

## APPARENT ATTRACTION OF MOTHS BY THE WEBS OF ARANEID SPIDERS

This preliminary note concerns observations of apparent attraction of prey by three species of araneids: *Argiope aurantia* Lucas, *Argiope trifasciata* (Forskål), and *Araneus trifolium* (Hentz). The prey species involved was the day-flying saturniid moth, *Hemileuca lucina* Edwards (Northern Buckmoth).

The observations were made during a study of a dense population of *H. lucina* in Worcester County, Massachusetts during middle and late September 1977. The population was located within a power-line cut which resembled a moist old field habitat (some shrubs and small trees were present). On 18 September I was in the study area during the flight period of the moths, and it was apparent that male moths were being attracted to the webs of the spiders in some way. I observed as many as six males simultaneously hovering around a given spider's web, and on occasion a moth would become ensnared. The hovering behavior of the moths differed from their normal flight. During normal flight the movement of the moths in the air was somewhat erratic, but with a clear forward component. During the hovering flight the forward component was largely lacking, and the moths tended to remain in one place. On three occasions I also observed moths hovering around partially destroyed webs which contained no spiders. These last observations suggest that whatever attracted the moths emanated from the web.

Attraction of potential prey has been recorded for a bolas spider, *Mastophora* sp., by Eberhard (1978, Science 198: 1173-1175). Eberhard's observations indicated that the attraction was probably due to a mimic of a sex attractant of the noctuid moth, *Spodoptera frugiperda*. He observed that only male moths were attracted, and that their approach to the spider was from down wind.

It is not clear at this point whether the attraction of prey which I observed was due to a chemical or a visual factor. The fact that only male moths were observed hovering suggests a sex attractant mimic as in the case of *Mastophora*. However, records from the morning of 18 September indicated that the resting population of moths was about 94% males (N=214). Male buckmoths also spend more time in flight than do the females.

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