Tree E-News
Colorado State Forest Service
October 2014

EAB Predator Introduced

According to a September 29, 2014 news release, from the Emerald Ash Borer Team with the Colorado Department of Agriculture a stingless parasitic wasp will be released in Boulder to assist in the control efforts directed at the emerald ash borer (EAB). EAB was discovered in Boulder in September of 2013. Here are some excerpts from that news release.

Photo courtesy USDA - APHIS

- Over a thousand *Tetrastichus planipennisi* adult wasps will be released on the East Campus of the University of Colorado. Female wasps locate EAB larvae under ash bark and lay eggs in the larva. Eggs hatch in the larva and consume it before it can complete its life cycle.
- The Colorado Department of Agriculture worked with the City of Boulder, the University of Colorado, and the USDA Agriculture Animal and Plant Health Inspection Service (APHIS) to acquire these wasps from the EAB Biological Control Production Facility located in Michigan.
- This particular parasitic wasp is one of three parasites of EAB that were identified in China. EAB was introduced into the U.S. from China, most likely on wood packing material. EAB was positively identified in 2002, but not until it had become established in the native ash forests around Detroit, Michigan.
- Following the initial release of wasps on September 29th, there could be two more wasp release events.
- The wasps focus on EAB larvae and are not attracted to people or pets.

Beneficial Insects

In their native range all tree insect pests have one or more parasitic insects that will affect their population numbers. These beneficial insects have varying degrees of notoriety and effectiveness. One of the most famous predators is the lady beetle (aka – ladybug). The adults and larvae are voracious eaters of soft-bodied insects like aphids that feed on many plant types. The more common predators focus on garden insect pests with some crossover to tree insect pests. Here are other examples of predatory insects and their food source:

- Green lacewing larvae; small caterpillars, beetles, aphids
- Syrphid fly larvae; aphids
- Mantids (aka – praying mantid); all insects

The Palisade Insectary, www.palisadeinsectary,com, operated by the Colorado Department of Agriculture, provides numerous insect pests of noxious weeds like tamarisk, leafy spurge, puncture vine, and spotted knapweed. These insects are effective in suppressing invasive weeds. However, most of the state's citizens don't know that the insectary has provided a biological control for the oriental fruit moth with the parasitic wasp *Macrocentrus ancylivorus* (aka Mac) since the 1940's. Each year over a million wasps are released in western Colorado peach orchards to suppress the destructive oriental fruit moth.

Researchers are always on the lookout for bio control agents like predatory insects to control invasive pests. In the long run, bio control insects are cheaper than chemical pesticides, provide a safe to human health alternative, and are usually self-propagating. Adding beneficial insects to the pest control palette is always an environmentally effective technique, but it must always be accompanied with other IPM (Integrated Pest Management) efforts, as well as the promotion of tree diversity in the community forest. Planting and promoting tree diversity is a necessity for tomorrow's urban forest.

Upcoming Events

October 8 – 9: Annual meeting of the Northern Rockies Tree School in Cody WY. Details are coming and will be found at the ISA-RMC website www.isarmc.org

December 4**:** Combined Western Slope Tree Care Workshop and Western Colorado Community Forestry Conference at the Two Rivers Convention Center in Grand Junction. Agenda and meeting details will be published as they are developed.