

Managing springs and seepages in grasslands, heathlands and open habitats

Springs and seepages can occur in open habitats, where they are a valuable feature for invertebrates. They create marshy and wet habitats which are ideal for unique types of plants and invertebrates. The geology and underlying soil type influence the character of the spring or seepage. There is normally a considerable difference between the fauna of open and shaded situations, and between base-rich, neutral and acid conditions. All three of these conditions can occur within a close mosaic.



A seepage at Markham Hill, Wiltshire © Sharon Pilkington

Scrub control

Too much scrub encroachment onto open sites can be detrimental for invertebrate diversity since this decreases the range of successional types of habitat. Thus, scrub invasion on open sites should be managed. However, total clearance is not desirable as isolated shrubs or areas of carr may be beneficial, especially

the springtime blossoms of willows and Alder buckthorn (*Rhamnus frangula*) which can be a valuable nectar and pollen resource for bees and other pollinating insects. Continuous dense scrub along the margins of pools and channels should be avoided, but if scrub is present, the retention of discrete stands close to the waters' edge may be beneficial.

Open areas of wet peat are also important for a large number of flies including *Tachytrechus consobrinus* and should be retained.



Southern damselfly (*Coenagrion mercuriale*) © Steven Falk

The Section 41 (S41)¹ Southern damselfly (*Coenagrion mercuriale*), occupies small streams and seepages in wet heathland and valley mires. Scrub encroachment can threaten the open conditions that it requires.

Opening up spring-fed streams by removing scrub and trees has been shown to improve conditions for Southern damselfly at a site in Dorset².

Protect marshy areas

Small areas of marsh may form where drainage is impeded and can mark the position of seepages³. At these sites, the vegetation may change if the management changes, but the site will generally remain wet. Even a very small area of marsh may support an interesting invertebrate community, and should be viewed as a potentially valuable site for invertebrates.

Avoid the temptation to use small marshy areas for pond creation.

There should be no drainage of marshy areas or bogs. This could lead to the drying of these important habitats, scrub invasion and the destruction of valuable and often very old plant communities.

Maintain a high, relatively stable water level around seepages, for example, in marshy areas, carr and marshy areas in woods.

Mires

Valley mires develop along the lower slopes and floor of a small valley and receive much of their water from springs and seepages on the valley sides. There is an obvious direction of water flow and large pH gradients can exist where a base-enriched spring



NVC plant community type M29 dominated by Marsh St John's wort (*Hypericum elodes*). A characteristic New Forest, Dorset mires and Dartmoor NVC type. © Steven Falk



Southern damselfly (*Coenagrion mercuriale*) © Steven Falk



Ponies grazing in New Forest © Steven Falk

The Nationally Scarce snail-killing fly (*Tetanocera punctifrons*) uses a range of wetlands including fens, damp heaths, mires and riversides where its larvae probably parasitize aquatic snails.

The S41 species Southern damselfly (*Coenagrion mercuriale*) is found on small flushes, runnels and streamsides on acid mires in Britain, including those in Dorset and Devon. These are generally spring-fed and have some nutrient enrichment.

or seepage feeds into more acidic rainwater-fed peatlands with *Sphagnum*. Valley mires, especially lowland ones, are rare in the UK and Europe, but are a particular feature of heathland in Dorset and the New Forest⁴.

interesting and diverse mosaic of invertebrate habitats that support a diversity of rare species.

Recognise and protect M29 soakways

Seepages running through mires can form shallow soakways (runnels of slightly enriched water running through a mire). This allows the important National Vegetation Classification (NVC) plant community type M29⁵ to develop. This community is characterised by Marsh St John's wort (*Hypericum elodes*) and Bog pondweed (*Potamogeton polygonifolius*). These soakways are often the most interesting part of a mire. pH gradients associated with inputs of base-rich waters can turn a species-poor valley mire into an

Grazing

A low intensity grazing regime is often most appropriate for seepages and springline mires in grassland situations in order to maintain floristic diversity and open conditions whilst minimising excessive damage.

On mainly open sites, grazing animals are likely to seek shelter from bad weather by congregating in carr, other woodland or scrub and can cause excessive poaching. Land managers may therefore need to give thought to providing shelter, timing of grazing (seasonal), length of time on site and the provision of drinking water. See Sheet 2 "Soil poaching" section for more details on poaching.

Buglife has developed a series of advice sheets on the conservation, management and restoration of springs and seepages. These are available at www.buglife.org.uk. Whilst these sheets have been developed as part of the Wessex springs and seepages project, much of the habitat management advice is applicable to other parts of the United Kingdom.

- Sheet 1 - Springs and seepages - An important habitat for wildlife
- Sheet 2 - General guidance to managing springs and seepages for wildlife
- Sheet 3 - Managing springs and seepages in woodlands
- Sheet 5 - Managing springs and seepages on coastal cliffs

Further information

¹ The Natural Environment and Rural Communities (NERC) Act came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. These were formerly UK Biodiversity Action Plan (UKBAP) priority species.

² Liley, D. (2005) Tree and scrub clearance to enhance habitat for the southern damselfly (*Coenagrion mercuriale*) at Creech Heath, Dorset England. Conservation Evidence 2, 131-132.

³ Kirby, P. (2001) Habitat Management For Invertebrates: a practical handbook. RSPB Management Guides

⁴ English Nature (1997) Dorset Heaths Natural Area Profile: (online) Available at: <http://www.naturalareas.naturalengland.org.uk/Science/natural/profiles%5CnaProfile81.pdf>

⁵ Joint Nature Conservation Committee (JNCC) (2001) National Vegetation Classification: Field guide to mires and heaths. Elkington, T., Dayton, N., Jackson, D.L. and Strachan, I. M. (online) Available at: http://jncc.defra.gov.uk/PDF/Mires_Heaths.pdf



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

Buglife - The Invertebrate Conservation Trust is a company limited by guarantee. Registered in England at Bug House, Ham Lane, Orton Waterville, Peterborough, PE2 5UU. Company no. 4132695, Registered charity no, 1092293, Scottish charity no. SC040004.



This project has been funded by Wessex Water.