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## GENERAL NOTE

### MASS EMERGENCES OF THE PINE WHITE, *NEOPHASIA MENAPIA MENAPIA* (FELDER & FELDER), IN COLORADO (PIERIDAE)

Ferris and Brown (1981, Butterflies of the Rocky Mountain states, University of Oklahoma Press, Norman, 442 pp.) cite *Neophasia menapia menapia* (Felder & Felder) as an occasional economic pest in western montane forests, primarily of ponderosa pine (*Pinus ponderosa* Laws.) and lodgepole pine (*P. contorta* var. *latifolia* Engelm.). I observed mass emergences of this species in 1983 and 1984 in the pinon-juniper forest of western Colorado. The location was Eagle Co., White River National Forest, Frying Pan River Valley, 8.85 km E Basalt, ca. 2,196 m elev. In both years the emergence lasted 3 days; 13-15 August 1983 and 3-5 August 1984. The emergences were sudden, synchronized, truly massive in nature, and all the adults disappeared as abruptly as they appeared.

Earliest flight on calm, sunny mornings was recorded ca. 0745 h, and it was that of males typically searching for females around the high outer branch tips of mature pinon pine. Not until ca. 0900-0930 h did flight get fully underway, giving one the sense of the forest being alive with butterflies.

Feeding was never observed in spite of special efforts to confirm Ferris and Brown's observation of early morning nectaring at flowers, which were abundantly available throughout the area. The pinon-juniper association showed no evidence of damage by larvae, densities of which can only be imagined. Both tree species were growing vigorously, and the pinon were filled with developing green cones. Considering their apparent three-day life span and the lack of feeding, it seems possible that these adults are non-feeders.

Male-to-female ratio of specimens collected was 5:1 ( $n = 58$  in 1983, 72 in 1984), though I believe that to be distorted by my efforts to locate the rare females. A ratio of 50:1 is probably closer to the true situation. Females collected were so heavily gravid they struggled to fly.

In the 10 years I lived at this locality (1976-85) this population explosion of *N. m. menapia* occurred only during the aforementioned 2 years.

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