

DISTRIBUTION AND BIOLOGY OF NATIVE SIRICIDAE AND ASSOCIATED HYMENOPTERAN PARASITOID SPECIES IN THE SOUTHEASTERN UNITED STATES

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ABSTRACT

The Eurasian woodwasp, *Sirex noctilio* Fabricius (Hymenoptera: Siricidae), is an introduced invasive pest in the Great Lakes region of North America. If *S. noctilio* is introduced to the southeastern U.S., it may cause severe economic and ecological impacts, especially in the extensive pine plantations. We are evaluating the species complex of native siricids and their hymenopteran parasitoids, as these two taxa may exert competitive and biocontrol pressure on *S. noctilio* in southern forests.

During fall 2009, plots were established in Georgia, Louisiana, and Virginia. Thirty intercept panel traps were placed in each of the three states. Traps were baited with *Sirex* lure alone, *Sirex* lure + ethanol, or left unbaited. In Georgia, 30 funnel traps were additionally used with identical lures, and four Sante traps were placed in the canopy with no lures. Trap logs were created in each state to attract native siricids and parasitoids: 5 trees were cut down in Georgia, 4 trees in Virginia, and 12 trees in Louisiana. All trap trees will be placed in emergence cages in summer 2010.

Preliminary results indicate that about 79 siricids were caught in the traps representing five species: *Sirex edwardsii* (Brullé), *Sirex nigricornis* (Fabricius), *Urocerus cressoni* (Norton), *Tremex colomba* (Linnaeus), and *Eriotremex formosanus* (Matsumura). The majority of siricids were caught in Virginia, which also had all the five siricid species. There was no significant difference in catches between *Sirex* lure alone and *Sirex* lure + UHR ethanol. More siricids were caught in the funnel than in the intercept traps in Georgia, but the difference was not significant.

Our results indicate that the Southeast has a healthy population of native siricids that may outcompete *S. noctilio* if it were to arrive in the region. Further, baiting only with *Sirex* lure will work just as well as including ethanol. Future studies will focus on re-sampling these study sites using similar trapping methods and will add North Carolina and Florida. Siricids and parasitoids will be reared out of trap logs, and the parasitism rate will be assessed.