Grub: Worm like, whitish cream colour, faint stripes, two spines like appendages at the end segment. Pupa: Pupa remains loosely lying in the grain and is naked.
Adult: Oblong, flat, brown in colour. In *T. confusum*, the compound eyes are completely notched and antennae are not gradually thickened whereas in *T. castaneum*, the notch is not complete and antennae have a clear 3-segmented club.

12. Long headed flour beetle, *Latheticus oryzae*,Tenebrionidae, Coleoptera
Host range: Cereal flours, packaged food, rice and rice products, grains with excessive dust, dockage and broken grains with high moisture contents preferred.
Life history: 400 E 7-12 d G
15-80 d Total life cycle : 25 d
A 5-10 d P
Nature of damage: Both grubs and adults feed.
Egg: White, smooth, cylindrical eggs at random in grain and seams of the bags.
Grub : Active grub feeds voraciously. Pupa: Pupa is naked.
Adult: Light brown with elongated body, resembles *Tribolium* sp. Antennae shorter than head, 11 segmented with 5 clubbed apical segments.
13. Flat grain beetle, *Cryptolestus minutas, Laemophloeus pusillus,* Cucujidae, Coleoptera
Host range: Rice, maize, wheat with excessive brokens, different flours, groundnut particularly with high moisture and mouldy grain.
Life history: E 5 d G
6-12 mon 21 d Total life cycle : 6 weeks
A P
Nature of damage: Both adults and grubs feed on stored products and are important pests of mills. Grubs feed on germ portion and even on dead insects. Adults are only scavengers, cause heating in grain and flour in case of heavy infestation.
Egg: White eggs are laid loosely in flour, grain or crevices.
Grub : Cigar like, yellowish white with two reddish brown spines at anal segment.
Pupa: Matured larvae pupates in a gelatinous cocoon covered with dust particles.
Adult: Tiny, light to dark reddish brown beetle with filiform antennae.

14. Saw toothed grain beetle, *Oryzaephilus surinamensis*, Silvanidae, Coleoptera
Host range: Rice, wheat, maize, cereal products, oil seeds and dry fruits.
Life history: 300 E 3-17 d G
3 years/ 14-20 d Total life cycle: 3 weeks
6-10 mon
A 7-21 d P
Symptom of damage: Presence of off odour in grain.
Nature of damage: Adults and grub cause roughening of grain surface and off odour in grain. Grains with higher percentage of broken, dockage and foreign matter sustain heavy infestation, which leads to heating of grain.
Egg: Whitish eggs laid loosely in cracks of storage receptacles or godowns.