



Wessex Springs & Seepages (2010 – 2015)



Springs and seepages are freshwater micro-habitats which provide an important interface between groundwater, surface water and terrestrial habitats. Research has shown them to be rich in invertebrate biodiversity as they contain species from both the surrounding ecosystems as well as adapted specialists. They are particularly rich in species of conservation value. In the UK, springs and seepages are often overlooked as a habitat and are normally regarded as sub-components of other habitat types. Their merit for supporting unique assemblages is rarely considered, causing them to be under-researched, degraded or destroyed, and lacking in conservation strategies.

A single short study found 10 UK Biodiversity Action Plan (BAP) and 53 Red Data species associated with seepages and defined seepage types, however the conservation needs of these sites are still poorly known. With poor site management, uncertain locations and a general lack of understanding of these habitats, springs and seepages are vulnerable to degradation and biodiversity loss.

The Wessex Water region is an important area for springs and seepages with seven associated UK BAP species occurring in the region. Many of 53 associated Red Data invertebrate species are also found in the Wessex Water area. At the moment these sites are under surveyed in Wessex and there is little awareness of their importance. This five year project seeks to identify key spring and seepages sites for invertebrates in the Wessex Water area and to provide management advice for the future preservation of these habitats.

Project Aims

- Identify priority survey sites.
- To further characterise the invertebrate assemblages of the springs and seepages of Wessex.
- Identify key spring and seepage sites including any of national, regional or local importance for invertebrates.
- Disseminate management advice to facilitate the future preservation of spring and seepages and their associated invertebrate fauna in Wessex.
- Highlight areas most vulnerable to poor management and in need of remedial action.
- Establish a conservation strategy for springs and seepages in the South West.



Progress in Year 1

- Four priority survey areas identified for fieldwork (specific survey sites to be identified annually).
- The development of a standardised sampling methodology.
- Specific survey sites for Year 1: seven different SSSI sites within the **Blackdown Hills** area on the Devon / Somerset border.
- Surveys for invertebrates (both aquatic and terrestrial) and bryophytes in 16 locations.
- 121 aquatic invertebrates and 291 terrestrial invertebrates including one possible Red Data Book species and 14 Nationally Scarce were found.
- 73 bryophytes were recorded including five uncommon species. The most interesting species were found at sites where the groundwater was relatively acidic and nutrient poor.
- During the survey, the uncommon hornwort *Anthoceros punctatus* was found, the first record for the vice-county (VC5) for over 50 years.

Progress in Year 2

- Specific survey sites for Year 2: three different areas of the
- coastal cliffs near **Lyme Regis** in Dorset.
- Surveys for invertebrates (both aquatic and terrestrial) and bryophytes in 12 locations.
- 143 aquatic and 24 terrestrial invertebrates recorded from the seepages along with 221 species recorded from sweep netting nearby. Nine Red Data Book, two IUCN Near Threatened and 28 Nationally Scarce species were recorded.
- Bryophyte diversity was extremely variable depending on the level of erosion on site. The undercliffs west of Eype Mouth were particularly interesting due to a series of prominent flush systems and tufa formations.



Cliff Tiger Beetle (*Cicindela germanica*) @ Roger Key

Year 3 and the future

- In 2012 / 13 sites on the **Mendip Hills** AONB in Somerset are being surveyed. The poor weather during the summer of 2012 has delayed the Invertebrate surveys, but work is ongoing.
- One more round of surveys in 2013 / 14.
- Work to increase awareness of the importance of springs and seepages amongst landowners and managers, the general public and relevant stakeholders through the production and appropriate placement of articles.



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