

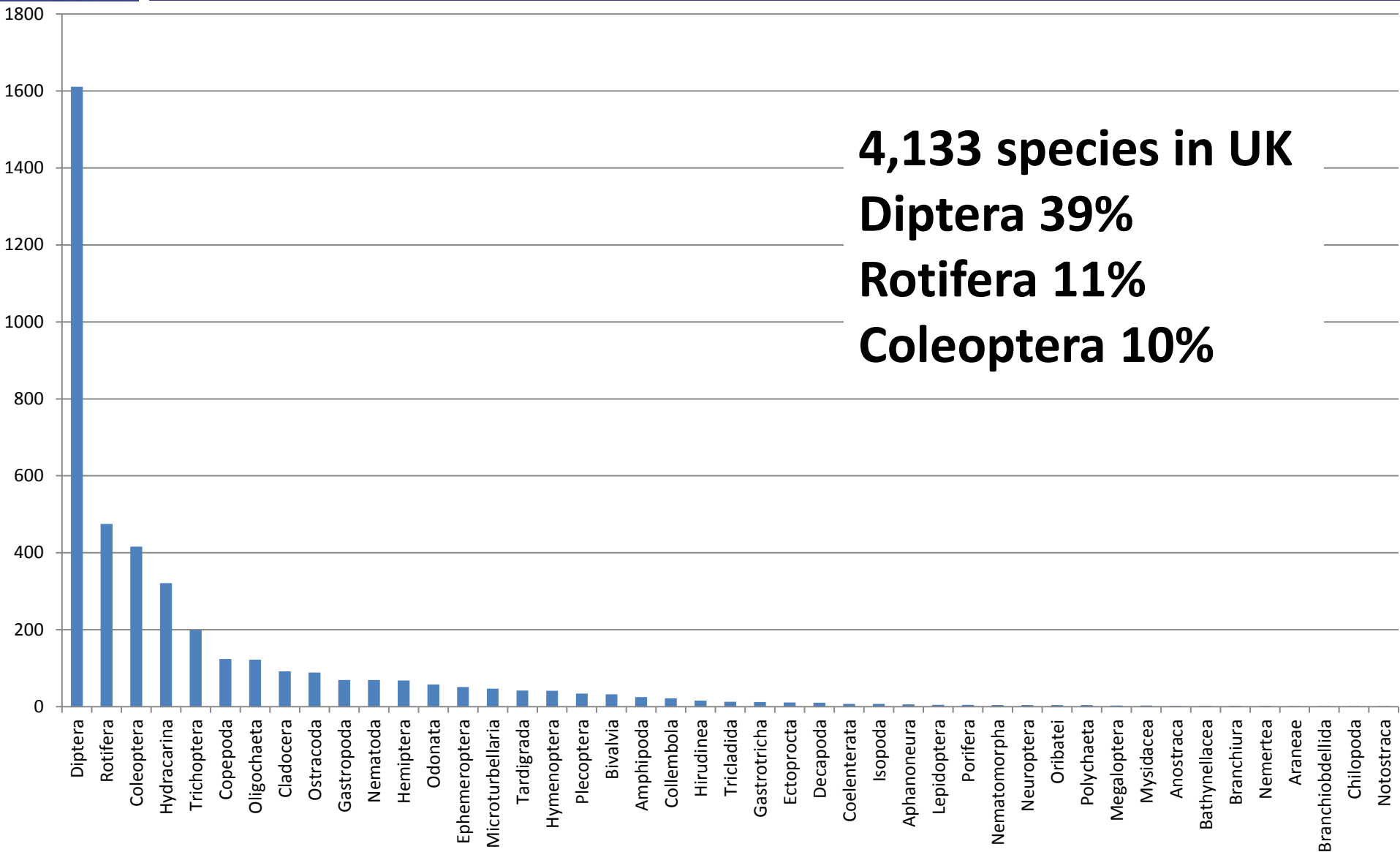


Freshwater invertebrates in Scotland

Craig Macadam – Conservation Director

www.buglife.org.uk
[@buzz_dont_tweet](https://twitter.com/buzz_dont_tweet)

What species do we have?



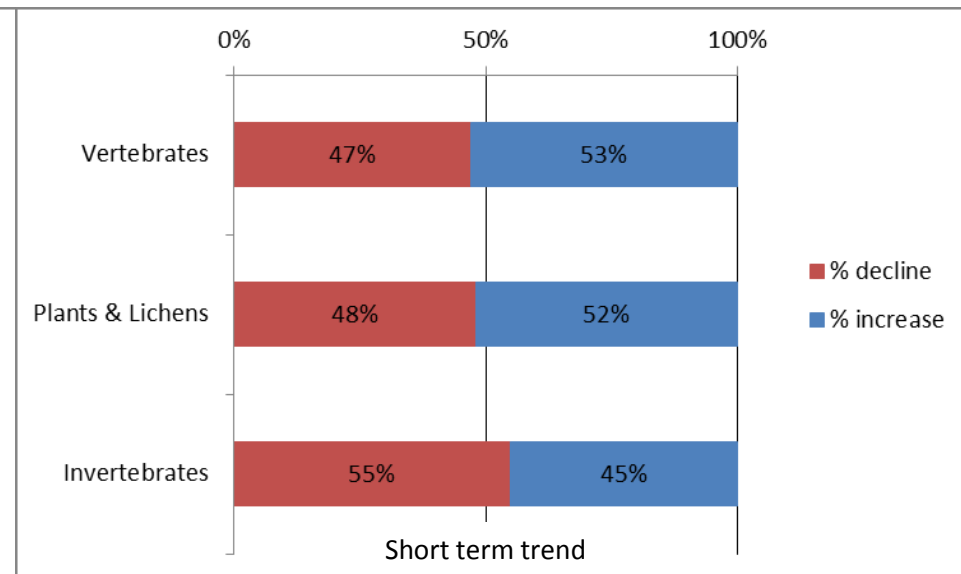
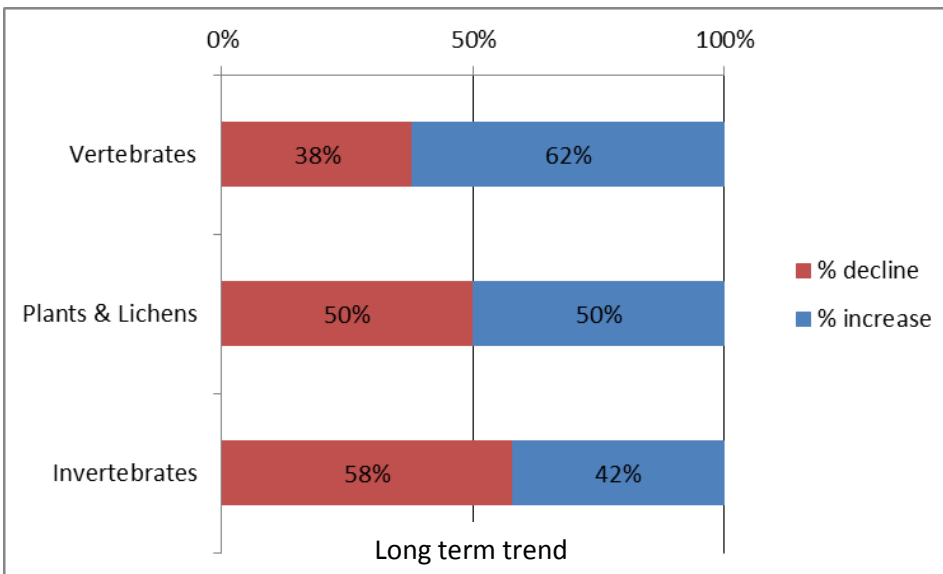
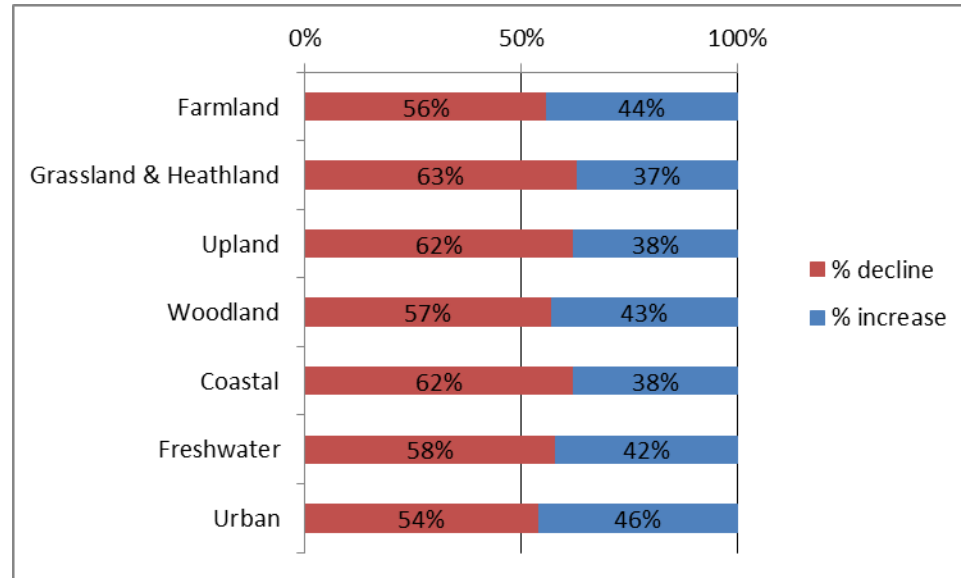
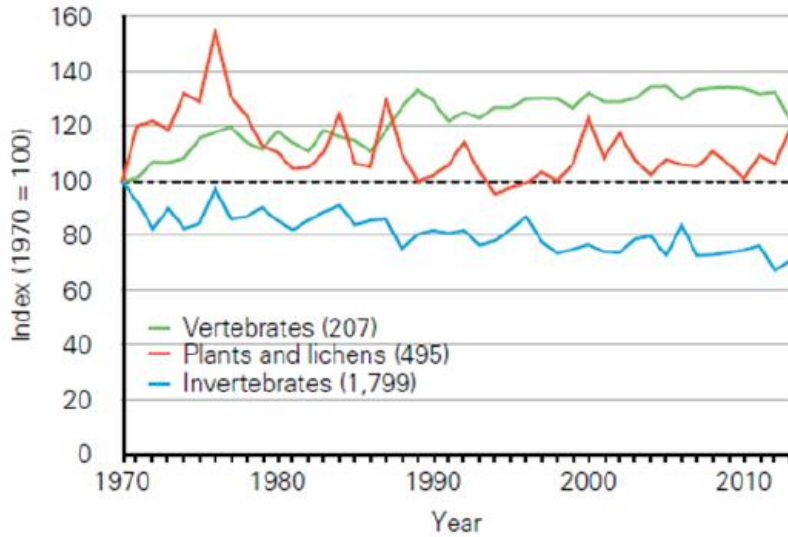
What about Scotland?

Order	UK	Scotland	%Scot	Reference
Ephemeroptera	51	38	75%	Macadam (2016)
Plecoptera	34	29	85%	Macadam (2015)
Trichoptera	199	163	82%	Wallace (2016)
Odonata	56	24	43%	Daguet et al. (2008)
Coleoptera	391	213	55%	Foster pers. comm.
Hemiptera	93	61	66%	Cook (2015)
Megaloptera	3	3	100%	Whittington (2011)
Mollusca	87	57	67%	Sumner/Willing pers. comm.
Tricladida	13	9	62%	Bellamy (2010)
Amphipoda	16	6	38%	Macadam (in prep)
Neuroptera	4	3	75%	Whittington (2011)
Isopoda	4	2	50%	Corbet & Collis (2010)
Total	951	608	64%	

What's important

Order	UK	Scotland	%Scot	Reference
Ephemeroptera	5	2	40%	Macadam (2016)
Plecoptera	2	0	0%	Macadam (2015)
Trichoptera	17	4	24%	Wallace (2016)
Odonata	6	4	67%	Daguet et al. (2008)
Coleoptera	35	10	29%	Foster pers. comm.
Hemiptera	4	0	0%	Cook (2015)
Megaloptera	-	-	-	Whittington (2011)
Mollusca	11	4	36%	Sumner/Willing pers. comm.
Tricladida	-	-	-	Bellamy (2010)
Amphipoda	0	0	0%	Macadam (in prep)
Neuroptera	-	-	-	Whittington (2011)
Isopoda	-	-	-	Corbet & Collis (2010)
Total	80	24	29%	

Species status



Overlooked habitats

AQUATIC CONSERVATION: MARINE AND FRESHWATER ECOSYSTEMS

Aquatic Conserv: Mar. Freshw. Ecosyst. **9**: 529–534 (1999)

New horizons—new species? The invertebrate fauna of unexplored aquatic habitats in Scotland

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KEY WORDS: invertebrates; interstitial; subterranean; groundwater; pools; ephemeral pools

Water on peat
Water underground
Temporary Waters

Water on Peat



Bugs on Bogs



Muir of Dinnet



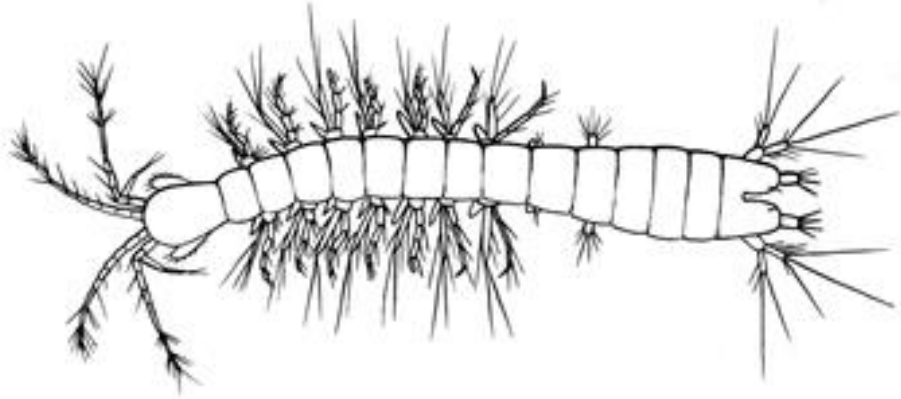
Letham Moss



Water underground



Antrobathynella stammeri



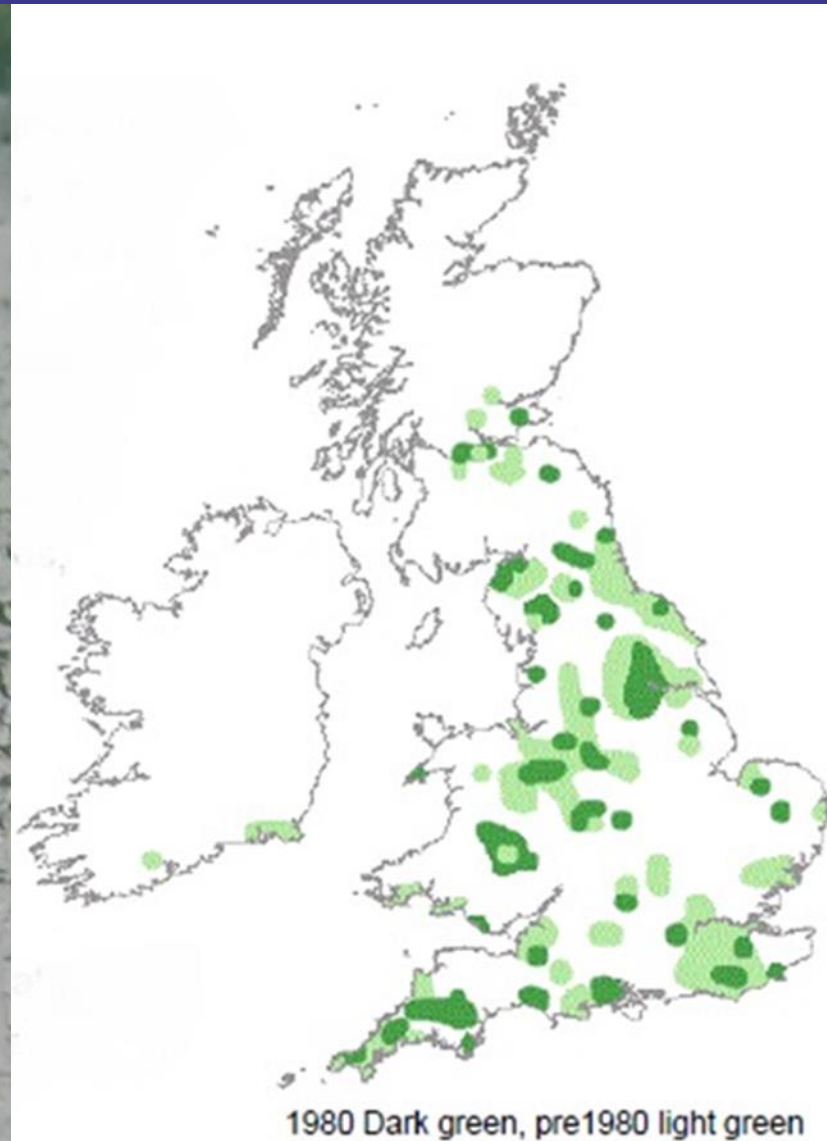
Temporary waters



© Roger Key

© Larry Griffin

Pond mud snail (*Omphiscola glabra*)



Marvellous mud snails!



Headwaters



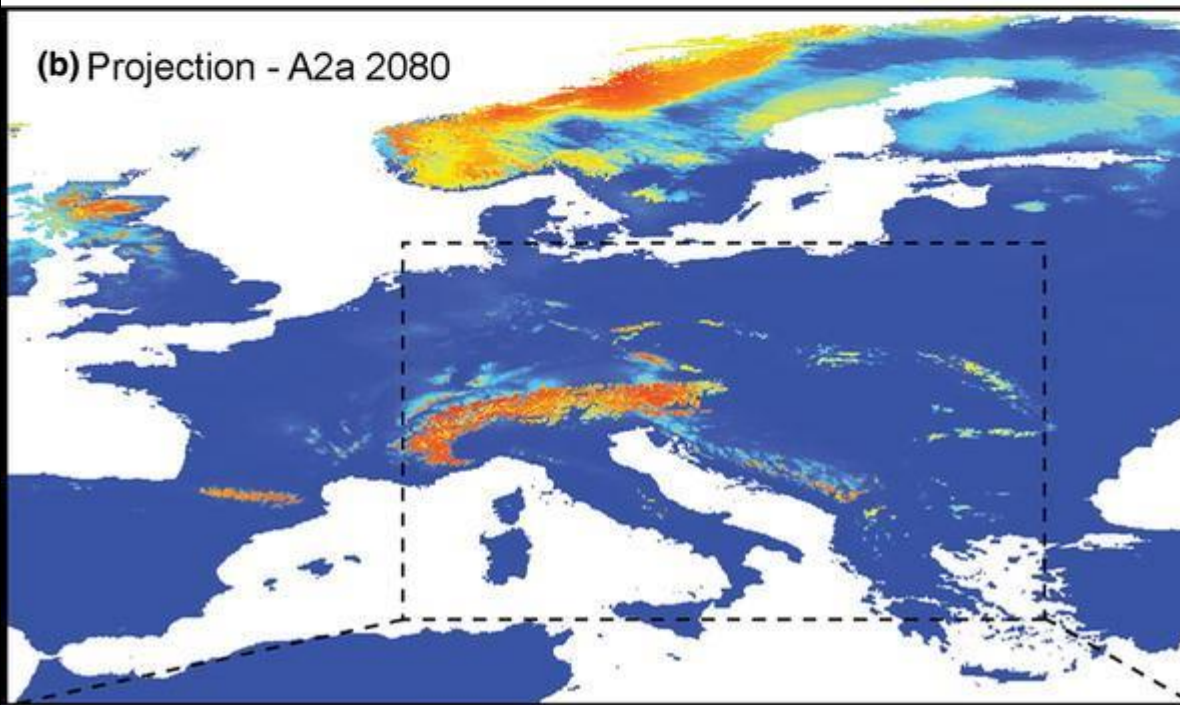
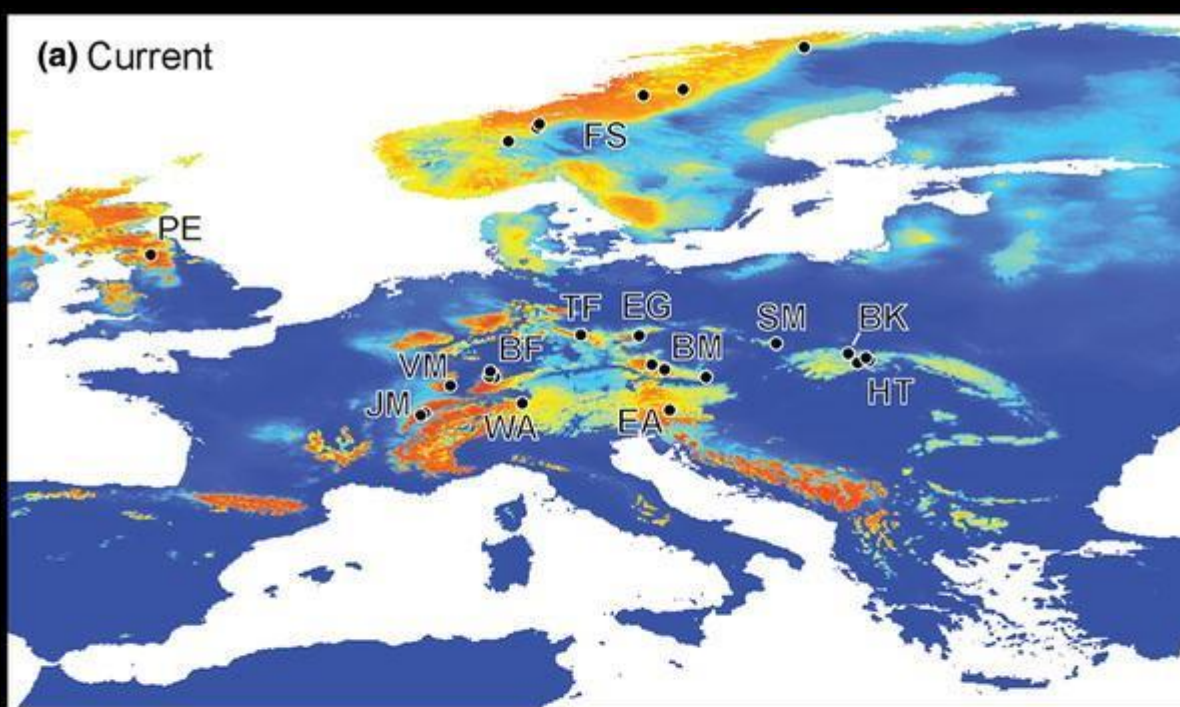
Impermanant burns





Ameletus inopinatus





Water Beetles



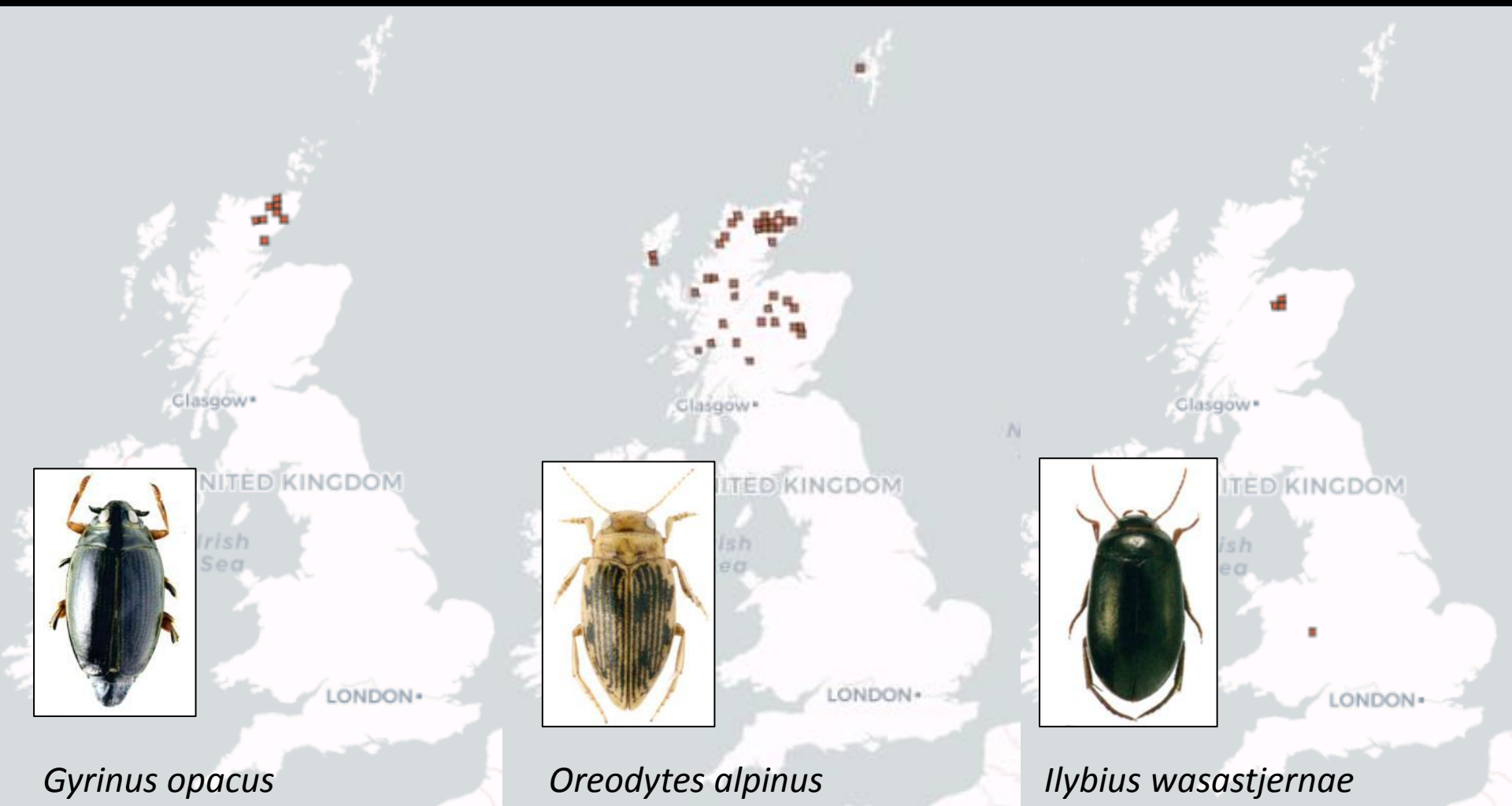
Gyrinus opacus



Oreodytes alpinus



Ilybius wasastjernae



Freshwater pearl mussels



Riverwatch

www.pearlsinperil.org

Protecting our native freshwater pearl mussels

We need your help if you see

- 1 Piles of dead shells in or near the river
- 2 Persons wading and using a cleft stick and glass bottomed bucket
- 3 Excessive siltation or pollution
- 4 River works that may be causing damage
- 5 Stressed or stranded mussel beds

Reporting – how you can help

- ✓ Record the time and date
- ✓ Identify location by GPS or map
- ✓ Take a description of persons involved including gender, height and clothing
- ✓ Make a note of vehicles including registration, make and model
- ✓ Take photographs or video, but only if safe to do so.
- ✗ Don't approach suspects
- ✗ Don't interfere with evidence
- ✗ Don't disturb the scene
- ✗ Don't ignore an incident and please...
- ✓ Report anything suspicious no matter how small. Evidence of wildlife crime is not always obvious.



Contact Details

In the first instance always contact your local police.

Riverwatcher

tel 01463 783505
mob 07789 793199
riverwatcher@rafts.org.uk

Crimestoppers

tel 0800 555111
(999 if a crime is in progress)





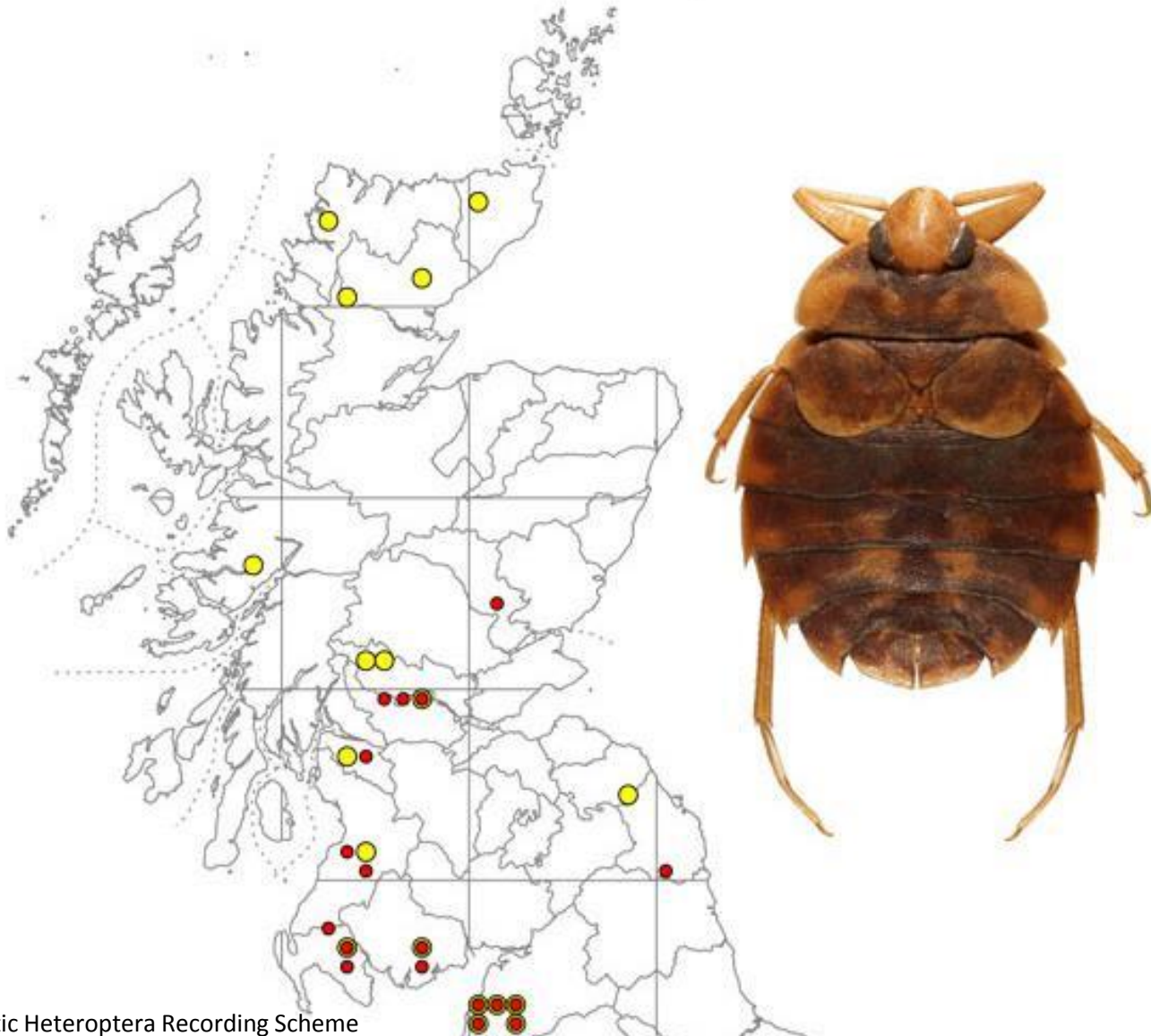
Medicinal Leech



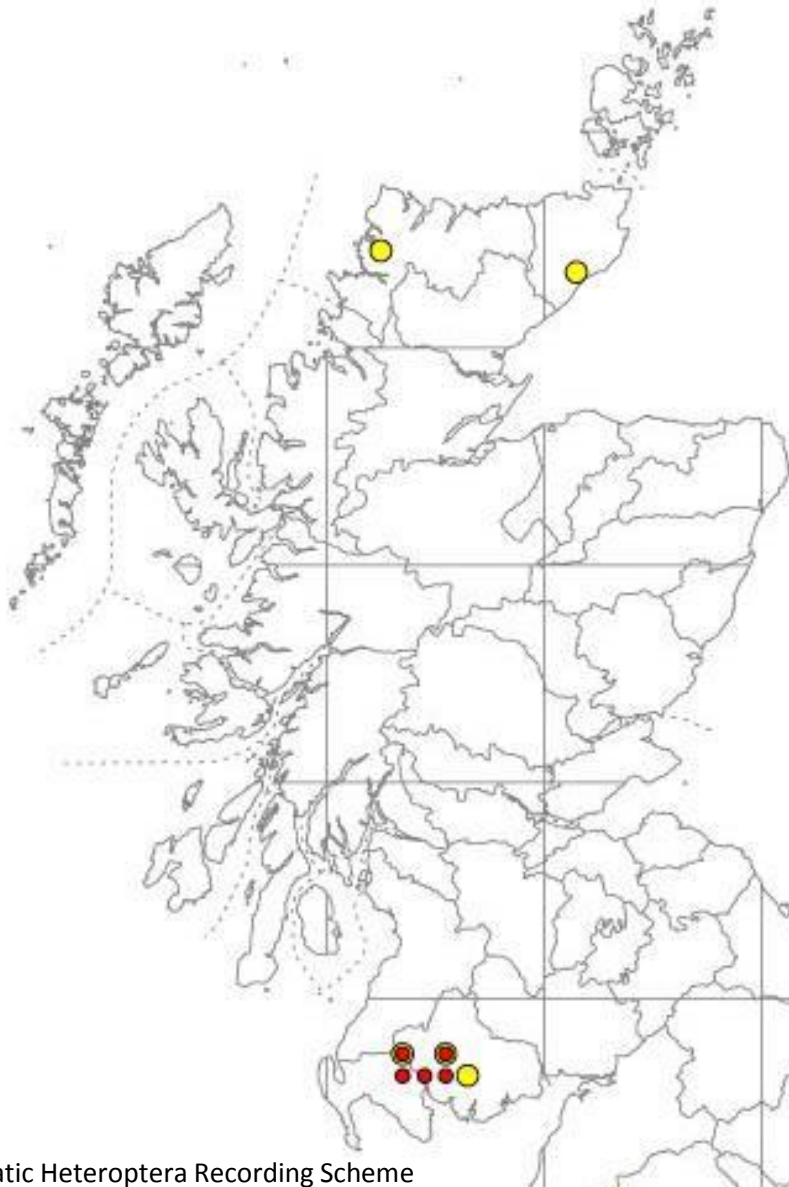




River bug (*Aphelocheirus aestivalis*)

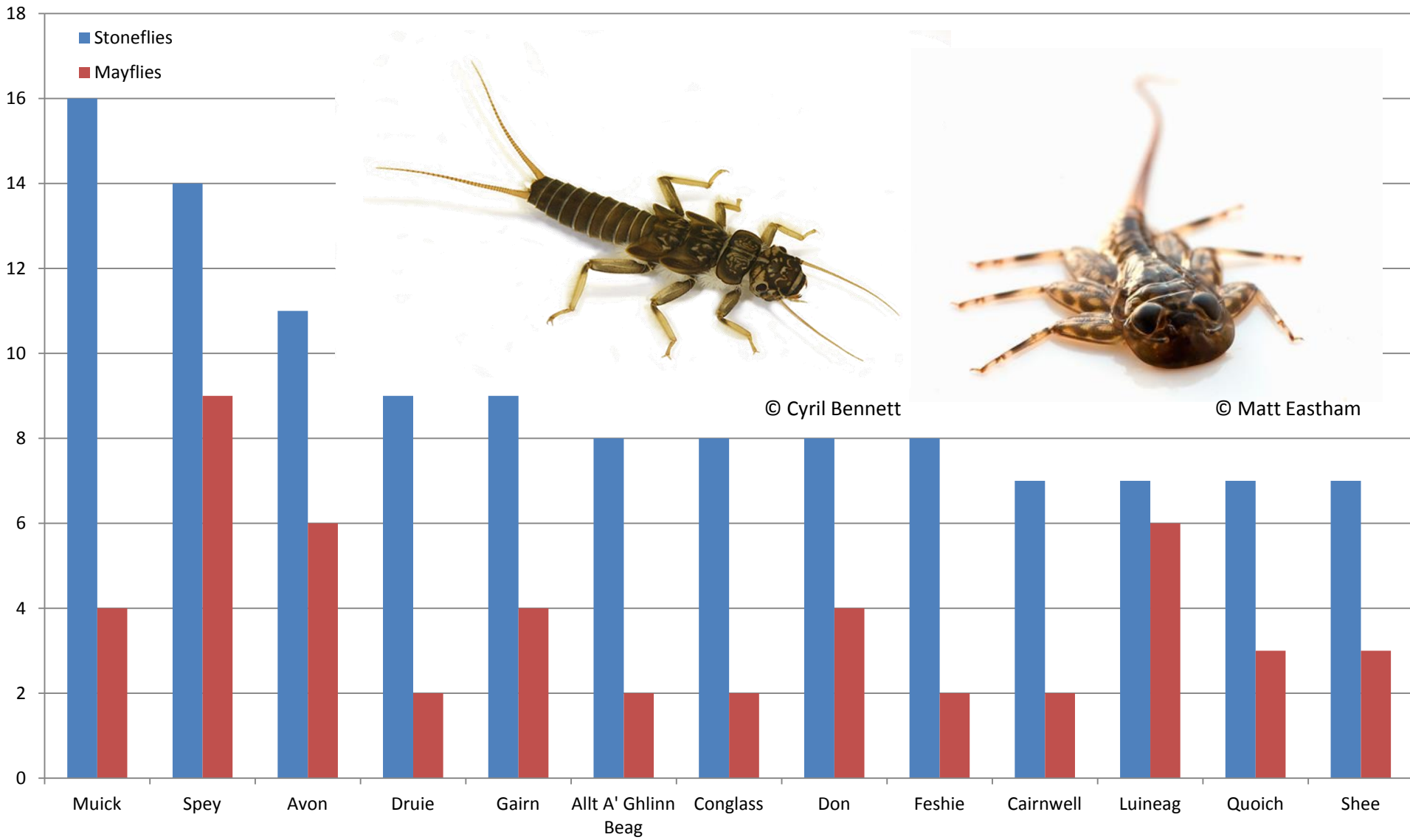


River strider (*Aquarius najas*)



Cairngorms rivers

Number of stonefly and mayfly species



Endemic stoneflies

Perlodes mortoni



© Roger Key

Capnia vidua anglica



© David Pryce



© Stuart Crofts



Brachyptera putata

© Stewart Taylor

Taeniopteryx nebulosa britannica

Northern February red stonefly (*Brachyptera putata*)









Non-native species



Encouraging recording



Encouraging recording





www.buglife.org.uk Tel: 01733 201210  @buzz_dont_tweet

Buglife is a registered charity at Bug House, Ham Lane, Orton Waterville, Peterborough, PE2 5UU
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