

Geographical distribution

Species	Pest status	USA & Canada	Central & South America	Europe & N.Asia	Mediterranean basin	Africa	S. & SE. Asia	Australia & Oceania
<i>Gibbium aequinoctiale</i>	●	X	X	X	X	X	X	X
<i>Gibbium psylloides</i>	●			X	X			
<i>Mezium affine</i>	●	X		X	X			
<i>Mezium americanum</i>	●	X	X	X	X	X	X	X
<i>Niptus hololeucus</i>	●	X	X	X	X		X*	X
<i>Ptinus clavipes</i>	●	X	X	X	X	X		X
<i>Ptinus fur</i>	●●	X	X	X	X		X	X
<i>Ptinus tectus (P. ocellus)</i>	●●	X		X	X		X*	X
<i>Ptinus raptor</i>	●	X		X				
<i>Ptinus villager</i>	●	X		X				
<i>Tipnus unicolor</i>	●	X		X				
<i>Sphaericus gibboides</i>	●	X		X	X			
<i>Trigonogenius globulus</i>	●	X	X	X		X*		X

Pest status: ● minor to ●●●● major pest

X: recorded

*: temperate regions only

Gibbium aequinoctiale and *Mezium americanum* are most frequently encountered in warm climates. The many species of *Ptinus* and the other genera listed are mostly encountered in temperate regions.

References

Aitken (1975), Bousquet (1990), Haines (1991), Hinton (1940), Howe (1991), Mound (1989), Spilman (1987a).

Anthribid beetles

(Family: Anthribidae)

Araecerus fasciculatus Cocoa weevil, Coffee-bean weevil

Summary

Feeding strategy	primary pest
Commodities attacked	cocoa, coffee, dried cassava and yams, maize, groundnuts, brazil nuts, spices especially nutmegs
Distribution	tropical
Economic importance	high on high value crops
Eggs	laid onto seed or root
Larvae	immobile, concealed within commodity
Adults	do not feed on commodity, can fly

Introduction

The Anthribidae is a family of beetles most of which feed on fungi and dead wood. Only one species *Araecerus fasciculatus* is well known as a pest of stored products.

Identification

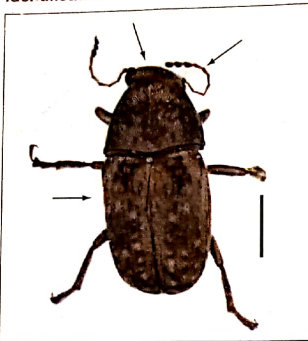


Figure 21 *Araecerus fasciculatus*, adult, showing antennae, head capsule wide relative to width of pronotum, patterning on elytra

A. fasciculatus is a globular beetle 3–5 mm long with long legs and long antennae (Figure 21) and is somewhat similar in appearance to bruchids. Elytra are patterned with small light and dark patches to give a chequered appearance. Elytra are short and leave the last segment of the abdomen exposed. The last three segments of the antennae are somewhat thickened and form a loose club. The larvae are scarabaeiform and hairy, with only vestigial legs.

Adult *A. fasciculatus* can be confused with bruchid beetles (see page 40). Compared to bruchids of similar size, the head capsule of *A. fasciculatus* is much wider relative to the width of the pronotum. Antennae are also different. Anthribids and bruchids attack quite different commodities and are unlikely to be found together.

Life cycle

Eggs are laid on the surface of the infested commodity. Larvae bore into the food material where they remain until adulthood. When infesting coffee cherries, larvae first feed on the fruit pulp before attacking the seed. Adult beetles can fly well and infestation of commodity may occur before harvest. Infestation of coffee may begin before harvest or during the initial phase of the drying process and will continue until the commodity is dried to below about 8% moisture content.

Physical limits and optimum rate of multiplication

Species	Conditions within which breeding takes place	Shortest development period, with optimum conditions	Maximum monthly rate of increase
<i>Araecerus fasciculatus</i>	> 22°C, r.h. > 60%	26–66 days at 28–32°C, > 60% r.h.	40

A. fasciculatus breeds most rapidly and successfully under conditions of high humidity. Drying of the commodity greatly increases mortality and the length of time taken to develop to adulthood.

Economic importance

A. fasciculatus can attack a wide range of commodities but is best known as a pest of coffee, cocoa and spices such as nutmeg. It will also attack some tropical nuts and dried roots such as yams and cassava. It is occasionally found attacking maize.

A. fasciculatus is an important pest of high value beverage crops and spices. On dry commodities kept in good condition damage is minimal, but if crops are stored damp in poor conditions then damage caused can become significant. Infestation of other materials listed is most often encountered under conditions of tropical subsistence agriculture.

Type of damage and symptoms

Emergence of adult beetles results in the excavation of circular emergence holes in the commodity and large cavities within seeds.

Ecology :

Initial infestation by this insect is known to provide access for other pests, notably moths of the genera *Cadra* and *Ephesia*.

Monitoring

Infestations of these insects quickly become obvious as a result of the presence of the active adults and emergence holes in infested commodities. Acoustic detectors are commercially available which detect the sounds that internal stages of these beetles make during feeding. X-ray photography has been used to detect hidden larvae developing within grains.

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Pest status: • minor to •••• major pest
X: recorded

A. fasciculatus is established in tropical regions where its crop hosts are grown. For example in Australia, it is restricted to the tropical north-east. In temperate regions, it may be intercepted on imported beverage crops and spices.

References

Aitken (1975), Arbogast (1991), Haines (1991).