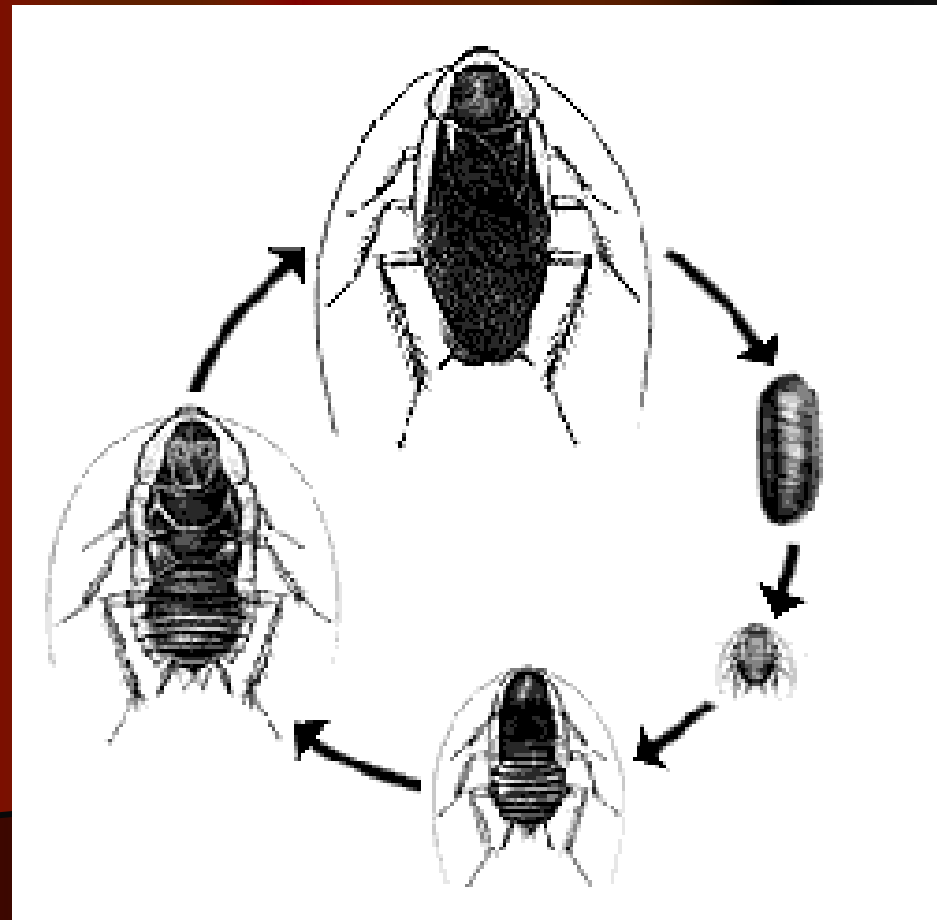


Blatodea (=Blattaria, = Blattoptera) - cockroaches



- About 4000 mainly tropical species, 40 more or less associated with human dwellings as serious pests
- Closely allied to Mantodea and Isoptera
- Long multisegmented antennae, long cerci, generalised chewing mouthparts, large pronotum, simple (paurometabolic) metamorphosis, large compound eyes, complicated wing venation

- Egg laid in groups – ootheca (egg capsule)
- Importance: common household pests, transmit diseases, eat the same as humans, aggressive odour, allergies-asthma,



Biggest (pet) species –
up to 35 g weight

*Blaberus
giganteus*



*Macropanesthia
rhinoceros*







Phorocera cincta



Apolyta caryocera



Geopelia libanota



Andria pallida ♀



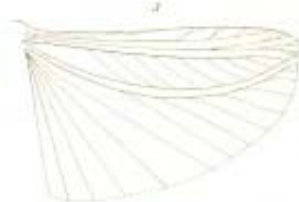
Andria pallida ♂



Andria pallida ♂



Phorocera cincta



Phorocera pallida ♀



Epilampra gibba



Nixopsis varicollis



Nixopsis pallida ♀



Epilampra basifera



Nixopsis varicollis



Parachalcidocera subulata



Epilampra gibba



Epilampra brevis



Parachalcidocera subulata



Melyris nigricollis



Epilampra austriaci



Anisopoda brevis



Mischocyttarus procerus



Epilampra caudata



Anisopoda longicauda

FAM. BLATTIDÆ.
SUBFAM. EPILAMPINÆ.

FAM. BLATTIDÆ.
SUBFAM. EPILAMPINÆ.



Blatella germanica

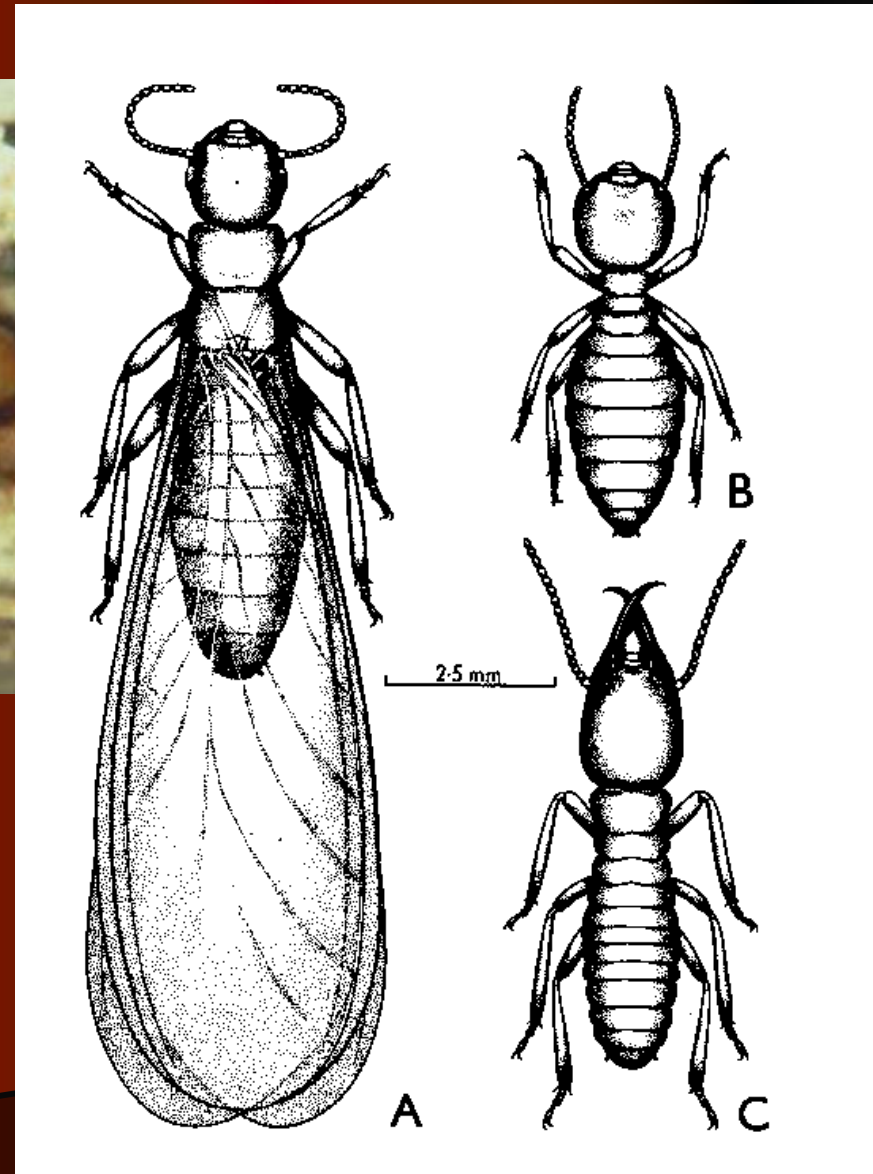
Ectobius – free living



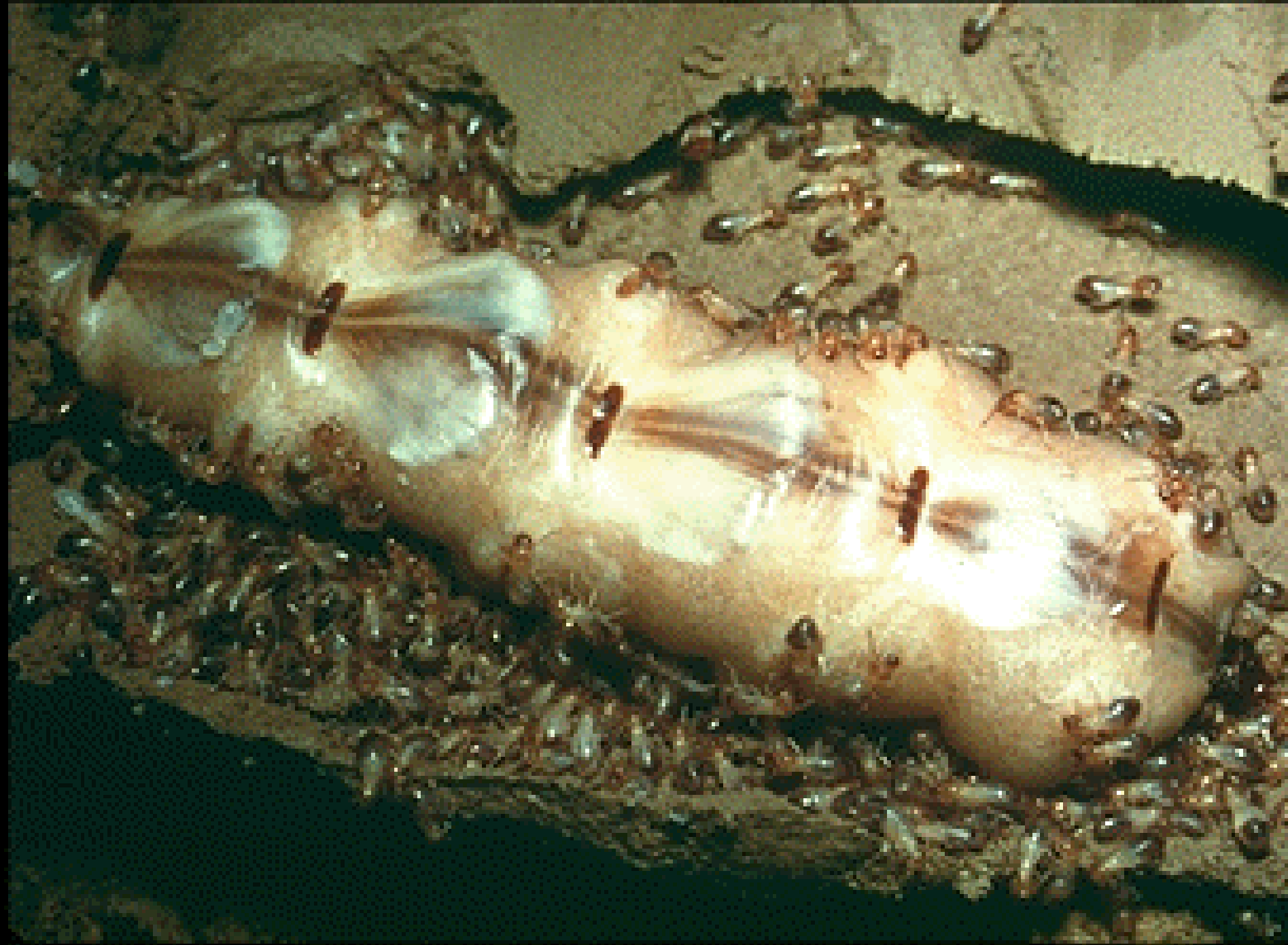
Isoptera - termites



About 3000 mainly tropical species
Eusocial organisation
Major detritivores of tropics, feed on
wood, symbionts, ne based
Physogastric female
Pheromone based castes







Order: **Ensifera** or suborder of **Orthoptera**

11 000 species worldwide

Elongate body, produce sounds (by rubbing their wings against each other)

Large pronotum, long multisegmented antennae (more than 30 segments)

Jumping third pair of legs

Tympanum (ears) on base of fore tibiae

Large compound eyes

First pair of wing hardened, second with anal lobe – complicated venation

Paurometaboly

Long ovipositor with coapted valvulae

Mostly predators



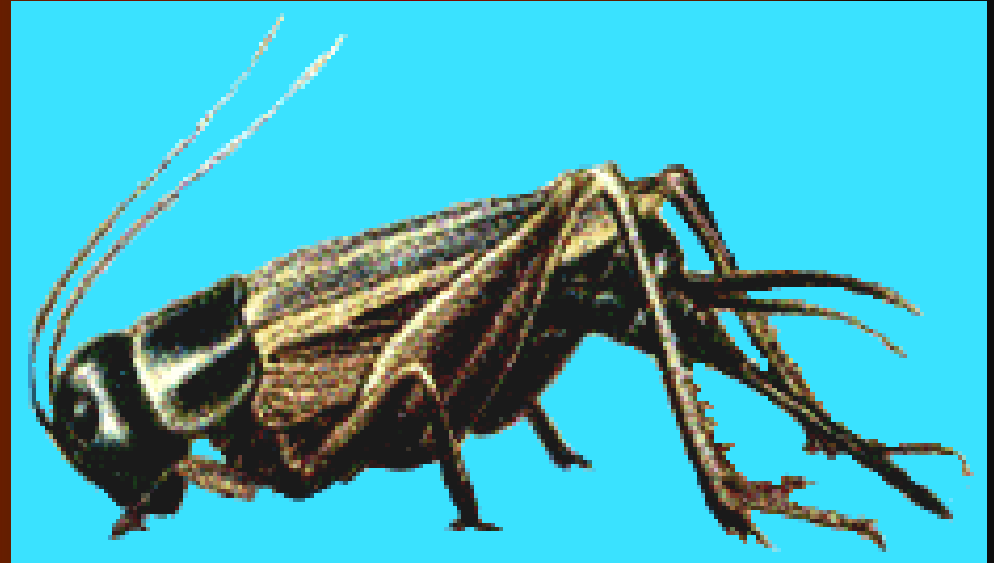
Tettigonioidea



Gryllotalpoidea



Grylloidea



Order: **Caelifera** or suborder of Orhoptera

11 000 species worldwide

Elongate body, produce sounds (by rubbing hind legs against wings)

Large pronotum, short antennae (less than 30 segments)

Saltatorial hind limbs

Tympanum (ears) on sides of abdomen

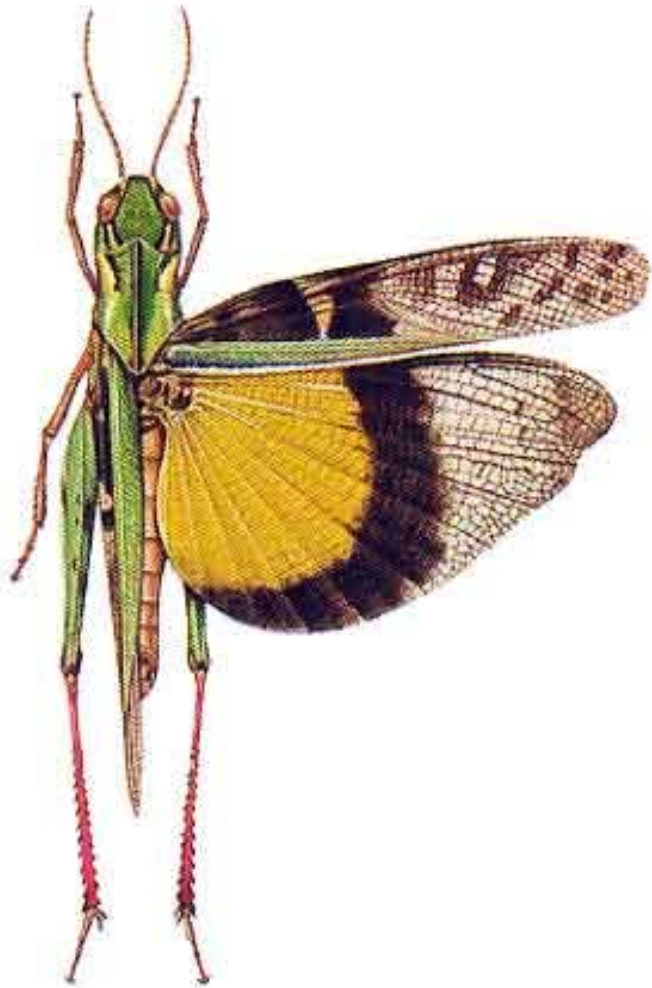
First pair of wing hardened, second with anal lobe – complicated venation

Paurometaboly

Short ovipositor

Exclusive herbivores





Migratory locusts

- Several species of short-horned grasshoppers of the family Acrididae that are characterized by having a swarming (gregarious) phase in addition to a solitary phase. These can be highly destructive and migrate in a more or less coordinated way.
- Locust swarms can cause massive damage to crops. Important locust species include *Schistocerca gregaria* and *Locusta migratoria* in Africa and the Middle East, and *Schistocerca piceifrons* in Mesoamerica
- A single swarms larger than any other single congregation of organisms on Earth, ranging from 100,000 to 10 billion insects



Phasmatodea

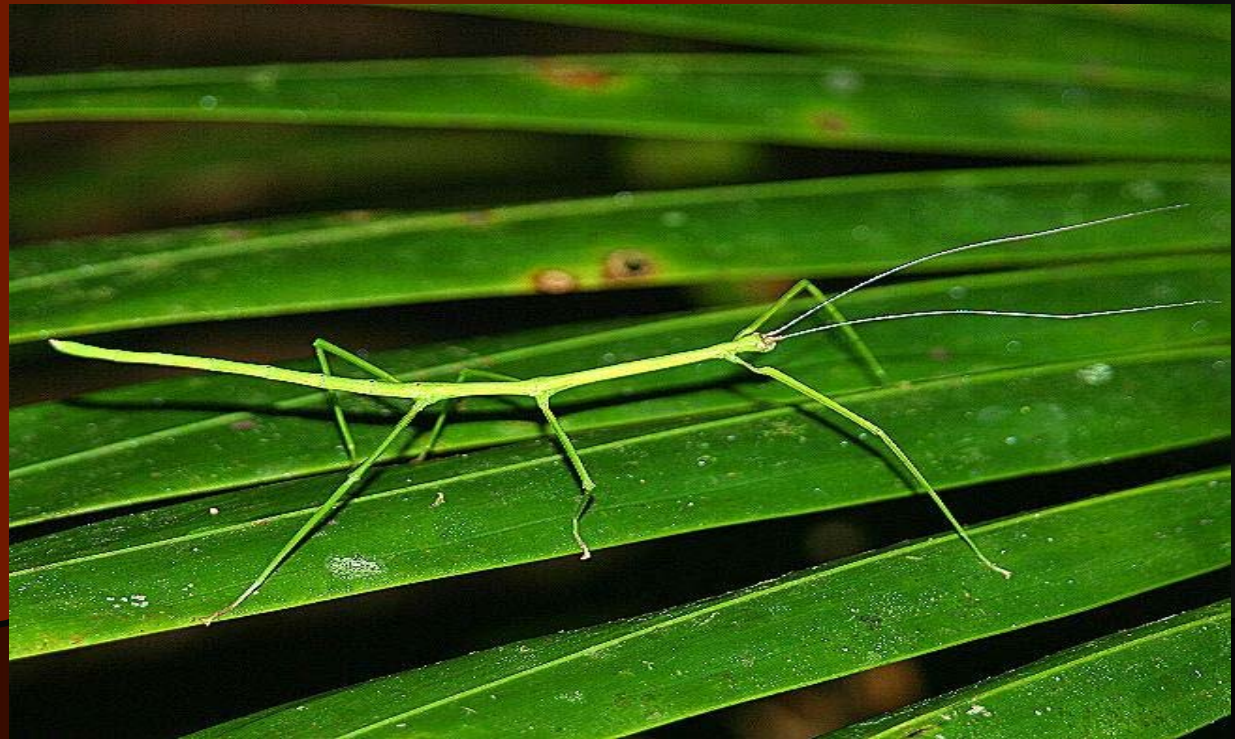
More than 3 000 species

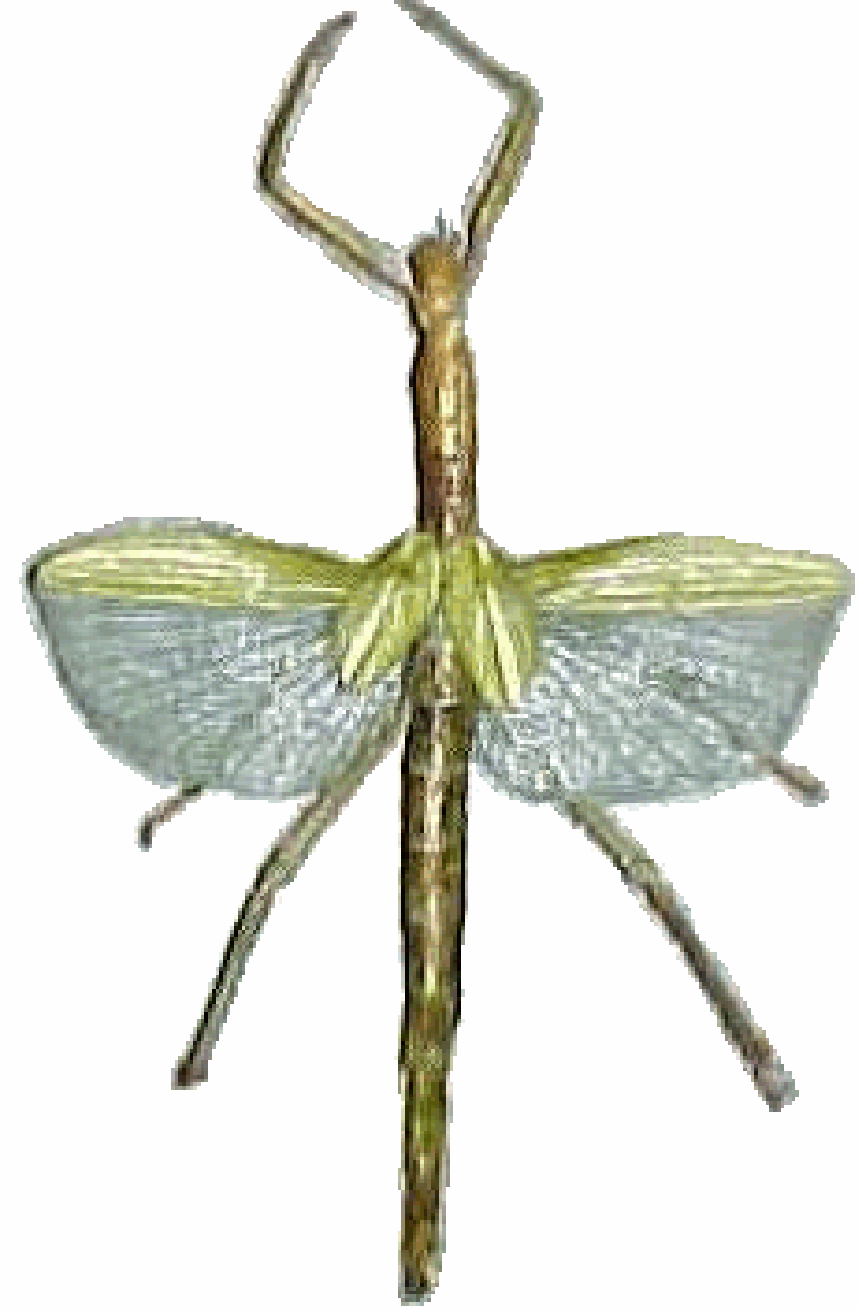
Large and often elongate body, cryptic mimicry, chewing mouthparts, often wingless

Paurometaboly, partenogenesis common

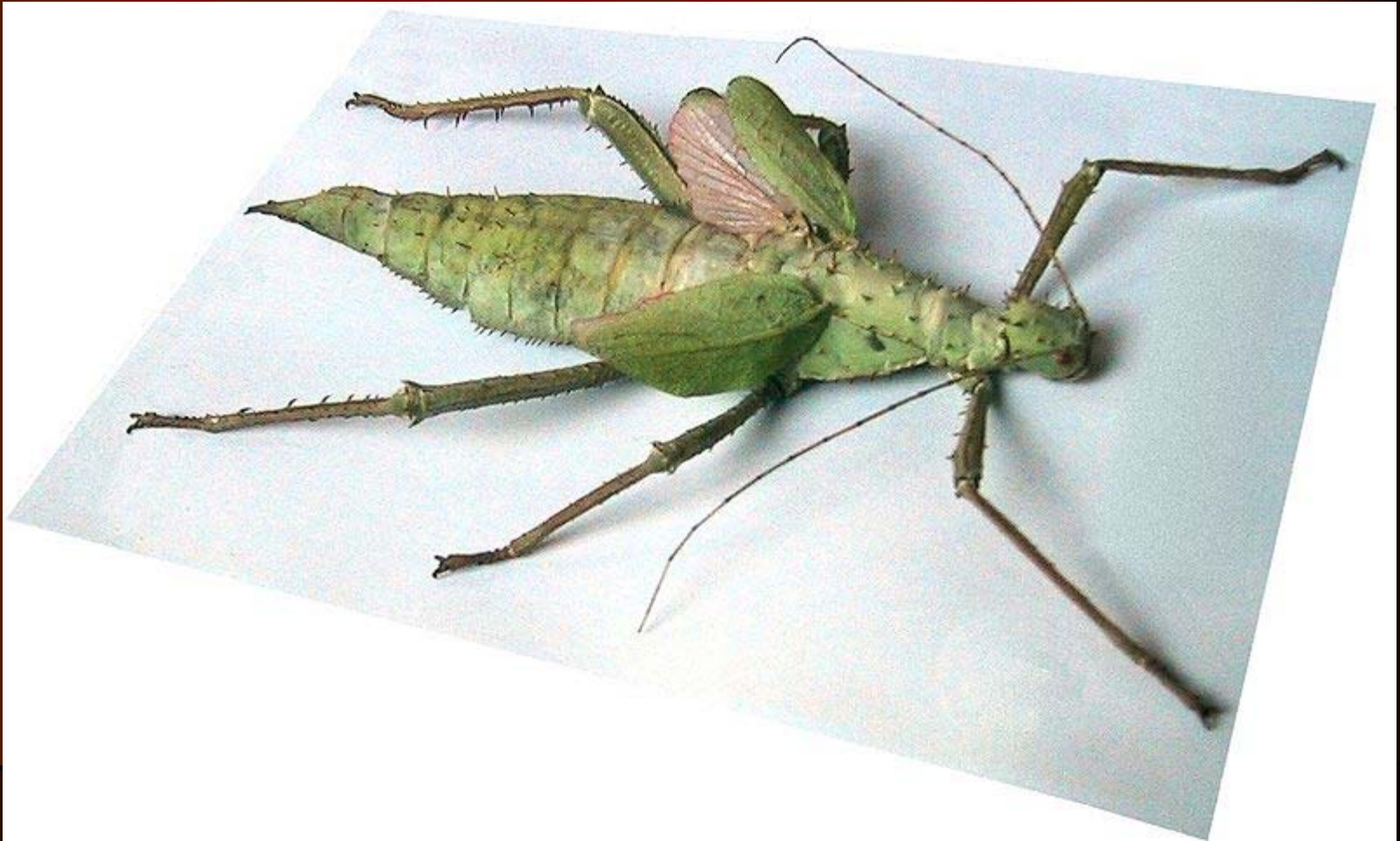
Many are pet animals (*Carausius morosus*)

all species are
herbivorous, rarely
pests





Heteropteryx dilatata (up to 60 g weight)



Dermaptera - earwigs

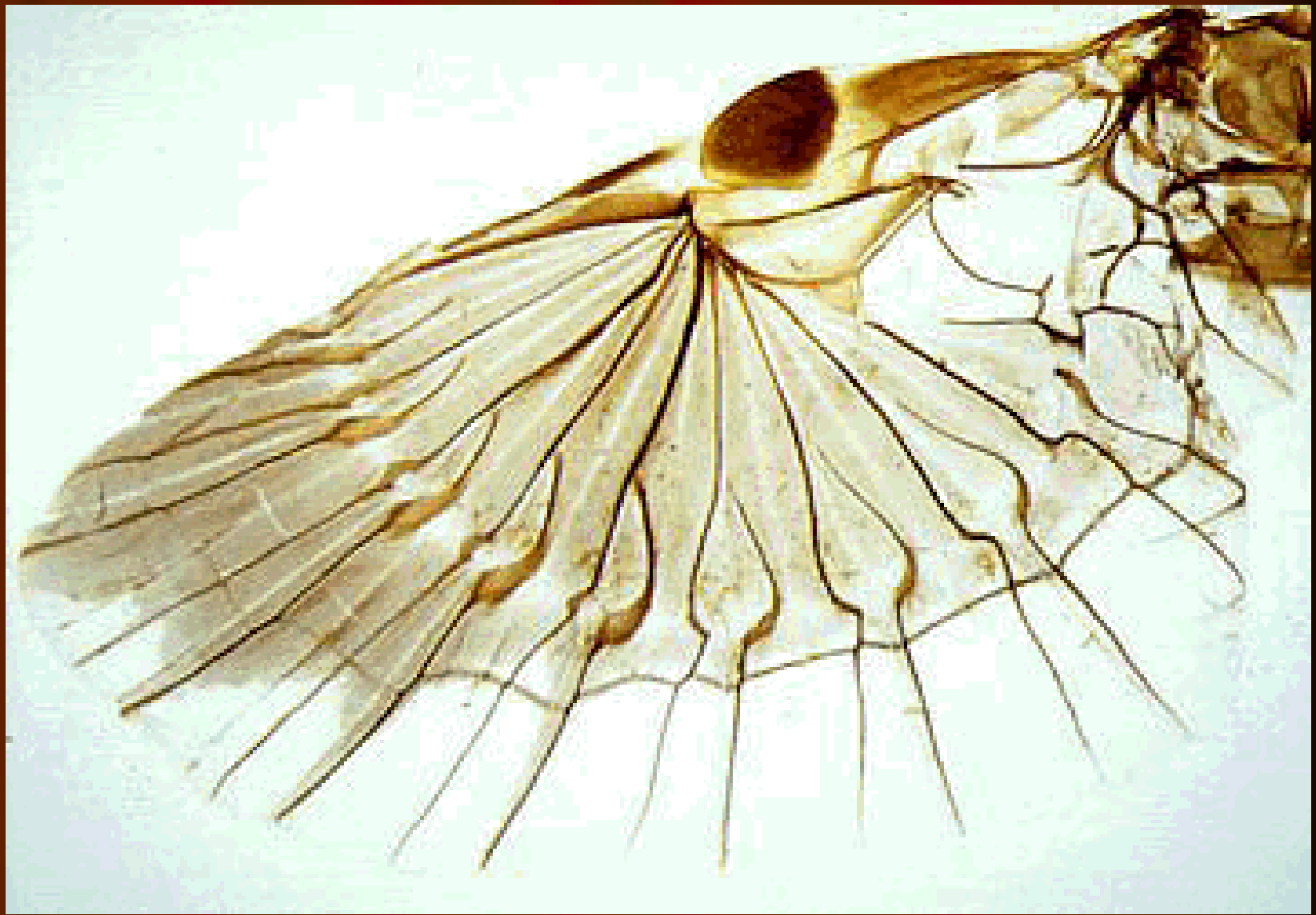
1 800 species

Blattoid order, eggs layed single, maternal care

Pincer-like cerci, mesothoracic wings elytrae-like, metathoracic membraneous or absent

Herbivorous, predatory or omnivorous

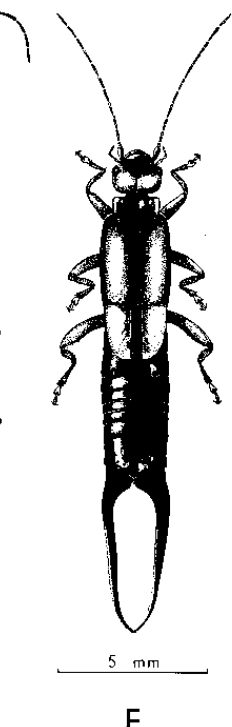
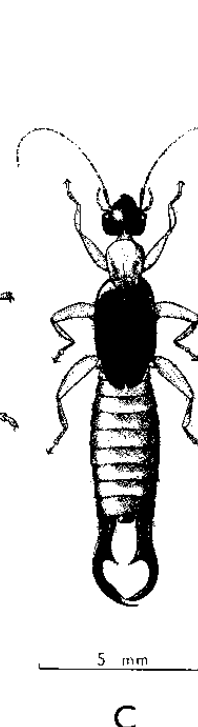
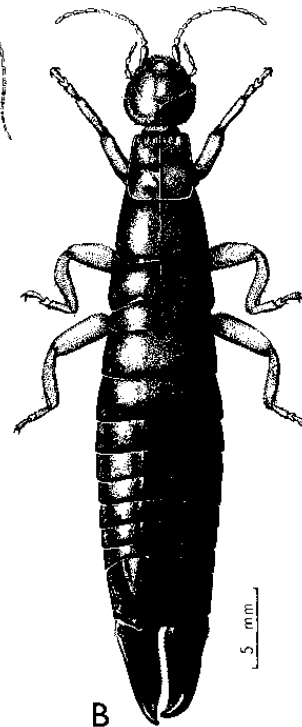
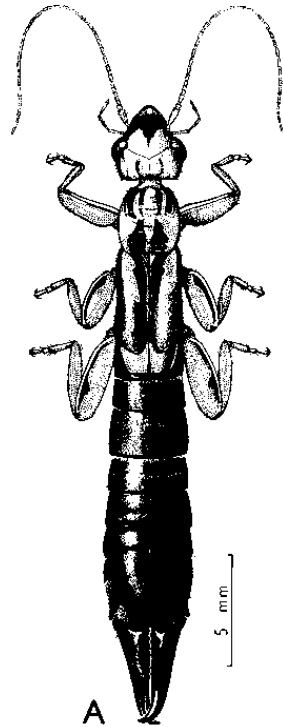
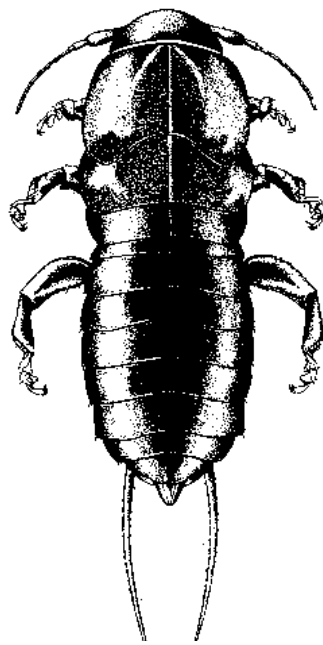
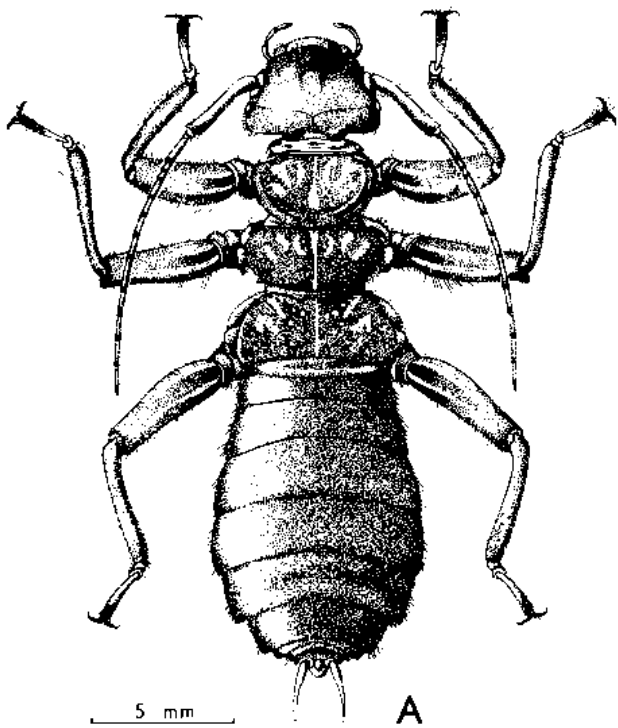






Parasitic suborders Arixeniina
and Hemimerina

Forficulina



Mantodea

2 200 species, mostly tropical, blattoid order, allied to cockroaches, paurometaboly (egg capsules), chewing mouthparts, primitive wing venation
Cryptic predators, large bodies, sexual cannibalism



