

Identification Guide to Freshwater Macroinvertebrates



STROUD[™]
WATER RESEARCH CENTER



970 Spencer Road
Avondale, Pennsylvania 19311

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Macroinvertebrate images prepared for
Stroud Water Research Center by Mr. Kevin Gill



Major Characteristics of Aquatic Larvae

GLOSSARY

Abdomen: posterior body segment of insect

Filaments: hair-like structures

Jointed leg: true legs, legs capable of bending

Lateral: at the side

Portable case: structure made of leaves, twigs, or sand that some caddisfly larvae carry with them

Posterior: tail end of the body

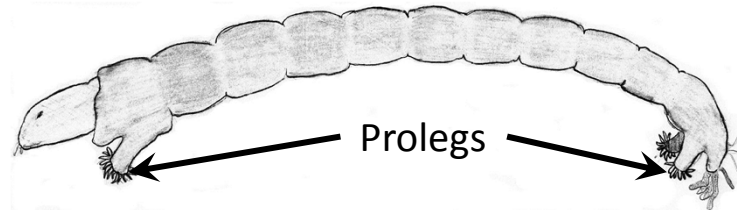
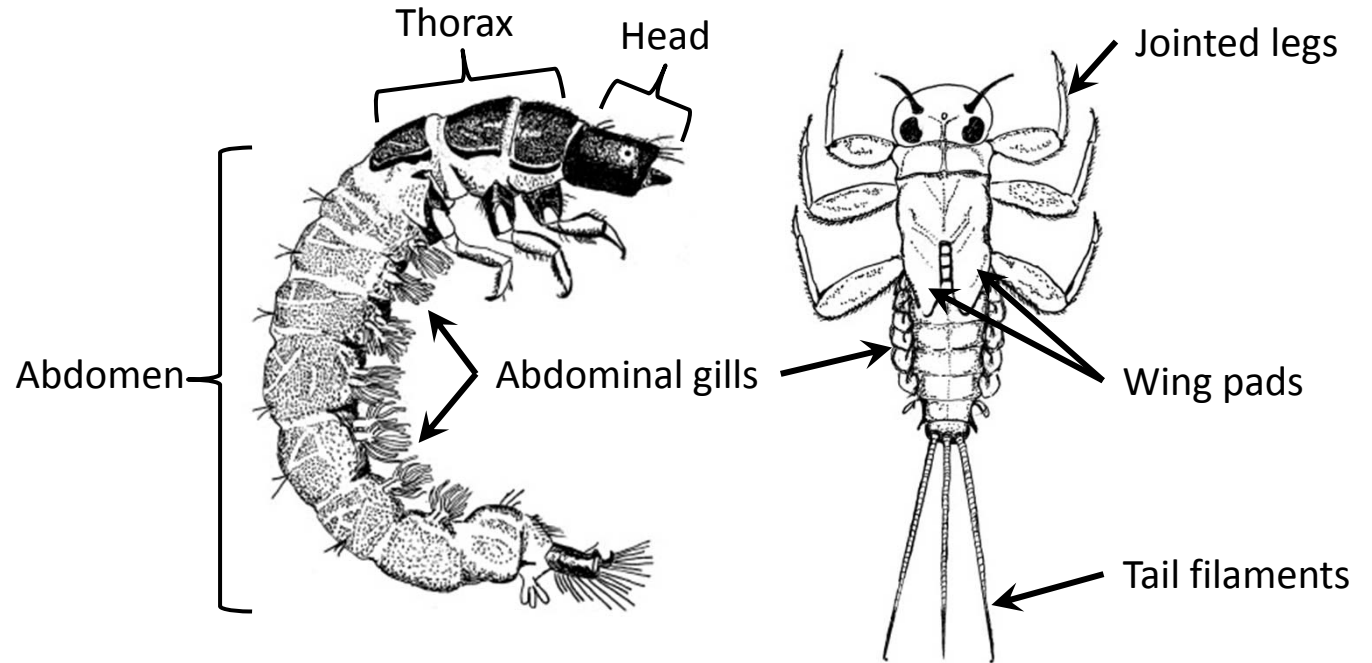
Prolegs: short, stumpy leg-like structures (not jointed)

Protrusion: part of the body that sticks out

Segment: a section of body

Ventral: underside

Wing pads: developing wings, often W in shape

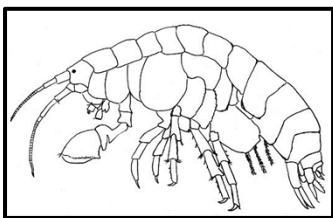


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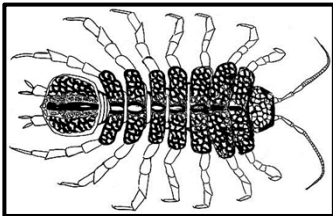
Jointed legs

No jointed legs

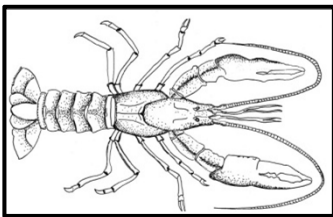
10 legs or more



AMPHIPODA
scud

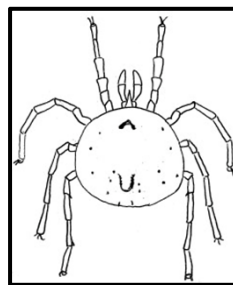


ISOPODA
sowbug



DECAPODA
crayfish
CRUSTACEANS

8 legs

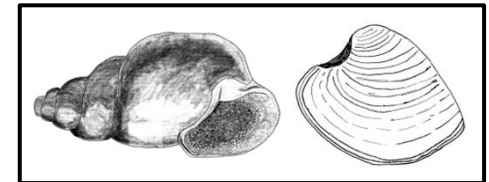


ARACHNIDA
water mite

6 jointed legs
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Worm-like
(no shell)

Body enclosed in
hard shell

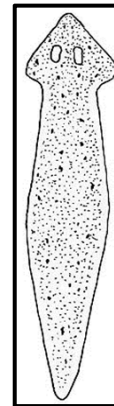


MOLLUSCA – *snail, clam*

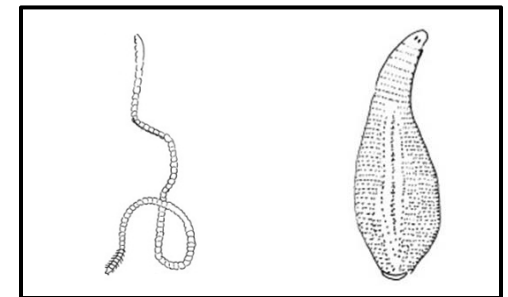
Non-segmented
flat-worm

Segmented
worms

Head and/or fleshy
protrusions
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PLATYHELMINTHES
planaria or flat worm



ANNELIDAE
aquatic worm

HIRUDINEA
leech

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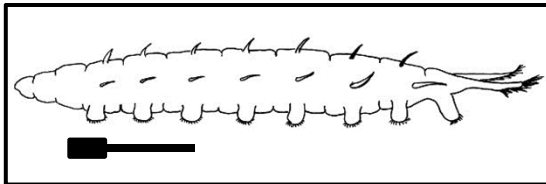
Worm-like with distinct head or fleshy protrusion

DIPTERA – *true flies*

Head small, often hidden from view

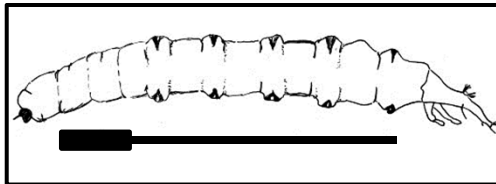
Distinct head

8 pairs of prolegs; posterior with 2 pointed protrusions longer than prolegs



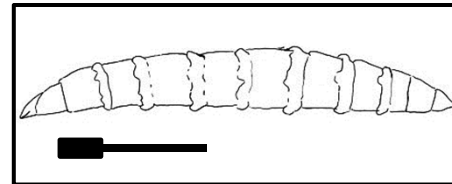
ATHERICIDAE – *water snipe flies*

Fleshy protrusions at posterior end



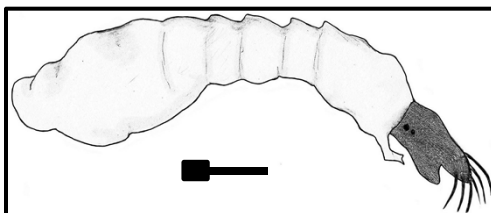
TIPULIDAE – *crane flies*

Head capsule retractile, first 7 abdominal segments ringed by fleshy pseudopods



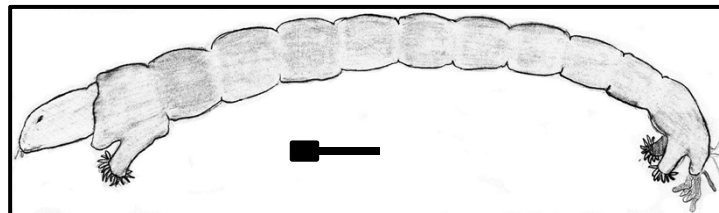
TABANIIDAE – *horse flies*

One end wider than the other



SIMULIIDAE – *black flies*

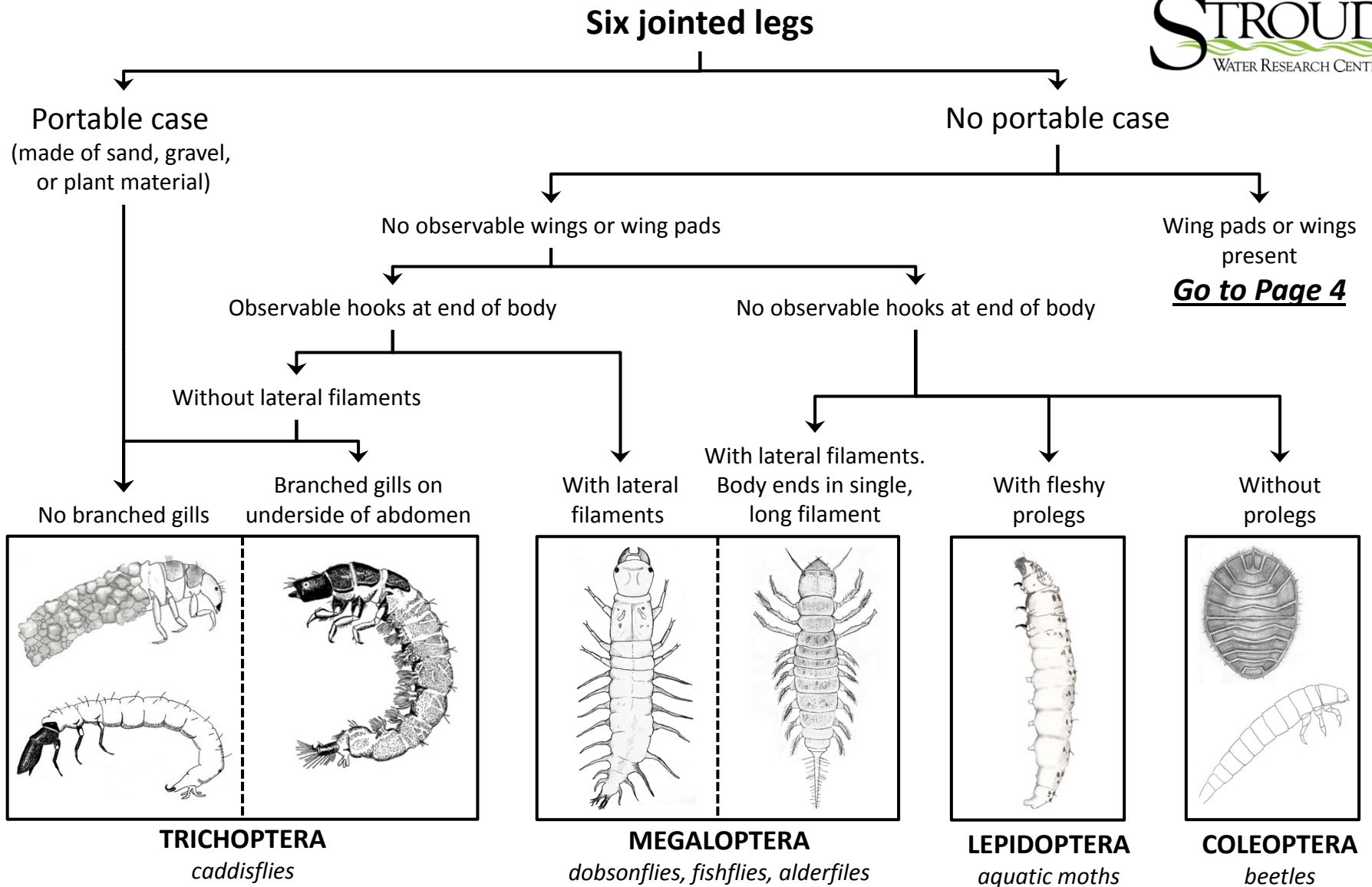
Both ends similar width



CHIRONOMIDAE – *midges*

Approximate size range
Minimum Maximum

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Wing pads or wings present

With tail filaments

Without tail filaments

Two tail filaments,
without
abdominal gills

Two or three tail
filaments, with
abdominal gills

Three flat tail
filaments, without
abdominal gills

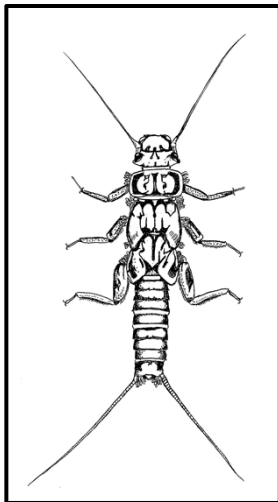
Wing pads

Wings

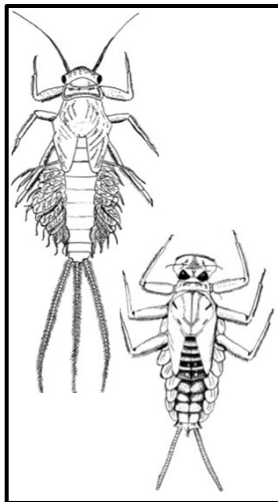
Large mouth,
hinged

Hard wing
coverings with
centerline

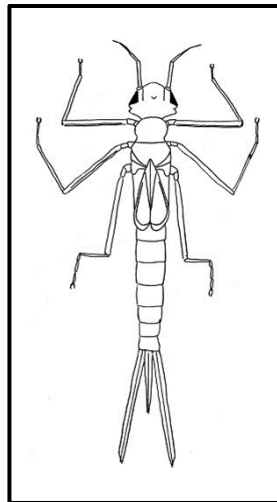
Wings
leathery, tips
overlapping



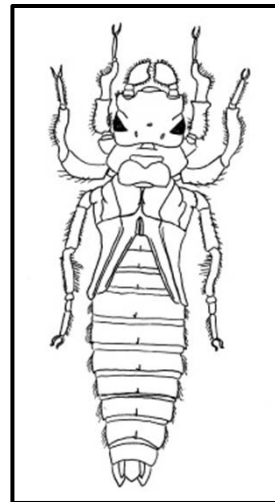
PLECOPTERA
stoneflies



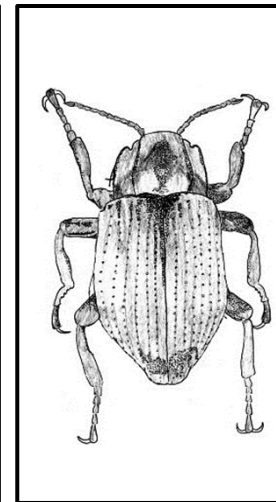
EPHEMEROPTERA
mayflies



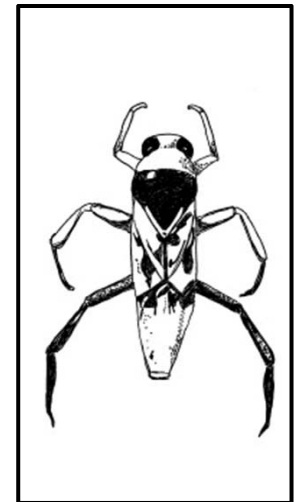
ODONATA
damselflies



ODONATA
dragonflies



COLEOPTERA
adult beetles



HEMIPTERA
true bugs