



DRAGONFLIES ATTRACTED TO AND SELECTIVELY FEEDING ON CONCENTRATIONS OF MOSQUITOES¹.—(Note) There are numerous reports of predaceous vertebrates (particularly birds) quickly finding localized concentrations of prey, but documentations of invertebrate predators with such ability are difficult to find. While releasing marked mosquitoes in August 1971, we observed a rapid accumulation of the large 'green darner' *Anax junius* (Drury) and witnessed selective feeding on this man-made concentration of prey.

The observation site was a 5-acre old field (now mostly *Baccharis* and guava) near the center of a heavily forested 100-acre island in the St. Johns River marsh west of Vero Beach. A 7×7×7 ft screen cage containing ca. 800,000 2-3 day old *Aedes taeniorhynchus* (Wiedemann) was centered in a cleared area at the middle of the field and smaller cages containing a total of ca. 300,000 newly-emerged mosquitoes were spaced around it (Ann. Ent. Soc. Amer., 1972, 65:848). At sunset the tops of all cages were removed and some mosquitoes in the big cage took flight during this disturbance. Lone dragonflies were seen "cruising their beat" in the old field prior to this time and a few (3-5) appeared over the big cage as soon as the top was removed. Following the initial disturbance, only a few mosquitoes (mostly males) remained in flight around the top edges of the cage but the "local" dragonflies remained nearby, at times dipping into the cage to capture mosquitoes. As darkness approached, increasing numbers took flight and large columnar swarms of males formed above the 4 corners of the cage. During the twilight period from 30 to 60 min after sunset almost all mosquitoes departed and mating activity was easily observed against the moon-lit sky. During this 30-min period of mass exodus, the number of dragonflies attracted to the release site continued to increase until 75-100 were rapidly circling 10-30 ft above the cages, concentrating on the 4 dense swarms. On repeated occasions the copulating pair disappeared from sight the instant a dragonfly passed the same point. Mating pairs seemed to be selected out, possibly because they presented a larger visual image. When mosquito activity started to decline rapidly about 1 hr after sunset, the dragonflies began to scatter from the tight circle in which they were concentrated and soon all had departed. Recently, Laird (Mosquito News, 1973, 33:466) referred to old observations in which the mere presence of dragonflies was said to cause biting females to disperse; we saw no evidence of such behavior during these observations.

Some 20 years ago on Sanibel Island, Haeger made some additional observations on the feeding of a large crepuscular Aeshninae (species unknown). During early twilight, dragonflies (first 1-2 and later 25-30) were feeding on the *A. taeniorhynchus* attracted to the observer standing in a small *Borrichia* glade. The dragonflies even picked those in the process of feeding or fully engorged off his arms and clothes. Later when numerous male swarms formed near the tips of the fronds of tall sabal palms nearby, these males too were attacked. As soon as even a few males (8-10) began to regroup at a new site, the dragonflies invaded and in seconds the swarm was dissipated. J. D. Edman and J. S. Haeger, Fla. Med. Ent. Lab., Box 520, Vero Beach, Florida 32960.

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