



# FBA updates

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 Freshwater Biological Association

# RP now managed by FBA.

## Original ARMI target groups.



**Caseless caddisfly**



**Olive**  
(Baetidae)  
Slim, fast moving, small  
gills along the side



**Flat Bodied (Stone Clinging)**  
(Heptageniidae)  
Flattened body, spider like  
& slow moving



**Gammarus**



**Cased caddisfly**



**Mayfly**  
(Ephemeroidea)  
Large with tusk-like projections  
from the head. Gills feathery and  
positioned over the back

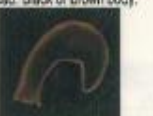















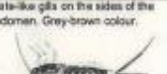
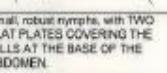
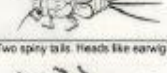
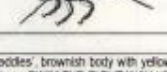

**Blue-Winged Olive**  
(Ephemeroidea)  
Four pairs of gills visible and held  
over the back. Moves slowly with  
a rocking horse movement



**Stonefly**  
Two tails - long antenna

# Riverfly Plus: extended 'Riverfly' taxa

Flatworms (Turbellaria)	
Planariidae ( <i>Polycelis</i> sp.) Up to 15 mm.	Multiple black eyes all around the front of the head. Black or brown body. 
Dugesidae Up to 25 mm.	Two eyes with pale circles around them, brown body. 
Dendrocoelidae Up to 30 mm.	Bright, white body. Two small black eyes on the front edge of the head. 
Segmented worms (Leeches & true worms)	
Erpobdellidae (leech) Usually 30 to 40 mm, but can reach 100 mm.	Sucker at either end. 8 eyes in 2 chevrons, dark brown body. 
Glossiphoniidae (leech) Usually 15 – 20 mm, but can reach 25 mm.	Suckers, 2, 6 or 8 eyes in parallel lines, normally pale brown body. 
Oligochaeta (true worm) Range from 1.5 mm up to 50 mm +. Usually around 10mm.	Looks like an earthworm. Can be tiny. 
Molluscs	
Planorbidae (ramshorn snails) Range from 3 mm to 30 mm in breadth.	Curled-up like a ram's horn. 
Lymnaeidae (pond snails) Usually 15 – 20 mm in height, but can reach 60 mm.	Aperture on the right (dorsal). 
Hydrobiidae/Bithyniidae ('trapdoor' snails) Range from 5 mm (Hydrobiidae) to 15 mm (Bithyniidae) in height.	Hard, bony plate which seals up the shell. 
Sphaeriidae (orb & pea mussels) Range from < 2 mm up to 22 mm, but commonest species is typically around 10 mm in width.	Small to tiny bivalves. Usually shades of pale brown. 

CRUSTACEANS	
Gammaridae/Crangonyctidae (freshwater shrimps) Up to 20 mm.	Look like shrimp! 
Asellidae (water hog lice) Up to 15 mm.	Aquatic woodlice. 
INSECTS	
Mayflies (Ephemeroptera)	
Ephemeriidae (Green Drake/Drake Mackerel Mayfly) Up to 30 mm.	Large, safe brown nymphs with triangles on the abdomen and feathery gills. 
Ephemeralidae (Blue-winged olive) Up to 12 mm.	Stripy body, legs & tails. Spines on top of abdomen. 
Beetidae Up to 15 mm.	Plate-like gills on the sides of the abdomen. Grey-brown colour. 
Caenidae (Anglers' Curse) Up to 9 mm.	Small, robust nymphs, with TWO FLAT PLATES COVERING THE GILLS AT THE BASE OF THE ABDOMEN. 
Stoneflies (Plecoptera) WHOLE ORDER Range from 5 mm to 16 mm.	Two spiny tails. Heads like earwigs. 
True bugs (Heteroptera)	
Corixidae (lesser water boatman) Range from 2 mm to 14 mm. Typically around 7 mm.	'Paddles', brownish body with yellow stripes. SWIM THE RIGHT WAY UP. 
Notonectidae (greater water boatman) Typically around 15 mm.	'Paddles', orange & black body. No eyes. SWIM UPSIDE DOWN. 

Lacewings (Megaloptera)	
Sialidae (alder flies) Typically around 15 to 20 mm.	Spiny gills down the side of the abdomen and a single spine for a tail. Grassy jaws. 
Caddisflies (Trichoptera): caseless	
Hydropsychidae Range from around 10 mm to 20 mm.	Greyish body WITH WHITISH GILLS UNDER ABDOMEN. 
Rhyacophilidae Typically 20 to 25 mm.	Green body WITH RED GILLS DOWN THE SIDES OF THE ABDOMEN AND THORAX. 
Caddisflies (Trichoptera): cased	
Goeridae Up to around 10 mm.	Smallest larvae WITH BIG BALLAST STONES ON THE CASE. 
Sericostomatidae Typically 15 to 20 mm.	Case a very neat tube of fine sand grains. 
Molannidae Up to 30 mm.	Case kite-shaped, with flanges around the tube. 
True/two-winged flies (Diptera)	
Simuliidae (Blackflies) Up to 8 mm.	Shaped like a dumb-bell, with feathery mouthparts. 

To detect effects of flow change, siltation, nutrients, impacts on urban rivers, species level monitoring (Dorset WT, EA, Salisbury & District AC)

**26 target groups**

# Riverfly Plus: invasive/problem species



# Projects examining temporary river ecology.

- 1) NTU (Rachel Stubbington) – postdoc, dry phase, partners inc. EA, NE)
- 2) Worcester University (Tory Milner, Matt Hill) PhD, lentic phase



# New publications

- **Adult Caddisflies – Stuart Crofts**
- **Aquatic Gastropoda (update to T.T. Macan) – Alex Pickwell, Martin Winter**
- **Stoneflies - Mike Hammett**

