

- CLARK, A. M., 1961. Some effects of X-irradiation on the longevity in *Habrobracon* females. *Radiation Research*, 15: 515.
- JOLY, P. & G. BIELLMAN, 1958. Effects of irradiation on *Locusta migratoria* (L.). *Compte Rendu Societe de Biologie*, 247: 243.
- VILLEE, C. A., 1946. Some effects of X-rays on development in *Drosophila*. *Jour. Exp. Zool.*, 101: 261.
- WHITING, A. R., 1950. Failure of pupation of *Ephestia* larvae following exposure to X-irradiation. *Anatomical Record*, 108: 609.

---

APPARENT PARTIAL COURTSHIP BETWEEN *MEGATHYMUS*  
*YUCCAE COLORADENSIS* AND *M. STRECKERI*  
(*MEGATHYMIDAE*)

MICHAEL TOLIVER

1612 Indiana N.E., Albuquerque, New Mexico

On April 23, 1966, while collecting on the west slope of South Sandia Peak at an elevation of approximately 6,200 feet, about three miles south of Embudito Canyon, Bernalillo County, New Mexico, I saw two *Megathymus* apparently engaged in a courtship flight. As I approached in the hopes of capturing them, the larger one lit on a bare patch of soil and the smaller one immediately lit beside it, about one inch away. I had approached close enough to identify them both, and was surprised to discover that the large *Megathymus* was a female *Megathymus streckeri* (Skinner) and the small one was a male *Megathymus yuccae coloradensis* Riley. An attempt to capture them was delayed to see what would happen. The female *M. streckeri* remained passive with her wings tightly closed. The male *M. y. coloradensis* fluttered its wings for a moment, then curved its abdomen so that the tip touched the tip of the female *M. streckeri*'s abdomen. The female responded by flying up with the male in close pursuit. At this point I captured them.

The behavior of these two individuals is similar to the mating behavior described for *Agathymus* in Arizona by Roever (1965), but differs in several aspects. In the mating procedure of *Agathymus polingi* (Skinner), the female fluttered her wings while the male was passive. This is the opposite of the behavior of the *M. streckeri* and the *M. y. coloradensis*. There is the possibility that the male or the female discovered that the other individual was not of their species and responded ac-

cordingly. This view was also suggested by Mr. Kilian Roever (*in litt.*) after he had read the author's manuscript. He stated "The sexual attraction does not necessarily appear to be mutual because the female did not accept the male during the period of observation. The attraction was primarily by the male to the female." It would seem highly improbable that a mating between these two species would ever occur naturally. They do appear similar enough to attract each other's attention, even if only for a moment. Roever (1965) says: "Territorial males rarely left their perches to investigate ovipositing females, *Agathymus* of other species, or other insects passing through their territory." "In the few cases where males left their perches to investigate ovipositing females they returned to the perches after approach(ing) no closer than two or three feet." Assuming that females of another species would have little more attraction than ovipositing females of the same species, the behavior of these two individuals is, to say the least, unusual.

Another factor is that *Megathymus streckeri* is usually temporally isolated from *Megathymus yuccae* by two or three weeks. Last year (1966), however, both species were flying at the same time. Seasonal isolation is probably the main isolating mechanism between these two species, but this is not always true, as pointed out by Roever (*in litt.*), "In an attempt to find out where the isolation mechanism is that isolates *streckeri* and *yuccae* as species our information is limited to mechanisms that prevent interspecific crosses. Although (a) seasonal isolation is generally true it is not always the case as your observation indicates." In the cases where seasonal isolation is not the isolating mechanism, it is probably the behavioral pattern of the adults that is the isolation factor.

It is interesting to note that the food plant of both species here is the same, *Yucca baileyi*, although *Megathymus yuccae* also uses *Yucca baccata*.

The author is indebted to F. M. Brown, Fountain Valley School, Colorado Springs, Colorado; Kilian Roever, Phoenix, Arizona; and Richard Holland, Albuquerque, New Mexico, for reading the manuscript and offering their encouragement.

#### LITERATURE CITED

- ROEVER, K., 1965. Bionomics of *Agathymus* (Megathymidae). Jour. Res. Lepid., 3(2): 103-120. ["1964"].