



*Macroinvertebrate
Identification Resources*

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

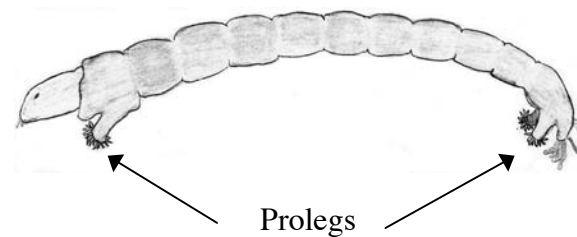
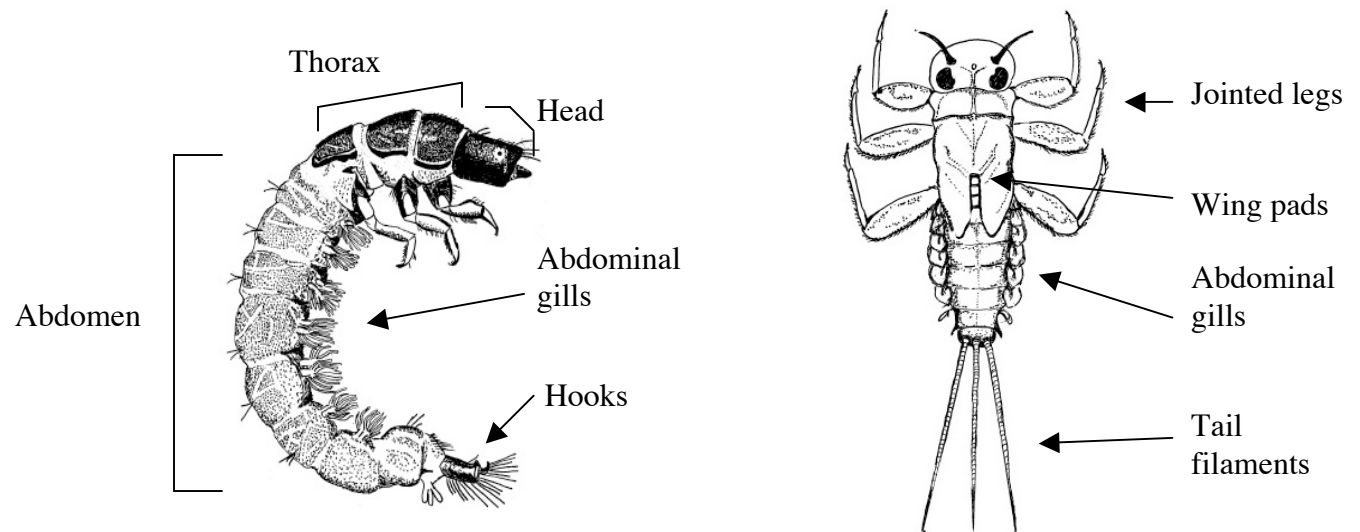
Prolegs: short, stumpy leg-like structures (not jointed)

Protrusion: part of the body that sticks out

Segment: a section of body

Ventral: underside

Wing pads: developing wings, often W in shape



Identification Guide to Freshwater Macroinvertebrates

Jointed legs

No jointed legs

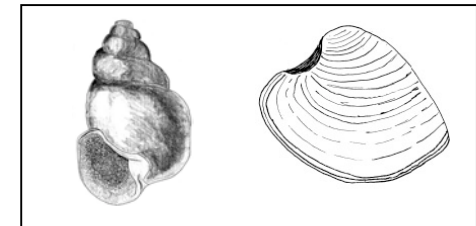
10 legs or more

8 legs

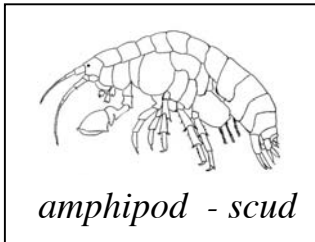
6 jointed legs
Go to Page 3

Worm-like
(no shell)

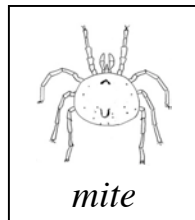
Body enclosed in hard shell



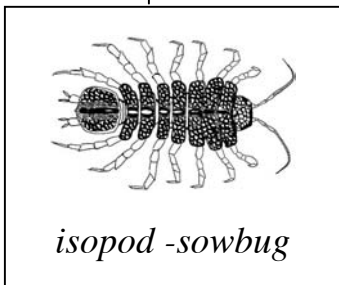
MOLLUSKS – *snail, clam*



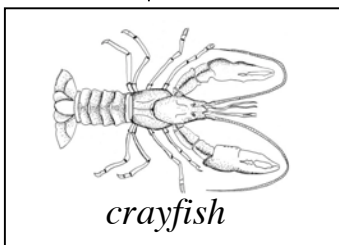
amphipod - scud



mite



isopod - sowbug

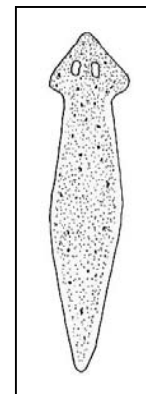


crayfish

CRUSTACEANS

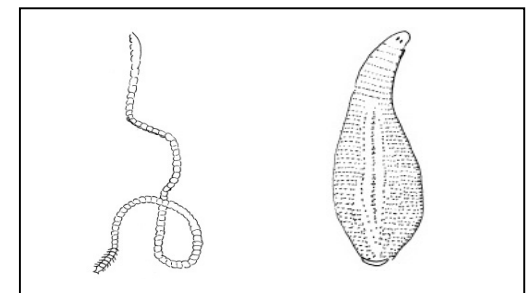
Head and/or fleshy
protrusions
Go to Page 2

Non-segmented
flat-worm



PLATYHELMINTHES
planaria

Segmented
worms



ANNELIDAE
aquatic worm

HIRUNDINEA
leech

Worm-like with distinct head or fleshy protrusion

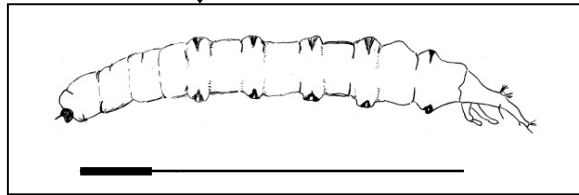
DIPTERA – true flies

Head small, often hidden from view

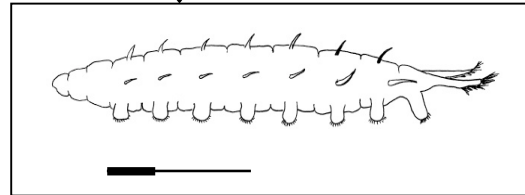
Distinct head

Fleshy protrusions at posterior end

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



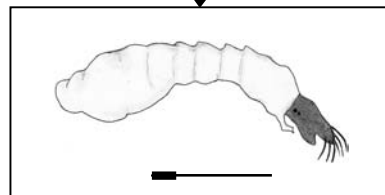
TIPULIDAE
crane flies



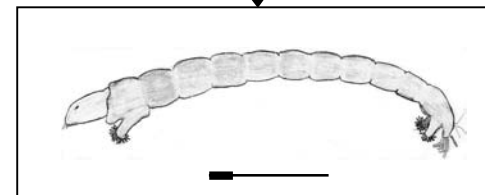
ATHERICIDAE
water snipe flies

One end wider than the other

Both ends similar width



SIMULIIDAE
black flies



CHIRONOMIDAE
midges

Approximate size range
Minimum maximum

Six jointed legs

No portable case

Portable case
(made of sand, gravel or
plant material)

No observable wings or wing pads

Wing pads or wings
Present

Go to Page 4

Observable hooks at end of body

No observable hooks
at end of body

Without lateral filaments

Branched gills on
underside of abdomen

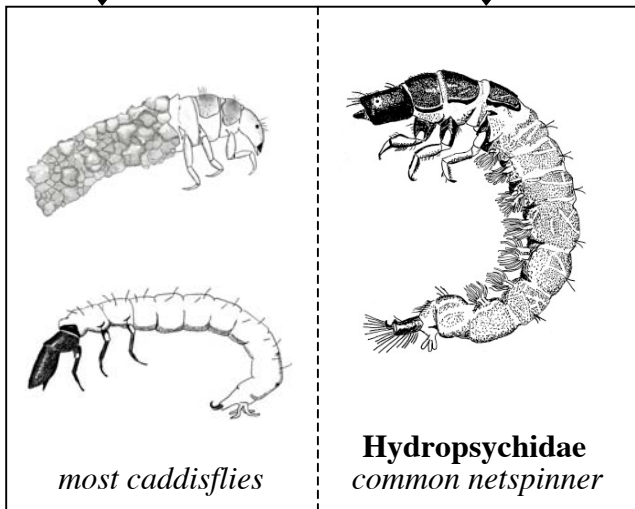
With lateral
filaments

With lateral filaments.
Body ends in single,
long filament

With fleshy
prolegs

Without
prolegs

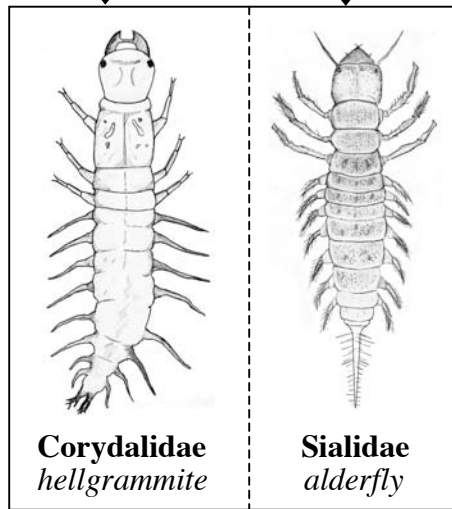
No branched gills



most caddisflies

Hydropsychidae
common netspinner

TRICHOPTERA
caddisflies



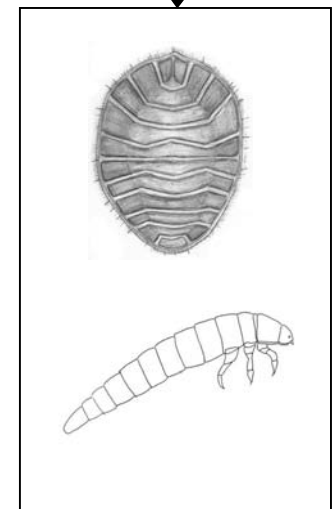
Corydalidae
hellgrammite

Sialidae
alderfly

MEGALOPTERA
dobsonflies, fishflies



LEPIDOPTERA
aquatic moths



COLEOPTERA
beetles

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

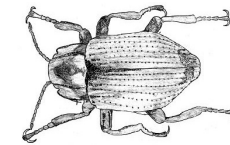
Wing pads

Wings

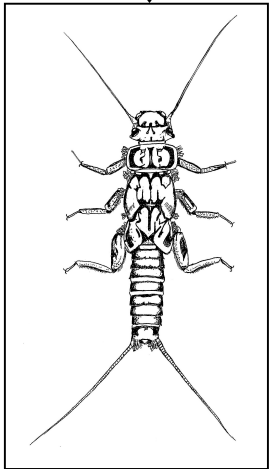
Hard wing
coverings with
centerline

Wings
leathery, tips
overlapping

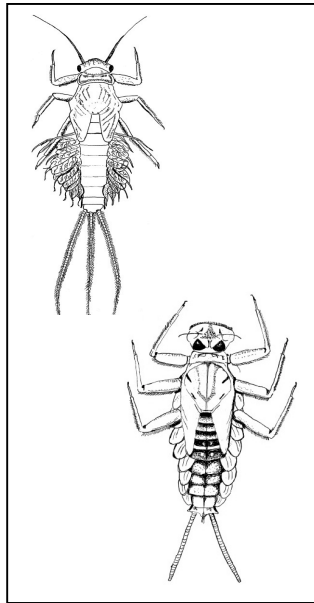
Large mouth,
hinged



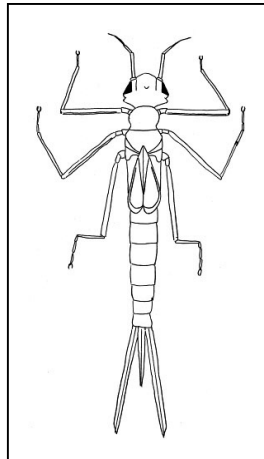
COLEOPTERA
adult beetles



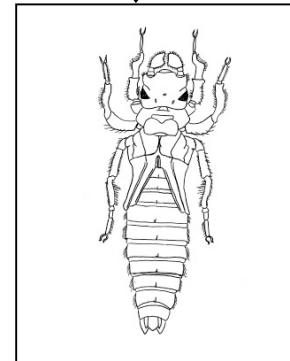
PLECOPTERA
stoneflies



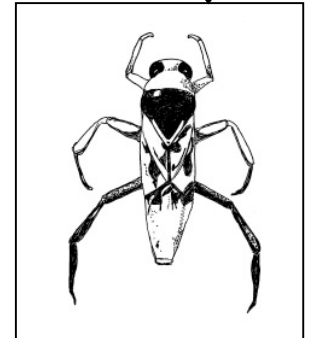
EPHEMEROPTERA
mayflies



ODONATA
damselflies



ODONATA
dragonflies



HEMIPTERA
true bugs