1998. The Journal of Arachnology 26:249–250

RESEARCH NOTE

WEB INVASION AND ARANEOPHAGY IN *PEUCETIA TRANQUILLINI*(ARANEAE, OXYOPIDAE)

Although the majority of spider species may include other spiders in their diets, this practice generally is only an opportunistic occurrence. Some species, however, have specialized for prey exclusively or mostly on spiders, sometimes using very complex patterns of behavior, including the invasion of webs followed by the simulation of a trapped insect (Foelix 1982; Jackson 1992; Jackson & Hallas 1986). Routine predation on other spiders, called araneophagy, has evolved in distantly related groups, including Araneidae, Theridiidae, Gnaphosidae, Pholcidae, Archaeidae, Salticidae and Mimetidae (Stowe 1986; Jackson 1992). Some araneophagic spiders attack only a narrow range of prey, while others are adept at invading a wide range of web types and capture insects on their own webs.

Oxyopids are usually thought of as wandering spiders which chase prey (including other spiders opportunistically) on vegetation. Their ancestors, however, probably were web-building spiders (Rovner 1980) and at least one primitive genus (*Tapinillus*) builds webs (Griswold 1983; Griswold 1993). Studies related to the predation habits of oxyopids are almost restricted to two species: *Peucetia viridans* Hentz 1832 and *Oxyopes salticus* Hentz 1845; and almost nothing is known concerning neotropical species. Nyffeler et al. (1987) found, in a study in cotton fields, that about 40% of the prey captured by *P. viridans* were spiders, but all the records were made on vegetation, none on webs.

We observed individuals of *Peucetia tranquillini* Mello-Leitão 1922 invading webs and attacking males of *Nephila clavipes* Linnaeus 1767 during March and April 1996 at the Ecological Station of the Universidade Federal de Minas Gerais (Brazil). During the observations, from 0800–1800 h, we recorded nine *N. clavipes* web invasions. In addition, in 11 of 13 trials where *P. tranquillini* individuals were placed on vegetation close to *N. clavipes* webs, the *P. tranquillini* spiders invaded the webs.

In only three instances did the intruders reach the spiral. In the others they moved slowly by anchor lines, taking their place in the frame until one of the residents moved (*Nephila* webs usually had a female and one or more males), vibrating the web. When this occurred, the intruder moved fast toward the source of vibration. In seven instances we observed attacks on the resident males. In two of them males were captured and carried to vegetation, while in three the intruder was attacked by the female (*Nephila* captured *Peucetia* only once). During one of these attacks on *Nephila* males, a *Peucetia* female apparently behaved as an aggressive mimic. That individual vibrated the web twice, once in the spiral (in which the *Nephila* female was attracted, resulting in the retreat of the *Peucetia*) and once in the frame threads (attracting a male which was attacked).

We also observed an invasion of a web of *Latrodectus geometricus* Koch 1841 (Theridiidae), where the intruder, an adult male, stayed for four days. During this time this individual captured insects which became caught in the web, and also stole prey that had been captured, wrapped up and set aside by the host spider. On another occasion we saw the invasion of a web of *Argiope argentata* Fabricius 1775 by another male of *P. tranquillini*, but it returned to the vegetation after reaching the spiral zone.

Dominant males of *N. clavipes* often react aggressively to vibrations at the edge of female web (Christenson & Goist 1979; pers. obs.), where the subordinate males usually stay. The web-vibrating behavior of *P. tranquillini* and the response of *N. clavipes* males suggest that *P. tranquillini* is capable of aggressive mimicry. However, it appears that in most cases *P. tranquillini* simply waits at the edge of the web for males to approach. Only

after more research will it be possible to say whether these species frequently practice araneophagy and web kleptoparasitism, and whether or not these forms of predation are associated with clearly specialized behaviors.

Voucher specimens were deposited at Instituto Butantan, São Paulo, SP (numbers IBSP 7380 and 7381).

ACKNOWLEDGMENTS

We wish to thank Lucia Garcia-Neto (Museu Nacional, RJ), for confirmation of the identification of *Peucetia tranquillini* specimens, Fernando A. Silveira and Hélcio R. Pimenta for suggestions on the manuscript. We also wish to thank the reviewers for their helpful comments.

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Manuscript received 20 July 1996, revised 20 November 1997.