

NEUROPTERA - REQUIRED TAXA

I. Suborder Megaloptera

- 1) Family Sialidae
- 2) Family Corydalidae

II. Suborder Raphidioptera

- 1) Family Raphidiidae

III. Suborder Planipennia

A. Superfamily Hemerobioidea

- 1) Family Mantispidae
- 2) Family Hemerobiidae
- 3) Family Chrysopidae
- 4) Family Sisyridae

B. Superfamily Myrmeleontoidea

- 1) Family Myrmeleontidae
- 2) Family Ascalaphidae

NEUROPTERA

Common Name: Lacewings; dobsonflies, antlions.

Etymology: Neuro = nerve; -ptera = wing.

Metamorphosis: Holometabolous; terrestrial or aquatic larvae.

CHARACTERISTICS

Body: Small to very large; soft-bodied; larvae campodeiform; pupae exarate in a silken cocoon.

Head: Small prognathous head which is free.

Mouthparts: Chewing, ectognathous; larvae grasping-sucking.

Eyes: Compound eyes; dorsal ocelli 2 or 3.

Antennae: Usually filiform; variable in length.

Wings: Two pairs, similar in size and appearance; net-veined; usually held rooflike over the body at rest.

Legs: Short, slender; 5-segmented tarsi; paired post-tarsal claws.

Abdomen: Cerci lacking; gills on aquatic immatures.

Comments: Mostly weak fliers; most beneficial.

SUBORDERS

Megaloptera: Hindwings broader at base than front wings; longitudinal veins do not have branches near wing margin.

Families: Sialidae and Corydalidae.

Raphidioidea (Rhaphidioptera): Prothorax elongate; front legs similar to other legs and are borne at posterior end of prothorax.

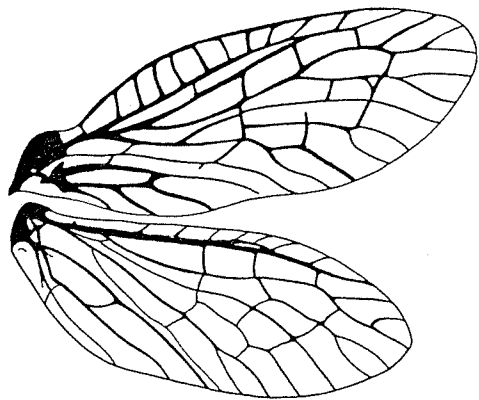
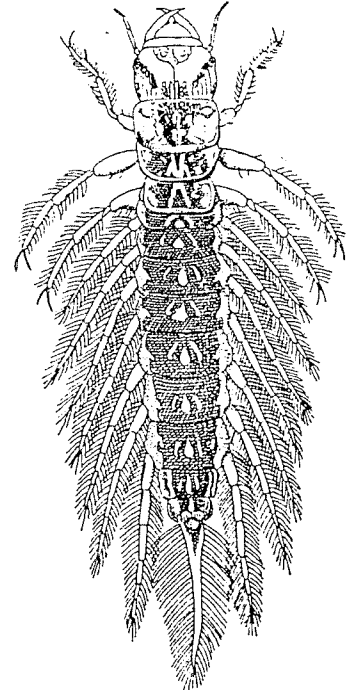
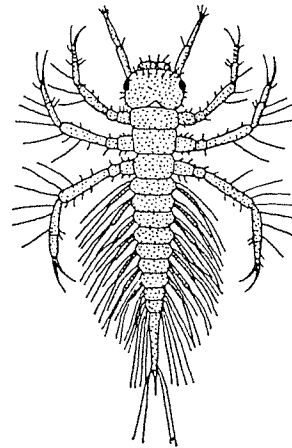
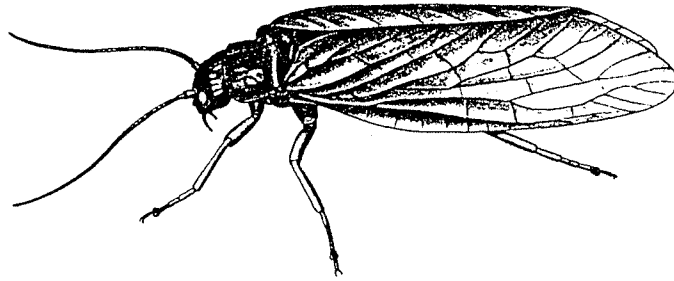
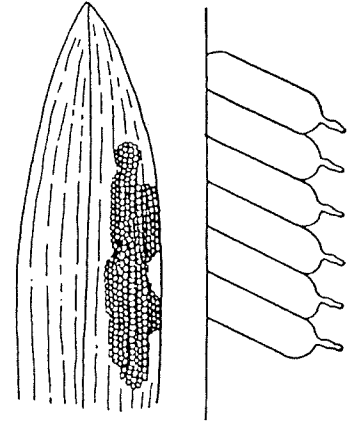
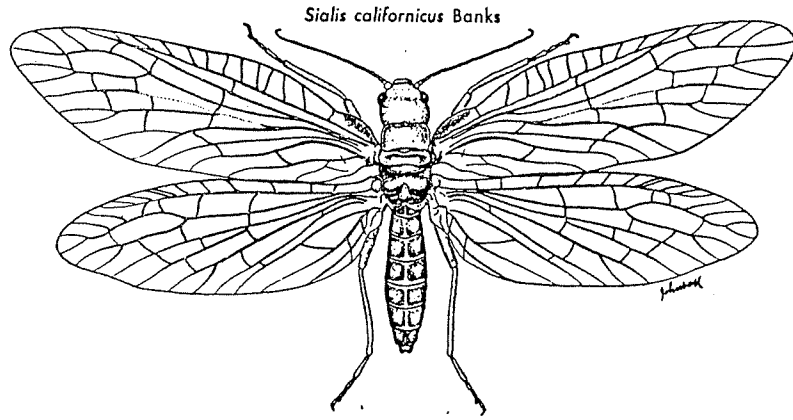
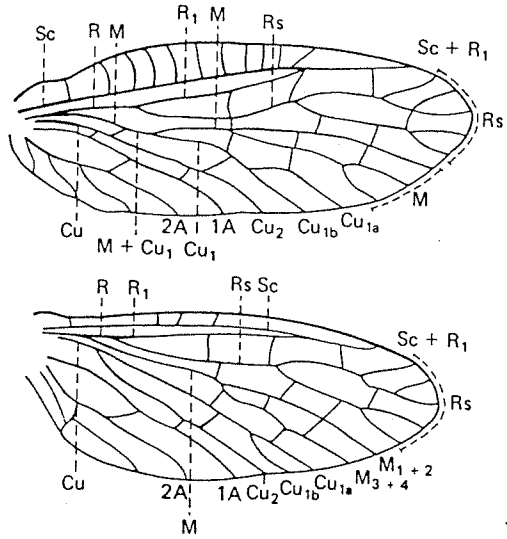
Family: Raphidiidae.

Planipennia (Neuroptera): Wings similar in size and shape; longitudinal veins in wings often have branches near wing margin.

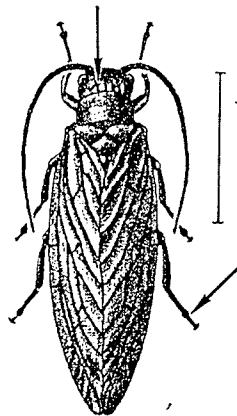
Hemerobioidea Families: Mantispidae, Hemerobiidae, Chrysopidae, Berothidae, Sisyridae.

Myrmeleontoidea Families: Myrmeleontidae, Ascalaphidae.

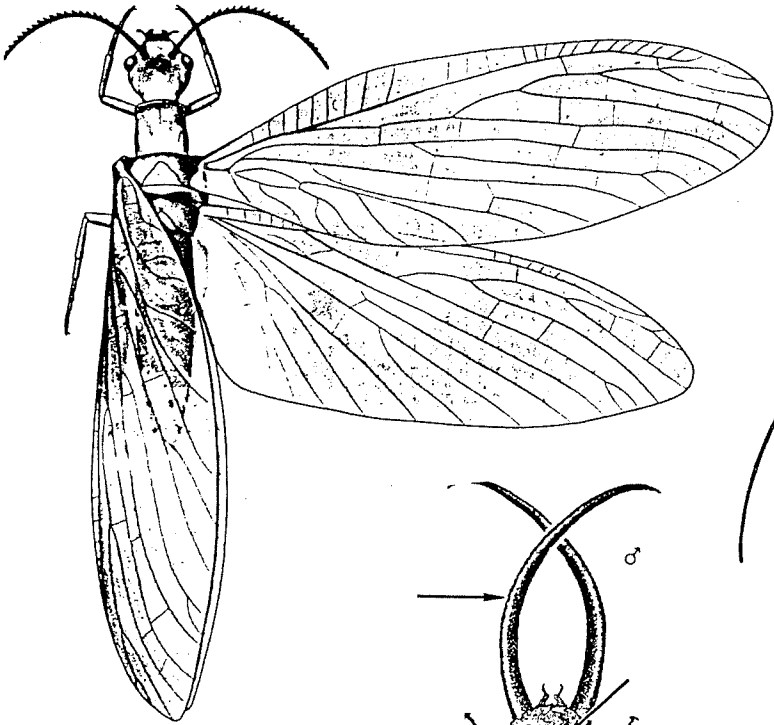
NEUROPTERA: Megaloptera
 Family Sialidae
 Alderflies



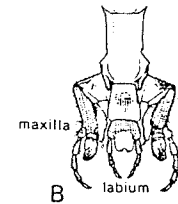
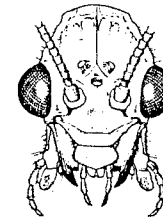
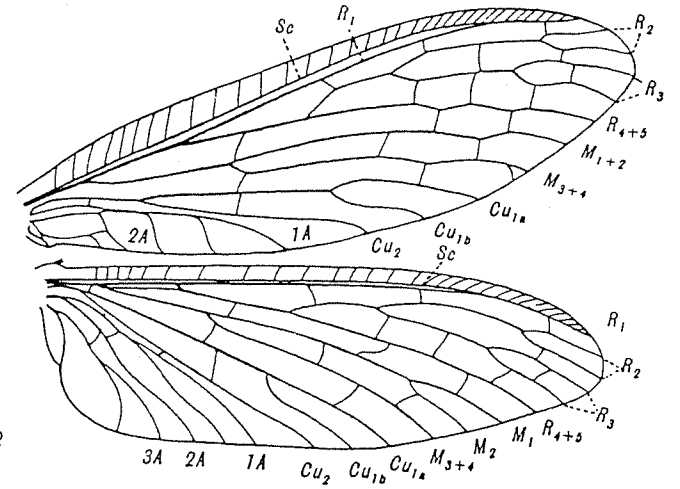
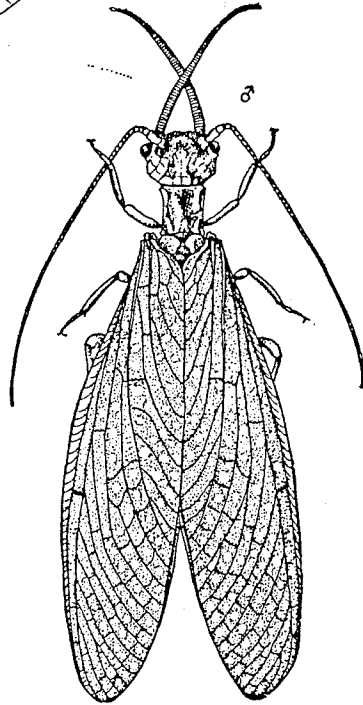
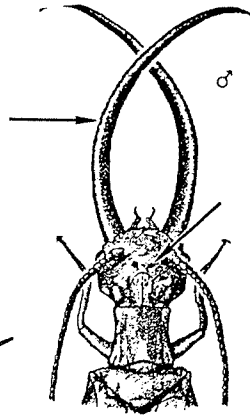
Ailes de Mégaloptère : *Sialis fuliginosa*.



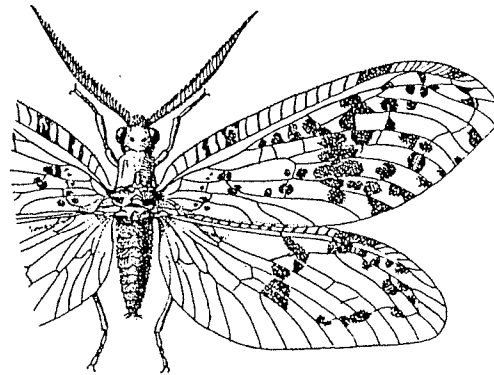
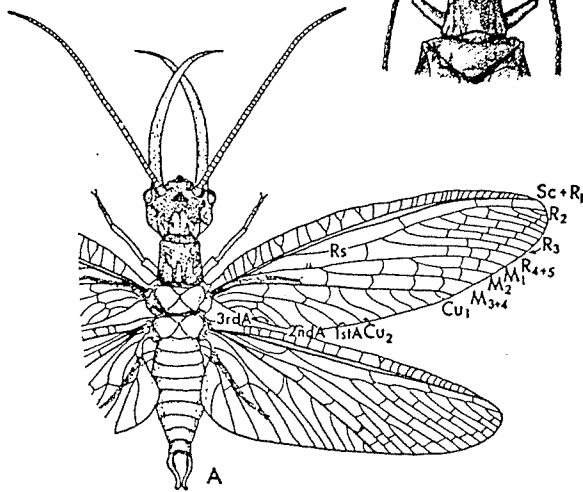
NEUROPTERA: Megaloptera
 Family Corydalidae
 Dobsonflies & Fishflies



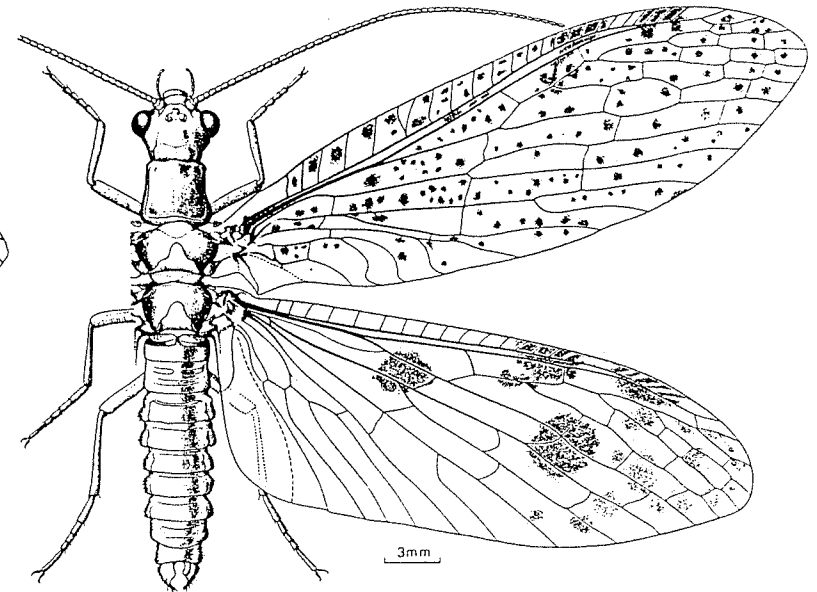
Nigronia adult ♀



Archichauliodes sp.: A, head, frontal; B, maxillae and labium.
 [M. Quick¹



Chauliodes sinensis, male

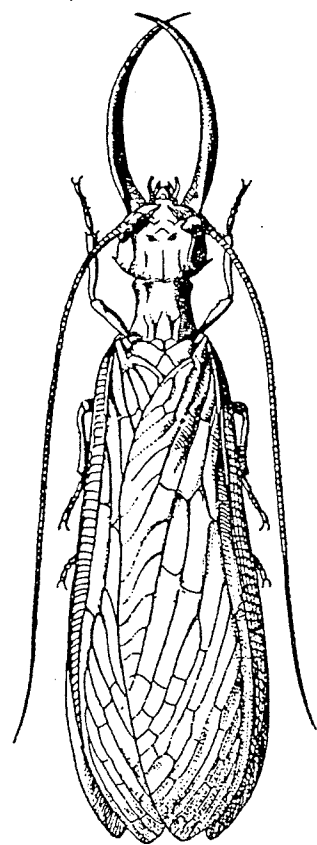


Archichauliodes sp., Corydalidae.

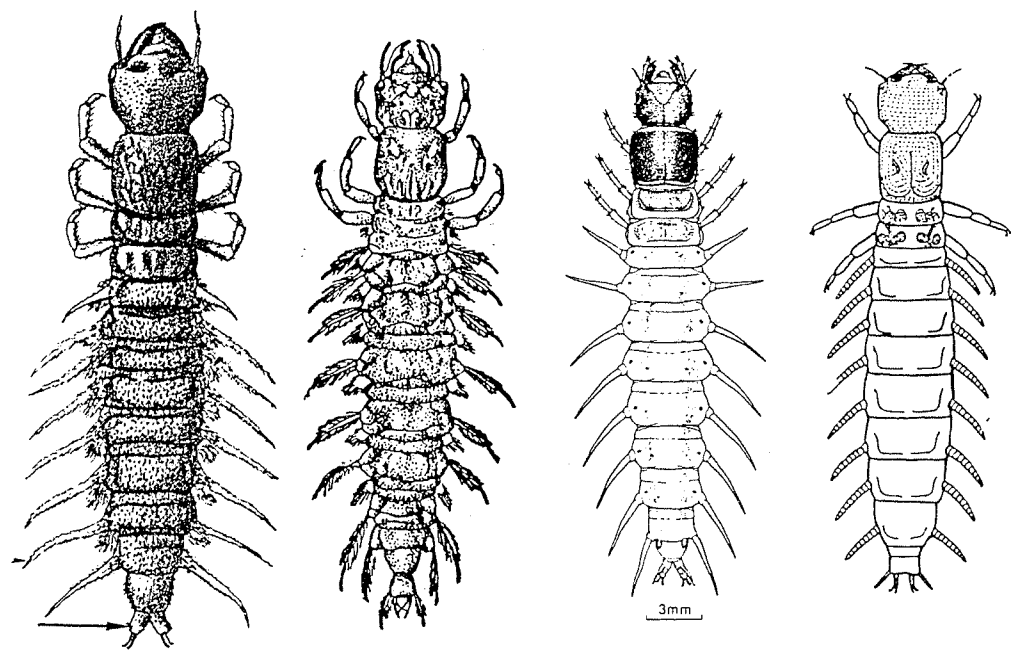
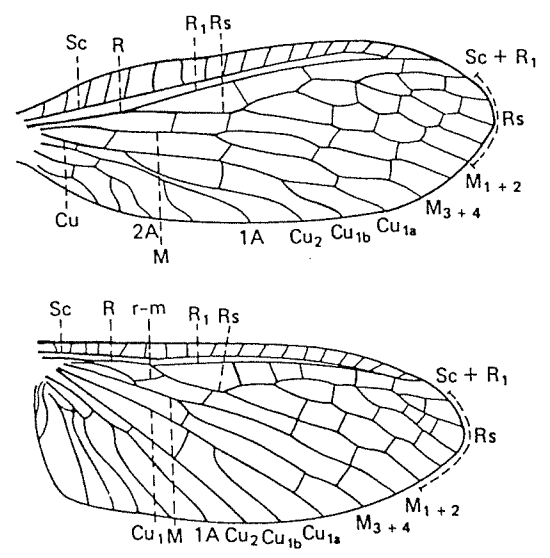
NEUROPTERA: Megaloptera

Family Corydalidae

Dobsonflies & Fishflies



Corydalus cornutus.



HELLGRAMMITE (Corydalidae)

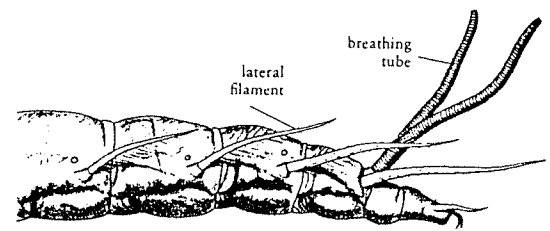
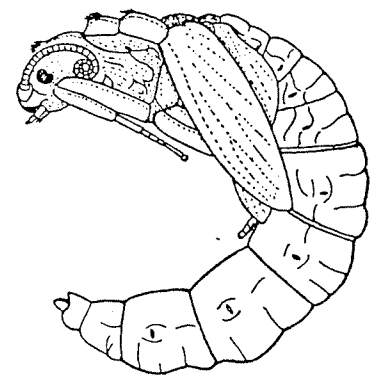


Figure 11.3. *Chauliodes* larva, end of abdomen (lateral)

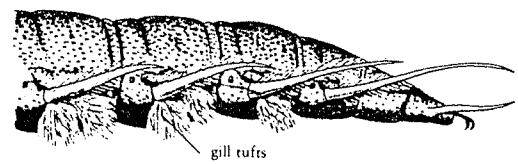
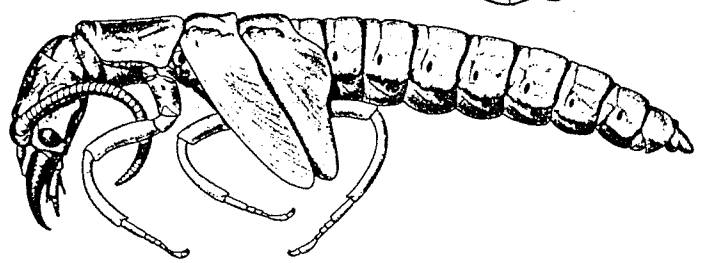
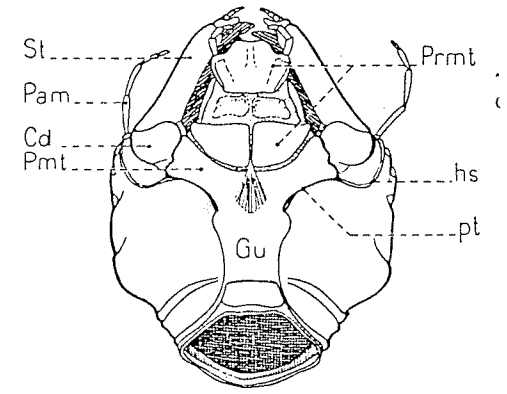


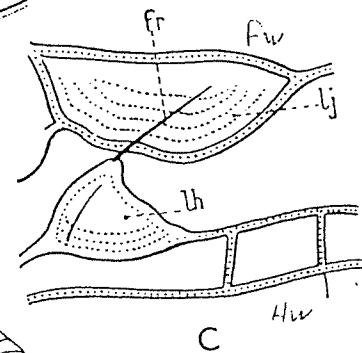
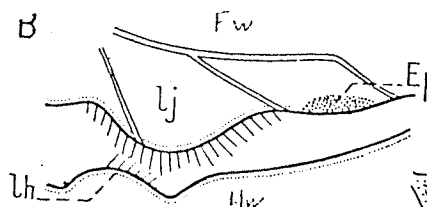
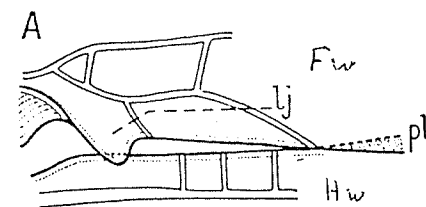
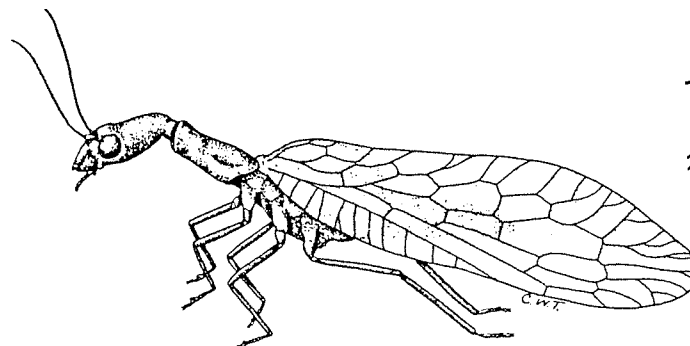
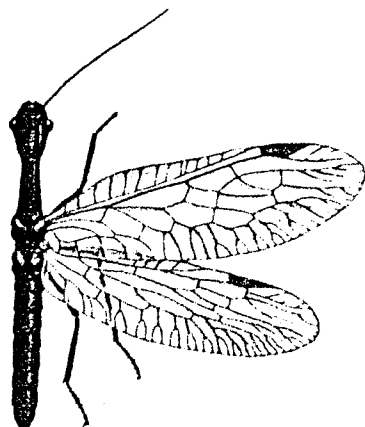
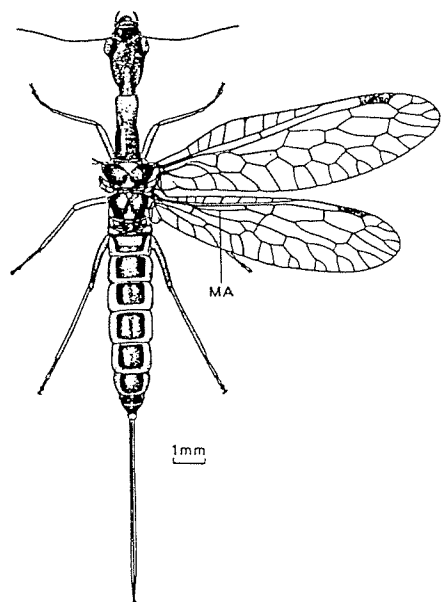
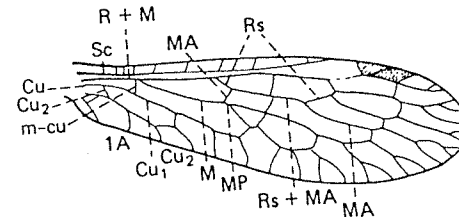
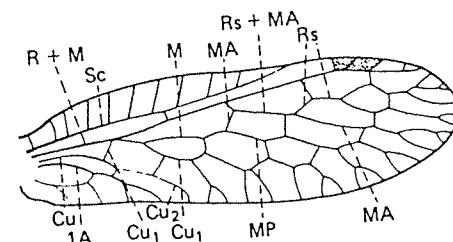
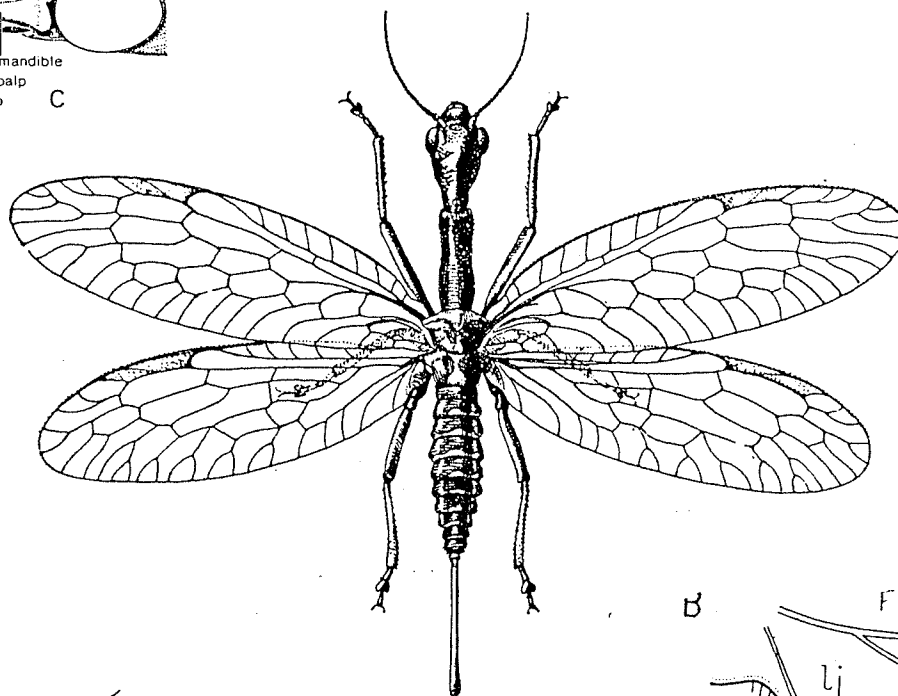
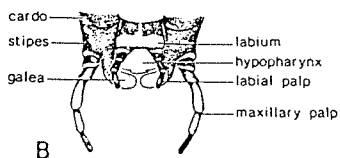
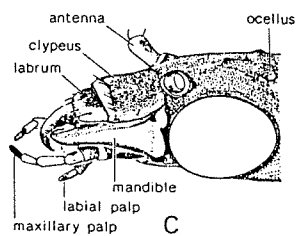
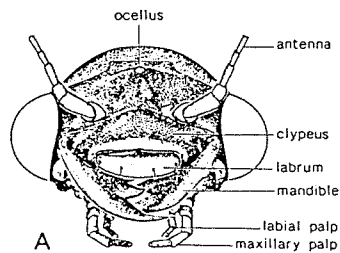
Figure 11.4. *Corydalus* larva, end of abdomen (lateral)



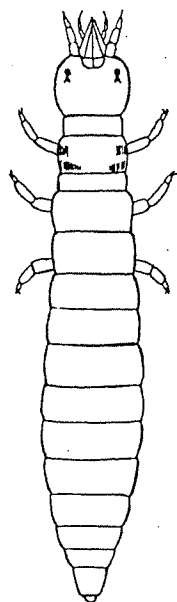
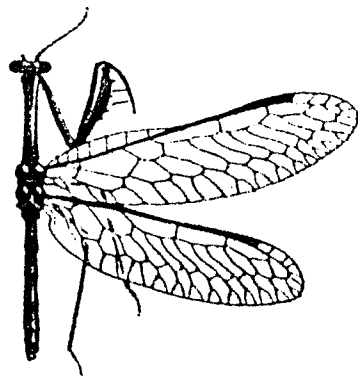
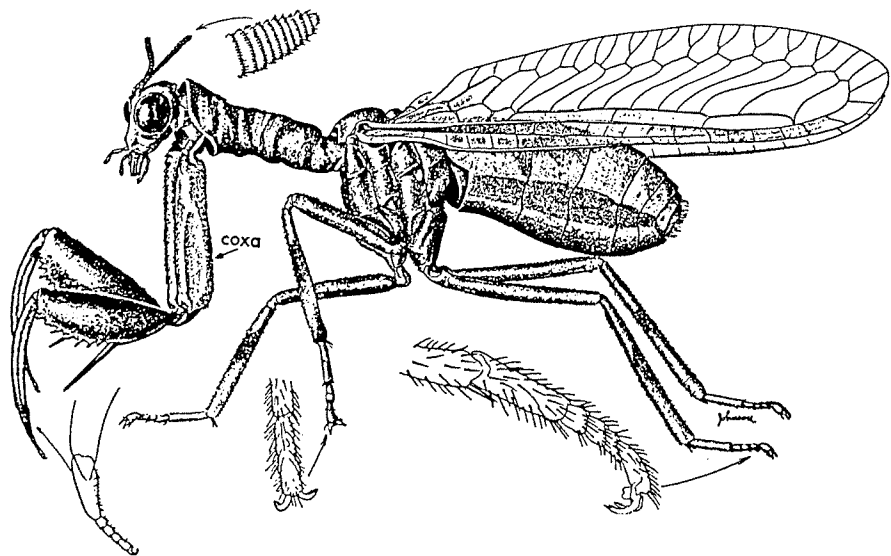
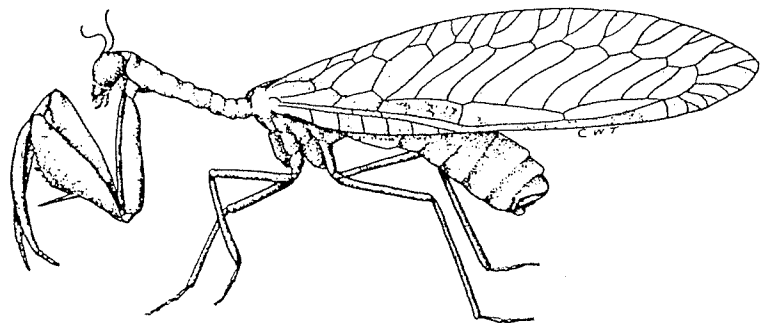
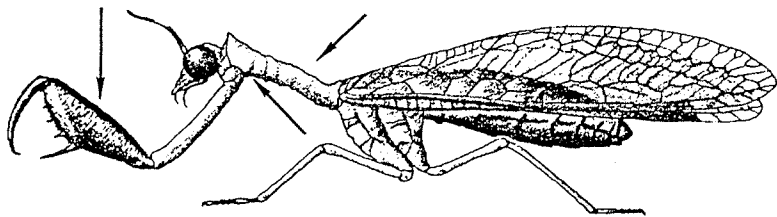
NEUROPTERA: Raphidiodea

Family Raphididae

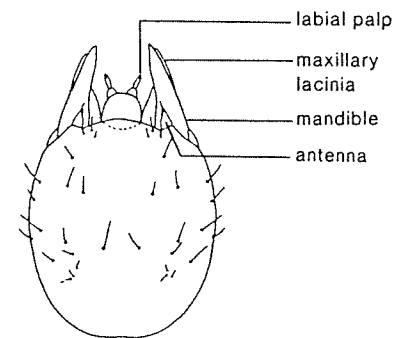
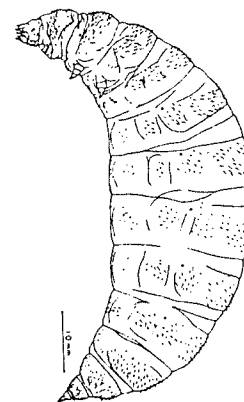
Snakeflies



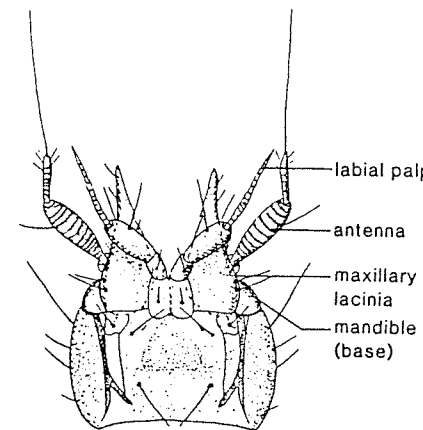
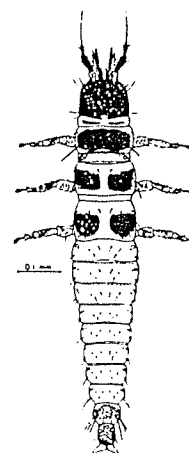
NEUROPTERA: Planipennia: Hemerobioidea
Family Mantispidae
Mantidflies



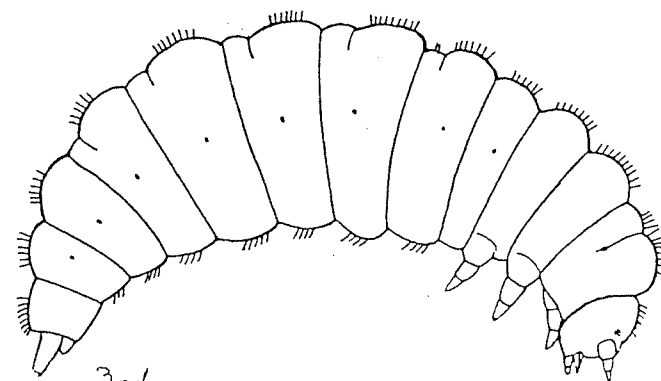
1st



labial palp
maxillary lacinia
mandible
antenna

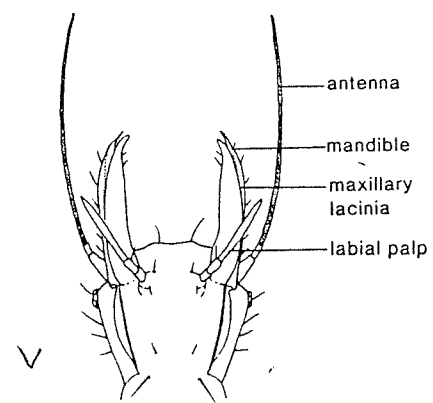
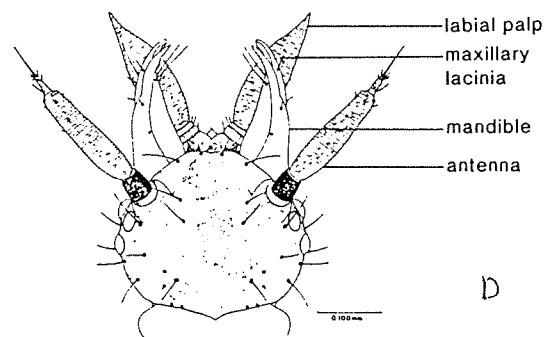
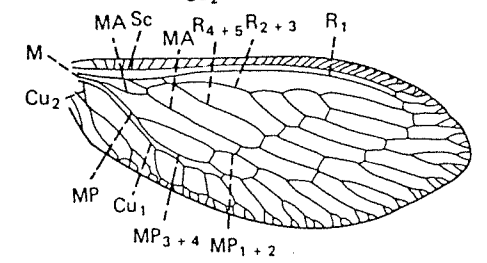
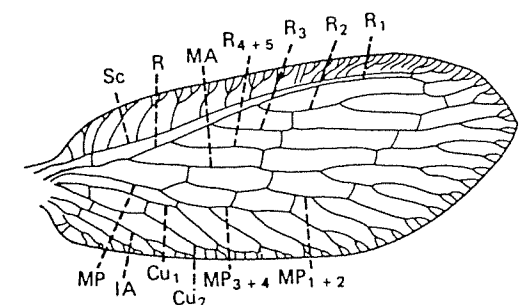
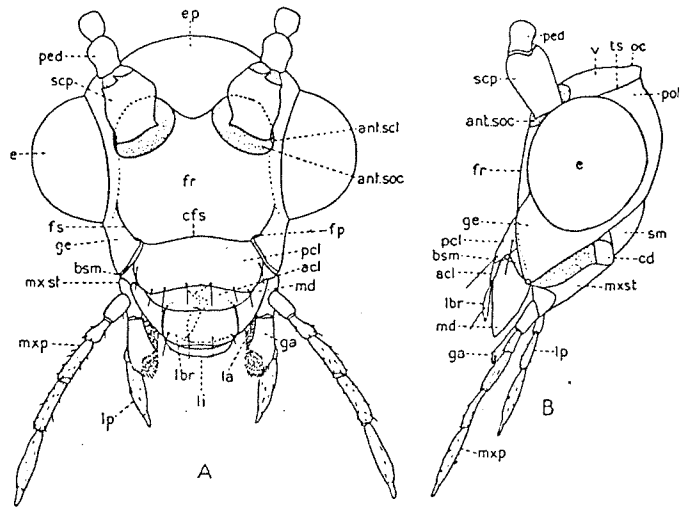
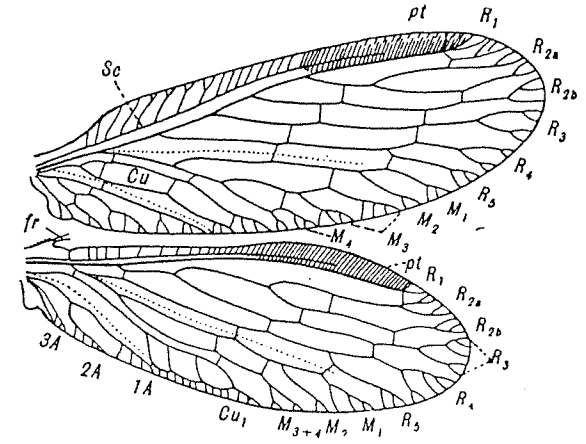
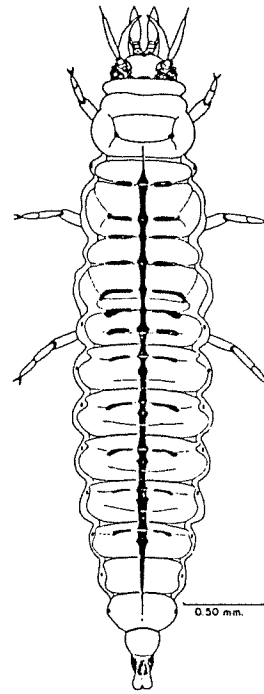
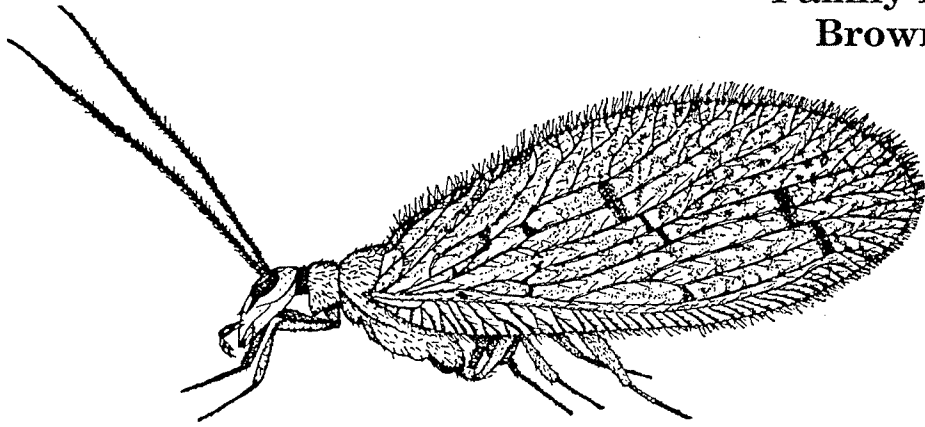


labial palp
antenna
maxillary lacinia
mandible (base)

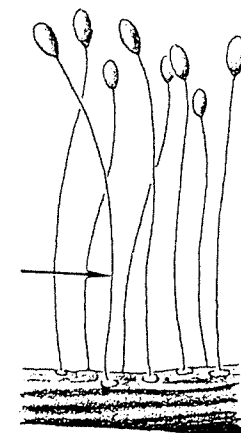
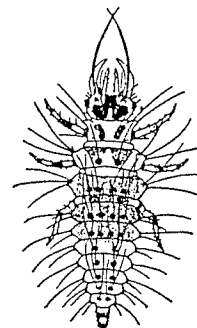
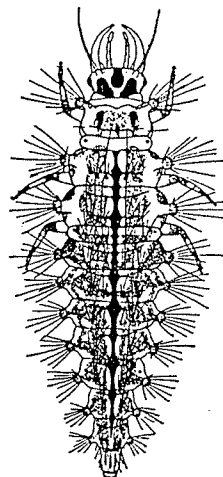
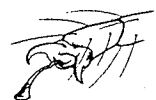
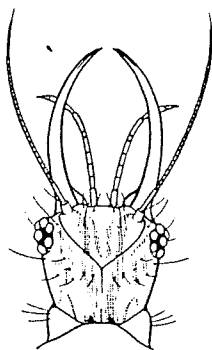
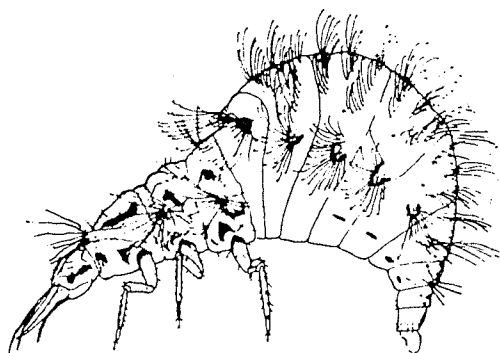
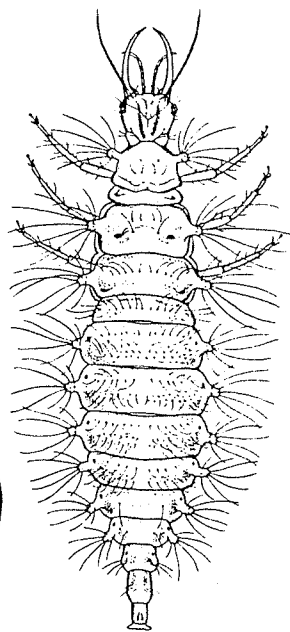
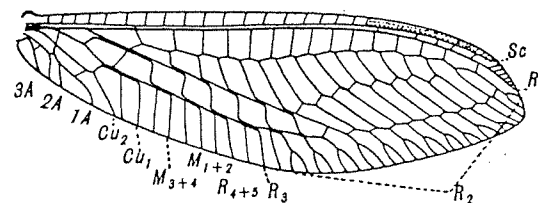
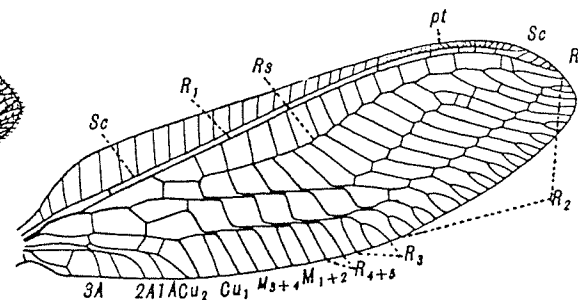
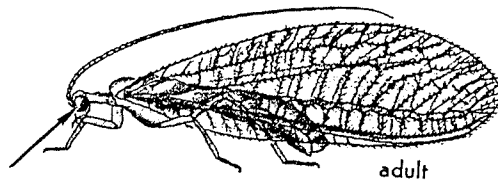
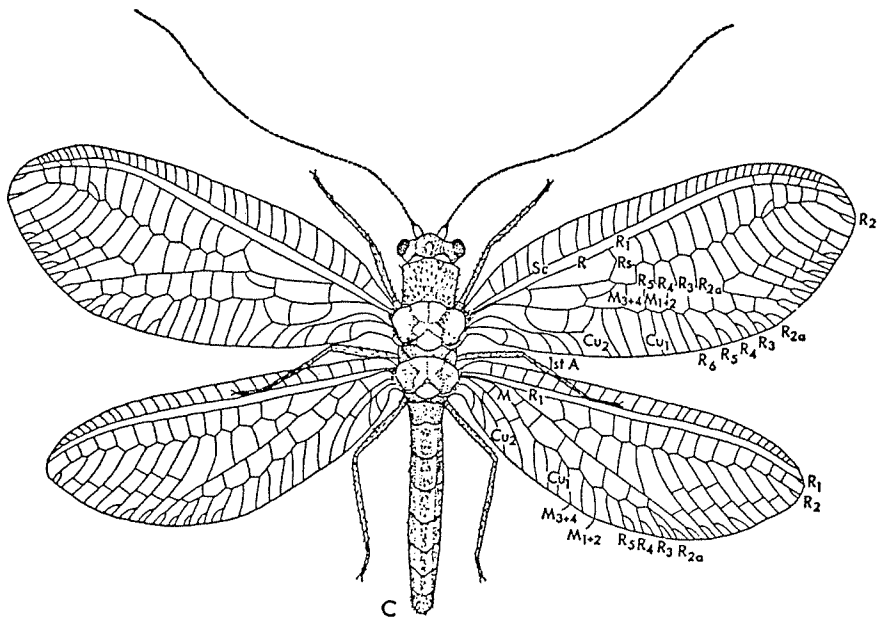


3rd

NEUROPTERA: Planipennia: Hemerobioidea
Family Hemerobiidae
Brown lacewings

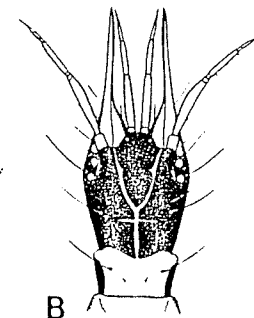
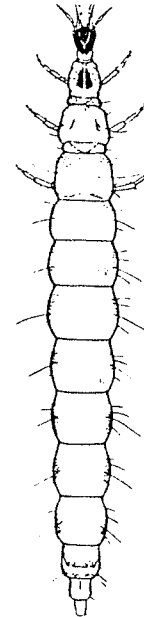
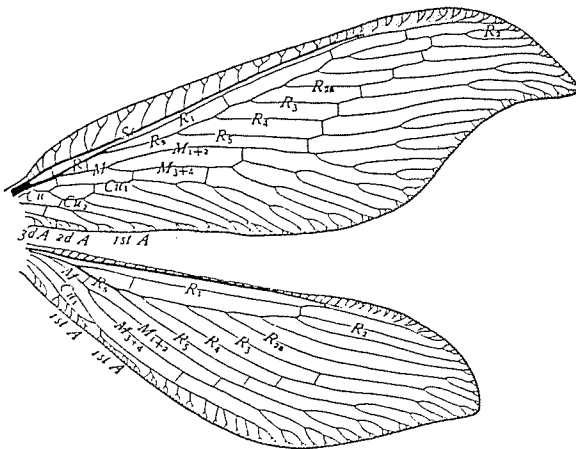
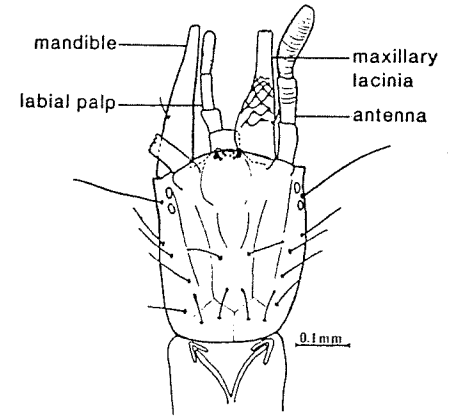
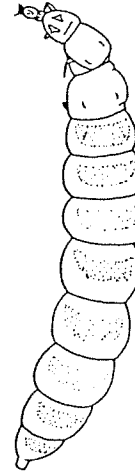
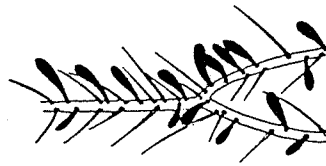
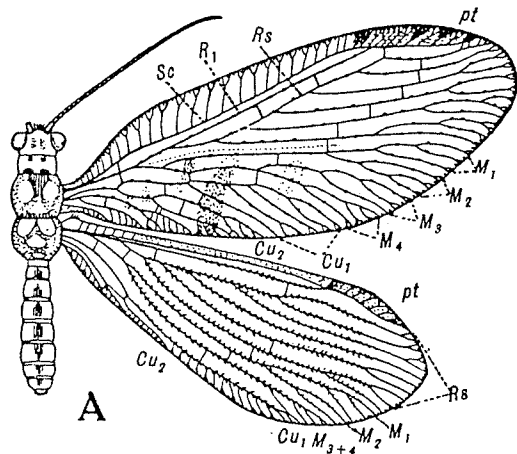


NEUROPTERA: Planipennia: Hemerobioidea
 Family Chrysopidae
 Green lacewings

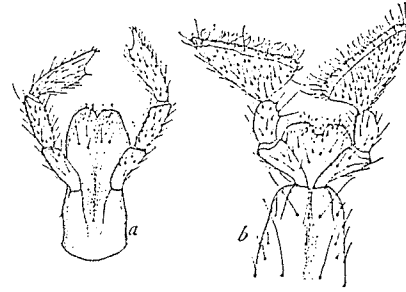
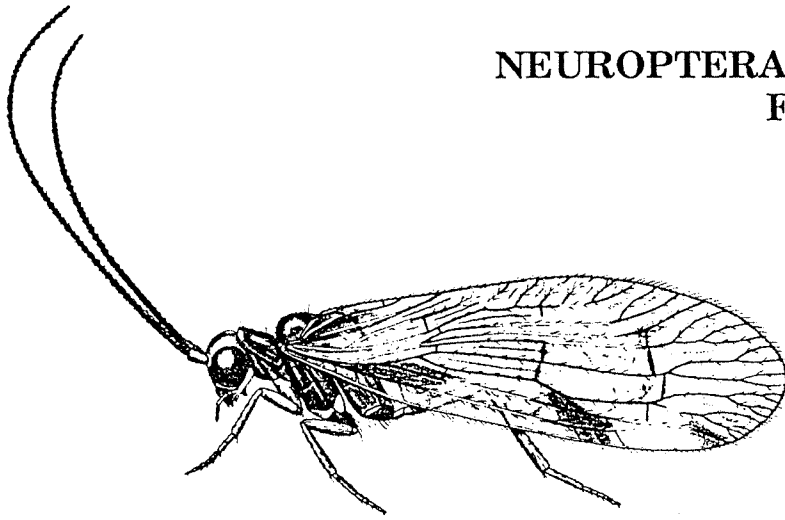


eggs

NEUROPTERA: Planipennia: Hemerobioidea
Family Berothidae
Beaded lacewings



NEUROPTERA: Planipennia: Hemerobioidea
 Family Sisyridae
 Spongillaflies



-Labia of Spongilla-flies: a, *Climacia dictyona*; b, *Sisyra umbrata*.
 m.)

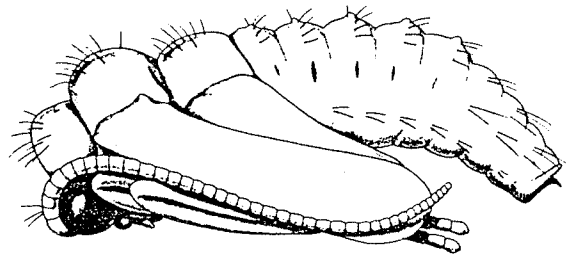
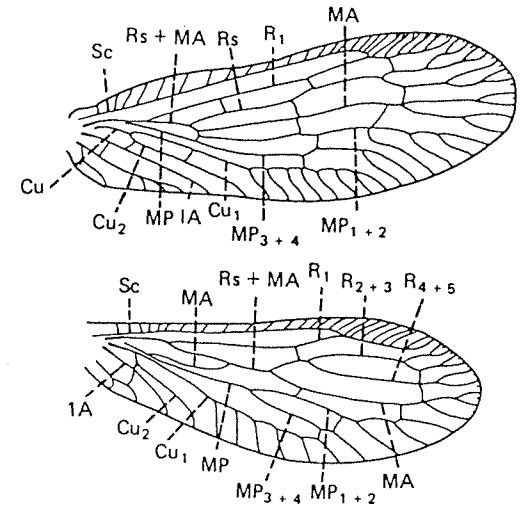
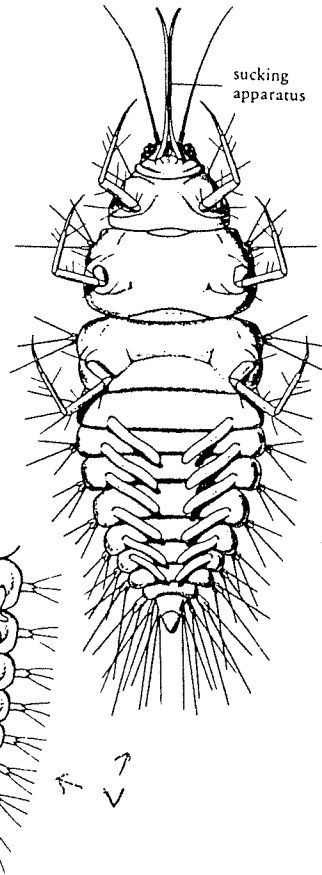
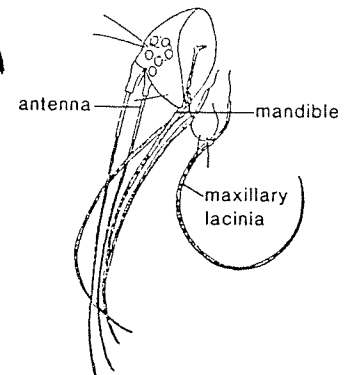
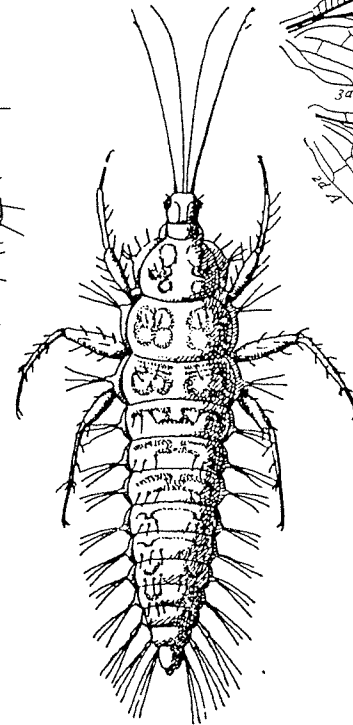
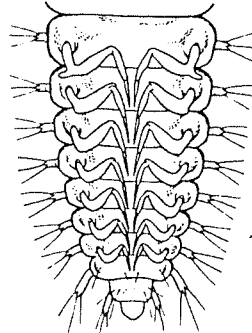
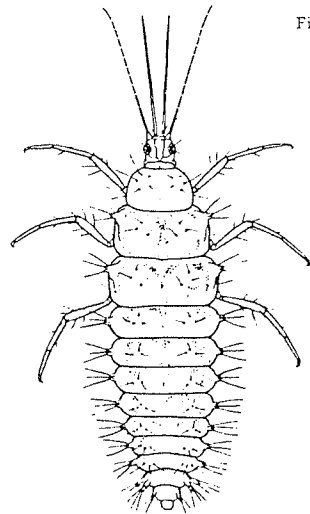
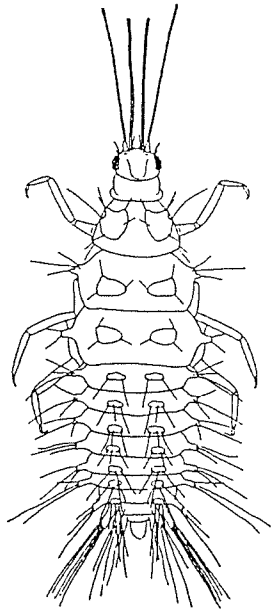
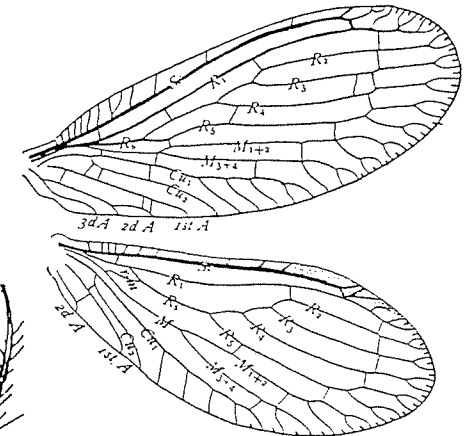


Fig. 330.—Cocoon and cocoon-cover of *Climacia*.



sucking apparatus

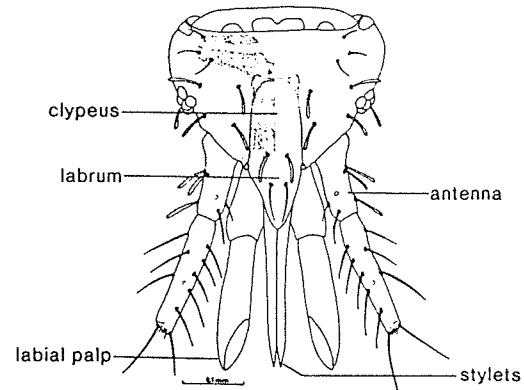
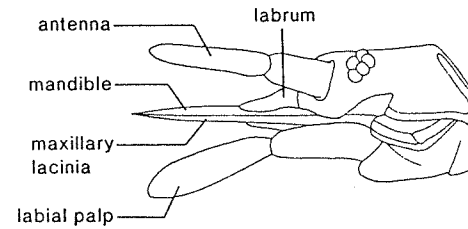
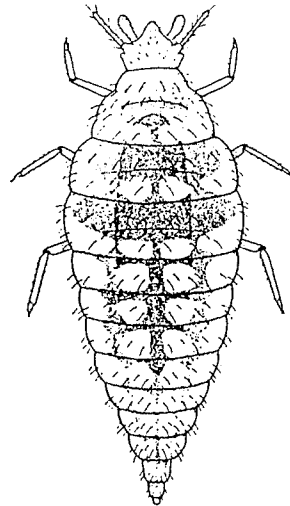
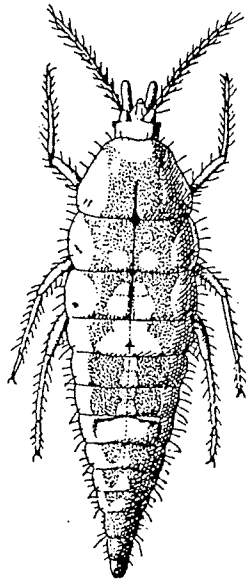
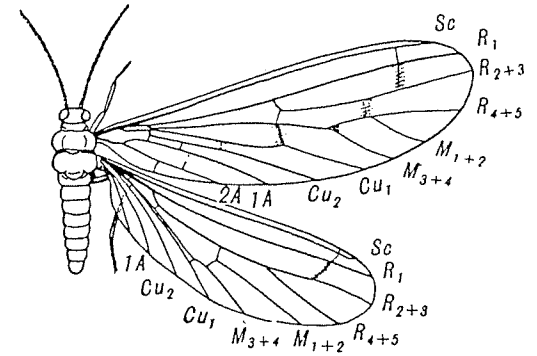
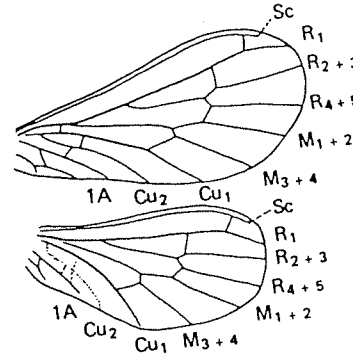
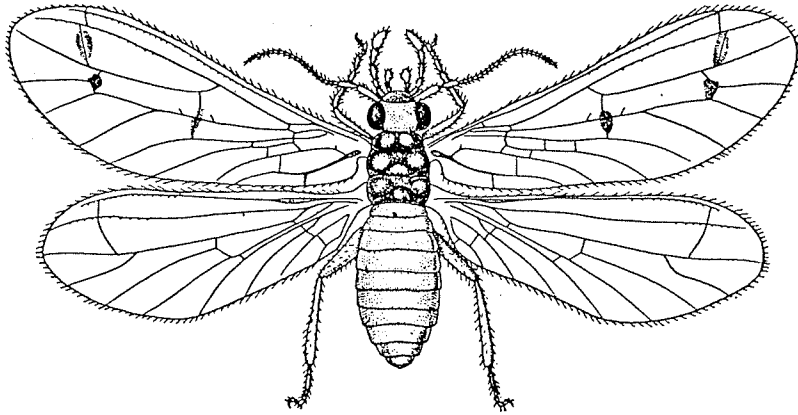


antenna

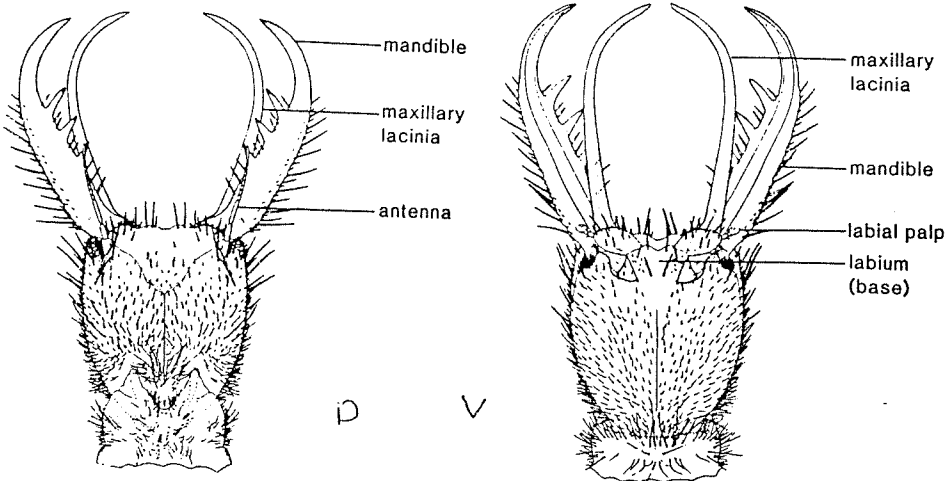
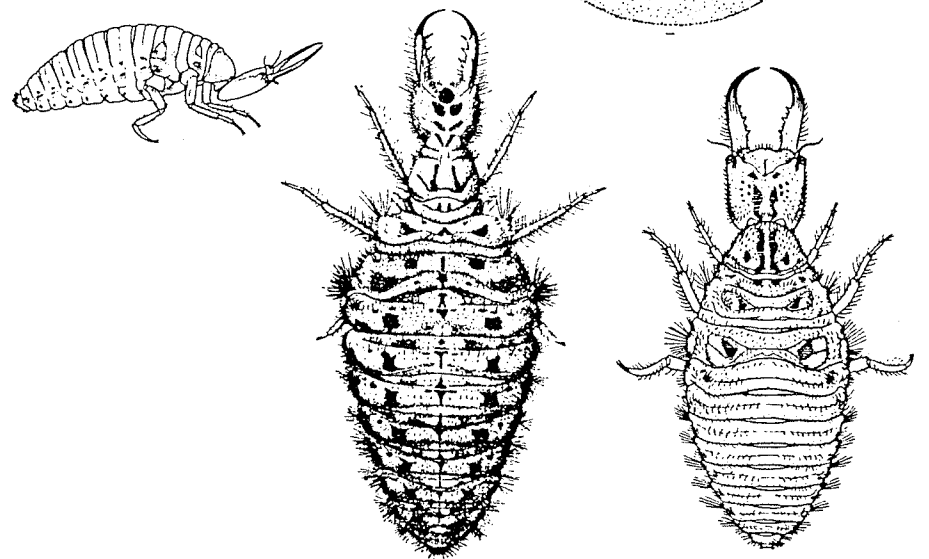
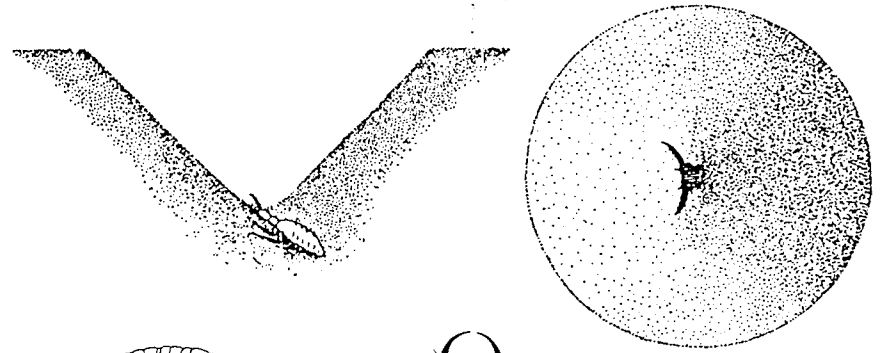
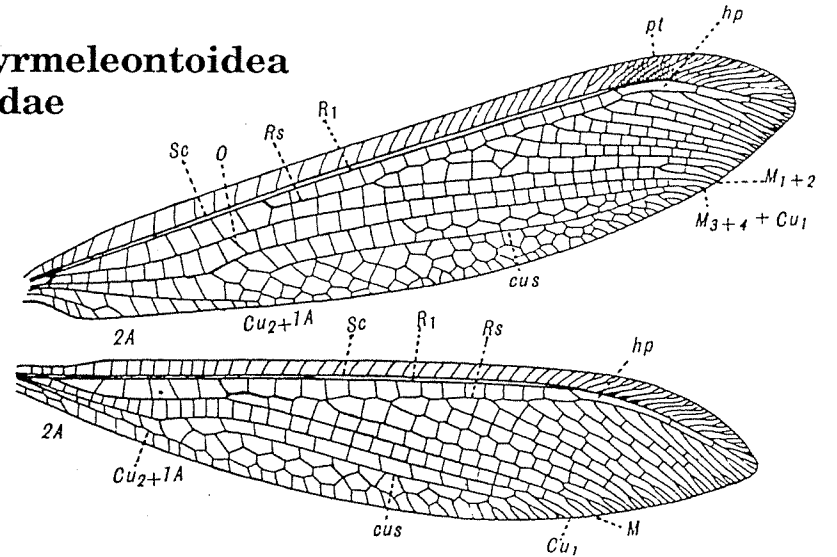
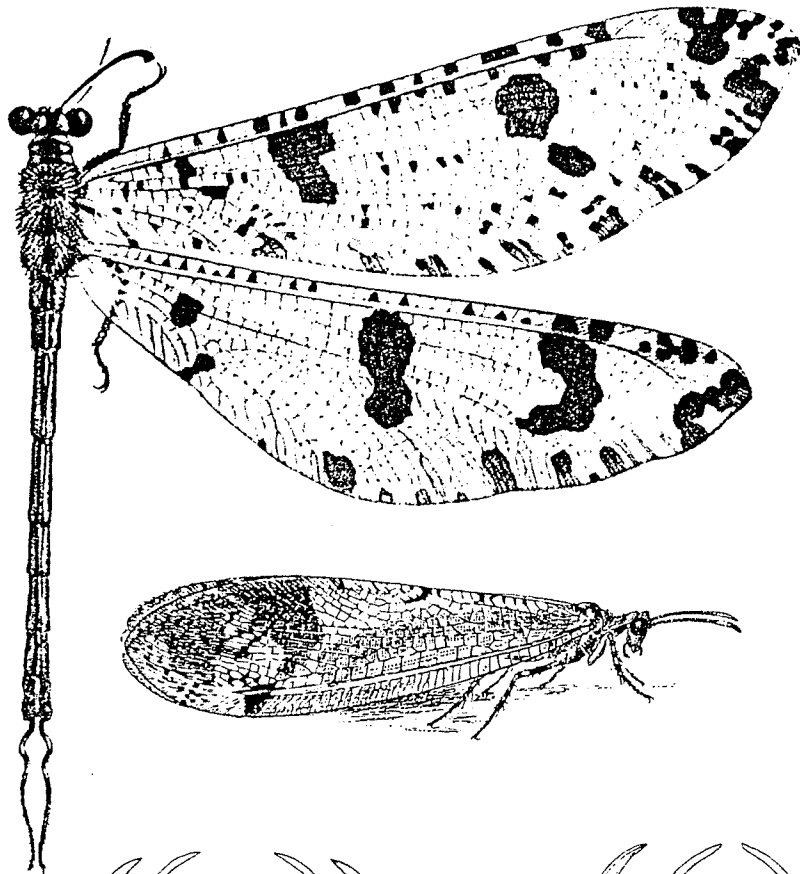
mandible

maxillary lacinia

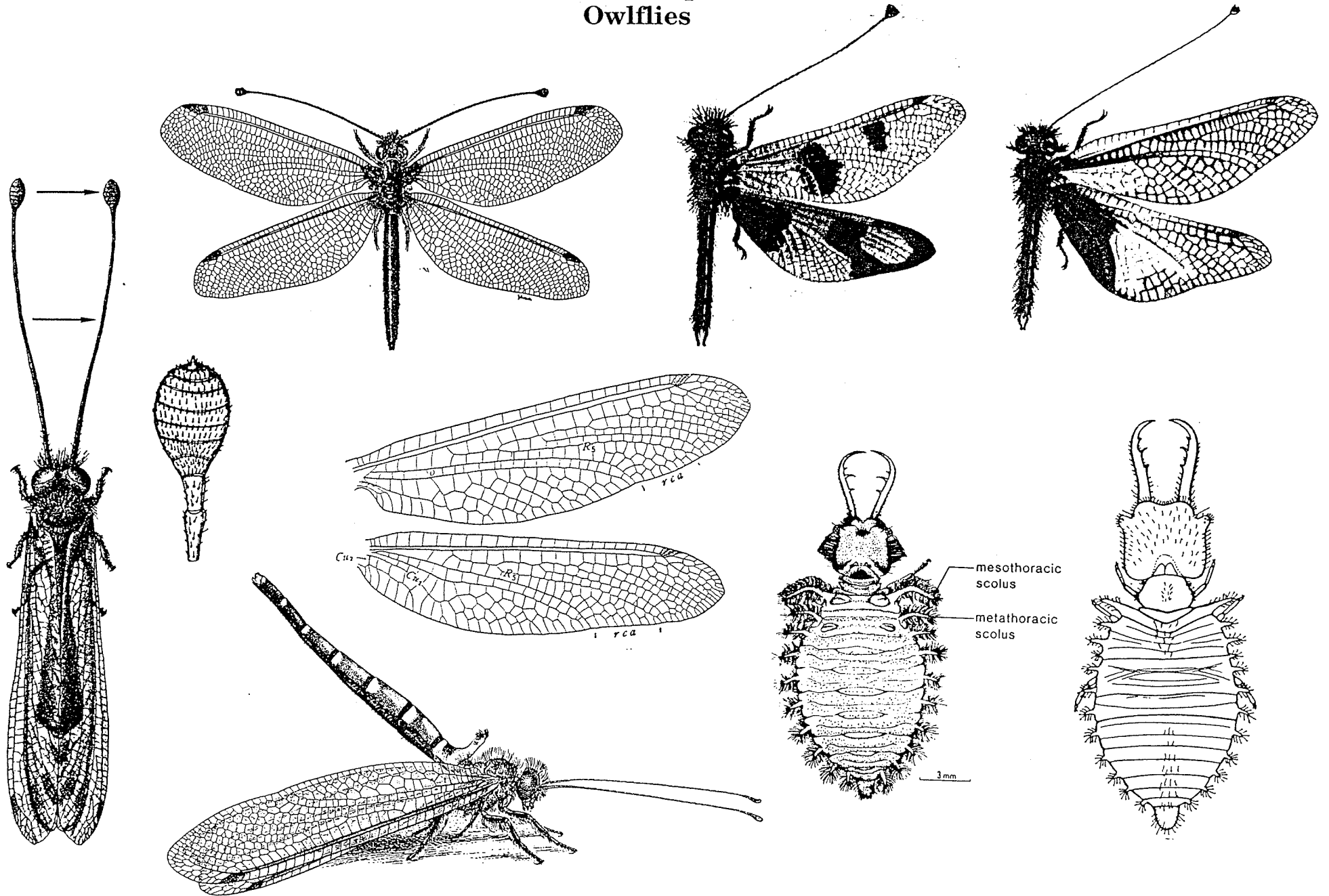
NEUROPTERA: Planipennia: Coniopterygoidea
Family Coniopterygidae
Dusty-wings



NEUROPTERA: Planipennia: Myrmeleontoidea
 Family Myrmeleontidae
 Antlions



NEUROPTERA: Planipennia: Myrmeleontoidea
Family Ascalaphidae
Owlfly



NEUROPTERA: Planipennia: Myrmeleontoidea
Family Nemopteridae
Spoonwing-flies

