

the  
species  
recovery  
trust

2021 Species Report

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# Marsh Clubmoss

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Thursley & Ockley  
Commons

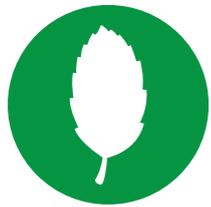
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# Summary



This report lays out the current status of Marsh Clubmoss *Lycopodiella inundata* at Thursley & Ockley Commons (NNR, Ramsar, SPA, SAC & SSSI).



The species continues to suffer declines in the south-east, but the populations at Thursley and Ockley are stable and increasing.



Scrapes are no longer a recommended management technique for this species. Disturbance through grazing & heavy vehicle tracking are now thought to be more effective in providing suitable habitat.



Management is recommended at sub-sites, aimed at improving the micro-habitat at these locations.



# Introduction

The Species Recovery Trust are a charity devoted to saving some of Britain's most endangered species. One of our target plant species is Marsh Clubmoss *Lycopodiella inundata* which is severely under threat in the south-east of England.

Detailed site surveys were completed across Sussex, Hampshire & Surrey in 2021, and those completed at Thursley and Ockley Commons are reported here. Our overall concern now is that elevated levels of atmospheric nitrogen, of which some are associated with air traffic overhead, may be impacting upon the SE sites. Our national monitoring programme has seen populations in Cumbria and Cornwall reaching huge proportions, whereas in the south-east, even when the habitat conditions appear relatively good, populations continue to decline.

Marsh Clubmoss is an indicator species of healthy damp heath and mire ecosystems, and it is vital to keep monitoring these populations and taking measures where necessary to save them from becoming extinct in the region.



# Sites Summary

Thirteen sub-sites at Thursley & Ockley Commons have been found to support Marsh Clubmoss. One of these is a new record for this year. Locations of these, along with 2021 population data is detailed in the table below, with additional information provided overleaf.

**Table 1: Populations of Clubmoss Recorded at Thursley & Ockley Commons in 2021**

Site Name	Grid Ref	2021 Count
Li53 Thursley Pond Track	SU 90114 41314	146 plants
Li53 Thursley Pond Track B	SU 90156 41359	167 plants
Li53a Thursley Northern Track	SU 91155 42061	6 plants
Li53b Thursley Keyhole	SU 91140 42064	484 plants
Li53c Thursley Linear Scrape	SU 90227 41747	10 plants
Li53d Thursley Old Trackway	SU 90220 41730	0 plants
Li53e Thursley Boardwalk	SU 90100 412221	N/A
Li53f Thursley Hammerhead	SU 90226 40826	3500 plants
Li53g Thursley Bushy Creek	SU 90293 40829	2 plants
Li53h Thursley Eastern Scrape Extension	SU 90277 40830	61 plants
Li53i Thursley South of Strip	SU 90254 40818	1128 plants
Li53j Thursley Wide Scrape	SU 90301 40846	907 plants
Li53k Thursley Round Pond	SU90064 40908	32 plants





## Li53 Thursley Pond Track

SU 90114 41314

2021: 146 plants scattered along the track and in places, 1-2m from the edges of the track (from SU 90135 41334 to SU 90085 41318)

2018: 20 plants scattered along the track in three clumps

**Recommended Actions:** Light, sporadic cattle grazing, or tracking with a heavy vehicle (digger, tractor, tank) to maintain the track and create structural variation with areas of inundation, bare & dry ground.



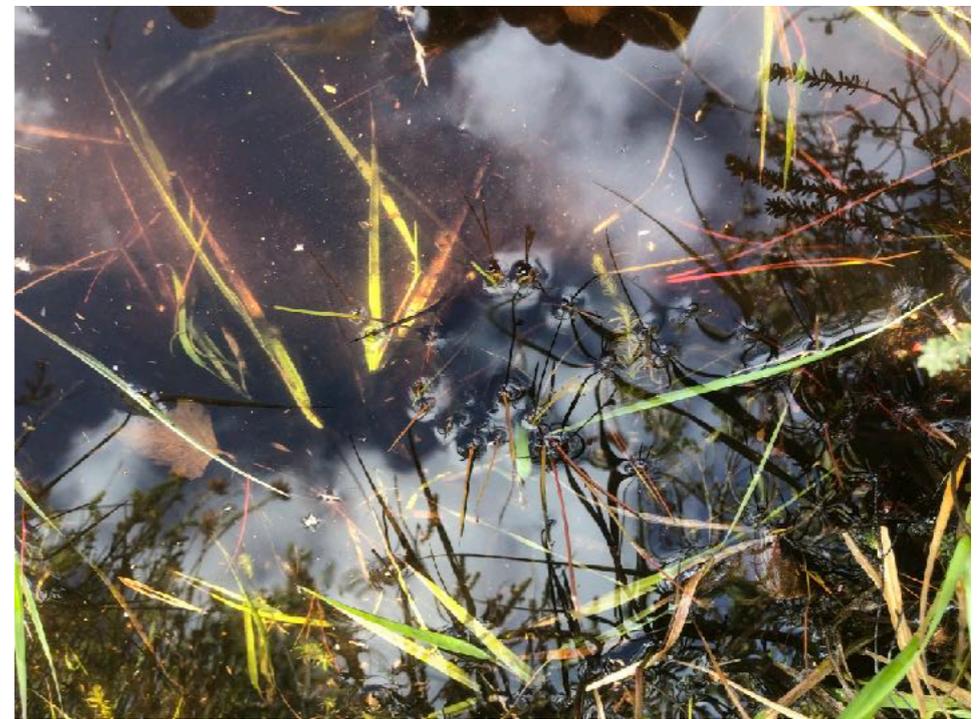
## Li53 Thursley Pond Track B

SU 90156 41359

2020: 167 plants along track towards a scrape. Main population at SU 90156 41359 and 2x outlier populations at SU 90154 41364 & SU 90152 41354. Many plants with strobili.

2018: 15 plants scattered along track

**Recommended Actions:** Light, sporadic cattle grazing, or tracking with a heavy vehicle (digger, tractor, tank) to maintain the track and create structural variation with areas of inundation, bare & dry ground.



## Li53a Thursley Northern Track

SU 91155 42061

2021: 6 plants found, but flooded at the time of survey so some may have been missed. Becoming very overgrown / shaded by surrounding *Erica tetralix*, *Calluna vulgaris*.

2018: 63 plants, many with strobili. Heather encroaching

2017: 13 plants

2014: 5 plants

**Recommended Actions:** Tracking with a heavy vehicle (digger, tractor, tank) to maintain the track and create structural variation with areas of inundation, bare & dry ground.



## Li53b Thursley Keyhole

SU 91140 42064

2021: 484 plants, many with strobili. Most plants on long section of track rather than within the keyhole (scrape). Associate species & bare ground present. *Molinia* & *Erica tetralix* starting to encroach

2019: 341 plants with strobili; largest numbers outside of keyhole

2018: 206 plants

2017: 158 plants

2014: 23 plants

**Recommended Actions:** Light grazing or tracking with heavy vehicle in areas where heather is starting to encroach (northern extent).



## Li53c Thursley Linear Scrape

SU 90227 41747

2021: 10 small plants approx. 3m north of scrape. 3 strobili present. *Molinia* & *Calluna* encroaching. Struggling population.

2019: 8 plants 3m north of scrape.

2018: 3 plants 9m up scrape

2017: 1 plant on scrape

**Recommended Actions:** track vehicle across area to open up the vegetation and create structural variation, areas of inundation, bare & dry ground.



# Li53d Thursley Old Trackway

SU 90220 41730

2021: 0 plants found. Trackway still visible, but very little bare ground with *Molinia*, *Erica tetralix*, *Sphagnum*, & *Narthecium ossifragum* across entire track.

2018: No plants recorded. Overgrown with *Calluna vulgaris*, *Erica tetralix* & *Salix repens*

2017: 0 plants found. Overgrown due to track realignment to new bridleway.

2011: 1000 plants by minor path, 17m from MOD sign.

**Recommended Actions:** track heavy vehicle across area to open up the vegetation and create structural variation, including inundated areas, bare & dry ground.

It is likely that this population has been lost, however management would aim to recreate suitable habitat. Although it's unlikely that a population would establish from dormant spores (this hasn't been witnessed before), it is possible that spores from the nearby population (Li53c) may locate themselves on new bare ground as this site was successful in the past.



# Li53e Thursley Boardwalk

SU 90100 412221

2021: Unable to monitor due to access constraints

2017: 0 plants. No suitable substrate, in damp patches *Sphagnum* has become dominant, and otherwise *Molinia* has formed dense tussocks.

2011: 70 plants in 30x30m path just south of the boardwalk

**Recommended Actions:** no action required at this time.

Photo from 2017



## Li53f Thursley Hammerhead

SU 90226 40826

2021: 3500 plants with high percentage supporting strobili. Area in good condition, plenty of bare ground, but edges starting to be encroached by *Calluna*, *Sphagnum*, & *Erica tetralix*. Less plants in the permanent monitoring plots.

2017: 660 plants. Excellent habitat with bare ground and *Sphagnum* hummocks. The densest clusters within permanent monitoring plots.

**Recommended Actions:** Light cattle grazing to keep the *Molinia* at bay & to create some light disturbance.



## Li53g Thursley Bushy Creek

SU 90293 40829

2021: 2 plants found, very overgrown with *Sphagnum compactum*, *Pinus sylvestris*, & *Erica tetralix*. Only a very small areas of bare ground left.

2017: 82 plants, good level of strobili

2011: present

**Recommended Actions:** Scrub removal & light mattocking around the area of the plants.



# Li53h Thursley Eastern Scrape Extension

SU 90277 40830

2021: 61 plants but flooded at the time of survey. Not many strobili present. Most plants at either end of the scrape with a few plants dotted between. Still plenty of bare ground and associate species (*Drosera* sp., *Erica tetralix*, *Sphagnum*, *Molinia*, *Juncus bulbosus*).

2018: 53 plants along scrape, lots of bare ground & fairly wet.

2017: 7 plants in three clumps, good amount of bare ground although poaching quite heavy in some parts.

2014: 13 plants

**Recommended Actions:** No action required at this time.



## Li53i Thursley South of Strip

SU 90254 40818

2021: 1128 plants (648 on scraped area & 580 on drier area between path & scrape). Lots of strobili on drier area.

2018: 531 plants

2017: 29 in 5x5 patch

**Recommended Actions:** Light cattle grazing to keep the Molinia at bay & to create some light disturbance.



## Li53j Thursley Wide Scrape

SU 90301 40846

2021: 907 plants across circular area & wide scrape (particularly in circular scrape). Very healthy plants, most with strobili. Plenty of bare ground and associate species present.

2019: 184 plants (82 in circular area & 102 in wide scrape).

2018: 175 plants

2017: 112 plants

**Recommended Actions:** No action required at this time.



# Li53k Thursley Round Pond

SU90064 40908

2021: NEW RECORD. 32 plants found around Molinia & Sphagnum tussocks, within a round scrape. Lots of bare ground & associate species present.

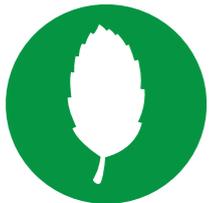
**Recommended Actions:** No action required at this time.

# Looking forward

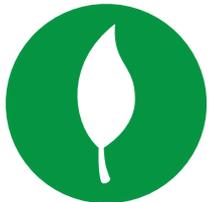
Project aims 2021-2030



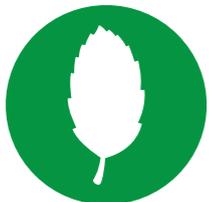
Continue to monitor all sites on annual basis.



Li53 Thursley Pond Track & B: Management required in the next few years as vegetation encroaching. Grazing or tracking with a heavy vehicle.



Li53a, Li53b, Li53c, Li53d: management using heavy vehicle tracking



Li53f & Li53i: light cattle grazing required in the next few years



Li53g: Scrub removal & light mattocking around the area of the plants.



Continue to raise local awareness in the area.



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.



A photograph of a forest floor in spring. The ground is covered with a dense carpet of purple bluebells. In the foreground, a large, weathered tree stump lies on the ground, partially covered in moss. The background is filled with tall, slender trees with fresh green leaves, suggesting a young forest or woodland. Sunlight filters through the canopy, creating dappled light on the ground.

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