

EXPLORATION FOR EMERALD ASH BORER IN CHINA

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ABSTRACT

In June 2002, the emerald ash borer (EAB), *Agrilus planipennis* Fairmaire (Coleoptera: Buprestidae), native to several Asian countries, was identified as the cause of ash (*Fraxinus* spp.) mortality in greater than 2,500 square miles of southeastern Michigan and southwestern Ontario; more recent infestations were found in Ohio, Maryland, and Virginia in 2003. Federal and state agencies adopted a strategy of EAB eradication in North America. Should eradication fail, EAB management will require augmentation of existing natural enemies or introduction of EAB natural enemies from Asia. The only literature known for EAB is from China, where EAB is a sporadic pest of ash (Yu 1992); a braconid parasitoid, *Spathius* sp. (Hymenoptera: Braconidae), was recently reported from EAB in Tianjin Province in an ash plantation (Xu Gongtian 2003).

In addition to our survey of EAB natural enemies in Michigan, we are studying the natural enemy complex of EAB in China. To this end, we explored 29 field sites in Heilongjiang, Jilin, Liaoning, Hebei, Tianjin, and Shandong Provinces in northeastern China from 21 October to nine November 2003. The habitats were variable, ranging from natural forests, nurseries, plantations, city parks, streets, and yards; ash species included *Fraxinus mandshurica*, *F. chinensis* subsp. *chinensis*, and *F. chinensis* subsp. *rhychophylla*. At each site we surveyed 30-60 trees for EAB and potential natural enemies. EAB was present in all provinces except Shandong and in 9 of the 29 sites; five sites showed signs of past infestation such as old exit holes, callused galleries, bark splits, and epicormic branches. EAB seems to prefer ash trees in open areas and at the edges of the forests. Gregarious ectoparasitoid larvae and pupae, probably *Spathius* sp., were found attacking EAB at four of these sites; at one site, 50 percent of EAB larvae were parasitized.

Yu C. 1992. *Agrilus marcopoli* Obenberger. Pages 400-401 in G. Xiao (ed.), *Forest Insects China* (2nd edition). China Forestry Publishing House, Beijing, China.

Xu Gongtian. 2003. *Agrilus marcopoli* Obenberger, pp. 321-322, In Xu G-T (ed.), *Atlas of ornamental pests and diseases*. China Agriculture Press, Beijing, China.