

EMERALD ASH BORER ATTRACTION TO TRAP LOGS OF DIFFERENT LENGTHS AND SPECIES

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ABSTRACT

The emerald ash borer (EAB), *Agrilus planipennis* Fairmaire (Buprestidae), a native of Asia, was discovered in the USA and Canada in 2002. In summer 2003, we conducted two studies to evaluate EAB attraction to trap logs that varied in length and species. In the first study, we investigated how EAB attraction to ash (*Fraxinus*) logs varied by log length. We cut live ash trees into 2-ft, 4-ft, and 8-ft lengths. A total of 54 logs were placed at each of two study sites in areas with high EAB populations. The logs were oriented vertically, being supported with metal fence posts. Tanglefoot was applied to a 30-cm tall plastic band that was wrapped around the center of each log. The number of EAB adults captured in the Tanglefoot was recorded for each log. The mean number of EAB captured per unit area of trap was similar among the three lengths of logs studied. However, given that EAB are likely captured as they land on a log, our trap results suggest that twice as many EAB likely landed on the 4-ft logs compared with the 2-ft logs, and similarly four times as many EAB likely landed on the 8-ft logs compared with the 2 ft logs. Such results suggest that more EAB will be collected as more of the surface area of the log is covered with Tanglefoot.

The second study was conducted to compare EAB attraction trap log that were similar in size but varied by tree species. We tested white ash (*Fraxinus americana*), green ash (*F. pennsylvanica*), black ash (*F. nigra*), blue ash (*F. quadrangulata*), American elm (*Ulmus americana*), hackberry (*Celtis occidentalis*), black walnut (*Juglans nigra*), and pignut hickory (*Carya glabra*). Logs were placed in the field using the same methods described above. Eighteen logs for each species (only nine for *F. quadrangulata*) were placed at each of three different locations in the EAB infested area. EAB adults were captured on all species of trap logs, both ash and non-ash. Overall, EAB tended to land more on ash logs than non-ash logs. White ash was the most attractive species of ash tested. Of the non-ash species tested, black walnut was the most attractive species and hackberry, the least.