Emerald Ash Borer David S. Bienemann, Municipal Arborist Elizabeth Mays, Intern Arborist Division

Emerald Ash Borer are slender, elongate beetles, about 7.5- 15 mm long. Adults are a metallic, coppery-green color. Mature larvae reach about 26- 32 mm in length. Larvae are white, flat, slender, and have a pair of brown, pincer-like appendages on the last abdominal segment. The larval head is relatively small, brown, and retracted inside the enlarged prothorax. Emerald Ash Borer is native to northeastern China, Korea, Mongolia, and Japan. It is also native to the Russian Far East.

The adult Emerald Ash Borer (EAB) is active from mid-May to July. Adults lay the eggs on the bark surface and in the barks crevices and cracks, usually from early June to late July. The larvae then usually feed off of the trunk from mid-June to mid-October. EAB grow into fully grown larvae in pupal cells constructed in the bark over winter.

Adult Emerald Ash Borer walks to the crown of their host tree and begin feeding on foliage soon after emergence. Adults eat around .5 squared centimeters per a day, making that a very small amount of foliage eaten throughout their life. They start their first flight around 3 to 4 hours after their first feeding. They usually fly in 8 to 12 meter bursts but longer flights are possible. They rest in the cracks of bark when it is rainy or cloudy. They also rest at night in foliage. Adult males usually live around 2 weeks and females live around 3 weeks. Females usually lay around 68-90 eggs in their lifetime. They lay their eggs individually on the trunk or on the lower ends of major branches. Eggs usually hatch in about a week. After the eggs hatch, the new larvae tunnel through the bark to feed on the inner bark.

Most Emerald Ash Borer attack ash trees that are growing in the open or along the forest edge. However, if there is an outbreak, entire stands can be killed. Some signs and symptoms that your tree has been infested are D-shaped exit holes on the bark of the tree and dieback occurs. This can happen in the first year. In the second year, less foliage develops and crowns appear thinner, longitudinal bark splits 5- 10 cm long, and "sprouts" develop among the main trunk and on some major branches. Typically by the third year of attack, many branches have died, little foliage is present, bark splits are very common, and the D-shaped exit holes are apparent throughout the whole bark.