Species	Pest status	USA & Canada	Central & South America	Europe & N.Asia	Mediterranean basin	Africa	S. & SE. Asia	Australia & Oceania
Tribolium audax	••• ,	X			1.0		1000	The Many
Tribolium castaneum	••••	X	X,	X	X	X	X	X
Tribolium confusum	••••	X	X	X	X	X	7	and the second second
Tribolium destructor	•••	X	X	X	X	^	X	X
Tribolium madens	••	X	X	Х			M=21-27 2	

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

X: recorded

T. castaneum and T. confusum are found worldwide. Under tropical conditions, T. castaneum dominates. In warm temperate and Mediterranean climates, both species are encountered, T. castaneum tends to be associated with cereal grain and grain storage whereas T. confusum largely replaces T. castaneum in mills. Cooler climates tend to favour T. confusum in any habitat.

T. audax, T. destructor and T. madens are largely restricted to temperate regions or cool areas in otherwise tropical countries. These species are of interest to quarantine services as they are currently absent from many areas in which they would likely survive, for example Australia. The ability of these species to spread is illustrated by the establishment of T. madens in the USA and Canada following its initial detection in the state of Kentucky in 1977 and Canada in 1979.

Trogossitid beetles

(Family: Trogossitidae)

Tenebroides mauritanicus	Cadelle	 . M			

Summary

Feeding strategies	secondary pest, scavenger	
Commodities attacked	stored products of vegetable origin	7
Distribution	worldwide	d
Economic importance	low	-
Eggs	laid in amongst commodity	
Larvae	campodeiform, mobile, external feeders	-
Adults	long lived, feed on commodity	

Introduction

In nature, trogossitid beetles are found living under the bark of trees, often as predators and scavenage is associated with stored products. Scavengers. One species, Tenebroides mauritanicus, is associated with stored products.

Identification

Adult T. mauritanicus are distinctive flattened, parallel-sided, glossy black beetles, 6-11 mm long (Figure 185). The head and pronotum are relatively large when compared to the rest of the body. The prothorax and elytra are distinctively separated by a visible constriction or 'waist'. Larvae are elongate, flattened and white in colour, the thorax and last segment of abdomen marked with dark coloured areas.



Figure 185 Tenebroides mauritanicus, adult, thorax and abdomen separated by waist

Life cycle

T. mauritanicus lays clusters of 10-50 eggs into cracks and crevices. About 1000 eggs can be laid by a female in her lifetime, which can be as long as several years. Larvae feed both on the stored commodity and on other insects present. When feeding on grain, larvae preferentially attack the germ. Pupation takes place in a cell hollowed out in a solid substrate. Both adult and larvae of T. mauritanicus are cold-tolerant and can survive periods below 0°C. Development from egg to adult can take place in as little as 70 days.

Economic importance

T. mauritanicus is a pest of a wide range of stored products, especially cereals, oilseeds and their products in mills and processing facilities. Larvae can cause serious damage by burrowing into wooden structures and even plastered walls.

Ecology

Burrowing by T. mauritanicus larvae into foodstuffs and storage structures provides harbourage for other insect pests. T. mauritanicus is rarely seen in large numbers, except under conditions of long established poor hygiene and pest control.

Type of damage and symptoms

Larvae and adults are general feeders, and damage is not readily identifiable as being specifically caused by this insect. Larvae of T. mauritanicus often burrow into wood structures and plastered walls.

Monitoring

T. mauritanicus is easily caught in pitfall type traps. Crevice traps are also effective and their efficacy can be improved with addition of food bait.

Geographical distribution

Species	t status	Canada	& South erica	pe & \sia	iterranean basin	g	E. Asia	alia & ania
Tenebroides mauritanicus	Pes	USA &	Central	Eur N.	Mediter	Afri	S. & SE	Austr
Post status	••	X	X	Х	Х	Х	Х	Χ

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

X: recorded

T. mauritanicus is found worldwide, including temperate regions.

References

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