5. On rock crevices and ledges, associated particularly with ivy on cliffs immediately above the sea, flanking the path leading from St. John's Valley to the landing beach. The Lundy Cabbage is more common on the gentler slopes between this path and the sea, where it often occurs competing successfully with other vegetation.

To sum up, the Lundy Cabbage is a calcifuge species favouring the sheltered conditions of the cliffs and gullies of the south-eastern part of the island, where it is well adapted for the widely differing seasonal changes, low mineral budget, and dangers from dessication inherent in the habitat of the plant. The species favours maximum periods of direct sunlight in the summer, though is fairly tolerant of competition, even with some shade-casting species. The plant associations in which the Lundy Cabbage occurs, are of three broad types:

(i) species growing in the clefts of bare acidic siliceous rock and walls;
(ii) plants with, on the whole, shallow creeping roots, colonising thin humus cover on rock ledges and other pockets of mineral accumulation;
(iii) turf coverlying the parent rock with a substantial, though thin, soil profile. The Lundy Cabbage favours well-drained shallow soil, which is often invaded with bracken.

These notes are not, of course, in any way intended to be the last word on the subject of the Lundy Cabbage, but rather as some sort of basis for a more detailed study of the plant and its relationship with the environment, which could provide a future research worker much rewarding study. In particular, the effects of re-colonisation after a landslip, the aggressive invasion of bracken into some existing localities, and the possible deprivation by grazing animals and tourists may be relevant if we are to ensure the survival of this interesting plant.

18.2.72 P. R. MARREN

REFERENCES

The Flora of Devon. 1939. W. Keble Martin. (Gives a concise summary of the papers by Wright and Pugsley.)

The Brassica of Lundy Island. *Journal of Botany* 1936, p. 323. H. W. Pugsley.

The Lundy Brassica, with some additions. *Journal of Botany* suppl. 1936. F. Elliston Wright.

On the origin of the Lundy Flora, with some additions. *Journal of Botany*, 1935, pp. 91–95. F. Elliston Wright.

THE PROPOSAL TO ESTABLISH A MARINE NATURE RESERVE AROUND LUNDY—PROGRESS

To date, 38 copies of the proposal have been sent to individuals and organisations directly connected with Lundy or interested in the establishment of marine reserves in Britain.

The proposals have been provisionally accepted by the Landmark Trust, they have been discussed and supported by the committee of the Lundy Field Society, and Mr. D. R. Shiers (Bristol Channel Divers Ltd.) has agreed to them in principal. The proposals have also been discussed with Mr. J. Dyke (Curator, Lundy Museum), and were presented and discussed at the Annual Symposium of the Underwater Association. Details of the proposals have been published in the following:

Journal of the Devon Trust for Nature Conservation
Illustrated Lundy News
Nature
Triton (Journal of the British Sub-Aqua Club)
Underwater Association Newsletter

Both from the discussions that have been held and correspondence received it is apparent that there is a great deal of interest in the proposed marine reserve and many helpful suggestions have been forthcoming.

Summary of comment and suggested amendments

(The following are intended for discussion and are not recommendations.)

Emphasis has shifted from the original main aim of regulating diving around Lundy to that of encouraging constructive diving activities from the island. However, regulations must be considered an essential background to this development.

Regulations A large number of people have expressed the view that a total ban on collecting is appropriate in a marine reserve. The collection of specimens for educational or research purposes should require a written permit and would not allow 'destructive' sampling methods. Mr. R. L. Vallintine (Director British Sub-Aqua Club) suggested that all forms of fishing should be prohibited.

Enforcement The problem of enforcing regulations or a 'code of conduct' has probably caused most concern. Mr. J. F. Lamerton (Nature Conservancy) is at present reviewing the legal situation with regard to this project and will be able to advise on the most effective way of obtaining control over activities on the shore and seabed.

Warden It is becoming increasingly evident that a marine warden will be essential to the smooth running of the reserve, especially during the summer season. Dr. C. C. Hemmings (DAFS) has suggested that the Field Studies Council might be interested in Lundy, this would provide a permanent scientific staff.

Management The proposal to establish Lundy as a marine reserve has come from a small group of people and does not have overall backing from any large organisation. After the summer expedition, meetings with the Landmark Trust must be held to discuss the possible future organisation and running of a reserve.

Diving operations The discussions and correspondence over the past few weeks show that strong feeling exists to the effect that the present diving organisation on Lundy is not consistent with that of a marine reserve particularly since it is profit orientated and has a monopoly on the shore based diving activities. It is difficult for organisations such as the B.S.-A.C. to encourage its members to patronise any one such organisation and many diving groups would be sufficiently competent to arrange their own diving from the island. The present organisation is, however, firmly entrenched on Lundy, has done a considerable amount to develop the diving and runs the diving efficiently and safely.

Finance It is hoped that many of the proposed museum, study, and educational facilities can be combined with present developments on the island. Money for the provision of a warden could probably be found from outside sources. The exact limit of the required finances will be known only after discussions have been held on the facilities which should be provided and on the running of the reserve.

General Information

A letter has been received from the Secretary of State for Education and Science expressing interest in the Lundy project and requesting information on its progress. The Natural Environment Research Council are considering the practical and legal problems involved in setting up marine reserves in Britain and the establishment of an independent and private project on Lundy will prove valuable in considering the possibility of statutory marine reserves.

Lundy—Activities Summer 1971

The discussions which have been held so far have not, unfortunately, resulted in the establishment of any regulations relating to conservation and diving which would control diving activities around Lundy this summer. A small display has however been prepared and placed on the island. This includes a copy of the proposals, explains their purpose, and suggests a code of conduct for divers operating from the island this summer.

Work in progress includes the preparation of a reference herbarium of Lundy marine algae (Dr. D. E. G. Irvine), a card file system for the marine fauna and flora (Lundy Field Society), a type collection of common marine animals (K.

Hiscock), a reference collection of marine photographs (K. Hiscock) and a review of the law with relation to the project (Mr. J. F. Lamerton).

An expedition of marine scientists has been organised to visit Lundy from 23rd July to 7th August and report on all aspects of the establishment of a reserve. (See Appendix.)

18th June, 1971

KEITH HISCOCK

APPENDIX

The Expedition

The expedition aims to make recommendations on the establishment and running of a reserve in the light of field experience and in discussion with the island authorities, curator of the Lundy Museum, the Lundy Field Society and Bristol Channel Divers Ltd. The expedition will also set out to lay the foundation of future studies on the shore and underwater around Lundy by starting to catalogue the fauna and flora, supplying type material and photographs of the fauna and flora, and supplying information and assistance for the preparation of museum displays.

A report will be prepared at the end of the expedition and should consider the following:

1. Lundy's potential for diving recreation and the way any facilities for such can best be integrated with the present running of the island.
2. The regulations which should be established to prevent any depreciation in the value of Lundy's marine environment as an area for recreation, education, and study.
3. Recommendations to the island authorities on the running of diving from Lundy in a way which is compatible with the status of the island as a marine reserve.
4. The facilities which should be offered for diving recreation, education, and research.
5. Advice on the preparation of displays, etc., including the possible production of a booklet or leaflet on marine life around Lundy.
6. Advice on the possible field projects which may usefully be carried out by amateur divers around Lundy.

Although a great deal of work will be concerned with the preparation of type collections and with surveying the populations of plants and animals around Lundy, participants will be encouraged to carry out work within their own sphere of interest. The main value of the expedition will be in the field experience that will be gained, not only underwater, but in Lundy generally.

Collecting will be kept to a minimum.

Personnel

Mr. K. Hiscock (23rd July–7th Aug.) (Marine Science Labs, Menai Bridge)	Organisation/Co-ordination. Survey of sublittoral animal populations.
Dr. M. W. Robins (23rd–31st July) (Kings College, University of London)	Ecology of *Alcyonium* spp. Ecology and identification of hydroids. Identification of algae and preparation of herbarium. Shore ecology.
Dr. D. E. G. Irvine (23rd–31st July) (Northern Polytechnic)	
Mr. R. Hoare (23rd–31st July) (Marine Science Labs, Menai Bridge)	Survey of sublittoral animal populations. Mollusca.
Mr. D. Lane (23rd–31st July) (Marine Science Labs, Menai Bridge)	Survey of sublittoral animal populations. Ascidiacea.

Dr. and Mrs. J. D. George (31st July–7th Aug.) (British Museum, Natural History)	General ecological studies. Sponges, Polychaetes, Echinoderms. Assessment of fish populations. Fish behaviour studies and filming. Marine Archaeology.
Dr. R. Hudson (31st July–7th Aug.) (Bristol University)	
Mr. J. Taylers (31st July–7th Aug.) (Bristol University)	
Mr. J. F. Lamerton (3rd–5th August) (Assistant Regional Officer, Nature Conservancy, Taunton)	

Dr. Yvonne Pocock (Northern Polytechnic) will be diving from Lundy during the first week in August and has expressed an interest in joining in the work and looking at problems of orientation in gorgonians. Dr. C. R. Boyden (Bristol University) has expressed an interest in joining the expedition to carry out investigationson the shore.

MARINE SCIENCES EXPEDITION 1971

KEITH HISCOCK

Marine Science Laboratories, Menai Bridge

Between 24th July and 7th August, 1971, a party of marine biologists visited Lundy to carry out field work especially of relevance to the proposal to establish a marine nature reserve around the island. In considering this proposal it was felt important to determine the suitability of the area from a practical as well as a biological point of view and to liase with everyone who would be affected by the project to discuss how best such an area might be established. The biological investigations were also planned to be of such a nature that they would act as a basis for further work of a more specific nature. The completed work has been presented in the form of a report published by the Lundy Field Society.

A total of twelve people took part in the work: five during the first week and seven during the second week. Dr. D. E. G. Irvine continued his work on the marine algae and has prepared a reference herbarium; Dr. and Mrs. J. D. George, K. Hiscock, R. Hoare, D. J. W. Lane and Dr. M. W. Robins carried out diving work, concentrating on a thorough study of the distribution of the sublittoral animal communities and their component species as a basis for a card file of the marine fauna and flora; Dr. C. R. Boyden investigated shore populations at contrasting sites around the island; and Dr. R. C. L. Hudson undertook a study of the fish populations. Mr. J. F. Lamerton of the Nature Conservancy visited Lundy for three days to advise on the project.

The biological investigations have confirmed the richness and diversity of the marine fauna as well as the scientific interest of the area for future research. The discussions which were held on the island, together with the consequent formation of an Advisory Committee and the production of a code of conduct for 1972, has meant that we can now work towards the final establishment of a marine reserve which will ensure the conservation of shore and sea-bed resources for scientists, naturalists and sports divers.

REFERENCE

Hiscock, K. (ed.) (1971). *Report on the proposal to establish a marine nature reserve around Lundy. Marine biological investigations* **1971**. Published by the Lundy Field Society.