

RIVERFLY: THE SECRET WORLD OF FRESHWATER INVERTEBRATES

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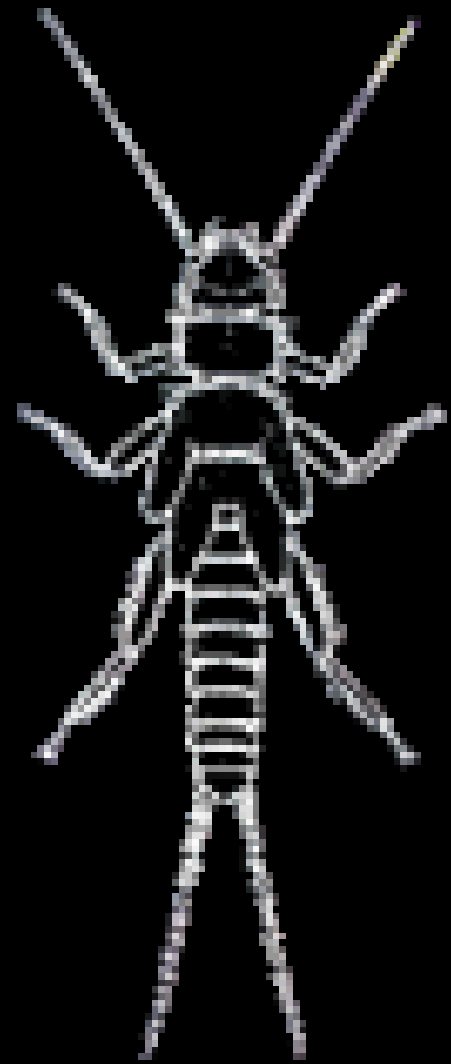
What are Riverfly and where to find them?

- Any freshwater invertebrate (everything but starfish)
 - Predominantly not flies*
- Found in any freshwater, to some extent or another
- Easiest to find in gentle gravelly streams



*There are a few flies

Stonefly nymph (Plecoptera)



1 6 legs

2 2 Tails

3 2 Antennae

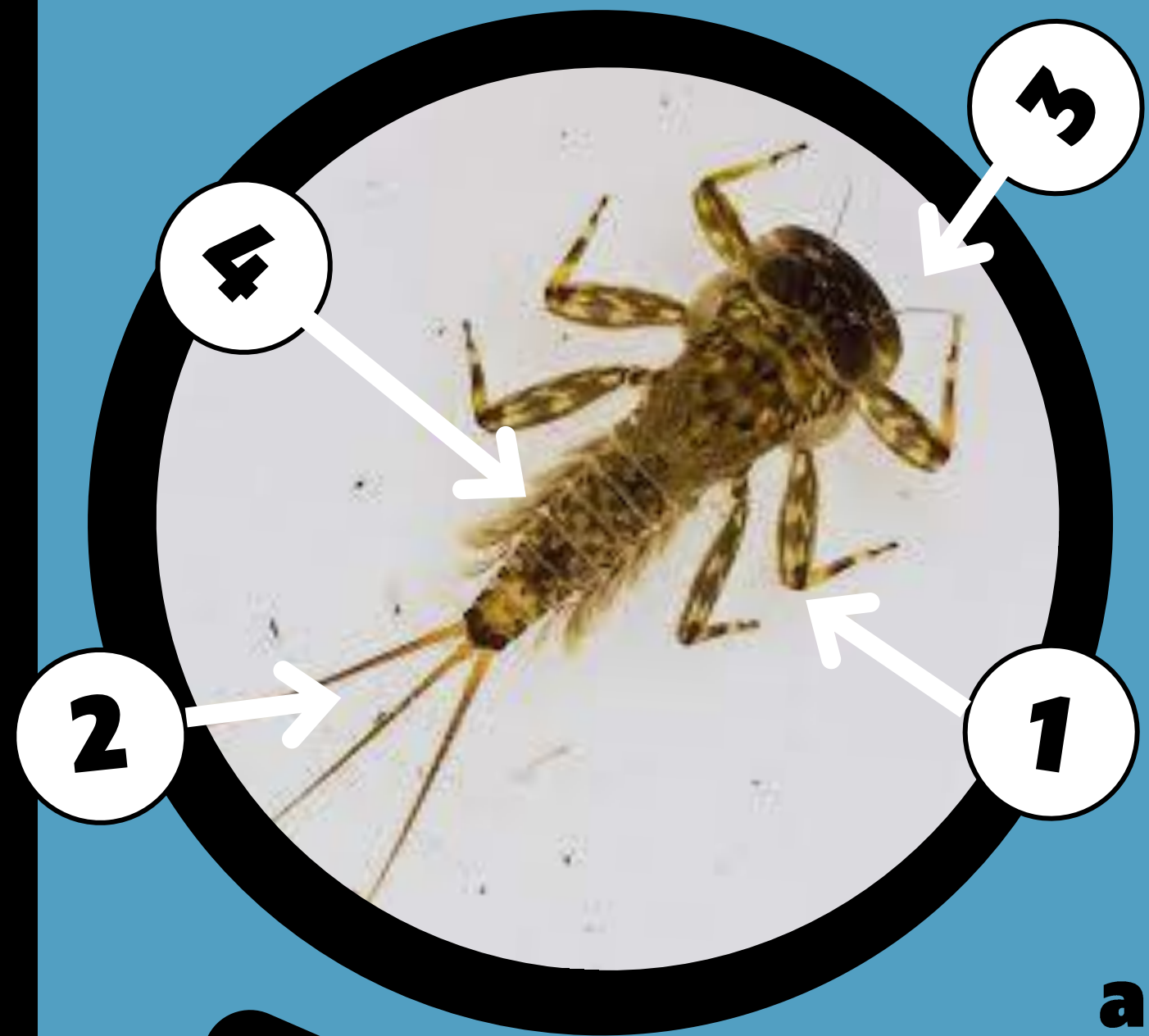
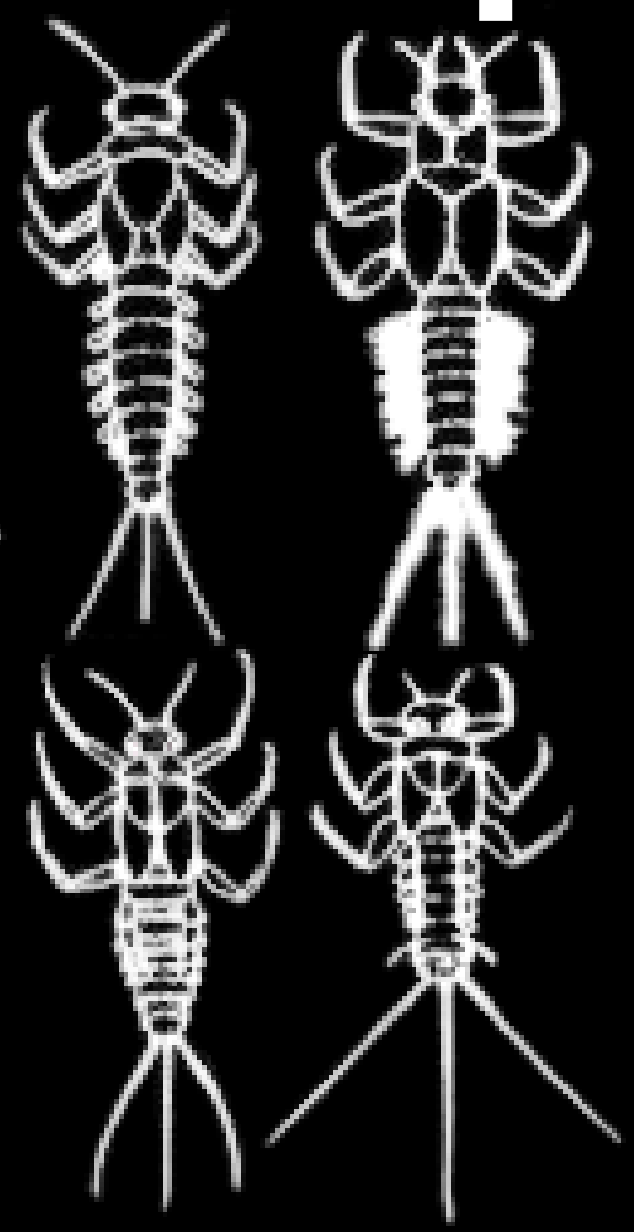
4 Body segment for
each pair of legs

 **5 - 40mm**
(Highly dependant on life stage and species)

 **Swims with a side to side "wiggle"**



Mayfly nymph (Ephemeroptera)



6 legs

1

3 Tails

2

2 Short Antennae

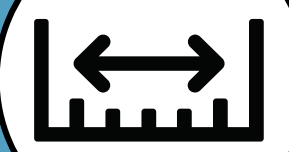
3

Gills running along abdomen

4

2 - 25mm

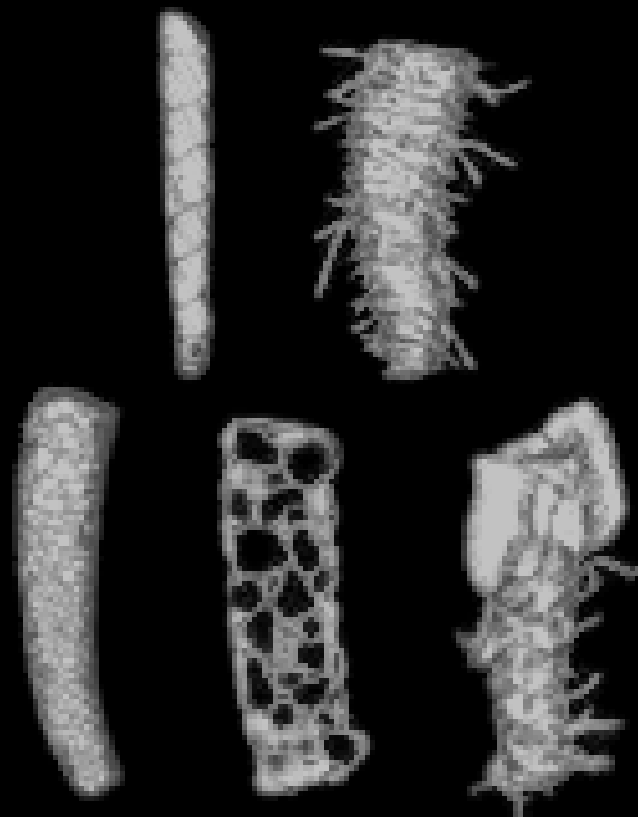
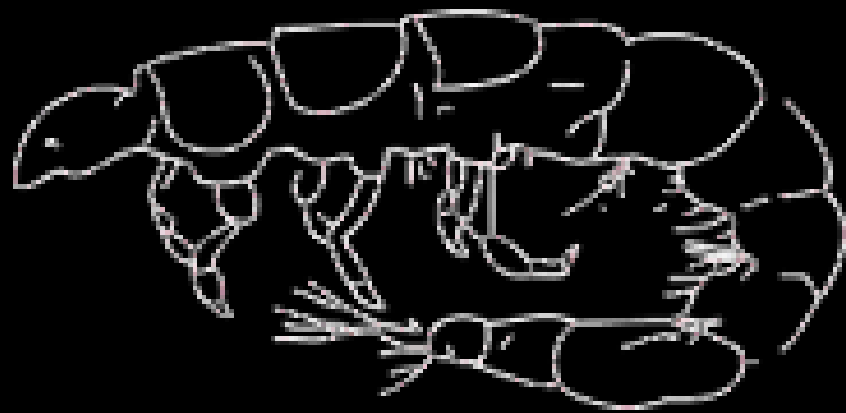
(Highly dependant on life stage and species)



Various swimming styles dependant on group



Caddis fly nymphs (Trichoptera)



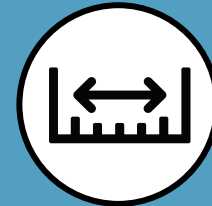
Cased Caddis

1

Protective case made from sticks, sand, or stones

2

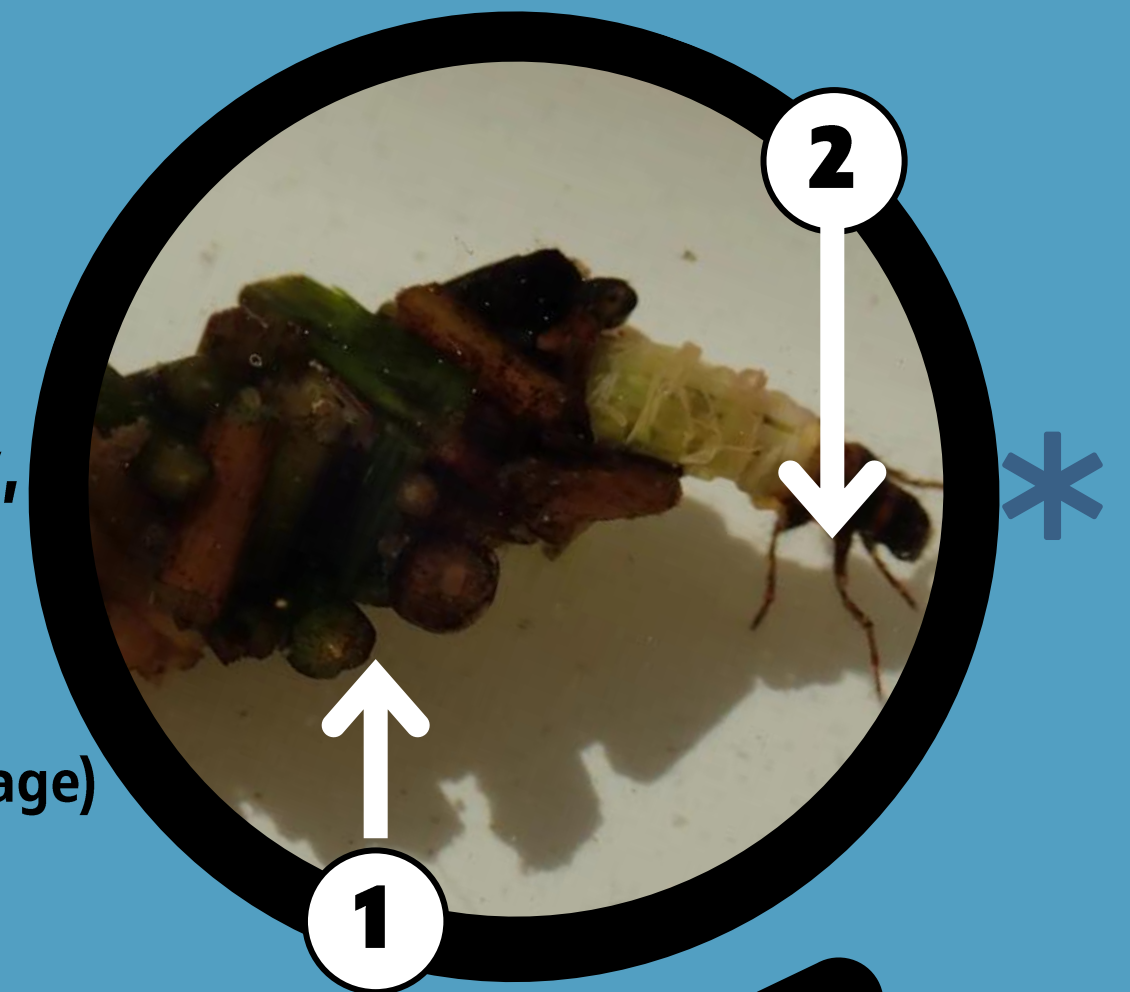
6 legs at the front of its body, has long abdomen anchored into case



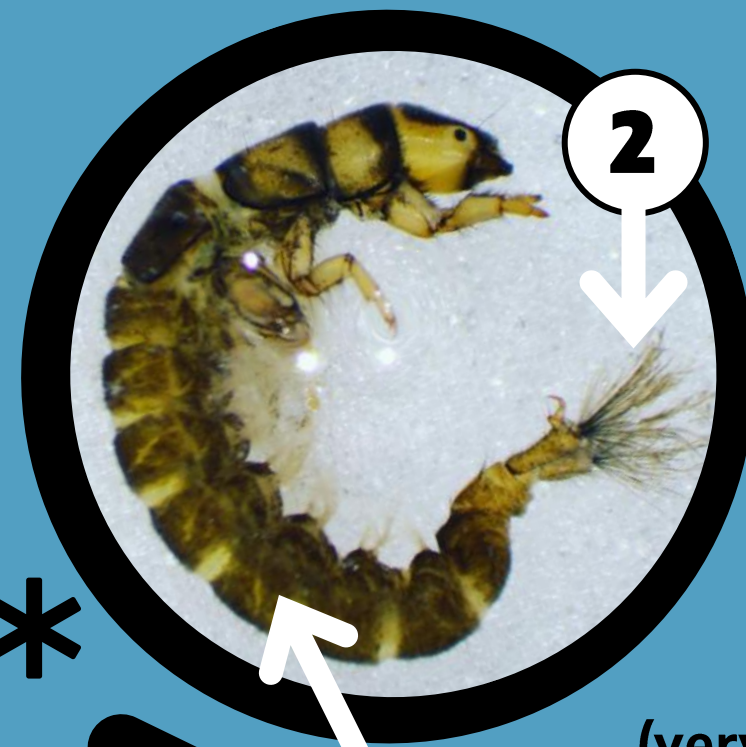
3 - 45mm
(very dependant on species and life stage)



Don't swim, crawls along substrate



Caseless Caddis



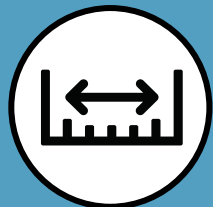
2

Similar body plan as cased, but without case

Tufts or claws at the end of abdomen.

1

2



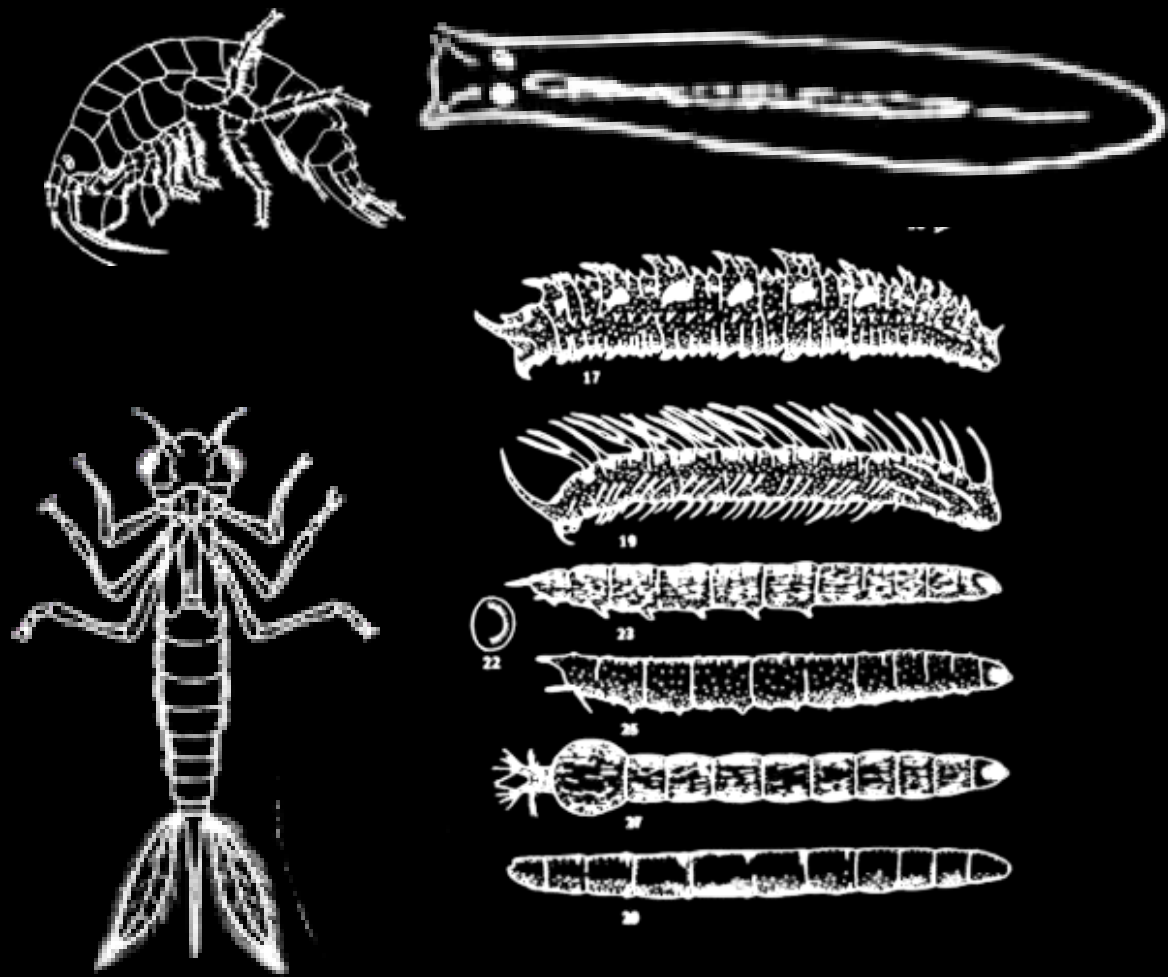
2 - 25mm
(very dependant on species and life stage)



1

Later life stages mainly crawl, however, when they do swim they violently writhe back and forth

The Others



Erpobdella testacea



Glossiphonia heteroclita



Gammarus pulex



Dytiscus marginalis

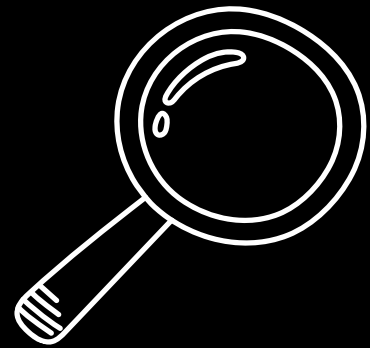


Orthetrum cancellatum

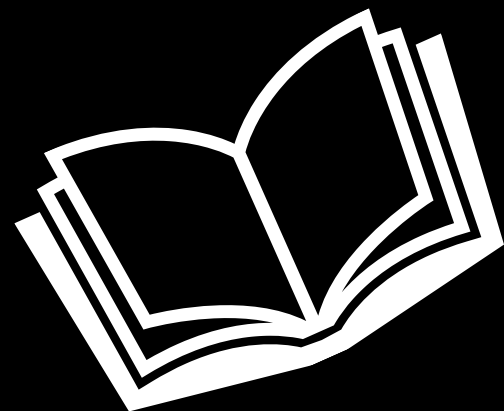


Eristalis tenax





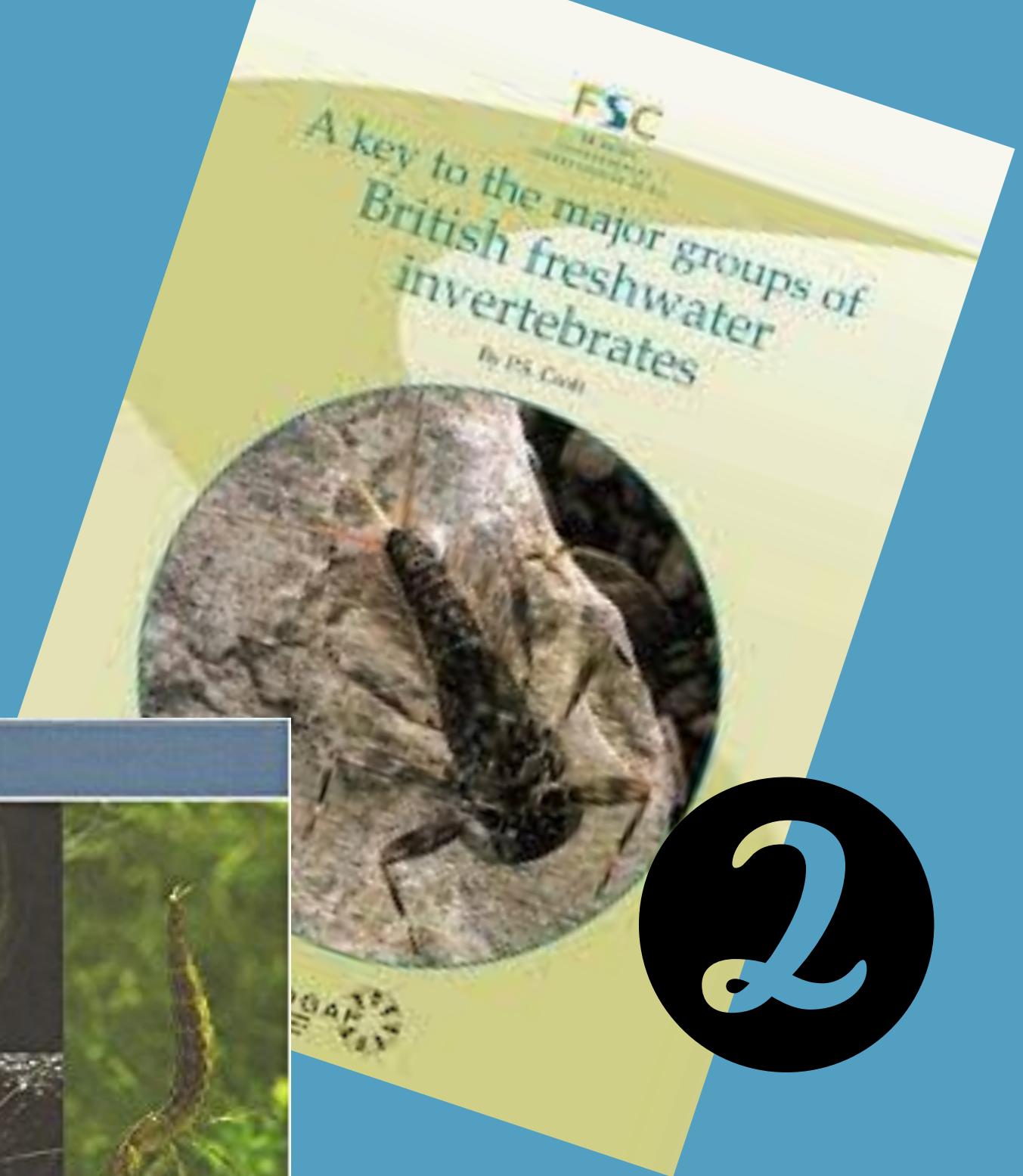
Some good ID Guides to look out for



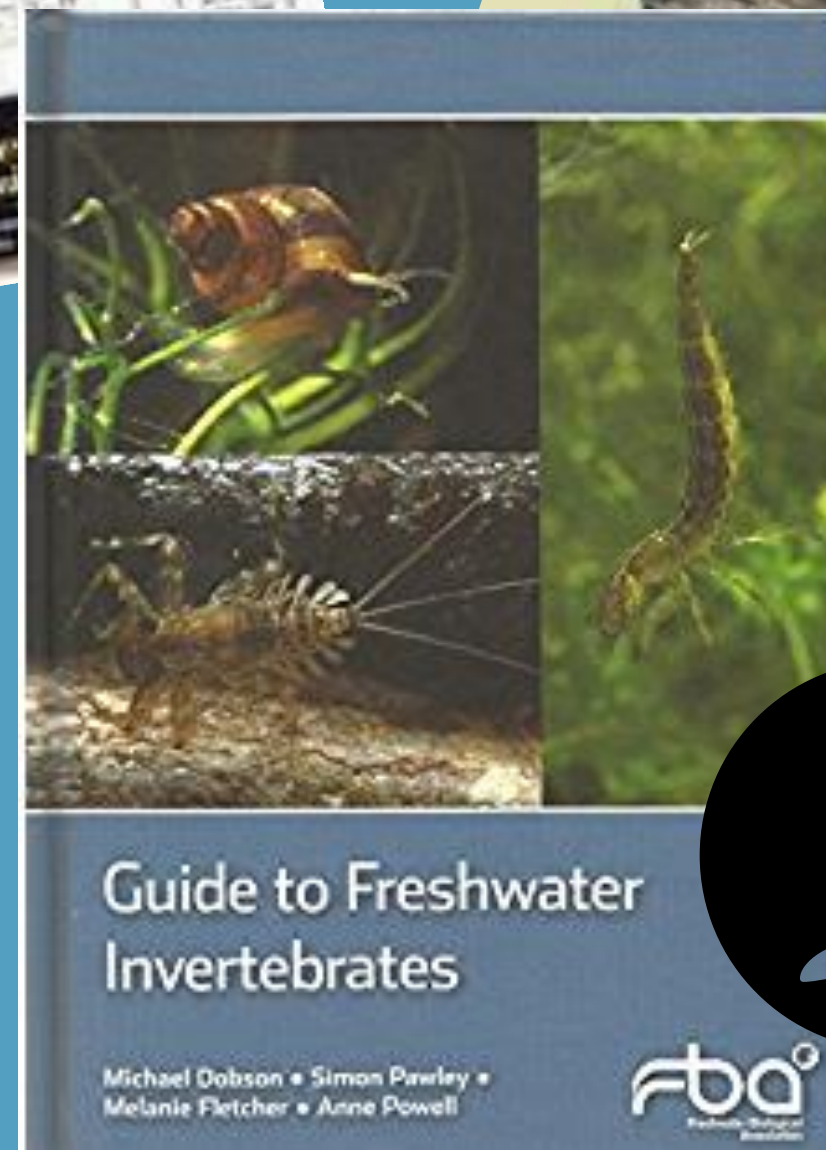
3



2



1

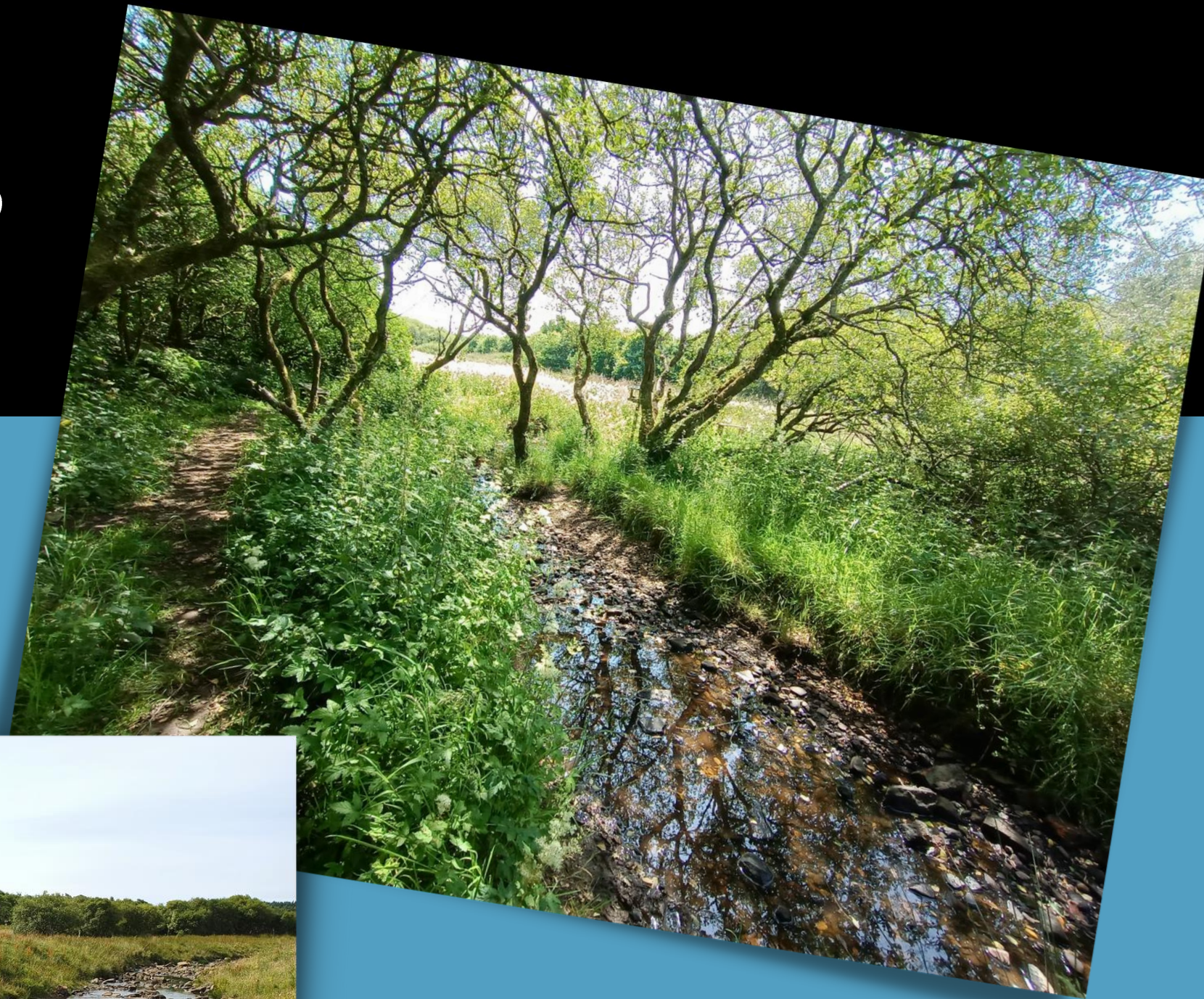


Why are Riverfly so important?

2

1

3



The "Correct" way - A The Standard

the m

The Fun Way!

1) - Grab a net, wellies, a tray, a magnifying glass, and a plastic spoon

2) - Kick furiously in front of your net that you've stuck in the river

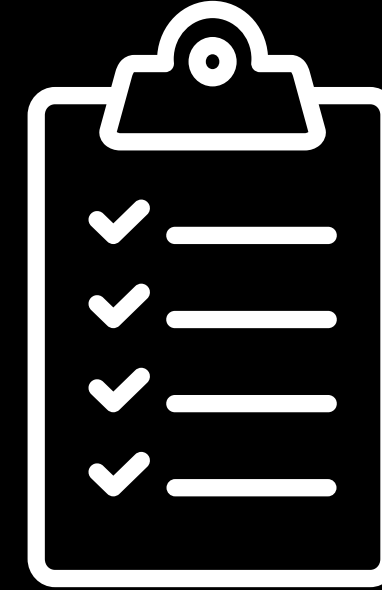
3) - See all the critters swimming around

Sampling Riverfly



- Gather equipment - 500mic
 - 15x magnifying hand lens,
 - Check risk
 - 2b. Check site
 - 2c. Complete dyn
 - 3. layout equipment
 - 4. Fill white sampling
 - 5. Stand (can
 - 6. p
 - 7. whilst n
 - (do this for 10-20s
 - 8. After 3mins of kick
 - 9. Separate out spe
 - 10. Spend 6-12 m
 - 11. Estimate, to t
 - on the clipboard
 - 12. Empty tra
 - 13. Turn over new rocks to see w
 - 14. Pack up, ensuring everything is
 - 15. Get back to the office, disinfect
- (The ruining tant)

Recording your finds



- Once you have found and identified the critters you need to record them... FOR SCIENCE
- CBDC Website form
- IRecord



References

Link to CBDC Website - <https://www.cbdc.org.uk/recording-wildlife/share-your-records/>

Book Reference for those REALLY interested in sampling techniques

- Stark, J.D., Boothroyd, I., Harding, J.S., Maxted, J.R. and Scarsbrook, M.R. (2001) 'Protocols for sampling macroinvertebrates in wadeable streams'.

Photo credits - * G, Bradley - UK safari.com

***** Ashton, N. N., Taggart, D. S. & Stewart, R. J. 2012. Silk tape nanostructure and silk gland anatomy of trichoptera. Biopolymers 97, 432-445.

***** Unknown -

***** <https://www.fscbiodiversity.uk/films/freshwaterinverts>

**Any
Questions ?**

