

Nature



Key Macroinvertebrates for SSRS Biological Index

A decorative header featuring several bright green leaves with water droplets on their surfaces. A monarch butterfly with orange and black wings is perched on one of the leaves to the right of the word 'Nature'.

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Group 1 - Mayflies



Mayfly nymphs

- Order Ephemeroptera
- Families: Heptagenidae; Ephemeridae; Ephemerellidae; Caenidae; Leptophlebiidae
- 33 species of mayfly found in Ireland
- **Three long tails**
- 6 legs (3 pairs)
- Small antennae
- 7 pairs of gills along the body
- Gill shape: leaf-like, oval, fringed
- Long, streamlined body
- Large head & legs with claws
- Movement – swimming, crawling, clinging, burrowing



Mayfly nymphs

Baetis

- Most common & abundant genus in rivers and streams
- **Not included in SSRS calculations** – so ID quickly and don't select or count them

Key ID features:

- Middle tail filament shorter than other two
- All three tails are covered in hairs at the base
- Tails have a distinctive dark band
- Pairs of leaf-shaped gills
- No abdominal spines
- Very slender body



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Group 2 - Stoneflies



Stonefly nymphs

- Order Plecopteran
- Families: Leuctridae; Nemouridae; Perlidae; Perlodidae
- 19 species found in Ireland
- **Two hair-like tails**
- 6 legs (3 pairs)
- Long antennae
- Gills under legs – not the abdomen
- Colour of the body
- **Poor swimmers**





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Group 3 - Caddisflies



Caddisfly larvae

- Order Trichopteran
- Families: Limnephilidae; Sericostomatidae; Glossosomatidae; Lepidostomatidae
- 147 species found in Ireland
- 6 legs (3 pairs)
- Elongated soft bodies with finger-like gills on abdomen and anal appendages (terminal hook)
- Three segments behind the head are hardened
- Typically cannot swim
- Either cased or free-living



Caddisfly larvae

Cased caddisflies

- **Case** acts as their house and provides protection
- Use silk to build their cases
- Material used includes stones, twigs, shells & sand

Key ID features:

- Presence/absence of dorsal sclerotized plates on the first three thoracic segments
- Anal proleg and anal proleg claw
- **Antennae**
- Case characteristics





Caddisfly larvae

Free living caddisflies

- Construct non-portable cases



Key ID features:

- Presence/absence of plates on the dorsal surface of the second and third thoracic segments
- Presence/absence of tufted gills appear
- Dark heads
- Cream, orange or green in colour
- Two tails that end with hooks
- Anal proleg





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Group 4 – G.OI.D

Gastropods, Oligochaetes & Dipterans



Snails & limpets

- Gastropods
- Families: Physidae; Planorbidae; Ancyliidae
- No legs
- Presence of a single streamlined **shell**
- Soft body
- Note the shape of the shell

Limpets – Key ID features:

- Low cones
- Wide elliptical aperture
- Not coiled



Ancylus fluviatilis





Snails & limpets

Snails – Key ID features:

- Tubular tapering shell coils
- Count the no of coils
- Dull brown in colour
- Presence or absence of an umbilicus (bellybutton at the base of the shell)
- Aperature may open to the left (left handed) or right (right handed)
- Some breath via a snorkel





Worms

- Oligochaeta
- Families: Lumbriculidae; Tubificidae
- No legs
- Tube shaped bod - long, flat & slender
- No definite head
- No tentacles
- Body wall translucent
- Has obvious body segments with bundles of hairs
- Red in colour

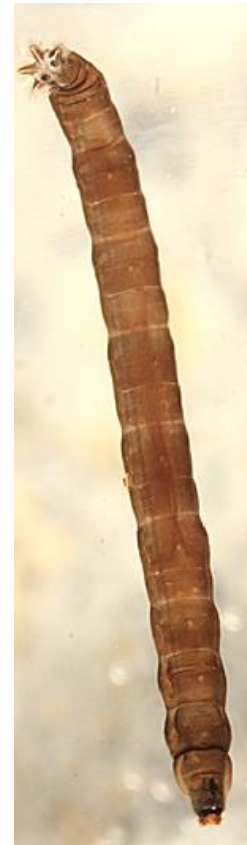


source internet - www.aquaporifail.com



True flies

- Diptera
- Families: Chironomidae (midge); Simuliidae (black-fly); Tipulidae (crane-fly); Ceratopogonidae (biting midge)
- Wide variety of structures
- Majority elongated and worm like with distinct segments
- No eyes or legs
- Bodies soft, naked or covered in bristles/scales
- Wiggling swimming motion (S- shaped)



The top of the slide features a decorative border of vibrant green leaves with water droplets. A monarch butterfly with orange and black wings is perched on one of the leaves to the right of the word 'Nature'.

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Group 5 - Asellus



Freshwater hoglouse

- Crustacean
- Flattened body
- 14 legs (7 pairs)
- Seven free thoracic segments
- Two pairs of antennae
- Abdomen reduced and covered dorsally by a single plate
- Grey-brown in colour
- Does not swim - crawls
- Similar to a woodlouse



A decorative header featuring several bright green leaves with visible veins and small water droplets. A monarch butterfly with orange and black wings is perched on one of the leaves to the right of the word 'Nature'.

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Thank you