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Survey of the Maritime Rock & Coastal Slope Lichen Assemblage Feature on Skokholm Island

Jon Hudson Ecological Consultancy, September 2025

Evidence Report No. 950

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Report series:	NRW Evidence Reports
Report number:	950
Publication date:	November 2025
Title:	**Survey of the Maritime Rock & Coastal Slope Lichen Assemblage Feature on Skokholm Island**
Author(s):	**Jon Hudson**
Quality Assurance:	Tier 2
Peer Reviewer(s)	Sam Bosanquet
Approved By:	Matthew Lowe
Restrictions:	**None**

Distribution List (electronic only)

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Recommended citation for this volume:

Hudson, J. 2025. Survey of the Maritime Rock & Coastal Slope Lichen Assemblage Feature on Skokholm Island. NRW Evidence Report No: **950**, 50 pp, Natural Resources Wales, Bangor.

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Crynodeb gweithredol

Mae'r ddogfen Guidelines for Biological SSSIs: Lichens and associated microfungi Sanderson et al, 2018) yn cynnwys mynegai newydd (ar Greigiau Morol a Llethrau Arfordirol) ar gyfer dewis casgliadau o gennau'r arfordir. Mae hyn yn egluro'r rhywogaethau o gen sy'n ffurfio'r nodweddion cen arfordirol a nodwyd ar SoDdGA Sgogwm ond mae hefyd yn amlygu'r wybodaeth fratiog am gennau arfordirol yng Nghymru. Dim ond SoDdGA Ynys Sgogwm, SoDdGA Ynys Sgomer a SoDdGA Ynys Enlli sy'n pasio'r trothwy ar gyfer dewis, er bod SoDdGA Ynys Dewi yn agos at y trothwy.

Mae'r adroddiad presennol yn ymdrin ag arolwg o Ynys Sgogwm. Roedd modd ymdrin â'r SoDdGA fwy neu lai yn ei gyfanrwydd gan fod Sgogwm yn ynys fechan. Fodd bynnag, mae rhannau o ymyl y clogwyn arfordirol yn anhygyrch. O achos y nifer fawr o rywogaethau wedi'u rhestru ar y Mynegai o Greigiau Morol a Llethrau Arfordirol, yr amser cyfyngedig a oedd ar gael a'r anawsterau o ran adnabod cyfran o'r rhywogaethau hyn yn y maes, mae'n annhebygol bod yr arolwg wedi dod o hyd i'r holl rywogaethau perthnasol. Fodd bynnag, dangosodd yr arolwg fod Ynys Sgogwm o bwysigrwydd cenedlaethol am y cennau arni ac mae ganddi sgôr o 36 ar y Mynegai dan sylw, sy'n golygu bod y safle'n gymwys o ran y nodwedd hon o'r SoDdGA.

Yn achos wyth rhywogaeth a gofnodwyd yn hanesyddol, sef Caloplaca sorediella, Pectenia atlantica, P. plumbea, Heterodermia obscurata, Leptogium britannicum, Nephroma laevigatum, Porina curnowii a Rinodina confragosa, ni chawsant eu cofnodi y tro hwn. Pe bai'r holl rywogaethau hyn yn bresennol o hyd, sy'n annhebygol yn achos pedwar ohonynt o leiaf, byddai'r sgôr ar y Mynegai yn 44. Mae'n bosib bod hen gofnod ar gyfer Leptogium cochleatum yn anghywir.

Yr argraff gyffredinol a gafwyd o'r arolwg oedd bod gan bron pob un o'r rhywogaethau ar y Mynegai boblogaethau cymharol fawr ac iach. Yr unig rywogaeth yr oedd pryder yn ei chylch oedd Teloschistes flavicans yn North Haven, ble gwelwyd dirywiad amlwg yn y boblogaeth rhwng 2007 a 2025. Canfuwyd bod poblogaethau Roccella phycopsis a R. fuciformis yn fawr ac i'w cael ar draws llawer o'r ynys, ac mae'n bosib mai dyma'r poblogaethau mwyaf yng Nghymru. Mae'r ynys o bwys

mawr i'r gymuned o gennau Sclerophytetum circumscriptae, cymuned nodedig iawn sy'n nodweddiadol o gilfachau a mannau trosgrog sych a chysgodol mewn creigiau morol silicaidd nad ydynt yn cael glaw uniongyrchol. Mae'r gymuned hon, sydd wedi'i chyfyngu i raddau helaeth i arfordiroedd de a gorllewin Ynysoedd Prydain, yn cynnwys llawer o rywogaethau prin, yn aml ar ymylon gogleddol eu dosbarthiad.

Executive summary

The 2018 *Guidelines for Biological SSSIs: lichens and associated microfungi* (Sanderson et al, 2018) includes a new index (Maritime Rock and Coastal Slope Index) for selecting coastal lichen assemblages. This clarifies the lichen species which make up the notified coastal lichen features on Skokholm SSSI but also highlights the patchy knowledge of coastal lichens in Wales. Only Skokholm Island SSSI, Skomer Island SSSI and Ynys Enlli SSSI pass the selection threshold, although Ramsey Island/Ynys Dewi SSSI comes close to the threshold.

The current report covers a survey of Skokholm Island. More or less complete coverage of the SSSI was possible as Skokholm is a small island. However, parts of the coastal cliff edge are inaccessible. Due to the large number of species listed on the Maritime Rock and Coastal Slope Index (MRCSI), the limited time available and the difficulties in identifying a proportion of these species in the field, the survey is unlikely to have found all of the relevant species. However, the survey showed that Skokholm Island is of national importance for its lichen flora and has an MRCSI score of 36, meaning that the site qualifies for this SSSI feature.

Eight historically recorded species, *Caloplaca sorediella*, *Pectenia atlantica, P. plumbea, Heterodermia obscurata, Leptogium britannicum, Nephroma laevigatum, Porina curnowii* and *Rinodina confragosa*, were not refound. If all these species were still present, which in the case of at least four, seems doubtful, the MRCSI score would be 44. An old record for *Leptogium cochleatum* may be erroneous.

The overall impression gained from the survey was that almost all of the MRCSI species had reasonably large and healthy populations. The only species there was concern about was Golden Hair Lichen *Teloschistes flavicans* at North Haven where, between 2007 and 2025, there has been a marked decline in the population. The

populations of *Roccella phycopsis* and *R. fuciformis* were found to be large and widespread across much of the island, and may be the largest in Wales. The island is of high importance for the *Sclerophytetum circumscriptae* lichen community, a very distinctive community that is characteristic of dry, sheltered recesses and overhangs in siliceous maritime rocks which are not subject to direct rainfall. This community, which is largely restricted to the south and west coasts of the British Isles, includes many rare species often at the northern edges of their distributional ranges.

Background and aims

The 2018 Guidelines for Biological SSSIs: lichens and associated microfungi includes a new index for selecting coastal lichen assemblages. This clarifies the lichen species which make up notified coastal lichen features on Skomer and Middleholm SSSI and Skokholm Island SSSI but also highlights our patchy knowledge of coastal lichens in Wales. Only those two sites and Ynys Enlli SSSI pass the selection threshold, although Ramsey/Ynys Dewi SSSI comes close to the threshold. The present survey aims to assess the condition of the Maritime Rock and Coastal Slope (MRCSI) lichen assemblage on Skokholm Island SSSI, and to clarify if it does actually qualify as an SSSI Feature.

There is a notified coastal lichen assemblage feature for Skokholm Island SSSI, which is based upon historic records which suggest that the site qualifies for the Maritime Rock & Coastal Slope Index (MRCSI) SSSI feature. Skokholm Island appears to have received little attention with regard to its lichen flora in comparison to the neighbouring Skomer Island. There have been no recent comprehensive surveys. A brief outline of lichen recording on the island is given below.

A survey was undertaken in 1964 by J.W. Sheard and B.W. Ferry (Sheard, J.W. & Ferry, B.W. (1964), Skokholm Bird Observatory Report 1964 pp 23-35), a copy of which is kept in the Skokholm Island library. One of the foremost and experienced lichenologists specialising in maritime lichens, Dr Anthony Fletcher, visited the island (how many times appears to be unknown) and recorded the lichens he encountered. In the Skokholm island library, there is a list of "*Lichens on Skokholm to 2017 compiled by John Jones from records made by Dr Anthony Fletcher*". This species

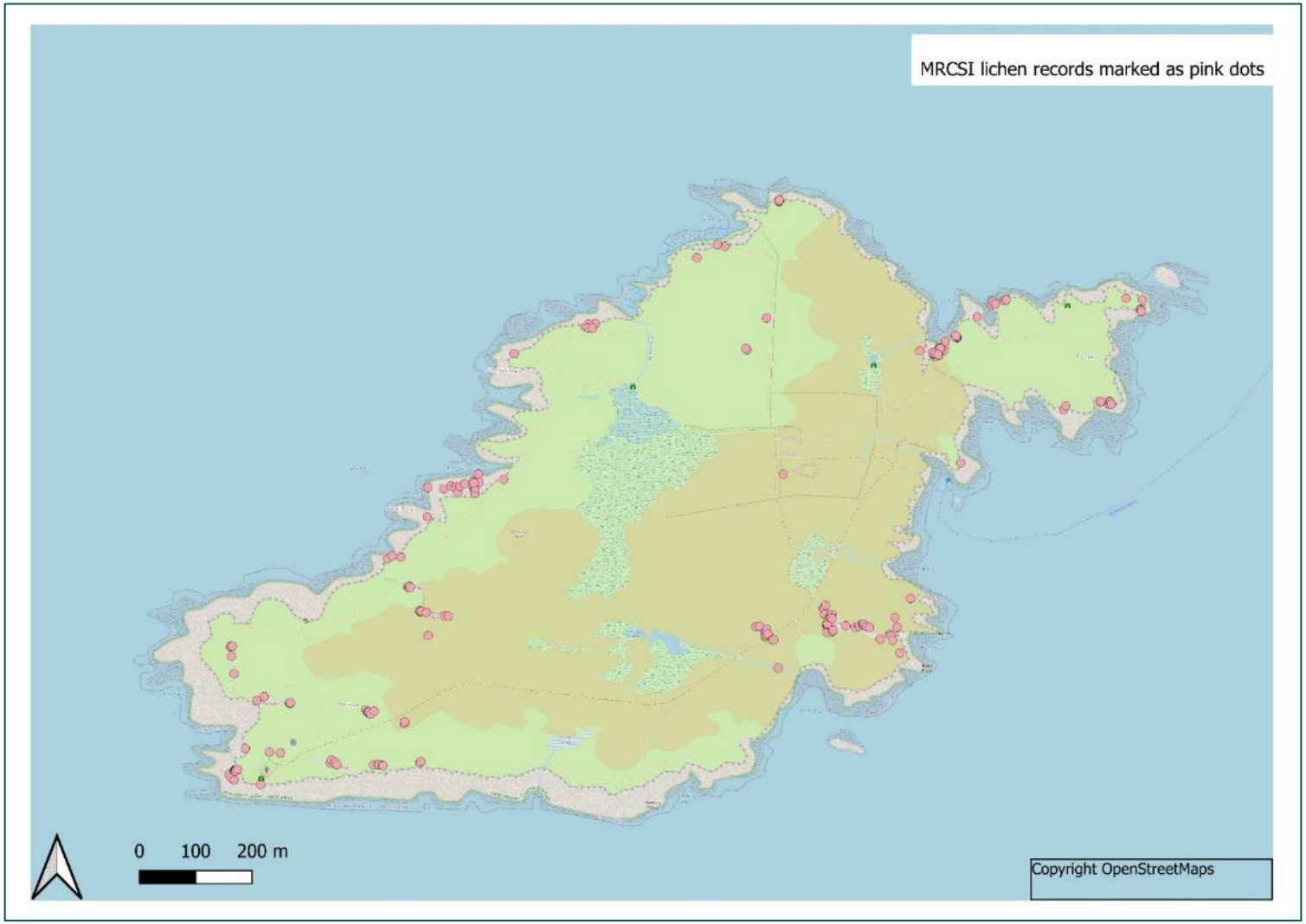
list indicates that the site passes the SSSI selection threshold. Unfortunately, it does not give any clues as to how thorough a survey was made, what areas were covered or when the records were made. Locational information, and the size or extent of the populations of any species, are also absent. This list also includes (but does not differentiate) historic records taken from: Gillham, M.E. (1954) and Sheard & Ferry (1964) and, possibly other sources.

John Jones (a member of the British Lichen Society) apparently led lichen courses on the island for several years (Sue Wolfe, pers. com.). Sue Wolfe, a member on one of these courses, wrote a report titled “Lichens of Skokholm Island”, based on several days of looking at lichens with John Jones on one of these courses in September 2007. Again, a copy of the report is kept in the Skokholm Island library. Whilst this is a valuable record, it is uncertain how reliable some of the identifications made on these lichen courses were – for example, a record of “*Platismatia glauca*” is accompanied by a photograph of a *Punctelia* species, probably *P. subrudecta*.

There is a book titled “Lichens of Skokholm” by Mike Creighton and Jan Schubert that was published in 2018. This is out of print but still available as an ebook. Again, this is of some use, but it is a collection of mostly unlabelled photographs with some misidentifications. It is far from complete but does contain some rough locational information on some MRCSI species.

The author is unaware of any other surveys of Skokholm Island - the Lichenologist online magazine was searched, as was the BLS “grey literature” web page. The Natural Resources Wales (NRW) Lower Plants Advisor was also consulted and no survey reports were found.

The present survey therefore aims to confirm the SSSI feature and to provide information on the location, size and extent of some of the key MRCSI species. See Map 1 for the survey area and the locations of the lichens recorded during the survey and Map 2 for the locations of the key MRCSI species *Athalia scopularis*, *Ramalina polymorpha, Roccella fuciformis, R. phycopsis* and *Teloschistes flavicans.*



Map 1 Skokholm Island survey area

Methods

This survey report focuses on the Maritime Rock and Coastal Slope assemblage of lichens. The *Guidelines for Biological SSSIs: lichens and associated microfungi* (Sanderson et al, 2018) identifies a list of some 96 species that make up the Maritime Rock and Coastal Slope Index (MRCSI). Of these, at least 35 species must be present in any contiguous 5km long stretch of coast for the assemblage to qualify as an SSSI feature.

A survey of the coastal lichens was undertaken around the whole island, covering a contiguous approximately 5km stretch of coast within the SSSI. The survey took place over a period of 4 days during September 2025 (Monday 22nd – Friday 26th inclusive). On the 22nd, the boat arrived at midday and therefore only the afternoon was available for surveying. On the 26th, the boat left at midday and just a few hours in the morning were available for surveying. Each day, a different area of the island was searched, with a further evening visit on two occasions to North Haven and Mad Bay to re-search for the cyanolichens that had been recorded in the past, e.g. *Pectenia atlantica, Pectenia plumbea, Leptogium britannicum* and *Nephroma laevigatum*. Cyanolichens are lichens in which the fungal component (the mycobiont) partners with a cyanobacterium (the cyanobiont).

All species recorded in this survey were identified in the field using the keys in “Lichens: An Illustrated Guide to the British and Irish Species” (Dobson 2018) and “A Field Key to Coastal and Seashore Lichens” (Dobson 2010). A number of species were collected for microscopic examination. These were keyed out using “The Lichens of Great Britain and Ireland” (Smith et al, 2009) and the online BLS “revision” keys. Few samples could be taken as excessive hammering of the rocks was deemed unacceptable. Many of the crustose (crust-like) species in the MRCSI are difficult to identify with certainty in the field, and therefore, it is likely that some species could have been missed. Small samples of foliose (leafy) and fruticose (bushy/shrubby) lichens were collected for laboratory identification/confirmation, as were some terricolous and crevice-dwelling species. Where possible, small fragments of loose rock bearing crustose species were also collected.

Any lichens that are listed in the Maritime Rock and Coastal Slope Index that were seen during the survey were recorded digitally into a tablet computer using “Qfield” a standalone data collection application linked to QGIS. The records were then saved as a QGIS shapefile, which accompanies this report. An indication of the abundance of each species is also provided using the British Lichen Society (BLS) scale. The following categories are used: A/R for Rare - Used for any species that occur as a single or a small number of individuals. A/O for Occasional - Used for species that occur in a few places in a survey area. A/F for Frequent – Used if a species was present in several places throughout a survey area. A/A for Abundant - Used if a species is common throughout the survey area. A/D for Dominant - Used where a species dominates any part of any of the survey areas.

Results

The survey area encompassed much of the coast of the island as well as the inland rock outcrops. The rocks here are all Old Red Sandstone, a great deal of which is exposed forming a mixture of steep cliffs and sloping rocks. The rocks dip to the south, forming a series of well-lit south-facing slabs and short walls, with many sheltered north-facing overhangs. In most places, the vertical extent of the littoral (black zone) is increased by the effects of extreme exposure. The sub-mesic and mesic-supralittoral (orange zones) are also generally extensive, whilst the xeric supra-littoral (grey zone) extends for many meters up the rock faces and on into the centre of the island, where it mingles with more terrestrial communities. The habitats are therefore varied but are similar throughout the survey area.

Lichen Communities

The main lichen communities on Skokholm Island supporting MRCSI species are described briefly below.

Orange Zone - Caloplacetum marinae. This association forms a yellow-orange zone in the sub-mesic and mesic-supralittoral (above the black “*verrucaria*” zone) in well-lit sites where seawater spray is frequent. Orange “*Caloplaca*” species and *Lecanora actophila* and *L. helicopis* are characteristic of this community. MRCSI species

include C*aloplaca littorea*, *Halecania ralfsii*, *Myriolecis poliophaea* and *Polycauliona verruculifera*. The community is widespread across the island.

Figure 1 Orange zone with "*Caloplaca*" species and *Lecanora actophila* and *L. helicopis*

Grey Zone – Well-lit rocks - *Ramalinetum scopularis*. This association forms the grey zone of the xeric-supralittoral. This variable maritime association is found extensively in all parts of the island, dominated by species such as *Anaptychia runcinata*, *Diploicia canescens, Lecanora gangaleoides*, *Ramalina siliquosa* and *R. cuspidata* and *Tephromela atra.* MRCSI species include *Ramalina canariensis* and *R. lacera* on vertical, more shaded rocks and, in sunnier, more horizontal situations, species such as *Diploschistes caesioplumbeus*, *Myriolecis fugiens*, and foliose species such as *Xanthoparmelia pulla/loxodes.* The community is widespread across the island.

Figure 2 Grey zone dominated by crustose species with tufts of fruticose *Ramalina* species

Grey Zone - dry, sheltered underhangs - *Sclerophytetum circumscriptae*. This association forms a pale crust in dry, sheltered underhangs on north or east-facing rocks that are not directly wetted by rainfall. This community has many rare MRSCI species, including *Ingaderia vandenboomii, Roccellographa circumscripta* and *Sparria endlicheri,* as well as *Roccella phycopsis* and R*. fuciformis*. *Roccella* is a widespread genus in the maritime regions of the west Mediterranean and Macaronesia but rare in Britain. The less sheltered but more or less vertical rock faces (of which there are many) are dominated by frequent to abundant *D. canescens, Ramalina lacera, R. cuspidata* and *Opegrapha cesariensis.* The community is widespread across the island.

Figure 3 Sheltered underhang community dominated by the bumpy grey/purple crustose thallus of *Paralecanographa grumulosa* (left) and (right) by extensive areas of *Phycopsis* spp.

Nutrient-enriched bird perches - *Candelarielletum corallizae.* This is the characteristic community on the tops of bird-perching rocks. The association includes species characteristic of eutrophicated sites, e.g. *Diploicia canescens, Candelariella vitellina, Lecanora polytropa* and *Xanthoria parietina*, with rarer MRCSI species such as *Athallia scopularis*, *Candelariella coralliza, Circinaria leprosescens* and *Ramalina polymorpha*. The community is widespread across the island.

Figure 4 Bird perching rock with *Athallia scopularis*

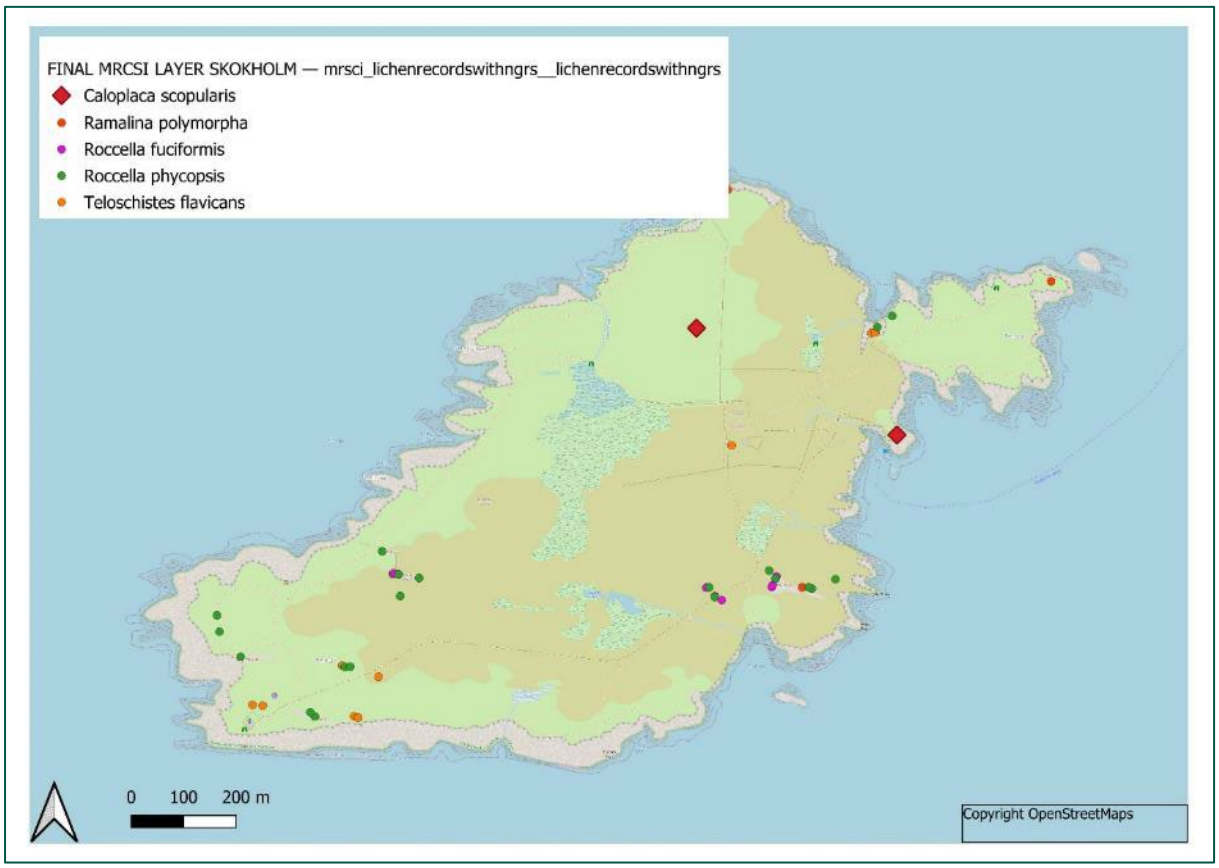
Golden Hair lichen Community - *Teloschistetum flavicantis.* This is an association that is rare in Britain on coastal rocks and heathlands and is found on Skokholm at several locations across the island. *Teloschistes flavicans* grows on and over bryophyte species, for example, *Frullania*, and foliose lichens, such as *Parmelia perlatum*, *P. reticulatum* and *Anaptychia runcinata* together with the crustose species such as *Ochrolechia parella* and *Pertusaria pseudocorallina.* The community is restricted to six locations across the island and is best developed on the more sheltered, mossy north facing rocks.

Figure 5 Typical Golden Hair lichen community with *Teloschistes flavicans* growing on and through other lichens over rock and soil

MRSCI Lichen Species

Across the island, rocks of all angles and aspects were searched for MRCSI species from the littoral zone up to the top of the xeric supra-littoral and into the terrestrial zone. Thirty-six MRCSI lichens were recorded during the present survey. Table 1 below lists these species and gives an indication of their abundance, and Table 4 in Appendix 1 provides a complete list of all the lichens recorded during the survey with ten-figure grid references. The populations of some of the more notable species are described in more detail below and shown in Map 2. National and international statuses are given for each species – E: on the English Section 41 list of priority species; IR: International Responsibility (Britain has a large proportion of the global population); NS: Nationally Scarce; NT: Near Threatened; S8: Schedule 8 protection;

VU: Vulnerable on the GB Red List; Wa: on Wales Environment Act Section 7 list of priority species.



Map 2 The locations of some Key MRSCI species

Athallia scopularis (NT NS). A northern species recorded only from Skokholm outside of Scotland. Fletcher recorded the species from a nutrient-enriched glacial erratic on “North plain” (SM7378505322), where it was seen during the present survey. A sample of what appeared to be *Caloplaca arnoldii* subsp. *oblitterata* (now *Calogaya oblitterata)* was collected from the Old Red Sandstone bedrock at South Haven (SM7416705118) but this was later determined by Steve Chambers as also being *Athallia scopularis.* This species may therefore be more widespread than previously thought, as there are plenty of similar habitats on the island.

Pectenia atlantica (IR), *P. plumbea* (IR), *Nephroma laevigatum* (IR), *Leptogium britannicum* (NS IR) . These four species have been recorded from the island in the past. Some north-facing parts of the coast (e.g. around Mad Bay and North Haven) had damp, shaded north-facing vertical rock faces surrounded by small areas of maritime grassland. These two areas appeared to be the most suitable habitats on

the island. Both areas were searched without success. The fact that these rather large and obvious species were not re-found was surprising and seems likely to indicate that they are no longer present on Skokholm. There seemed to be little suitable habitat left – all initially promising-looking rocks turned out to have little moss on them and were nutrient-enriched from bird droppings with frequent nitrophilic lichen species such as *Xanthoria parietina* and *Diploicia canescens*.

Figure 6 Shaded rocks showing evidence of nutrient enrichment

Pectenia atlantica, P. plumbea and *Nephroma laevigatum* are part of the *Lobarion* community, a community more typical of old-growth, oceanic woodland and are usually epiphytic species that sometimes saxicolous (occurring on rock). Saxicolous maritime *Lobarion* communities in Pembrokeshire are restricted to either igneous rocks where woodland runs down to the sea, as at Borough Head (Little Haven), or, in depauperate form, on hard sandstones such as at Black Cliff (Newgale) and Gateholm Island (Marloes). The only records for any MRCSI lichens from the *Lobarion* community during the present survey were a single small patch of *Normandina pulchella* at the foot of a north-facing inland crag (Spy rock) and a few patches of *Parmotrema crinitum* on mossy boulders on the flat (inland) "plains" where it was found growing with *Parmotrema perlatum* and *P. reticulatum*.

Roccella phycopsis (NT NS), and *R. fuciformis* (NT NS), ***Roccellographa circumscripta, Ingaderia vandenboomii (= Llimonaea sorediata)*** (NS)***, Sparria endlicheri*** (NS)***, Opegrapha*** *cesareensis,* and *Paralecanographa (Lecanographa) grumulosa* (NS)*.* Across large areas of the island, there are extensive areas of dry, sheltered recesses on north - or east-facing rocks that are not directly wetted by rainfall. During the present survey, these habitats were found to support numerous large, healthy fruticose thalli of *Roccella phycopsis* and *R. fuciformis* both of which were found to be widespread and locally frequent. Mapping in 2002 showed that *R. phycopsis* was widespread on the island. Over 5,400 thalli were counted – including a large number of small thalli. (Purcell, T.V. & Thompson, G.V.F. 2002. - referenced in "The Natural History of Skokholm Island" by G.V.F Thompson), Thompson considered that the presence of many small thalli "combined with the knowledge that the species was found only in one locality in 1994 - 95, perhaps indicates that it is spreading fast". The present survey showed that both *Roccella* species have large populations on the North end of Spy Rock, which is a key site for them, and that they are also frequent to abundant in many other locations, with populations running to the low hundreds of *R. fuciformis* thalli and thousands of *R. phycopsis* thalli present. The figure from 2002 therefore seems credible and the populations remain large and healthy.

The crustose *Sclerophytetum* community species *Ingaderia vandenboomii, Opegrapha cesareensis* and *Roccellographa circumscripta* are found in similar

habitats and are also widespread and frequent. *Paralecanographa grumulosa* was present in several locations with reasonably large populations. *Sparria endlicheri* appeared to be rare and was seen at a single location.

Figure 7 A dense sward of *Roccella phycopsis* (left) and a close-up of *R. fuciformis* (right)

Figure 8 *Ingaderia vandenboomii*, (brownish/grey areas in the centre) and *Roccellographa circumscripta* (grey surrounding areas)

Teloshistes flavicans (VU NS E Wa S8). In 2008, Thompson noted (Thompson, 2008), that “Until recently there were 7 well-separated populations on the island, the largest consisting of about 200 thalli (in North Haven), the smallest of just a few thalli”. six of these populations were found on rock outcrops, the other apparently on moribund heather. Unfortunately around that time, one population seems to have been lost (on the flat top of a large rock at the base of the western end of Spy Rock), perhaps due to rabbit activity. The small population reported by Thompson from heather has also been lost. There have been changes in the vegetation of the island since Sheard and Ferry (1964) noted that “*Calluna* is present”. Heather is now restricted to a single small plant in an old grazing exclosure.

More recently *Teloshistes flavicans* was known from five locations, where it was refound during the present survey. At North Haven, Sugar Loaf Gully and the translocation site near the cottage, the populations were small. At the remaining two sites, the populations were larger. A new and relatively large population was found on a mossy, north-facing outcrop to the south of Winter Pond, about 175 metres east of the lighthouse during the present survey. A brief description of each population is given below. Unfortunately due to a lack of historic information, apart from at North Haven, where Thompson reported “about 200 thalli” and a photograph of the population taken in 2007 is shown in Wolfe (2007), it is not possible to assess any changes in the population sizes.

Figure 9 *Teloschistes flavicans* growing on foliose lichens

Site 1 North Haven (SM7412505313): A comparison with photos in Wolfe (2007) was possible and this shows that there has been a decline in the vigour and size of thalli. Thompson reported “about 200 thalli” here in 2008. Today very few large thalli remain, but numerous very small thalli are scattered across a steep, mossy rock face at the back of the bay, growing on *Cladonia* squamules*, Parmotrema perlatum, Parmelia sulcata, Xanthoria parietina, Anatypchia runcinata* and *Ramalina* spp. The population here is now nowhere near 200 thalli, and more like 30-40. This decline does not seem to be due to nutrient enrichment from birds or disturbance from rabbits and there is no obvious reason for the decline. This mossy rock face also seemed a likely possible historic site for the missing MRSCI *Lobarion* community species, but none were seen here.

Figure 10 *Teloschistes flavicans* at North Haven in 2007 (left) and (right) in 2025 with the thalli circled in blue

Site 2 On a rock face near the cottage (SM7385205098): Five small thalli were transplanted low down on a north-facing rock wall a few years ago by simply entwining some wind-blown thalli fragments from Sugar Loaf into the existing lichen/bryophytes (Richard Brown, Skokholm Warden, pers. com.). All thalli were still present and healthy-looking, but small.

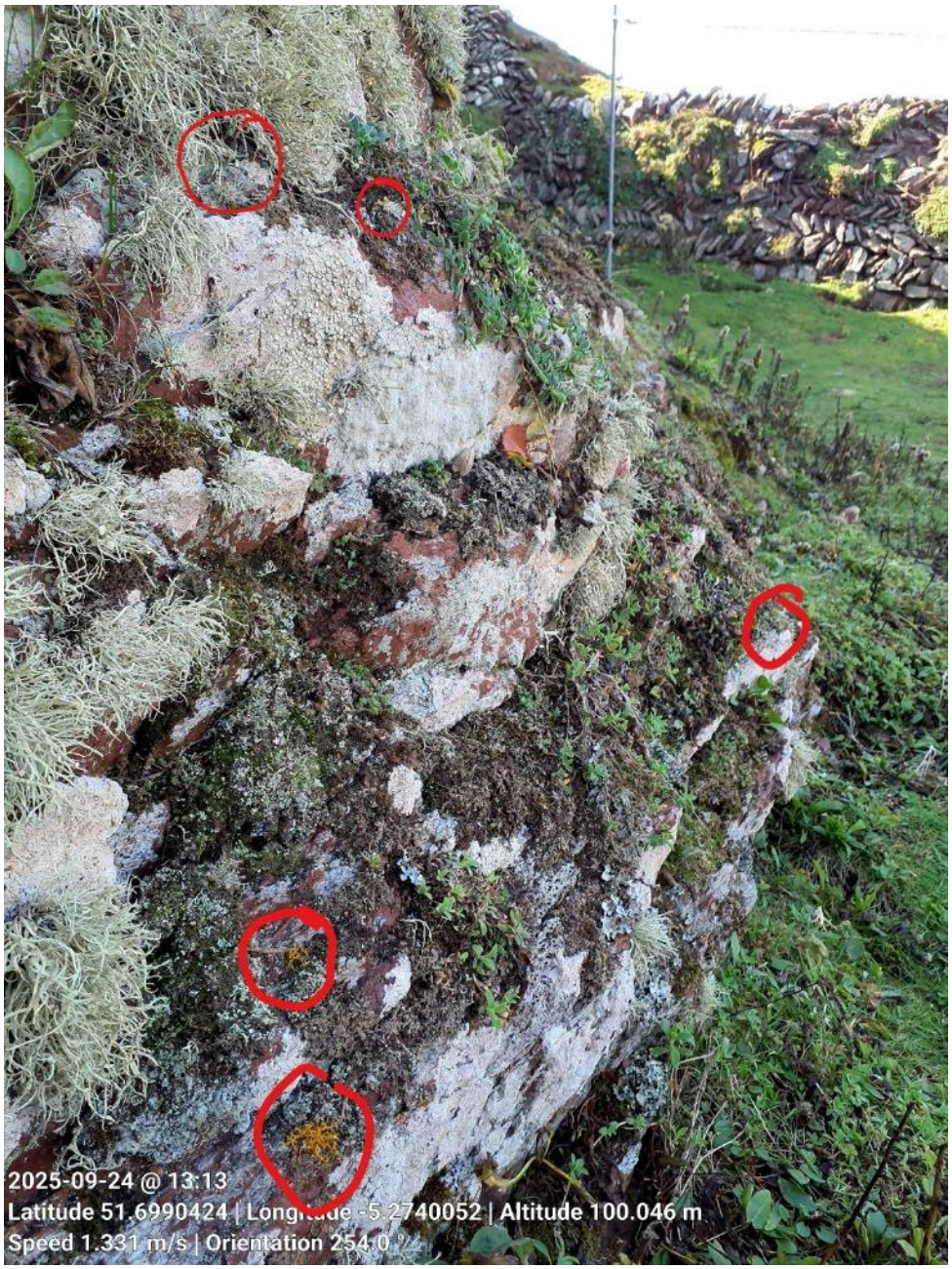


Figure 11 *Teloschistes flavicans* transplants (circled red) near the cottage

Site 3 Broken rock/soil area just south of the track (SM7317804658): *Teloschistes flavicans* is frequent on a small area (roughly 4x2m) of south-facing, very gently sloping broken rock and soil with between 50-100 thalli present. *T. flavicans* is attached to Cladonia squamules, *Parmelia sulcata*, *Xanthoria parietina*, *Anatypchia runcinata, Ramalina* spp., Bryophytes, *Festuca* spp and *Spergularia* spp.

Figure 12 *Teloschistes* site 3

Site 4 Sugarloaf gulley. South facing rock slab at the top of a gulley at the western end of Sugarloaf (SM7310904679): Approximately 20 thalli of *Teloschistes flavicans* were found attached to *Cladonia rangiformis*, *Cladonia* squamules*, Parmotrema perlatum*, *P. reticulatum*, *Parmelia sulcata*, *Xanthoria parietina*, *Anatypchia runcinata*, *Ramalina* spp. and Bryophytes. All thalli looked healthy, but it seemed like perhaps the population was not as dense as it might be, and it may be in decline (although this is no more than a “gut feeling”).

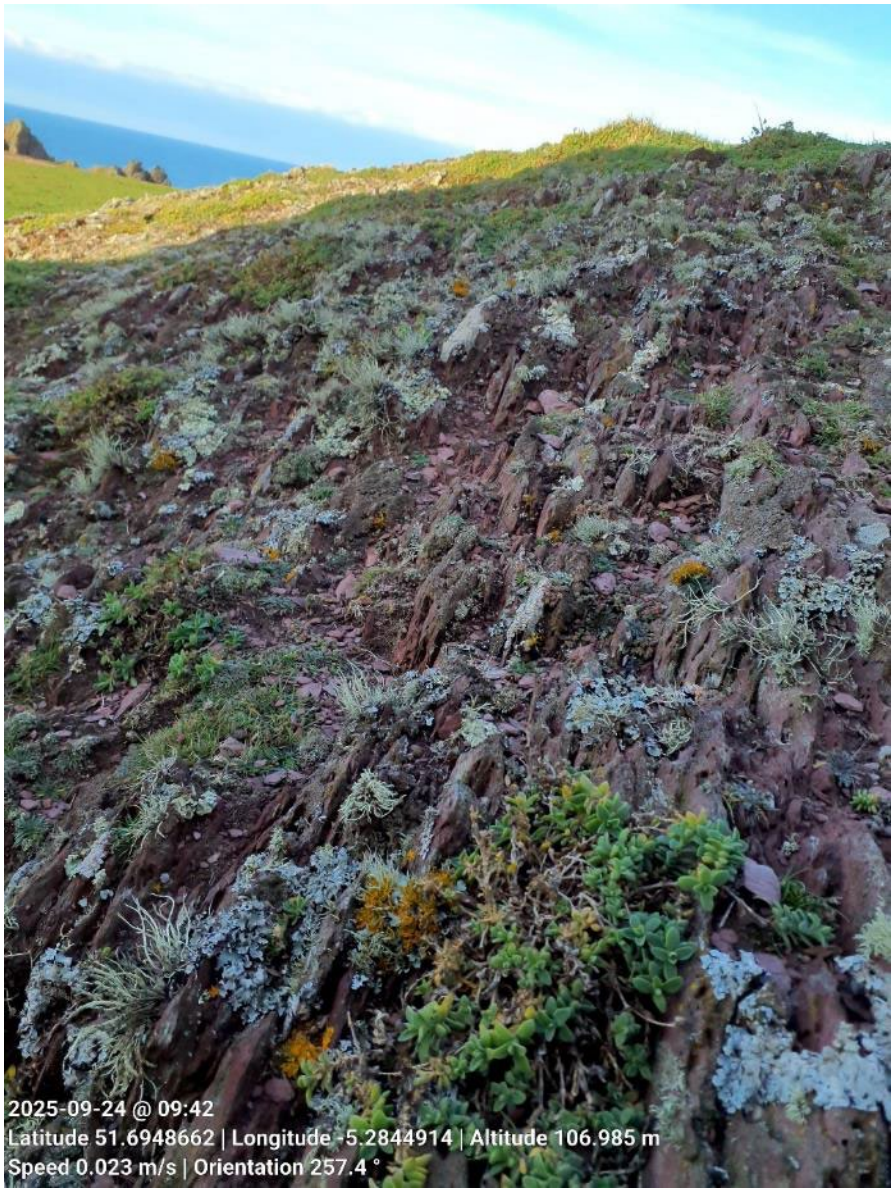


Figure 13 Thin scatter of *Teloschistes flavicans* thalli at Site 4

Site 5 Low down on the North side of the rock wall, immediately north of the lighthouse, between "The Smoking Room" and a small gully. *(SM7293804604 - SM7295804603):* A single *Teloschistes flavicans* at SM7293804604 and numerous (50-100) thalli at SM7295804603.

Figure 14 (left) numerous *Teloschistes flavicans* thalli at Site 5 (SM7295804603) and (right) the single thallus at SM7293804604

Site 6 (New site) South of Winter Pond, 175 metres West of the lighthouse, (SM7313804580). Three more or less linked populations occur along the South coast path near Winter Pond, on the mossy North facing side of a rock wall. Probably between 100-200 thalli present.

Figure 15 (left) numerous scattered *Teloschistes flavicans* thalli (edged in blue) high up on rocks at Site 6 and (right) the extent of a population (edged in red) near the base of Site 6

Ramalina polymorpha (NT NS) The nutrient-enriched areas on the top of Spy Rock are a key site for *Ramalina polymorpha,* where a reasonably large population is present. Otherwise, the species appears to be uncommon on the island.

Figure 16 *Ramalina polymorpha* and (inset) its prominent, isidia-like or soredia-like granules

***Parmotrema reticulatum*.** Whilst not an MRSCI species, it was interesting to note that *Parmotrema reticulatum* (an oceanic and thermophilic lichen) is abundant across most of the island – it seems to be more common than *P. perlatum* and its abundance seems not to have been commented on before.

Table 1 MRCSI Lichens recorded at Skokholm Island SSSI; *Species found in 2025 but not included in the pre - 2025 MRCSI score

Species	MRCSI score	Indication of abundance
Aspicilia epiglypta	1	A/O
Athallia scopularis	1	A/R
Bacidia scopulicola	1	A/F
Buellia subdisciformis	1	A/O
Caloplaca littorea	1	A/R
Candelariella coralliza	1	A/O
Circinaria leprosescens	1	A/O
Dermatocarpon miniatum	1	A/R
Diploschistes caesioplumbeus	1	A/O
Diplotomma chlorophaeum	1	A/R
Flavoplaca maritima	1	A/O
*Fuscopannaria nebulosa**	1	A/R
Halecania ralfsii	1	A/R
Ingaderia vandenboomii	1	A/F
Lecania aipospila	1	A/O
Lecanora praepostera	1	A/O
Lepra monogona	1	A/R
Myriolecis fugiens	1	A/O
Myriolecis poliophaea	1	A/R
Normandina pulchella	1	A/R
Opegrapha cesareensis	1	A/A
Paralecanographa grumulosa	1	A/O
Polycauliona verruculifera	1	A/O
Ramalina canariensis	1 score for *canariensis*	A/F
Ramalina lacera	or *lacera* but not both	A/A
Ramalina polymorpha	1	A/R
Rinodina beccariana	1	A/O
Rinodina luridescens	1	A/R
Roccella fuciformis	1	O/F

Species	MRCSI score	Indication of abundance
Roccella phycopsis	1	O/F
Roccellographa circumscripta	1	A/F
Solenopsora holophaea	1	A/R
Solenopsora vulturiensis	1	A/R
Sparria endlicheri	1	A/R
Teloschistes flavicans	1	A/O
Trapeliopsis wallrothii	1	A/R
Xanthoparmelia loxodes	1 score for *loxodes*	A/O
Xanthoparmelia pulla	or *pulla* but not both	A/O
Required MRCSI Score for the site to meet the selection threshold	35	n/a
MRCSI Score from the 2025 survey	36	n/a
MRSCI score of all pre-2025 records	44	n/a
Number of new MRCSI species found in 2025	1	n/a
Number of previously recorded MRCSI species not seen in 2025	8	n/a
Total MRCSI score for all years	44	n/a
Likely present-day total MRSCI score	39 or 40	See Section 6 for an assessment of the likely present-day status of the seven additional species

Lichen species not refound during the 2025 survey

Table 2 Likely status of the MRCSI species previously recorded from Skokholm but not seen in the present survey

Species not seen during this survey	Likely presence in 2025
Caloplaca sorediella	Presumably recorded by Fletcher, likely to be present. A difficult species to locate and identify.
Pectenia atlantica	Recorded by Sheard and Ferry (1964) likely to be absent now. An easy species to locate and identify.
Pectenia plumbea	Probably a very old record, likely to be absent now. Easy species to locate and identify.
Heterodermia obscurata	Probably very old record, likely to be absent now. Not an easy species to locate.
Leptogium britannicum	Probably very old record, possibly absent now but could be present among other grey foliose lichens.
Nephroma laevigatum	Probably very old record, likely to be absent now. An easy species to locate and identify.
Porina curnowii	Presumably recorded by Fletcher, likely to be present. A difficult species to locate and identify.
Rinodina confragosa	Presumably recorded by Fletcher, likely to be present. Very similar and sometimes mixed with *Lecanora gangaleoides* and *Tephromela atra,* which makes finding it in the field difficult

Caloplaca sorediella is included in the 2017 Jones and Fletcher list but there is no locational information. This species is likely to have been recorded by Fletcher on one of his visits. The thallus occurs in tiny patches (5-15 mm diameter) of tiny, contiguous or scattered, areoles. It occurs on the dead stems of *Crithmum maritimum, Armeria maritima*

and *Spergularia maritima.* It would be easy to miss this species, and it seems likely that it is present.

Pectenia atlantica (recorded as *Parmeliella atlantica*) was recorded by Sheard and Ferry (1964) as being present “high on damp rocks above Mad Bay”. Most inlets and features on the island have individual names. However, the location of “Mad Bay” is not entirely clear. From modern maps, the name seems to refer to the whole of a shallow indentation along the West coast of the island. Older O.S. maps suggest it refers more specifically to an area within “Mad Bay” known also as “Purple Cove”. Searches for *Pectenia atlantica* were focused in this area where damp, north-facing mossy rocks are frequent. The only other likely suitable habitat occurs on a damp and somewhat mossy rock face above North Haven. All likely habitat above Mad Bay (especially around “Purple Cove”) and in North Haven was searched without success.

The source of the old record for *Pectenia plumbea* included in the 2017 Jones and Fletcher list is unclear, and there is no locational information. It seems safe to assume that if this species were once present on the island, it would likely be in the same area as the *Pectenia atlantica*. The only other likely suitable habitat occurs on a damp and somewhat mossy rock face above North Haven. All likely habitat above Mad Bay (especially around “Purple Cove”) and in North Haven was searched without success.

The source of the old record for *Nephroma laevigatum* included in the 2017 Jones and Fletcher list is unclear, and again, there is no locational information. Again, suitable sites (particularly “Mad Bay” and North Haven) were searched without success.

The only remaining stands of maritime grassland (where there is also some evidence of flushing from base-rich waters) along the coastal edge of the island occur around the Mad Bay/Purple Cove area and searches for *Leptogium britannicum* were also made in this area, again, unsuccessfully

The source of the old record for *Leptogium cochleatum* (a Vulnerable, Nationally Scarce, Welsh Priority Species but not listed on the MRCSI) included in the 2017 Jones and Fletcher list is unclear, and again, there is no locational information. *Leptogium cochleatum* is considered to be extinct in Wales, having last been seen in 1989 on a tree base in a flushed area of woodland in a ravine west of Dolgellau in North Wales. Recent searches

have failed to relocate it there. There is an old record (date unknown) from Whitcliff Rocks near Ludlow. There is a record from SH46 with no other details in the BLS database, and a record from near Barmouth in 1860. Elsewhere in Britain, it occurs rarely in Western Scotland, at a single location in Cumbria and Cornwall, where it is known only from a single, very old Ash (*Fraxinus excelsior*) in ancient woodland on the Boconnoc Estate. It also occurs in the west of Ireland (wales-lichens.org.uk). A record for this species was made at Manorbier (south Pembrokeshire) in 2015 when it was recorded from a sheltered, north-west facing coastal slope. The record was noted as coming from an outcrop of Old Red Sandstone rock with a cover of other epiphytes, next to the coast path. This record was made by Pat Wolseley and Theresa Greenaway during a teaching course. A sample collected in 2015 to support the original record was kindly provided to the present author by Theresa Greenaway (See Hudson 2020). This sample was keyed out using Smith et. al. to *Leptogium britannicum*. It was therefore concluded that the original record was incorrect and was, in fact, a misidentification of *Leptogium britannicum*. Neither *Leptogium britannicum* nor *L. cochleatum* were seen during the present survey. It seems possible that the record for *L. cochleatum* was perhaps a misidentification. It is possible, however, that these two records hint at the presence of a now lost *L. cochleatum* population from mossy Old Red Sandstone Rocks on the Pembrokeshire coast.

Elsewhere on the island, any potentially suitable areas for the above-mentioned species were looked for. Due to the bedding planes of the Old Red Sandstone dipping to the south, there are few damp, mossy north-facing slabs suitable for cyanolichens and those that do exist are nutrient enriched. Few other areas appeared suitable, apart from the bases of some of the damper, north-facing rocks (e.g. Spy Rock, Sugar Loaf, Tabernacle Rock). These areas were also searched without success.

The source of the old record for ***Heterodermia obscurata*** included in the 2017 Jones and Fletcher list is unclear, and again, there is no locational information. The Irish Lichens website notes it “Occurs on mossy trunks and branches of Willow, Oak, Hazel and Ash in undisturbed woods and sallow carr. Also found on coastal turf.” https://www.irishlichens.ie/pages-lichen/l-507.html. Apart from the heavily rabbit-grazed inland “plains”, coastal turf is a rare habitat on Skokholm now, with most of the maritime grassland along the cliff edges having been replaced by a dense cover of Sea Campion *Silene uniflora* or other coarse vegetation. A few promising looking areas of maritime

grassland with rocks were searched without success. However, it is possible that this species could be present growing among other superficially similar green/grey foliose lichens on or around mossy rocks.

Porina curnowii is included in the 2017 Jones and Fletcher list, but there is no locational information. It occurs mainly on siliceous coastal rocks in sheltered, damp sites and seepage tracks and is a very local species recorded from West Cornwall, the Isles of Scilly and the Channel Islands. This species is likely to have been recorded by Fletcher on one of his visits. It would be easy to miss this species, and it seems likely that it is still present.

Rinodina confragosa is included in the 2017 Jones and Fletcher list, but there is no locational information. Presumably, it was recorded by Fletcher. The species is similar and sometimes mixed with *Lecanora gangaleoides* and *Tephromela atra*, which makes its recognition (and discovery) in the field difficult. It would be easy to miss this species, and it seems likely that it is still present.

Bacidia sipmanii has not been recorded on Skokholm before and was not definitely seen during the present survey. However, when some patches of lichen adjacent to *Bacidia scopulicola* thalli were inspected closely under x10 and x 20 magnification, they clearly lacked areas of isidia-like granules, and several of them could be assigned to *B. sipmanii*. The Revisions of British and Irish Lichens Volume 35, September 2023 notes that *Bacidia sipmanii* occurs in the same habitats as *B. scopulicola* and has essentially the same apothecia, ascospores and conidia. *B. scopulicola* has a thallus that is thick and warty or granular or granular-sorediate, whereas *B. sipmanii* is said to have a much thinner, non-isidiate thallus. However, in the field every gradation between these two states was observed and, due to this uncertainty, *B. sipmanii* was not recorded but may have been present.

Habitat management issues

No immediate issues were noted. The survey suggests that the populations of *Pectenia atlantica, Pectenia plumbea, Leptogium britannicum, Nephroma laevigatum* have been lost or at least severely declined. This is most likely due to nutrient enrichment from bird

droppings. However, Sulphur Dioxide pollution from shipping may have contributed to the loss of these highly sensitive “cyanolichens”. The populations of *Teloschistes flavicans* are small at sites 1, 3 and 4 and, at site 1, there is evidence that the population has declined. At this site this does not seem to be due to nutrient enrichment from birds and there is no obvious reason for the decline. There is some scope to carefully scrape soil and encroaching vegetation back from around the edges of site 3 to increase the area of suitable habitat for *Teloschistes flavicans*. (See Figure 17 below).

Figure 17 The population of Teloschistes flavicans at site 3 outlined in red. Soil and vegetation outside of the red line could be scraped away to increase the extent of suitable habitat

Conclusions

The Guidelines for Biological SSSIs: lichens and associated microfungi (Sanderson et al, 2018) sets a selection criterion of at least 35 MRCSI species being present in any

contiguous 5km long stretch of coast for a coastal lichen assemblage to qualify as an SSSI feature.

The present survey found thirty-six MRCSI lichen species on Skokholm Island. This shows that Skokholm Island meets the SSSI selection criteria for the Maritime Rock and Coastal Slope Assemblage of lichens and is of national importance for its lichen flora.

The MRCSI score of thirty-six is considered to be the minimum score for the island. It is likely that three historically recorded species, *Caloplaca sorediella, Porina curnowii* and *Rinodina confragosa* (and possibly *Heterodermia obscurata*), may still be present but were not found and, therefore, thirty-nine or forty seems like a likely total score (see Table 1 in Section 5). If the remaining historically recorded species (*Pectenia atlantica, Pectenia plumbea, Leptogium britannicum* and *Nephroma laevigatum)* were included, the total score for all records from all surveys would be 44. However, it seems likely that these four are genuinely no longer present and that their last recorded occurrences were more than (often much more than) 25 years ago. Whilst the present survey found a good number of MRCSI lichens (including *Fuscopannaria nebulosa,* new to the island), further survey effort may further increase the MRCSI score (see Sections 6 and 10)**.**

As well as scoring highly on the MRCSI, eighteen of the MRCSI species recorded in the present survey are Nationally Scare (NS) species (see Table 3 below). Four of these are classified as “Near Threatened” (NT). Skokholm Island is also of high importance for its large populations of *Roccella fuciformis and Roccella phycopsis* (both NS) and for its population of *Teloschistes flavicans* (VU NS E Wa S8).

Roccella fuciformis (NT NS) is known from just three SSSI in Wales: Skomer Island and Middleholm SSSI, Skokholm SSSI and Dale and South Marloes Coast SSSI (Bosanquet 2022). The population on Skokholm seems likely to be the largest in the Area of Search, and the species probably meets the criteria as an Independently Qualifying SSSI feature.

Roccella phycopsis (NT NS) is known from just four SSSI in Wales, Skomer Island and Middleholm SSSI, Skokholm SSSI, Dale and South Marloes Coast SSSI and Strumble Head - Llechdafad Cliffs SSSI (Bosanquet 2022). The BLS mapping scheme does,

however, indicate that it is also present in the Aberarth - Carreg Wylan SSSI in Ceredigion. The population on Skokholm seems likely to be the largest in the Area of Search, and the species probably meets the criteria as an Independently Qualifying SSSI feature.

Table 3 Lichens of Conservation Interest recorded during the survey

Taxon	Status
Aspicilia epiglypta	LC NS
Athallia scopularis	NT NS
Caloplaca littorea	LC NS
Diploschistes caesioplumbeus	LC NS
Flavoplaca maritima	LC NS
Fuscopannaria nebulosa	LC NS
Halecania ralfsii	LC NS
Ingaderia vandenboomii	LC NS
Lecania aipospila	LC NS
Lecanora praepostera	LC NS
Lepra monogona	LC NS
Normandina pulchella	LC L*
Paralecanographa grumulosa	LC NS
Ramalina polymorpha	NT NS
Rinodina beccariana	LC NS
Roccella fuciformis	NT NS
Roccella phycopsis	NT NS
Solenopsora holophaea	LC NS
Sparria endlicheri	LC ? NS
Teloschistes flavicans	VU NS E Wa S8

Rarity NR Nationally Rare (i.e. Recorded in 15 or fewer 10km squares in the UK) NS Nationally Scarce (i.e. Recorded in 16-100 10km squares in the UK). Threat (IUCN criteria) EX Extinct CR Critically Endangered EN Endangered VU Vulnerable NT Near Threatened LC Least Concern DD Data Deficient NE Not Evaluated. UK and Constituent Country Priority Lists P Priority Taxon on the UK BAP (Biodiversity Action Plan) Eng Priority Taxon for Biodiversity in England Sc Priority Taxon for Biodiversity in Scotland Wa Priority Taxon for Biodiversity in Wales L and L* Lobarion species . Other IR International Responsibility Nb Notable S8 on Schedule 8 of the Wildlife and Countryside Act, 1981 as being specially protected under UK law.

The condition of the MRCSI lichen feature

Whilst the survey did not include monitoring any individual species, the overall impression was that almost all of the species probably had reasonably large and healthy populations. The only species there was concern about was *Teloschistes flavicans,* where comparisons of the population at North Haven between 2007/8 and 2025 showed a marked decline. However, all other populations appeared to be of a reasonable size, with the lichen thalli appearing healthy. Despite this concern, it was notable that (even at North Haven) *T. flavicans* was reproducing many new, small thalli. No photographs were available to allow any comparisons of any of the other *T. flavicans* populations or indeed of any other lichen species, and there appears to be no historical information on the size of any of lichen populations, apart from for *Roccella phycopsis* which appears likely to be maintained.

Further survey

Further searches for the “missing species” set out in Table 2 would perhaps be worthwhile.

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Acknowledgement

Thanks are due to Sam Bosanquet (NRW Specialist Advisor: Bryophytes, Lichens & Fungi) for input into the development of this survey, to Helen Lucas (NRW) for managing the contract, to Richard Brown and Giselle Eagle, Skokholm Wardens, Wildlife Trust of South and West Wales, and to Sue Wolfe for invaluable background lichen information. Thanks are also due to everyone on the island at the time of the survey for their kindness and interest in lichens.

Appendix 1: list of lichens recorded during the survey

Table 4 List of lichen records from the present survey

Sax = Saxicolous. SSd = Sandstone

Grid ref	Taxon name	Status	Substrate	Small scale habitats
SM7392604849	Aspicilia epiglypta	LC NS	Sax	SSd
SM7311804672	Aspicilia epiglypta	LC NS	Sax	SSd
SM7297304691	Aspicilia epiglypta	LC NS	Sax	SSd
SM7416705118	Athallia scopularis	NT NS	Sax	SSd
SM7378505322	Athallia scopularis	NT NS	Sax	SSd
SM7416005343	Bacidia scopulicola	LC	Sax	SSd
SM7287604572	Bacidia scopulicola	LC	Sax	SSd
SM7287504555	Bacidia scopulicola	LC	Sax	SSd
SM7413105322	Bacidia scopulicola	LC	Sax	SSd
SM7335405089	Bacidia scopulicola	LC	Sax	SSd
SM7330105077	Bacidia scopulicola	LC	Sax	SSd
SM7435005213	Buellia subdisciformis	LC	Sax	SSd
SM7394004821	Buellia subdisciformis	LC	Sax	SSd
SM7382004818	Buellia subdisciformis	LC	Sax	SSd
SM7314804948	Buellia subdisciformis	LC	Sax	SSd
SM7424805408	Caloplaca littorea	LC NS	Sax	SSd
SM7441705228	Candelariella coralliza	LC	Sax	SSd
SM7396304829	Candelariella coralliza	LC	Sax	SSd
SM7382504815	Candelariella coralliza	LC	Sax	SSd
SM7399104831	Candelariella coralliza	LC	Sax	SSd
SM7326705074	Candelariella coralliza	LC	Sax	SSd
SM7330205083	Candelariella coralliza	LC	Sax	SSd
SM7413205320	Candelariella coralliza	LC	Sax	SSd
SM7416105341	Circinaria leprosescens	LC	Sax	SSd
SM7382205376	Circinaria leprosescens	LC	Sax	SSd
SM7384405585	Circinaria leprosescens	LC	Sax	SSd
SM7399304831	Circinaria leprosescens	LC	Sax	SSd
SM7327705077	Circinaria leprosescens	LC	Sax	SSd
SM7297504692	Circinaria leprosescens	LC	Sax	SSd
SM7405904780	Dermatocarpon miniatum	LC	Sax	SSd
SM7405404826	Dermatocarpon miniatum	LC	Sax	SSd
SM7409405318	Dermatocarpon miniatum	LC	Sax	SSd
SM7448805391	Diploschistes caesioplumbeus	LC NS	Sax	SSd

Grid ref	Taxon name	Status	Substrate	Small scale habitats
SM7441505226	Diploschistes caesioplumbeus	LC NS	Sax	SSd
SM7393904818	Diploschistes caesioplumbeus	LC NS	Sax	SSd
SM7404104814	Diploschistes caesioplumbeus	LC NS	Sax	SSd
SM7287704571	Diploschistes caesioplumbeus	LC NS	Sax	SSd
SM7351705366	Diploschistes caesioplumbeus	LC NS	Sax	SSd
SM7413705318	Diploschistes caesioplumbeus	LC NS	Sax	SSd
SM7422105402	Diploschistes caesioplumbeus	LC NS	Sax	SSd
SM7402404805	Diplotomma chlorophaeum	LC	Sax	SSd
SM7443205228	Diplotomma chlorophaeum	LC	Sax	SSd
SM7424505407	Flavoparmelia soredians	LC Sc	Sax	SSd
SM7378705320	Flavoplaca maritima	LC NS	Sax	SSd
SM7448805391	Flavoplaca maritima	LC NS	Sax	SSd
SM7287604572	Flavoplaca maritima	LC NS	Sax	SSd
SM7337305313	Flavoplaca maritima	LC NS	Sax	SSd
SM7351705366	Flavoplaca maritima	LC NS	Sax	SSd
SM7330005076	Flavoplaca maritima	LC NS	Sax	SSd
SM7328505081	Flavoplaca maritima	LC NS	Sax	SSd
SM7330205083	Flavoplaca maritima	LC NS	Sax	SSd
SM7287004558	Fuscopannaria nebulosa	LC NS	Sax	TR
SM7448905388	Halecania ralfsii	LC NS	Sax	SSd
SM7384405585	Halecania ralfsii	LC NS	Sax	SSd
SM7321905075	Halecania ralfsii	LC NS	Sax	SSd
SM7392904830	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7384405585	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7393804848	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7382004809	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7399504831	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7311404676	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7413005322	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7369805483	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7320504856	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7330305064	Ingaderia vandenboomii	LC NS	Sax	SSd
SM7412705311	Lathagrium auriforme	LC	Sax	SSd
SM7422105399	Lecania aipospila	LC NS	Sax	SSd
SM7315704953	Lecanora praepostera	LC NS	Sax	SSd
SM7330205083	Lecanora praepostera	LC NS	Sax	SSd
SM7404304811	Lepra monogona	LC NS	Sax	SSd
SM7415905343	Myriolecis fugiens	LC	Sax	SSd
SM7448605392	Myriolecis fugiens	LC	Sax	SSd
SM7443505223	Myriolecis fugiens	LC	Sax	SSd
SM7287704570	Myriolecis fugiens	LC	Sax	SSd

Grid ref	Taxon name	Status	Substrate	Small scale habitats
SM7350505359	Myriolecis fugiens	LC	Sax	SSd
SM7384305585	Myriolecis poliophaea	LC	Sax	SSd
SM7351205358	Myriolecis poliophaea	LC	Sax	SSd
SM7324805072	Myriolecis poliophaea	LC	Sax	SSd
SM7412105307	Myriolecis poliophaea	LC	Sax	SSd
SM7422305406	Myriolecis poliophaea	LC	Sax	SSd
SM7404604803	Myriolecis zosterae	LC NS	Sax	SSd
SM7393604843	Normandina pulchella	LC L*	Sax	SSd
SM7393804842	Normandina pulchella	LC L*	Sax	SSd
SM7412405313	Opegrapha cesareensis	LC	Sax	SSd
SM7384405585	Opegrapha cesareensis	LC	Sax	SSd
SM7443105223	Opegrapha cesareensis	LC	Sax	SSd
SM7393104833	Opegrapha cesareensis	LC	Sax	SSd
SM7393604844	Opegrapha cesareensis	LC	Sax	SSd
SM7382004811	Opegrapha cesareensis	LC	Sax	SSd
SM7311404675	Opegrapha cesareensis	LC	Sax	SSd
SM7351705366	Opegrapha cesareensis	LC	Sax	SSd
SM7330105076	Opegrapha cesareensis	LC	Sax	SSd
SM7414005334	Opegrapha cesareensis	LC	Sax	SSd
SM7393504843	Paralecanographa grumulosa	LC NS	Sax	SSd
SM7393004833	Paralecanographa grumulosa	LC NS	Sax	SSd
SM7399404831	Paralecanographa grumulosa	LC NS	Sax	SSd
SM7311304676	Paralecanographa grumulosa	LC NS	Sax	SSd
SM7320504585	Paralecanographa grumulosa	LC NS	Sax	SSd
SM7373505507	Paralecanographa grumulosa	LC NS	Sax	SSd
SM7318404897	Paralecanographa grumulosa	LC NS	Sax	SSd
SM7287004793	Paralecanographa grumulosa	LC NS	Sax	SSd
SM7286904791	Paralecanographa grumulosa	LC NS	Sax	SSd
SM7411705315	Parmotrema crinitum	LC L	Sax	SSd
SM7312304581	Parmotrema crinitum	LC L	Sax	SSd
SM7411805312	Parmotrema reticulatum	LC	Sax	SSd
SM7392304859	Parmotrema reticulatum	LC	Sax	SSd
SM7449005409	Polycauliona verruculifera	LC	Sax	SSd
SM7443105223	Polycauliona verruculifera	LC	Sax	SSd
SM7397904826	Polycauliona verruculifera	LC	Sax	SSd
SM7384405585	Polycauliona verruculifera	LC	Sax	SSd
SM7287604571	Polycauliona verruculifera	LC	Sax	SSd
SM7350605365	Polycauliona verruculifera	LC	Sax	SSd
SM7330405073	Polycauliona verruculifera	LC	Sax	SSd
SM7326105078	Polycauliona verruculifera	LC	Sax	SSd
SM7419705378	Polycauliona verruculifera	LC	Sax	SSd

Grid ref	Taxon name	Status	Substrate	Small scale habitats
SM7422505406	Polycauliona verruculifera	LC	Sax	SSd
SM7392704865	Punctelia subrudecta s. lat.		Sax	SSd
SM7384405583	Ramalina canariensis	LC	Sax	SSd
SM7416005342	Ramalina canariensis	LC	Sax	SSd
SM7393404838	Ramalina canariensis	LC	Sax	SSd
SM7407804877	Ramalina canariensis	LC	Sax	SSd
SM7382204822	Ramalina canariensis	LC	Sax	SSd
SM7399404832	Ramalina lacera	LC	Sax	SSd
SM7304604585	Ramalina lacera	LC	Sax	SSd
SM7350005360	Ramalina lacera	LC	Sax	SSd
SM7311304675	Ramalina lacera	LC	Sax	SSd
SM7305404587	Ramalina lacera	LC	Sax	SSd
SM7292904703	Ramalina lacera	LC	Sax	SSd
SM7318804897	Ramalina lacera	LC	Sax	SSd
SM7325004846	Ramalina lacera	LC	Sax	SSd
SM7330205070	Ramalina lacera	LC	Sax	SSd
SM7321905022	Ramalina lacera	LC	Sax	SSd
SM7287204792	Ramalina lacera	LC	Sax	SSd
SM7327005076	Ramalina lacera	LC	Sax	SSd
SM7384405585	Ramalina polymorpha	NT NS	Sax	SSd
SM7446105411	Ramalina polymorpha	NT NS	Sax	SSd
SM7398604828	Ramalina polymorpha	NT NS	Sax	SSd
SM7415705342	Rinodina beccariana	LC NS	Sax	SSd
SM7393604845	Rinodina beccariana	LC NS	Sax	SSd
SM7384304754	Rinodina beccariana	LC NS	Sax	SSd
SM7311404675	Rinodina beccariana	LC NS	Sax	SSd
SM7384505584	Rinodina luridescens	LC	Sax	SSd
SM7392904829	Roccella fuciformis	NT NS	Sax	SSd
SM7393004831	Roccella fuciformis	NT NS	Sax	SSd
SM7393704849	Roccella fuciformis	NT NS	Sax	SSd
SM7382004811	Roccella fuciformis	NT NS	Sax	SSd
SM7380404827	Roccella fuciformis	NT NS	Sax	SSd
SM7383304804	Roccella fuciformis	NT NS	Sax	SSd
SM7320804855	Roccella fuciformis	NT NS	Sax	SSd
SM7321704853	Roccella fuciformis	NT NS	Sax	SSd
SM7415805345	Roccella phycopsis	NT NS	Sax	SSd
SM7393004832	Roccella phycopsis	NT NS	Sax	SSd
SM7392304860	Roccella phycopsis	NT NS	Sax	SSd
SM7393604845	Roccella phycopsis	NT NS	Sax	SSd
SM7405004843	Roccella phycopsis	NT NS	Sax	SSd
SM7382004810	Roccella phycopsis	NT NS	Sax	SSd

Grid ref	Taxon name	Status	Substrate	Small scale habitats
SM7380904828	Roccella phycopsis	NT NS	Sax	SSd
SM7400504826	Roccella phycopsis	NT NS	Sax	SSd
SM7399904828	Roccella phycopsis	NT NS	Sax	SSd
SM7304804590	Roccella phycopsis	NT NS	Sax	SSd
SM7311404676	Roccella phycopsis	NT NS	Sax	SSd
SM7312404677	Roccella phycopsis	NT NS	Sax	SSd
SM7305704582	Roccella phycopsis	NT NS	Sax	SSd
SM7413005324	Roccella phycopsis	NT NS	Sax	SSd
SM7287504743	Roccella phycopsis	NT NS	Sax	SSd
SM7318504897	Roccella phycopsis	NT NS	Sax	SSd
SM7320604853	Roccella phycopsis	NT NS	Sax	SSd
SM7321704853	Roccella phycopsis	NT NS	Sax	SSd
SM7325604846	Roccella phycopsis	NT NS	Sax	SSd
SM7322004811	Roccella phycopsis	NT NS	Sax	SSd
SM7291604696	Roccella phycopsis	NT NS	Sax	SSd
SM7287004775	Roccella phycopsis	NT NS	Sax	SSd
SM7393004832	Roccellographa circumscripta	LC	Sax	SSd
SM7393404844	Roccellographa circumscripta	LC	Sax	SSd
SM7381904817	Roccellographa circumscripta	LC	Sax	SSd
SM7383504804	Roccellographa circumscripta	LC	Sax	SSd
SM7311504675	Roccellographa circumscripta	LC	Sax	SSd
SM7413005323	Roccellographa circumscripta	LC	Sax	SSd
SM7320704587	Roccellographa circumscripta	LC	Sax	SSd
SM7318604900	Roccellographa circumscripta	LC	Sax	SSd
SM7320704854	Roccellographa circumscripta	LC	Sax	SSd
SM7287004792	Roccellographa circumscripta	LC	Sax	SSd
SM7422905401	Roccellographa circumscripta	LC	Sax	SSd
SM7404304811	Solenopsora holophaea	LC NS	Sax	SSd
SM7287604571	Solenopsora holophaea	LC NS	Sax	SSd
SM7413005323	Solenopsora holophaea	LC NS	Sax	SSd
SM7435405220	Solenopsora vulturiensis	LC	Sax	SSd
SM7311404675	Sparria endlicheri	LC ?NS Sc	Sax	SSd
SM7411905313	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd
SM7412505313	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd
SM7295804603	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd
SM7310904679	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd
SM7293804604	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd
SM7385205098	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd
SM7317804658	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd
SM7313204582	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd

Grid ref	Taxon name	Status	Substrate	Small scale habitats
SM7313804580	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd
SM7314004580	Teloschistes flavicans	VU A NS P Eng Wa S8	Sax	SSd
SM7384405585	Trapeliopsis wallrothii	LC	Ter	TR
SM7286604565	Trapeliopsis wallrothii	LC	Ter	TR
SM7382204813	Xanthoparmelia loxodes	LC	Sax	SSd
SM7289504611	Xanthoparmelia loxodes	LC	Sax	SSd
SM7287804570	Xanthoparmelia pulla	LC	Sax	SSd
SM7292204546	Xanthoparmelia pulla	LC	Sax	SSd
SM7297504691	Xanthoparmelia pulla	LC	Sax	SSd
SM7297504691	Xanthoparmelia pulla	LC	Sax	SSd