# Signs and Symptoms of the Emerald Ash Borer

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#### **Adult**



Michigan State University



Michigan State University

- Bright, metallic green (Figs. A, B).
- 1/2 inch long, flattened back (Figs. A, B).
- Purple abdominal segments beneath wing covers.

### Larva



- Creamy white, legless (Fig. C).
- Flattened, bell-shaped body segments (Fig. C).
- Terminal segment bears a pair of small appendages.

# **Canopy Dieback**



- Begins in top one-third of canopy (Fig. D).
- Progresses until tree is bare (Fig. E).







# **Epicormic Shoots**



J. Smith, USDA APHIS PPO

- Sprouts grow from roots and trunk (Figs. F, G).
- Leaves often larger than normal.



## **Bark Splitting**





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- Vertical fissures on bark (Fig. H) due to callous tissue formation (Fig. I).
- Galleries exposed under bark split.

# Serpentine Galleries and D-shaped Exit Holes





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- Larval feeding galleries typically serpentine (Fig. J).
- Galleries weave back and forth across the woodgrain.
- Packed with frass (mix of sawdust and excrement).
- Adults form D-shaped holes upon emergence (Fig. K).

### **Increased Woodpecker Activity/Damage**







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- Several woodpecker species (Fig. L) feed on EAB larvae/pupae.
- Peck outer bark while foraging (Fig. M).
- Create large holes when extracting insects (Fig. M).

