



# VARMANT GUARD®

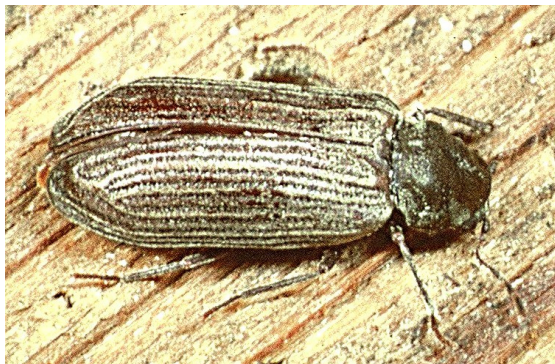
ENVIRONMENTAL SERVICES INC.



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Common Name: **Anobiid powderpost beetles / furniture beetles / deathwatch beetles**  
Scientific Name: **Family Anobiidae**

## ANOBIID POWDERPOST BEETLES



**Introduction.** Anobiid powderpost beetles or furniture beetles are the most commonly encountered of the powderpost beetles. They get their common name of anobiids from the beetle family to which they belong. The name furniture beetle was deserved in a time when these insects could be found infesting tables, chairs, cabinets, benches and bed headboards and footboards made of pine, poplar and other soft wood types. For some species, the name of deathwatch beetle comes from the tapping sound they make by striking their mandibles (jaws) against the wood surface of their tunnel as a mating call. Heard in the quiet of the night when people were sitting up with an ill person, this tapping was superstitiously believed to indicate that death was near. They are worldwide in distribution, with about 310 species occurring in the United States.

**Recognition.** Depending on the species, adult anobiid powderpost beetles measure 1/16 to 3/8 inch long but those attacking buildings range from 1/8 to 1/4 inch long. They are usually elongate, cylindrical and reddish-brown to nearly black in color. The prothorax (front upper part of the thorax) is hoodlike, nearly always enclosing the head and concealing it when viewed from above. Structure-infesting species usually have distinct rows of pits on the elytra (hardened front wings or wing covers) giving their surface a ridged appearance. Mature larvae of anobiid powderpost beetles range from 3/16 to about 1/2 inch long. They are nearly white in color, C-shaped in form but have the thorax enlarged. They have 3 pairs of tiny legs.

**Similar Beetles.** True powderpost beetles (family Lyctidae) have the body flattened and head visible from above. As a rule they are smaller and narrower than anobiids.

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**Damage and Signs of Infestation.** The beetle exit holes are round and, depending on the species, range from 1/16 to 1/8 inch in diameter. Another indication of an infestation is the accumulation of piles of powdery but gritty frass (fecal material) beneath the exit holes or streaming from them. However, there are 2 anobiid species, which attack hardwoods that do not produce pellets in their frass; but their frass is tightly packed in their tunnels (vs. lyctids whose frass is loosely packed).

### Representative Species.

1. Furniture beetle, *Anobium punctatum*, adults are 1/8 to 1/4 inch long, reddish-brown to dark brown and covered with fine yellowish hairs. The elytra (hardened front wings or wing covers) are sculptural with striae (longitudinal furrows). These beetles attack only old wood and are widely distributed.
2. Deathwatch beetle, *Xestobium rufovillosum*, adults are 1/8 to 1/4 inch long, dark grayish-brown, mottled with patches of pale hairs, and have elytra (wing covers) without striae (longitudinal furrows). They attack wood softened by fungal deterioration and are primarily found in the eastern United States but not common.
3. Eastern deathwatch beetle, *Hemicoeelus carinatus*, adults are elongate, 1/8 to 1/4 inch long, and reddish to blackish-brown with shallow elytral striae (longitudinal furrows). They attack both new and old wood and are widely distributed in the eastern United States.
4. Broad-diet anobiid powderpost beetle, *Euvrilletta peltatus* (formerly *Xyletinus peltatus*), adults are 1/8 to 1/4 inch long, brown, covered with fine yellowish hairs, and have elytra (wing covers) with fine shallow striae (longitudinal furrows). These beetles attack new and old wood of both soft and hard consistency and are widely distributed throughout the eastern United States.

**Biology.** Female anobiid beetles lay their eggs (usually 20 to 60: maximum 121) on wood under surface splinters, in cracks, or in old exit holes. After hatching, the larvae bore straight into the wood for a short distance, and then make a right-angle turn and bore with the wood grain. As they bore, the larvae pack their frass and fine wood fragments into the tunnel behind them. If a softwood (conifer/evergreen) is being attacked, this loosely packed mixture feels gritty due to the lemon or bun-shaped fecal pellets whereas, if a hardwood (broadleaf tree) is being attacked, this mixture is tightly packed and does not feel gritty. Each time the larva molts, the tunnel is made larger in diameter. When larval development is completed, the immediate tunnel is often enlarged for pupation. When the adult is ready to emerge, it bores straight to the wood's surface and exits. In other species, the mature larva bores almost to the wood surface and creates its pupal chamber there; when the adult is ready to emerge, it chews through the thin outer surface and exits. Adults usually emerge in the spring or early summer and do not feed, but actively seek a mate. Under very favorable conditions, developmental time (egg to adult) may require only 1 year, but it usually requires 2 to 3 years indoors and



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sometimes longer. Although most anobiids are strong fliers, females tend to lay their eggs on the wood from which they emerged. Based upon those studied, anobiids can digest wood cellulose with the aid of yeast cells in their digestive tracts; lyctid powderpost beetles cannot digest cellulose.

**Habits.** Anobiid powderpost beetles attack both softwoods and hardwoods, and mostly the sapwood. They attack structural timbers, lumber, and manufactured products. In structures, only wood older than 9 to 10 years is attacked; however, *Euvrilletta peltatus* will also attack freshly seasoned wood. The wood moisture content required for beetle development is 13 to 30%. Because of this high moisture requirement, they are a major problem in the southeastern states, especially in crawlspace type construction, and in coastal states where the relative humidity is high and it is warm. Adults are active only at night and those of some species are attracted to light while others are not.

The larval and adult activity varies considerably during the year based primarily on beetle biology and wood moisture content. For *Euvrilletta peltatus*, probably the most destructive species in the east, this activity can be summarized as follows:

1. December-January-February: Larvae are inactive; no new frass or exit holes.
2. March-April-May: Larvae resume feeding during March and feed for 1 to 2 months. New exit holes and adults are present by mid-May.
3. June-July-August: New exit holes and adults are present. The number of adults may start to decrease during June.
4. September-October-November: Usually no visible signs of activity but larvae are feeding within wood; larval chewing cannot be heard.

**Cultural Control & Preventative Measures.** The easiest way to prevent infestation of buildings and wood furnishings by anobiid powderpost beetles is to thoroughly inspect old wood items for signs of beetle damage (such as 1/16 to 1/8 inch diameter holes expelling powdery and coarse frass) before bringing them inside. This includes antique furniture, barn wood (e.g., beams and siding intended for use as rustic mantles for fireplaces and paneling for a recreation room). If old barn wood is desirable for a rustic decor, it should first be treated by a pest management professional, either by application of an aqueous borate preservative or by chamber fumigation.

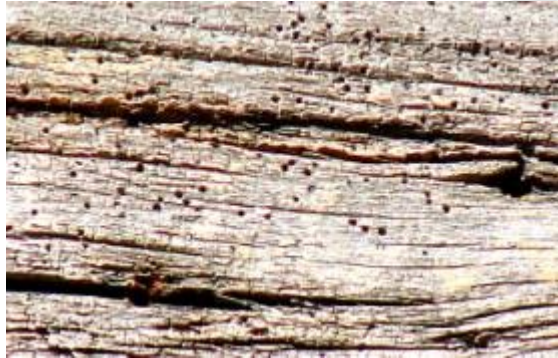
**Professional Control.** A Varment Guard pest management professional will be able to determine whether or not a powderpost beetle infestation exists and whether the evidences indicate current or past activity. If beetles are active in woodwork, a borate treatment of exposed structural wood can be contracted and performed.

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**Note:** Aqueous borate treatments are not applicable to finished antique furniture, nor effective if the infested structural wood is finished with paint, varnish, shellac, wax, etc. A chamber fumigation may be arranged for treatment of valuable antique furniture if the situation warrants it and all conditions are met.



Anobiid powderpost beetle exit holes measure 1/8 to 1/16 inch across.