

# BRYOPHYTES (MOSESSES, LIVERWORTS & HORNWORTS) ON LUNDY IN 2018 AND 2019

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I visited Lundy twice in 2018 and twice in 2019. In 2018, recording during letterboxing walks coupled with evening wanders out from Old Light on 12<sup>th</sup> to 15<sup>th</sup> May and 29<sup>th</sup> to 30<sup>th</sup> August produced 212 records of 66 bryophyte taxa (19 liverworts & 47 mosses). In 2019, recording during a family visit from 4<sup>th</sup> to 6<sup>th</sup> May 2019 produced 113 records of 52 bryophyte taxa. I returned on my own between 19<sup>th</sup> and 22<sup>nd</sup> October 2019 to carry out dedicated dawn to dusk recording of bryophytes on the island using a 200x200m Ordnance Survey grid. This trip generated 1,151 records of 168 taxa (2 hornworts, 48 liverworts and 118 mosses): more than doubling the number of bryophyte records in the Lundy bryophyte dataset to 2,276. Full data are given in Excel format on the LFS website, have been sent to the British Bryological Society (BBS) Recorder for Devon, and will be available on the National Biodiversity Network.

Most county bryophyte Floras use a 2x2km (tetrad) grid for mapping distributions, but Lundy's size makes it ideal for finer-scale mapping. Having divided the island into 200x200m squares, I considered there were 123 which were likely to support bryophytes and would be accessible without undue risk. Although complete recording of these tiny plants even within a 200x200m square is impossible, one to three hours is usually enough to get a good record of what species are present. Seventy-six squares are now considered acceptably covered and another couple of focused visits should achieve acceptable island-wide coverage. Some areas of the plateau are exceedingly species-poor, whereas Millcombe, the Quarries and Gannets' Combe are bryophyte-rich with 40 or more species per 200x200m square.

In 2018, three new bryophyte taxa for Lundy were noted, and a *Fossombronina* sp. recorded in 2017 was found with sporophytes in 2018, allowing identification as *F. maritima*. Twenty-nine bryophyte taxa (1 hornwort, 9 liverworts and 19 mosses) were newly recorded for Lundy in 2019, taking the island's tally of bryophytes to 199 taxa (2 hornworts, 54 liverworts and 143 mosses). The most notable discoveries in 2019 were *Isothecium myosuroides* var. *brachythecioides*, a montane taxon new for South West England; *Rhynchostegium alopecuroides*, a Nationally Scarce oceanic species; *Blasia pusilla*, which had not been seen anywhere in Devon since before 2000; *Lophozia sudetica*, which has a couple of Dartmoor colonies but has not been found in North Devon; and *Scapania scandica*, with just four previous Devon records.

The dynamism of the Lundy bryophyte flora was demonstrated by a return to Quarry Beach in 2018, where *Philonotis rigida* was recorded the previous year. Both colonies of this Nationally Rare species – the rarest bryophyte recorded on Lundy – had been lost due to natural erosion. It has to be hoped that *P. rigida* survives elsewhere on the island, or with re-grow at Quarry Beach once the slumping soil has temporarily stabilised.

Most of the 199 bryophyte taxa recorded from Lundy have been seen by me during the last three years, but 14 have not: *Heterocladium wulfsbergii* (2006), *Sphagnum cuspidatum* (2005), *Cephalozia pleniceps* (1975), *Kurzia pauciflora* (1975), *Lophozia incisa* (1975), *Riccardia latifrons* (1975), *Scapania nemorea* (1959), *Heterocladium heteropterum* var. *heteropterum* (1950), *Racomitrium aciculare* (1950), *Tortella nitida* (1950), *Bryum archangelicum* (pre-1980), *Eurhynchium crassinervium* (pre-1980), *Racomitrium aquaticum* (pre-1980) and *Rhabdoweisia fugax* (pre-1980).

The list below covers the notable bryophytes recorded in 2018 and 2019. The \* symbol indicates those which appear to be new for Lundy, following scrutiny of the BBS database, Paton (1975), Cox (1959) and the NBN Atlas (<https://nbnatlas.org>).



The Liverwort *Blasia pusilla* with distinctive horn-like gemma receptacles in Gannets' Combe  
(photo: Sam Bosanquet).

## HORNWORTS

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*Anthoceros punctatus*: 2 records in 2019. Found at Gannets' Combe and the north Quarries gully, the third and fourth colonies.

\**Phaeoceros laevis*: 1 record in 2019. First record: 100x100cm patch on bank in coastal stream gully on west coast east of St Peter's Stone (SS13214703). A relatively frequent hornwort in SW England.

## LIVERWORTS

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*Aneura pinguis*: 3 records in 2019. One of the large, loose-growing *Aneura* taxa in flushes above Threequarter Wall Bay and Jenny's Cove, the first localised Lundy records.

\**Barbilophozia attenuata*: 1 record in 2018. First record: several patches with gemmae on N-facing rocks of a tor near Tibbetts (SS13884611). This is a locally frequent liverwort in much of western Britain, and was very much expected on the tors of Lundy. 2 records in 2019, in Quarter Wall Copse and Gannets' Combe.

\**Blasia pusilla*: 1 record in 2019. First record: 80x80cm and 80x40cm patches where path crosses stream in Gannets' Combe (SS13574725). A distinctive thallose liverwort with very few Devon records.

\**Cephaloziella divaricata*: 13 records in 2019. First record: thin peat over granite by track north of Threequarter Wall (SS13354711). Widespread in the north of the island.

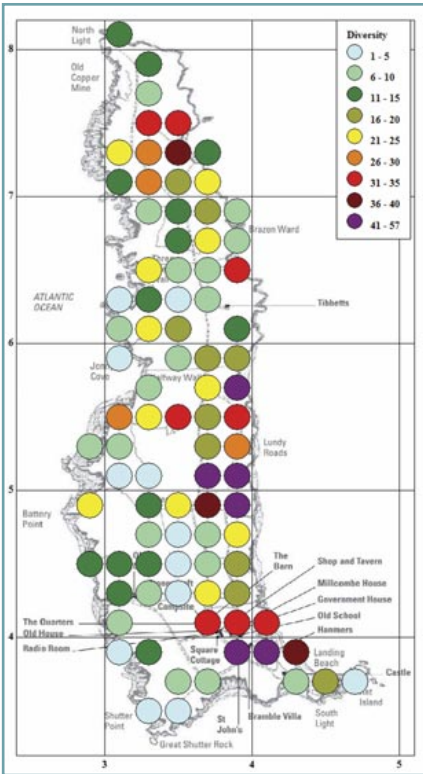
\**Cephaloziella hampeana*: 2 records in 2019. First record: on Sphagnum in flushed mire by Pondsbyry (SS13504551). Recorded in two locations near Pondsbyry.

*Chiloscyphus polyanthos* s.s.: 4 records in 2019. On rocks in four streams, the first localised records.

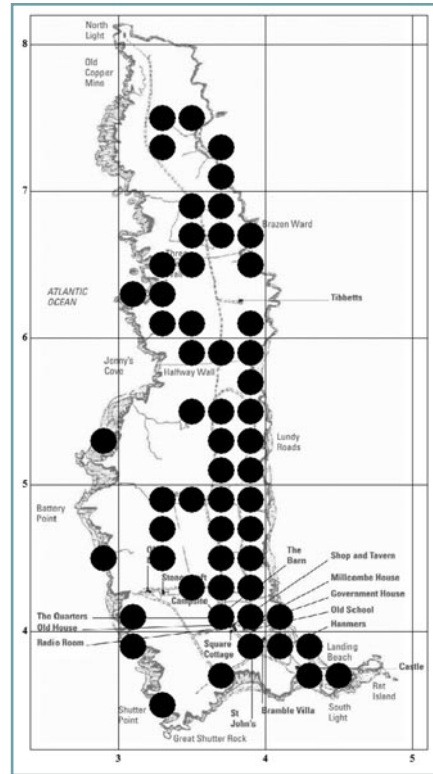
\**Fossombronia maritima*: 1 record in 2018. First record: damp peat over granite, Middle Park (SS13344647). One sporophyte was found on a *Fossombronia* patch at Middle Park, confirming the identification of *F. maritima* new for North Devon (v.-c. 4). It is likely that the *Fossombronia* above Jenny's Cove is also *F. maritima*, but small plants by a track in St John's Valley are likely to be *F. incurva*, a colony by Quarry Pond and *Fossombronia* spp. in a ditch at Quarter Wall (2017) are probably *F. wondraczekii*, and a streamside colony at Quarter Wall Copse may be *F. pusilla*. Ripe spores are needed to identify members of this genus.

*Frullania teneriffae*: 1 record in 2019. On a rockface in Gannets' Combe, the third Lundy record.

\**Gymnocolea inflata*: 8 records in 2019. First record: thin peat over granite by track north of Threequarter Wall (SS13414708). Apparently restricted to the northernmost quarter of the island.



**Fig. 1. Recorded bryophyte diversity (all species) on Lundy after the 2019 visits.**



**Fig. 2. The recorded distribution of the common moss *Hypnum cupressiforme*.**

*Kurzia sylvatica*: 2 records in 2019. Tiny colonies in heathland at Gannets' Combe and Pondsbury, the second and third localised records.

*Lejeunea cavifolia*: 1 record in 2018. Found in the north-western part of the island (SS13134808) in May 2018. The only previous records are from the Landing Bay area. 2 records in 2019.

*Lejeunea lamacerina*: 2 records in 2019. By streams at Quarter Wall Copse and Quarries south, the first localised records.

*Lepidozia cupressina*: 5 records in 2019. This uncommon liverwort has now been recorded from six rockfaces in Gannets' Combe, with a few large patches.

\**Lophozia sudetica*: 1 record in 2019. First record: several patches on north-facing rock outcrops above Landing Bay road (SS14224383). The first record for northern Devon of this upland liverwort.

\**Marsupella emarginata* var. *emarginata*: 1 record in 2019. First record: 3x2cm patch on mineral soil among rocks of northernmost of the Quarries (SS13814564). A new liverwort genus for Lundy.

*Pellia endiviifolia*: 1 record in 2019. By Quarry Pond, the third Lundy record.

\**Pellia neesiana*: 3 records in 2019. First record: male plants by a flush above Threequarter Wall Bay (SS13964646). Also noted in Gannets' Combe and the north Quarries gully.

*Plagiochila (killarniensis) bifaria*: 1 record in 2018. A few patches were found in a deep gully at

Earthquake (near the letterbox). The only previous Lundy records were from the coastal slopes of the Landing Bay. 3 records in 2019, two from the Landing Bay, where *P. bifaria* is frequent, plus a new colony on a tor on the east coast at Halfway Wall.

\**Riccardia chamedryfolia*: 2 records in 2019. First record: mire by pond in quarry floor, Quarry Pond (SS13764504). Also recorded from a flush near Jenny's Cove.

*Scapania* sp.: 1 record in 2019. Probable *Scapania lingulata* collected from thin soil over rock in St John's Valley would be new for SW England, but the small specimen was too dry to allow microscope confirmation.

\**Scapania scandica*: 1 record in 2019. First record: about 20 shoots on gritty peat bank about 3m above stream in Gannets' Combe (SS13434743). The fifth record for Devon.

*Scapania undulata*: 5 records in 2019. Recorded in five coastal streams, representing the second to sixth known Lundy colonies.

*Tritomaria exsectiformis*: 1 record in 2018. Frequent over 50x50cm of peaty coastal slope near the 'Forgotten Heinkel' letterbox on the west coast (SS13004535). 1 record in 2019. In lichen-rich heath in Gannets' Combe. The only previous Lundy record was from the Battery steps in 2017.

## MOSESSE

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\**Andreaea rothii* subsp. *falcata*: 1 record in 2018. First record: several patches with old fruit on rock in flush above Jenny's Cove (SS13194549). This is an upland genus in Britain, and there are scattered colonies of *A. rothii* on Exmoor, Dartmoor and Bodmin Moor.

\**Atrichum undulatum*: 1 record in 2019. First record: four tufts on stream bank in Quarter Wall Copse (SS13884486). A common woodland moss on the mainland but remarkably rare on Lundy.

\**Barbula convoluta* var. *commutata*: 1 record in 2018. First record: Old Light garden (SS13204427). 2 records in 2019. The other British variety of *B. convoluta* – var. *convoluta* – was found in St John's Valley in 2017 and on the track across Widow's Tenement in 2019. These two taxa are sometimes considered distinct species, with var. *commutata* being separated as *B. sardoa*.

\**Brachythecium mildeanum*: 2 records in 2019. First record: concrete pad at Lundy Farm (SS13694418). A common ruderal moss on the mainland.

\**Bryum bornholmense*: 1 record in 2019. First record: on peat in heathland above the Quarries (SS13794531). Frequent in heathland in SW England and easily overlooked as other tuberous *Bryum*.

\**Bryum donianum*: 1 record in 2019. First record: locally frequent on top of wall by Landing Bay road (SS14214387). South-western in Britain; overlooked previously as I've hurried up or down the road.

*Bryum pseudotriquetrum*: 1 record in 2018. Found by a stream on Ackland's Moor (SS13034458) in 2018. There is only one previous localised Lundy record, from Quarter Wall, but there are also broad 'Lundy' records from 1960 and 1997. 6 records in 2019.

*Bryum radiculosum*: 1 record in 2019. On mortar of Quarter Wall Cottages, the first localised record.

*Campylopus brevipilus*: 1 record in 2018. Noted on damp peat over granite at Middle Park (SS13344647) in 2018, following a 2017 record above Jenny's Cove and broad 'Lundy' records from 1950, 1960 and 1997. 9 records in 2019. Locally abundant on thin peat over rock in the northern half of the island; this heathland moss has declined substantially in Britain in recent decades.

*Cryphaea heteromalla*: 2 records in 2019. The second and third Lundy records of this common epiphyte, both from walls.

\**Dicranella rufescens*: 1 record in 2019. First record: frequent on eroding mineral stream bank of North Quarries gully (SS13864571). Mixed with *Pohlia annotina*, which was also new for Lundy.

*Dicranum scottianum*: 5 records in 2019. Three colonies in the Quarries area and two in Gannets' Combe, extending the known range of this uncommon western moss which had previously been seen on a single rockface in the latter area.

*Didymodon nicholsonii*: 1 record in 2019. On concrete at the Farm, the first localised Lundy record.



*The moss Hookeria lucens in Gannets' Combe (photo: Sam Bosanquet).*

*\*Didymodon vinealis*: 2 records in 2019. First record: mortar of Quarter Wall Cottages (SS13794495). This reasonably common lime-loving moss was also seen on a rock by the track north of the Village.

*\*Entosthodon attenuatus*: 7 records in 2019. First record: occasional on stream bank north-east of Jenny's Cove (SS13324612). All seven records are from two streams on the west coast between Halfway Wall and Threequarter Wall. An uncommon, western species in Britain.

*Epipterygium tozeri*: 1 record in 2018. Two patches on soil in a hole in a tor at The Cheeses (SS13354575) were a surprise, as previous Lundy records were from sheltered areas of the east coast, in Millcombe and Quarry Beach. 6 records in 2019.

*Fissidens bryoides* var. *cespitans* (*curnovii*): 1 record in 2018. Found in a damp hole in a tor at The Cheeses (SS13354577). The only previous localised record was from Quarry Beach, but there are 1960 and 1997 'Lundy' records. 6 records in 2019.

*\*Fissidens dubius*: 1 record in 2019. On three rocks in coastal stream at the south end of the Quarries (SS13874506). A large and distinctive lime-loving *Fissidens*.

*Hookeria lucens*: 4 records in 2019. Found in three stream valleys on the east coast; the second to fourth Lundy colonies of this strikingly glossy moss.

*Hypnum cupressiforme* var. *lacunosum*: 1 record in 2019. On a wall top by the Landing Bay, the second Lundy record of this calcicolous form of *H. cupressiforme*.

*\*Isoetecium myosuroides* var. *brachythecioides* (*I. interludens*): 1 record in 2019. First record: a few patches on the base of a cliff above Threequarter Wall Bay (SS13934645). The first record for SW England of this taxon, which is now regarded as a separate species to *I. myosuroides*. It is occasional in the mountains of Wales, Cumbria and Scotland but common in the Hebrides and Shetland.

*Orthodontium lineare*: 1 record in 2018. The second Lundy record, of a colony with sporophytes, was from peat near the 'Forgotten Heinkel' letterbox (SS12994535). 7 records in 2019. Widespread records of this non-native species, which was found new to Lundy in 2017.

*\*Orthotrichum affine*: 7 records in 2019. First record: on concrete of wall at Quarters (SS13664405). Although mostly an epiphyte on the mainland, six of its seven Lundy colonies are on walls or rocks.



*The moss Racomitrium lanuginosum, Lundy Quarries (photo: Sam Bosanquet).*

*\*Orthotrichum tenellum*: 1 record in 2019. First record: on willow by Quarry Pond (SS13754504). It was a challenge to reach the Quarry Pond willows, rewarded by this epiphyte new for Lundy!

*Philonotis fontana*: 5 records in 2019. Scattered in the stream gully at the north end of the Quarries.

*Plagiothecium denticulatum* var. *denticulatum*: 1 record in 2019. One patch in Gannets' Combe, the second localised Lundy record.

*Plagiothecium succulentum*: 1 record in 2018. Found in a wet hole in a tor at The Cheeses (SS13354577); the two previous island records of this woodland moss were from the East Side. 1 record in 2019, from the stream gully at the north end of the Quarries.

*Pleurozium schreberi*: 4 records in 2019. Abundant on the wet floor of one of the Quarries and found on two banks nearby, but remarkably rare on Lundy given its ubiquity in upland Britain.

*Pogonatum aloides*: 3 records in 2019. On three banks in the Quarries area, the only localised records.

*Pohlia* sp.: 1 record in 2019. A *Pohlia* collected from a stream bank in Gannets' Combe is probably the scarce *P. lescuriana*, but the specimen lacked tubers so could not be identified conclusively.

*\*Pohlia annotina*: 1 record in 2019. First record: several shoots among *Dicranella rufescens* on stream bank in North Quarries gully (SS13864571). Frequent in upland Britain, but reproducing using bulbils and therefore a poor long-distance colonist.

*Pohlia lutescens*: 2 records in 2019. At Quarter Wall Copse and North Quarries gully, the second and third Lundy records.

*Polytrichum commune* var. *commune*: 2 records in 2019. Found growing through *Sphagnum* in two areas at the Quarries, but surprisingly rare on Lundy.

*Polytrichum piliferum*: 3 records in 2019. Seen in three places around the Quarries, the second to fourth Lundy records.

*\*Pseudocrossidium revolutum*: 1 record in 2019. First record: mortar of Quarter Wall Cottages (SS13794495). Widespread but uncommon on mortar in Britain; presumably introduced with the mortar to Lundy.

*Racomitrium heterostichum* s.s.: 1 record in 2019. In block scree below the Quarries, the second localised record.

*Racomitrium lanuginosum*: 2 records in 2019. On granite blocks in two areas at the Quarries, representing the first localised Lundy records of this distinctive montane moss.

*Rhizomnium punctatum*: 4 records in 2019. Records from three streams on the east coast are the first localised Lundy colonies.

*Rhynchostegiella tenella*: 3 records in 2018. Found on walls in three places in the Old Light/Ackland's Moor area, indicating *R. tenella* is present more widely than previous Village records suggested. 3 records in 2019.

\**Rhynchostegium alopecuroides* (*Platyhypnidium lusitanicum*): 1 record in 2019. First record: in waterfall in coastal stream on west coast north of Threequarter Wall (SS13214702). A Nationally Scarce south-western species in Britain and a very unexpected addition to the Lundy bryophyte flora.

*Rhytidadelphus triquetrus*: 2 records in 2019. Only known from the slopes above Landing Bay.

*Sciuro-hypnum plumosum*: 3 records in 2019. Found by three streams in the Quarries area, the first localised records.

\**Sciuro-hypnum populeum*: 1 record in 2019. First record: on rocks by stream in Quarter Wall Copse (SS13884486). Frequent in western Britain.

\**Sphagnum capillifolium* subsp. *rubellum*: 1 record in 2019. First record: one patch in flushed mire north-east of Pondsburry (SS13504551). Found whilst I introduced Lundy warden Dean Jones to the island's bryophytes.

\**Sphagnum fimbriatum*: 1 record in 2019. First record: one patch in deep shade of *Carex paniculata* tussocks in Gannets' Combe (SS13274736). The rarity of this species on Lundy is surprising.

\**Sphagnum inundatum*: 8 records in 2019. First record: in flushed mire NE of Pondsburry (SS13494551). Also present in several flushes along the west coast but less common than *S. denticulatum*.

*Syntrichia laevipila*: 1 record in 2019. On concrete at Quarters. The first localised Lundy record of this species, which normally grows on trees.

\**Syntrichia ruraliformis*: 1 record in 2019. First record: on concrete wall by road above the Landing Bay (SS14144395). Easily spotted thanks to recent rain. ( I have walked past this colony many times in dry weather and missed it.)

*Syntrichia ruralis*: 2 records in 2019. Found at the Farm and Landing Bay, the second and third records.

*Thamnobryum alopecurum*: 1 record in 2018. A small colony on rocks by the stream in St Helen's Combe (SS13954425) is in a similar situation to the 2017 Millcombe population. 1 record in 2019. On rocks in Quarter Wall Copse, the third Lundy site.

*Ulota crispa* s.s.: correction to the 2017 record as the identification as *U. intermedia* was corrected to *U. crispa* by the BBS Recorder for Mosses. 1 record in 2019. Tufts on willow by Quarry Pond are the second Lundy record.

*Warnstorfia exannulata*: 2 records in 2019. Locally frequent with *Anagallis tenella* and *Eleocharis multicaulis* in a flush near Halfway Wall, and also recorded in a flush north-east of Jenny's Cove; the first localised records.

*Warnstorfia fluitans*: 1 record in 2018. A colony on damp peat over granite at Widow's Tenement (SS13334690) is the only recent record of this moorland moss; it was also reported by Cox (1959). 5 records in 2019. Scattered on wet peaty ground in the northern half of the island.

## References

- Cox, R.M. 1959. Mosses, Liverworts and Lichens. *Annual Report of the Lundy Field Society* 13: 49-53.  
Paton, J.A. 1975. Hepatics on Lundy. *Annual Report of the Lundy Field Society* 26: 18.