A Selection of Aquatic Macroinvertebrates of Illinois, USA

Organized by Illinois RiverWatch Taxa Categories

Produced by Jim Bland. © Photos by Jim Bland [ilmbland@comcast.net]. **version** 1. 04/2012
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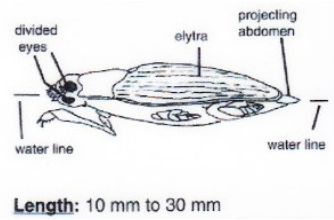
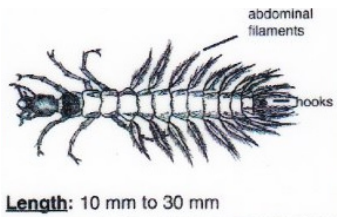
Adult:
- Shiny,black,oval-shaped beetle with abdomen projecting out behind the wing covers
- Eyes divided so that they appear to have two pairs of eyes, one looking up and the other looking down



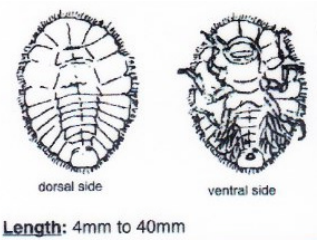
Coleoptera: Gyrinidae **25**
INSECTA
Whirligig beetles
adult

Larvae:
- Long, slender, pale colored larvae with three pairs of segmented legs
- Lateral unsegmented gill filaments on abdomen
- End of abdomen bears tow pair of sickle-shaped hooks



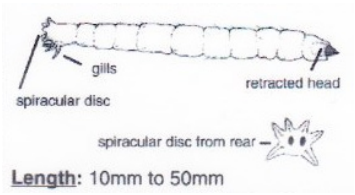
Coleoptera: Gyrinidae **26**
INSECTA
Whirligig beetles
larvae

- Oval, extremely dorsoventrally (top to bottom) flattened
- Mouth parts and three pairs of jointed legs only visible from ventral side
- Five pairs of finely branched gills visible on the ventral side



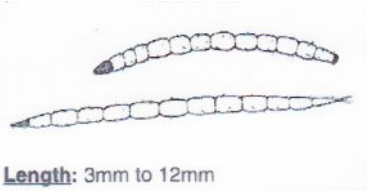
Coleoptera: Psephenidae **27**
INSECTA
Water penny
larvae

- Soft-bodied, elongate fly larvae with heads that are usually retracted into the thorax
- Conspicuous spiracular disc at the posterior end. May be lobed or fringed.
- May have delicate gills on the last abdominal segment
- Colors may be brown to white



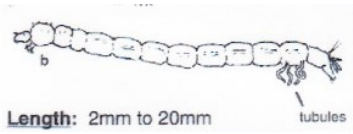
Diptera: Tipulidae **28**
INSECTA
Craneflies
larvae

- Elongate fly with well developed head capsule
- Most are thin and needle-like with no prolegs.
- May have bristles or hooks on the posterior end
- If prolegs are present, unpaired on the first thoracic segment.
- Species with prolegs have lonf conspicuous spines on the body segments



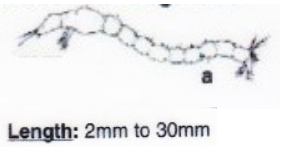
Diptera: Ceratopogonidae **29**
INSECTA
Biting midges; no-see-ums larva

- Bright red midge larvae that fade to brown or gray when preserved in alcohol
- Two pairs of ventral tubules on the 8th abdominal segment
- Hardened head capsule
- Worm-like body



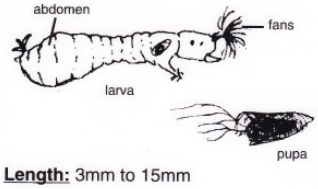
Diptera: Chironomidae **30**
INSECTA
Bloodworm midges larva

Midges:
- Elongated, worm-like fly larvae with well developed head
- Paired prolegs on first thoracic segment and last abdominal segment



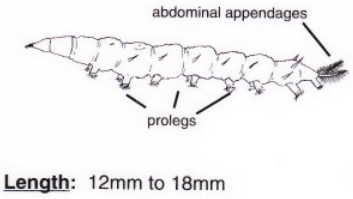
Diptera: Chironomidae **31**
INSECTA
Non-biting midgess larva

- Soft-bodied fly larvae with bulbous, rounded abdomen
- Head well developed, usually with a pair of foldable fans on the anterior end
- Triangular shaped pupa with conspicuous gills originating from the anterior end of the thorax; found in a woven cocoon attached to the substrate



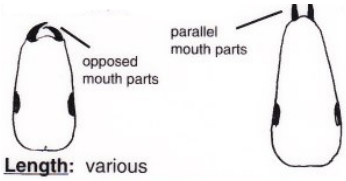
Diptera: Simuliidae **32**
INSECTA
Black flies larva and pupa

- Fly larvae with the last abdominal segment ending in two long fringed appendages
- Abdomen with well developed prolegs
- Head not well developed; mouth parts are parrallel hooks
- Elongate, cylindrical, and slightly flattened; anterior end is tapered



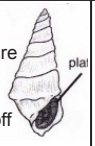
Diptera: Athericidae **33**
INSECTA
Snipe flies

- Usually elongate, worm-like, soft bodies rounded abdomen
- No jointed thoracic legs.May have unjointed prolegs
- May be naked and smooth, or may have tubercles,spines, or scales
- Head may be well developed or vestigial.Mouthparts either opposed and hooked or parallel



Diptera:multiple families **34**
INSECTA
Other flies

Snails: muscular body called a foot, and a shell coiled into a spire
Operculate snails: with a small plate on the upper side of the foot.When snail retracts it seal off the shell



Right handed snails: no operculum, opening of the shell on observors right when the spire is pointed upward

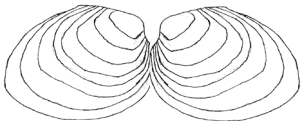
Left-handed snails: no operculum, opening of the shell is on the observors left when the spire is pointed upward

Planorbid snails: have no spire

Gastropoda: mutiple families **35**
MOLLUSCA
Left-handed, right-handed, operculate, planorbid snails

Limpets: uncoiled, very low cone shaped shell 2 to 5 mm

Freshwater mussels
- 2 hinged shells
- 2.5 to 30 cm
- shell highly varaible



Gastropoda:Ancylidae **36**
Unionidae: mussels
MOLLUSCA
Limpets