

# Diseases and other health issues in cricket rearing

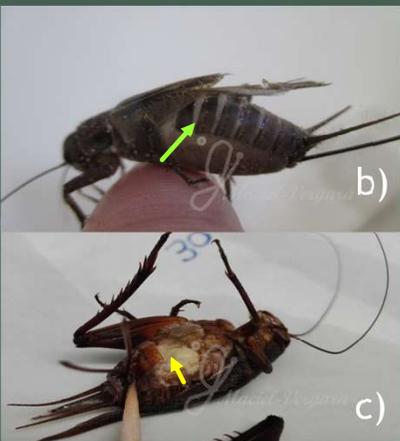
## Viral diseases



- a) 5-6<sup>th</sup> instar house cricket *Acheta domesticus* infected with the *Acheta domesticus* densovirus (AdDV). All instars are susceptible. Symptoms: liquified inner tissues, hindleg paralysis, sluggishness, swelling (not always noticeable). Mortality occurs 2-3 days after the first symptoms are noticed.

Besides AdDV, there are several other viruses that are pathogens of crickets. Reported symptoms are very similar for different viruses. One or more of the following symptoms are often a sign of viral infection: sluggishness, leg shaking, poor coordination of movement, frequent moulting, crippling, swelling, viscous and/or opalescent haemolymph.

## Bacterial diseases



- b) c) Adult crickets (Gryllidae family) infected with *Rickettsiella* sp. All instars are susceptible, though the older the cricket, the more severe the symptoms (**green arrow** indicates the extended membranes between the sternites due to abdomen swelling; **yellow arrow** indicates the viscous amorphous mass inside infected crickets, solidified after storage in ethanol 70%). Symptoms: swollen abdomen, inner tissues become a big “creamy” viscous mass, loss of limbs, poor coordination, females lose the ability to lay eggs - either due to an obstructed oviduct or due to highly reduced egg production. *Rickettsiella* sp. causes a chronic disease. It can take up to 20 days for the infected crickets to die.

Infections with other bacteria (i.e. *Serratia* sp., *Pseudomonas* sp.), lead to a change in coloration (i.e. pink brown, yellowish) and flaccidity. Infected crickets die within 2-4 days after first symptoms are noticed.

## Fungal diseases



- d) Adult cricket (Gryllidae family) infected with *Metarhizium* sp. covered with the typical gray-dark green “brick-like” fungal spores all over the exoskeleton.

For crickets infected with *Metarhizium* sp., *Beauveria* sp. and *Entomophaga* sp., one of the most characteristic symptoms is the **hardening** of the body. A couple of days after death, white mycelium can be observed (at high relative humidity) growing on the cuticle. 3-4 days later, the body gets entirely covered by greenish (*Metarhizium* sp.) or whitish (*Beauveria* sp.) spores.

## Other health issues



- e) Adult house cricket *A. domesticus* covered with mites

Mites are a common problem in cricket rearing, especially at high relative humidity. They pierce the cuticle of alive crickets and feed on the haemolymph. Mites develop well in dead crickets too. Mites can be effectively controlled by releasing predatory mites e.g. *Stratiolaelaps scimitus*.

Text, photos and design by PhD candidate [Gabriela Maciel-Vergara](#)