

EMERALD ASH BORER ADULT DISPERSAL

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ABSTRACT

The emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, is an Asian buprestid beetle that was first discovered in Michigan and Ontario in 2002 (Haack et al. 2002). Smaller populations, resulting from movement of infested host material, were found in Ohio, Maryland, and Virginia in 2003. EAB adult dispersal has not been studied in Asia; however, observations made by a buprestid collector in Japan estimated that EAB adults can fly at least 1 km (Haack et al. 2002).

We conducted a field study to evaluate EAB adult dispersal at two Michigan sites in early summer 2003. At each site, we placed several EAB-infested logs at a central release point, and then put out uninfested, vertically positioned, sticky-banded ash trap logs at specified distances and directions from each release site. The EAB-infested logs had been maintained indoors in a heated room for a few weeks to speed up development relative to wild EAB populations outdoors. We placed the infested logs in the field when adults started to emerge indoors in early May. We estimated that emergence from our test logs was at least two weeks ahead of the wild EAB populations.

One site consisted of a power line corridor that ran through a rural area north of Ann Arbor, Michigan. We used a straight 4-km-long section of the corridor, which was about 100 m wide and was generally free of trees. Trap logs were placed at 100, 250, and 500 m to the west of the release site, as well as 100, 250, 500, 1,000, 1,500, 2,000, 2,500, and 3,000 m to the east of the release site. Only one EAB adult of an estimated 2,118 released adults (based on a subsequent count of exit holes) was captured on the trap logs by late May, and this was at a distance of 250 m. The second site was the Ann Arbor airport, where we were able to place trap logs at distances out to 150 m to the west, 500 m to the north, 2,000 m to the east, and 500 m to the south. Again, only a single EAB adult of an estimated 1,059 released adults was captured on any of the trap logs by late May, and this beetle was captured at a distance of 1,500 m. If repeated in 2004, we will release marked beetles and use girdled ash trees (with sticky traps) instead of trap logs.

Haack, R.A., E. Jendek, H. Liu, K.R. Marchant, T.R. Petrice, T.M. Poland, and H. Ye. 2002.

The emerald ash borer: a new exotic pest in North America. *Newsletter of the Michigan Entomological Society* 47(3-4): 1-5.