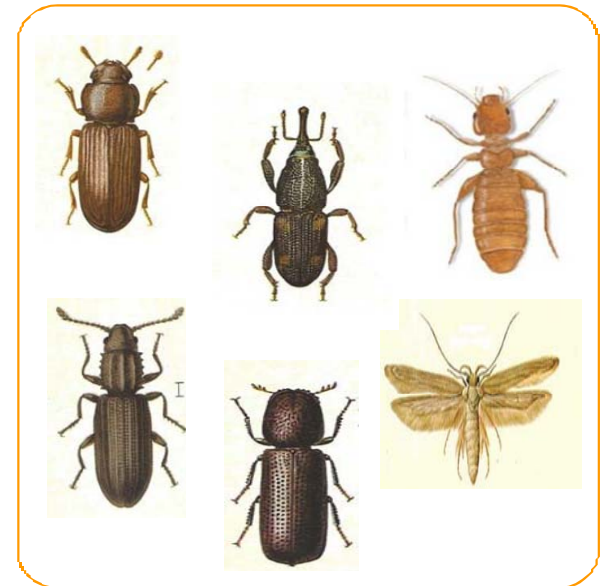


NOTES



## Major Insect Pests of Stored Paddy and Rice in Guyana



***Tribolium castaneum* (H.)**



**Red-rust flour beetle**

**Key Features :**

Adult beetles are about 3 – 4.5mm long. They are bright reddish-brown in colour when young and turn to a darker brown when older. The main characteristic are the three larger segments at the end of the antennae.

**Life History :**

Life cycle is completed in 4 weeks at a temperature of 30°C, 11 weeks at 22°C and reproduction stops below 20°C. The females can lay up to 1000 eggs, loosely scattered throughout the grains. Its cream-colored larvae feed externally on damaged grain.

***Liposcelis***



**Booklouse**

**Key Features :**

These small insects are sometimes confused with mites. They may be distinguished easily by their long antennae.

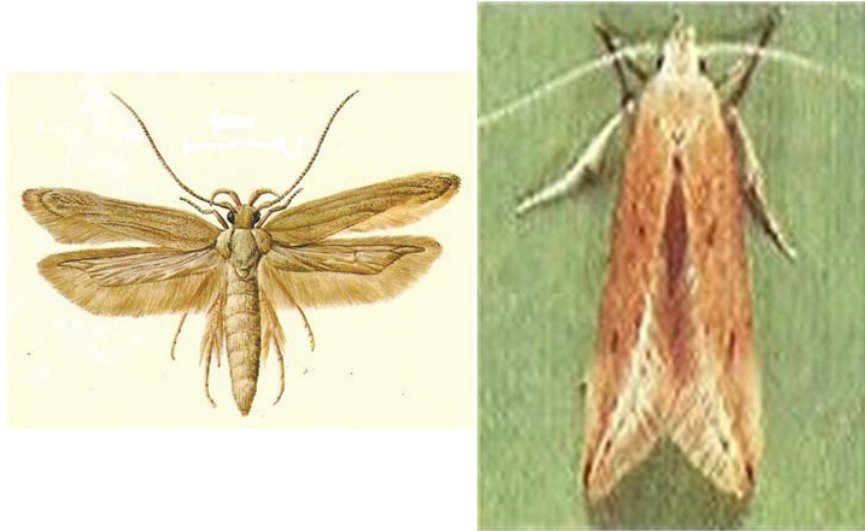
These insects feed on microscopic moulds, fungi, dead insect fragments, and starchy food materials, which can be found among the grains. They are also known to eat insect eggs.

Actually, they do not normally damage grains but are usually considered as contaminants to grains and stored food products.

**Life History :**

Under humid conditions very large populations may develop, which contaminate stores by forming a thick foul swelling carpet of dead bodies.

***Sitotroga cerealella* (Oliv.)**



**Angoumois grain moth**

**Key Features :**

The adults have silvery grey to grey brown wings, which taper to a point.

The main characteristic is on the wings, which have a long fringe of fine hairs along the posterior edge.

Adults (5 – 7mm long) are unable to penetrate the grain, therefore only infest surface layers of bulk grain.

**Life History :**

Adult moths do not feed but lay 150 – 300 eggs on or near the grain surface.

The larvae burrow into a single grain and feed and develop until the adult moth emerges in 10 – 14 days through a visible hole.

The life cycle takes around 5 – 7 weeks in warm conditions.

***Sitophilus oryzae* (L.)**



**Rice Weevil**

**Key Features :**

Adult weevils are dark brownish black in colour and about 2 – 4mm long with a long weevil ‘snout’.

It has four small distinctive light coloured patches on its rear wing.

The adults rarely fly, and climbs vertical surfaces (e.g. glass jar).

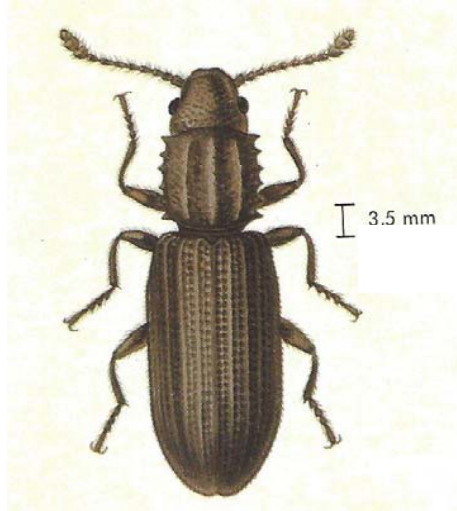
**Life History :**

Adults live for about 2-3 months.

Larvae are generally not seen – they feed and develop inside single grains.

Life cycle is completed in 4 weeks at a temperature of 30°C, 15 weeks at 18°C, and breeding stops below 15°C.

***Oryzaephilus surinamensis* (L.)**



**Saw-toothed grain beetle**

**Key Features :**

Adult beetles are dark brown-black in colour and can be up to 3mm long. They are known to be fast moving insects.

The main characteristic is on the thorax (chest), which has saw-toothed pattern on each side, and consist of 6 pointed projections and three distinct ridge lines on top.

Adults climb vertical surfaces (glass jar) and fly mostly in warm conditions.

The slim, whitish-yellow larvae are freely mobile and grow to a length of 3.5-4 mm. They make cocoons from grain particles in which they pupate.

**Life History :**

Adults can live for several months, female lays 150-250 eggs loosely throughout the grains. White larvae feed and develop externally.

The life cycle is completed in 3 weeks at a temperature of 30 – 33°C, 17 weeks at 20°C, reproduction stops below 17.5°C.

***Rhizopertha dominica* (F.)**



**Lesser grain borer**

**Key Features :**

Adults are dark brown cylindrically shaped beetles (up to 3mm long) with club-like antennae.

When viewed from the side the beetle's mouth parts and eyes are tucked underneath the thorax (chest). Adult beetles are known to be strong flyers.

The spots on the shield (its back) gradually become smaller towards the rear.

**Life History :**

The life cycle is completed in 4 weeks at a temperature of 35°C and 7 weeks at 22°C. Breeding stops below 18°C.

Females lay between 200 – 400 eggs on grain surfaces. Young larvae (white with brown heads) initially feed outside then bore into the grain. Adults live for 2 – 3 months.