

evolved aphid-ant-plant bug system, including the mirid's use of trail substances or other ant pheromones, is needed.

*Schaffneria schaffneri* Knight

*Distribution.* Knight (1966) described this mirid from College Station, Texas, and it has been reported subsequently only from Alberta and Saskatchewan (Kelton, 1980). I note that Kelton's map shows only a record for Saskatchewan and that Henry and Wheeler (1988) inadvertently listed Alberta as Arizona. New records are MAINE: York Co., Waterboro Barrens, Aug. 7, 1990, and PENNSYLVANIA: Schuylkill Co., Frackville Barrens (see discussion below).

*Biology.* The type specimen and associated material were collected on the ground under red cedar (*Juniperus virginiana* L.) trees; adults and nymphs were observed running and hiding among litter (Knight, 1966). On the basis of observations by M. H. Sweet, Knight said that the bugs may feed on fallen cedar fruits and may be associated with ants. In the Prairie Provinces, Kelton (1980) reported *S. schaffneri*\* from the grass *Beckmannia syzigachne* (Steud.) Fern.

*Schaffneria schaffneri* was not as abundant as *S. davisii* at Frackville. In collections of *Schaffneria* adults in 1986, *S. schaffneri* represented 1 of 7 on July 22, 2 of 8 the next day, 3 of 11 on Aug. 1, and 4 of 26 on Aug. 15. Both mirids were collected from the same ant-attended colonies of the aphids *Lachnus allegheniensis* and *Myzocallis bella*. Nymphs presumably were present but were not distinguished from those of *S. davisii*. In Maine's Waterboro Barrens, only one adult was collected, although *S. davisii* was common on scrub oak in certain areas. The comments made about the probable defensive adaptations of *S. davisii* also apply to *S. schaffneri*.

Tribe Orthotylini

*Diaphnocoris provancheri* (Burque)

Widespread in eastern North America from southern Canada to Georgia, occurring in the Pacific Northwest, California, Colorado, and the Prairie Provinces (Henry and Wheeler, 1988). It is predacious on mites, mite eggs, aphids, leafhoppers, psyllids, and lepidopteran larvae and eggs (Stear, 1925; Braimah et al., 1982; Kelton, 1982) and is found on numerous shrubs and trees, including *Quercus alba*, *Q. macrocarpa*, *Q. palustris*, *Q. prinus*, and *Q. rubra* (Knight, 1941; Kelton, 1980; Wheeler et al., 1983). Adults only were taken in small numbers at Frackville and several other pine barrens (Table 1).

*Noctuocoris fumidus* (Van Duzee)

Widely distributed across the northern United States and southern Canada, ranging south to Colorado, Utah, and Oklahoma (Schwartz and Stonedahl, 1986). It has been taken at light and on *Carya* and *Quercus* in Canada (Schwartz and Stonedahl, 1986), specifically *Q. macrocarpa* in the Prairie Provinces (Kelton, 1980). Larochelle (1984) collected *N. fumidus* on profusely fruiting oak in Quebec. During the study of scrub oak Miridae, this apparently predacious bug was collected only at Frackville. Small numbers of adults (1-4) were beaten from large branches on each of three sample dates in July 1986.