

# Diseases and Disorders

## *Alphitobius diaperinus*

Healthy

**Egg**



**First Instar**



**Larva**



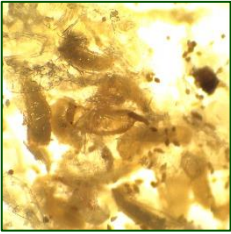
**Pupa**



**Beetle**



Unknown Disorders



**Yellow/Brown unhatched eggs**  
Cause unknown



**Airbubbles in intestine**  
Probably caused by dehydration



**Swollen, black Eusophagus**  
Larvae recovered  
Cause unknown

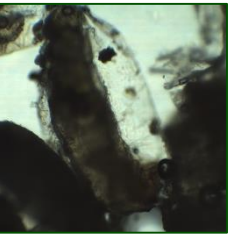


**Hollow pupae**  
Probably eaten by other larvae/beetles

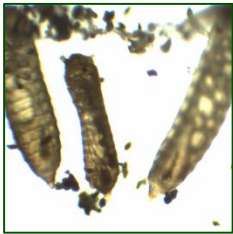


**Bad developed elytra**  
Cause unknown

Incomplete transformation



**Unhatched larva inside eggshell**  
Cause unknown



**Shrunken hatchling**  
Cause unknown



**Incomplete exuviation**  
Cause unknown

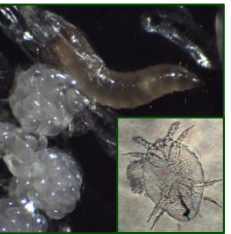


**Incomplete pupal formation**  
Cause unknown

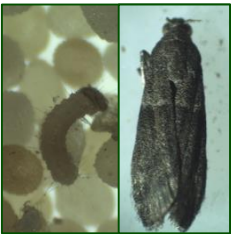


**Incomplete eclosion from pupa into adult**  
Cause unknown

Natural enemies



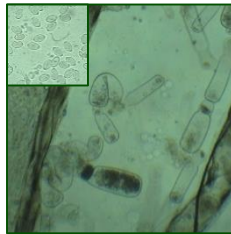
**Eggmites (*Acarophenax mahunkai*)**  
developing in mother mite from Alphitobius egg  
Effect is not known



**Mill moth (*Ephestia kuehniella* and *Plodia interpunctella*)**  
Pest in feed



**Broad-horned flour beetle (*Gnatocerus cornutus*)** 4-6 mm  
pest in feed



**Gregarina parasite in larval intestine**  
Effect on metamorphosis  
Cause unknown



**Black larder beetle (*Dermestes haemorrhoidalis*)**  
6-9 mm Probably feeding on alphitobius