

NEBRASKA FOREST SERVICE



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# Decline in Ash Trees: Borers and Bark Beetles

## An Identification Guide

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Many borers and bark beetles contribute to the decline of ash trees in Nebraska. This publication describes the common characteristics of these insects.

- Emerald ash borer
- Lilac borer
- Chrysobothris borers (flatheaded appletree borer)
- Carpenterworm
- Roundheaded borers (longhorned beetles)
- Ash bark beetles



**General symptoms of declining ash trees with borers or bark beetles:** sparse foliage, dying branches, broken branches or trunks, and woodpecker activity such as bark stripping.

## Emerald Ash Borer



**Adult:** Metallic green beetle, 1/2 inch long.<sup>1</sup>



**Larva:** Flattened with bell-shaped segments. Resembles a small tapeworm. Up to 1 1/4 inches long.<sup>2</sup>



**Tunnels:** S-shaped tunnels are found in the inner bark and on the surface of the wood. Heavily infested trees have meandering tunnels. Larvae pupate just under the bark (at most 1/2 inch into wood).

**Exit holes:** Small, D-shaped, 1/8 inch across. Some holes may be oval in shape.



## Lilac Borer



**Adult:** Clearwing moth that mimics a wasp.<sup>3</sup>



**Exit holes:** Round, 1/4 inch diameter.



**Larva:** Cylindrical, whitish with amber-colored head. Up to 1 1/4 inches long.<sup>4</sup>



**Tunnels:** 1/4 inch wide and extend deep into the wood.

## Chrysobothris Borers (flatheaded appletree borer and others)



**Adult:** Dark metallic beetle, 1/2 inch long.<sup>5</sup>



**Tunnels:** Irregular winding tunnels are found in the inner bark and on the surface of the wood. Larvae tunnel deep into the wood to pupate.

**Larva:** Flattened, cream-colored. Appears to have a round, flat head. Up to 1 inch long.<sup>6</sup>



**Exit holes:** Oval, 3/16 inch long and half as wide.





# Carpenterworm



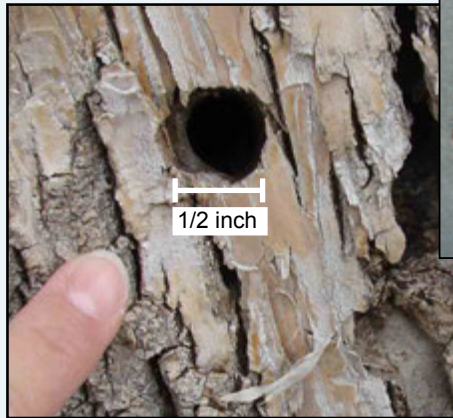
**Adult:** Large black and grey moth.<sup>7</sup>



**Larva:** Pink to greenish white. Large and robust, up to 3 inches long.<sup>8,9</sup>



**Tunnels:** Large, 1/2 inch wide. Extend deep into the wood.<sup>10</sup>

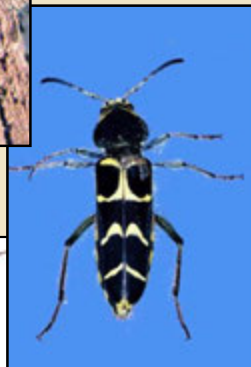


**Exit holes:** Large round, 1/2 inch diameter. Large irregular holes are also present, which may contain frass and large papery insect skins.

# Roundheaded Borers (Longhorned Beetles)



**Redheaded ash borer**  
**Adult:** Reddish brown with yellow stripes. 1/4 - 3/4 inch long.



**Banded ash borer**  
**Adult:** Nearly black with yellow stripes. 3/8 - 3/4 inch long.<sup>11</sup>



**Ash and privet borer**  
**Adult:** Brown with amber spots. 3/8 - 3/4 inch long.<sup>12</sup>



**Exit holes:** Typically round and variable in size (1/8 inch or more).



**Tunnels:** Irregular tunnels are found both under the bark and deep into the wood. Often found in firewood.



**Larva:** Cylindrical and cream-colored, with a rounded head. Generally up to 1 inch long.<sup>13</sup>

# Ash Bark Beetles



**Adult:** Tiny dark mottled beetle.<sup>14</sup>



**Exit holes:** Tiny, round, 1/16 inch.

**Tunnels:** Narrow horizontal tunnels and narrower vertical tunnels are found in the inner bark and on the surface of the wood. Tunnels do not go deep into the wood.

## For control of borers in ash, see:

FH06-2009: "Insect Pests of Broadleaf Trees."

FH13-2012: "Emerald Ash Borer Treatment Options."

## For other problems in ash trees, see:

FH21-2014: "Decline in Ash Trees: Diseases and Environmental Stresses."

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