IMPORTANT INVERTEBRATE AREA PROFILE

Lundy

Left: Lundy Island © Laura Larkin. Right: Lundy Cabbage Flea Beetle (*Psylliodes luridipennis*) © John Walters

Lundy Island sits in the Bristol Channel, off the north coast of Devon. The western side of the island is rugged, with vast granite cliffs facing directly out on to the Atlantic Ocean, and can often experience strong winds and rough sea conditions. The eastern side of the island is considerably more sheltered, with gentle maritime cliff slopes, known as sidelands. It supports the world's only population of the Critically Endangered Lundy Cabbage Flea Beetle (*Psylliodes luridipennis*)- an endemic species known only from Lundy.

Lundy Cabbage Flea Beetles live almost solely on Lundy Cabbage (*Coincya wrightii*), which is also endemic to the island, with some adults also feeding on Sea Rocket. The adults lay eggs into the sandy soil at the base of the Lundy Cabbage plants. The larvae mine the stems, roots and leaves of the plant and return to the soil to pupate.

The location of the largest populations of Lundy Cabbage varies from year to year, but the area of slate cliffs above Landing Beach, Millcombe, the Sugar Loaf, the cliffs below the various combes on the eastern sidelands and sections of the granite cliffs at Quarry Bay are the most important areas for the plant. The distribution of the Lundy Cabbage is impacted by grazing animals, such as livestock and rabbits. Historically Rhododendron has posed a threat, however, after a concentrated effort, Rhododendron has been almost eradicated from the island.

Much of the Lundy IIA is part of the Lundy Site of Special Scientific Interest (SSSI) and Lundy Special Area of Conservation (SAC) which envelop the coast and sea around Lundy Island.

Reasons for Selection

The Lundy IIA supports an internationally important population of the Critically Endangered Lundy Cabbage Flea Beetle, which is endemic to Lundy.

Threats and Opportunities

Coastal Habitats

Threats

- Overgrazing by livestock and rabbits can lead to the loss of Lundy Cabbage needed by the Lundy Cabbage Flea Beetle. Conversely, abandonment of grazing can lead to scrub encroachment.
- The direct loss or damage of coastal habitats could reduce Lundy Cabbage extent.
- Although limited amounts of scrub provide important shelter, nectar and pollen, the loss of grazing or other management can lead to areas becoming dominated by thick grass, brambles, Bracken and scrub at the expense of Lundy Cabbage habitat.
- Cliff stabilisation measures could disrupt the dynamic natural processes of erosion, slumping and slippage, impeding the introduction of Lundy Cabbage seeds to cliff faces and the creation of new nesting habitat including friable bare ground and early successional vegetation stages required by many cliff-dwelling invertebrates.
- The use of fertilisers and pesticides and the loss of low intensity grazing on adjacent land can negatively impact on soil-dwelling invertebrates reliant on high quality cliff top habitats for foraging or for dispersal.
- Non-native invasive plant species (e.g. Rhododendron) can negatively affect the vegetation and structural composition of coastal habitats, as can some 'native' species (e.g. Bracken and bramble thickets).

Lundy Cabbage © Natural England/Allan Drewitt (CC-BY-NC ND)

Opportunities

- Target restoration work around or near to existing high quality Lundy Cabbage sites, to improve connectivity and to provide opportunities for invertebrates to develop resilient populations and where coastal habitats can move inland in line with retreating coastlines to mitigate for future losses.
- Further restrict access to or reduce numbers of grazing animals within the IIA, at least between April and October each year.
- Undertake work to reduce the existing Bracken and scrub (only if grazing animals are at low enough levels, where bramble isn't required to protect the plants from being consumed), to see whether the Lundy Cabbage fares better in an open habitat.
- Trial seeding of new areas with varied conditions to determine which is most likely to be successful.
- Trial the suppression of dominant grasses with hemi -parasitic plants sourced on the island to see whether Lundy Cabbage and grass can grow together if the sward is not too thick.
- Create accessible cabbage patches alongside heavily used footpaths and access routes – providing an "opportunity to see" for visitors, as well as essential habitat for Lundy Cabbage and Lundy Cabbage Flea Beetle. Intensive management of such areas could be used to create abundant stands of Lundy Cabbage which could be used to harvest seed from.
- Control or remove invasive species.
- Continue grazing on coastal sites, but evaluate the level of grazing pressure and reduce where excessive poaching and erosion are leading to the loss of Lundy Cabbage.
- Ensure Shoreline Management Plans recognise the importance of cliffs for biodiversity and avoid damaging management. Any activity that changes the natural rate of cliff and slope erosion or extent of bare ground and seepages, such as re-profiling or the introduction of coastal defences, should be avoided wherever possible.
- Prevent damage by excessive disturbance or overuse by maintaining permanent pathways and tracks to keep footfall and vehicular access along the same routes.


Left: Lundy Cabbage Weevil (*Ceutorhynchus contractus var. pallipes*) © John Walters. Right: Cliff Tube-Weaver (*Segestria bavarica*) © Pascal Dubois (CC BY-NC)

- Avoid development proposals that threaten coastal habitats and their associated invertebrate fauna.

Other Interests

Although this IIA qualifies for the Lundy Cabbage Flea Beetle, there are records of seven other IIA qualifying species in this hectad, however, it doesn't exceed the threshold to qualify for an overall invertebrate assemblage. The Lundy Cabbage Weevil (*Ceutorhynchus contractus var. pallipes*) is a sub-species also supported by Lundy Cabbage. Other species of interest are reliant on coastal habitats such as shingle, cliffs and coastal grassland, and include Cornish Snout (*Nothris congressariella*), the flea beetle *Longitarsus nigrofasciatus,* the marsh weevil *Procas picipes,* Cliff Tube-weaver (*Segestria bavarica*) and Southern Mesh Weaver (*Lathys stigmatisata*). One species reliant on deadwood, the weevil *Pseudophloeophagus aeneopiceus,* can also be found on Lundy.

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Date: May 2025
Version number: 1
https://www.buglife.org.uk/our-work/important-invertebrate-areas/