3. Biological Control

STINK BUG EGG PARASITES IN WASHINGTON AND THEIR SEASONAL DEVELOPMENT

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Species complex: Eight species of Pentatomidae were found on uncultivated plants and pome fruits in Chelan and Douglas counties in central Washington. The phytophagous species were *Acrosternum hilare* (Say), *Euschistus conspersus* Uhler, *Chlorochroa ligata* (Say), *Euschistus variolarius* (Palisot), *Chlorochroa sayi* (StÂl), *Thyanta pallidovirens* (StÂl), and *Cosmopepla integressus* (Uhler). The species found in orchards were *A. hilare*, *E. conspersus*, *C. ligata* and *T.Êpallidovirens*. *Acrosternum hilare* was detected exclusively in riparian habitats and *C. integressus* was found only associated with wild currant. One predatory stink bug was also identified, *Brochymena* sp.

Host plants most commonly supporting stink bugs were mullein, bitterbrush, wild currant, snowberry, wild rose, and red-osier dogwood. Low numbers of stink bugs were also collected from cottonwood, thimbleberry, asparagus, baby's breath, balsam root, big leaf maple, blackberry, cheat grass, dalmatian toadflax, elderberry, rabbitbrush, knapweed, and vetch. No stink bugs were found on sumac or sage.

Biological control: Five species of parasites were identified attacking stink bug eggs. Levels of parasitism reached nearly 70% in mid-summer, and parasites were active all summer. Even with the high levels of egg parasitism, stink bug populations were high and fruit damage excessive. The full effect of egg parasites on stink bug populations is not well understood but no doubt has an effect in reducing densities in natural habitats.

Table 1. Wasp parasites of the egg stage of *Euschistus conspersus.*

Family	Genus species
Scelionidae	*Trissolcus cosmopeplae* (Gahan)
Scelionidae	*Trissolcus euschisti* (Ashmead)
Scelionidae	*Trissolcus utahensis* (Ashmead)
Scelionidae	*Telenomous podisi* Ashmead
Encyrtidae	*Ooenycyrtus sp.*