SPECIES HANDBOOK

Forked Spleenwort (*Asplenium septentrionale*)

Ecology, conservation, survey and management

Conservation Status

ENDANGERED

- **Facing a high risk of extinction in England**
- **Only two native sites remaining in England - exact status in Wales unknown**
- **Facing pressures from warming climate**

Forked Spleenwort is a unique fern amongst rock-dwelling pteridophytes, with its almost grasslike delicate fronds, making it instantly recognisable.

Although never common in England, its current occupation of just two sites gives great cause for concern for its long-term survival. Our work is focussing on keeping these two populations extant, while collecting more data about its occurrence in Scotland and Wales; both to ensure its wider national survival, and learn more about its ecology.

Historically it has been threatened by sites becoming scrubbed over, and its reliance on newly created or maintained rock faces. In recent years the run of exceptionally hot summer periods and the detrimental impact this has had on plants in England have given cause for concern that climate change may also have a large impact on this and other species which occupy bare rock niches.

Description

A distinctive fern with long slender, almost grasslike leaves. It can form dense clusters. The fronds are monomorphic, with no difference between fertile and sterile fronds.

The leaf blades are narrow (<0.5cm), usually 4-8cm long and stiff, with a leathery texture. They can grow up to 8cm and often, but not always, have a forked tip. Blades are green turning to a purple/brown at the base.

The sori are linear, covered with pale indusia with entire edges.

Lifecycle

Forked Spleenwort is evergreen and long-lived, but does exhibit some dieback at the end of the summer growth season, especially in drought-prone situations.

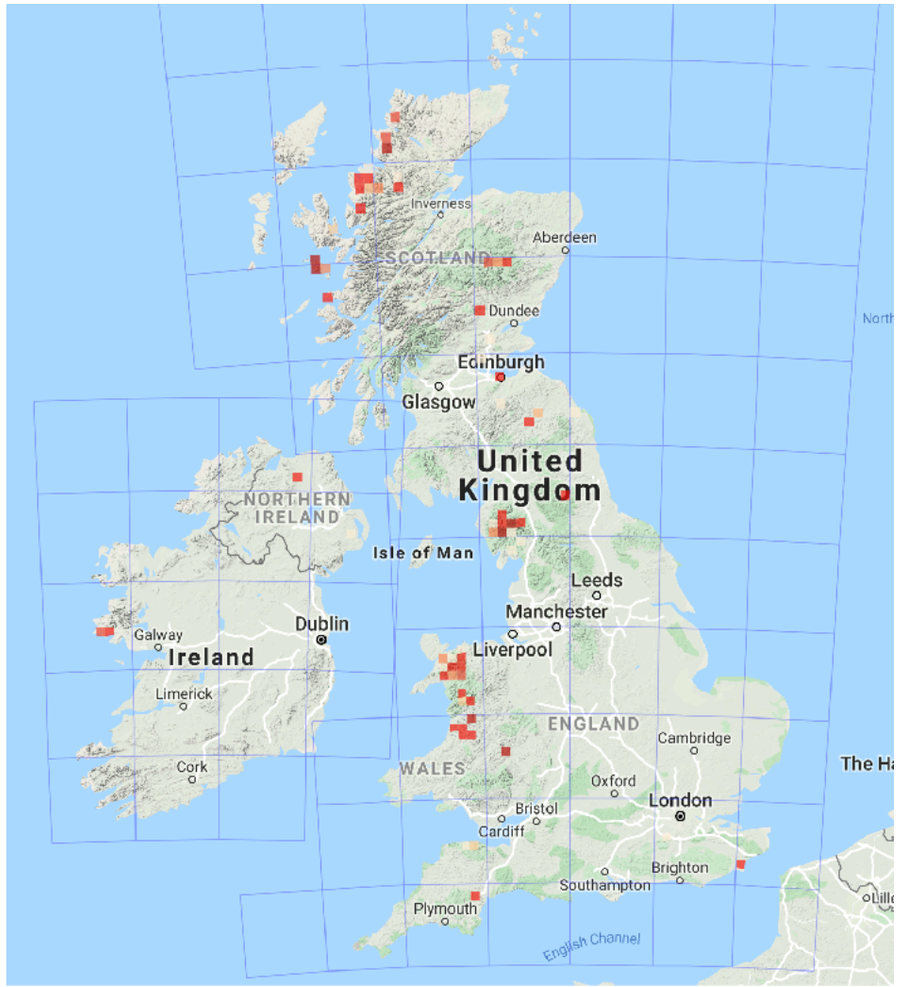
Like other ferns it has a double-generational lifecycle, but little is known or published about the precise ecological needs of the gametophyte. It is likely to develop in cracks in rock faces before the adult sporophyte emerges.

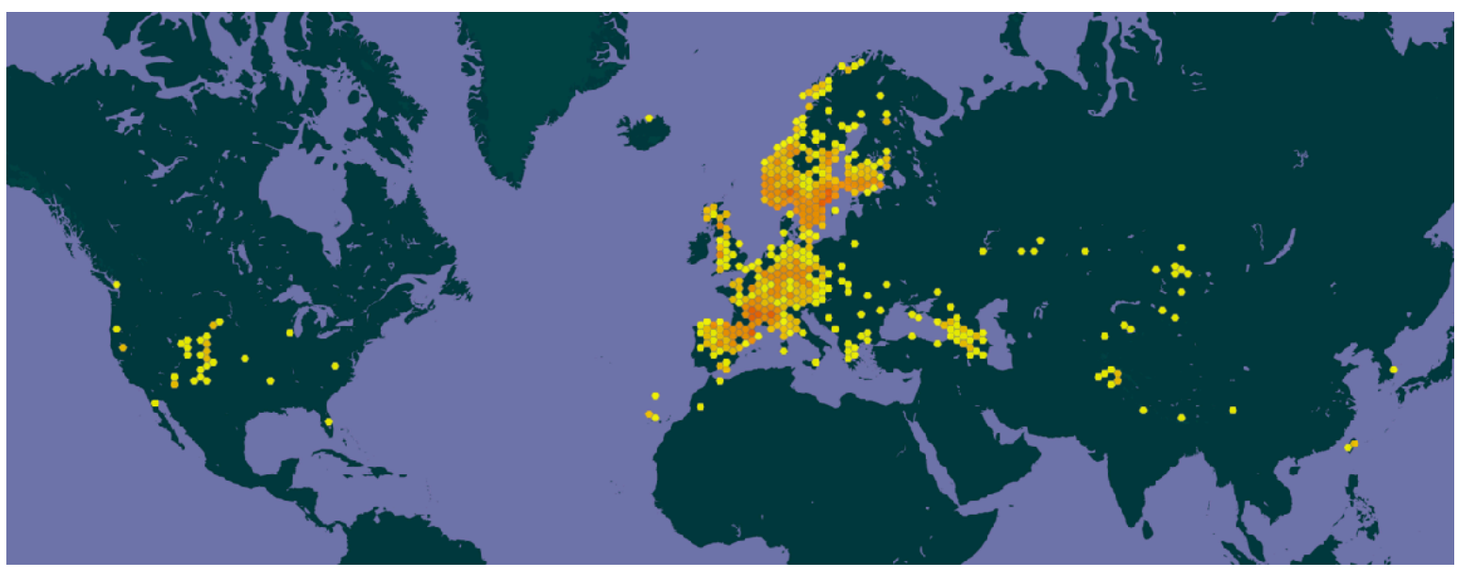
Habitat

Forked Spleenwort is epipetric (growing on rocks) and can be found in crevices of rocks, around boulders, and on cliffs. It can be found on a variety of substrates, including granitic rocks and limestone.

In these situations it is generally found in areas where there are small cracks and fssures in the rock, ideally not large enough to allow larger vascular plants and scrub to colonise.

In Kent it occurs on the grouting of a red-brick bridge.





Distribution

Forked Spleenwort is found in Europe and Asia from the Macaronesian Islands east through Europe, western Asia, the former USSR, northern India, parts of western and central China (Xinjiang, Tibet, and Shaanxi), and Taiwan. It is also found in North America, principally in the Rocky Mountains of the western United States.

In the UK it has a good scattering of sites in Wales and Scotland, but in England is now restricted to just two sites - an exposed rocky outcrop in the Hennock Valley in Dartmoor, and a road bridge on the edge of Romney Marshes in Kent.

Reasons for decline

Historically this species has recorded decline due to collecting, but more recently it is as a result of sites becoming either shaded or directly outcompeted as larger plants and shrubs start to colonise rock faces.

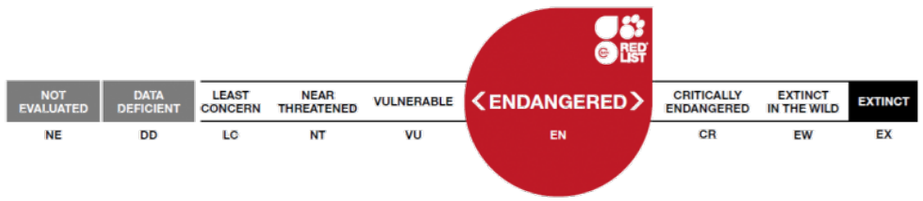
The increasing fragmentation of sites makes recolonisation less likely, and the modernisation of mining, with fewer, larger, more intensively quarried sites (rather than the creation of smaller mines) will have an impact on the future of the species. Climate change is also likely to have negative impacts in the future.

Protection under the law

General protection under the Wildlife and Countryside Act (1981). This makes it an offence to intentionally pick, uproot or destroy any plants without the permission of the landowner or occupier.

Status

Endangered, meaning it is facing a high risk of extinction in the wild.



Edge of Devon site with encouraging scrub

SURVEY

Habitat

Grows on steep rocks and cliffs and in some locations has spread to roadside walls. Sites are usually south-facing, with some shade, often from trees and gorse. Searches should be focussed in any areas supporting these formations.

When to survey

Can be surveyed through the year, although fronds will be at their best in the late summer.

What to record

- Numbers of plants (if over 100 count to the nearest 10, if over 100 to the nearest hundred)
- Area occupied by plants
- Size of plants (if notably large or small)
- Exact location of plants
- Presence of sori (if done at correct time of year)

MANAGEMENT

Plants require open conditions so this may involve the removal of scrub and other competing plants on rock faces. In addition attention should be given to ensuring rock faces are not unduly shaded as this may affect the plants' survival.

As mentioned earlier there are now concerns about climate change and the impact of heatwaves and drought, and in some cases this may require some detailed consideration about the role of scattered shade and the retention of 'nursery plants' on rock faces to ameliorate conditions.

OUR WORK

- Annual monitoring of English sites
- Re-survey of Welsh sites
- Management of the two English sites to maintain optimum conditions

SUCCESS

- Kent population now known to Highways contractors

We remain very concerned about the survival of this species in England, with both sites showing population decline in recent years. We hope management at these sites will improve the outlook for them. At the same time we are hoping to produce an up-to-date census of populations in Wales.

View from the Devon site

The Species Recovery Trust is a charity set up to tackle the loss of some of the rarest species in the UK.

There are over nine hundred native species in the UK that are classed as under threat, with several hundreds more currently widespread but known to be in significant decline. The countryside is now bereft of many species that were a familiar sight a mere generation ago.

A small number of these species are on the absolute brink of existence, poised to become extinct in our lifetimes; our goal is to stop them vanishing.

Our aim is to remove 50 species from the edge of extinction in the UK by the year 2050. In addition we are reconnecting people with wildlife and the natural world through training programmes and awareness raising.









the species recovery trust

www.speciesrecoverytrust.org.uk

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