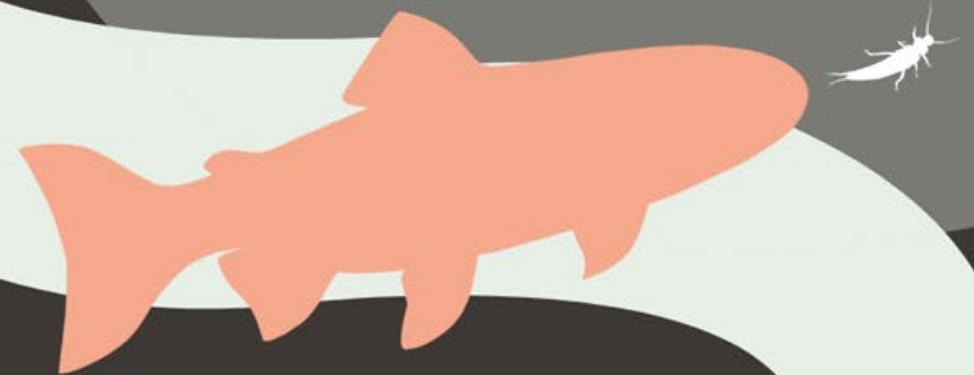


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# SmartRivers

Powered by  
**WildFish.**



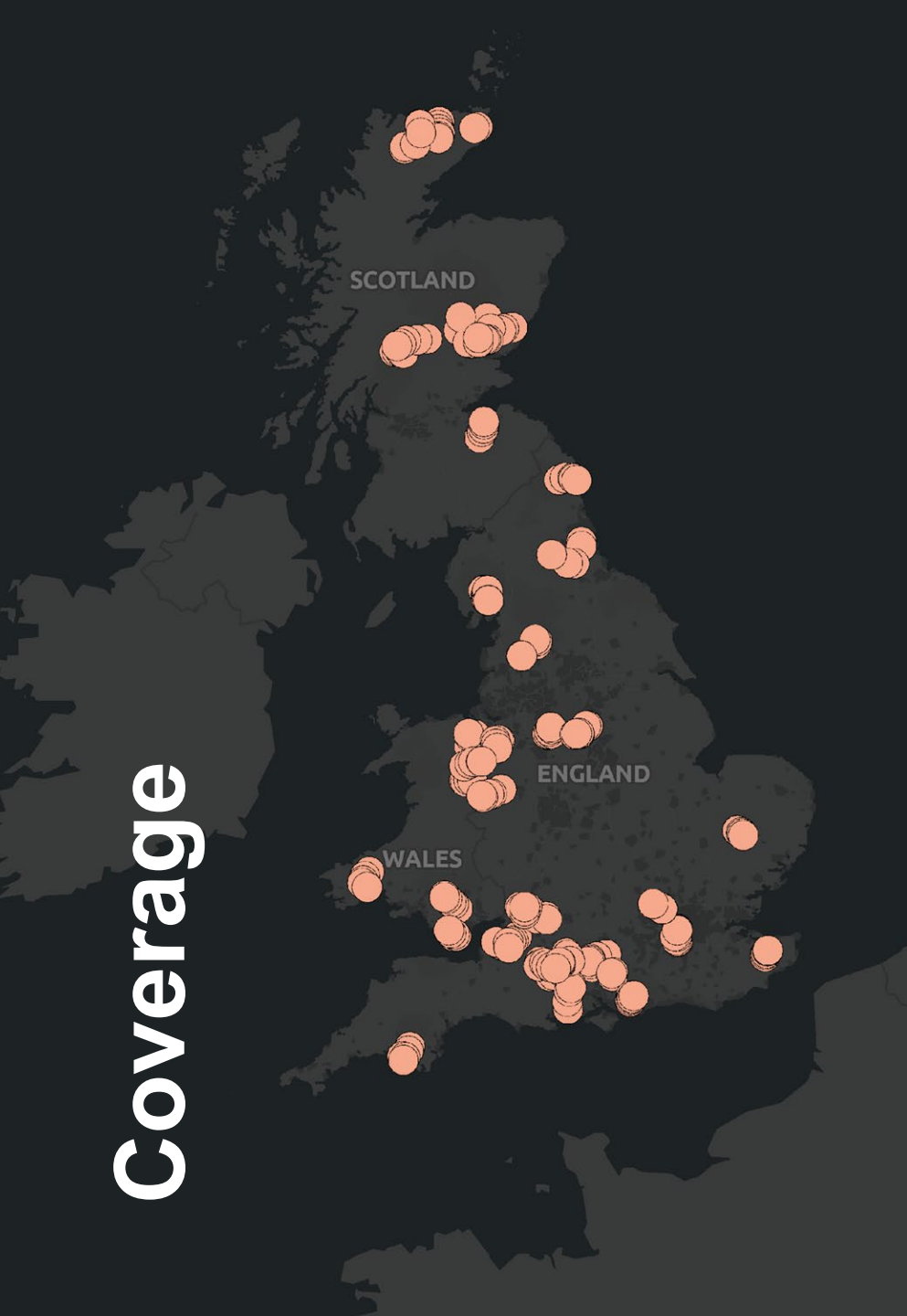
**We're bridging the national monitoring gap in UK rivers**

## SmartRivers is the highest tier of citizen science invertebrate monitoring

- Monitoring in spring and autumn
- Samples preserved and identified away from the riverbank using microscopes
- Identify to species-level as much as possible.



# Coverage



**104**

Rivers covered by the project to date

**4,584**

Hours of training undertaken by volunteers to date

**34**

Organisations have signed up to host hubs

We are active in England, Scotland and Wales. **Our ambition is that all rivers are SmartRivers.**

# Process



## Enrolment

- River signs up, hosted by a local organisation
- Hub lead from the group
- Around 10 volunteers required
- River sites chosen based on objectives

## Training & Benchmarking


- Two days of volunteer training (Sample technique, sample identification)
- Professional benchmarking surveys in spring and autumn

## Volunteer monitoring

- Hub begins independent sampling
- Chooses self identification or 'sample and send' pathway
- Quality control mandatory for self ID hubs

## Data & reporting

- Seasonal reporting, twice a year
- Time series reporting for multi-year datasets
- Data presentation to stakeholders and policy support from WildFish
- All data open-access for transparency



Why bother going the extra level with ID?

**Outputs**

**1.**

**Invertebrate abundance and diversity profiles**

The invertebrate records produced allow us to assess changes in invertebrate diversity and abundance, to highlight areas at risk.



Invertebrates are present in rivers for months, if not years, and each species has different tolerances to pollution.

Outputs

2.

**Water quality 'score cards'**

Using the list of identified invertebrate species at each site, we generate water quality 'scorecards' grading the impact of organic pollution, nutrient enrichment, sediment, chemicals and flow stress.

SmartRivers data is all open access via the SmartRivers database.



**Outputs**

**3.**

**Usable data to work with decision makers**

**SmartRivers data is useful for regulators, especially where professional analysis has been used (benchmark surveys and hubs using the 'sample & send' service).**







## Picture matching, not keys

- High resolution invertebrate image library with ID features

## Continual support

- Quality control for volunteer ID
- ID support from experts

How is this  
even possible  
with volunteers?



Mature Larva (25 mm)

Dinocras cephalotes - Perlida											
Sediments	Highly sensitive										
Organic	Highly sensitive										
Flow	Highly sensitive										
Conservation	Occasional										
Flight Period											
J	F	M	A	M	J	J	A	S	O	N	D

*Dinocras cephalotes*  
Large Dark Stonefly

**Habitat & Distribution**  
Fairly common on stony upland rivers.

