forceps while the dot of paint was applied with a straw. When released, most flew to a nearby bush to rest before flying away.

The frequency of return of marked *A. reakirtii* was surprising. Between February 7 and March 2, 1954, 33 of the 68 males marked were recaptured: 17 were recaptured once; 10, twice; 3, three times; and 3, four times. Sixteen were recaptured the first time on the same day they were marked; 8 were recaptured the first time on the day after being marked; 6 returned the first time on the second day; and 3 did not reappear until the third, fourth, and sixth day after being painted. No specimen was captured more than three times in one day. The 68 *A. reakirtii* were netted 126 times.

During 1955, my *A. reakirtii* marking was limited to a ten-day period in February. Of 17 males netted, only four were recaptured; however, this small percentage of recaptures can be explained by observing the effect of unfavorable weather on *Anthocaris* flight. Five released specimens failed to reappear after a two-day rain. The chances of recovering 5 other individuals, which I marked on a warm day, were greatly reduced when the next two days turned so chilly that hardly more than one hour each day was warm enough for butterflies to fly.

This method of releasing and recapturing *A. reakirtii* males in just one spot has proved that in wandering along the main canyon and up and down side canyons, about half of the males making a round-trip in a particular side canyon are likely to return at least once to that same canyon. The females almost never return to the same area. To determine how far males and females wander, it would be desirable to have several collectors searching for the marked butterflies in various branches of La Tuna Canyon.