

# Pests of Spices



**Pests of Cardamom**

**Pests of Pepper**

**Pests of Turmeric and Ginger**

**Pests of Cinnamom**

**Pests of Clove**

# Plantation crops



**Pests of Arecanut**

**Pests of Coconut**

**Pests of Coffee**

**Pests of Tea**

**Pests of Cocoa**

**Pests of Oil Palm**

## **Pest of Cardamom**



## Thrips: *Sciothrips cardamom*



Adult



Corky encrustations on pods



Shoot, panicle and capsule borer: *Dichocrocis*  
(*Conogethes*) *punctiferalis*



Corky encrustations on pods



Larva



Adult

Capsule borers: *Jamides* sp.





Beetle borer: *Onthophagus* spp.



Hairy caterpillars: *Eupterote cardamomi*, *E. canarica*, *E. fabia*



**Cardamom aphid: *Pentalonia nigronervosa* f. *Caladii***



Shoot fly: *Formosina flavipes*



Root grubs: *Basilepta fulvicorne*, *Holotrichia serrata*





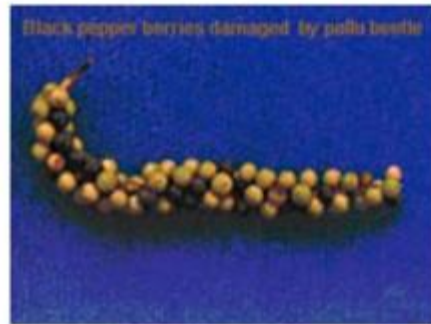




## **Pest of Pepper**



**Pollu beetle: *Longitarsus nigripennis***



Berry damage



Leaf damage



Adult

Pepper mussel scale: *Lepidosaphes piperis*



White tailed mealy bug: *Ferrisia virgata*



## Pest of Turmeric and Ginger





**Shoot borer: *Conogethes punctiferalis***



Damaged leaves and larva presence  
on the inside stem

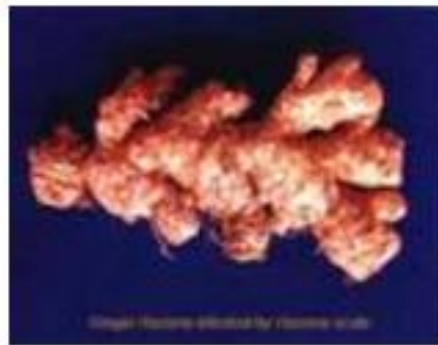
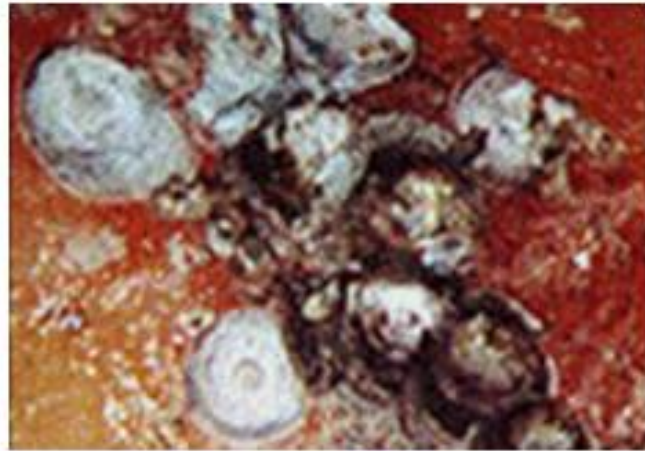


Larva



Adult

**Rhizome scale: *Aspidiella hartii***



Larva

Leaf roller: *Udaspes folus*



Larva



Adult

## **Pest of Cinnamom**



Cinnamon butterfly: *Chilasa clytia*







**Leaf miners: *Conopomorpha civica***



## Pest of Clove



**Stem borer: *Sahyadrassus malabaricus***



**Green scale: *Lecanium* sp.**



**Black Scale: *Saissetia nigra***



# Plantation crops

## Pest of Arecanut





**Spindle bug: *Carvalhoia arecae***



**Root grub: *Leucopholis burmeisteri***



Grub



Adult

**Cholam or white mite: *Oligonychus indicus***



**Mite infestation: Reddening  
of leaves**

**Inflorescence caterpillar: *Tirathaba mundella***



Larva



Adult

## Pest of Coconut



## Rhinoceros beetle: *Oryctes rhinoceros*



Holes in central spindle



Holes with chewed fibre sticking out in central spindle





Triangular cuts on leaves



Grub



Rhinoceros Beetle



Rhinoceros Beetle



Trapped Rhinoceros Beetle

**Red Palm Weevil: *Rhynchophorus ferrugineus***



Holes on the stem



chewed up fibres



Pupae



Adult



## Coconut Eriophyid: *Aceria guerreronis*



Brown colour patches on nuts

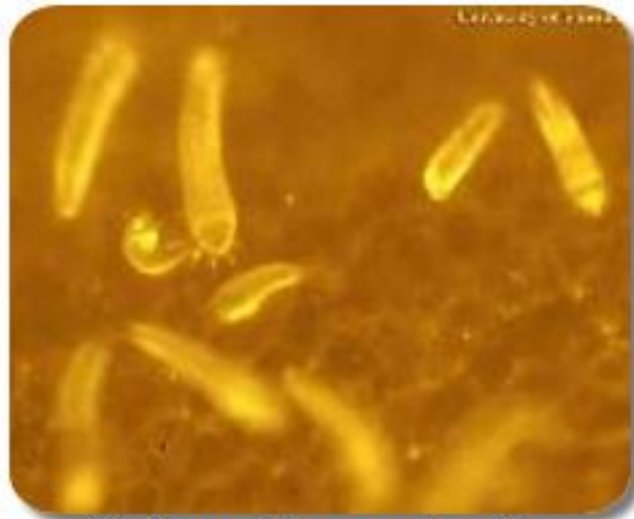


V Shaped spindles





Oozing of the gummy exudation



Colony of coconut mite



Eriophyid mite under microscope

**Leaf Eating Caterpillar/ Black Headed  
Caterpillar: *Opisina arenosella***



Dried up patches



Galleries of silk



Scorched appearance



Larvae



Pupae



Adult



**Slug Caterpillar: *Parasa lepida* and *Contheyla rotunda***



Symptom



Adult



**Coconut Skipper: *Gangara thyrsis* ; *Suastus gremius***



Rolled leaf



Dried rolled leaf



*Gangara thyrasis* larvae



*Gangara thyrasis* pupae



*Gangara thyrasis*



*Suastus gremius* larvae



*Suastus gremius* pupae



*Suastus gremius*

**Coreid Bug: *Paradasynus rostratus***



Deformed coconut



Cervix on husk





Nut fall





*Paradasynus rostratus*

## Bag Worm: *Manatha albipes*



Small irregular holes



Pupae



Adult

**White Grub/ Cockchafer Beetle: *Leucopholis coneophora***



Grub



Adult

**Lacewing Bug: *Stephanitis typicus***



White spots on leaves



*Stephanitis typicus*



**Scale Insect: *Aspidiotus destructor***



Scale on leaves



Yellow spots on leaf





Nymph



Adult

**Mealy Bug: *Pseudococcus longispinus***



Colony of Mealybug



Stunted leaves



Crinkeld leaves

## **Pest of Coffee**





White stem borer: *Xylotrechus quadripes*

White Stem Borer- Nature of Damage



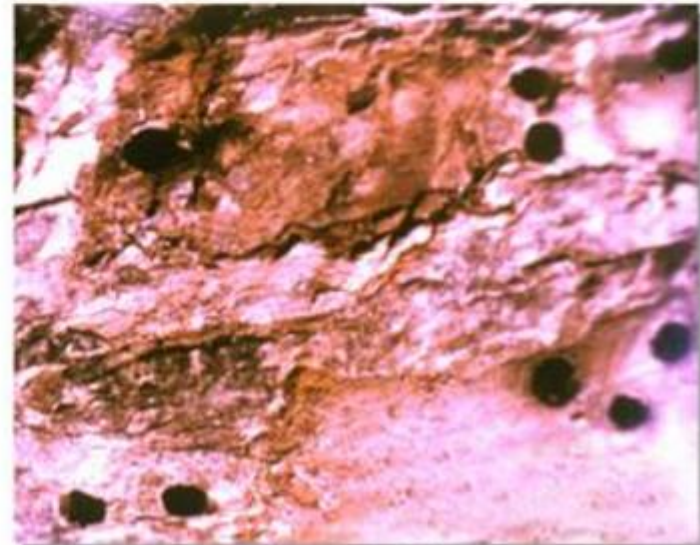
Infested plant showing ridges



Stem with ridges



Infested stem showing borer tunnels



Emergence holes





# Coffee berry borer: *Hypothenemus hampei*

## CBB - Nature of Damage



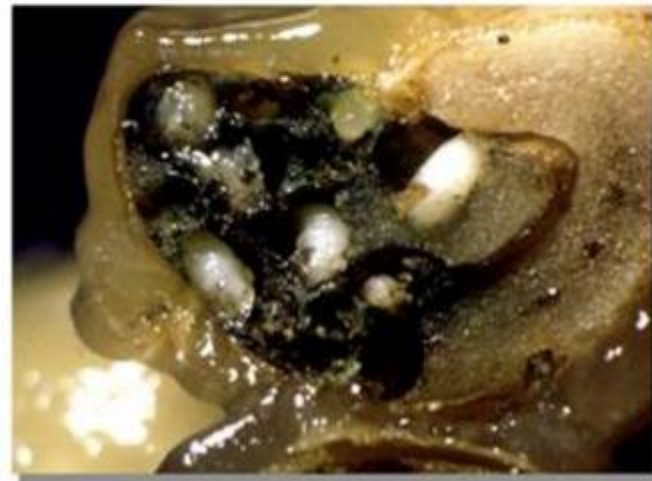
CBB Infested berries



Infested fruit showing borer hole



Damaged berry with CBB eggs



Damaged berry with stages



Coffee berry borer adults

Shot hole borer: *Xylosandrus compactus*



Mealy bugs: *Planococcus spp.*



Large white mealy bug



Cherry infestation

**Brown scale: *Saissetia coffeae***



Brown scales on coffee leaf

Cockchafers or white grubs: *Holotrichia* spp.





**Hairy caterpillars: *Eupterote* spp.**



← Grub

Adult →



**Coffee bean beetle: *Araecerus fasciculatus***







**Snail: *Ariophanta solata***





**Red borer: *Zeuzera coffeae***



Larva



Adult

## Pest of Tea



Tea mosquito bug: *Helopeltis theivora*



Looper caterpillar: *Biston supressaria*



Lobster Caterpillar: *Neostauropus alternus*







Flush worm: *Cydia leucostoma*



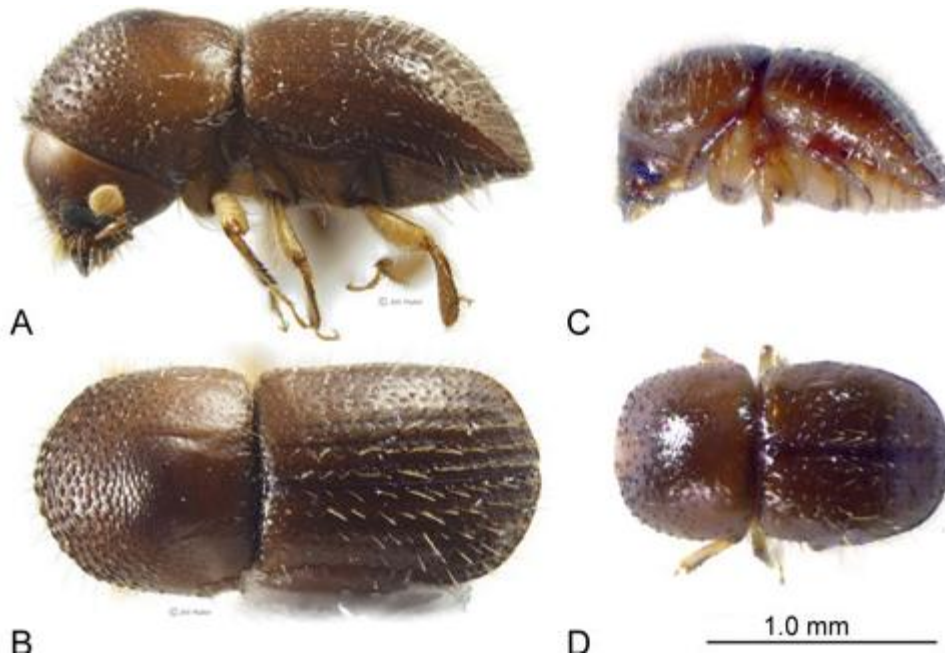
Adult

Tea tortix: *Homona coffearia*



**Adult, Tea tortix**

Shot hole borer: *Envallecea fornicatus*



Red spider mite: *Oligonychus coffeae*





Scarlet mite: *Brevipalpus californicus*



Purple mite: *Calacarus carinatus*

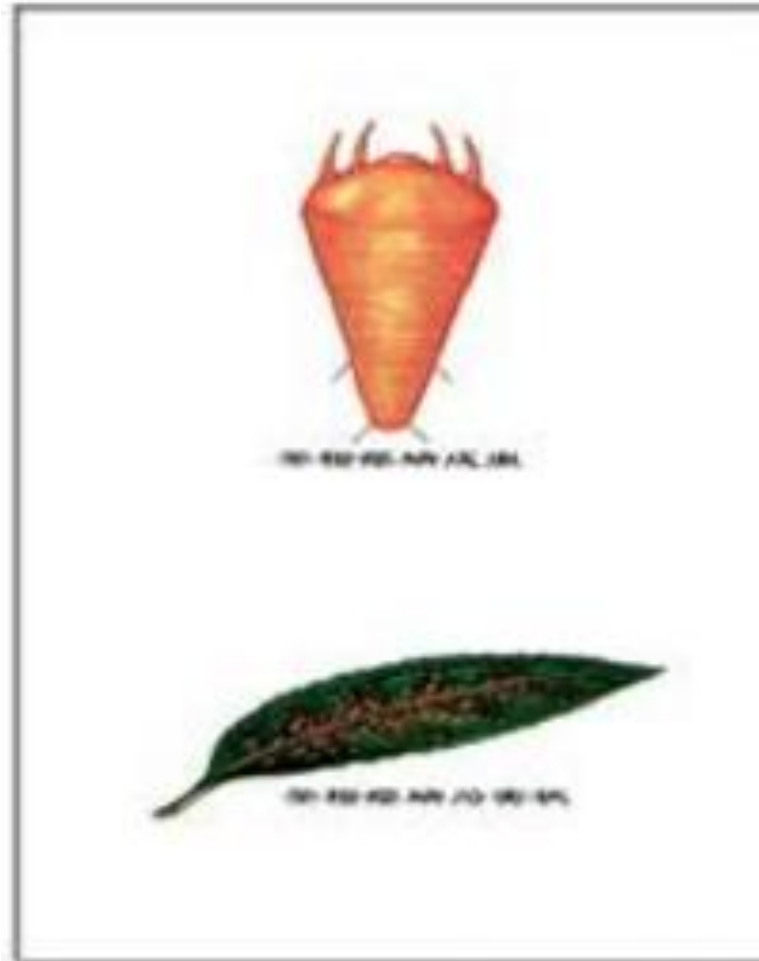


Coppery brown discoloration



Adult

**Pink mite (or) Orange mite: *Acaphylla theae***

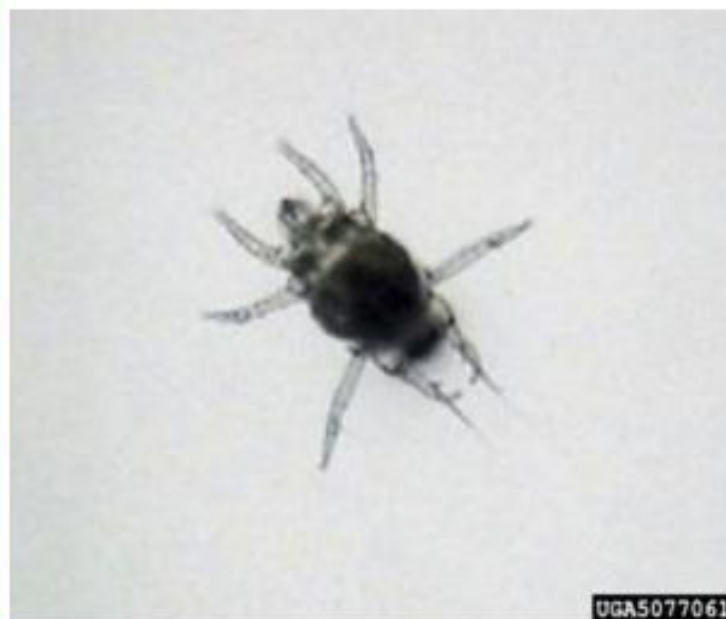


**Yellow mite: *Polyphagotarsonemus latus***





Eggs



Adult



**Aphid: *Toxoptera aurantii***



## **Pest of Cocoa**



**Mealy bugs: (*Planococcus lilacinus*,  
*Planococcus citri*, *Paracoccus*  
*marginatus* and *Rastrococcus iceryoides*)**



*Planococcus lilacinus*



*Paracoccus marginatus*



*Rastrococcus iceryoides*

**Tea mosquito bugs (*Helopeltis antonii*)**



Tea mosquito bug



Damage symptom

## Flatid Plant hoppers



Flatid Plant hopper nymphs





Flatid Plant hopper Adults

Hairy caterpillars: (*Lymantria sp.*, *Euproctis sp.*, *Dasychira sp.*)



Defoliation

**Aphids: (*Toxoptera aurantii* and *Aphis gossypii*)**



*Toxoptera aurantii*



*Aphis gossypii*

## Stem Girdler: *Sthenias grisator*



Damage by stem girdler



Adult stem girdler



## Non- Insect pests



Rat damage



Squirrel damage



## Pest of Oil Palm



**Spindle bug: *Carvalhoia arecae***



Rhinoceros beetle: *Oryctes rhinoceros*



Grub



Adult

Red palm weevil: *Rhynchophorus ferrugineus*



Pupa



Emerging from cocoon



Adult



**Damage – red palm weevil**



**Nettle caterpillar: *Thosea andamanica***



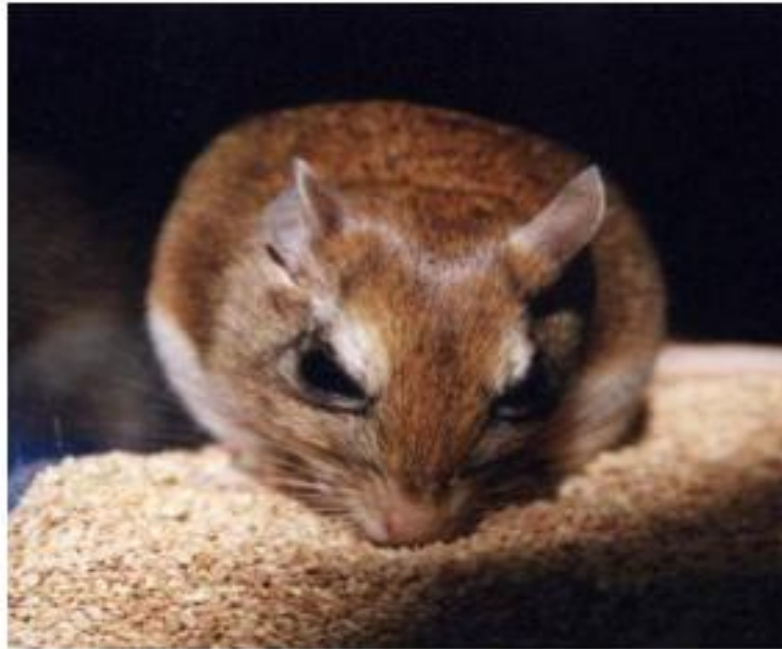


The common mynah *Acidotheres tristis tristis*



Common mynah *Acidotheres tristis tristis*

**Rodents: Burrowing rat, *Tatera indica***



**Burrowing rat, *Tatera indica***

Thank you