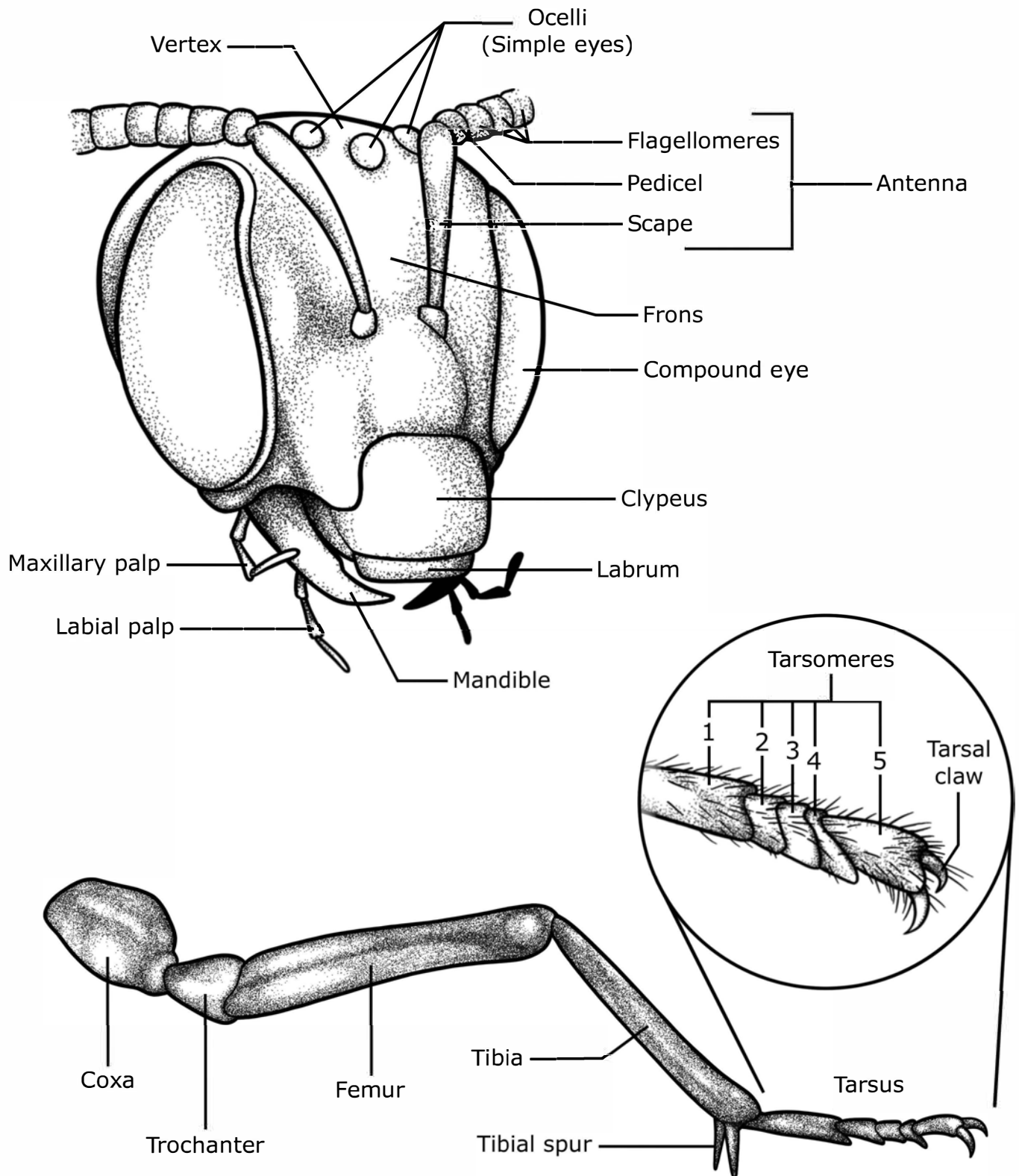
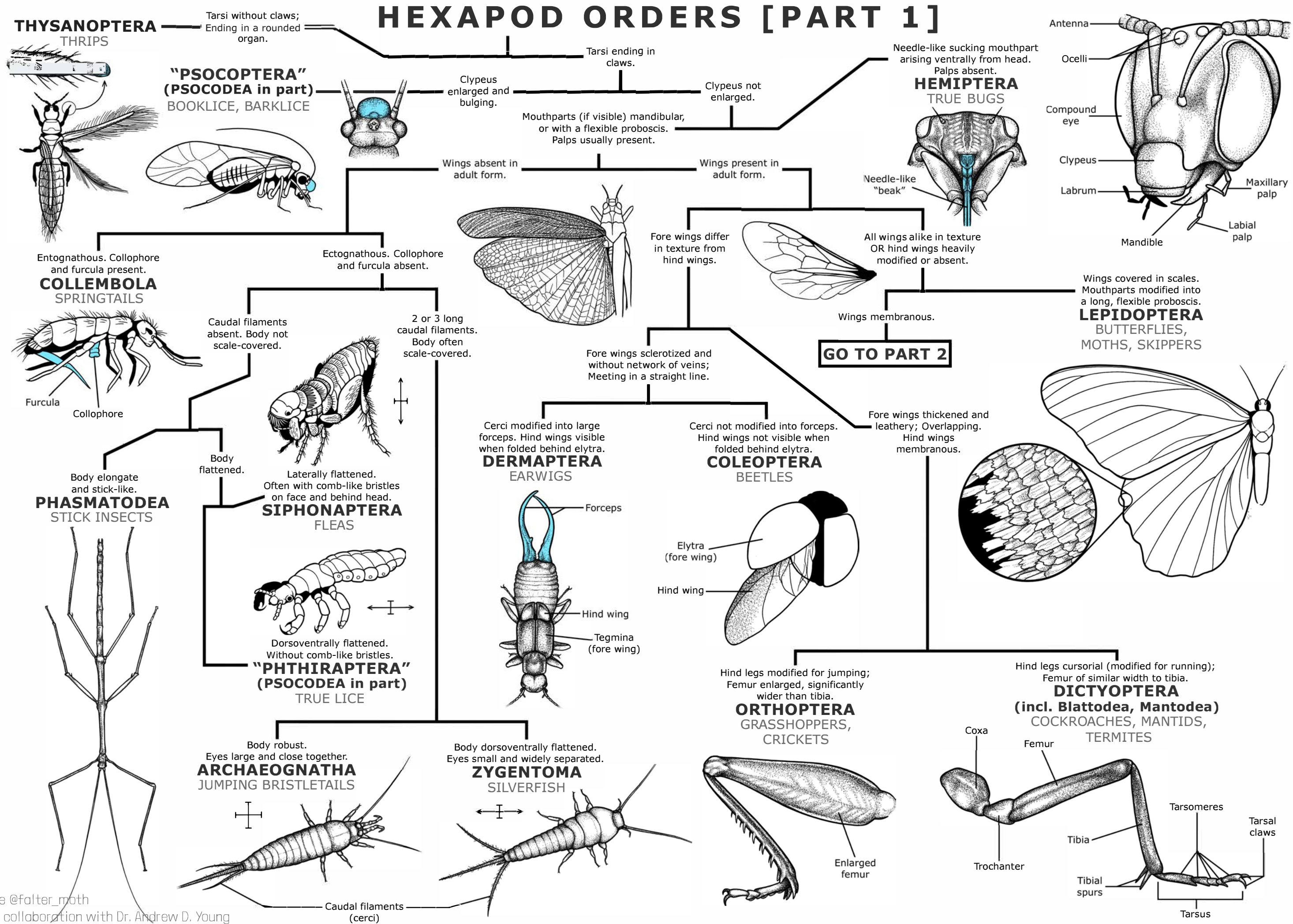


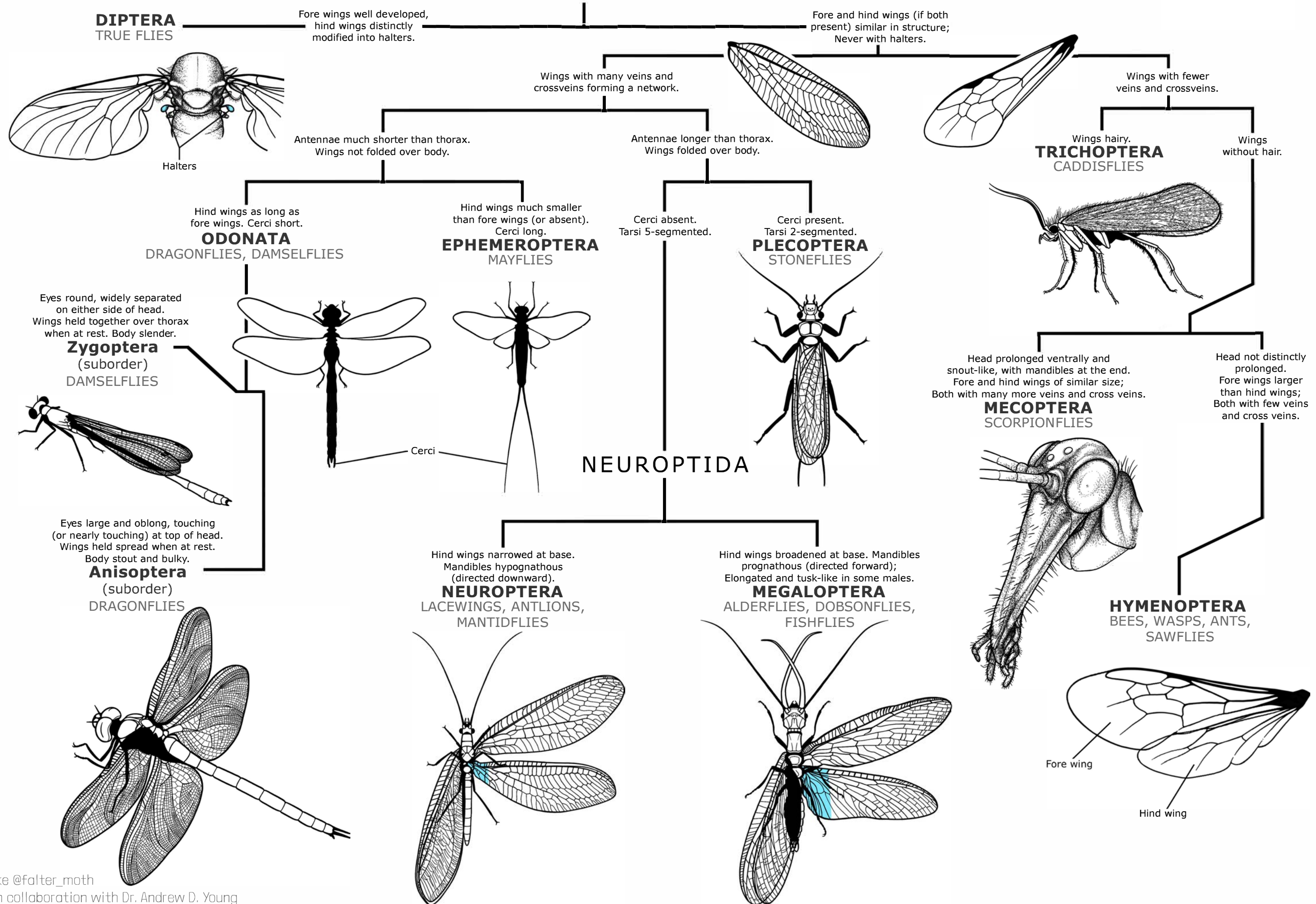
GENERIC INSECT PARTS



HEXAPOD ORDERS [PART 1]

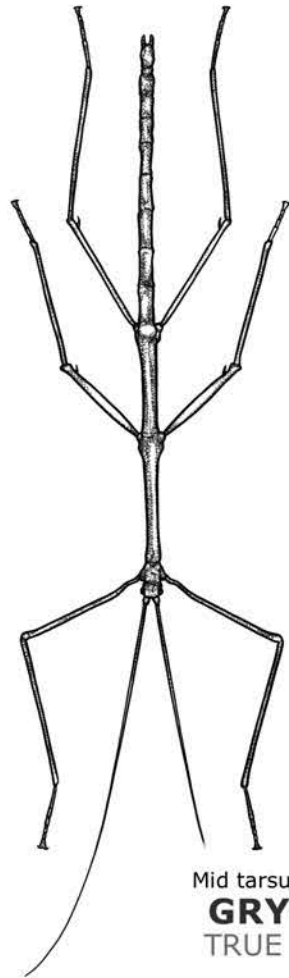


HEXAPOD ORDERS [PART 2]

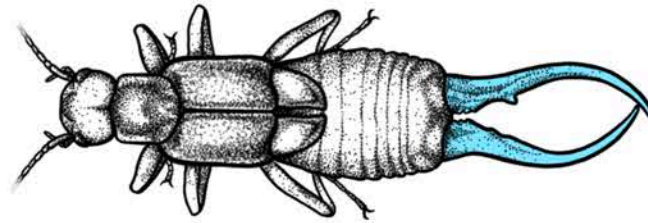


POLYNEOPTERA

PHASMATODEA STICK INSECTS



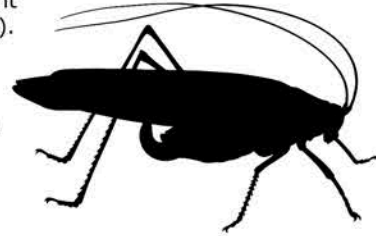
DERMAPTERA EARWIGS



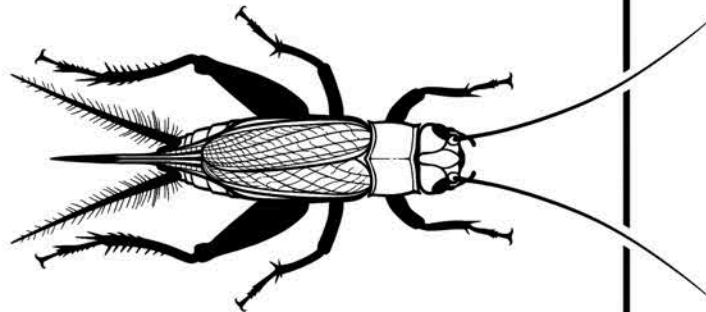
ORTHOPTERA

Antennae longer than body.
Tarsi 3 or 4-segmented.
Tympanal organs present
on fore tibiae (in males).

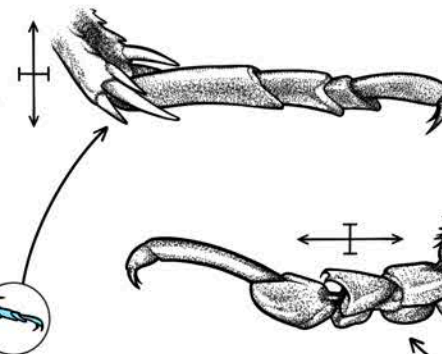
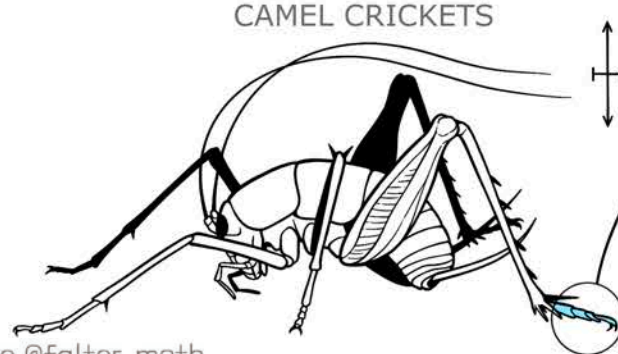
ENSIFERA



Mid tarsus 3-segmented.
GRYLLIDAE
TRUE CRICKETS

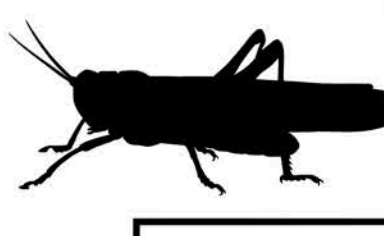


Body distinctly hunch-backed.
Wings entirely absent.
Tarsi laterally flattened.
RHAPHIDOPHORIDAE
CAVE CRICKETS,
CAMEL CRICKETS

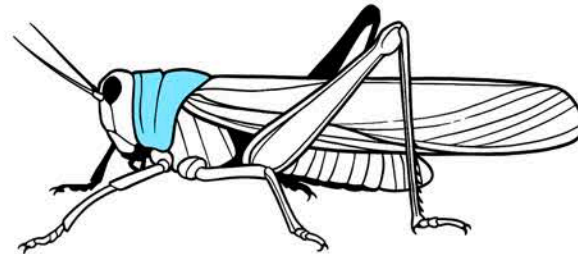


Antennae much shorter than
body. Tarsi 3-segmented.
Tympanal organs present on first
abdominal segment (in males).

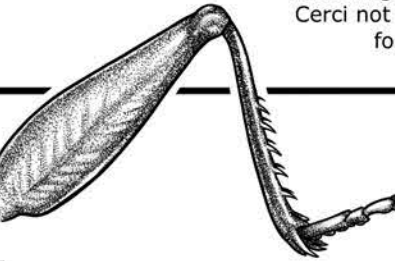
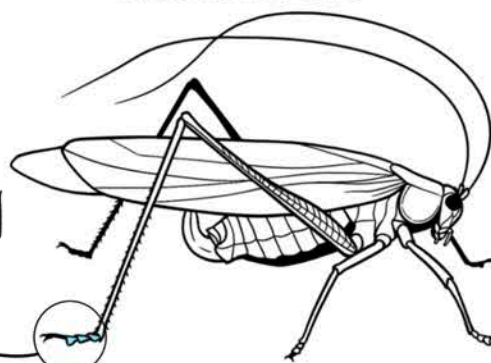
CAELIFERA



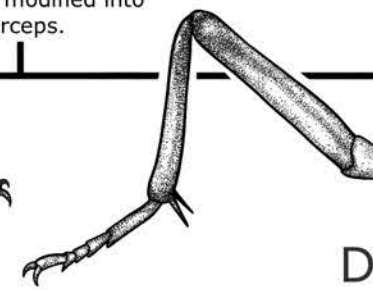
Pronotum not covering abdomen.
Fore wings well developed.
Variable in size.
ACRIDIDAE
SHORT-HORNED
GRASSHOPPERS



Body relatively straight-backed.
Winged. Tarsi
dorsoventrally flattened.
TETTIGONIIDAE
KATYDIDS, LONG-HORNED
GRASSHOPPERS



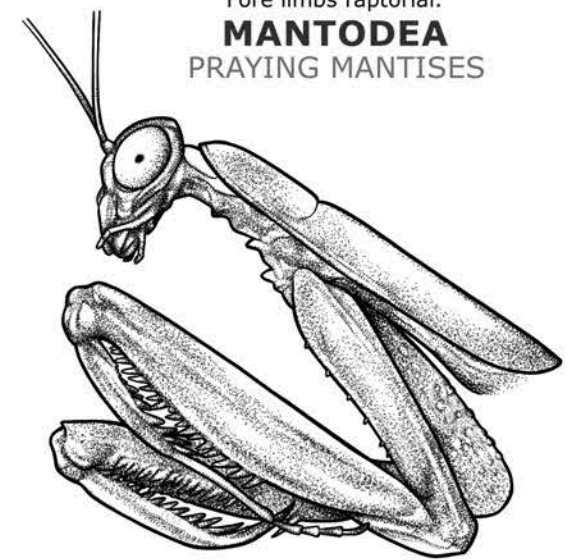
Fore wings overlapping.
Cerci not modified into
forceps.



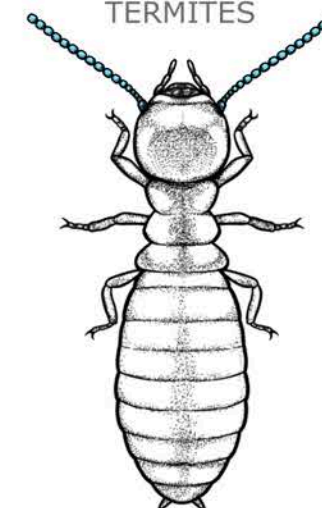
DICTYOPTERA

Fore limbs similar
in structure to mid
and hind legs.

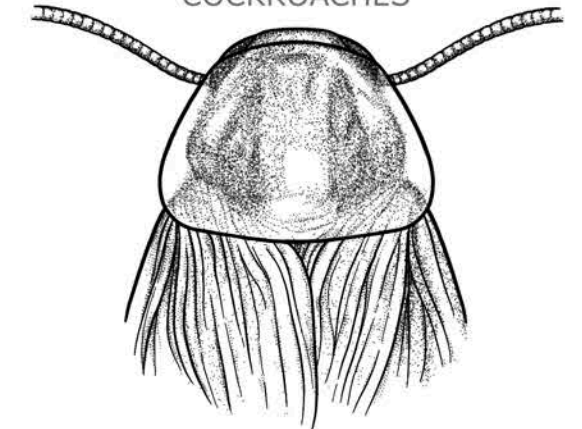
Fore limbs raptorial.
MANTODEA
PRAYING MANTISES



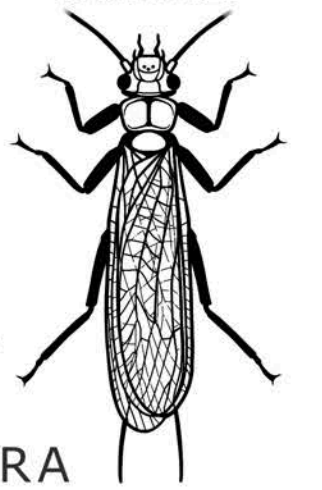
Head not covered by
pronotum. Antennae beaded.
"ISOPTERA"
(**BLATTODEA** in part)
TERMITES



Pronotum broad, covering
head. Antennae filiform.
BLATTODEA
(in part)
COCKROACHES



PLECOPTERA STONEFLIES



Fore wings thickened
and leathery; Hind wings
membranous.

Fore wings membranous,
the same texture as hind
wings.

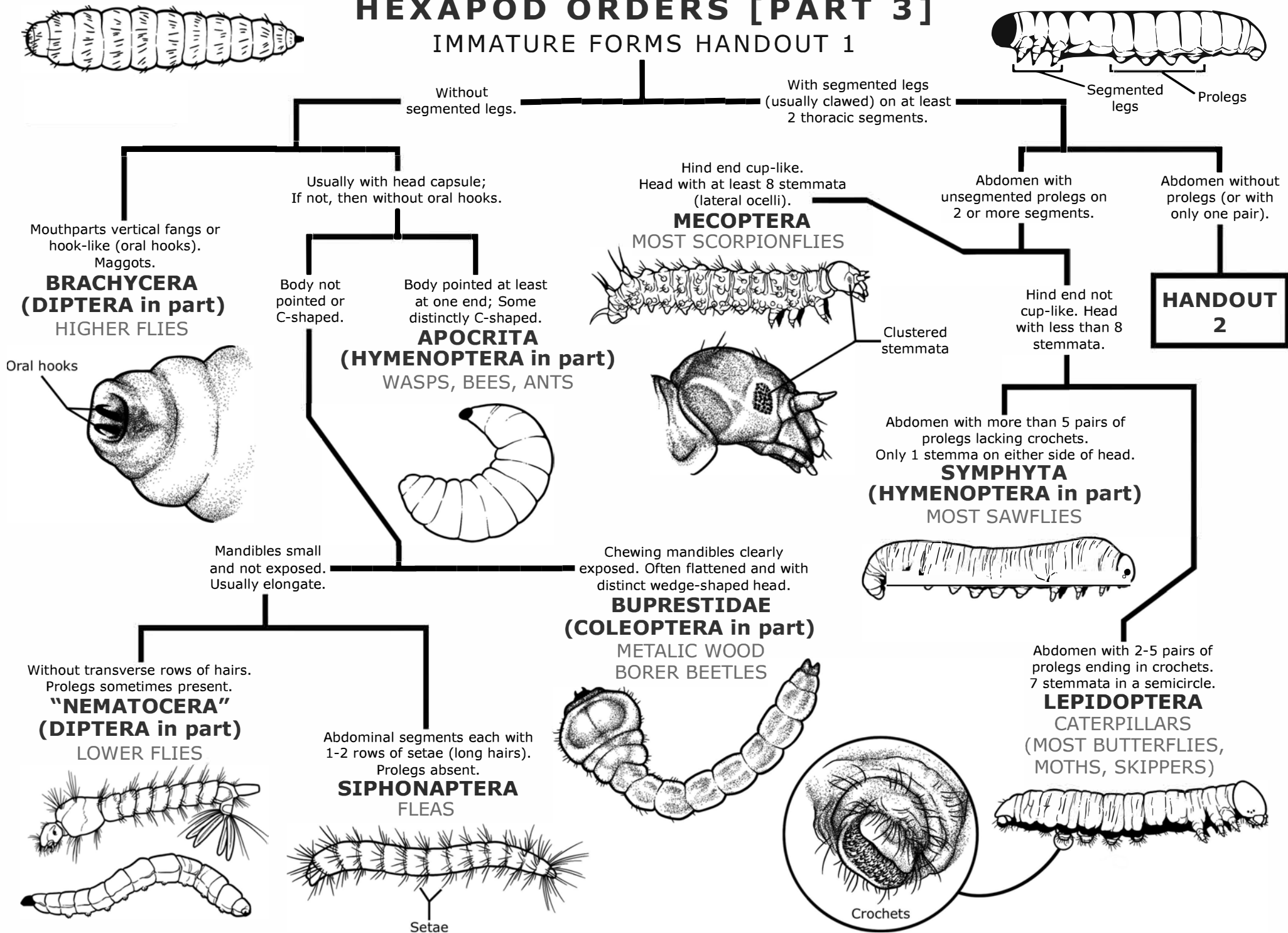
Fore wings meeting
in a straight line.
Cerci modified into
large forceps.

Hind legs modified
for jumping;
Femur enlarged,
wider than tibia.

Hind legs cursorial
(modified for running);
Femur of similar width
to tibia.

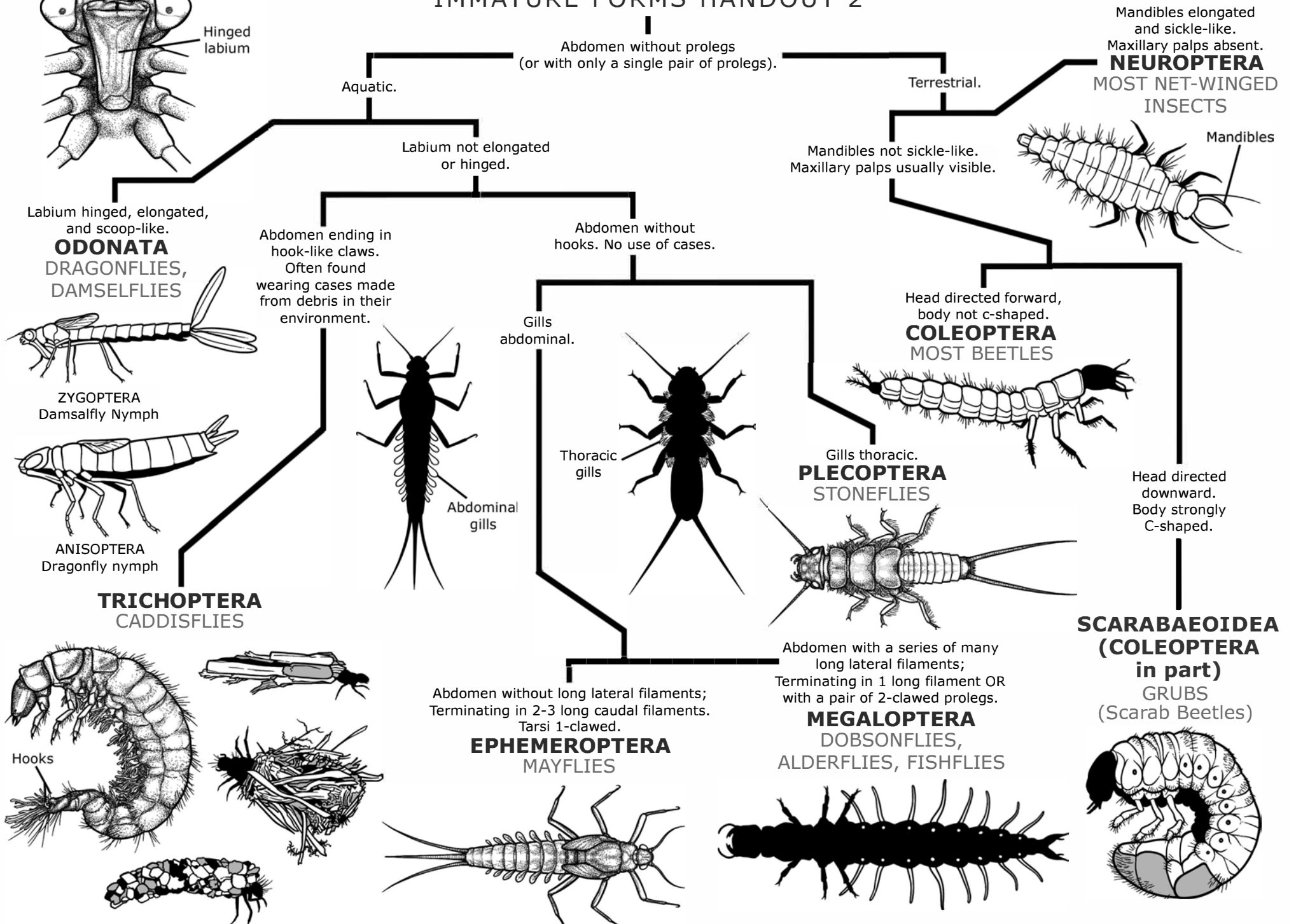
HEXAPOD ORDERS [PART 3]

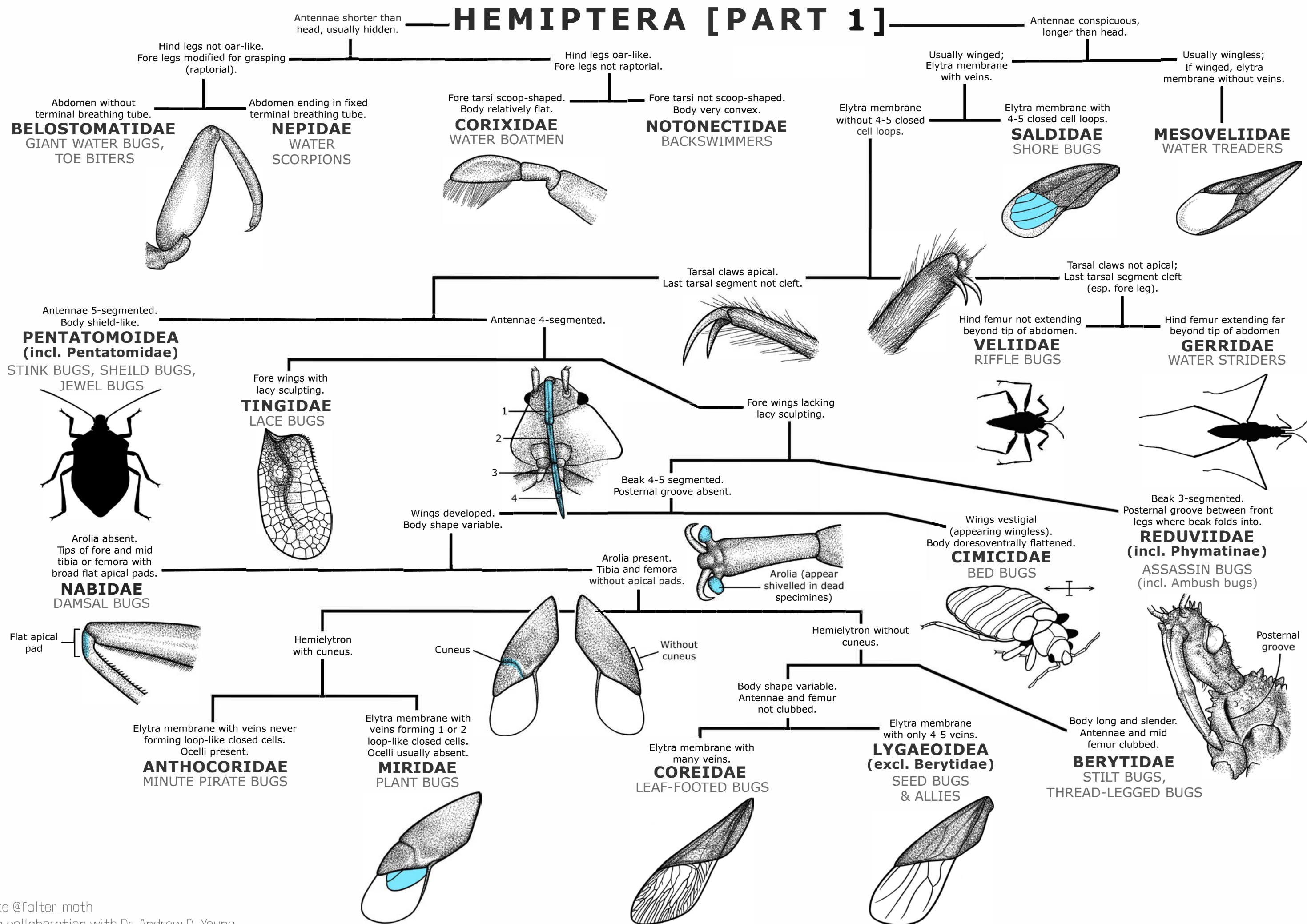
IMMATURE FORMS HANDOUT 1



HEXAPOD ORDERS [PART 4]

IMMATURE FORMS HANDOUT 2





HEMIPTERA [PART 2]

Beak arising ventrally from head.
Antennae inconspicuous.
Tarsi with 3 tarsomeres.

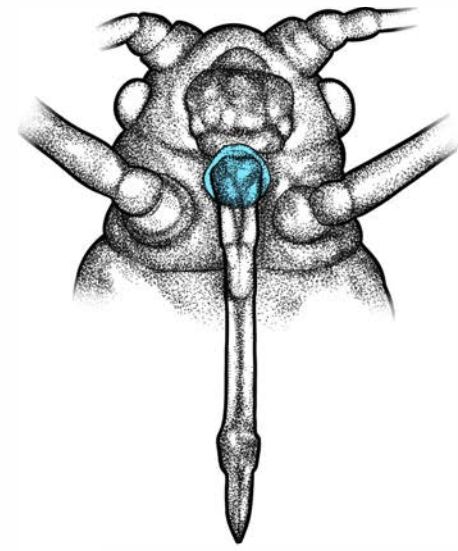
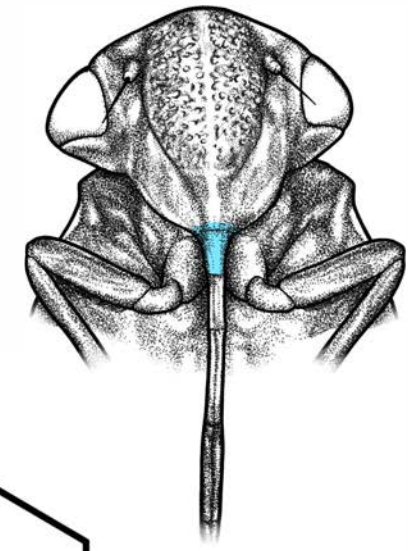
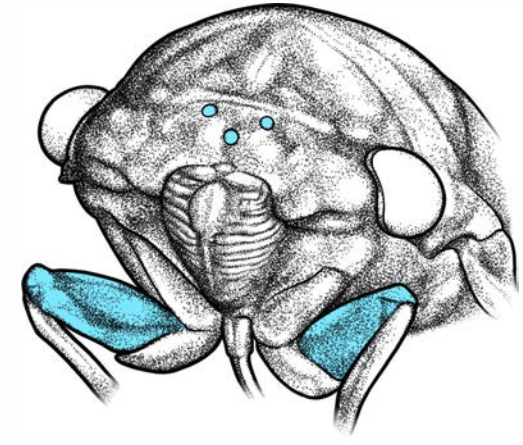
Beak (if present) appearing to arise from
between fore Coxae. Antennae (if present)
conspicuous, much longer than head.
Tarsi with at most 2 tarsomeres.

AUCHENORRHYNCHA

STERNORRHYNCHA

Fore femur enlarged.
3 ocelli. Large insects
(over 2cm long).
CICADIDAE
CICADAS

Fore femur not enlarged.
2 or less ocelli.
Smaller insects
(under 1.5cm long).

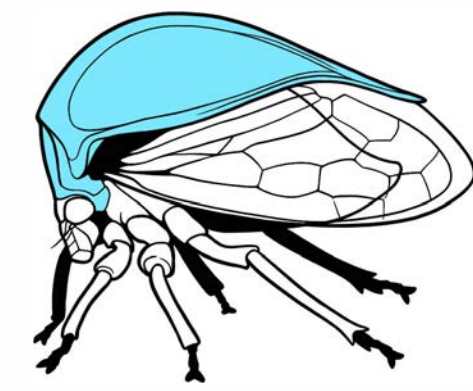
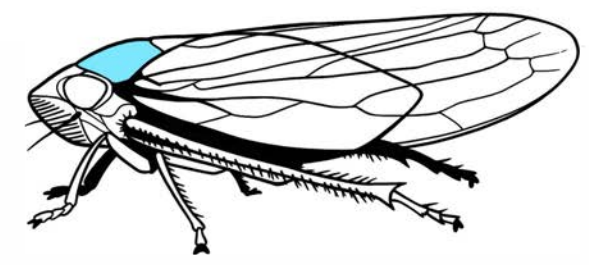


Tarsi with 2 tarsomeres.
Either wingless OR with
two pairs of wings.

Tarsi with 0-1 segments.
If winged, then only with
a single pair.
COCCOIDEA
SCALE INSECTS,
MEALY BUGS

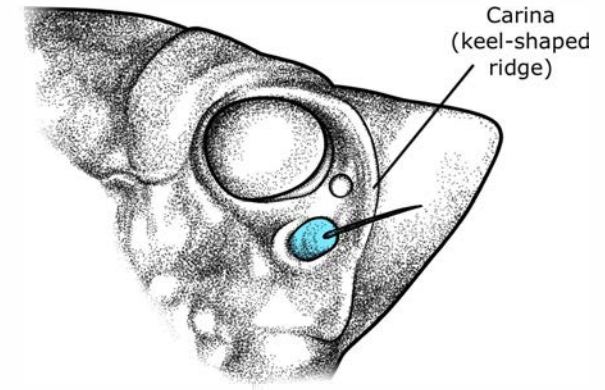
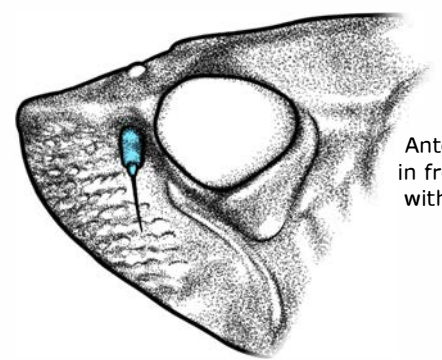
Pronotum not
prolonged.

Pronotum prolonged
over thorax.
MEMBRACIDAE
TREEHOPPERS



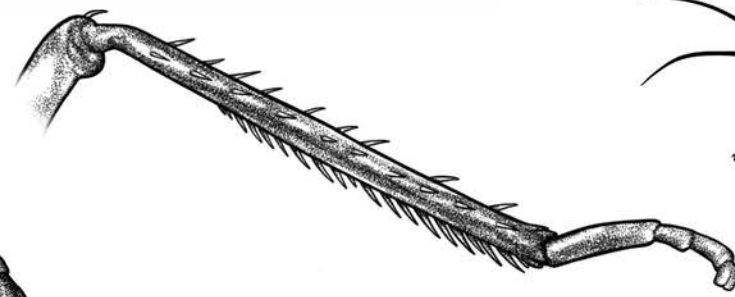
Antennae inserted below eyes;
Usually separated from face by
a prominent carina.
FULGOROMORPHA
FULGOROIDEA,
DELPHACOIDEA
PLANTHOPPERS

Antennae inserted
in front of eyes and
without prominent
carina.



Hind tibia with a circlet
of spines at apex.
CERCOPOIDEA
(incl. Cercopidae,
Aphrophoridae)
SPITTLEBUGS
(incl. Froghoppers,
True spittlebugs)

Hind tibia with a row
(or rows) of stout bristles.
CICADELLIDAE
LEAFHOPPERS,
SHARPSHOOTERS

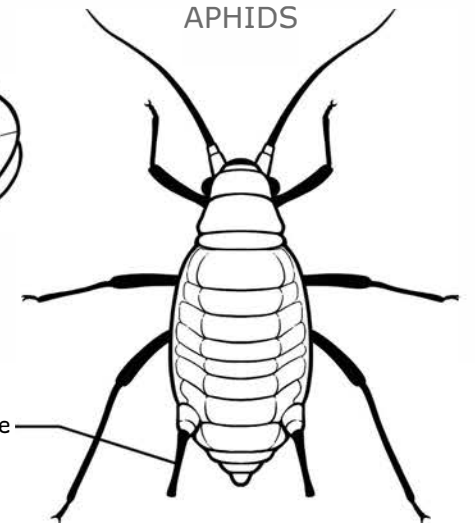
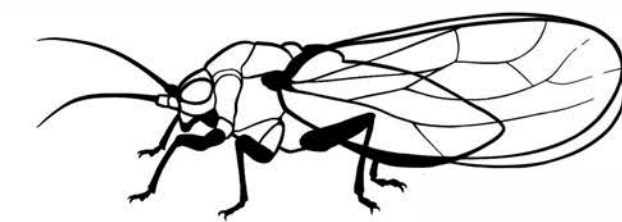


Wings (if present)
lacking white powder.

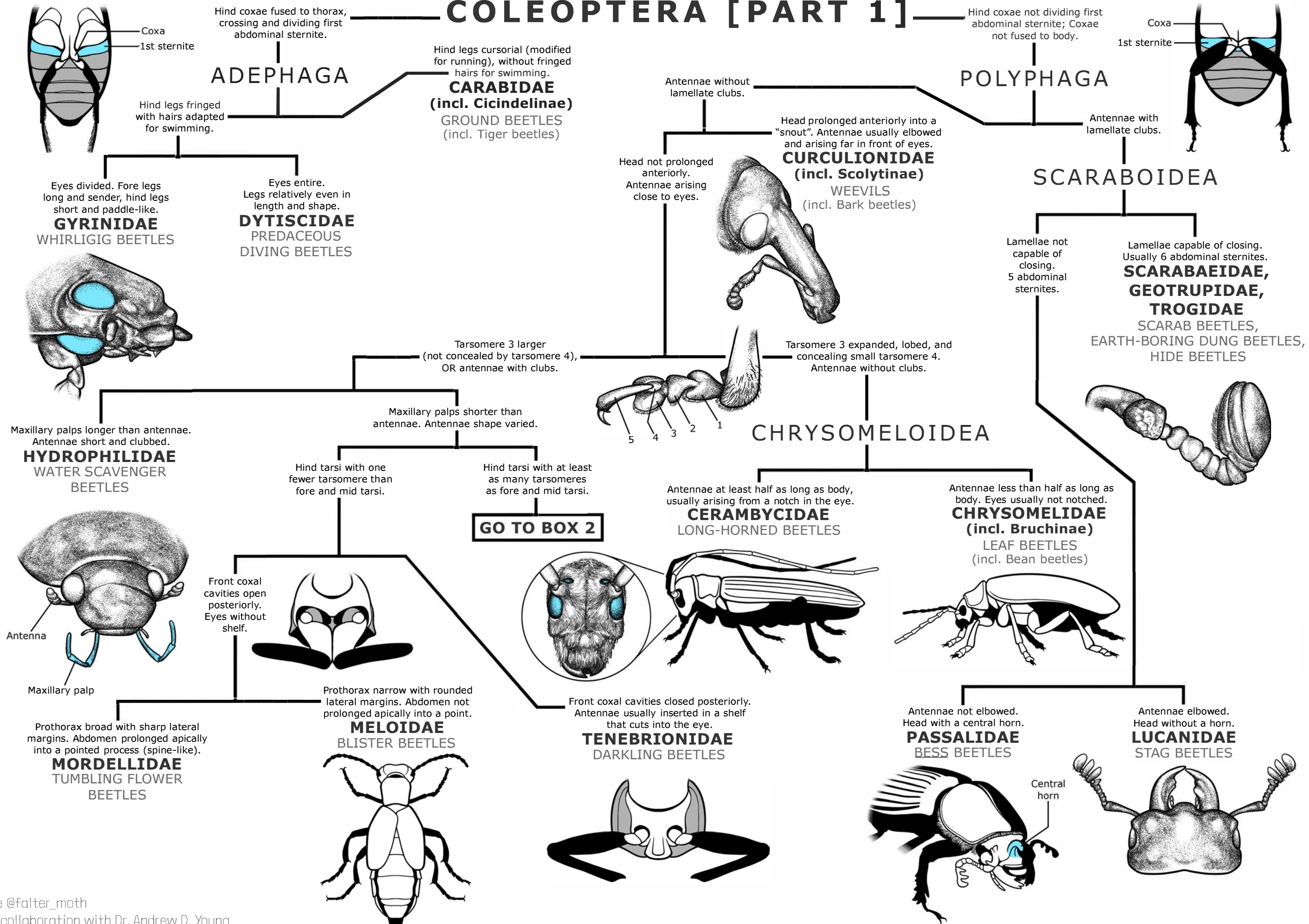
Wings covered in
a white powder.
ALEYROIDEA
WHITEFLIES

Body hard and
well-sclerotized (shiny).
Abdomen without cornicles.
PSYLLOIDEA
JUMPING PLANT LICE

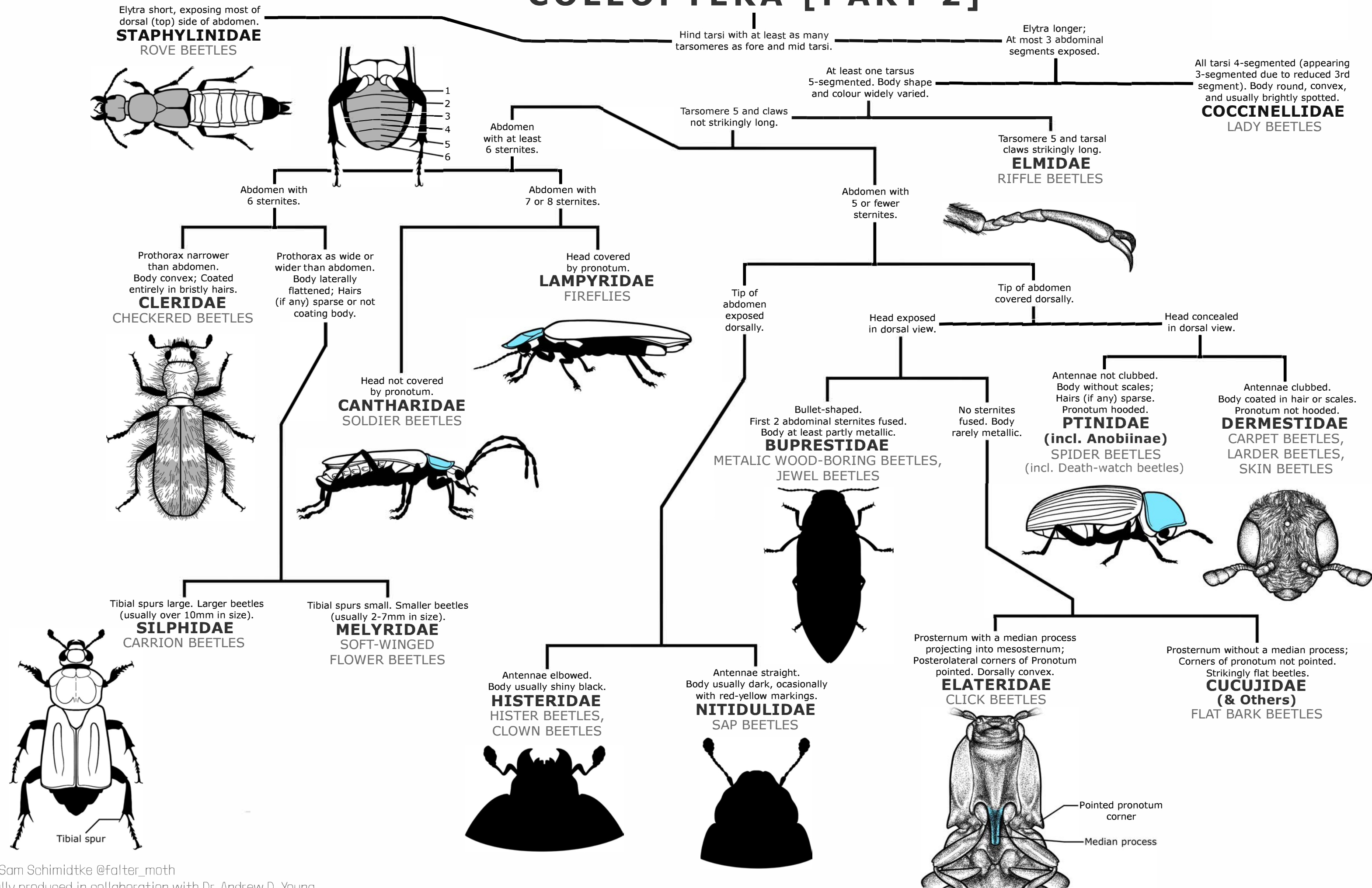
Body soft and weakly-sclerotized
(appearing shrivelled as dried specimens).
Abdomen usually with cornicles.
APHIDOIDEA
APHIDS

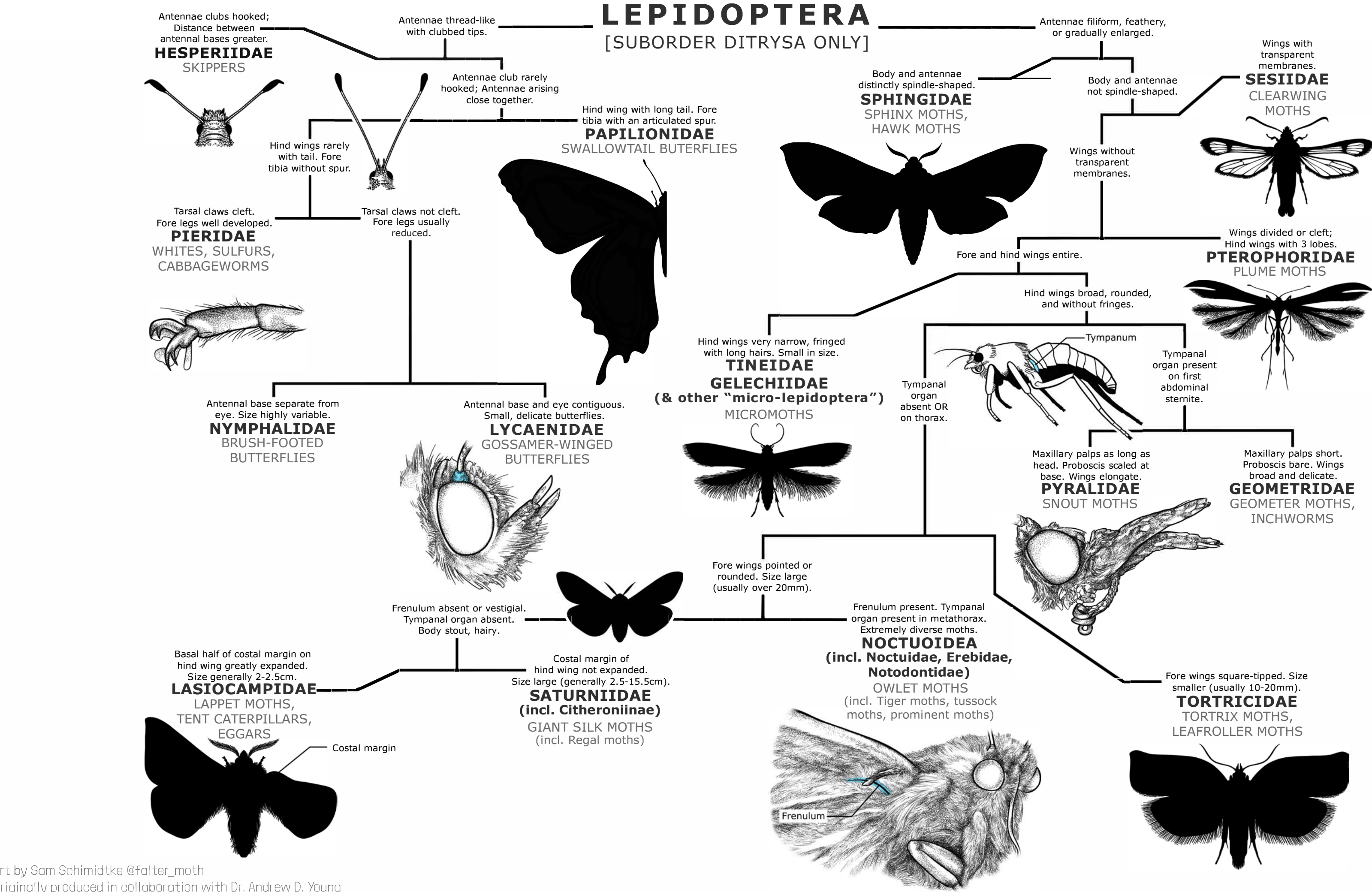


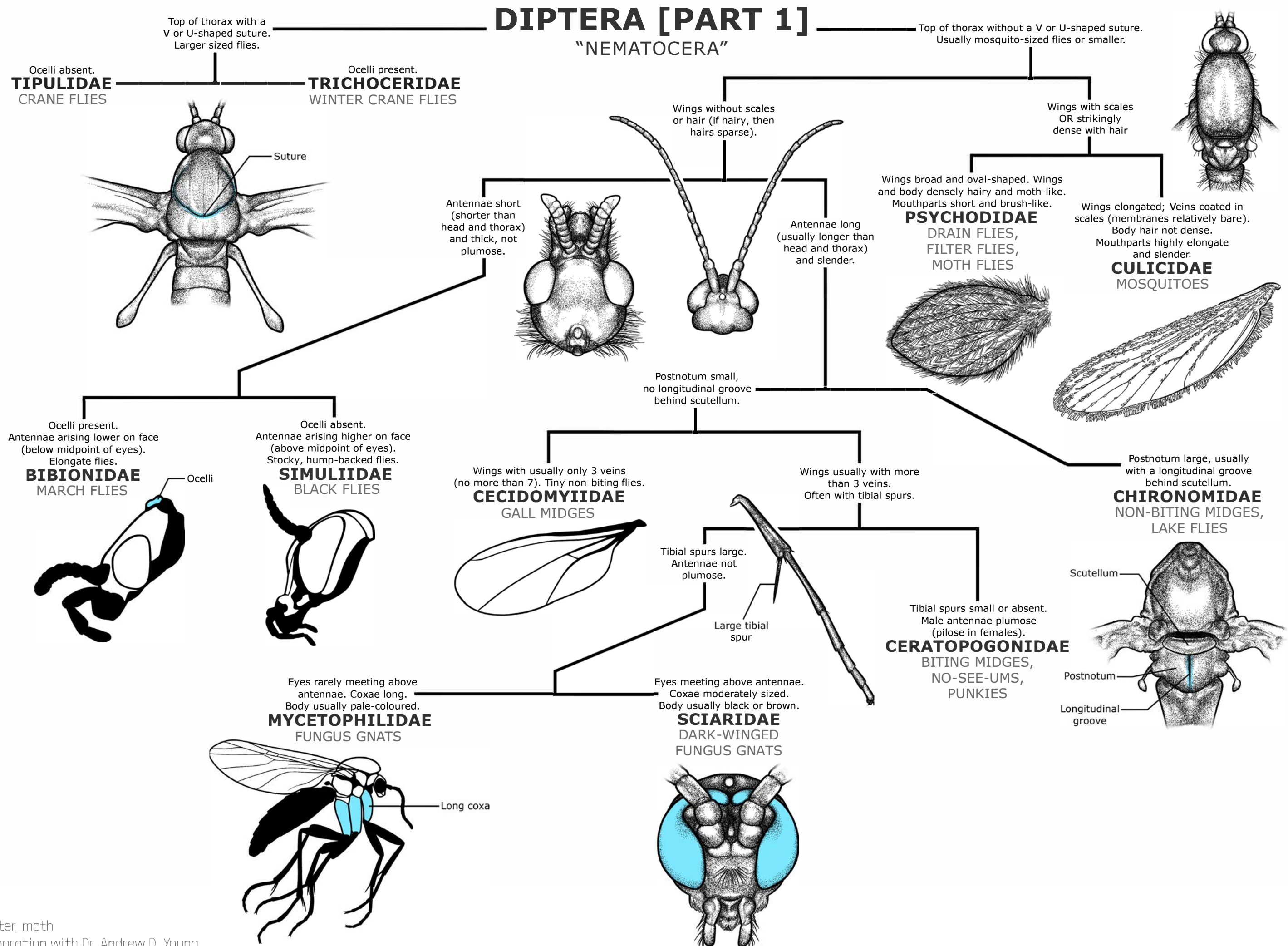
COLEOPTERA [PART 1]



COLEOPTERA [PART 2]



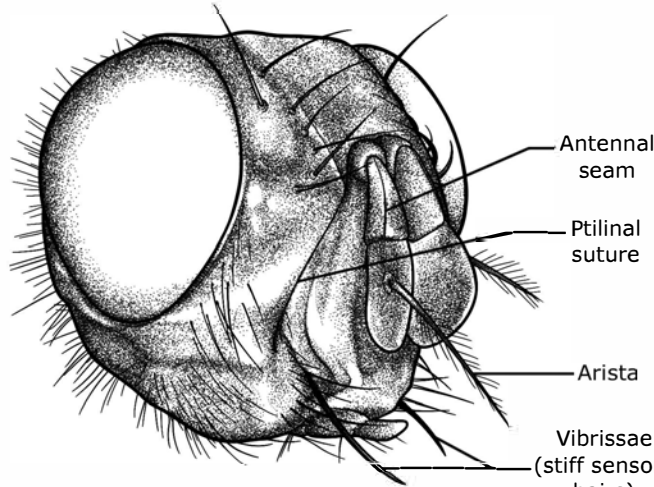




DIPTERA [PART 2]

BRACHYCERA

Antennae short and 3-segmented;
Third segment usually with a style or arista.



CALYPTRATAE

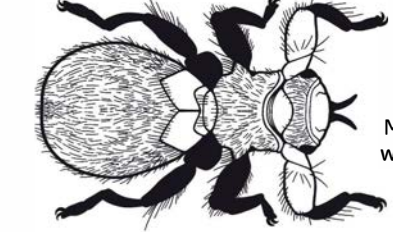
"ACALYPTRATAE"

Including:

Drosophilidae,
Sepsidae,
Tephritidae,
Ephydridae,
Sphaeroceridae
(and others)

Mouth opening very
small or absent.
OESTRIDAE
BOT FLIES

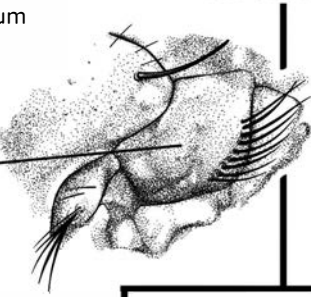
Coxae widely separated. Body
dorsoventrally flattened and stout.
HIPPOBOSCIDAE
LOUSE FLIES,
KEDS



Coxae close
together. Body not
dorsoventrally
flattened.

Mouth opening
well developed.

Meron with a
row of bristles.



Meron without a row of bristles.
MUSCOIDEA
(incl. **Muscidae,**
Anthomyiidae,
Scathophagidae,
Fanniidae)
MUSCID FLIES

Subscutellum strongly
developed and convex.
TACHINIDAE
BRISTLE FLIES,
PARASITIC FLIES



Subscutellum weakly
developed and not
evenly convex.

Arista usually bare distally.
Bodies not metallic, usually
striped with grey and black.
SARCOPHAGIDAE
FLESH FLIES,
SATELLITE FLIES

Arista usually plumose beyond
basal half. Bodies metallic OR thorax
with dense silky yellowish hairs.
CALLIPHORIDAE,
POLLENIIDAE
BLOW FLIES,
CLUSTER FLIES

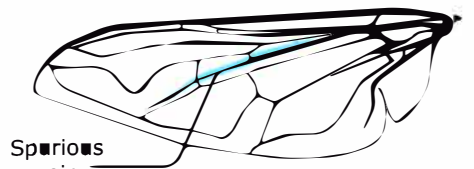


Wing veins crowded and
thickened anterobasally.
Small humpbacked flies.
PHORIDAE
SCUTTLE FLIES

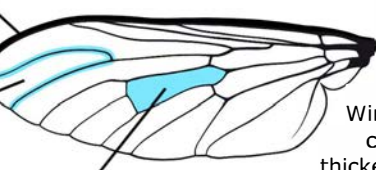


Wing veins not
crowded or
thickened. Size and
shape variable.

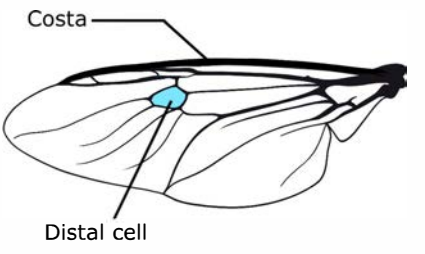
Wings with a strong
spurious vein between radial
sector and medial vein.
SYRPHIDAE
FLOWER FLIES,
HOVERFLIES



Calypteres small.
Subscutellum not developed.
Fork of R4+5 (wing apex) narrow.
Slender-bodied flies.
RHAGIONIDAE
SNIPE FLIES

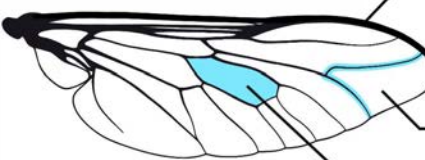


Costa extending before or
at wing apex. Discal cell
in wing centre small.
STRATIOMYIDAE
SOLDIER FLIES

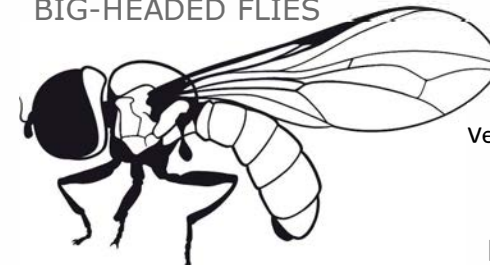


Costa extending
beyond and
around wing tip.
Discal cell
(if present) much
longer than wide.

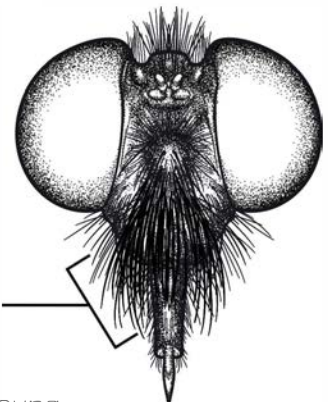
Calypteres large. Subscutellum
strongly developed and bulging.
Fork of R4+5 (wing apex) wide.
Stout-bodied flies.
TABANIDAE
HORSE FLIES,
DEER FLIES



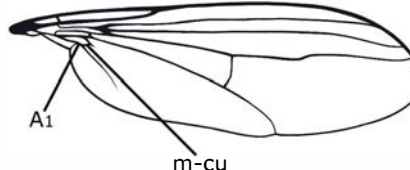
Head hemispherical with
huge eyes. Arista dorsal.
PIPUNCULIDAE
BIG-HEADED FLIES



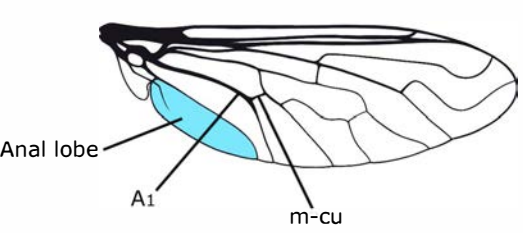
Vertex deeply excavated
between eyes.
Face with a mystax.
ASILIDAE
ROBBER FLIES



Anal lobe short or absent.
m-cu vein absent or joining
A1 vein far from wing margin.
Slender-bodied flies.
EMPIDOIDEA
(incl. **Empididae,**
Dolichopodidae,
Hybotidae)
DANCE FLIES



Anal lobe long. m-cu vein reaching
or joining A1 vein near wing margin.
Usually very robust and fuzzy flies.
BOMBYLIIDAE
BEE FLIES



Mystax

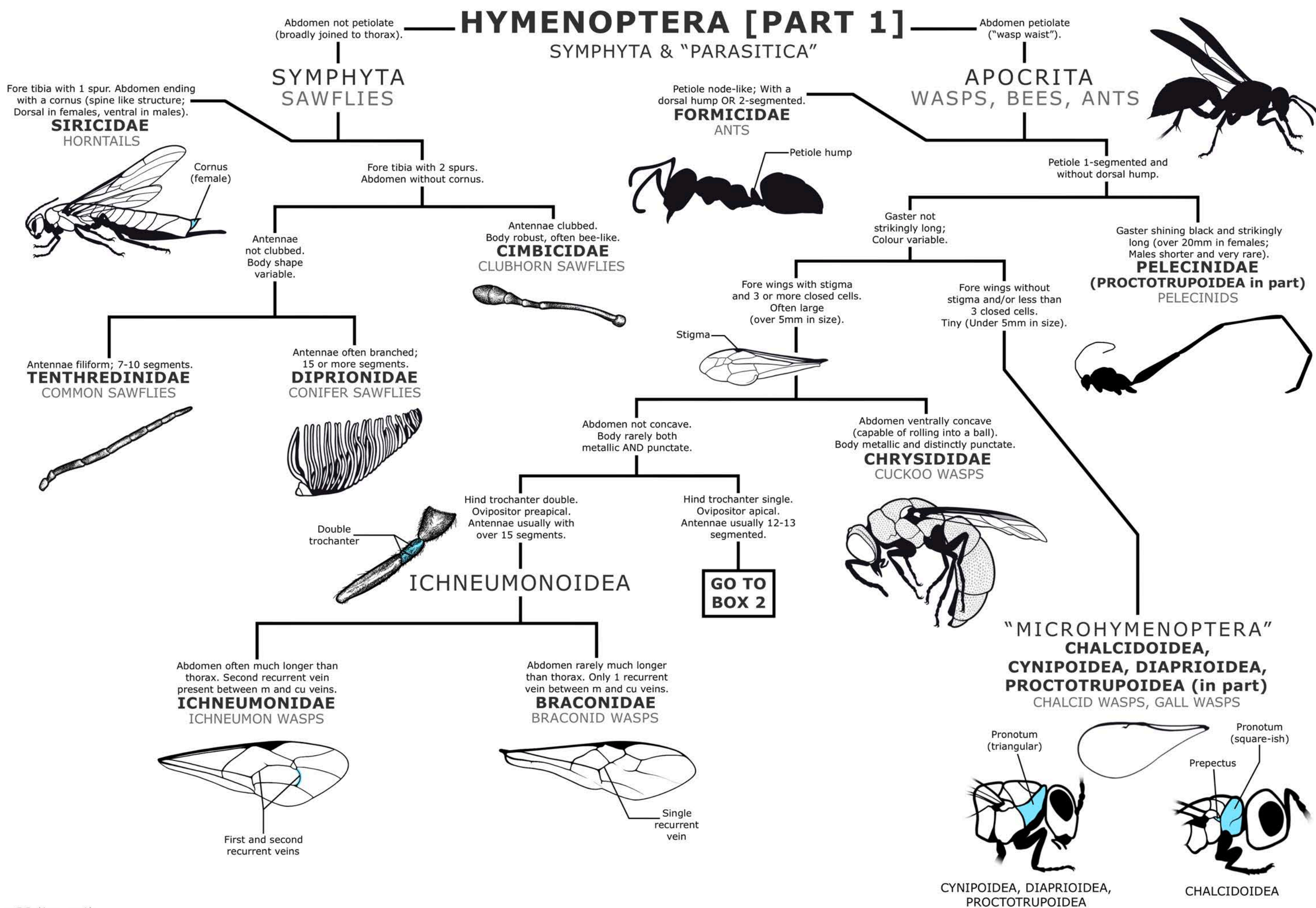
A1

m-cu

Anal lobe

A1

m-cu



HYMENOPTERA [PART 2]

ACULEATA (EXCL. FORMICIDAE)

