THE PHENOLOGY OF THE PLANT BUGS (HEMIPTERA: MIRIDAE) ASSOCIATED WITH CEANOTHUS CRASSIFOLIUS IN A CHAPARRAL COMMUNITY OF SOUTHERN CALIFORNIA

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Abstract.—Seven species of Miridae were found to develop on Ceanothus crassifolius at a locality in southern California. Mirid activity was confined to the first five months of the year, the period of lowest temperatures and greatest precipitation, and also the time of blooming and fruiting for C. crassifolius. Although levels of synchrony are high, the periods of greatest abundance of mirid species are spread out through the growing season.

There are little data on the host relationships of western U.S. Miridae. A relatively recent list of associations (Knight, 1968) does not suggest a large fauna on *Ceanothus*. However, I have found that species of *Ceanothus* and other Rhamnaceae serve as hosts for a variety of plant bugs in California. This paper deals with the species on *C. crassifolius* Torrey, or Hoaryleaf Ceanothus, an evergreen shrub common between 450–1100 m in the dry chaparral covered hills of southern California.

The study is based on collections of all instars of Miridae on *C. crassifolius* at a single site throughout most of 1979. Primary objectives were to determine the number of species developing on this plant, their occurrence relative to host phenology, and the degree of interspecific seasonal overlap. Preliminary data of feeding behavior are also presented.

Seven species were found to develop on *C. crassifolius*. Six belong to the Phylini and one to the Mirini. Identification to species is possible for only five of the seven at this time. The phylines collected were *Psallus ancorifer* (Fieber), *Psallus breviceps* Reuter, *Psallus sp., Microphylellus bicinctus* (Van Duzee), *Lepidopsallus californicus* Van Duzee, and *Phymatopsallus* sp. near *croceguttatus* Knight. The single mirine present was *Pycnocoris ursinus* Van Duzee. In addition, five adults of *Deraeocoris fulgidus* (Van Duzee) were collected. Since this species was not represented by immatures it is not dealt with further.