

Hemiptera:

a quick guide to common families

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About this guide:

This guide was developed as a visual reference for quick identification of common Hemipteran families. Not all species in these families will show all of the characters noted, but this guide should be sufficient for identifying most common species to the family level. The individual illustrations are an average representation of a particular family and do not represent one species in particular. This is not a dichotomous key.

All illustrations were completed with a calligraphy pen and ink by Amy L. Springer, and all image rights are reserved.

Table of contents:

Glossary of terms.....(4)

Identification of suborders..(5)

Suborder Heteroptera: the
typical true bugs..... (6)

Miridae..... 7

Coreidae..... 8

Rhopalidae..... 9

Lygaeidae..... 10

Pentatomidae.....11

Nabidae.....12

Reduviidae.....13

Belostomatidae.... 14

Corixidae..... 15

Notonectidae.....16

Gerridae..... 17

Cimicidae..... 18

Suborder Auchenorrhyncha:
the free-living Hemipterans (19)

Cercopoidea.....20

Cicadidae..... 21

Cicadellidae.....22

Membracidae..... 23

Flatidae.....24

Delphacidae..... 25

Suborder Sternorrhyncha: the
plant-parasitic Hemipterans (26)

Aleyrodidae..... 27

Aphididae.....28

Coccoidea.....29

Adelgidae.....30

Psylloidea..... 31

Glossary of terms

Beak: the hardened proboscis or feeding mouthparts of a Hemipteran.

Calcar: a moveable, thumb-like spur found at the end of the hind tibiae of some insects.

Clypeus: an exoskeleton “plate” found on the head of an insect above the jaws. The “upper lip” of an insect.

Cornicles: tubes that emerge from the abdomen of an aphid and emit pheromones.

Cuneus: a triangle-shaped region at the end of the leathery portion of the forewing of a Heteropteran.

Femur: the third leg segment of an insect, located between the trochanter (the segment nearer to the insect’s body) and the tibia (the segment located further from the insect’s body). Plural: femurs.

Filiform: thread-like. Used to describe long, thin, smooth insect antennae.

Fossorial: in insects, forelegs that are modified for digging, as in mole crickets or cicadas.

Marginal cells: Cells in an insect wing that directly adjoin the margin (edge) of the wing.

Ocellus: Small, round, simple eyes that detect light and dark. Found on the head of many insects. Plural: ocelli.

Pronotum: the exoskeleton “plate” of an insect that covers most of the thorax on the insect’s dorsal side.

Raptorial: in insects, forelegs that are modified for grabbing prey, as in praying mantises.

Scutellum: the triangular-shaped thorax plate found between where the forewings attach to the insect’s thorax.

Sub-marginal vein: the wing vein of an insect running directly parallel to the margin (edge) of the wing.

Tarsus: the foot of an insect. Usually comprised of multiple segments called tarsomeres. The claw of an insect, if present, is not included in a tarsomere count. Plural: tarsae.

Thorax: the middle segment of an insect’s body found between the head and the abdomen (belly).

Tibia: the fourth leg segment of an insect, located between the femur and the tarsus (foot). Plural: tibiae.

Wing pad: small, leathery pads found on the thorax of juvenile insects or adult wingless insects where wings would normally emerge.

Identification of Suborders:

If your bug has wings divided into a leathery portion and a membranous portion and a beak arising from the front of the head, start on page 6: Heteroptera.

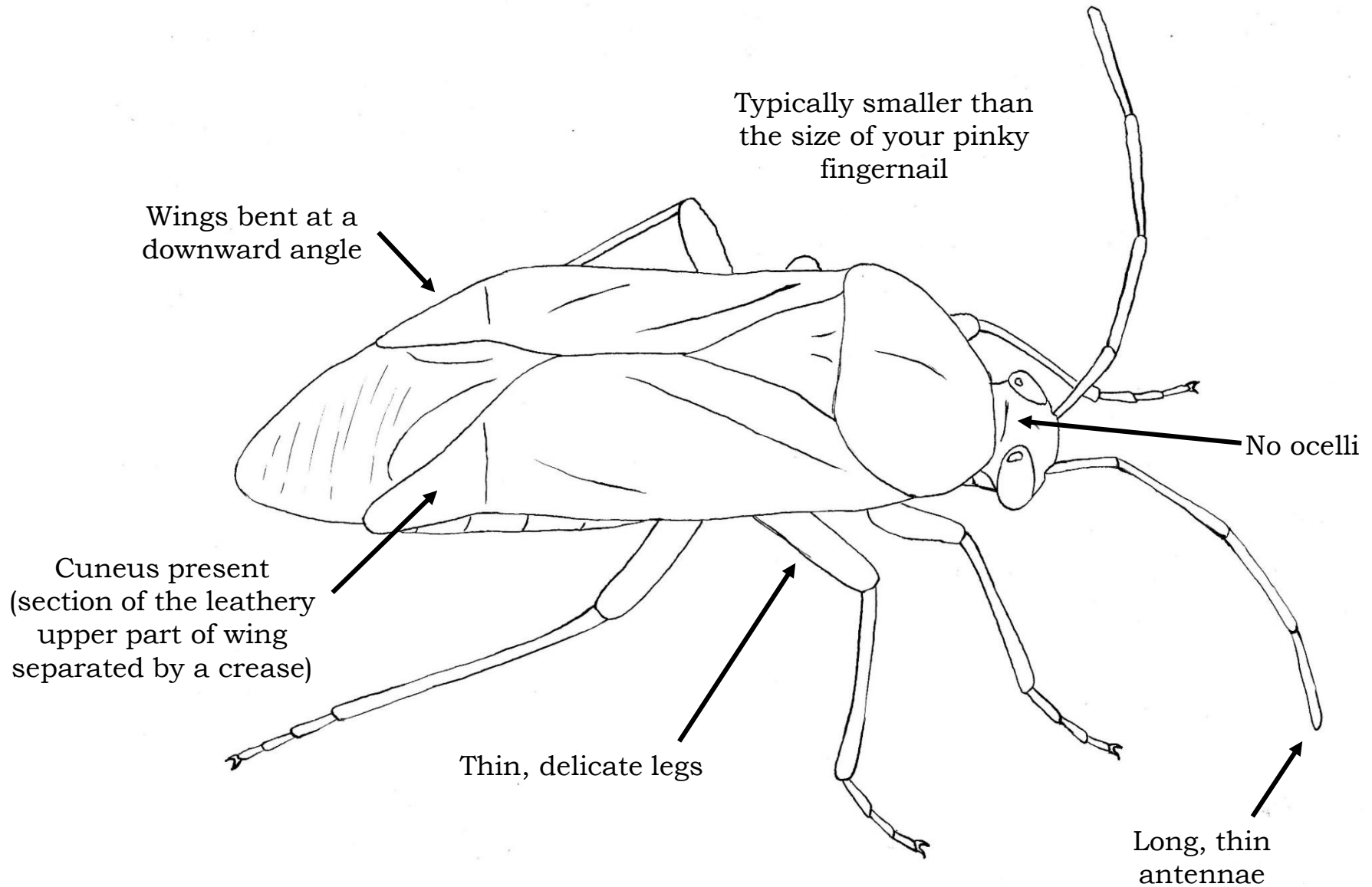
If your bug has fully membranous wings, bristle-like antennae, and a beak arising from the back of the head, start on page 19: Auchenorrhyncha.

If your bug has fully membranous wings, long, thin antennae, and a beak arising from the back of the head, start on page 26: Sternorrhyncha.

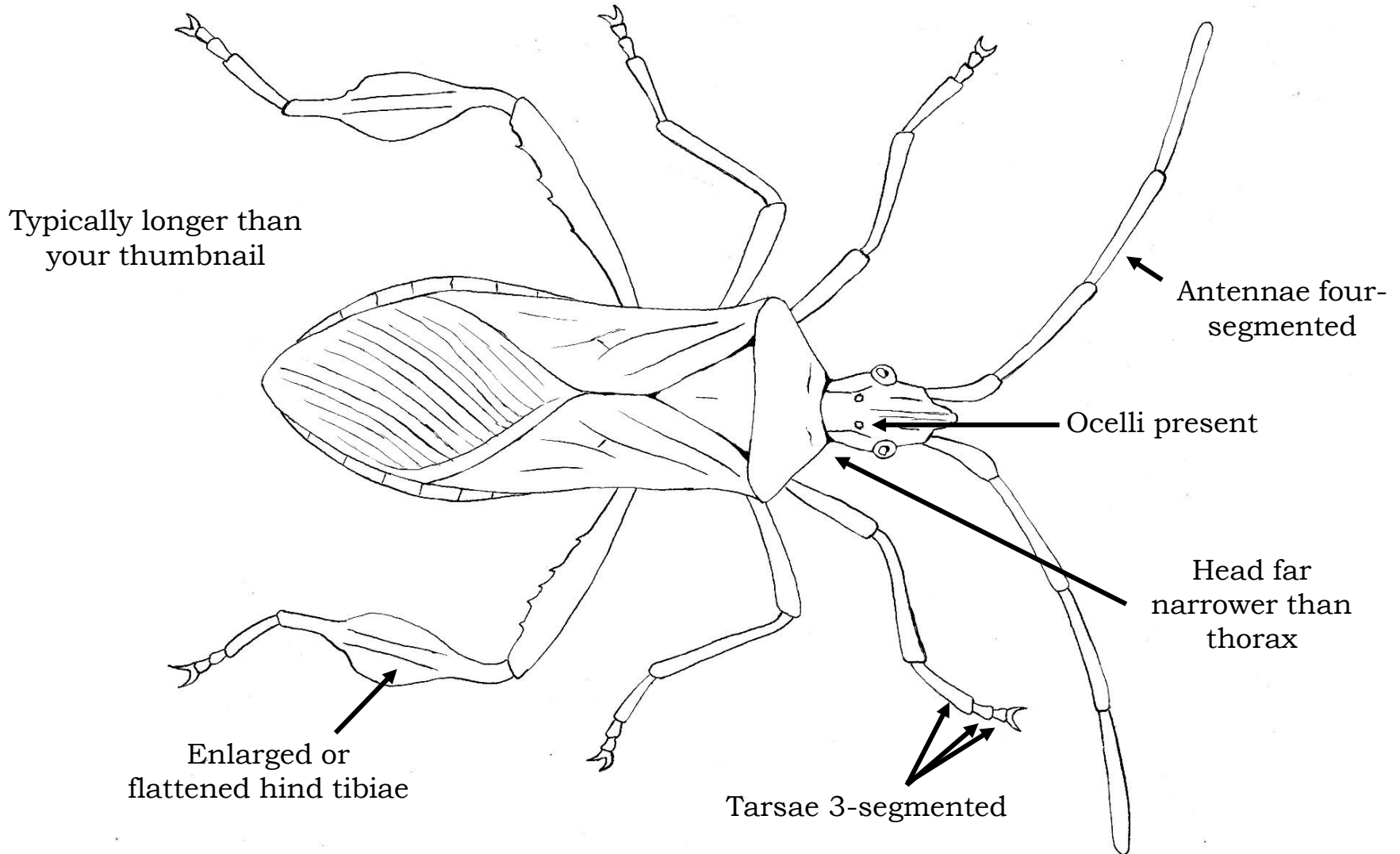
Suborder Heteroptera

The typical true bugs

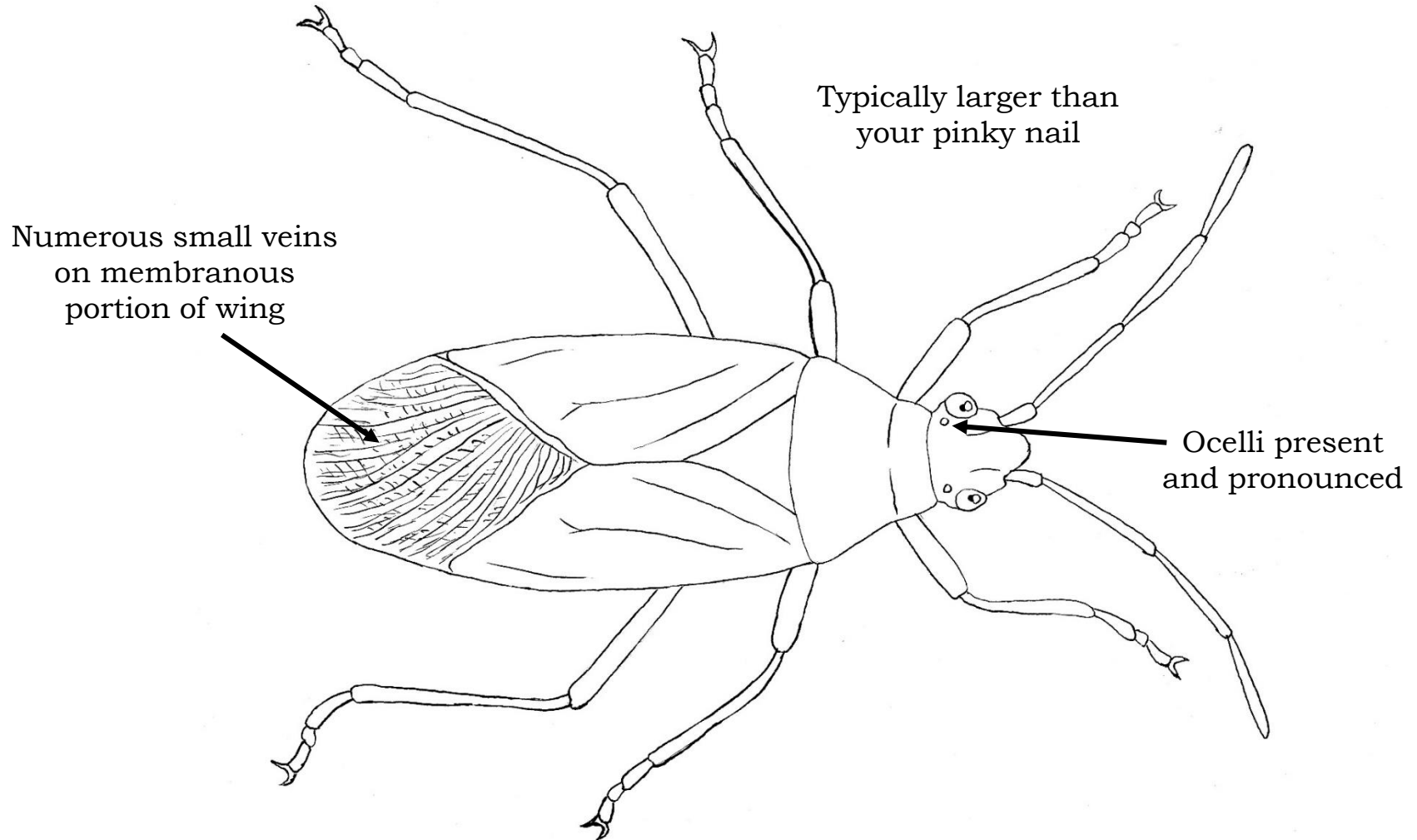
Miridae: plant bugs



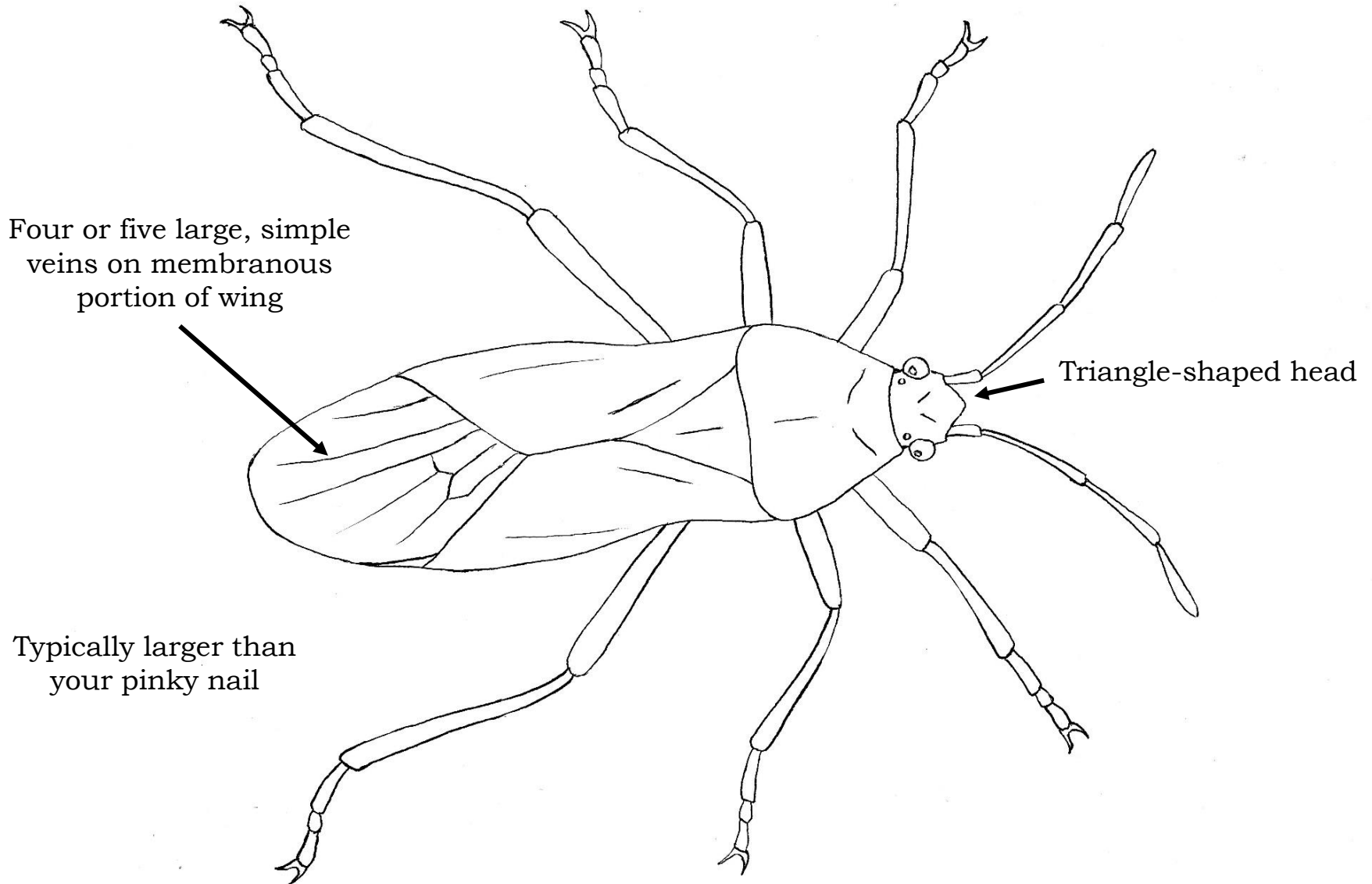
Coreidae: leaf-footed bugs



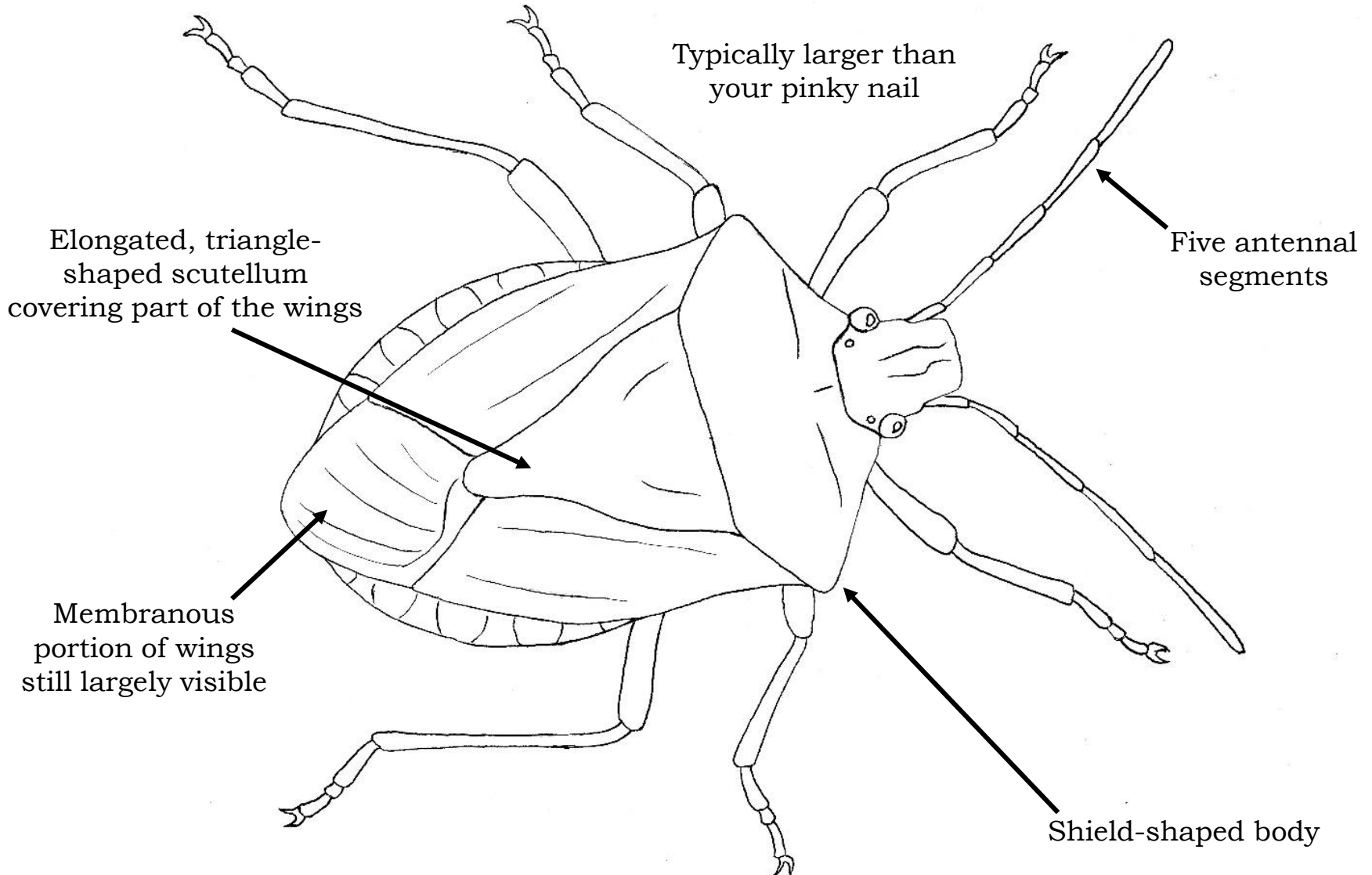
Rhopalidae: scentless plant bugs



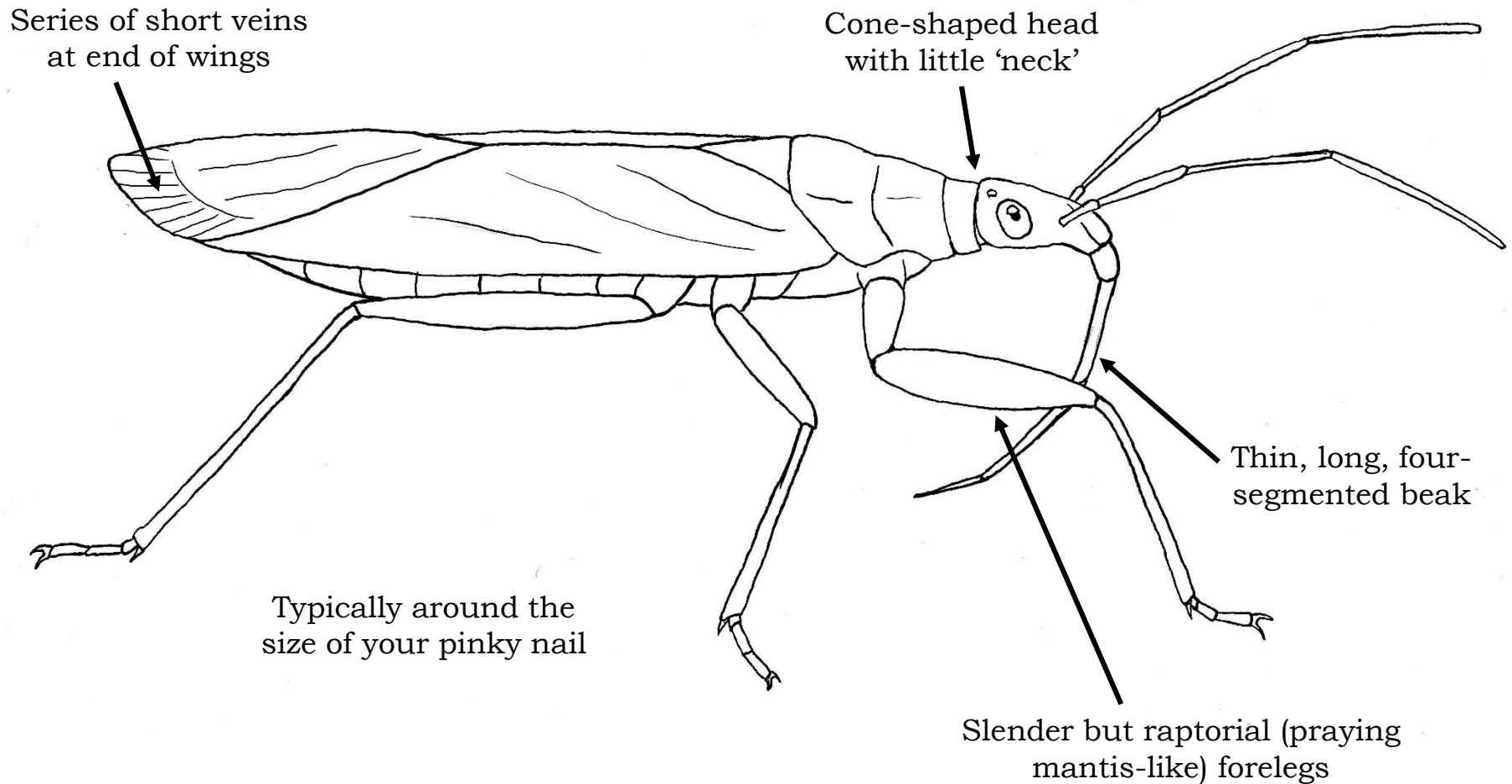
Lygaeidae: seed bugs



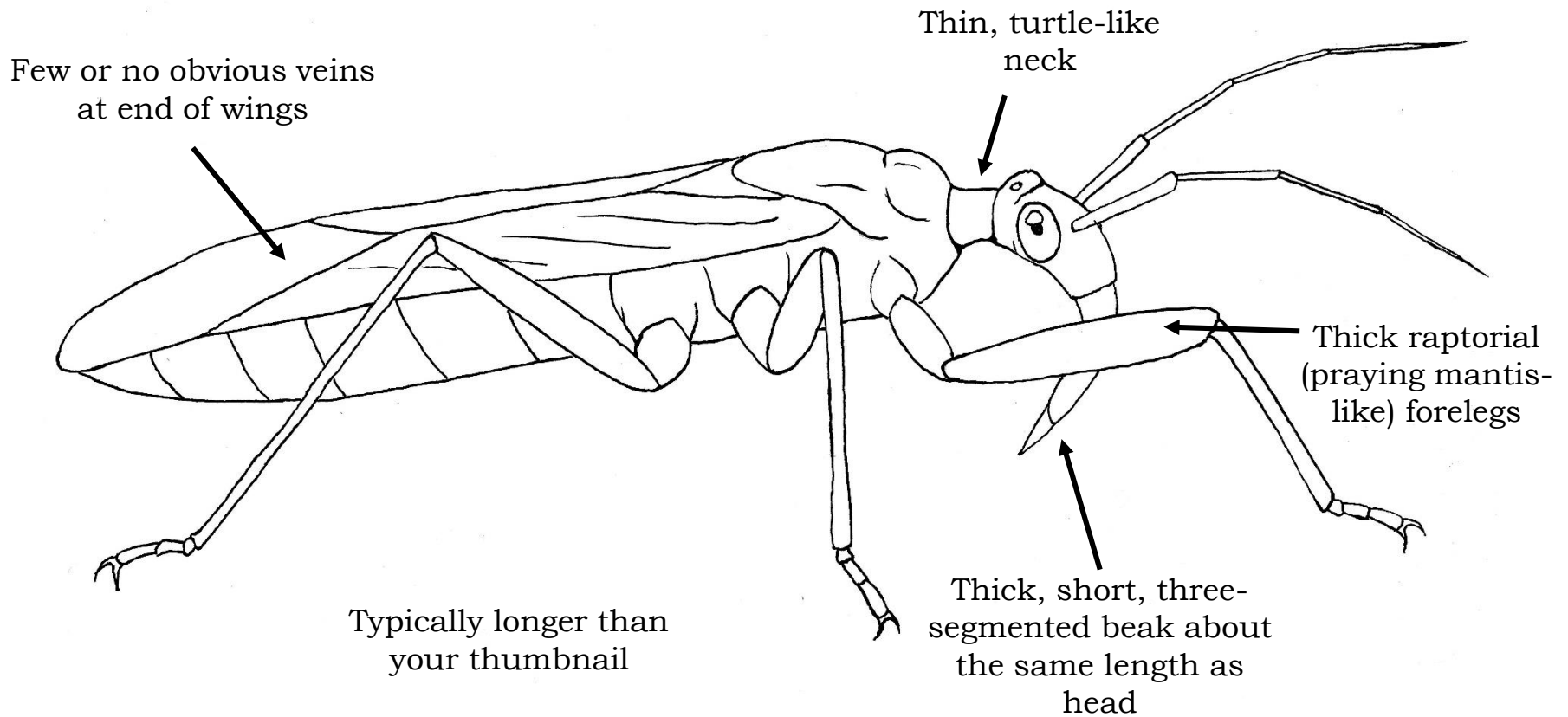
Pentatomidae: stinkbugs



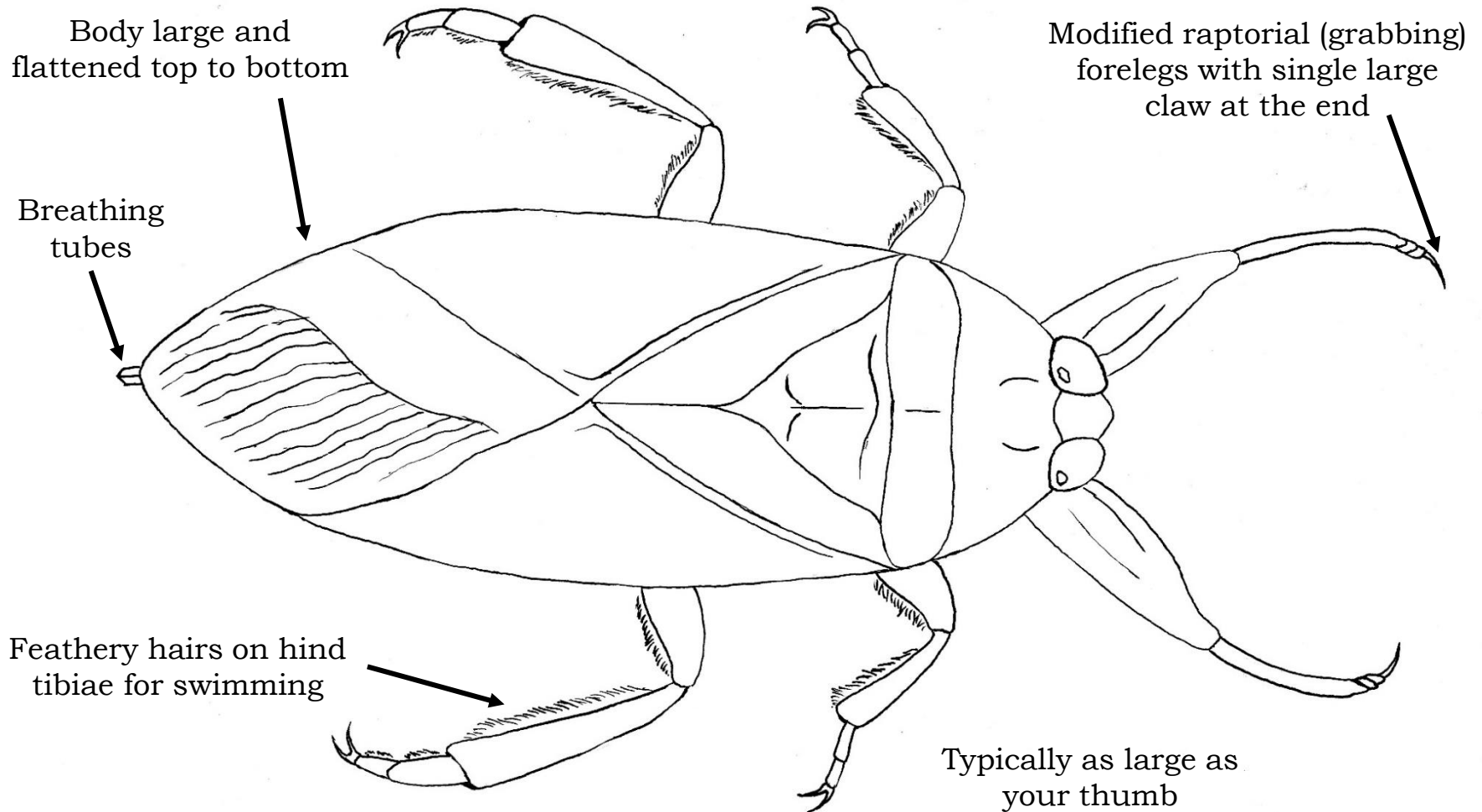
Nabidae: damsel bugs



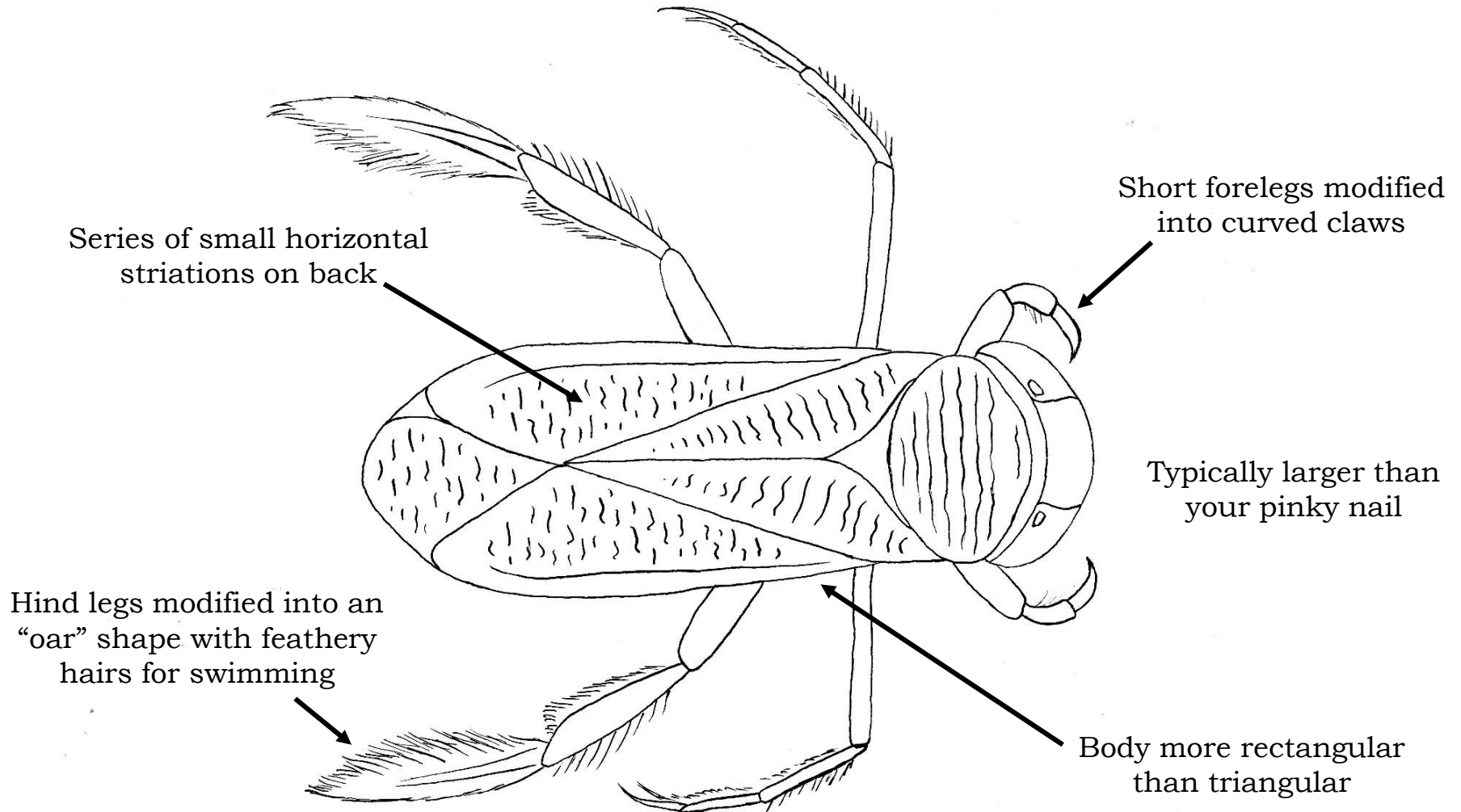
Reduviidae: assassin bugs



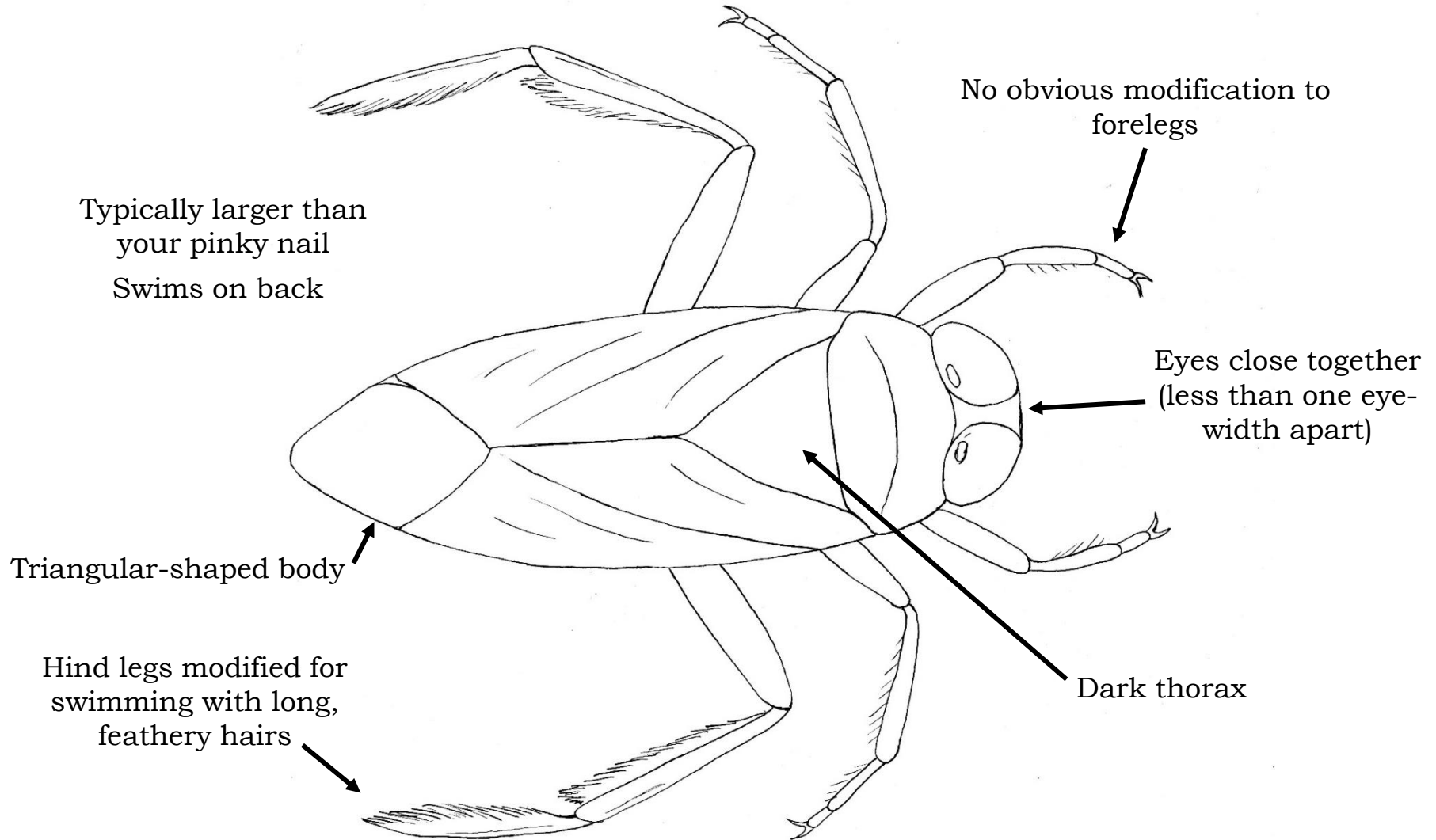
Belostomatidae: giant water bugs



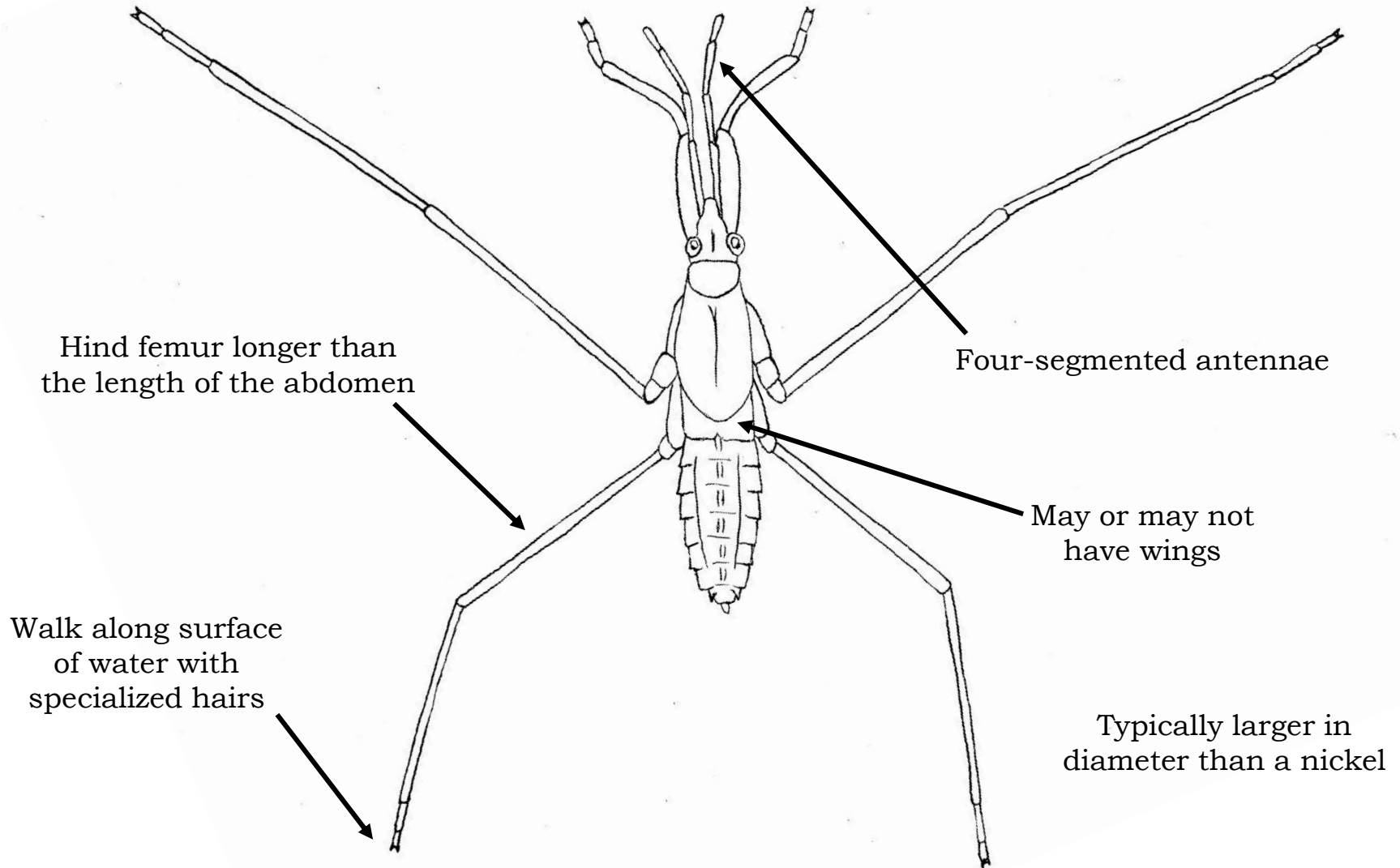
Corixidae: water boatmen



Notonectidae: backswimmers

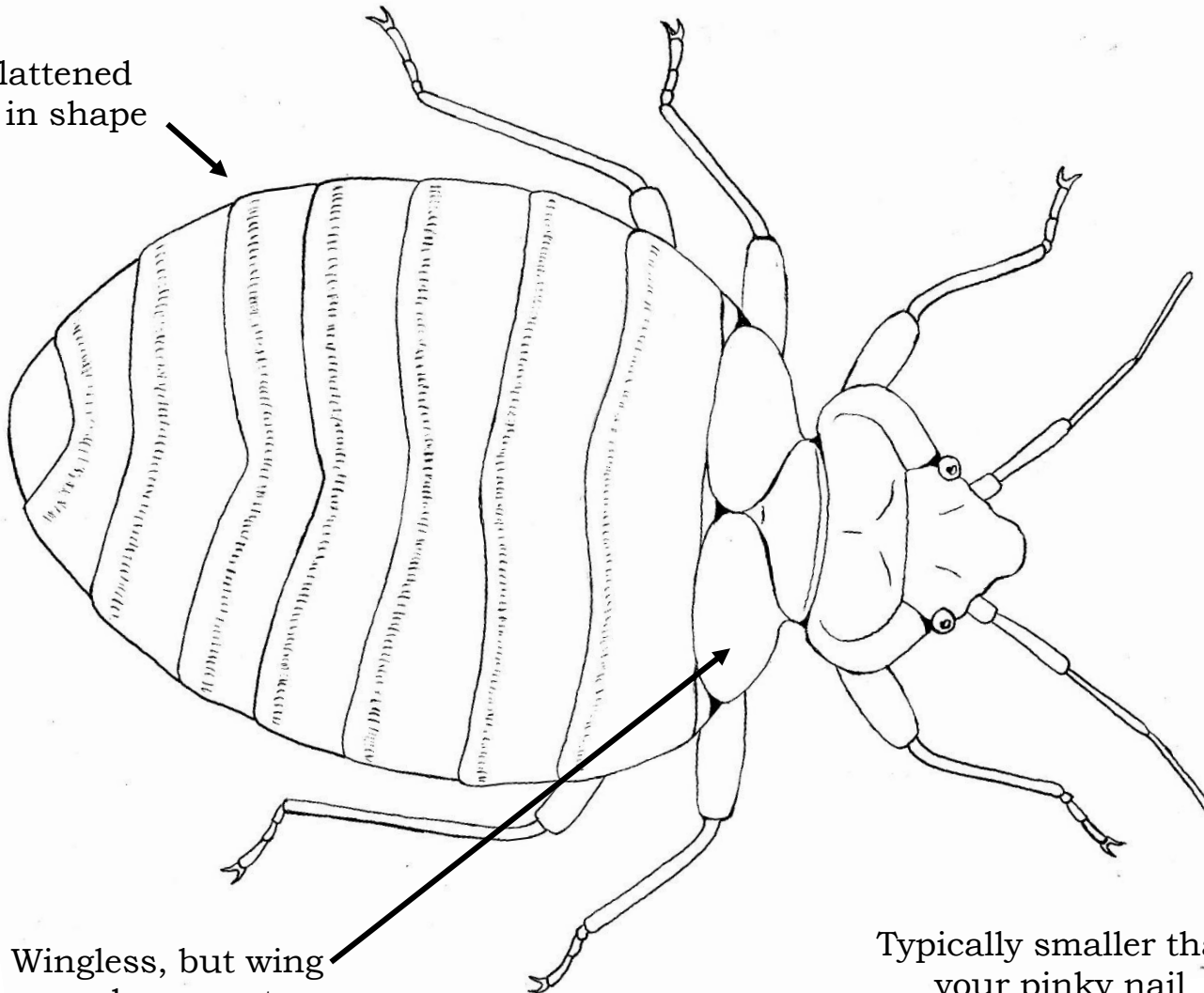


Gerridae: water striders



Cimicidae: bedbugs

Body is flattened
and oval in shape



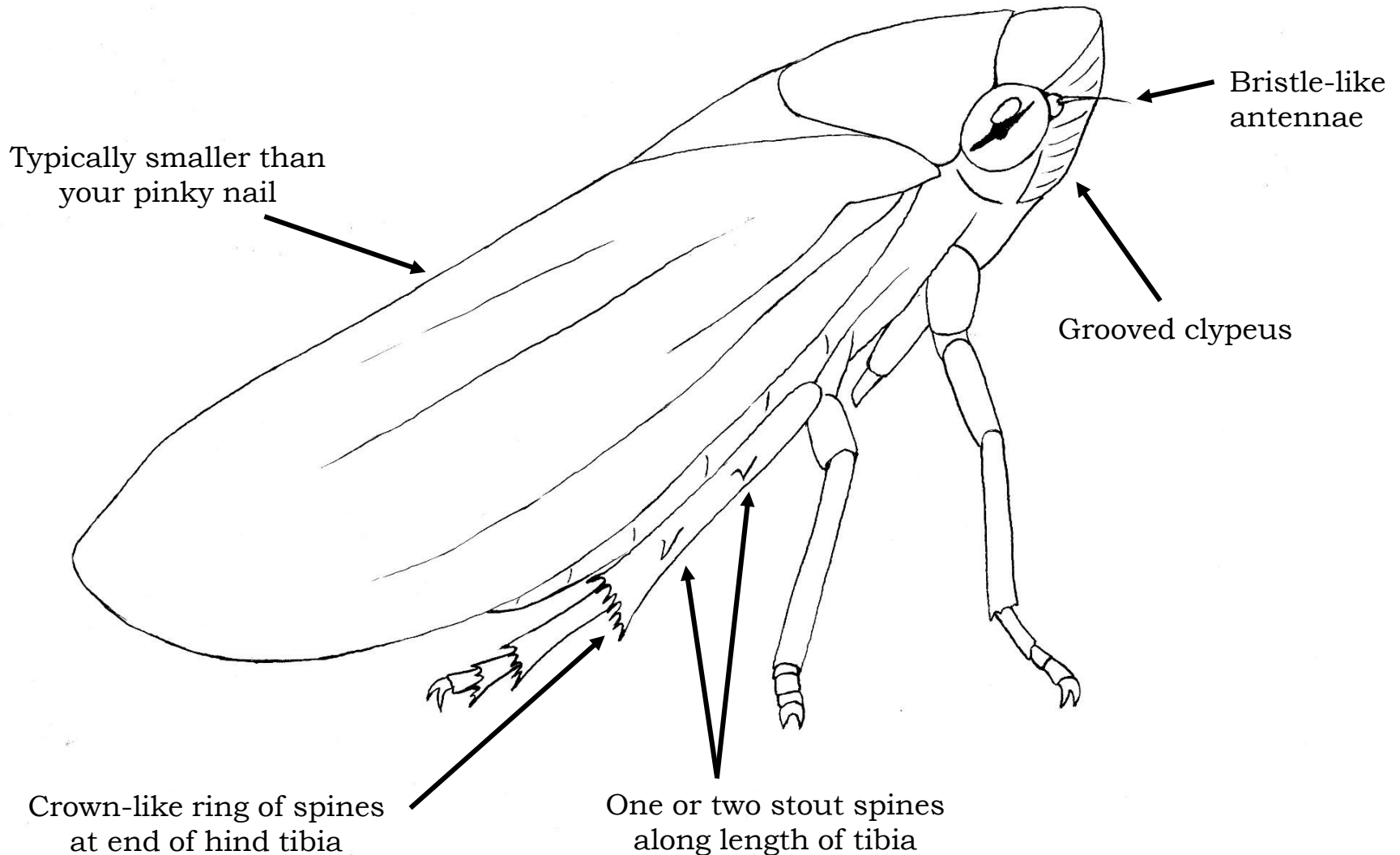
Wingless, but wing
pads present

Typically smaller than
your pinky nail

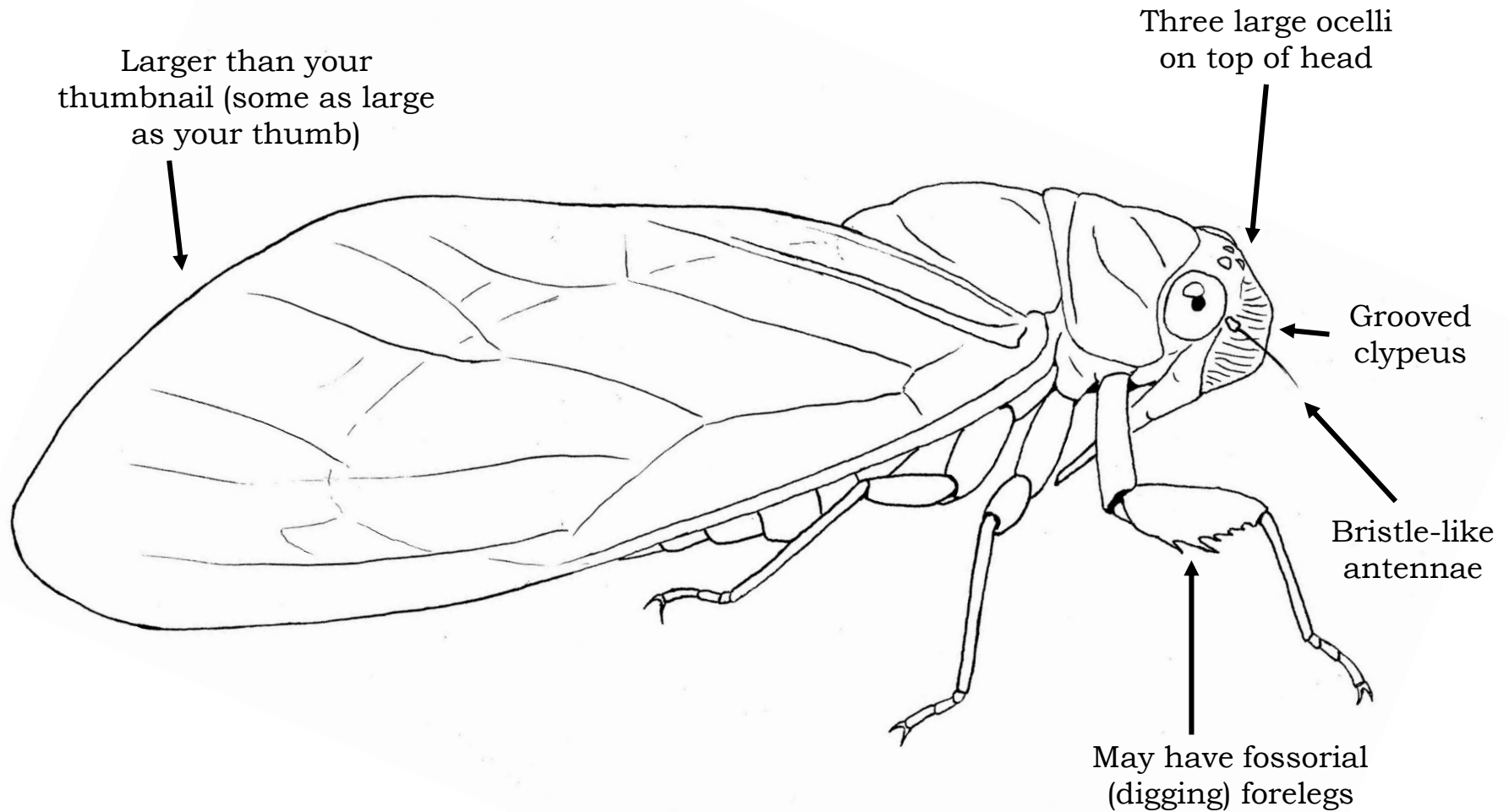
Suborder Auchenorrhyncha

The free-living Hemipterans

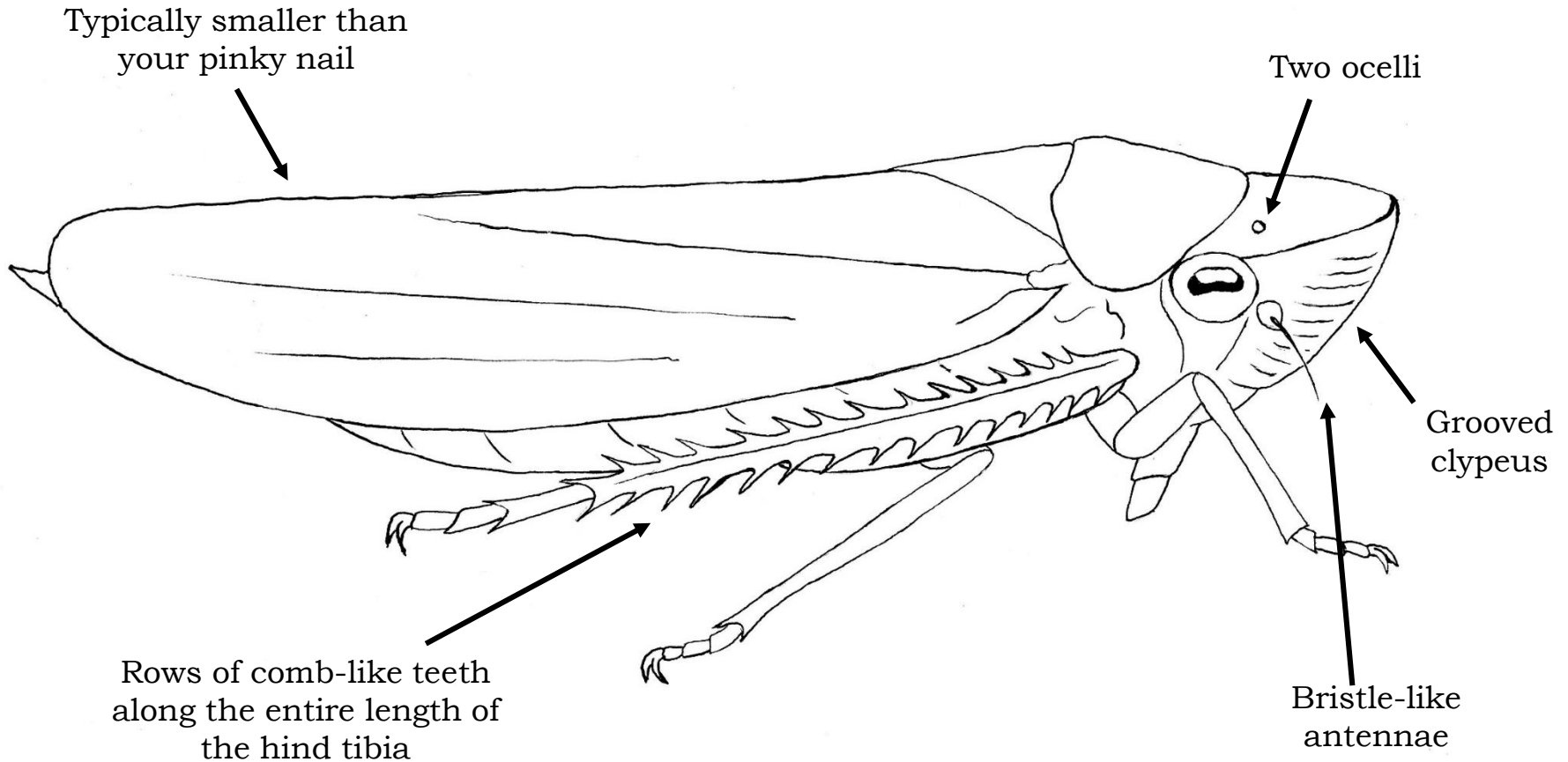
Cercopoidea: froghoppers and spittlebugs



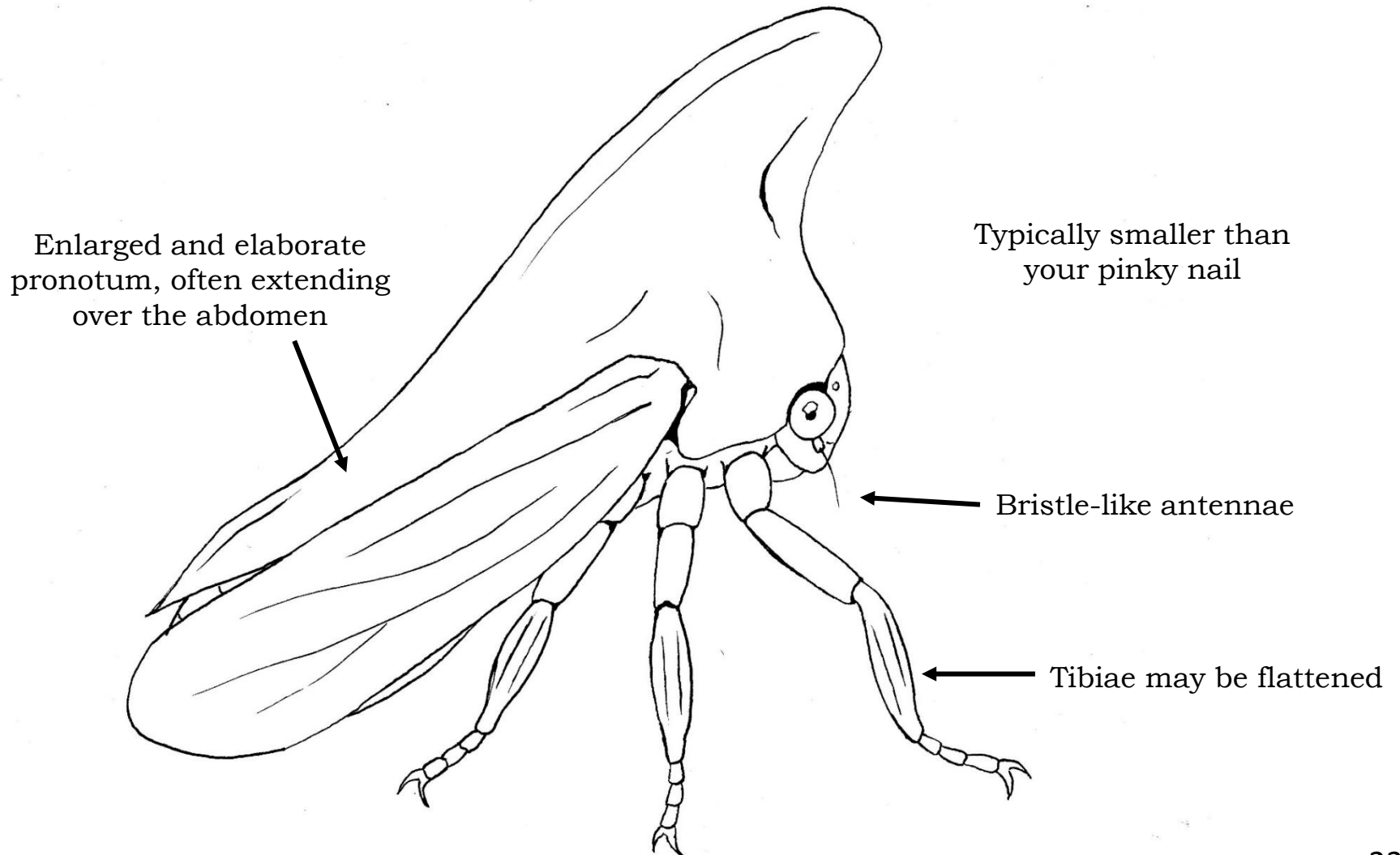
Cicadidae: cicadas



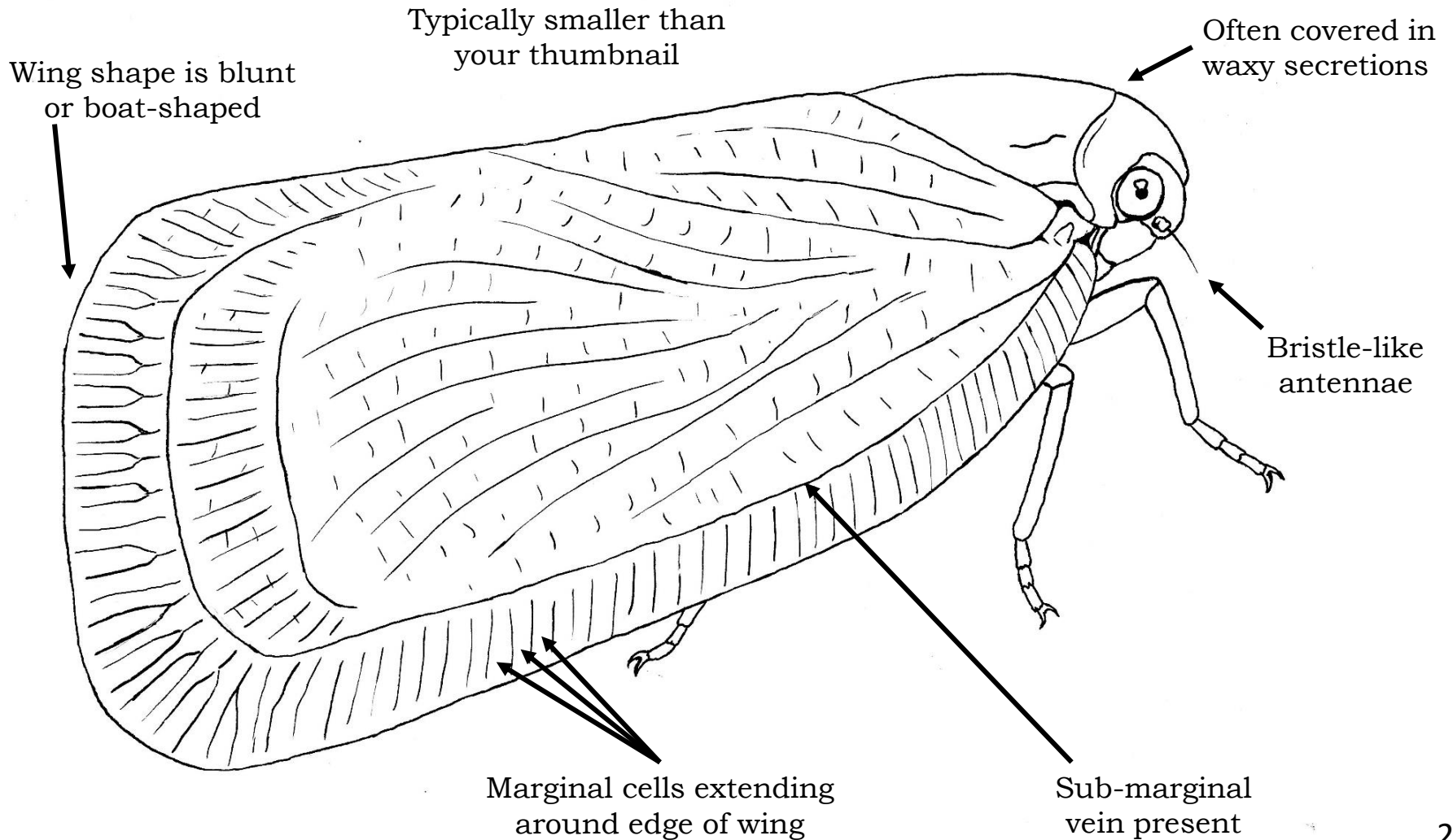
Cicadellidae: leafhoppers



Membracidae: treehoppers

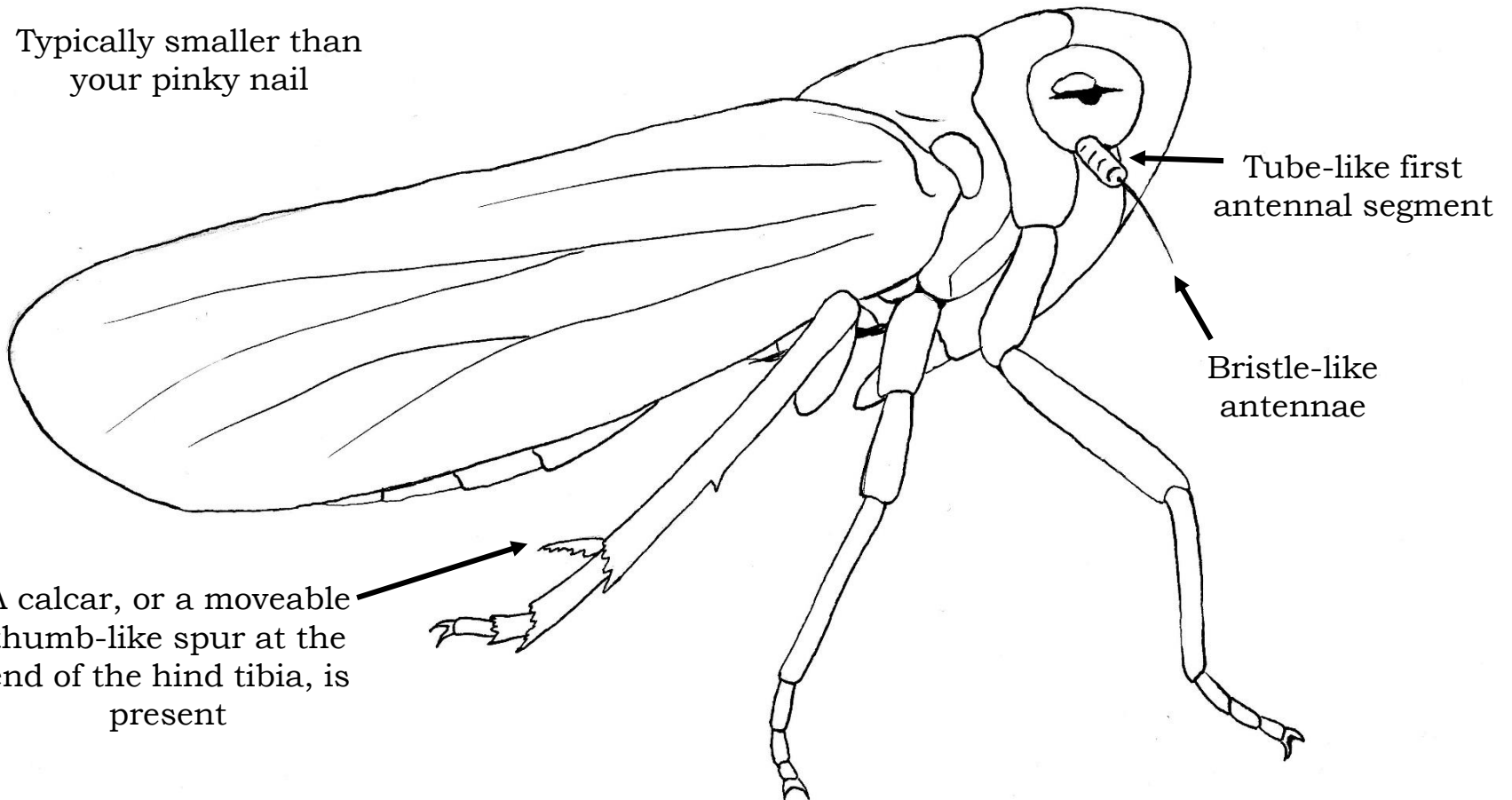


Flatidae: Flatid planthoppers



Delphacidae: Delphacid planthoppers

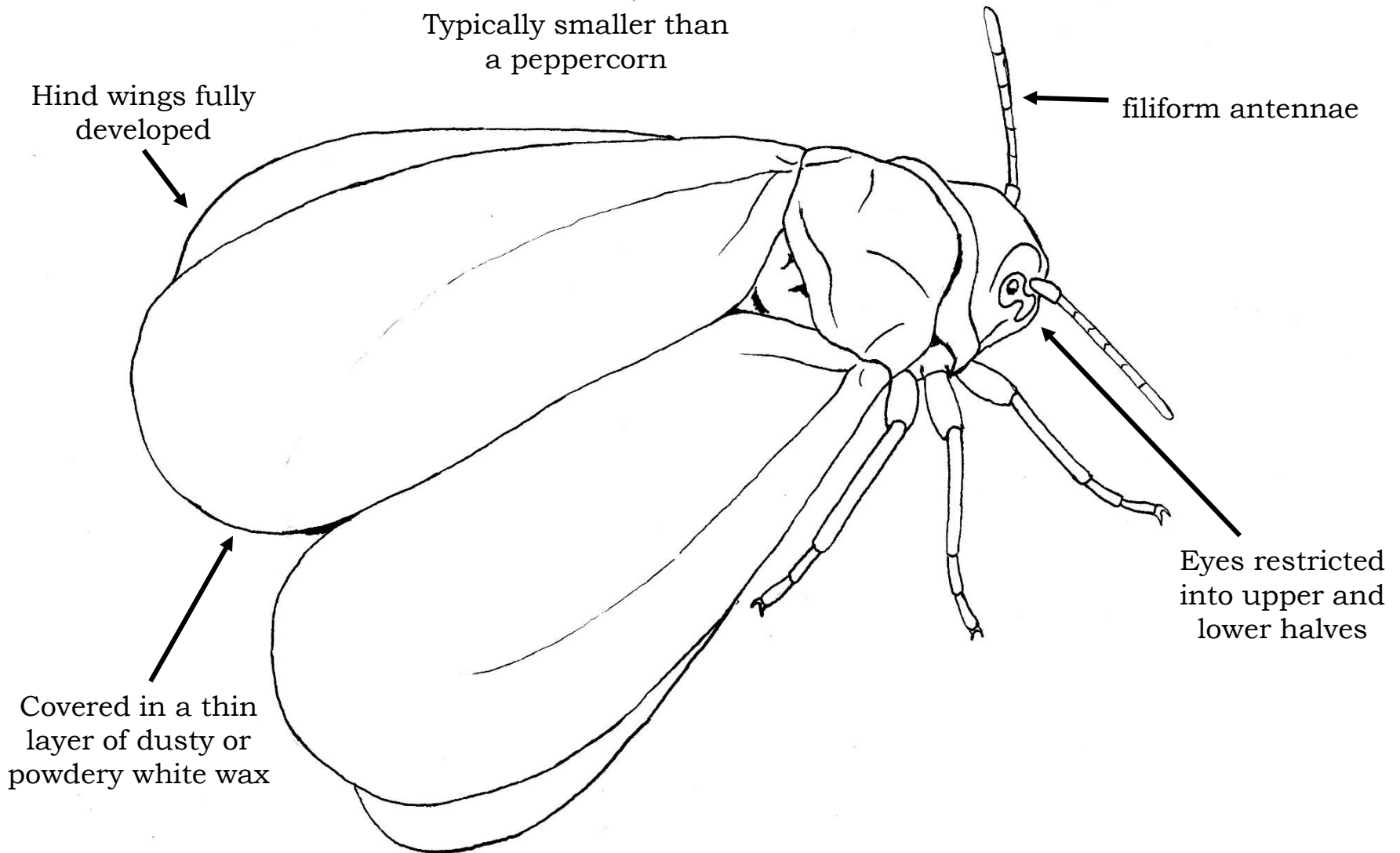
Typically smaller than
your pinky nail



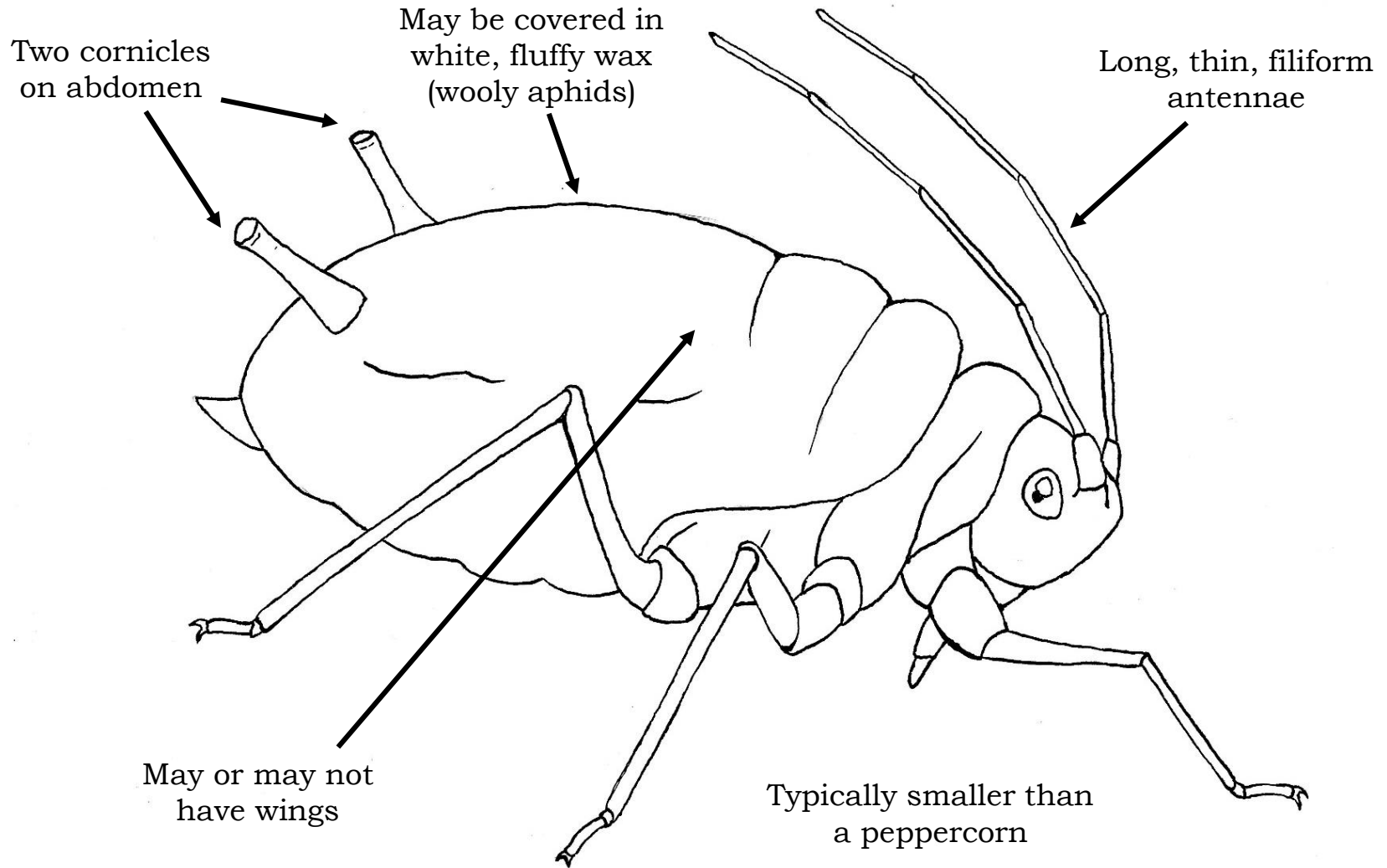
Suborder Sternorrhyncha

The plant-parasitic Hemipterans

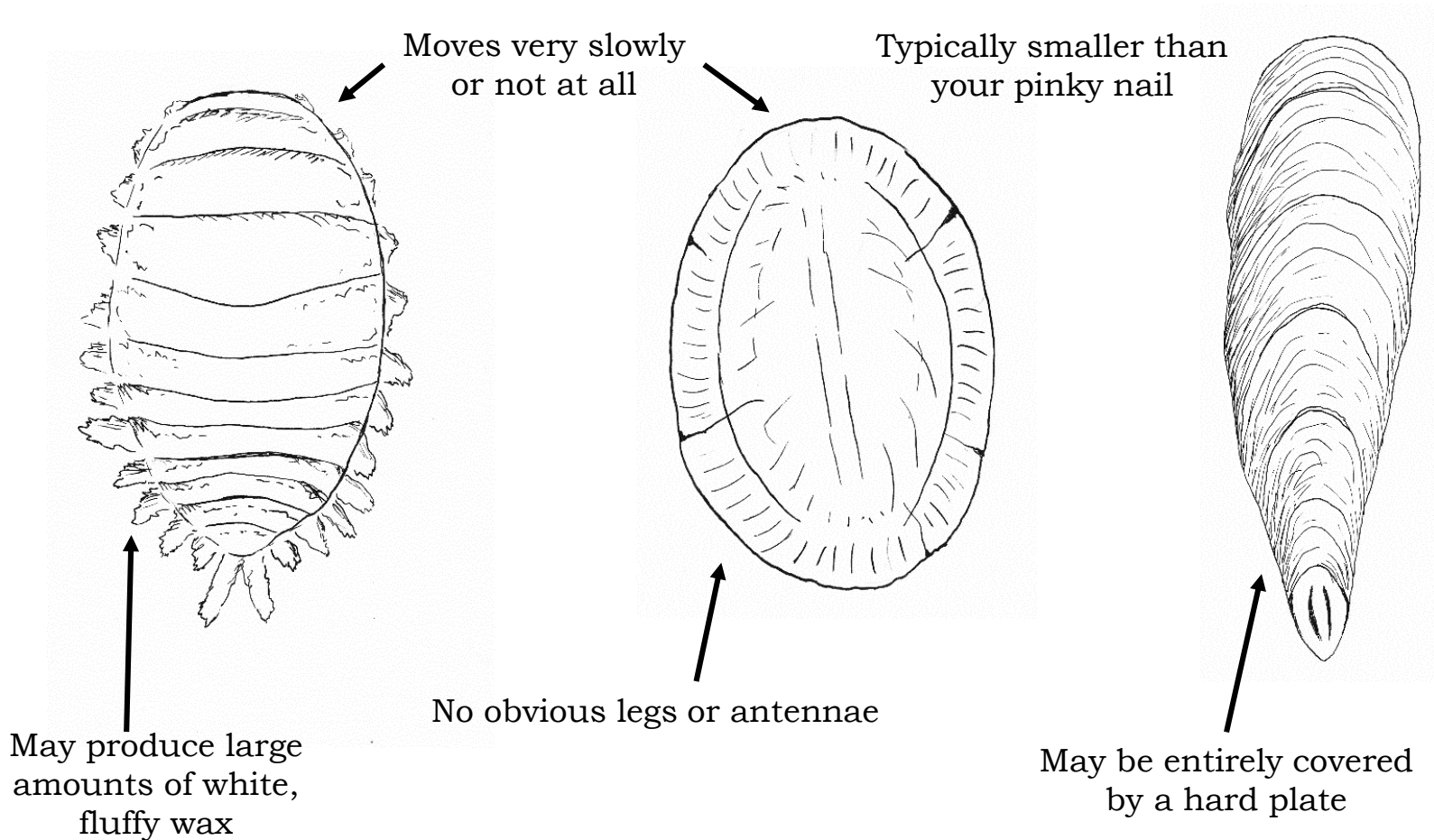
Aleyrodidae: whiteflies



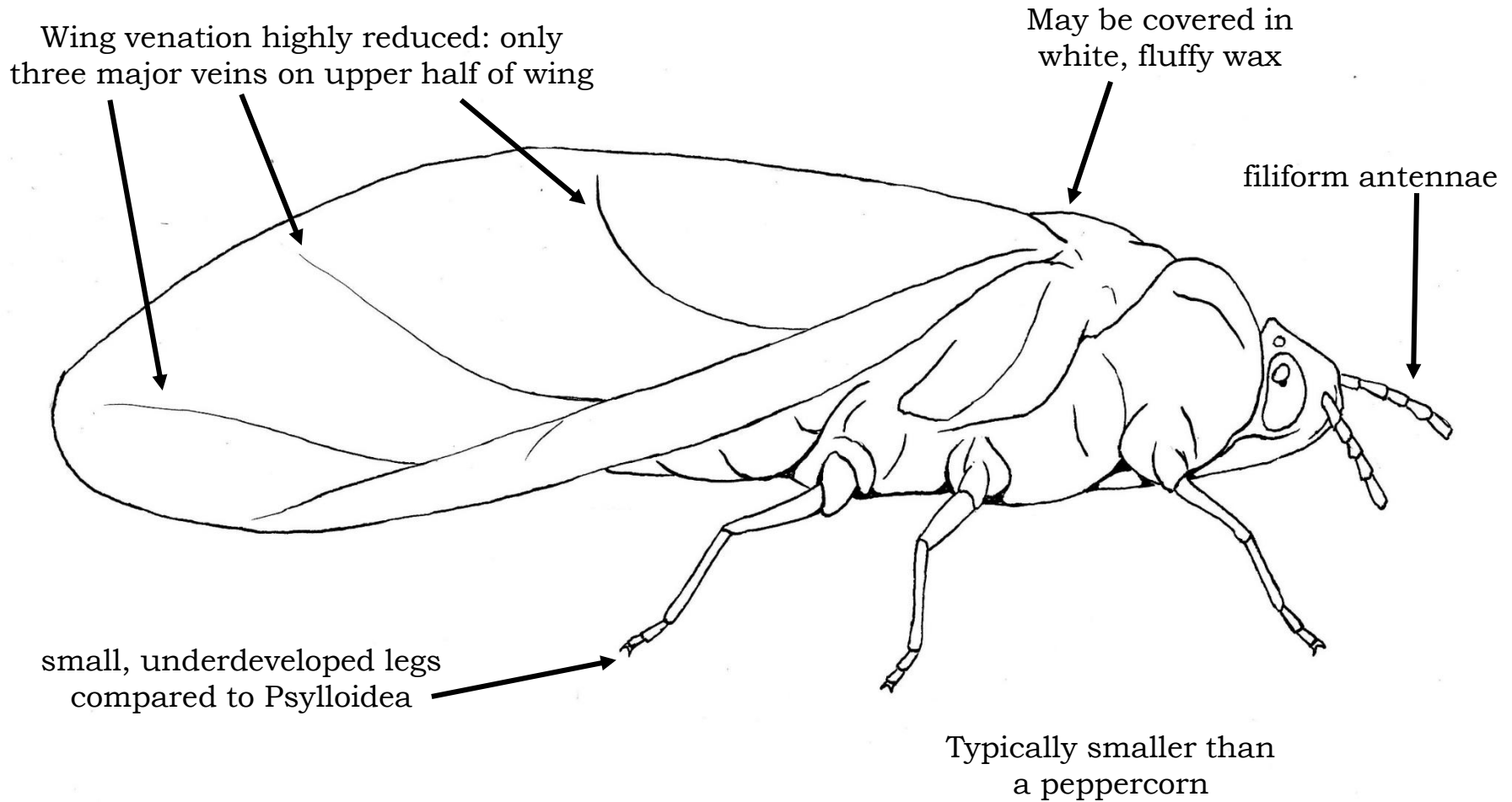
Aphididae: aphids



Coccoidea: scales and mealybugs (female only)



Adelgidae: spruce aphids



Psylloidea: jumping plant lice

