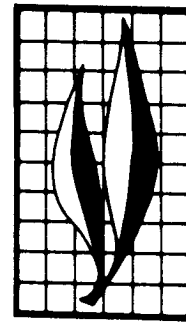

ABSTRACT

This study was designed to determine the extent to which the introduced Argentine ant (*Iridomyrmex humilis*), a pest in urban and agricultural environments, has invaded natural habitats in the lower Sacramento Valley, and its effects on the native ant fauna. Of four natural habitats surveyed (valley riparian woodland, foothill riparian woodland, blue oak-digger pine woodland, and chaparral), at 46 sites in Yolo and Solano counties, only valley riparian woodland was found to have been colonized by *I. humilis*. Riparian woodland sites occupied by *I. humilis* have permanent sources of water and tend to be environmentally degraded. Populations of *I. humilis* are common but patchily distributed along four principal riparian systems in Yolo and Solano counties (Ulatis Creek, Putah Creek, Cache Creek, and the Sacramento River). Observations indicate that patches of semidisturbed riparian woodland provide refuges from which populations of *I. humilis* may invade adjacent agricultural land, and vice versa. The species richness of native ants is markedly reduced at riparian woodland sites occupied by *I. humilis*. Among the common native ants, epigaeic (aboveground foraging) species are more susceptible to displacement by *I. humilis* than are hypogaeic species. The three most adversely affected species (*Liometopum occidentale, Tapinoma sessile,* and *Formica occidua* [= *moki*]), which are absent from sites colonized by *I. humilis*, are dominant epigaeic ants; two of the three least displaced species (*Stenamma diecki* and *S. californicum*) are timid, cryptobiotic ants that forage in soil and leaf litter.

THE AUTHOR:

Philip S. Ward is Associate Professor, Department of Entomology, University of California, Davis, California 95616.