Searching efficiency and multiparasitism in Aphidius smithi and A. ervi (Hym., Aphidiidae), parasites of pea aphid, Acyrthosiphon pisum (Hom., Aphididae)

ABSTRACT

Aphidius smithi and A. ervi were introduced into the United States to control aphid pests of alfalfa. Laboratory experiments showed that A. smithi was more efficient in searching for hosts (i.e., more hosts parasitized) than A. ervi, when measured separately. However, when the two species searched together for the same hosts, a lesser percentage of A. smithi adults than A. ervi emerged from the mummies. Studies on multiple parasitism which involved hosts parasitized by one species exposed to the other species indicated that larvae of A. ervi were more competitive and survived better to adulthood than larvae of A. smithi. These results might help explain for the decline of A. smithi in California.