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A Product of the Integrated Pest Management Working Group

Old House Borer

Hylotrupes bajulus (Linnaeus)

DIAGNOSTIC MORPHOLOGY

Adults:

- 15 to 25 mm long
- Black to brownish-black, with or without gray patches or bands on the wing covers
- Long 11 segmented antennae
- Round prothorax with two small, shiny protuberences

Immature Stage:

- Up to 31 mm long, cylindrical body tapering to the posterior end
- Cream colored with dark mouth parts and three dark eye-spots on either side.

GENERAL INFORMATION

The old house borer is a wood boring beetle of the Cerambycidae family which originated in North Africa. It is now distributed worldwide, though it is more commonly encountered in Europe than North America and has yet to be identified in Australia. Contrary to what its name may suggest, infestations are usually found in newer structures, often when lumber has been attacked in storage prior to construction. However, old house borers may attack wooden objects of any type.

SIGNS OF INFESTATION

Old house borer exit holes are oval or round and 1/4 to 3/8 inch in diameter. Frass consists of tightly-packed, coarse powder and small pellets. Since larvae may take up to ten years or more to mature before emerging from their food source, significant damage may have occurred by the time exit holes are found. It may also be difficult to determine the age of exit holes. Chewing sounds made by medium to large sized larvae can be heard at a distance of several feet during active months.

FOOD SOURCES

Old house borer larvae feed on softwood with moisture content of 10 percent or higher. Typically found in wood under 10 years old, they may survive in older wood, but with impaired larval development and a longer life cycle. They have been observed eating both seasoned and unseasoned wood.

LIFE CYCLE

The old house borer typically spends two to ten years in the larval stage depending upon air temperature and humidity as well as wood moisture and nutrition content. Optimal conditions are about 68-88F, 80-90 percent relative humidity, and 28 percent moisture content. Larvae feed by tunneling with the grain of the wood. They become inactive during the winter when temperature, humidity, and moisture content drop, and resume feeding in the spring as conditions become more favorable. When the larva becomes fully grown it tunnels to the surface, cuts an exit hole, retreats to an enlarged pupating chamber, and packs the exit hole with frass. Pupating takes about 20 days. The adult spends several more days in the chamber then finally emerges from the wood, usually in spring or early summer. Adults mate soon after emerging, and females quickly lay several batches of eggs in cracks and crevices in the wood. Eggs hatch a little over a week later.

CONTROL & TREATMENT

Many Old house borer infestations begin in the lumberyard, and typically affect wood less than 10 years old. It is imperative to insure prior to any construction projects that all lumber has been properly stored and treated. Old house borers may also be present in wooden artifacts or sculptures, natural tree branches or plant material used in exhibition displays, firewood, wooden pallets, or furniture. Quarantining, inspecting, and preventatively treating with cold, heat, or anoxia, any questionable objects that will be in proximity of museum collections will greatly reduce the risk of an infestation. Wood moisture content should be kept to a minimum. Any high moisture conditions resulting from leaks, poor drainage, or poor ventilation should be corrected. In the event that a localized infestation has been identified, the infested wood can be removed and replaced if appropriate, or the infested object can be quarantined and treated with cold, heat, or anoxia. (More information on these treatment methods can be found at www.museumpests.net.)

Information current as of 3/6/13.
For more information go to www.museumpests.net.

Fact Sheet: Old House Borer

Gulmahamad, Hanif. 2004. Wood-boring Beetles. In: Handbook of Pest Control, Arnold Mallis et al.

Robinson, William H. 1988. Biology and Control of Wood-infesting Coleoptera. In: A Guide to Museum Pest Control, Lynda A. Zycherman (ed.). Washington, DC: Foundation of the American Institute for Conservation of Historic and Artistic Works and the Association of Systematics Collections.

Upper right image: Pest and Diseases Image Library, Bugwood.org (http://www.ipmimages.org/browse/detail.cfm?imgnum=2159099)

Lower left image: Udo Schmidt (http://eol.org/data_objects/19608699)