

Lundy

Lundy is a small, exposed, mainly granite island 4.5 km long and 1 km wide lying 18 km off the North Devon coast, with a maritime Atlantic climate and isolated from the mainland following sea-level rise since the end of the last ice age. The granite intrudes into metamorphosed sedimentary rocks, slates, at the southeast corner of the island by the Landing Beach and both are intruded by a swarm of igneous dolerite dykes. The island is a relatively flat plateau, sloping from a height of 140 m in the south to 90 m in the north, surrounded by steeply-inclined sidelands, at the base of which are near-vertical cliffs (Smith & Roberts 1997). Lundy has been occupied or visited by humans since Mesolithic times and occupied permanently since the Middle or Late Bronze age (Blaylock 2006).

With both sheltered and exposed environments on the plateau, the cliffs have a rich flora of over 300 species of flowering plants and ferns. Soils on the plateau are loamy with some peat. About a quarter of the plateau is semi-improved grassland enclosed by stone walls and either grazed by domestic sheep and ponies or cut for silage. Elsewhere, feral goats, Soay sheep, Sika Deer *Cervus nippon* and Rabbits *Oryctolagus cuniculus*, subject to culling to prevent over-grazing, range across the whole island (Haw *et al.* 2009). A small herd of Highland Cattle has recently been introduced with the aim of increasing grazing of *Molinia* to open up the vegetation structure in the Pondsburry area (see below). The remaining areas, especially those on the west and at the northern end are a mosaic of dry maritime heath and unimproved acid grassland. Heather *Calluna vulgaris*, Bell Heather *Erica cinerea* and Western Gorse *Ulex gallii* are typical plants of the dry heath with Sheep's-fescue *Festuca ovina*, Tormentil *Potentilla erecta* and Heath Bedstraw *Galium saxatile* in the associated grasslands.

The artificial pond at Pondsburry is the largest permanent waterbody. Other significant ponds include Quarry Pond, Rocket Pole Pond and Quarter Wall Pond. Around and in the ponds Marsh Pennywort *Hydrocotyle*



Lundy, seen from the southwest.

vulgaris, Water Purslane *Lythrum portula* and Bog Pondweed *Potamogeton polygonifolius* can be found with Marsh St John's-wort *Hypericum elodes*, Common Spike-rush *Eleocharis palustris* and Creeping Forget-me-not *Myosotis secunda*. Mires, especially those in the Pondsburry area, are dominated by Purple Moor-grass *Molinia caerulea* and Sharp-flowered Rush *Juncus acutiflorus*. Bog Asphodel *Narthecium ossifragum*, Bog Pimpernel *Anagallis tenella*, Round-leaved Sundew *Drosera rotundifolia* and Heath Spotted-orchid *Dactylorhiza maculata* are most frequent in this area. Allseed *Radiola linoides*, sometimes with Chaffweed *Centunculus minimus*, are found occasionally in damp bare areas. The network of walls have a good fern flora including Maidenhair Spleenwort *Asplenium trichomanes*, Black Spleenwort *A. adiantum-nigrum* and Common Polypody *Polypodium vulgare*. Hare's-foot Clover *Trifolium arvense* is found on two of the wall tops. Maritime grassland is often very colourful in spring with Sea Campion *Silene uniflora*, Sheep's-bit *Jasione montana*, Bluebell *Hyacinthoides non-scripta* and Common Bird's-foot-trefoil *Lotus corniculatus*. The western cliffs are very exposed and maritime species such as Thrift *Armeria maritima* and Sand Sedge *Carex arenaria* occur well above sea level on the rocks at the top of the cliffs. The eastern slopes of the island are much more sheltered with three areas of woodland of varying size. Stands of Greater Tussock-sedge *Carex paniculata* and Royal Fern *Osmunda regalis* can be found in the sideline coombes. The latter thrives in several locations where it may be seen in quarries growing directly out of the bare rock, especially where there is water seepage, protection from grazing animals and competition from more vigorous plants (Cleave 2012). Hay-scented Buckler-fern *Dryopteris aemula* is a very common species on Lundy, and can be found in both sheltered and exposed locations along much of the east side and also in some of the much more exposed valleys on the west side such as the Punchbowl Valley (Cleave 2012). Small Adder's-tongue *Ophioglossum azoricum* was first recorded by F.R.Elliston Wright in 1935. It is found in areas of short exposed grassland on the western side of the island in Middle Park, and at the south end near Rocket Pole, in one of only two Devon sites. It may be very abundant with in excess of 100,000 plants counted in 1993. Balm-leaved Figwort *Scrophularia scorodonia* is found commonly in the southeast of the island. It was first reported from Lundy in 1877 (Rogers 1877) about the same time it was first seen by Briggs (1880) in South Devon in the Kingsbridge area, but it did not get to the North Devon mainland until 2005. Other less common species include Henbane *Hyoscyamus niger*, known from Lundy before 1939 and still found regularly, most recently near Castle Hill. Greater Broomrape *Orobancherapum-genistae* has been seen frequently above the Landing Beach since 1993 and Common Broomrape *O. minor* at Quarry Bay in 2009. Other recent additions to the island flora include Yellow-horned Poppy *Glaucium flavum*, found for the first time close to the jetty in 2007 but gone again by 2014, and Wood Vetch *Vicia sylvatica*, well known on the nearby mainland of Devon, by the beach road in 2009.



Millcombe, Lundy, looking southeast towards the Landing Bay and Rat Island.

The best known plant on the island must be Lundy Cabbage *Coincya wrightii*. Isolation has led to the evolution of this Lundy endemic which is found mainly on the slate sidelines and cliffs of the southeast of the island. It had been known there since the 19th century but not recognised as a distinct species until 1936 (see the species account). Numbers of plants vary greatly from year to year, partly in response to rabbit and goat grazing, but the plant has responded well to *Rhododendron ponticum* clearance in recent years. It is host to the endemic Bronze Lundy Flea Beetle *Psylliodes luridipenis*. A flightless form of another Flea Beetle, *P. napi*, and Lundy Cabbage Weevil *Ceutorhynchus contractus* var. *pallipes* also feed on the plants. Populations are, in part, protected from grazing animals as *C. wrightii* often grows on inaccessible cliff ledges (Simensen & Eichhorn 2012).

Highly invasive *R. ponticum* scrub, particularly on the sidelands and cliffs of the east side, but also spreading via wind-blown seed onto the plateau, has been a major problem, excluding native flora. However, a determined policy of eradication has greatly improved the situation. *Coincya wrightii* is colonising bare areas and in time these are expected to recover to acid grasslands with Bracken *Pteridium aquilinum*, Gorse *Ulex* spp. and *Hyacinthoides non-scripta*. The situation now only needs monitoring and seedling removal (Haw *et al.* 2009).

Lundy is a Site of Special Scientific Interest and its intertidal and subtidal coast a Special Area of Conservation, part of England's first designated Marine Conservation Zone. The island was gifted to the National Trust in 1969 and is managed by the Landmark Trust with the advice and support of partners including Natural England and the RSPB. The Lundy Field Society, founded in 1946, has been researching the island's archaeology, geology, marine and terrestrial natural history and social history since that time and publishes an Annual Report and periodic Journal. Hubbard (1997) takes the reader on a short journey around the island and very usefully provides a review of the vegetation surveys conducted up to that time.

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