Lycaenidae

Tmolus azia (Hewitson). The first specimen of *Tmolus azia* taken in Florida was a worn female on 28 June 1974 in Fairchild Gardens, Dade Co. This butterfly was found on an ornamental acacia. A second specimen, also female, was taken on 27 April 1975 at the same location on *Montezuma speciosissima* Moc. & Sesse (Malvaceae).

A third record of *T. azia* was contributed by Mr. Charles Covell, who captured a single fresh specimen on 12 May 1975 near Homestead, Dade Co., Fla.

T. azia is found in South and Central America extending into the extreme southern portions of Texas and Arizona (Erlich & Erlich 1961, How to Know the Butterflies. Dubuque, Iowa. 200 p.), but there are no records of this species from the Antilles (Scott 1971, J. Res. Lepid. 9: 249–256). *T. azia* may, therefore, represent a recent introduction to Florida, perhaps associated with exotic ornamental plants.

Electrostrymon angelia (Hewitson). This species, also reported by Anderson (1974, J. Lepid. Soc., 28: 354–359), is taken commonly at Fairchild Gardens, Dade Co., Fla., where it is associated with *Derris* sp. (Leguminosae), a group of trees and shrubs native to India. However, immatures have not been found on this plant. *E. angelia* was also taken on 8 May 1975, in a sawgrass marsh located near the junction of U.S. Highway 41 and State Road 27 in Dade Co., Fla.

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NOCTURNAL ACTIVITY OF A MONARCH BUTTERFLY (DANAIDAE)

Rhopalocera are generally diurnal in habits, even becoming inactive during total solar eclipses (Moucha 1964, J. Lepid. Soc. 18: 109–110). Scattered reports of Rhopalocera at artificial light, including light traps, have indicated some nocturnal activity of these insects (Kendall & Glick 1972, J. Res. Lepid. 10: 273–283 and references therein). Some reports have included pairs in copula (Heitzman 1969, J. Lepid. Soc. 23: 105–106; Chambers 1962, J. Lepid. Soc. 16: 200). However, activity directed toward artificial light may not indicate normal nocturnal activity. Some species collected at artificial light are those normally active at dusk or low light level habitats [*Opsiphanes* by Welling (1963, J. Lepid. Soc. 17: 37–38) and *Melanitis* by Donahue (1962, J. Lepid. Soc. 16: 131–135)]. Diurnal species collected at light traps may well include only specimens that have somehow become disturbed (Kendall & Glick, *op. cit.*).

On 29 October 1971 at the Brackenridge Field Laboratory of the University of Texas at Austin, I observed an adult male monarch, *Danaus plexippus plexippus* L., feeding at inflorescences of shrubby boneset, *Eupatorium havanense* H.B.K. (Compositae), at 2130 CDT. The time of observation was 2 hr 44 min after sunset. Moonlight was apparent but not bright (between first quarter and full), with a clear sky (0% cloud cover). The temperature at recording stations 50 and 125 m away was 21.1° C (70° F) with 84% RH. No artificial light was present at the site. The white coloration of the inflorescences is significant, since white blossoms are more visible at night than flowers of other colors. Flowers

pollinated by nocturnal insects are generally white (Faegri & van der Pijl 1971, The Principles of Pollination Ecology, 2nd ed., Pergamon Press). Monarchs have been reported previously at artificial light in Texas, Missouri and Mexico (Kendall & Glick, *op. cit.*; Heitzman 1965, J. Lepid. Soc. 19: 179–180). Lack of previous reports of nocturnal activity for monarchs in a natural setting indicates that such activity is not normal (Urquhart 1960, The Monarch Butterfly, U. Toronto Press).

Several environmental factors may have resulted in the behavior cited in the present note. Drought conditions from late 1970 to mid-1971, followed by heavy rains in early August 1971 resulted in massive numbers of butterflies in late August and September. Although plant growth, including blossom production, was greatly enhanced, little rain occurred from mid-August through September. Flower production was retarded. Feeding pressure from local butterflies as well as the immigrant monarchs resulted in a nectar shortage. The daylight hours of 29 October 1971 were overcast with fog persisting until late morning and cloudiness (80%) as late as mid-afternoon. Only 32% (3.6 hr) of possible sunshine was recorded that day. Conditions for nectar foraging were definitely inferior. As a result, at least one individual fed at flowers at night. The time (pre- or post-sunset) of arrival of the butterfly at the inflorescence is unknown.

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CRAB SPIDER PREYS ON *NEOPHASIA MENAPIA* (PIERIDAE)

On 22 August 1974, an immature crab spider, *Misumenops* sp. (Araneae: Thomisidae), was observed feeding on an adult male pine butterfly, *Neophasia menapia* (Felder & Felder) (Pieridae). The spider and butterfly prey were on a flower of goldenrod, *Solidago rigida* L., in ponderosa pine forest at Sheridan Lake (TIS, R5E, sec. 13), el. 1,400 m, Black Hills National Forest, Pennington Co., South Dakota. Examination of other goldenrods failed to yield additional spiders with butterfly prey, although another *N. menapia* cadaver was found.

Evenden (1926, J. Agr. Res. 33: 339–344) described the life history of *N. menapia.* Additional information on habits, parasites, and predators of this pierid are given by Orr (1954, USDA, For. Serv., Intermountain For. and Range Exp. Stn., Misc. Publ. No. 1, 12 p.), Cole (1956, USDA, For. Serv., Intermountain For. and Range Exp. Stn., Res. Note No. 29, 8 p.; 1971, USDA, For. Serv., For. Pest Leafl. 66, 3 p.), and Bousfield & Dewey (1972, USDA, For. Serv., Northern Region Insect and Disease Rept. No. I–72–12, 9 p.). Natural enemies include various hymenopterous and dipterous parasitoids that attack the larval and pupal stages, and pentatomids and snakeflies which prey on the eggs. We found no previous records of spiders preying on any of the life stages of the pine butterfly.

The spider feeding on *N. menapia* was captured alive, but an attempt to rear it to maturity failed. Since species determinations of spiders are based chiefly on characters of the genitalia, which are not fully developed until maturity, the specific identity of the spider is unknown although we suspect that it is *M. asperatus* (Hentz), a common inhabitant of goldenrod. A related misumenid crab spider, *Misumenoides formosipes* (Walckenaer), was also found on goldenrod, but without prey. This latter species is readily distinguished from *Misumenops* by the presence of a white clypeal carina. Records of South Dakota crab spiders are given by Buckman (1966, Proc. S. D. Acad. Sci. 45: 118–123) and include both *Misumenops asperatus* and *Misumenoides aleatorius* (Hentz) (= *formosipes* (Walckenaer)).

Crab spiders of the subfamily Misumeninae are ambushers and are commonly found on flowering plants, such as goldenrod, where they lie in wait for visiting insects. Some species blend with the background plant color and are capable of