County Donegal

An Foras
Forbartha
Teoranta

The National Institute for Physical Planning and Construction Research

Teach Mhártin
Bóthar Waterloo
Áth Cliath 4
Teileafón 64211

**St. Martin's House
Waterloo Road
Dublin 4**

CONSERVATION AND AMENITY
ADVISORY SERVICE

Secretariat

A REPORT ON AREAS OF ECOLOGICAL AND GEOLOGICAL INTEREST IN COUNTY DONEGAL

R. Young,
An Foras Forbartha,
April, 1973.

DONEGAL

This report is based on information in the files of the Conservation and Amenity Section, An Foras Forbartha, on published literature and on observation made in the field during the summer and autumn of 1972.

Dr. A. Flegg, Geological Survey of Ireland, supplied details of geological sites included in this report and his help is gratefully acknowledged.

CONTENTS

SECTION A

PREFACE

In the present day, Ireland can still justifiably be called 'The Green Isle'. In comparison with most countries in the western world, a very high percentage of the country is still 'natural', unspoilt countryside, untouched by industry, urbanization and often, even by modern farming techniques.

It is unrealistic to think that this situation will continue indefinitely. If the national economy is to improve, many areas of our countryside must be taken over by industrial and urban development and traditional farming methods must be 'modernised'. These trends have already become manifest and can be expected to continue over the coming years.

Fortunately, it is now realised that unspoilt countryside is itself a valuable asset to the community. It is generally appreciated that in the peace and quiet and scenic beauty of such countryside, many people find relaxation and recreation - this is surely the basis of the Irish tourist industry. In addition to such amenity values however, many parts of the countryside are of scientific importance, either because of their research potential or their educational value.

The essence of conservation is planning, in which these intrinsic values of the countryside are weighed against the needs of agricultural improvement and industrial and urban expansion. Its aims are, firstly to ensure that as far as possible the areas of countryside that will be 'lost' to development are those of least value from the points of view of amenity and scientific interest, and secondly, to ensure that development does not pollute or in any way clash with the intrinsic values of the surrounding countryside beyond a degree that is absolutely essential. Thus development can proceed without unnecessary impoverishment of our rich heritage of beautiful and scientifically important areas.

The responsibility for conservation in Ireland lies largely with the County Councils in the preparation and implementation of County Development Plans. However, if County Development Plans are to be based on the principles of conservation outlined above, it is clearly essential that adequate data on areas of scientific interest should be supplied to the County Councils because, whilst such a characteristic of an area as scenic beauty is readily apparent to the discerning eye, the scientific values of a site are often hidden from all but the specialist.

It is the aim of the Conservation and Amenity Advisory Service, An Foras Forbartha, to provide this information in a series of reports, each of which will deal with the areas of scientific interest within a single county.

SECTION B

VULNERABILITY OF AREAS OF SCIENTIFIC INTEREST

Areas of scientific interest can be damaged in many ways. They can, for example, be completely and rapidly destroyed by scrub or tree clearance, by turf cutting or by arterial drainage, or they can suffer insidiously through pollution, fertilisation, grazing or overuse for recreations.

Of these various instances the first poses the greatest threat because of the rapidity with which it can occur. In the absence of a fine large enough to be a sure deterrent, co-operation to maintain the county's deciduous woodlands at all levels of landowner, forester and the general public must be actively sought. It may not be sufficient merely to put a Tree Preservation Order on an area which would lose its value immediately the trees are felled. The voluntary organisations have a role to play in this acting as observers throughout the county.

Turf cutting on a small, private scale presents little threat to the countries' boglands in comparison with the activities of Bord na Mona. A representative series of Irish bogs should certainly be left untouched by commercial exploitation.

Drainage schemes of all kinds can have serious effects on wetland sites. Marshes, fens and bogs may dry out, lake levels may fall and the dredging of rivers results in the steepening of their banks and an increased rate of water flow. All these changes can result in the disappearance of particular communities or species.

The effects of pollution are most often encountered in aquatic sites, which are particularly vulnerable because the incoming material cannot be localised, but is transported throughout the water body. Toxic chemicals can obviously

have disasterous effects on aquatic communities but equally serious effects can be produced by sewage if sufficient quantities pass into the water. Such influx of sewage causes the nutrient levels of lakes to rise with consequent effects on the aquatic communities and water quality. A sign of this rise in nutrient levels, known as eutrophication, is the production of algal scums or 'blooms' on the water surface in warm weather.

Several farming operations are potentially destructive, apart from straightforward pollution by silage effluent or intensive livestock units. Excessive fertilization produces run-off of nutrients, especially nitrates and these are particularly bad for nutrient-poor ecosystems such as acid lakes and bogs. Introducing such run-off into any natural community will change the species composition.

Grazing has a similar effect. It can select out of the vegetation those species that are most resistant to constant cutting and/or those that are unpalatable, and therefore not grazed, and allow them to multiply at the expense of others. This reduces the diversity of the flora and often also its interest. Light grazing is seldom detrimental except that it prevents the natural colonisation of grassland by shrubs and trees, but as it is intensified such changes as those mentioned above occur and in extreme cases the vegetation may not be able to persist at all. Eskers and sand dunes are particularly vulnerable as their dry soils do not allow a fast recovery growth by grazed plants.

The last influence to be mentioned is recreation, the effects of which are most obvious today on sand dune systems. Heavy recreational use of dunes results in destruction of the vegetation which stabilises the dunes and serious erosion can result. The destructive effects of flower or plant collecting should perhaps also be mentioned. Opening up of areas with a rare noticeable plant may damage that species, but in general enough individuals escape notice so that it persists from year to year.

SECTION C

INTRODUCTION TO THE AREAS OF SCIENTIFIC INTEREST IN COUNTY DONEGAL

This report contains details of sixty-six areas of scientific interest in County Donegal, together with an assessment of their relative importance. It expands and, where necessary, revises the data presented in the Provisional Survey of Areas of Scientific Interest in County Donegal. Bridget Doran, An Foras Forbartha, October, 1971.

It is hoped that the report will enable the County Council to take the necessary action to preserve the scientific interest of these areas. Where areas are already known to be threatened specific recommendations have been made for their protection. An indication is also given as to the degree of urgency necessary if protective measures for the areas are to be effective. As will be seen, only in the case of four areas, the priority 'A' areas, is immediate action deemed necessary in the face of known development proposals, though immediate consideration should be given to the means of protecting the areas with 'B' priority.

As developments occur and as scientific knowledge increases, the importance and priority of the areas will change. Continual reassessment is required to monitor such changes. If a particular site loses its value through pollution or physical disturbance, the others of its type will immediately become more important in the regional context. Likewise, if a new and particularly interesting organism is found in an unlisted site, one of the existing ones may be deleted after comparison. Priority for a site's protection may also vary as developments in its vicinity are proposed or begun.

To anyone with an intimate knowledge of the geology of Donegal it will be apparent that certain areas of geological interest in the county have not been documented in this report. These are sites of mineralogical interest which are extremely vulnerable to mineral collectors. Indeed in the last few years two

of the areas in question have been devastated by a commercial collector, who removed several tons of material from them. In view of the profits to be made from the sale of minerals and the fact that legislation to protect geological sites is currently lacking, it is likely that damage to known exposures of rare minerals will continue and it is therefore considered that the best protection that can currently be afforded to rare mineral localities is a veil of secrecy over details of their location and features of interest. They have thus not been included in this document, which is readily available to the public. Similar considerations have led to the exclusion from the report of precise localities for one or two other features of interest.

With regard to the inadequacy of existing legislation in the field of conservation, it must be stressed that essential to a successful conservation programme is the co-operation of landowners and the public at large. Penalties for contravening Conservation Orders and Tree Preservation Orders for instance are insufficient ever to be a universal deterent and surely the main hope for conservation currently lies in greater public awareness of the intrinsic values of the countryside. From the County Council a definite statement of intent is certainly required with regard to areas of scientific interest. The listing of most of the areas in this report in the Draft Variation to the County Donegal Development Plan, 1972, (as areas to be protected) is a valuable first step in this direction. Many of the disagreements that have arisen in the past stemmed basically from a lack of knowledge. The developer did not know that his chosen site had any scientific interest and his imagination and self-assurance did not allow any graceful retreat from his stand. This could be largely avoided if the areas of scientific interest were widely publicised. Such firm action by the Council might elicit a response from the public in greater awareness of the environment and developers might then be inclined to work more closely with the planning authorities rather than against them. Also the landowners should, in almost all instances, be told of the importance of their land. They should be advised that their present form of land use is that most suited to the maintenance of such interest, if this is so; if not, recommended alternatives should be passed on.

When assessing the importance of areas of scientific interest it is essential to take a broad view, hence eliminating errors that could be caused by local variations in the abundance of a particular species or habitat. Thus it can be seen that the finest Donegal blanket bogs are of international importance, though from purely a local viewpoint it would be difficult to conceive that representative samples of a habitat type that covers the majority of the county are of any importance. The importance of these bogs is a result of their position at the northern tip of the area of Irish blanket bogs, themselves the most westerly bogs in Europe. The distribution of bog types in Ireland is shown on Fig. 1.

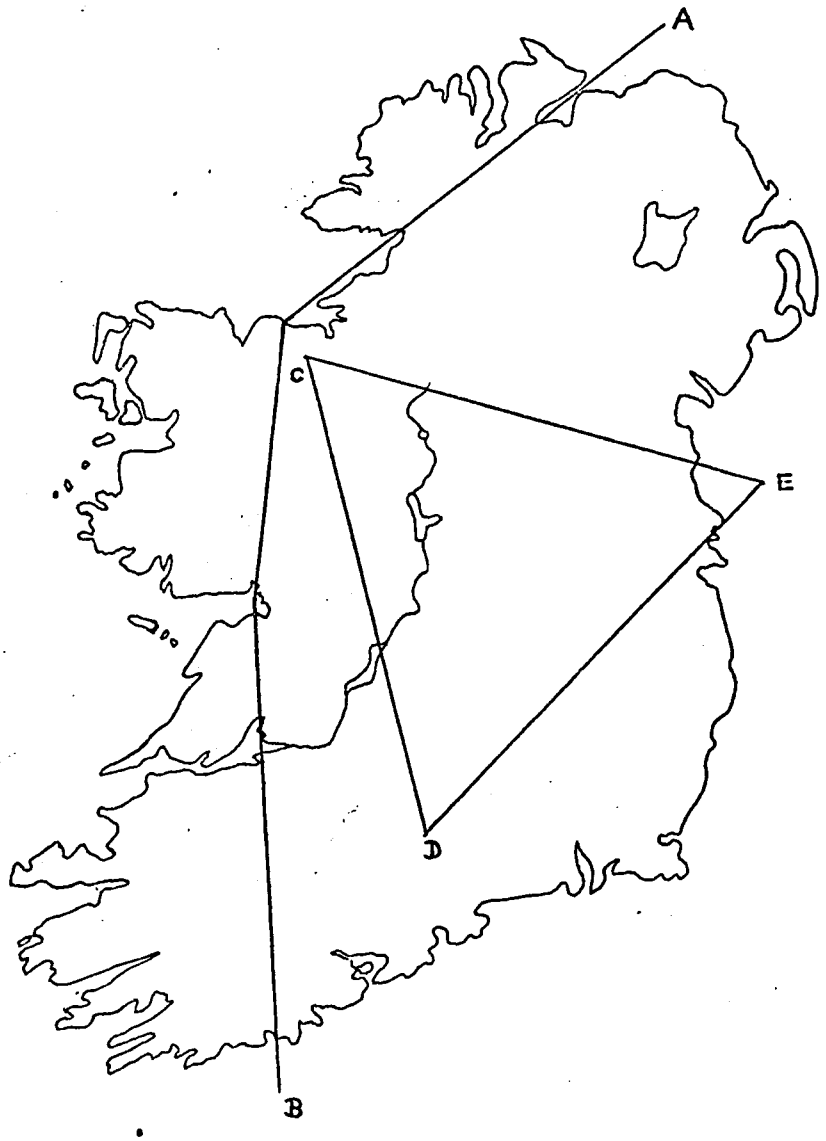


Fig. 1 Distribution of the main bog types in Ireland

West of the line A - B is the region of blanket bog par excellence. The triangle C D E encloses the main aggregates of raised bog (Hochmoore).

A final introductory comment is needed regarding the place of deciduous woodlands in conservation plans. As the natural climax vegetation of vast areas of central and western Europe deciduous woodlands were once common in Ireland and Britain. Over the last few centuries however the activities of man and his grazing animals have reduced the extent of these woodlands until only tiny remnants of the former forests are left. Nowadays, therefore the rarity of this habitat type coupled with its great biological richness and ecological diversity results in virtually any area of deciduous woodland being of scientific interest and the finer examples of remnant forest are of national and international importance. In addition to their scientific value however, deciduous woodlands are one of the most important components of attractive countryside, providing variety to the landscape and thus have great amenity value. The County Council is therefore urged to make every effort to preserve all the areas of deciduous woodland listed in this report. To this end several Tree Preservation Orders have been recommended and should be implemented, though, as has already been stated, the co-operation of the relevant landowners in maintaining the woods should be actively sought.

SECTION D

RATING OF AREAS OF SCIENTIFIC IMPORTANCE

This is a measure of the relative importance of areas of scientific importance.

The importance of each area is indicated in terms of the following categories:

International Importance

1. Only area of its type in Europe.
2. One of the few such localities in Europe.
3. One of a natural series in Europe.
4. Recognised international importance.
5. Specialised educational importance.

National Importance

1. Only area of its type in Ireland.
2. One of a few such localities in Ireland.
3. One of a natural series in Ireland.
4. Recognised national importance.
5. General or specialised educational importance.

Regional Importance

1. Only area of its type in province.
2. One of a few localities in Ireland.
3. One of a natural series in region.
4. Fine example of its kind.
5. General or specialised educational importance.

Local Importance

1. Only area of its type in county.
2. One of a few localities in province.
3. Fine example of its kind.
4. General educational importance.

PRIORITY OF AREAS OF SCIENTIFIC INTEREST

This is a measure of the relative urgency necessary for protection of the areas of scientific importance.

Each site is given a priority rating of A, B or C.

The rating of any area is based on a combination of the following criteria:-

a) the importance of the area

b) the vulnerability of the area

c) the nature and imminence of any threats to the area.

Area	Grid Reference	Rating	Priority	Interest
Slieve League Area	G. 5, 7	International Importance	B	Geological; botanical; ecological. A coastal mountain mass, with spectacular seacliffs, high-level corries and interesting blanket bog.
Malin Head	C. 3, 5	International Importance	C	Geomorphological; botanical; ornithological. This area contains well-preserved late-glacial strand lines and some small stone polygons. Some botanical and ornithological interest also.
Horn Head cliffs	C. 0, 4	International Importance	C	Ornithological. Inaccessible quartzite cliffs holding very large seabird colonies.
Inch Lough	C. 34, 22	International Importance	A	Ornithological; ecological. A shallow brackish lough with extensive marginal wetlands.
Gannivegil Bog	B. 82, 06	International Importance	C	Ecological. An area of intact low-level blanket bog containing several small lakes.
Lough Barra Bog	B. 92, 10	International Importance	C	Ecological. An area of intact blanket bog containing several small lakes.
Cliffs on Aran Island	B. 6, 1	International Importance	C	Botanical. The only known locality of the saxifrage, Saxifraga hartii.

Area	Grid Reference	Rating	Priority	Interest
Kilkenny pebble dyke	G. 78, 98	National Importance	C	Geological. An intrusive dyke with three-faced pebbles in a granophyric matrix.
Kindrum tinoid	C. 19, 41	National Importance	C	Geological. Outcrops of a boulder bed of glacial origin from the Dalradian; a vital marker horizon in the Scottish and Irish succession.
Birra Lough	G. 87, 69	National Importance	B	Ornithological; ecological. A shallow freshwater lough with marginal marginal wetlands.
Meenagoppoge Bog	B. 96, 22	National Importance	C	Ecological. An area of extremely wet blanket bog at water table level.
Dunragh Loughs area	H. 0, 7	National Importance	C	Ecological. A large area of intact blanket bog.
Owenbeagh Bog	C.000,188	National Importance	A	Ecological. A small intact area of blanket bog with a well-formed ombrogenous dome.
Sessiagh Lough	C. 04, 36	National Importance	B	Ecological; zoological. An acid lake with an exceptionally high biomass and also char stocks.

Area	Grid Reference	Rating	Priority	Interest
Lough Shore	B. 65, 17	National Importance	A	Ecological; zoological. Principal lake in Ireland with naturally regenerating rainbow trout.
Glenveagh Woods	C. 01, 19	National Importance	B	Ecological; botanical. Natural woodland, predominantly oak but with scattered yew, juniper, white-beam and birdcherry.
Ardnamona Wood	G. 96, 84	National Importance	A	Ecological; botanical. A well-grown, mixed wood containing several rare herbs.
Lough Nacung	B. 8,1/2	National Importance	C	Botanical. One of only two known sites in Ireland and Britain of the heather, Erica mackaiana.
Near Ballintra	G. 92, 68	National Importance	C	Botanical. The only locality in Ireland of the rock-rose, Helianthemum chamaecystus common plant of Britain.

Area	Grid Reference	Rating	Priority	Interest
Muckish	C. 00, 28	Regional Importance	C	Geological. A glat-topped quartzite mountain with associated deposits of glass sand, formed by weathering of the quartzite.
Barnes Gap railway cutting		Regional Importance	B	Geological. Large exposures of a skarn mineral deposit, rich in wollastonite.
Roadside near Ballyshannon	G. 90, 61	Regional Importance	C	Geological. A roadside cutting in which carboniferous deposits of marine origin overlie flaggy, siliceous granulites.
Muckross Head to Fintragh Bay	G. 62, 73 - G. 69, 76	Regional Importance	C	Geological. A fairly complete succession through the lower Carboniferous from the unconformity with basement schists to marine limestones and shales.
St. John's Point	G. 70, 69	Regional Importance	C	Geological; botanical. A richly fossiliferous limestone headland with a few of the rarer Irish calcicole plants growing on it.
Doorin Point	G. 80, 72	Regional Importance	C	Geological. Richly fossiliferous limestone.

Area	Grid Reference	Rating	Priority	Interest
Foreshore west of Bundoran	G. 80, 59	Regional Importance	C	Geological. Richly fossiliferous limestone.
Finner Camp 61	G. 84, 61	Regional Importance	C	Ecological. A fine dune system with a new actively developing foredune ridge on its west side.
Kildoney Point 63	G. 82, 64	Regional Importance	C	Geological. Interesting sedimentary structures.
Poisoned Glen 64	B. 90, 16	Regional Importance	C	Geomorphological; botanical. A fine corrie in which several rare plants have been recorded.
Roaninish 65	B. 65, 02	Regional Importance	B	Ornithological. An important breeding site for several species of seabirds.
Inistrahull 67	C. 48, 65	Regional Importance	C	Ornithological. An important breeding site for eider duck.

Area	Grid Reference	Rating	Priority	Interest
Inishkeeragh	B. 68, 12	Regional Importance	C	Ornithological. An important breeding site for seabirds, particularly terns.
Dunfanaghy Lake and dunes	C. 00, 36	Regional Importance	B are	Ornithological; ecological; botanical. The lake is an important overwintering area for swans and other wildfowl and a breeding area for several species of duck. The dunes are of general ecological and botanical interest.
Blanket Nook	C. 30, 19	Regional Importance	B	Ornithological; botanical; ecological. A brackish lough and wetland; important as an overwintering area for wildfowl.
Parts of Tory Island	B. 8, 4	Regional Importance	C	Ornithological. Nesting sites for seabirds.
Islands in Mulroy Bay		Regional Importance	C	Ornithological. Nesting sites for seabirds.
Trawbreaga Bay	C. 4,4/5	Regional Importance	C	Ornithological; ecological. A shallow, almost land-locked bay of ornithological importance as an overwintering area for wildfowl, particularly brent geese. The bay itself and the sand dunes at Lag are of general ecological interest.

Area	Grid Reference	Rating	Priority	Interest
Lough Finn 76	B. 9, 0	Regional Importance	C	Ecological; zoological. Acid, mountain lake with char stocks.
Lough Kindrum 77	C. 18, 42	Regional Importance	C	Ecological; zoological. Lowland, acid lake with char stocks.
Lough Fad - W 78	C. 39, 42	Regional Importance	C	Ecological; zoological. Acid, mountain lake with char stocks.
Lough Fad - E 79	C. 54, 39	Regional Importance	C	Ecological; zoological. Acid, mountain lake with char stocks.
Lough Ananima	G. 79, 94	Regional Importance	B	Ecological. A shallow lake with exceptionally low mineral content, calcium being present only as a 'trace'.
Lough Derg 12	H. 0, 7	Regional Importance	C	Ecological; zoological. Large, acid, mountain lake with char stocks.
Lough Eske (See also Ardnamona Wood) 13	G. 9, 8	Regional Importance	B	Ecological; zoological; botanical. A large lake, with exceptionally large stocks of char, in and around which several rare herbs have been recorded.

Area	Grid Reference	Rating	Priority	Interest
Area west of Ardara/Maas road	G. 6/7, 9	Regional Importance	C	Ecological; botanical; ornithological. A complex of small sites with a variety of interests.
Gartan Lough and Lough Akibbon	C. 9, 1	Regional Importance	B	Botanical; ecological. The Irish headquarters of two northem plants.
Murvagh Lower	G. 89, 73	Regional Importance	C	Ecological; botanical. A broad dune spit, a large part of which has recently been planted with conifers.
Ballyarr Wood	C. 18, 20	Regional Importance	B	Ecological. A fine, mature oakwood with scrub on the east side.
Carndonagh Wood	C. 45, 45	Regional Importance	B	Ecological. Old native oakwood.
Carradoan Woods	C. 28, 30	Regional Importance	B	Ecological; botanical. Deciduous woodlands and scrub.
Creeslough Wood	C. 06, 30	Regional Importance	B	Ecological. Secondary, mixed, deciduous woodland.

Area	Grid reference	Rating	Priority	Interest
Slieve Snaght P. 97	B. 92, 15	Regional Importance	C	Botanical; ecological. Interesting arctic alpine flora.
Inishduff 98	G. 647, 723	Local Importance	C	Ornithological. Nesting site for seabirds.
Inishbarnog 99	G.640,962	Local Importance	B	Ornithological. Nesting site for seabirds.
Inishkeel	B.707,001	Local Importance	B	Ornithological. Nesting site for seabirds.
Tormore Island and neighbouring cliffs	G. 55, 90	Local Importance	C	Ornithological. Nesting sites for seabirds.
Ballyness Bay and dunes	B. 9, .3	Local Importance	B	Ornithological; ecological. A shallow bay, important as an over-wintering area for wildfowl, whose mouth is almost closed by a fine sand dune spit.
Lettermacaward dunes 104	B. 76, 01	Local Importance	C	Ecological. A mature dune system backed by extensive dune grassland.
Woods in Leanan Valley	C. 13, 19	Local Importance	C	Ecological. Deciduous woodland and scrub.

Area	Grid Reference	Rating	Priority	Interest
Woods around Letterkenny	C. ~~1, 0/1~~ 1510	Local Importance	C	Ecological. Deciduous woodland and scrub.
Woods near Lettermacaward	G. 79, 99	Local Importance	C	Ecological. Deciduous woodland and scrub.
Rathmullan Wood	C. 27, 27	Local Importance	C	Ecological. Mature deciduous woodland.
Glen Alla Woods	C. 24, 27	Local Importance	C	Ecological; botanical. Mature, planted, estate woodlands.
Melmore Lough	C. 12, 43	Local Importance	C	Ecological. Deep, calcareous lough.
Rosepena Lough	C. 11, 38	Local Importance	C	Ecological; botanical. Shallow, extremely calcareous lough.
Mullaghderg Lough	B. 76, 20	Local Importance	C	Ecological; botanical. Extensive reedbeds surround the lough, in and around which are several interesting plants.

SECTION F

DETAILED REPORTS AND MAPS OF EACH OF THE AREAS OF SCIENTIFIC INTEREST

Each report is written under the following sub-headings:-

Name of Area
Acreage - where appropriate
Grid Reference
Scientific Interest
Rating
Priority
Description of Area
Evaluation
Threats to the area
Recommendations

In the descriptions the abundance of the species may be indicated according to the following scale:-

a	-	abundant
c	-	common
f	-	frequent
o	-	occasional
r	-	rare
l	-	locally (as a prefix)

Botanical nomenclature follows that of "Flora of the British Isles", Clapham, Tutin and Warburg. Second Edition, 1962.

Name of Area	SLIEVE LEAGUE AREA
Acreage	c. 4,400 acres
Grid Reference	G. 5, 8
Scientific Interest	Geological; botanical; ecological
Rating	International Importance
Priority	B

Description of Area

The area of scientific interest is shown on Map 1.

This area is perhaps best known for its amenity values, centred on the spectacular scenery of the great seacliffs, rather than for its great scientific interest.

The very steep, often precipitous, slopes of the seacliffs rise almost 2,000' from the sea to the summit of Slieve League. Mainly of quartzite, they are capped by an inlier of basal Carboniferous sandstones and conglomerates, a remnant of the Tertiary peneplain. Only parts of the less-steep slopes are vegetated: a mixture of heather, Calluna vulgaris, and very dwarfed bracken, Pteridium aquilinum: the rest of the cliffs being sheer, or almost sheer, bare rock or unstable scree patches. These cliffs are of botanical note because of the occurrence here of several rare plants.

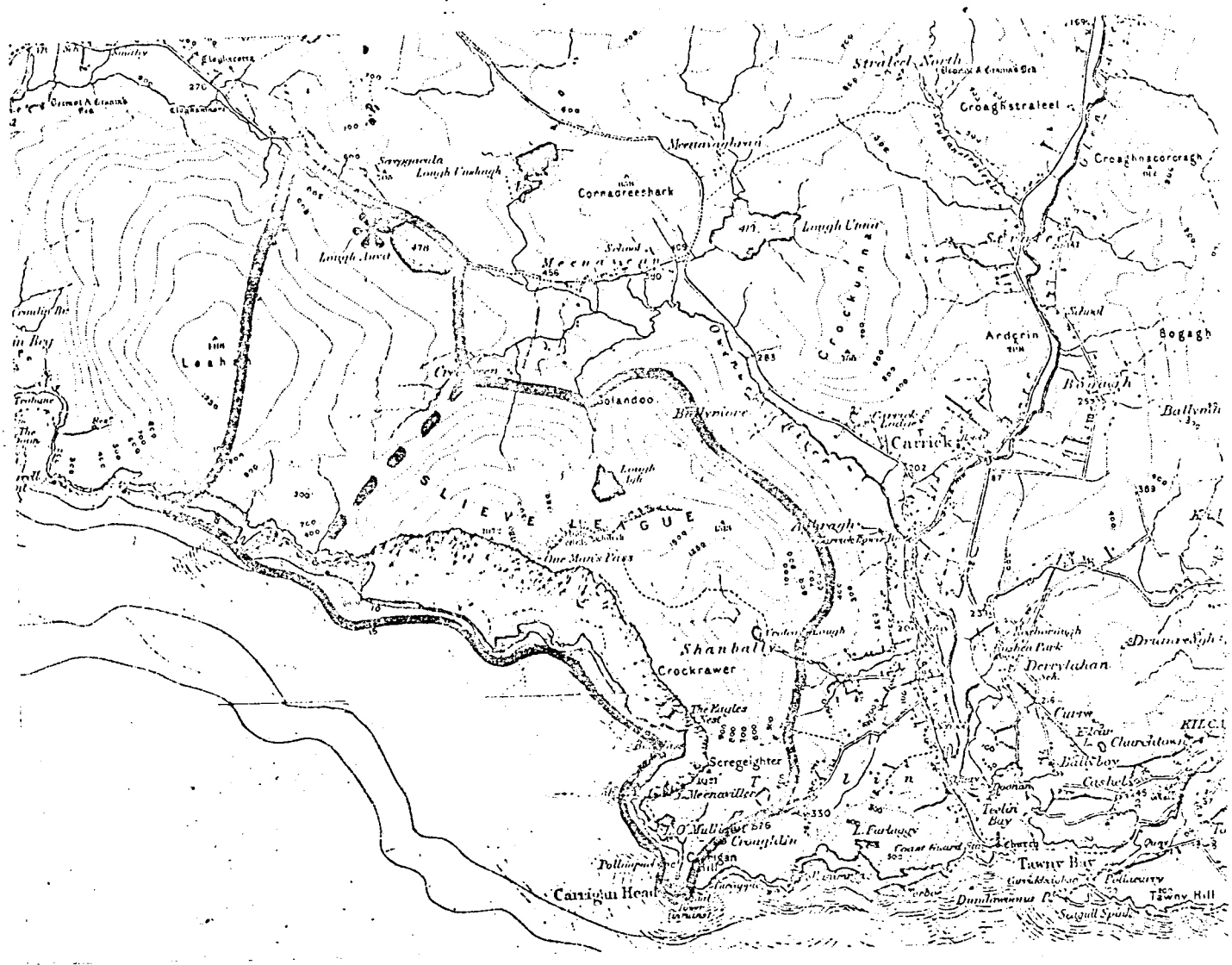
On the northern slopes of the mountain is the fine north-facing corrie, in which lies Lough Agh. The steep back wall of this corrie has an extremely interesting flora, referred to by Praeger* who wrote: "The north face which falls down towards the little Lough Agh is the home of a remarkable assemblage of alpine plants. ----- Nowhere else in Ireland is so large an assemblage of plants of Watson's Highland type to be found in so small an area". This was followed by a list of twenty-one noteworthy species growing in the corrie.

The remainder of the area is covered with blanket bog, best developed in that part west of the dotted line on Map 1. The majority of this area has deep

* The Botanist in Ireland. Praeger, R.L., 1934.

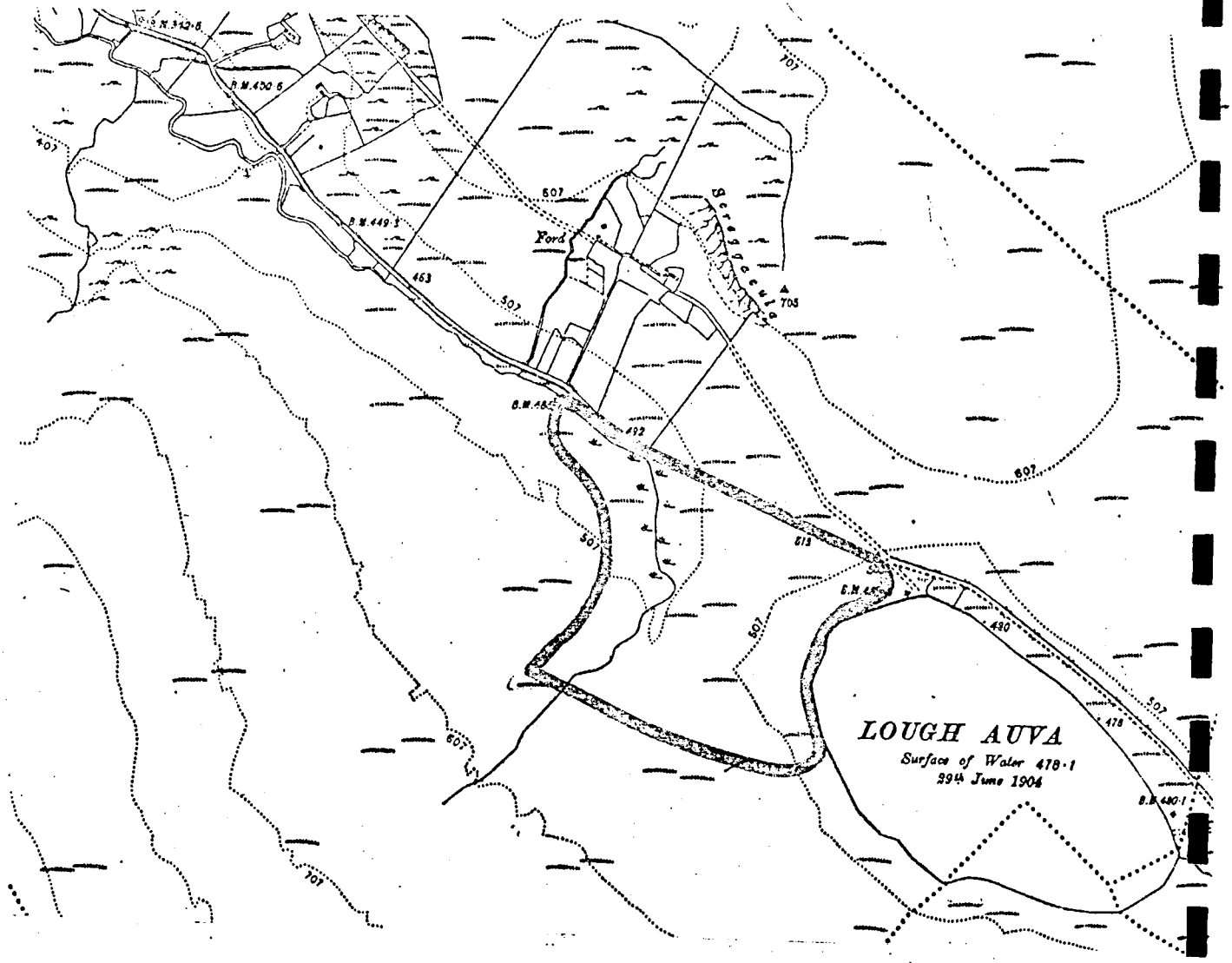
MAP SHOWING AREA OF SCIENTIFIC INTEREST — 1

Scale: 1 Inch to 1 Mile



MAP SHOWING AREA OF SCIENTIFIC INTEREST — 1a

Scale: 6 Inches to 1 Mile



erosion channels in the peat often exposing the full peat profile, whilst the most interesting part is that marked * on Map I and shown at a larger scale on Map 1a. This small area is a fine example of undrained blanket bog with numerous pools.

Evaluation

The present "international importance" rating of this area can be justified on two separate counts. Firstly, the gross geology of the area, a cap of basal Carboniferous strata overlying the quartzite, results in it being of vital importance to our knowledge of Tertiary earth movements. Secondly, the peatlands were rated of international importance as a representative area of blanket bog by Bord na Mona in 1972*.

The great botanical interest of the Lough Agh corrie and of the sea cliffs adds to the scientific value of the area.

Threats to the area

Only the ecological and botanical values of this area could conceivably be damaged: the blanket bog could be damaged by cutting, burning, drainage or application of fertilisers, whilst the flora of the Lough Agh corrie could be decimated by plant collectors.

Recommendations

Conservation Orders should be prepared to cover the Lough Agh corrie and the area of bog shown on Map 1a, under Section 46, Local Government (Planning and Development) Act, 1963.

A Conservation Order could only effectively protect this small area of bog if drainage, burning and fertiliser application were prevented in immediately adjacent areas. It is therefore recommended that this Conservation Order be drawn up to include both the area outlined on Map 1a and a "buffer zone" all around it.

Both Orders could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

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* National Heritage Area. Peatlands. Co. Donegal. Bord na Mona. January. 1972.

Name of Area	MALIN HEAD
Acreage	c. 600 acres
Grid Reference	C. 3,5.
Scientific Interest	Geomorphological, botanical.
Rating	International Importance
Priority	B

Description of Area

The area of interest is shown on Map 2.

Below the 100 ft. contour between Ineuran Bay and Esky Bay occur the highest, best preserved and oldest late-glacial marine strandlines known in Ireland. Futhermore, these are the only well-preserved shorelines of early late-glacial times in Europe. They are approximately 15,000 years old. Details can be found in:-

> Late-Pleistocene shore-lines and drift limits in Northern Donegal. Stephens. N., Synge. F.M., Proceedings of the Royal Irish Academy. Sect. B 1965.

Another feature of geomorphological interest within this area is a patch of small, but well-formed, stone polygons close to the Malin Tower. These were formed by frost action in periglacial times.

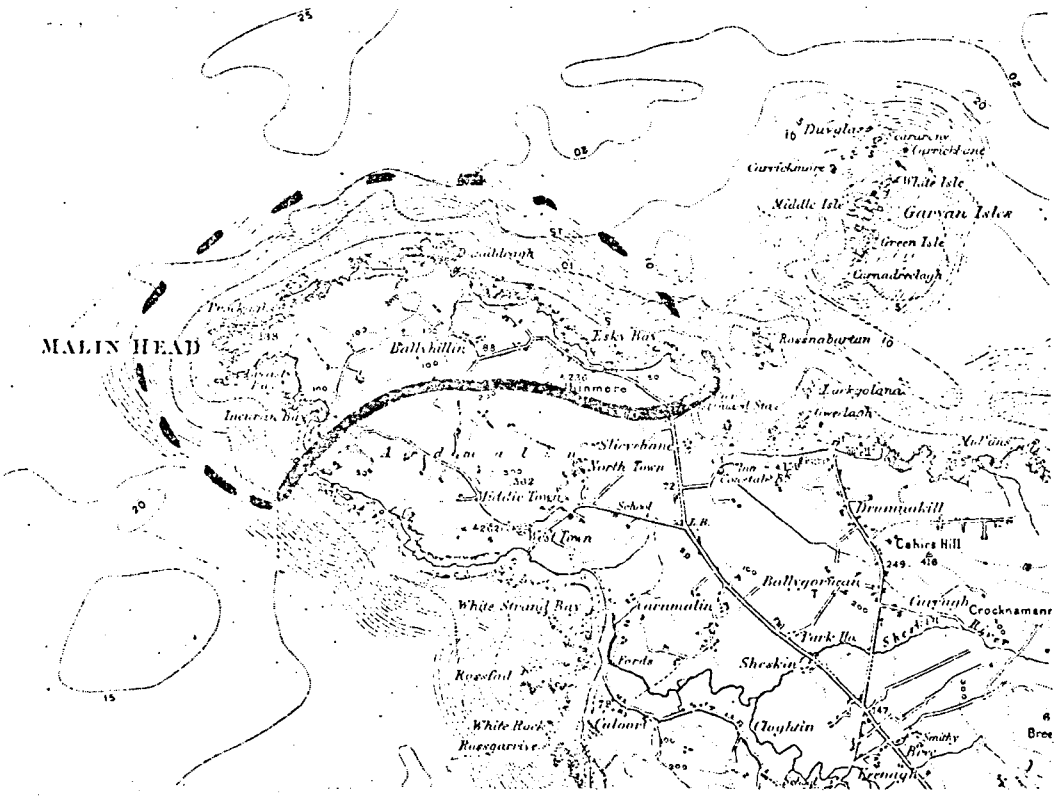
Botanically the area is of note because of the occurrence of two rare plants, lovage, Ligusticum scoticum, and oysterplant, Mertensia maritima, on the coastal rocks and shingle beaches. (See Figs. 3 and 4).

Evaluation

The well-preserved ancient shorelines of this area are of undoubted international importance: unique in Europe, they are of great interest to Quaternary geologists. The other features of the area increase its importance.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —2

Scale : 1 inch to 1 mile



Threats to Area

Possible development of this area for amenity purposes is the most likely threat. For example, the area of stone polygons and parts of the ancient shorelines could be easily obliterated by building development or the construction of car parks.

Recommendations

Large scale amenity development in this area should be prevented. No development whatsoever should be allowed without first ensuring that it would not damage any part of the ancient shorelines or the area of stone polygons.

Name of Area	HORN HEAD CLIFFS
Grid Reference	C. 0, 4
Scientific Interest	Ornithological
Rating	International Importance
Priority	C

Description of Area

The area of interest is shown by the thick black line on Map 3.

These high, very steep, often sheer, quartzite cliffs hold very large numbers of nesting seabirds. Of particular note is the exceptionally large colony of razorbills, c. 50,000 pairs.

Evaluation

The vast numbers of seabirds nesting on these cliffs result in this area being of international ornithological importance.

Threats to the Area

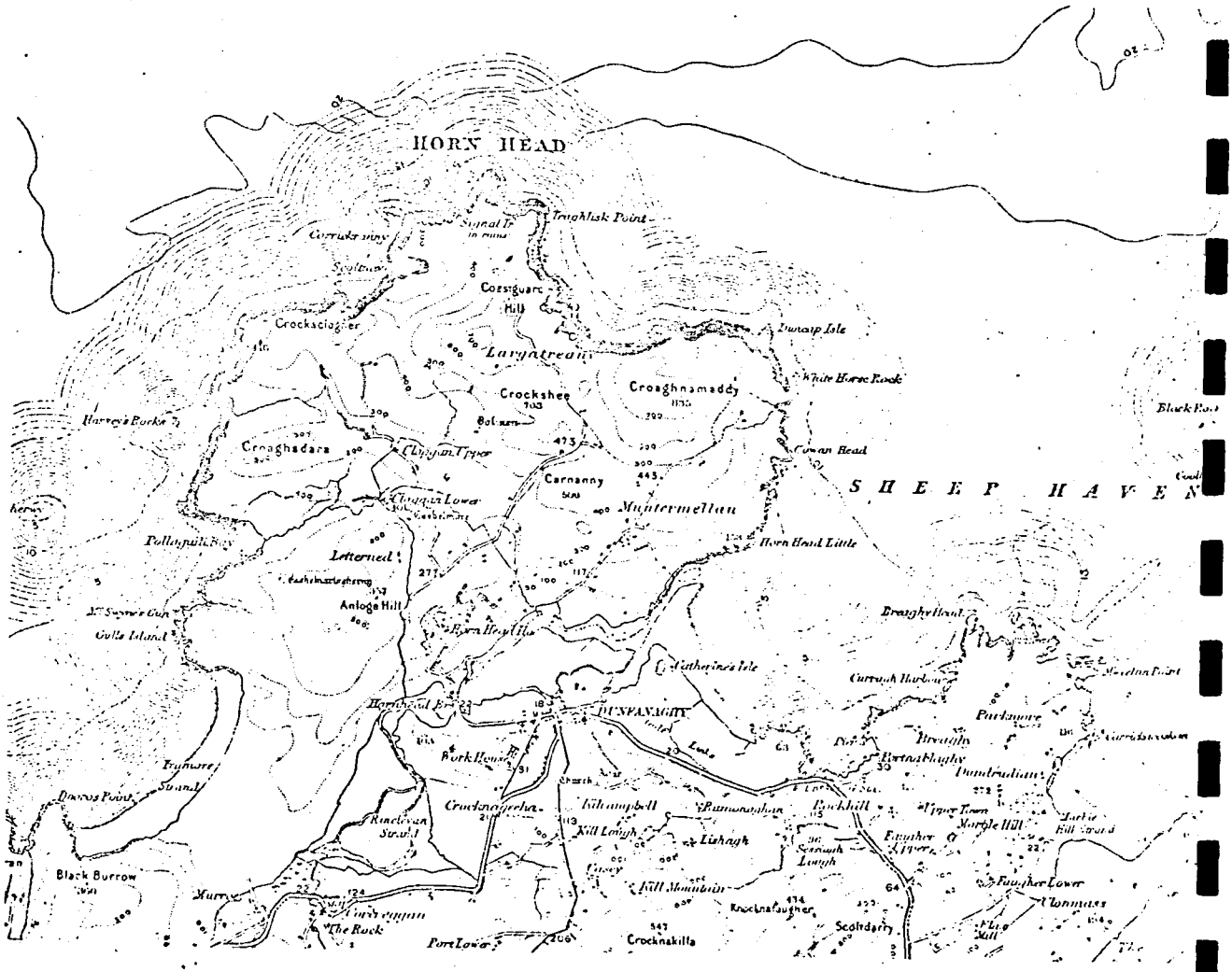
At the moment no threats to the bird colonies are known of. In view of their position, direct physical damage to the nesting areas would never appear likely but it must always be borne in mind that repeated disturbance of the nesting birds could decimate the colonies.

Recommendation

Development plans affecting this area should provide for adequate protection of these bird colonies. General planning control to exclude development from this area of Horn Head would ensure this.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 3

Scale: 1 Inch to 1 Mile



Name of Area	INCH LOUGH
Acreage	c. 670 acres
Grid Reference	C. 34, 22
Scientific Interest	Ornithological; ecological
Rating	International Importance
Priority	A

Description of Area

The area of interest, a brackish lough with marginal wetland, is shown on Map 4.

The lough itself is very shallow and most of the bottom is completely covered with a very dense growth of the fennel-leaved pondweed, Potamogeton pectinatus. When the lough was visited in October 1972, the growth of this pondweed was so luxuriant that many acres of the water surface was covered by a dense floating mat of its upper stems and leaves, the length of the shoots considerably exceeding the water depth.

On its west side and in the north-east corner, the lough is bordered by an often heavily grazed zone of glaucous bulrush, Schoenoplectus tabernaemontani, with some patches of sea clubrush, Scirpus maritimus in places. Behind this is a narrow zone (only 2 or 3 metres wide) of mud rush, Juncus gerardii and sea milkwort, Glaux maritima, and then damp pasture, dominated by fiorin grass, Agrostis stolonifera, but including such herbs as silverweed, Potentilla anserina, and marsh ragwort, Senicio aquaticus, indicative of its wetness. In contrast to this, the areas on the east side of the lough, shown as marsh on Map 4, are wetter and are dominated by a mixture of Schoenoplectus tabernaemontani and Agrostis stolonifera in which are growing:-

Hydrocotyle vulgaris	(marsh pennywort)	f
Galium palustre	(marsh bedstraw)	o
Lythrum salicaria	(purple loosestrife)	o
Myosotis sp	(forget-me-not)	o
Phragmites communis	(reed)	o

Ranunculus flammula	(lesser spearwort)	o
Senicio aquaticus	(marsh ragwort)	o
Typha latifolia	(great reedmace)	o

The lough is an important breeding area for several species of wildfowl, but assumes its greatest importance from September to April as an over-wintering area. It then holds large numbers of duck, geese and wild swans. Presumably, the main attraction of this area to wildfowl is the abundant food supply provided by the enormous beds of Potamogeton pectinatus. Access to the lough is excellent and the various parts can be easily viewed from the road and the embankments without disturbance to the wildfowl populations. The area could thus act as an important tourist attraction.

Evaluation

This is easily the most important wildfowl wetland in County Donegal and its ornithological interest is sufficient for the area to be included in the M.A.R. List of European and North African Wetlands of International Importance.

Threats to the Area

The main threat to this area is uncontrolled shooting. At the moment the lough is very heavily shot and continual disturbance of the birds could lead to their eventually foresaking the area. Controlled shooting with organised shoots at regular intervals would be less detrimental, but ideally shooting should be prevented entirely.

Recommendation

A Conservation Order should be made to cover this area, under Section 46, Local Government (Planning and Development) Act, 1963. This order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

An approach should also be made to the Minister for Lands, with a view to having the area declared a wildfowl sanctuary under the Game Preservation Act, 1930.

Name of Area	GANNIVEGIL BOG
Acreage	c. 1,300 acres
Grid Reference	B. 82, 06
Scientific Interest	Ecological
Rating	International Importance
Priority	C

Description of Area

The area of interest is shown on Map 5.

This is a general area of low level blanket bog, intact and containing several lakes. Within the area is a fine lake margin reedswamp and a mile long stream, running partly underground, whose line is marked by a flush track of purple moor grass, Molinia caerulea.

Evaluation

This area was rated as being of international importance, (as a representative area of lowland blanket bog), by Bord na Mona in 1971, when compiling the National Heritage Inventory of Peatlands.

Threats to the Area

Turf cutting could obviously ruin the area. Such a threat comes from the active turf cutting on the north-west boundaries of the area, which could slowly extend into the area if no control is exercised.

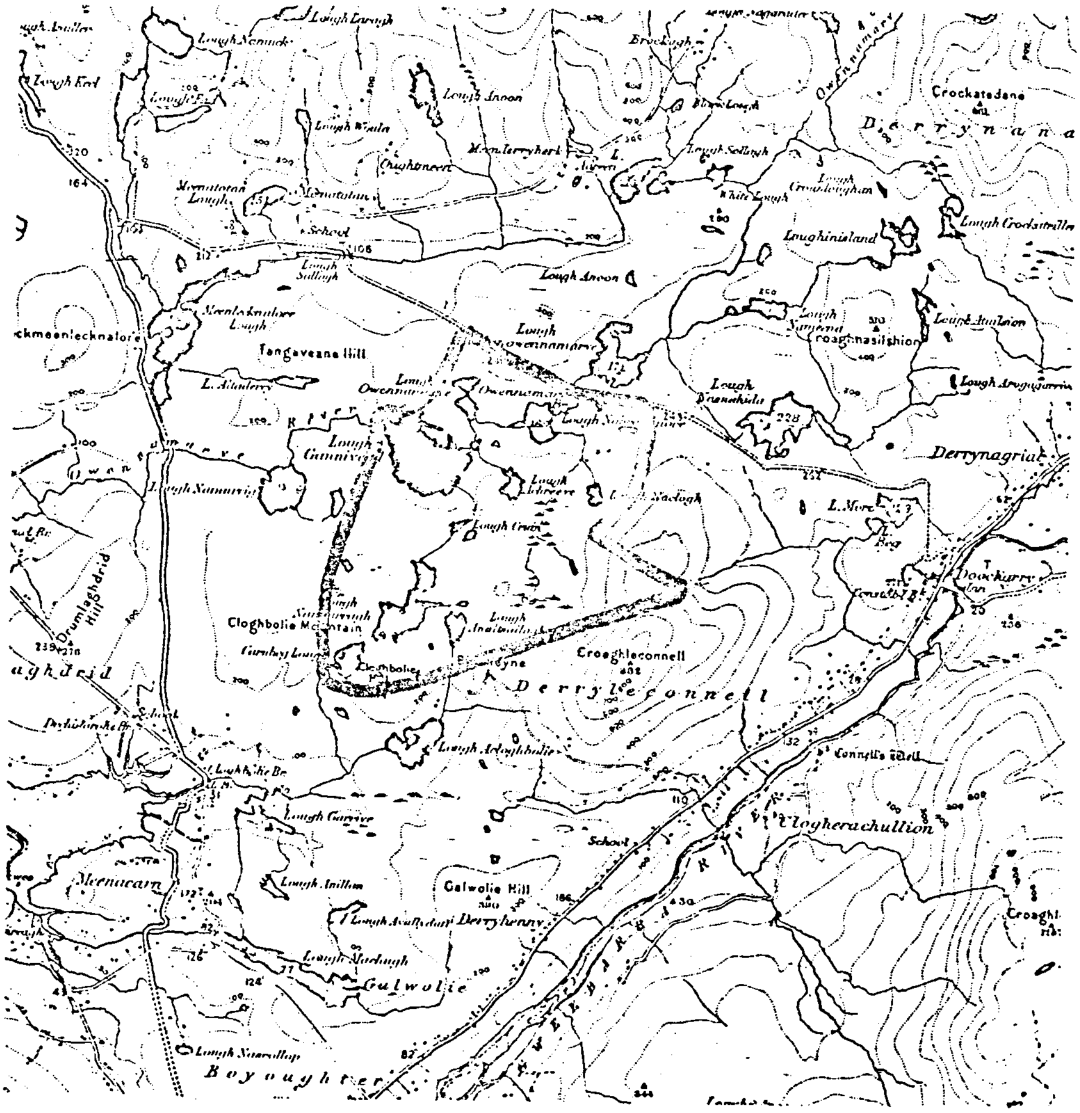
Burning, drainage, fertiliser application or sewage effluent discharge could also all have adverse effects on the area.

Recommendation

Development plans for this area should take its scientific value into account.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 5

Scale: 1 Inch to 1 Mile



Name of Area	LOUGH BARRA BOG
Acreage	c. 900 acres
Grid Reference	B. 92, 10
Scientific Interest	Ecological
Rating	International Importance
Priority	C

Description of Area

The area of interest is shown on Map 6.

This is intact blanket bog with several features of particular ecological interest, viz. pool complexes on low ground in the east, stands of reed, Phragmites communis, in the north and several small lakes.

The area is very accessible and attractive.

Evaluation

This bogland was also listed as internationally important by Bord na Mona in the National Heritage Inventory of Peatlands.

Threats to the Area

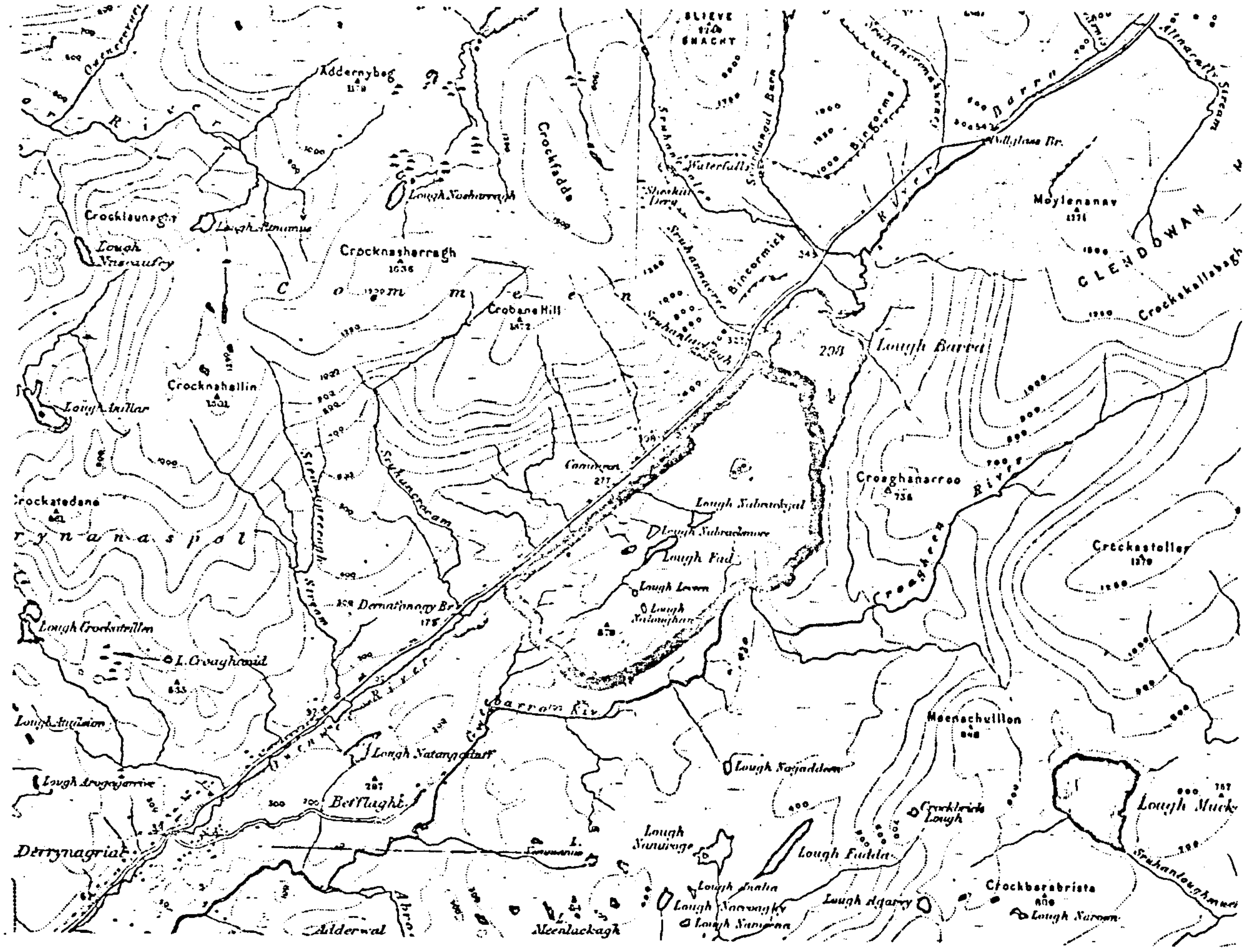
As for Lough Gannivegil bog. (p. 29).

Recommendation

Development plans for this area should take its scientific value into account.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 6

Scale: 1 Inch to 1 Mile



Name of Area	CLIFFS ON ARAN ISLANDS
Grid Reference	B. 6, 1.
Scientific Interest	Botanical
Rating	Internationally Important
Priority	C

Description of Area

The area of interest is shown on Map 7.

This section of coast consists mainly of high, inaccessible, quartzite cliffs, with only a very sparse vegetation. The botanical interest of these cliffs lies in the presence of a small white-flowered saxifrage, first found by Hart in 1881 and later fully described as a species new to science by Webb* under the name Saxifraga hartii.

Details of past recordings and a visit in May 1972 both indicate that the saxifrage is very rare on the cliffs. Hart, in 1881, found it in the cove called Polldoo and it was then found on Torneady Head in 1886. A search in 1933 revealed that it still existed in both stations, but in 1944/45 it could not be found in either by the lighthouse keeper, who did however discover three new stations. In 1972 only a small stretch of the cliffs immediately W of Lough Shore was searched and only one plant of S. hartii was seen, growing in an inaccessible position about 15 feet down from the top of a high, sheer cliff.

Evaluation

The only known locality for this species, the cliffs must be classified as a site of international importance.

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* A Revision of the Saxifrages of Northwestern Europe. Webb. D.A. Proceedings of the Royal Irish Academy. Vol. LIII B (1950).

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 7

Scale: 1 Inch to 1 Mile

Threats to Area

None likely, the inaccessibility of plants protecting them from collectors.

Recommendations

In view of the remoteness of the area, the difficulty of finding the saxifrage on the cliffs and the inaccessibility of any plants to be seen, no action is necessary to protect this species at present.

Name of Area	KILKENNY PEBBLE DYKE
Acreage	< 1 acre, precise area not shown on Map 8
Grid Reference	G. 78, 98
Scientific Interest	Geological
Rating	National Importance
Priority	C

Description of Area

The dyke is exposed at the surface within the area outlined on Map 8. The exact location of the exposures has not been pin-pointed.

The dyke consists of three-faced pebbles in a granophyric matrix.

Evaluation

The petrology of the dyke is sufficiently unusual to justify classification as a site of national importance.

Threats to the Area

The site could be damaged by quarrying or building on top of the exposures, however, as far as is known, no such threats are imminent.

Recommendation

The Conservation and Amenity Advisory Service should be informed of any proposed developments within this area. Only developments that would obliterate the exposures themselves need then be prohibited.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 8

Scale: 1 Inch to 1 Mile

Name of Area	KINDRUM TINOID
Acreage	c. 1 acre
Grid Reference	C. 19, 41
Scientific Interest	Geological
Rating	National Importance
Priority	C

Description of Area

The area of interest is shown on Map 9.

In this gulley, which runs down the hillside to the road, can be seen exposures of a boulder bed of glacial origin from the Dalradian.

Evaluation

Amongst the best exposures of the Dalradian in Ireland, this bed is a vital marker horizon in the Scottish and Irish successions and is thus of national importance.

Threats to the Area

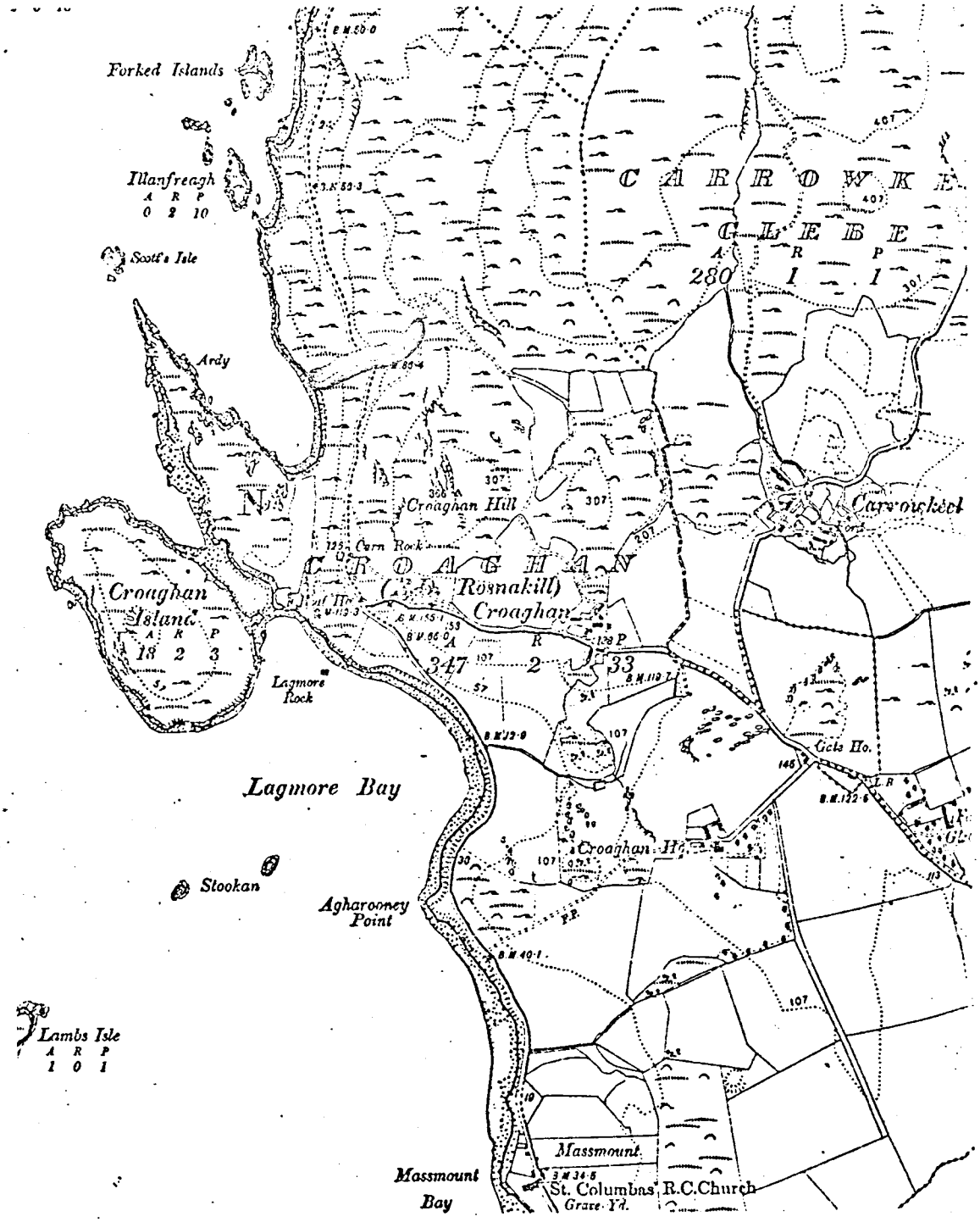
Damage to the area could probably only come about by building.

Recommendation

Development should be prevented within this small area.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 9

Scale: 6 Inches to 1 Mile



Name of Area	BIRRA LOUGH = DURNESH LOUGH
Acreage	c. 900 acres
Grid Reference	G. 87, 69
Scientific Interest	Ornithological; ecological
Rating	National Importance
Priority	B

Description of Area

The area of interest is shown on Map 10.

This is a shallow, freshwater lough, which in wet weather floods onto the surrounding marshy fields. The dunes separating the lough from the sea are also included in the area of interest on the basis of their general ecological interest.

The lough, which has extensive marginal reedbeds, is important as an overwintering area for duck and wild swans, and also as a breeding area for several species of duck, particularly mallard. Access to it is good and the area has potential as a tourist attraction.

Evaluation

This is the second most important wildfowl wetland in County Donegal and its ornithological interest is such as to justify its classification as an area of national importance.

Threats to the Area

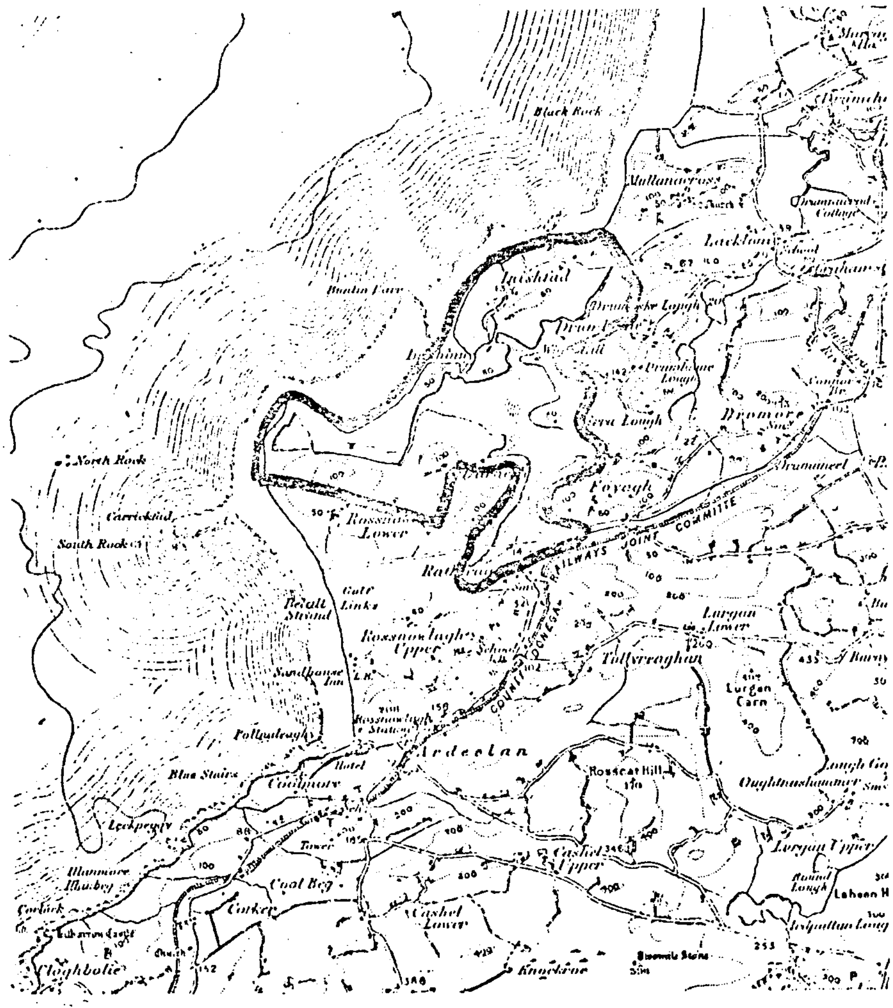
Drainage would appear to be the main threat to the lough and its surrounding wetlands.

Recommendations

The lough and its surroundings should be protected by a Conservation Order under Section 46, Local Government (Planning & Development) Act, 1963.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —10

Scale: 1 Inch to 1 Mile



This could be drawn up in draft form by the Conservation and Amenity Service, An Foras Forbàrtha.

An approach should also be made to the Minister for Lands, with a view to having the area declared a wildfowl sanctuary under the Game Preservation Act, 1930.

Name of Area	MEENAGOPPOGE BOG
Acreage	c. 235 acres
Grid Reference	B. 96, 22
Scientific Interest	Ecological
Rating	National Importance
Priority	C

Description of Area

The area of interest is shown on Map 11.

This is a fine area of very wet blanket bog with numerous pools, lying near water table level in the valley bottom just SE of Altan Lough. There is interesting variation in the vegetation of the bog across its width. The eastern half and the western margin of the area shown on Map 11 are dominated by deer sedge, Trichophorum cespitosum associated with:-

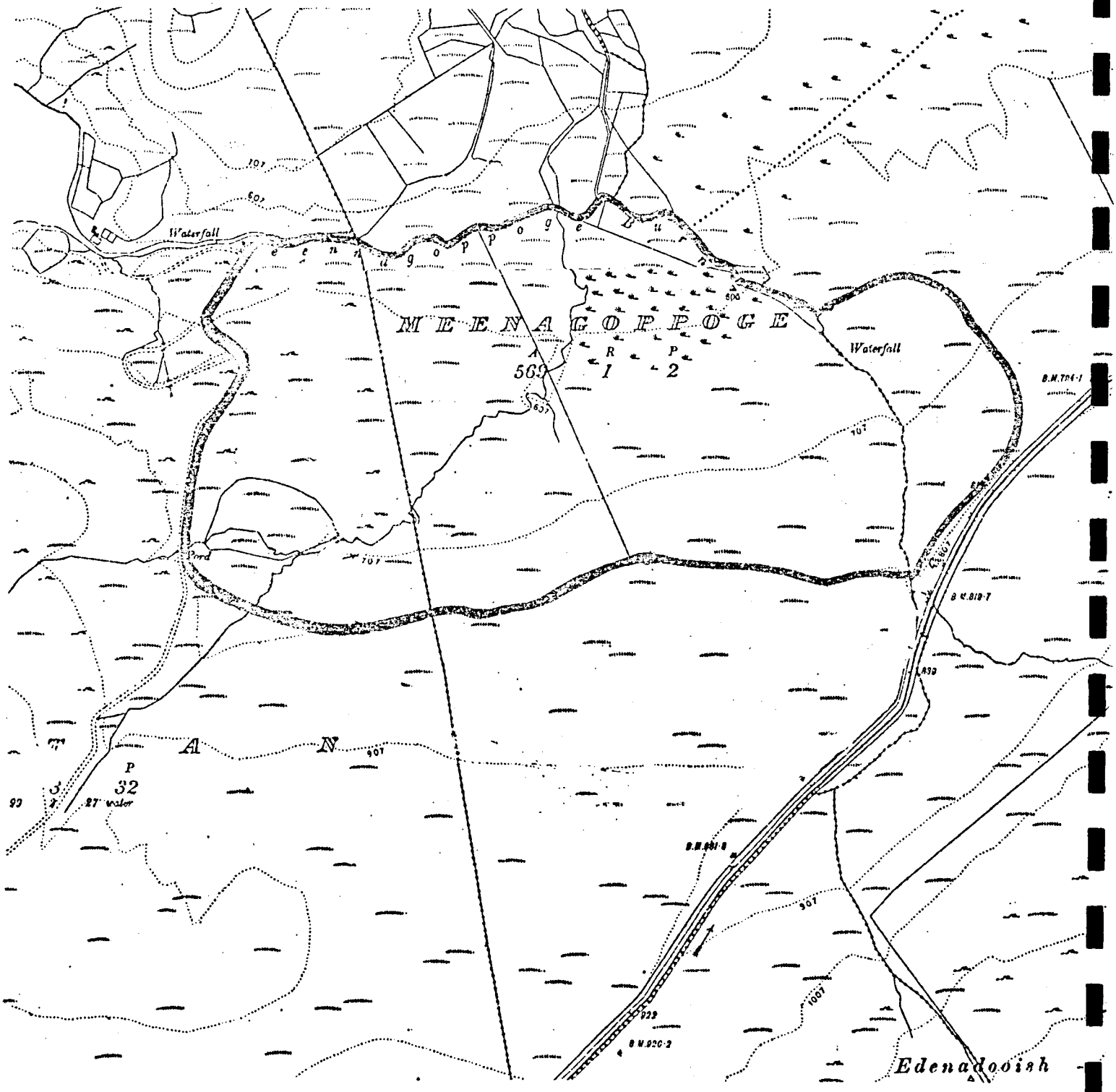
Sphagnum spp	(bogmoss)	f-la in pool
Eriophorum angustifolium	(cotton grass)	f-c
Calluna vulgaris	(ling, heather)	f
Erica tetralix	(cross-leaved heather)	f
Molinia caerulea	(purple moor-grass)	f
Narthecium ossifragrum	(bog asphodel)	o-f
Myrica gale	(bog myrtle)	o
Rhynchospora alba	(white beak-sedge)	o in pool
Schoenus nigricans	(bog rush)	o

In the west centre of the area however, Schoenus nigricans is abundant, dominating a broad strip of the bog.

There are a few old peat cuttings in the east of the area, otherwise the bog is intact.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 11

Scale: 6 Inches to 1 Mile



Evaluation

This site is classified as of national importance as a representative northern sample of very wet, intact blanket bog, (see Figure 1, p. 7).

Threats to the Area

Drainage, possibly associated with forestry planting, would appear to be the main threat. There has been extensive forestry planting immediately to the east of the area.

Recommendation

Development plans for this area should take its scientific value into account.

Name of Area	DUNRAGH LOUGHS AREA
Acreage	c. 3,900 acres
Grid Reference	H. ~~0,7~~ 0374
Scientific Interest	Ecological
Rating	National Importance
Priority	C

Description of Area

The area of interest is shown on Map 12.

This is a large, very remote area of blanket bog containing several acid lakes. Extensive forestry plantations extend from its eastern margin as far as Lough Derg.

Evaluation

The large size of this area, together with its remoteness and consequent likelihood of its remaining intact, justify its classification as nationally important as a representative northern area of blanket bog. (See Figure 1, p. 7).

Threats to the area

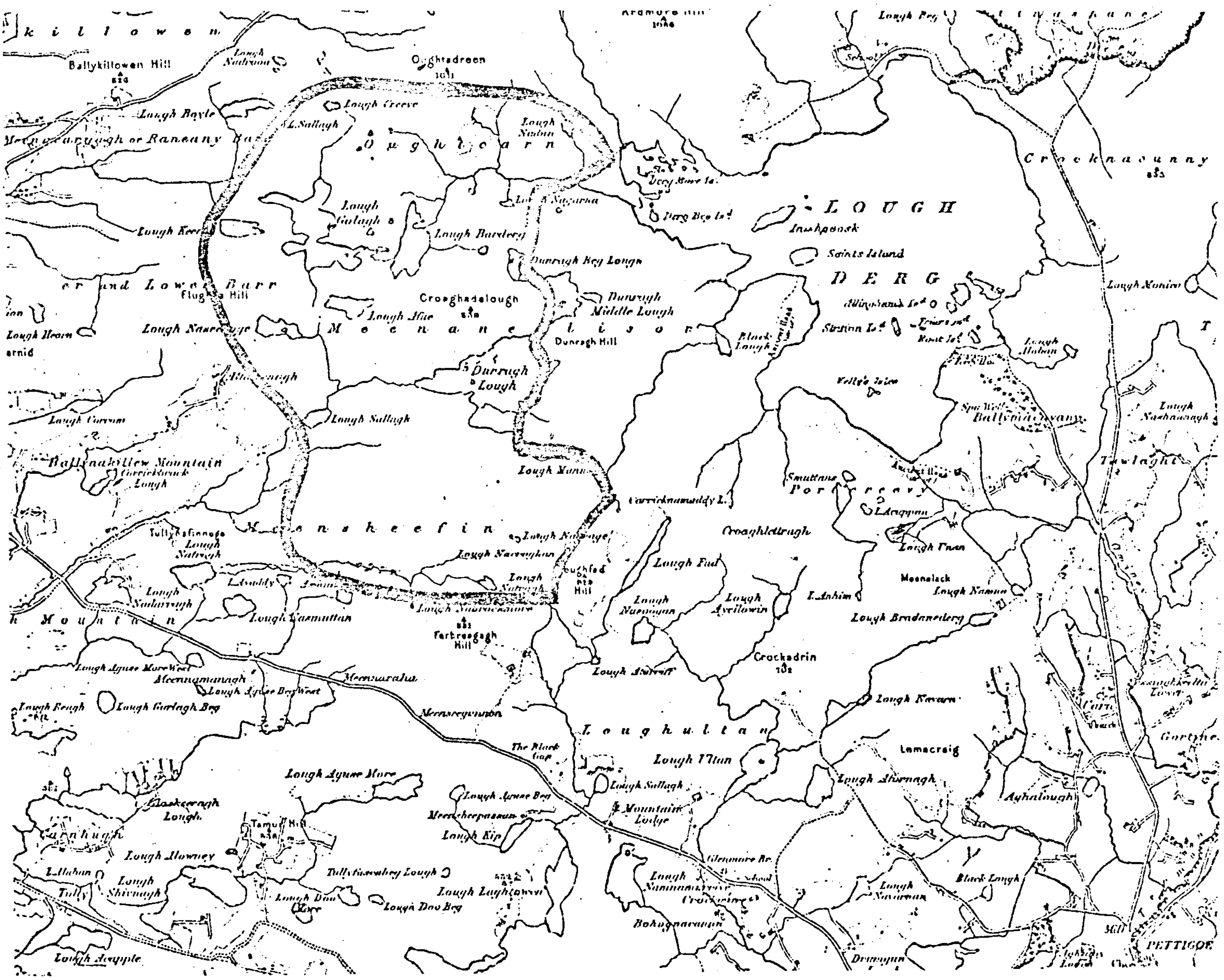
Forestry would appear to be the only likely threat.

Recommendation

Development plans for this area should take its scientific value into account.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —12

Scale: 1 Inch to 1 Mile



Name of Area	OWENBEAGH BOG
Acreage	c. 40 acres
Grid Reference	C. 000, 188
Scientific Interest	Ecological
Rating	National Importance
Priority	A

Description of Area

The area of interest is shown on Map 13.

This is a small area of valley bog, which can probably be best described as an area of western blanket bog in which an ombrogenous dome has developed as a result of its position on more or less level ground. Similar areas of bog in Connemara and Mayo have been described by Osvald*. As would be expected from its western position, bogrush, Schoenus nigricans, is common on the bog surface along with cross-leaved heath, Erica tetralix, deer sedge, Trichophorum cespitosum, bog myrtle, Myrica gale and purple moor-grass, Molinia caerulea, the last being most abundant near the edges. There is also a complex of shallow pools and wet hollows dominated by bog mosses, Sphagnum spp, and containing cotton-grass, Eriophorum angustifolium, and white beak-sedge, Rhynchospora alba.

Evaluation

This is probably the most interesting peatland in County Donegal. No it is not! (C. Douglas 1990)
(also 5 other domed sites discovered in Co. Donegal)
In view of the ecological interest of the area, its geographical position at the north end of the blanket bog zone (see Figure 1, p. 7) and its intact condition, it is classified as an area of national importance.

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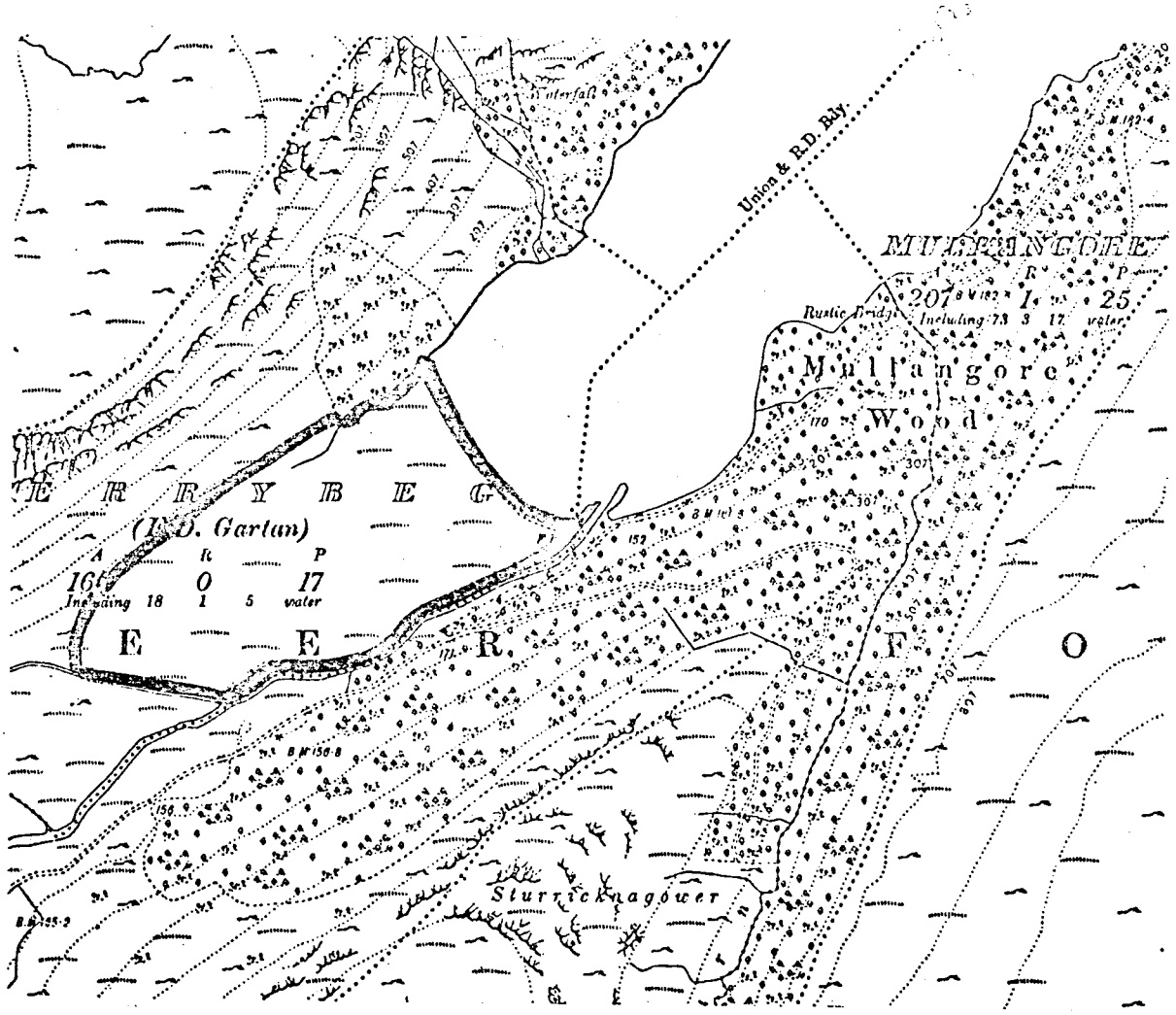
* Notes on the vegetation of British and Irish Mosses.
Osvald, H. 1949. Acta. Phyt, Suec. 26.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —13

Scale: 6 Inches to 1 Mile



Threats to the Area

A current threat to the area is the spread of the alien shrub Rhododendron ponticum onto the bog surface. At the moment, there are only a small number of seedlings present on the bog and eradication would be easy. Delay in taking action will only increase the difficulty of eradicating the shrub in the future.

No other threats appear likely.

Recommendations

Negotiations with the owner of the Glenveagh Estate, Mr. H. McIlhenny, should begin immediately, aimed at ensuring that Rhododendron is eradicated from the bog as soon as possible.

Name of Area	SESSIAGH LOUGH
Acreage	c. 60 acres
Grid Reference	c. 04,36.
Scientific Interest	Ecological, zoological
Rating	National Importance
Priority	B

Description of Area

The area of interest is shown on Map 14. The lough has a barren appearance with a stony bottom, little or no visible,benthic vegetation and no marginal reed swamp. It has an exceptionally high biomass for an acid lake however, and is therefore of great interest for ecological studies. It also has a stock of char.

Data on the lough's brown trout population is contained in:-

Growth and food of brown trout, Salmo trutta, in Irish waters. Kennedy M. & Fitzmaurice P. (1971). Proceedings of the Royal Irish Academy, Vol. 71, Sect. B, Number 18.

Evaluation

This lough was classified as an areas of national importance in lists produced by the Department of Agriculture and Fisheries, Fisheries Division (Inland)*

Such waters of national importance are those which in addition to holding typical fauna have features of outstanding biological interest. The exceptionally high biomass of Sessiagh Lough merits its inclusion in this category.

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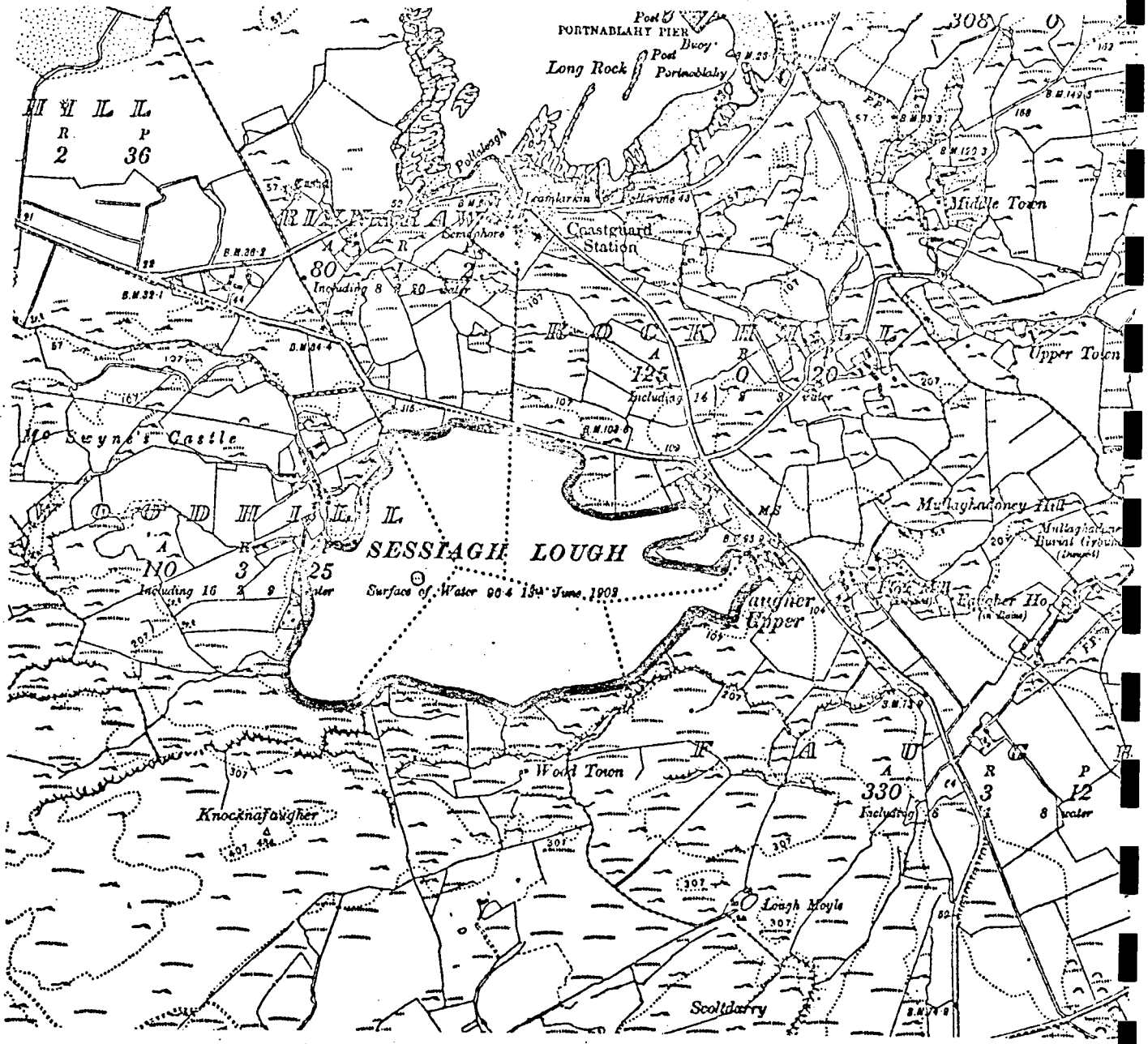
* National Heritage Inventory. Freshwater Habitats 1972.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 14

Scale: 6 Inches to 1 Mile



Threats to Area

Such peculiar aquatic ecosystems are easily upset by any influx of organic or inorganic nutrients, such as could result from sewage disposal or excessive fertiliser application in the catchment.

Influx of sewage into the lough would appear to be the most likely threat in this case. What appears to be a fairly new house already exists on the lake shore.

Recommendations

Any form of sewage disposal into the lough or its feeder streams should be prevented.

Name of Area	LOUGH SHORE
Acreage	c. 13 acres
Grid Reference	B. 65, 17.
Scientific Interest	Ecological, zoological.
Rating	National Importance
Priority	A

Description of Area

The area of interest is shown on Map 15. This is a small, acid lake, whose bottom is of stones, sand and peat debris. Water enters the lake by seepage and occassional inflow from small gullies.

The scientific interest of the lough lay in its naturally regenerating rainbow trout populations. These populations were not self-sustaining, hence the lake has been periodically restocked since the introduction of the species in 1905-7, but that spawning did occur more or less regularly is indisputable. The spawning areas were the outflow stream and the small stony areas around the margins of the lough which were kept free from peat dust by rainwater falling from overhanging peat banks. The former area was probably the most important.

Recently, however, a small dam has been placed across the outflow stream: part of a scheme to use the lough as a reservoir for local water supply. Details are not known concerning the structure of this dam and its likely effects on the condition of the spawning areas or the accessibility of the outflow stream redds to the fish in the lough.

Evaluation

The lough was classified as an area of national importance in the lists of the Department of Agriculture and Fisheries, Fisheries Division (Inland)* on the

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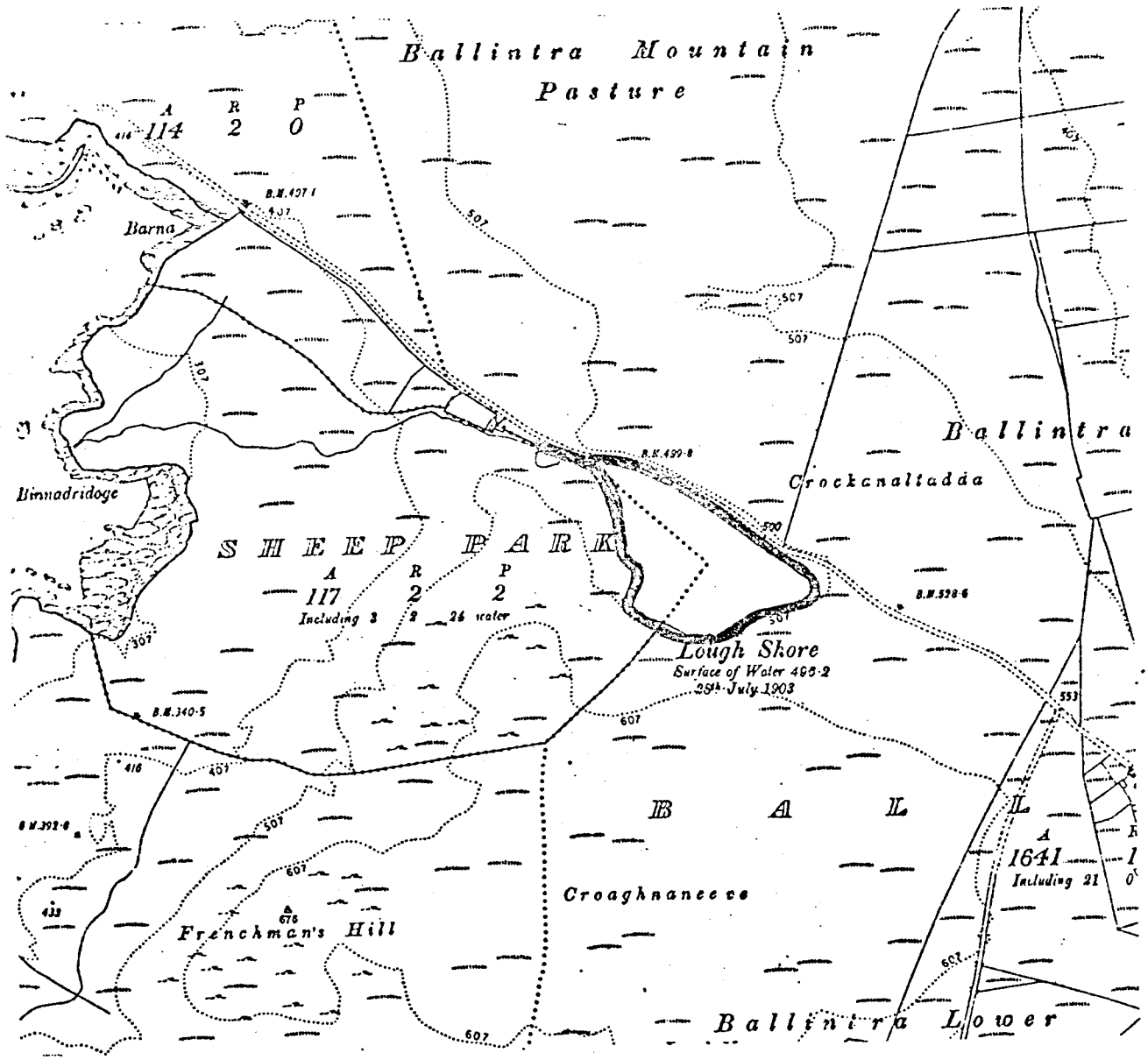
* op. cit.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —15

Scale: 6 Inches to 1 Mile



basis of its exceptional rainbow trout populations, which not only were self-regenerating but also showed extremely rapid growth for fish in such acid waters.

The recent construction of the dam, however, is likely to have radical effects on the spawning activities of the trout population and the rating of this area may require re-assessment in the near future.

Recommendations

A study of Lough Shore is urgently needed, to ascertain the likely effects on the rainbow trout population of the new dam and to suggest ways in which the scientific values of the area can be maintained now that the lough has become a reservoir.

This study could be carried out by the Conservation and Amenity Advisory Service , An Foras Forbartha.

Name of Area	GLENVEAGH WOODS
Acreage	c. 225 acres
Grid Reference	C. 01, 19.
Scientific Interest	Ecological, botanical
Rating	National Importance
Priority	B

Description of Area

The areas of interest are shown on map 16. These are old, apparently natural, deciduous woodlands. They are dominated by oak, Quercus petraea, with some birch, Betula pubescens, and rowan, Sorbus aucuparia in the high canopy, and holly, Ilex aquifolium, as an understorey shrub. Also present in the woods are yew, Taxus baccata, erect juniper, Juniperus communis, whitebeam, Sorbus spp. and bird cherry, Prunus padus. Seedlings and saplings of the various trees can be found occassionally, but the woods are suffering badly from overgrazing by deer and sheep and there is virtually no regeneration. Contributing to this problem on the SE side of the lough is the invasion of the woods by the alien shrub, Rhododendron ponticum, which forms dense thickets in places, particularly nearer to the Castle.

The lack of regeneration is most obvious on the north west side of the lake, where the prolonged prevention of regeneration by grazing has reduced the woods to the state where only the old high canopy remains. Even this is begining to open up as trees die and the woods are not as continuous as is shown on Map 16. Beneath the high canopy there is only ground zone vegetation, dominated by purple moor grass, Molinia caerulea, and bent grass, Agrostis spp. Bryophytes are common, the most conspicuous being the liverwort Frullania tamarisci, which covers most of the tree trunks with its dark red mats. East of the lough the woods do not appear to be so open, though this visual impression is probably due in part to the presence of

rhododendron. These woods are also damper, Molinia being more abundant onthe woodland floor and the filmy fern, Hymenophyllum wilsonii replacing Frullania as an epiphyte.
Botanically the woods are of note because of the presence of the other native filmy fern, Hymenophyllum tunbrigense, a much rarer plant than H. wilsonii throughout Ireland and Britain (See fig 3).

Evaluation (see p. 8)

The natural character, age and size of these areas of woodland merit their classification as an area of national importance.

Their scientific value is being reduced however, by the effects of grazing and rhododendron.

Threats to the Area

Continuation of the grazing and further spread of the rhododendron will progressively reduce the scientific value of the woodlands. The owner of the woodlands, Mr. H. McIlhenny, is interest in conservation however and discussions have been held between Mr. McIlhenny, An Foras Forbartha and the Department of Lands with a view to arranging the fencing of a large part of the woodlands and the erradication of rhododendron within the enclosure Research into various aspects of the regeneration of oak woodlands would follow. It is hoped that this work will eventually take place.

Recommendations

Whilst Mr. McIlhenny owns the area no threat of clearance is likely to arise. However, as a precautionary measure it would probably be best to protect the woodlands with a Tree Preservation Order, under Section 45, Local Government (Planning and Development) Act, 1963.
This Order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

Name of Area	ARDNAMONA WOOD
Acreage	c. 70 acres
Grid Reference	G. 96, 84
Scientific Interest	Ecological, botanical
Rating	National Importance
Priority	A

Description of Area

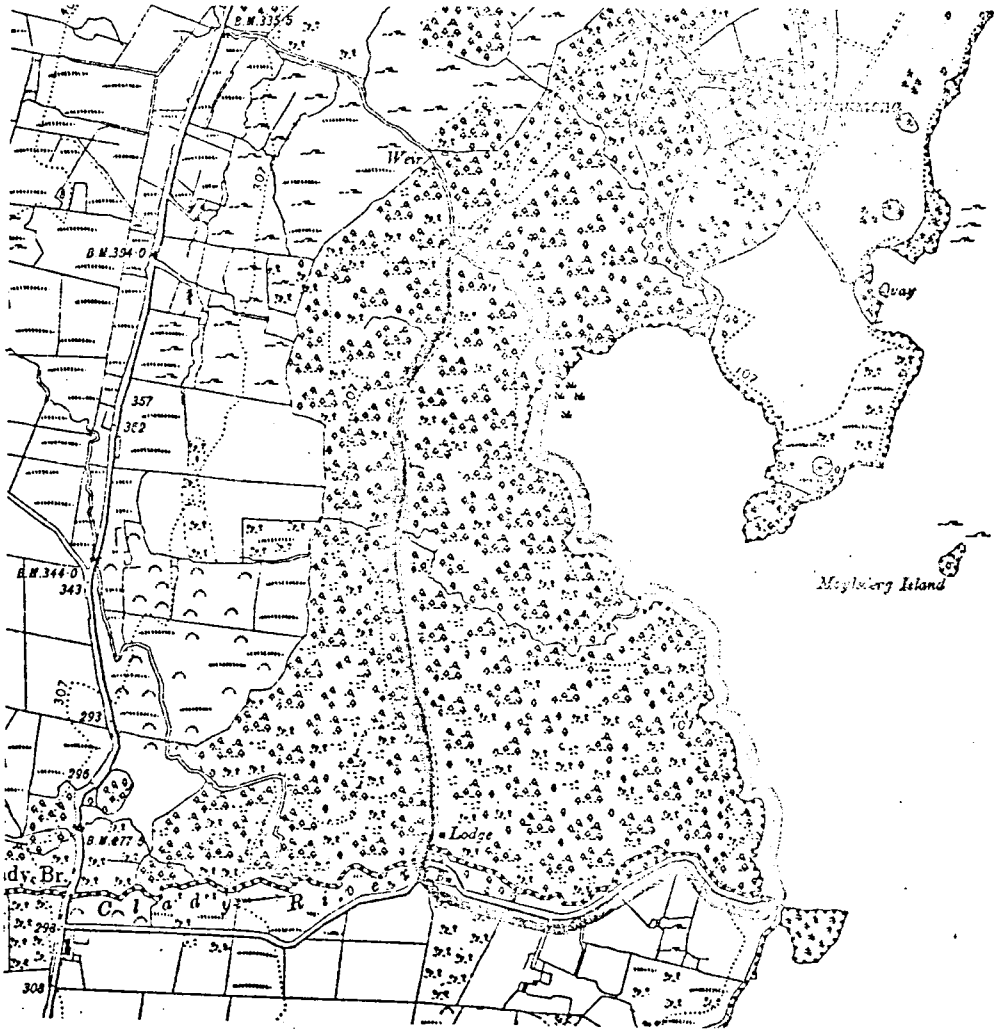
The area of interest is shown on Map 17, this particular stand of deciduous woodland differing from much of the neighbouring woods in showing relatively little evidence of recent management.

Relative to other woods in Donegal the trees in this area are well-grown on relatively fertile soil. Oak, Quercus sp., ash, Fraxinus excelsior, and alder, Alnus glutinosa, are all locally dominant whilst elsewhere occurring mixed together. Rowan, Sorbus aucuparia, and birch, Betula pubescens, also occur in the high canopy and holly, Ilex aquifolium, hazel, Corylus avellana, willows Salix spp. and rhododendron, Rhododendron ponticum, are important in the understorey. The spread of the latter species represents a considerable threat to the present scientific value of the woodland. Another unusual feature of the area is the regeneration of the oak here; oak seedlings are common and several young oaks can be seen. This regeneration may be the result of either low grazing pressure in the wood or the relatively fertile soil, possibly both.

The ground flora varies widely with such factors as density of shade, wetness etc. e.g. large areas are dominated by the greater woodrush, Luzula sylvatica, other areas by purple moor-grass, Molinia caerulea. Several rare herbs occur in the area.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —17

Scale: 6 Inches to 1 Mile



Name of Area	LOUGH NACUNG
Acreage	c. 520 acres
Grid Reference	B. 8, 1/2.
Scientific Interest	Botanical
Rating	National Importance
Priority	C

Description of Area

The area of interest is shown on Map 18.

On the peat at the margins of the lough grows an abundance of the rare heather, Erica mackaiana. It grows principally on the scarped edge of the bog around about two-thirds of the lough, descending in some places to the stony shore and occasionally spreading up onto the bog surface, but seldom for more than ten or fifteen yards. As one moves away from the lake shore it is progressively and rapidly replaced by Erica praegeri (its hybrid with the common cross-leaved heath, Erica tetralix) which in turn gives way to Erica tetralix itself.

The distribution of Erica mackaiana around the lake was mapped by Webb in 1950* (See fig. 2 on next page) and its distribution has probably changed little since, despite the conversion of L. Nacung into a reservoir since that date.

Evaluation

This is one of only two known sites of Erica mackaiana in Ireland, the other being in Galway. Elsewhere its nearest stations are in Northern Spain. The area is thus of national importance.

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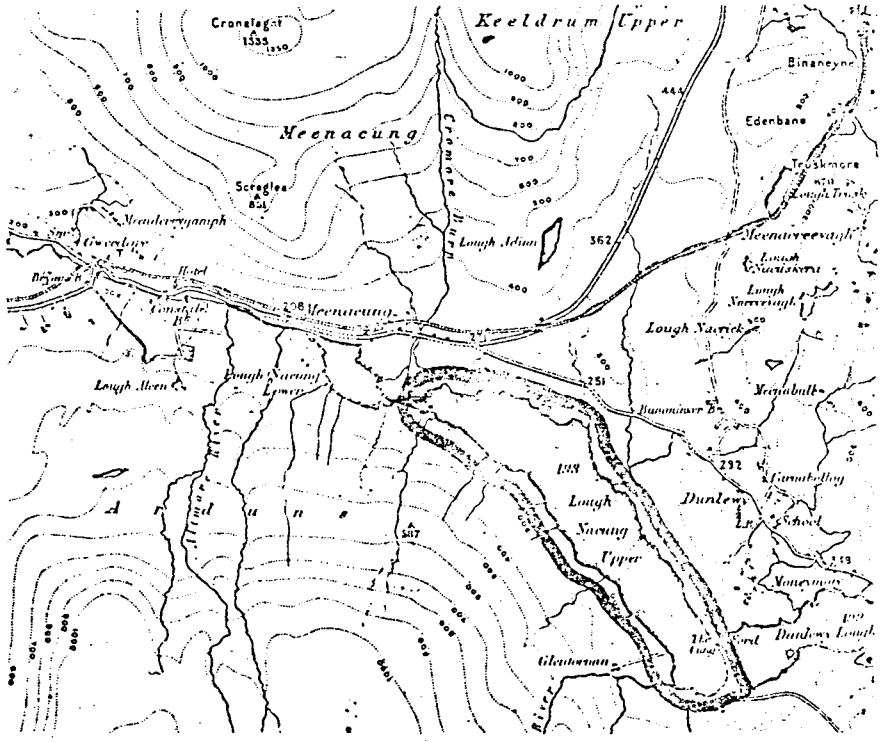
* Notes on four Irish Heaths. Part 1. Irish Naturalist's Journal. Vol.XI No. 8.

MAP SHOWING AREA OF SCIENTIFIC INTEREST --18

Scale: 1 Inch to 1 Mile



Threats to Area

Extensive peat cutting could eliminate the plant but this would appear unlikely.

Recommendations

Development plans affecting this area should take its scientific value into account.

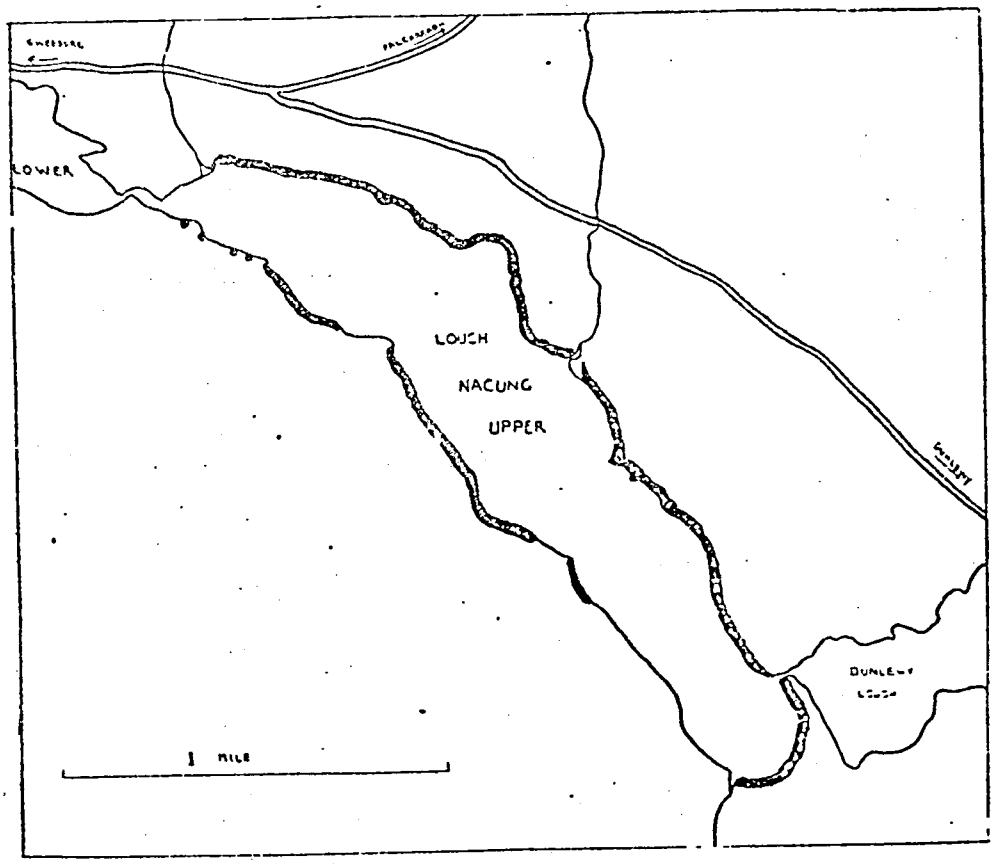


Fig. 2. *Erica mackaicna* at Lough Nacung, W. Donegal. The zone in which the plant grows is marked in black

Name of Area	NEAR BALLINTRA
Acreage	< 1 acres, precise area not shown on Map 19
Grid Reference	G 92,68
Scientific Interest	Botanical
Rating	National Importance
Priority	C

Description of Area

The ares of interest is shown on Map 19.

Within this area of hummocky, limestone pastureland is the only Irish locality of the rockrose, Helianthemum chamaecistus, a plant of common occurrence in Britain (See fig.6). As a protection against collectors the exact locality of the plant has not been pinpointed.

Evaluation

This area is of national importance as the only known Irish locality for the rockrose.

Threats to Area

The plant only occurs in a very small area. It could thus be easily eliminated by building or quarrying in its immediate vicinity.

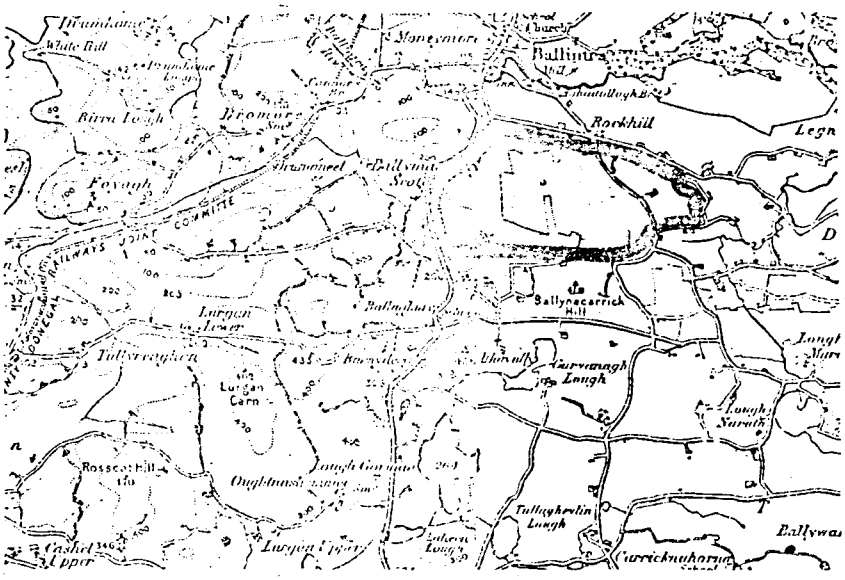
Collectors could represent another threat to the survival of the species here because of the very limited amount of the plant that is present.

Recommendations

The Conservation and Amenity Advisory Service should be informed of any proposed developments within this area. Only developments which would result in the obliteration of the plant need then be prohibited.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 19

Scale: 1 Inch to 1 Mile



Name of Area	MUCKISH
Acreage	c. 2,800 acres
Grid Reference	C. 00, 28.
Scientific Interest	Geological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 20.

Muckish is a large,flat-topped,quartzite mountain with deposits of sand around it, which were formed by the weathering of the quartzite.

The sand shows exceptional uniformity in grain size and has an extremely low iron content and is therefore almost ideal for the manufacture of optical glass. The deposits are not being worked at the moment, but during the war large quantities of sand were mined and exported.

Evaluation

There are several other quartzite mountains in the region, eg. Errigal, but these do not have such interesting associated sand deposits. Thus the Muckish area is classified as an area of regional geological importance.

Threats to Area

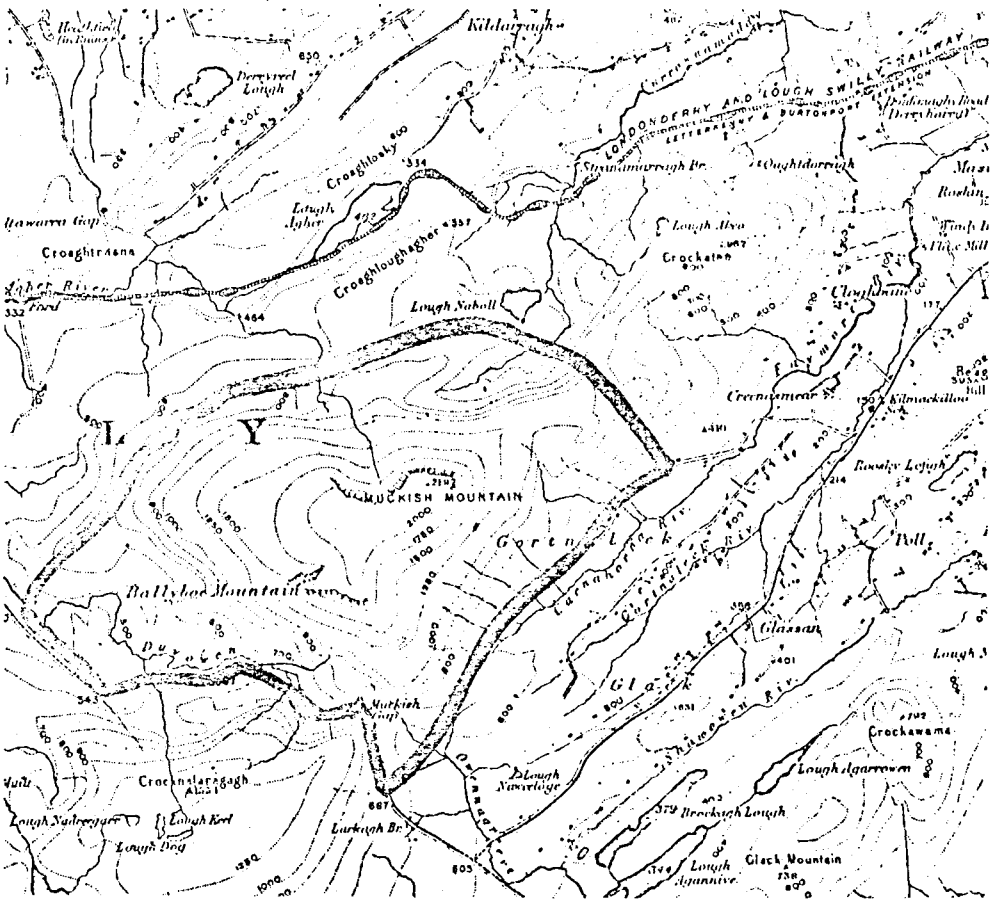
None likely. The value of the area would not be reduced by re-opening of the sand workings.

Recommendations

No action is necessary at present to protect the scientific values of this area.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 20

Scale: 1 Inch to 1 Mile



Name of Area	BARNES GAP RAILWAY CUTTING
Acreage	Area not yet accurately mapped
Grid Reference	C. 08, 26
Scientific Interest	Geological
Rating	Regional Importance
Priority	B

Description of Area

This railway cutting has been excavated into a large skarn mineral deposit rich in Wollastonite.

Data regarding the limits of this skarn and hence the precise boundaries of the area of interest is not available and hence the boundary shown by the dotted line on Map 21 is only provisional.

Evaluation

The size and mineralogy of this skarn deposit is of sufficient interest to justify a classification of regional importance.

Threats to the Area

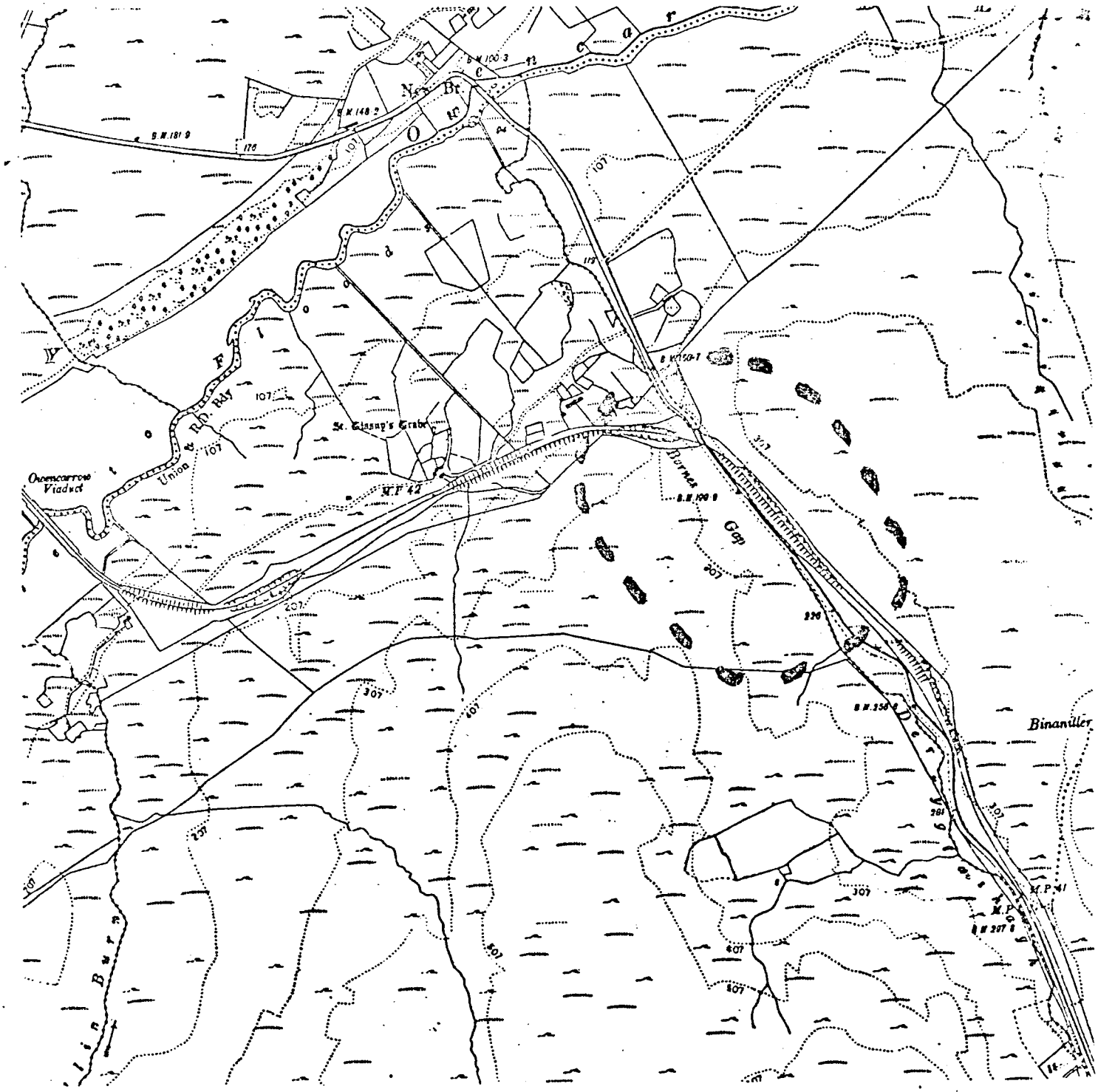
It is believed that this Wollastonite deposit is suitable for commercial exploitation.

Recommendation

Any development plans affecting this area should take account of its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —21

Scale: 6 Inches to 1 Mile



Name of Area	ROADSIDE NEAR BALLYSHANNON
Acreage	< 1 acre
Grid Reference	G. 90, 61
Scientific Interest	Geological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 22.

On the north side of this stretch of road is a long, low cliff, created during road widening. A large part of the cliff is overgrown with gorse, but where it is accessible one can see Ballyshannon limestone, here a sandy dolomite, lying unconformably on metamorphic flaggy, siliceous granulites. It is possible to demonstrate here that the carboniferous strata are marine in origin, as a colony of Syringopora, a colonial coral, occurs about 1 metre above the unconformity.

Evaluation

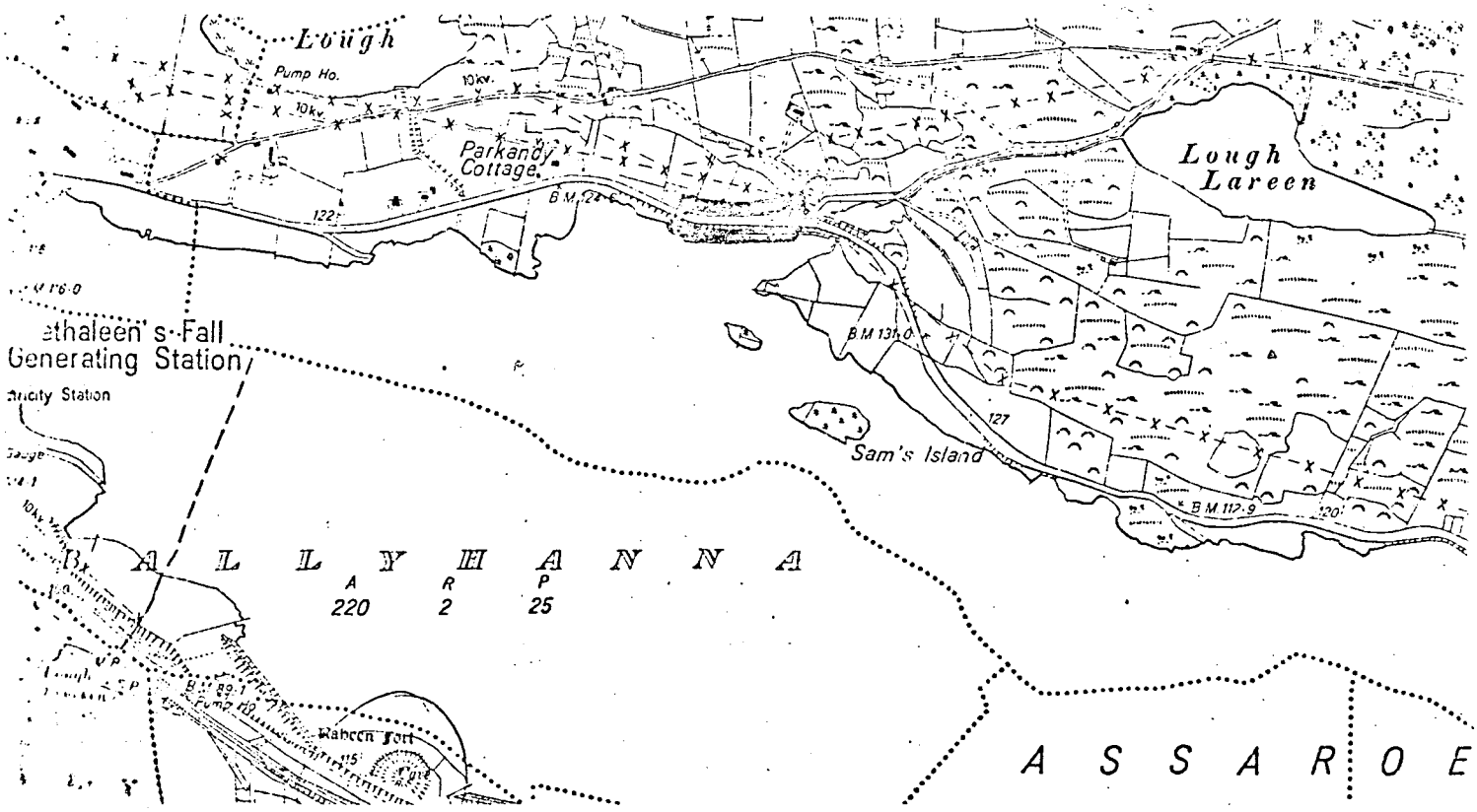
This section contrasts markedly with those on the north side of Donegal Bay, where fluviatile deltaic facies underlie marine facies. Because of this the exposures are utilised by University field parties. The site is thus classified as being of regional importance.

Threats to the area

No threats to the exposures are likely. The growth of gorse on the cliff, however, has made the exposures less accessible and hinders their examination by field parties.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —22

Scale: 6 Inches to 1 Mile



Recommendations

A section of the cliff should be completely cleared of gorse, thus allowing easy access to it. The remainder of the cliff should be left with its cover of the shrub as a protection against possible future damage by geological field parties.

Name of Area	MUCKROSS HEAD TO FINTRAGH BAY
Grid Reference	G. 62, 73 - G. 69, 76.
Scientific Interest	Geological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown by the thick black line on Map 23.

These coastal cliffs and intertidal rocks display a fairly complete succession from schists, through the unconformity, up to marine limestones and shales. A wide range of rock types and sedimentary structures are visible, typical of many different environments of deposition. Trace fossils, particularly chondrites, are spectacular at many horizons and the upper part of the succession is richly fossiliferous.

Evaluation

This richly fossiliferous area is the subject of geological research and is often visited by geological field parties. It is thus classified as an area of regional importance.

Threats to Area

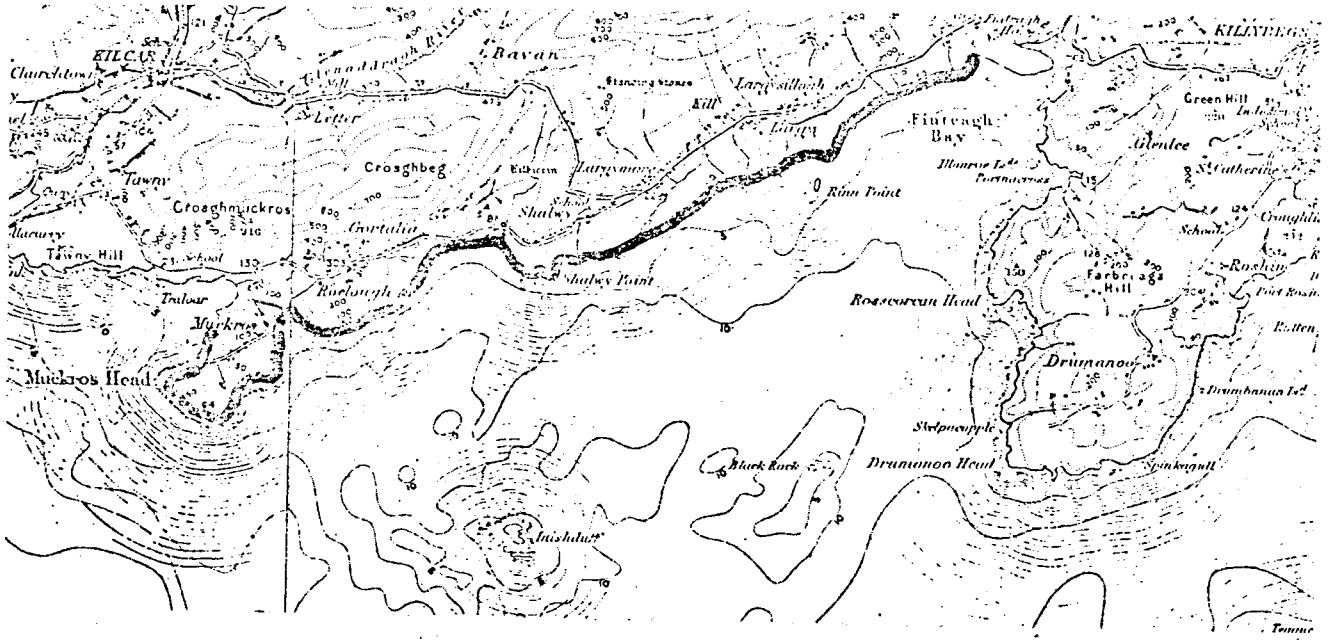
None likely

Recommendations

Development plans for this area should take account of its scientific value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 23

Scale: 1 Inch to 1 Mile



Name of Area	ST. JOHN'S POINT
Acreage	c. 860 acres
Grid Reference	G 70, 69
Scientific Interest	Geological; botanical
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 24.

This is a narrow limestone peninsula with richly fossiliferous coastal cliffs and rocks and an interesting calcicole flora. Several uncommon plants occur here viz. bloody cranesbill, Geranium sanguineum, northern bedstraw, Galium boreale, stone bramble, Rubus saxatilis, and the grass, Sesleria albicans, which is plentiful in the pastures here (See figs. 7-10).

Evaluation

The area merits classification as regionally important on the basis of its richly fossiliferous limestones and the occurrence of the rather uncommon calcicole plants.

Threats to Area

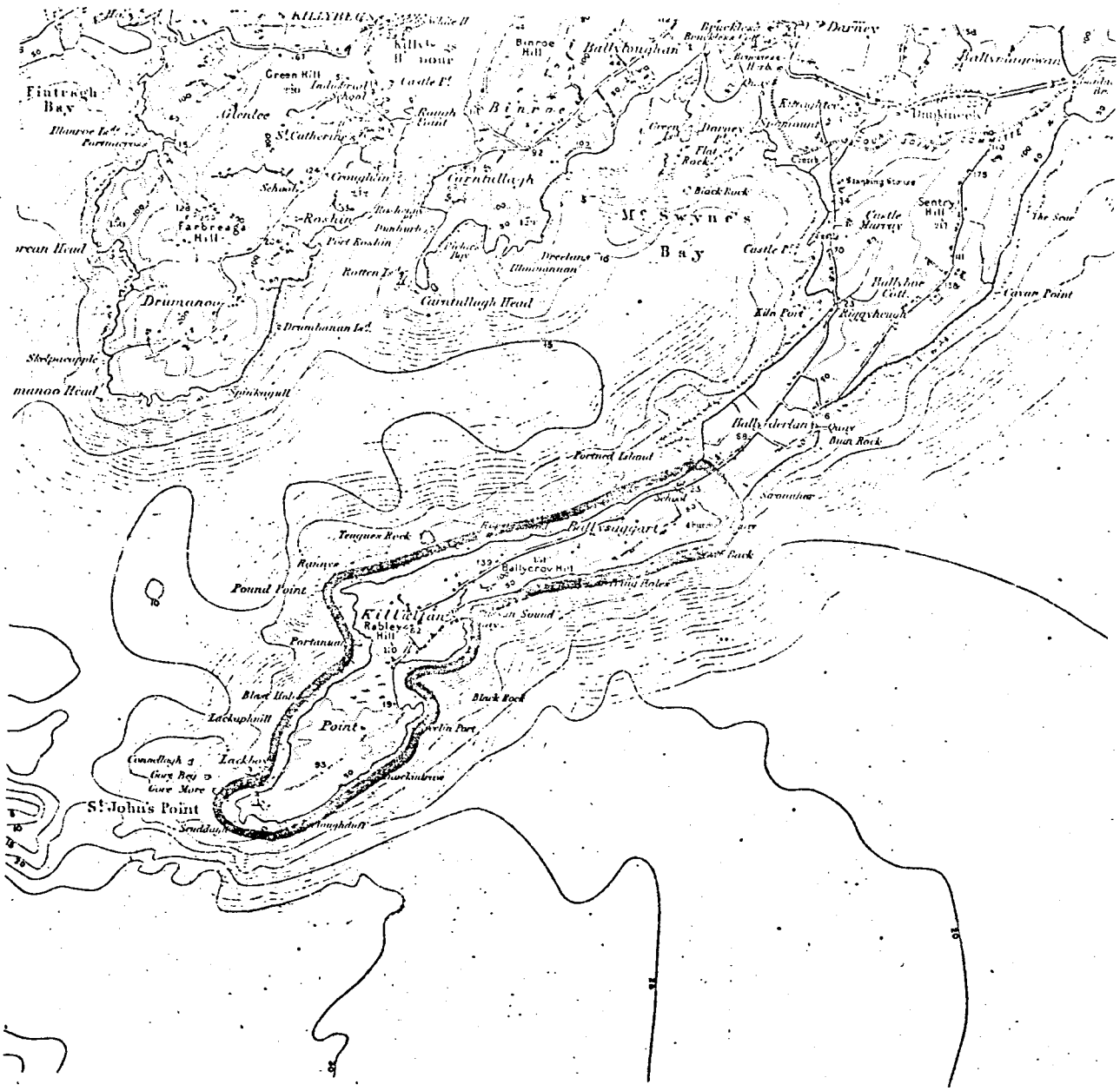
None likely, though individual plant localities could be destroyed by building etc.

Recommendations

Development plans for this area should take account of its scientific value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 24

Scale: 1 Inch to 1 Mile



Name of Area	DOORIN POINT
Grid Reference	G. 80, 72.
Scientific Interest	Geological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown by the thick black line on Map 25.

This is a low-lying, limestone headland with richly fossiliferous coastal rocks.

Evaluation

The palaeontological interest of the fossiliferous limestones is sufficient for this area to merit classification as one of regional importance.

Threats to Area

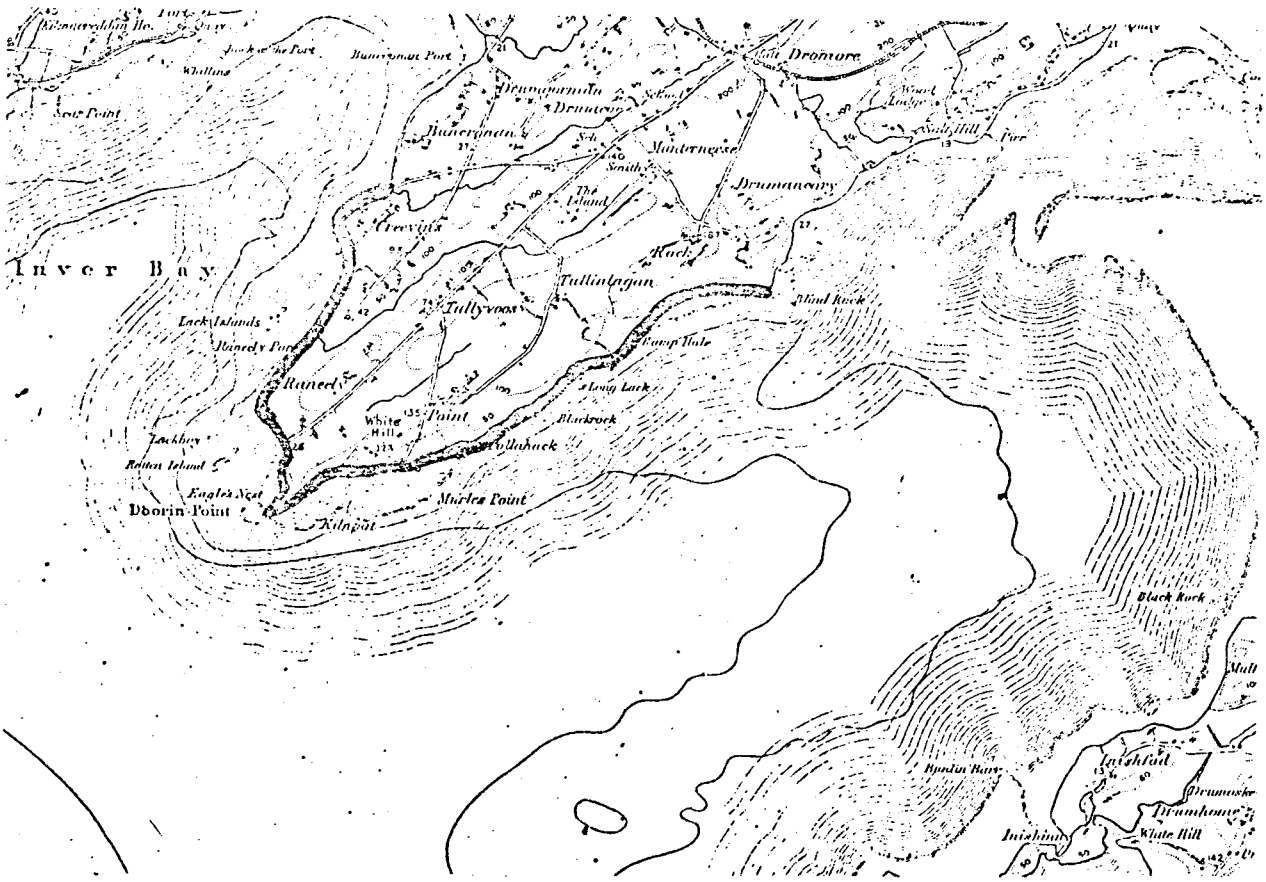
None likely.

Recommendations

Development plans for this area should take account of its scientific value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —25

Scale: 1 Inch to 1 Mile



Name of Area	FORESHORE WEST OF BUNDORAN
Grid Reference	G. 80, 59
Scientific Interest	Geological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown by the thick black line on Map 26.

These limestone cliffs and intertidal rocks are richly fossiliferous.

Evaluation

The palaeontological interest of these limestones is sufficient for this area to merit classification as one of regional importance.

Threats to Area

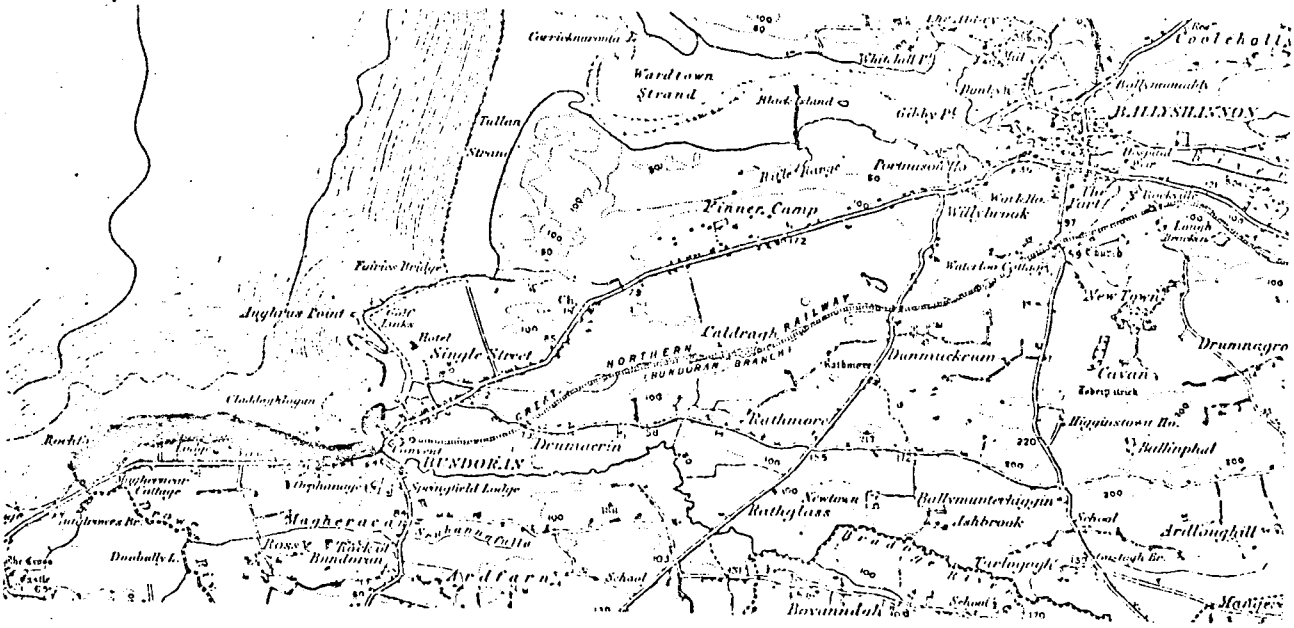
None likely

Recommendations

Development plans for this area should take account of its scientific value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 26

Scale: 1 Inch to 1 Mile



Name of Area	FINNER CAMP
Acreage	c. 860 acres
Grid Reference	G. 84, 61.
Scientific Interest	Ecological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 27.

This area consists of a dune system backed by dune grassland. Access to most of the area is restricted because of the military camp.

The most interesting part of the dune system is that bordering Tullan strand. Along the southern part of the strand a fine foredune ridge is developing, which gets lower and eventually disappears further to the north. This ridge is backe by higher, unstable, marram-dominated dunes, which further from the shore grade into very high, partly-stabilised dunes, that are being badly eroded by the wind.

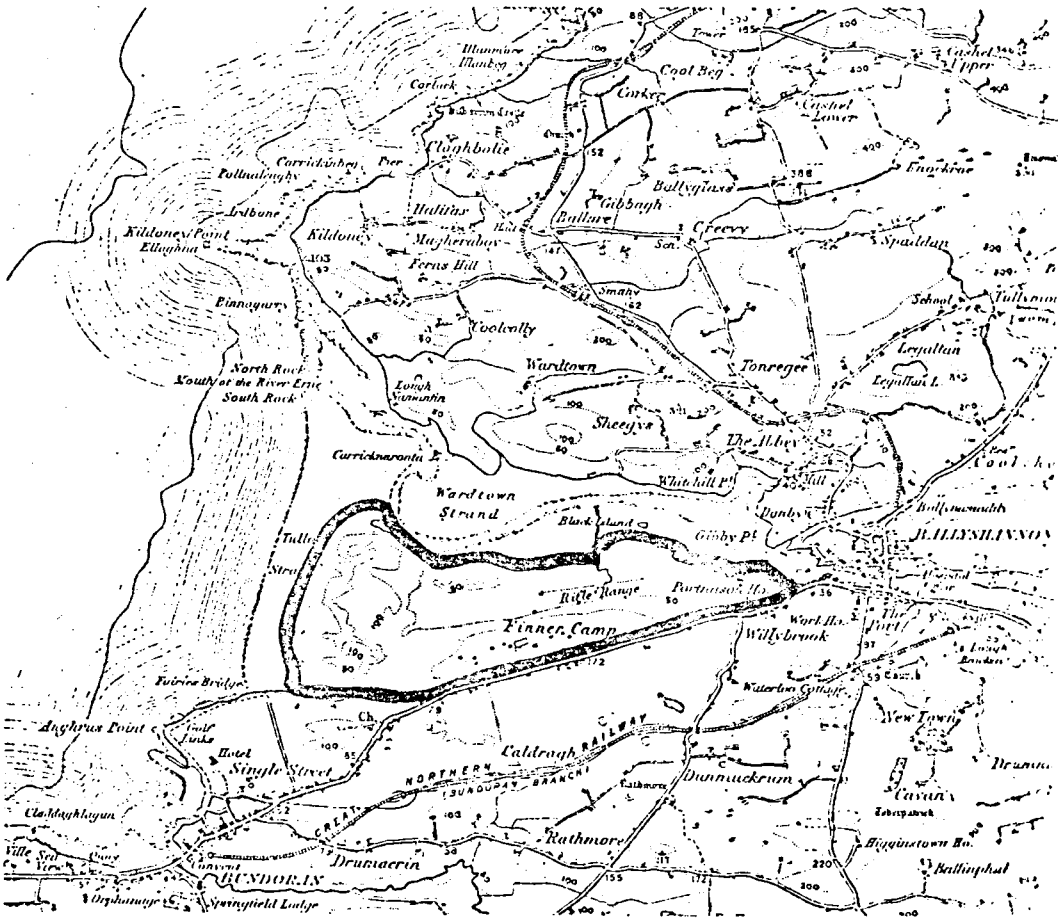
There are three old quarries within the area with exposures of fossiliferous limestone, but these are of little scientific value.

Evaluation

The Tullan Strand area, because of its young, actively-developing foredune ridge, is an excellent site for studies of plant succession on sand dunes. As such fine developing ridges are not features of other dune systems in Donegal and neighbouring coastal counties this area is classified as being of regional importance.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 27

Scale: 1 Inch to 1 Mile



Threats to the area

In view of the land use of the area little threat to it should arise. Pressure may, however, develop on Tullan Strand and the dunes bordering it. This could cause erosion and reduce the value of the area for ecological studies.

Recommendation

Recreational use of Tullan Strand and the adjacent dunes should not be encouraged.

Name of Area	KILDONEY POINT
Grid Reference	G.82, 64
Scientific Interest	Geological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 28.

The carboniferous rocks exposed here are upper 'Calp' sandstones, in which interesting deltaic sedimentary structures can be seen.

Evaluation

The unusual, clearly visible sedimentary structures result in this area being classified as one of regional importance.

Threats to Area

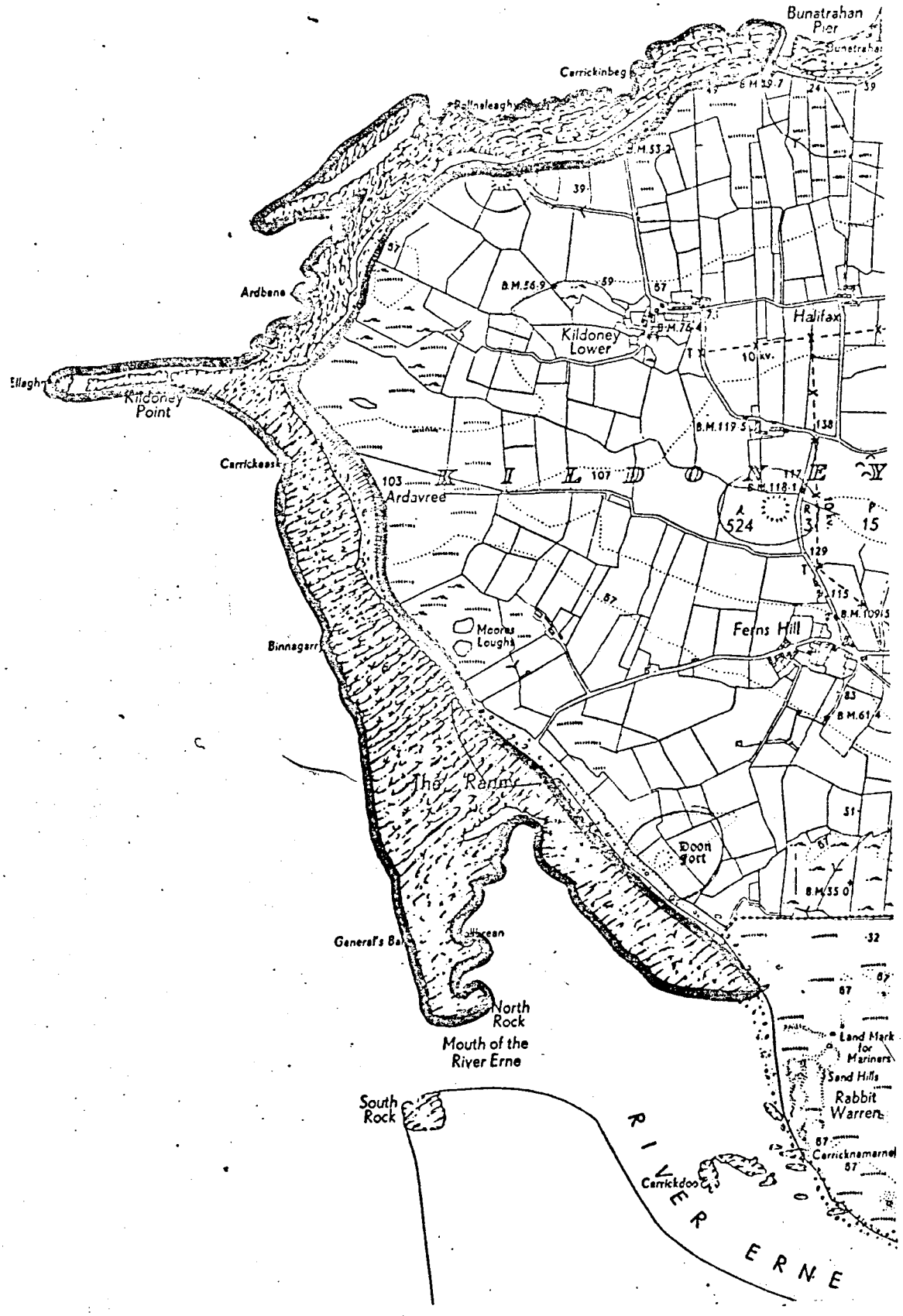
None likely because of the location of the area and the nature of the geological features to be seen here.

Recommendation

Development plans for this area should take account of its scientific value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 28

Scale: 6 Inches to 1 Mile



Name of Area	POISONED GLEN
Acreage	c. 1,300 acres
Grid Reference	B. ~~90, 16~~ 94 17
Scientific Interest	Geomorphological; botanical
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 29.

The Poised Glen is a very fine W-facing corrie with very steep, high walls and a peat-covered floor.

There are two extremely interesting old plant records for the Glen, viz. for the Killarney fern, Trichomanes speciosum and the Irish spurge, Euphorbia hyberna. In Ireland both of these species have always been almost exclusive to the south west (see figs. 11+12) and their Donegal stations were of great interest to botanists. It is unlikely however that either of the species still survives in the Glen, though Trichomanes may yet be rediscovered in some damp, remote crevice.

Evaluation

Probably the finest corrie in Donegal the area is thus of regional geomorphological interest.

Threats to Area

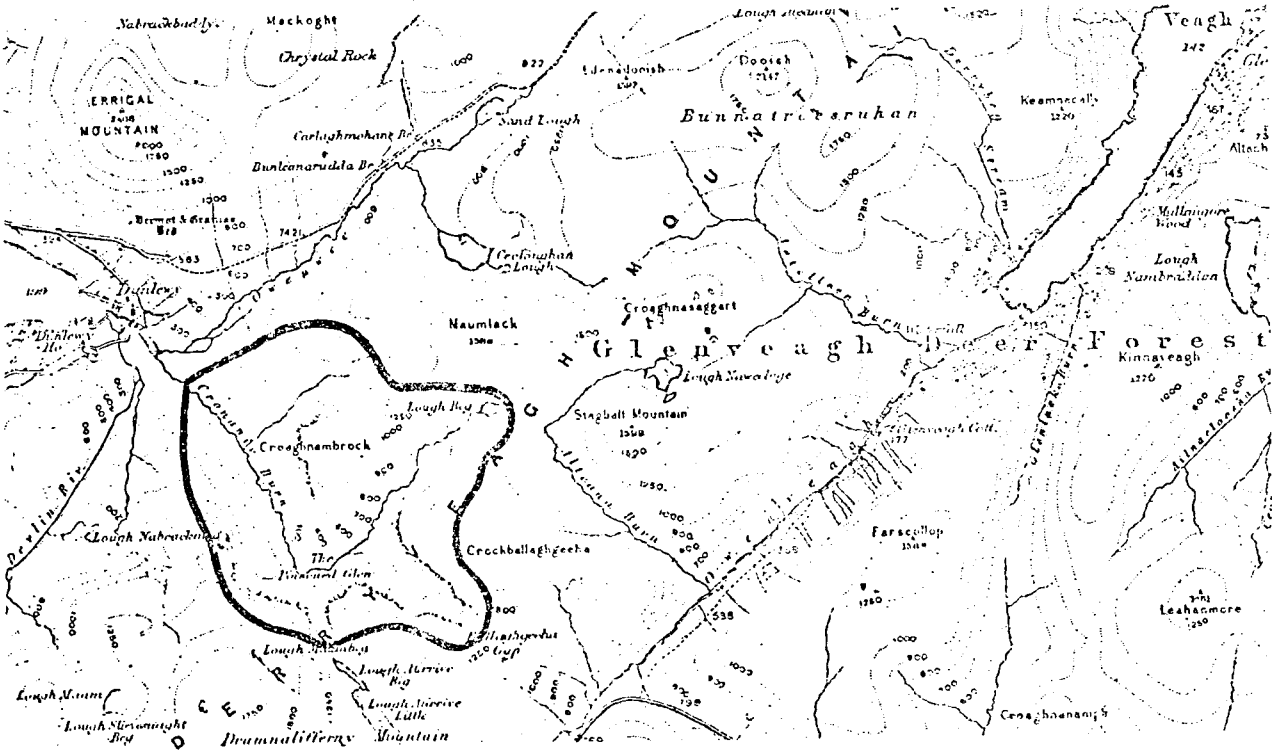
None likely.

Recommendations

At the present time no action need be taken to preserve the scientific value of this area, nor is any need for action likely to arise in the future.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 29

Scale: 1 Inch to 1 Mile



Name of Area	ROANINISH
Acreage	c. 30 acres plus intertidal rocks
Grid Reference	B. 65, 02.
Scientific Interest	Ornithological
Rating	Regional Importance
Priority	B

Description of Area

The area of interest is shown on Map 30.

This is a small, flat island, c. 600 yards long by 200 yards wide, covered by a lush maritime grassland broken by rocky outcrops and surrounded by extensive, intertidal rocks. It is an important breeding area for arctic terns, storm petrels and eider duck. Barnacle Geese graze the turf in winter.

The island is easily accessible by boat from Rossbeg and Portnoo.

Evaluation

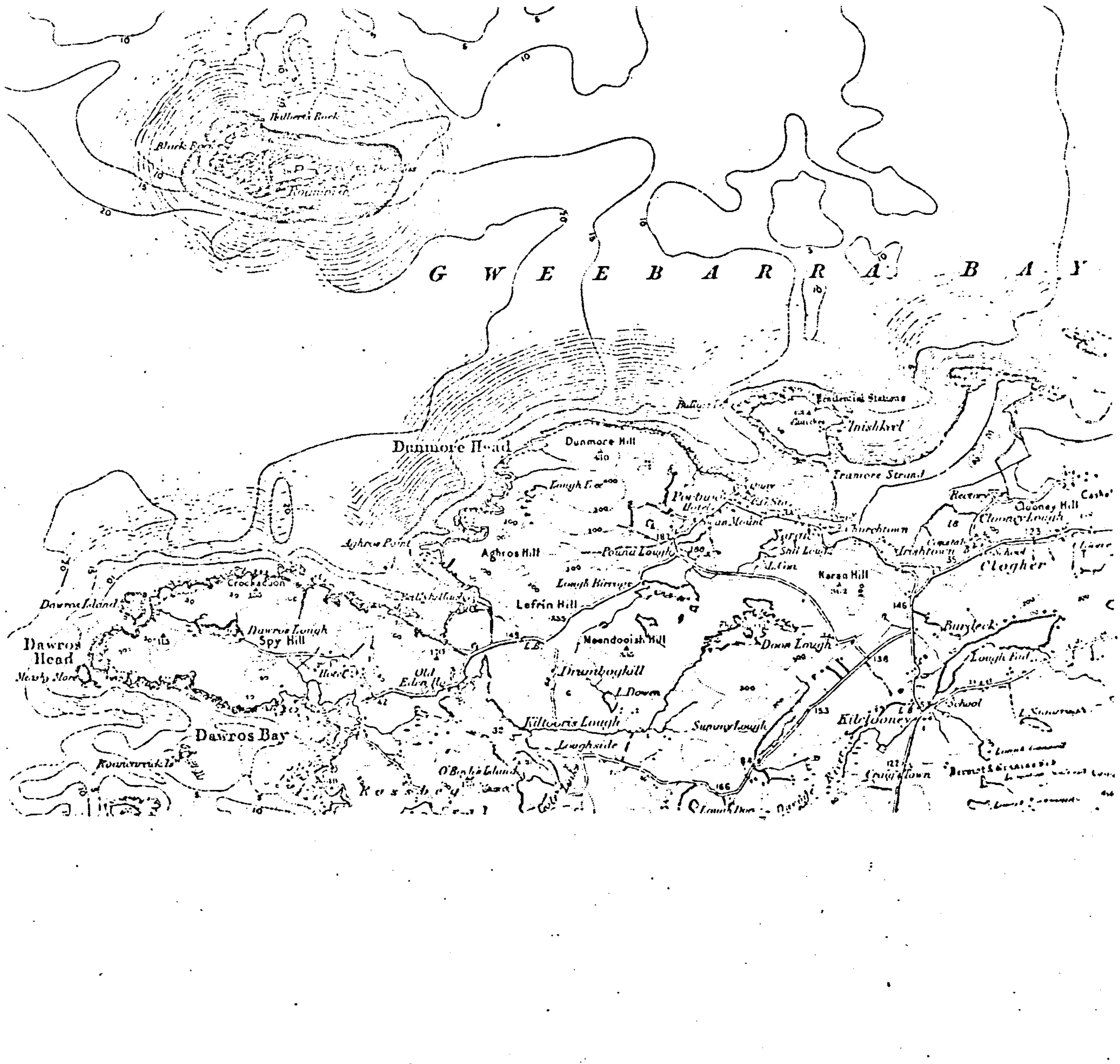
The breeding colonies of arctic terns, storm petrels and eider duck are of sufficient importance for Roaninish to be classified as a site of regional importance.

Threats to Area

The breeding birds are very vulnerable to egg collectors and disturbance by visitors on day trips from Rossbeg and Portnoo. The arctic terns and eider ducks are particularly sensitive to visitors moving around the island at the height of the breeding season.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 30

Scale: 6 Inches to 1 Mile



Recommendations

The island should be protected by a Conservation Order under Section 46, Local Government (Planning and Development) Act 1963. This order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

Access to the island should be strictly controlled during the breeding season, ie. May, June and July, casual visitors being excluded entirely.

Name of Area	INISTRAHULL
Acreage	c. 100 acres plus out-lying islands
Grid Reference	C. 48, 65.
Scientific Interest	Ornithological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 31.

This island was the first Irish breeding site of the eider duck, first recorded breeding here in 1912. Since then they have extended their breeding range to the Donegal mainland and several other islands in the county eg. Roaninish and subsequently further afield. The Inistrahull colony remains the largest in Ireland, however.

The island also has large colonies of other seabirds, especially gulls and shags, and is the first possible Irish landfall for migrants from Iceland.

Evaluation

The eider colony results in Inistrahull being classified as an area of regional importance.

Threats to Area

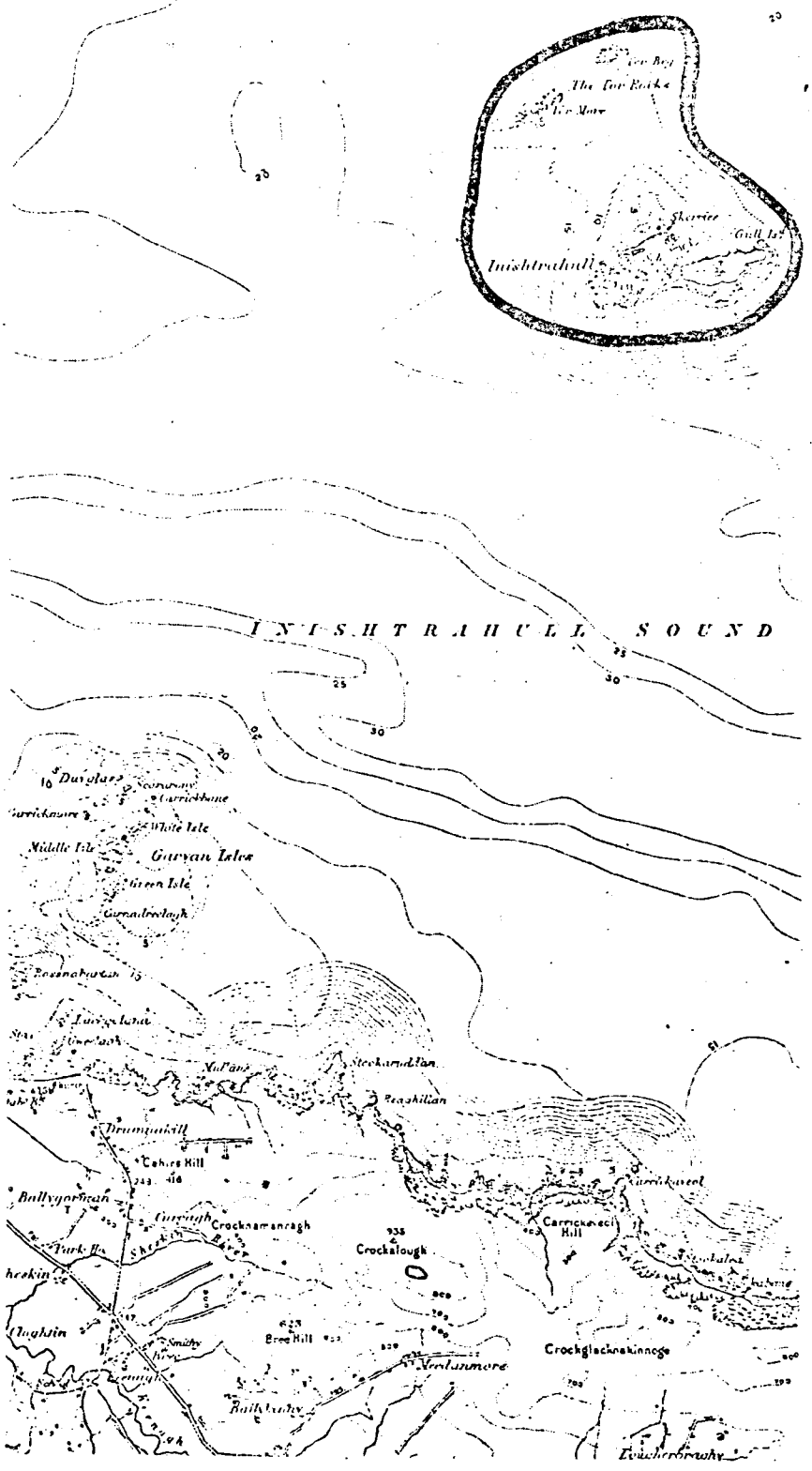
None likely.

Recommendations

Development plans for the island should take account of its ornithological value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —31

Scale: 1 Inch to 1 Mile



Name of Area	INISHKEERAGH
Acreage	c. 45 acres plus intertidal rocks
Grid Reference	B. 68, 12.
Scientific Interest	Ornithological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest, a low-lying grassy island surrounded by extensive intertidal rocks, is shown on Map 32.

The island is important as a breeding area for seabirds, particularly terns. Four of the five species of terns breeding in Ireland breed here on Inishkeeragh, only the sandwich tern not having been recorded.

Evaluation

The breeding seabird colonies result in Inishkeeragh being classified as a site of regional importance.

Threats to Area

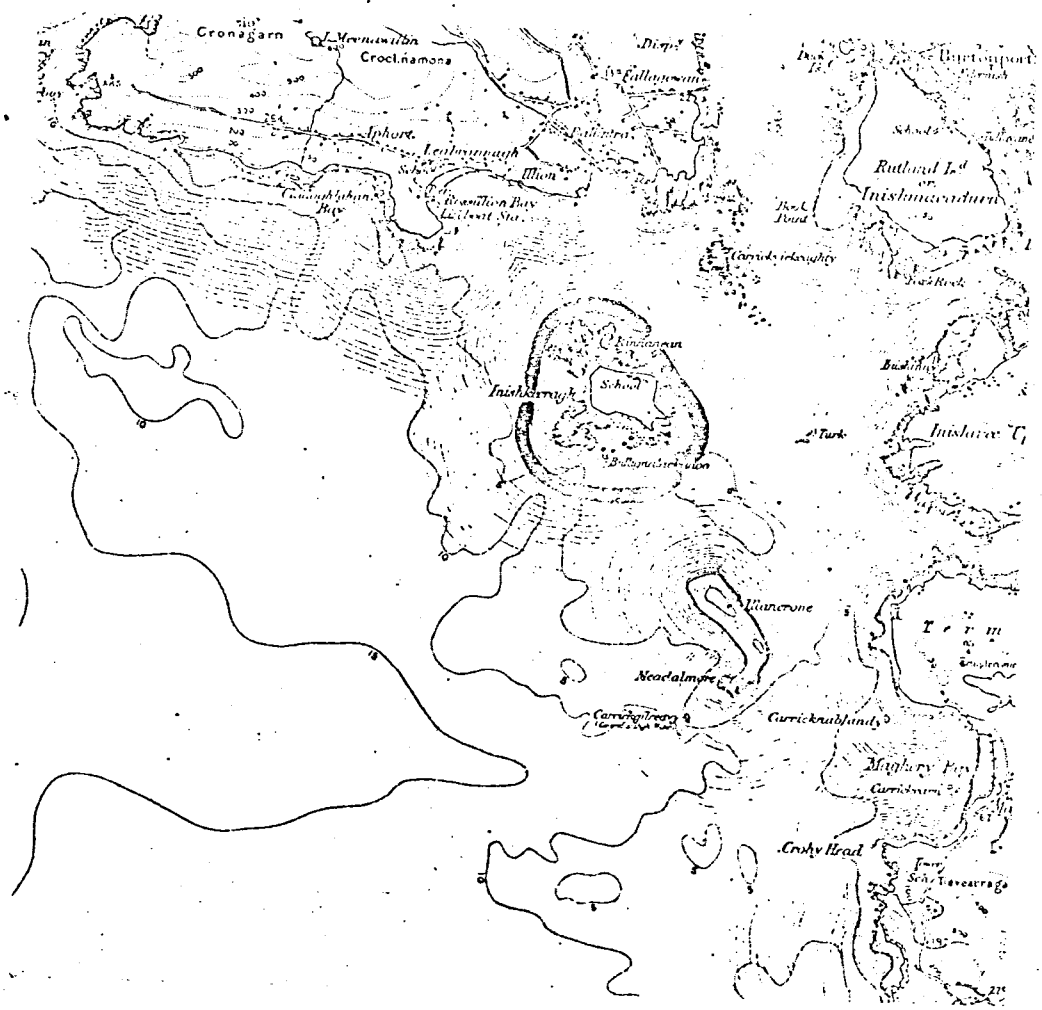
None likely.

Recommendations

Development plans for the island should take account of its ornithological value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST --32

Scale: 6 Inches to 1 Mile



Name of Area	DUNFANAGHY NEW LAKE AND DUNES
Acreage	c. 970 acres
Grid Reference	C. 00, 36.
Scientific Interest	Ornithological, ecological, botanical
Rating	Regional Importance
Priority	B

Description of Area

The area of interest is shown on Map 33.

The most obvious feature of the area is the lake. This occupies the area shown as intertidal strand on Map 33 (taken from the O.S. 6" map, revised 1903) and also the two low-lying areas that used to be protected from tidal inundation by the embankments, now almost entirely submerged. The lake formed about 50 years ago as a result of sand movement into the channel which connected Rinclevan strand with the sea. It is now important as a wintering area for wild swans and many other species of wildfowl, and as a breeding area for duck. Mallard certainly breed around the lake, and pochar and widgeon, both of which may be regarded as rare breeding duck in Ireland, are suspected of having bred here. At the west end of the lake, is an area of low-lying, wet grassland, which is often utilised by over-wintering Greenland white-fronted geese, the only such area in Donegal.

The rest of the area is occupied by the sand dune system, which is mainly of interest because of its extremely large dune slack. The wettest parts of this slack are dominated by a mixture of common sedge, Carex nigra, fiorin grass, Agrostis stolonifera, and creeping willow, Salix repens, with such typical associate as pennywort, Hydrocotyle vulgaris, silverweed, Potentilla anserina and the mosses Scorpidium scorpiodes and Camptothecium lutescens. There is also a little bog-rush, Schoenus nigricans

present here and this becomes commoner towards the drier edge of the slack where it is locally dominant. Much of the slack, however, is a dry species-rich grassland, in which the following species are important:-

Festuca rubra	red fescue	a
Linum catharticum	purging flax	c
Lotus corniculatus	bird's foot trefoil	c
Salix repens	creeping willow	c
Thymus drucei	wild thyme	c
Ammophila arenaria	marram grass	f
Carex arenaria	sand sedge	f
Holcus lanatus	Yorkshire fog	f
Trifolium repens	white clover	f
Arenaria serpillifolia	thyme-leaved sandwort	o, lc.
Gentianella campestris	field felwort	o, lf
Selaginella selaginoides	lesser clubmoss	o, lf

The dunes themselves also have a rich flora.

Threats to Area

Development in the area could cause habitat damage and disturbance of the birds. Erosion is already reasonably severe on the dunes. It could be accelerated tremendous by recreational pressure on the dune system.

Recommendations

This area should be protected by a Conservation Order under Section 46, Local Government (Planning and Development)Act, 1963. This order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

Name of Area	BLANKET NOOK
Acreage	c. 160 acres
Grid Reference	C. 30, 19.
Scientific Interest	Ornithological, botanical, ecological.
Rating	Regional Importance
Priority	B

Description of Area

The area of interest is shown on Map 34.

This is a shallow, brackish lough with marginal marsh, pools and wet pasture. On its west side the lough is fringed by a reedswamp of glaucous bulrush, Schoenoplectus tabernaemontani, and sea clubrush, Scirpus maritimus, backed by marshy pasture with:-

Agrostis stolonifera	(fiorin)	a
Juncus articulatus	(jointed rush)	c
Carex nigra	(common sedge)	f
Senicio aquaticus	(marsh ragwort)	f
Triglochin spp.	(arrowgrasses)	f

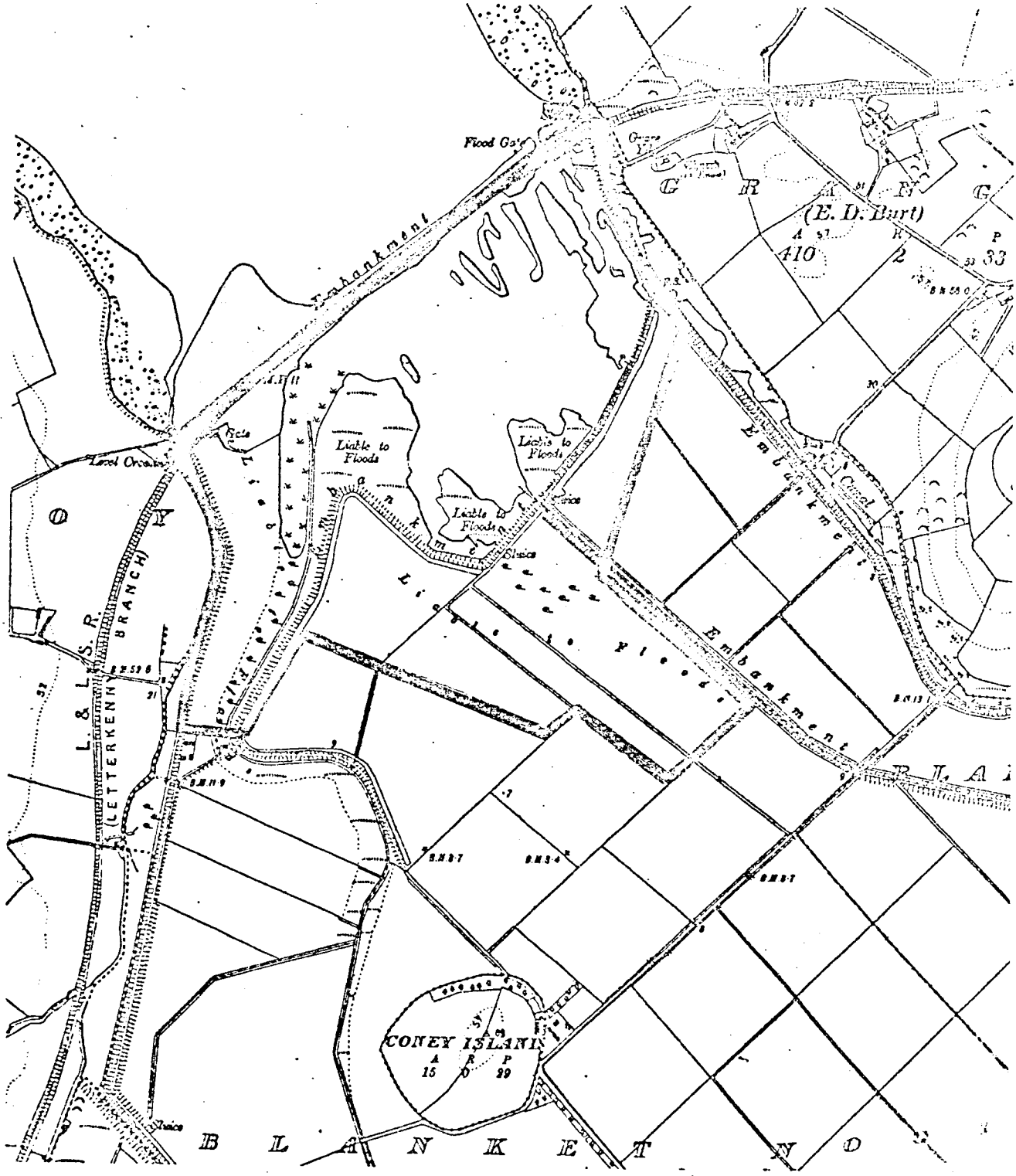
On its east side the reedswamp is absent and Agrostis pasture runs to the waters edge. There is a complex of pools here, full of the fennel-leaved pondweed, Potamogeton pectinatus.

This is the second most important wildfowl wetland in Donegal, an overwinter and breeding area. In recent years it has been declared a Wildfowl Refuge by the Minister for Lands under the Game Preservation Act 1930.

As at Inch lough (see p.27) the wildfowl probably feed largely on extensive beds of fennel-leaved pondweed, Potamogeton pectinatus, which occur in the waters of the lough, though eel-grass, Zostera angustifolia, which can be seen growing in the small pool in the northwest corner of the area, probably also grows in the lough and could form a valuable food supply.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 34

Scale: 6 Inches to 1 Mile



The Zostera, which is very rare in Ireland (fig. 13) was only discovered here when the area was visited in October, 1972. Another uncommon plant noted at the time was the spikerush, Eleocharis uniglumis (fig.14)

Evaluation

The ornithological and botanical interest of this area is sufficient for it to be classified as an area of regional importance.

Threats to Area

Now that the area is a wildfowl refuge the main danger to the area is undoubtedly drainage. The Game Preservation Act, though allowing for the prevention of shooting within refuges, affords no protection to the refuges themselves and thus drainage of this area could occur in spite of its legal status.

Recommendations

In order to ensure that the particular environmental conditions of Blanket Nook are not modified in a manner detrimental to the bird populations, the area should be protected by a Conservation Order under Section 46, Local Government (Planning and Development) Act, 1963. This Order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

Name of Area	PARTS OF TORY ISLAND
Acreage	c. 135 acres
Grid Reference	B. 8, 4.
Scientific Interest	Ornithological
Rating	Regional Importance
Priority	C

Description of Area

The two areas of interest are shown on Map 35.

The eastern area is comprised of high cliffs, which hold large colonies of nesting seabirds and choughs. The western area, in contrast, includes Lough Ayes and the stony bogland north of it. A variety of waterbirds nest on the lough and to its north breed dunlin, little terns and common gulls.

Evaluation

Dunlin, little terns and common gulls are all moderately rare breeding birds in Ireland and choughs mainly breed in the south and west. Thus these breeding areas are classified as of regional importance.

Threats to Area

None likely.

Recommendations

Development plans for Tory Island should take account of the ornithological value of these areas.

Name of Area	ISLANDS IN MULROY BAY
Grid Reference	?C. 13, 38
Scientific Interest	Ornithological
Rating	Regional Importance
Priority	C

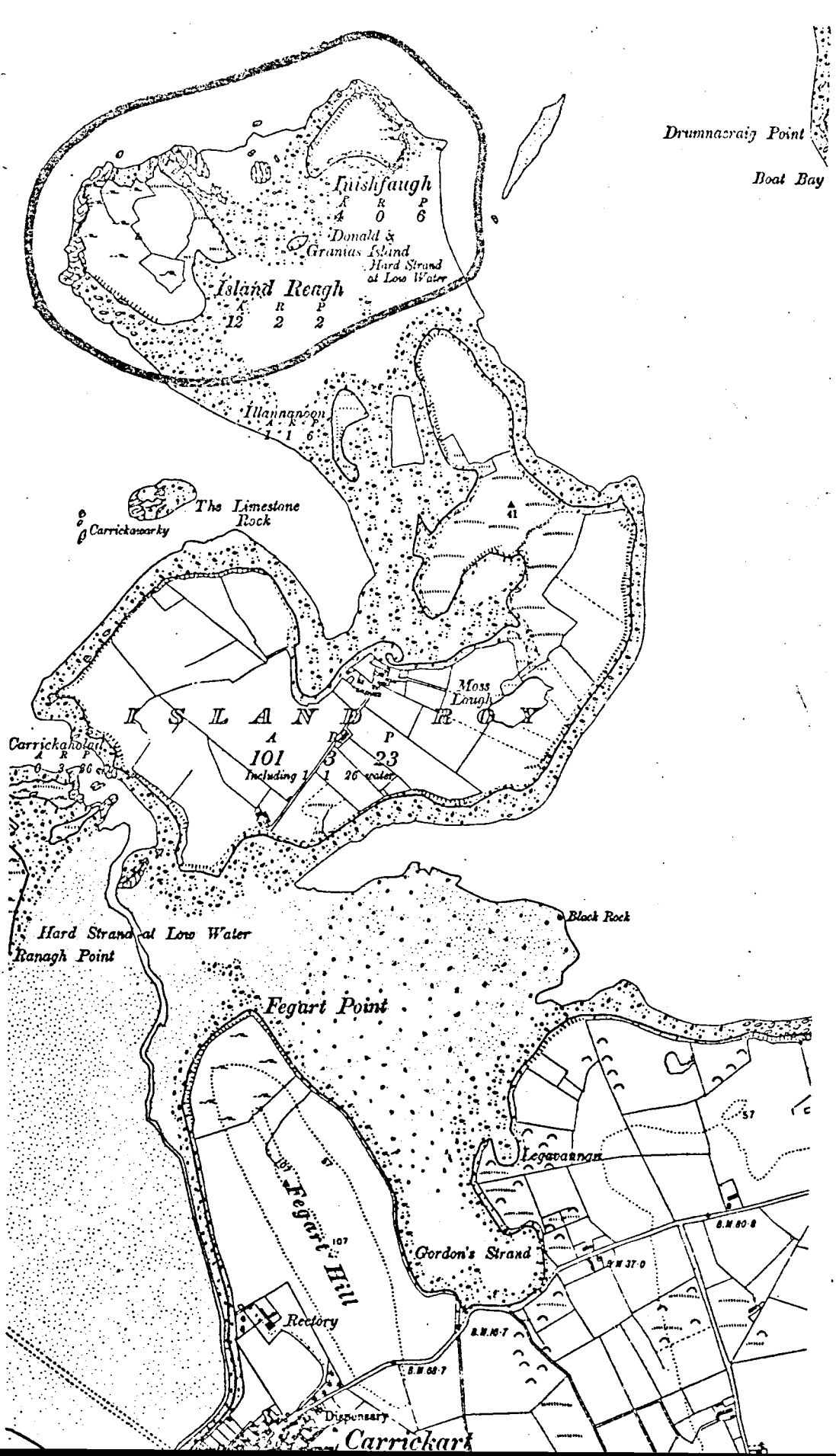
Description of Area

Certain of the islands in Mulroy Bay, believed to be those shown on Map 36, are of ornithological importance because of their breeding colonies of terns.

Precise details concerning this site are currently unavailable though it is hoped that more information will be gathered in the near future. It is therefore recommended that the advice of the Conservation and Amenity Section, An Foras Forbartha, should be sought regarding any proposed developments which would affect the islands in Mulroy Bay, particularly those shown on Map 36.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —36

Scale: 6 Inches to 1 Mile



Name of Area	TRAWBREAGA BAY
Acreage	c. 4,000 acres
Grid Reference	C. 4, 4/5
Scientific Interest	Ornithological; ecological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 37.

The bay, connected to the sea by a narrow channel, has large areas of intertidal mudflats. It is important as a wintering area for wildfowl, principally brent geese, whichfeed on the mudflats. In recent years the area has been declared a Wildfowl Refuge by the Minister for Lands, under the Game Preservation Act, 1930.

The sand dunes at Lag are of general ecological interest.

Evaluation

The wintering populations of brent geese and other wildfowl result in this area being of regional importance.

Threats to Area

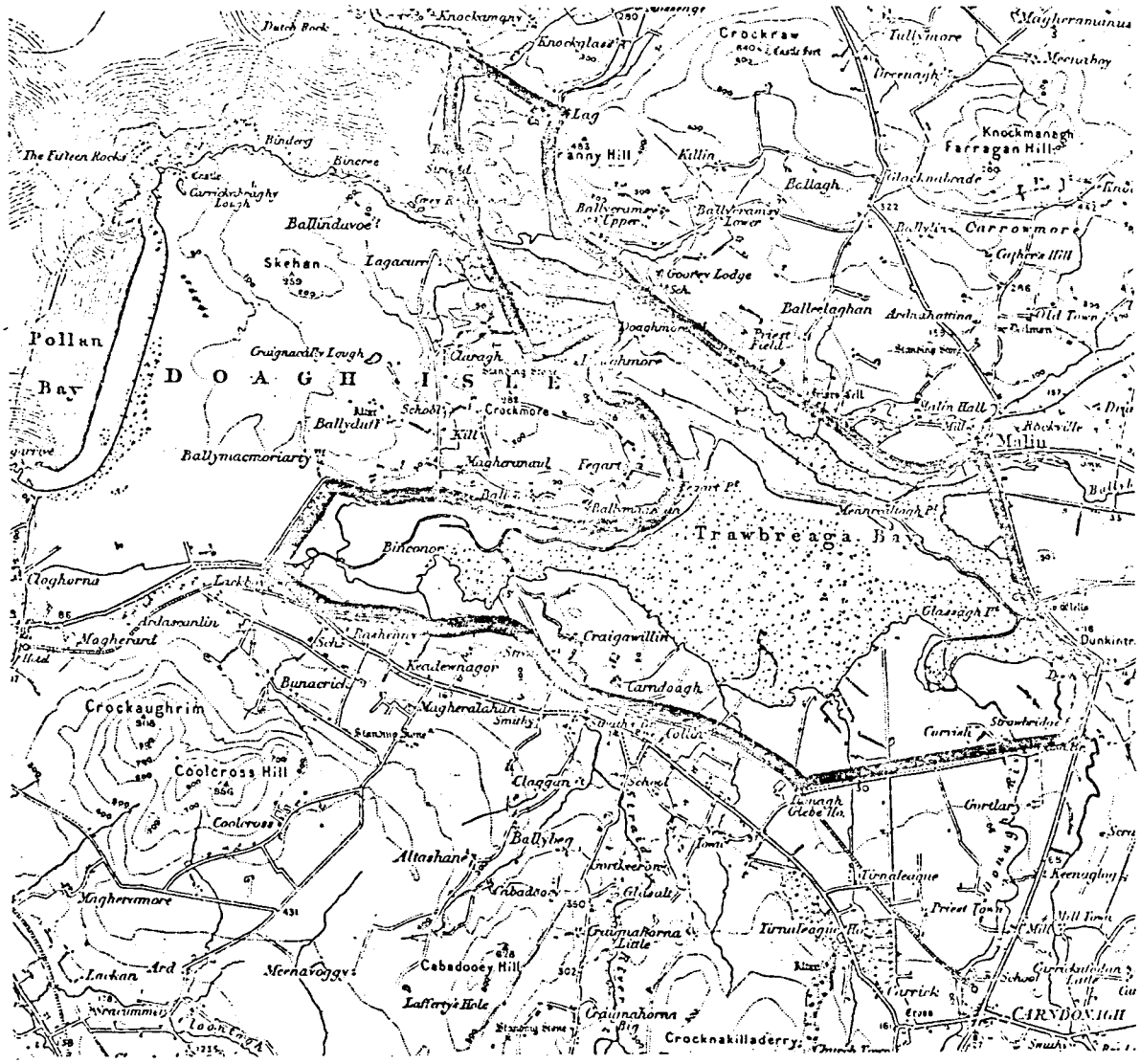
Some danger of pollution exists from the recently proposed development at Lag. Careful control of sewage treatment and disposal must be exercised.

Recommendations

Development plans for this area should take account of its ornithological value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —37

Scale : 1 inch to 1 mile



Name of Area	LOUGH FINN
Acreage	c. 600 acres
Grid Reference	B. 9001
Scientific Interest	Ecological, zoological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 38.

This is a long, narrow, acid lake with impressive steep, rocky slopes on its southeast side. It holds a stock of char.

Evaluation

This lough was classified as of regional importance in the lists of the Departme of Agriculture and Fisheries, Fisheries Division, (Inland) * because of its stocks of char, a relict species from glacial times.

Threats to Area

None likely

Recommendations

Development plans affecting the lough should take account of its scientific value.

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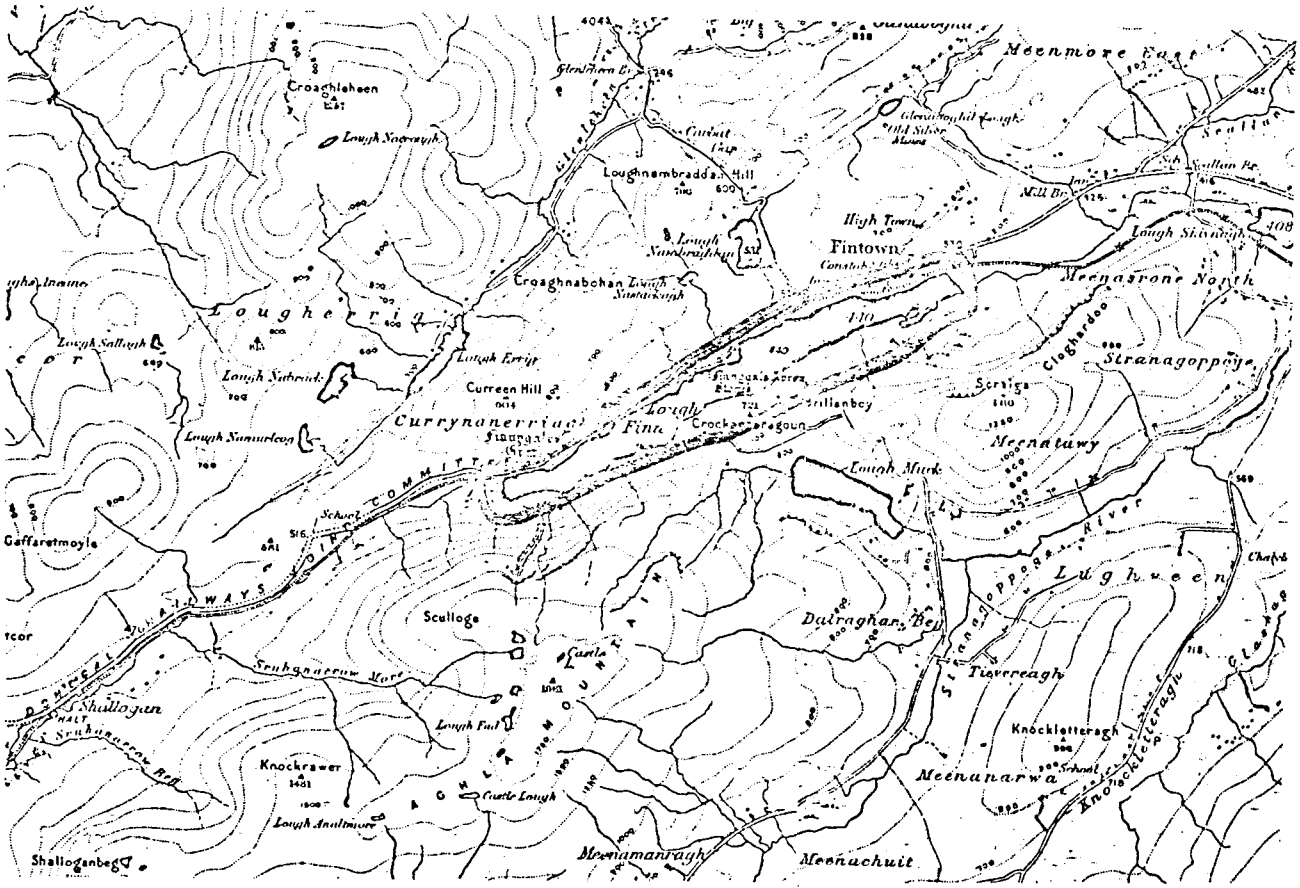
* op. cit.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —38

Scale : 1 inch to 1 mile



Name of Area	KINDRUM LOUGH
Acreage	c. 190 acres
Grid Reference	C. 18, 42.
Scientific Interest	Ecological, zoological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 39.

This is a shallow, acid, lowland lake with a stock of char. There is a partial fringe of reedswamp, Phragmites communis, best developed in the bays and in some places the stumps of ancient forest trees can be seen in the water.

Evaluation

As for Lough Finn (p. 76)

Threats to Area

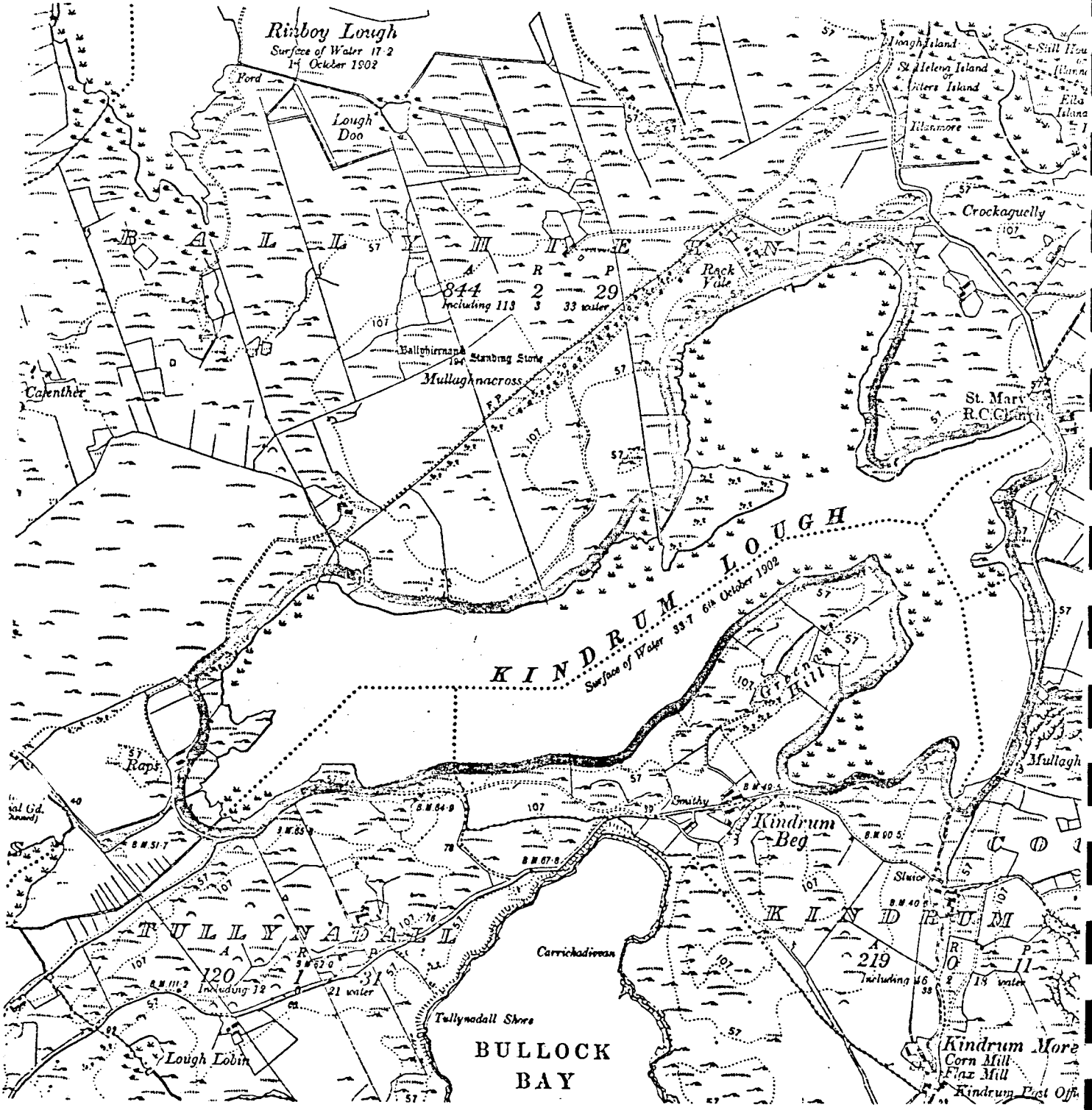
None likely

Recommendations

Development plans affecting the lough should take account of its scientific value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST – 39

Scale: 6 Inches to 1 Mile



Name of Area	LOUGH FAD - W
Acreage	c. 110 acres
Grid Reference	C. 39, 42.
Scientific Interest	Ecological, zoological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 40.

This is a barren, acid, mountain lake surrounded by bog. It holds a stock of char.

Evaluation

As for Lough Finn (p. 76)

Threats to Area

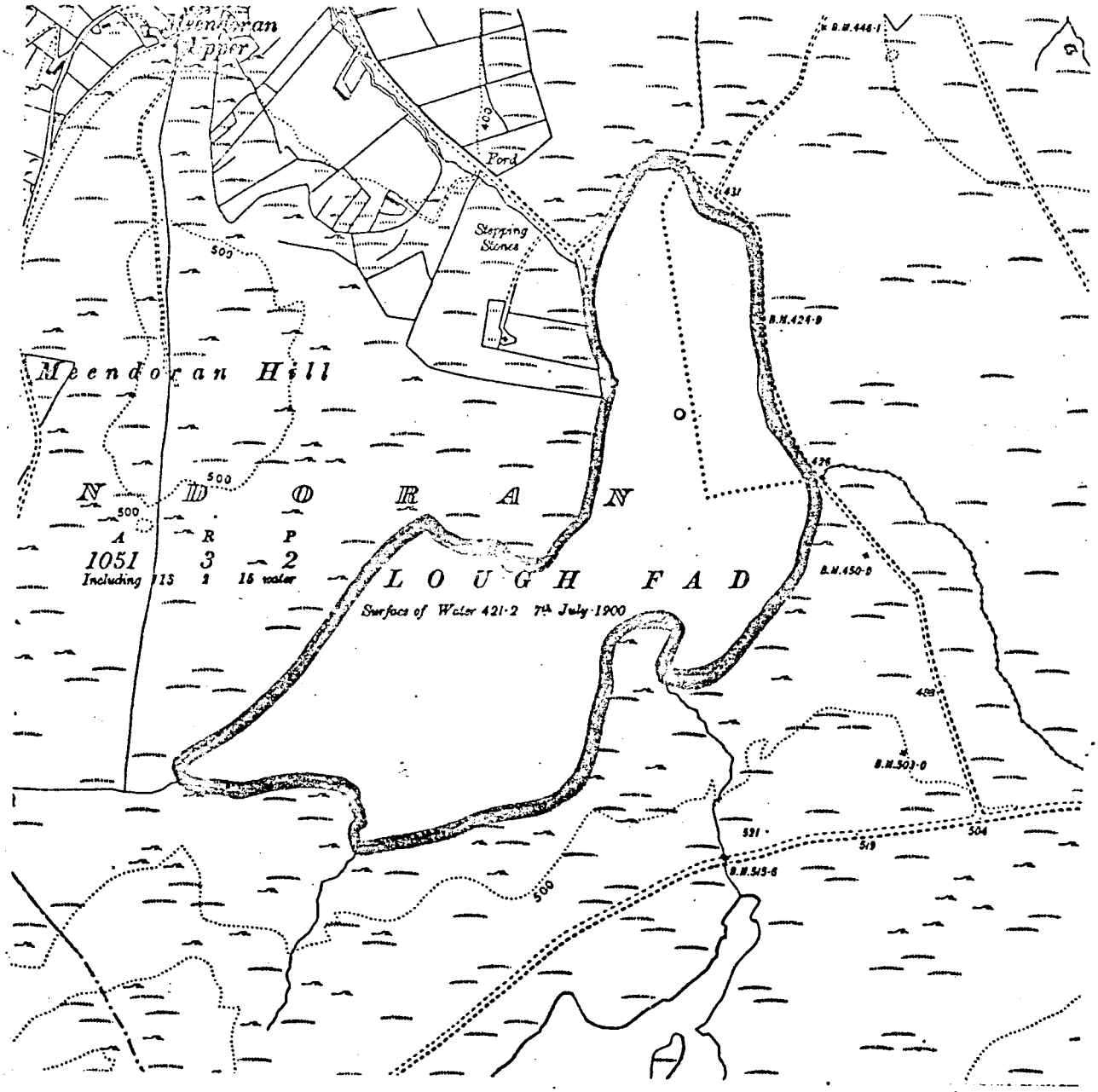
None likely

Recommendations

Development plans affecting the lough should take account of its scientific value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 40

Scale: 6 Inches to 1 Mile



Name of Area	LOUGH FAD - E
Acreage	c. 35 acres
Grid Reference	C. 54, 39.
Scientific Interest	Ecological; zoological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest if shown on Map 41.

This is another barren, acid, mountain lake surrounded by bog. It also holds a stock of char.

Evaluation

As for Lough Finn (p. 76)

Threats to Area

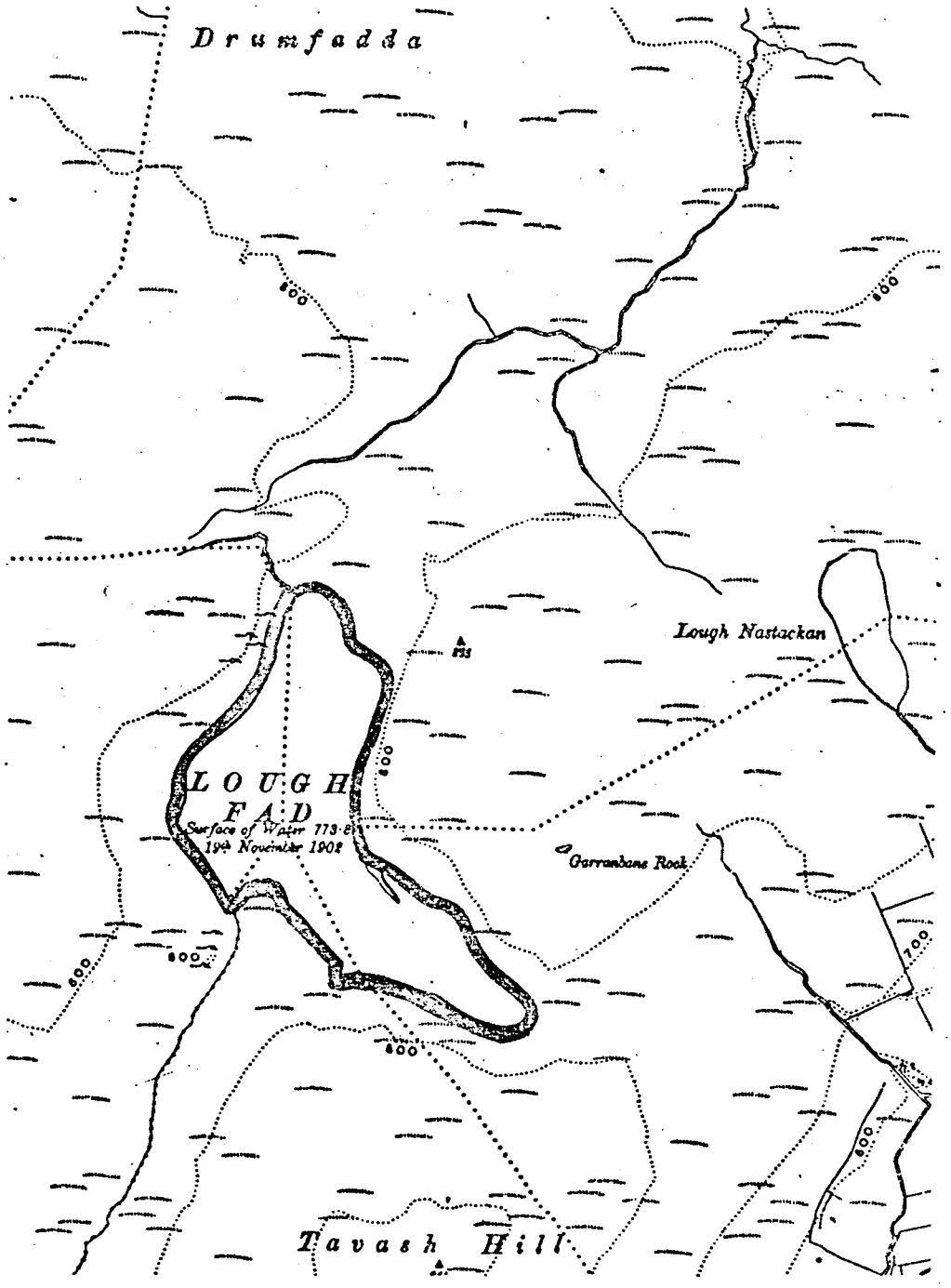
None likely

Recommendations

Development plans affecting the lough should take account of its scientific value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 41

Scale: 6 Inches to 1 Mile



Name of Area	LOUGH ANANIMA
Acreage	c. 65 acres
Grid Reference	G. 79, 94.
Scientific Interest	Ecological
Rating	Regional Importance
Priority	B

Description of Area

The area of interest is shown on Map 42.

This is a shallow lake, with an average depth of 10 feet, surrounded by bog. It has an exceptionally low mineral content with calcium present as a 'trace' only, less than 1ppm.

In the 1950's experimental fertilisation of the lake waters was carried out and studies made of the effects on the growth of the resident brown trout population. Details of this work is contained in :-

'Fertilisation of some acid or bog lakes in Ireland'.
Twomey E. 1956. Report on Sea and Inland Fisheries, 1956.

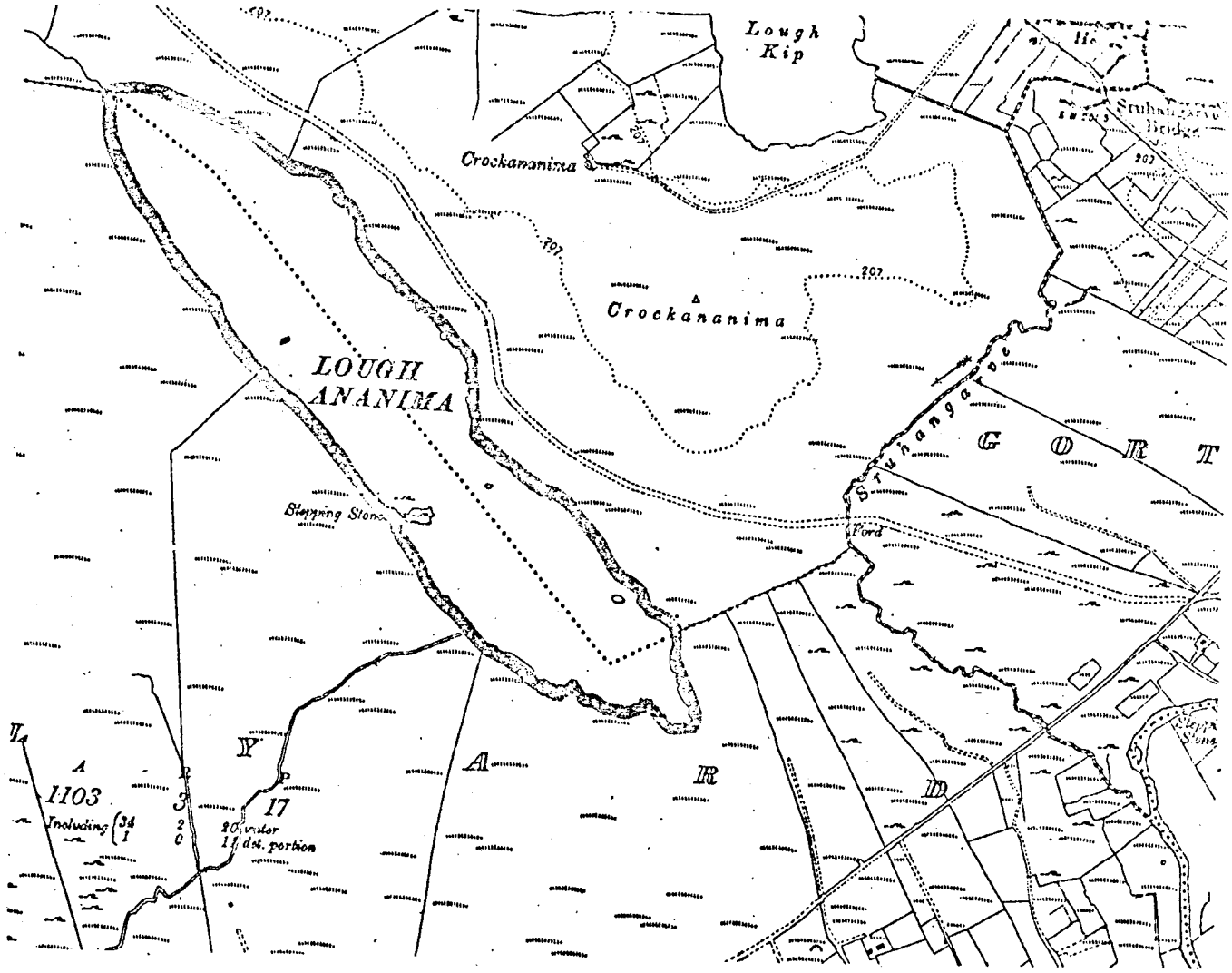
Evaluation

This lough was classified as of regional importance in the lists of the Department of Agriculture and Fisheries, Fisheries Division (Inland)* because of the research work that has been carried out on it (Twomey E. 1956 see above).

All waters which have been the subject of scientific papers were similarly classified, on the basis that they are of interest in having had some information recorded at a particular time on their fauna or chemistry. This knowledge allows comparisons to be made by future workers and encourages further research on them, as workers will be inclined to study them further as opposed to starting new studies in completely unknown territory. Obviously if valid comparative studies are to be made from time to time it is important that such lakes are interferred with as little as possible.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —42

Scale: 6 Inches to 1 Mile



Threats to Area

The chemical characters of the waters of the lough could be radically altered by a relatively small influx of nutrients in the form of sewage.

Recommendations

Any form of sewage disposal into the lough should be prevented.

Name of Area	LOUGH DERG
Acreage	c. 2,100 acres
Grid Reference	H. 0,7.
Scientific Interest	Ecological, zoological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 43.

A large, acid, mountain lake, surrounded by bog and forestry plantations. It holds a stock of char.

Evaluation

As for Lough Finn (p.76)

Threats to Area

None likely

Recommendations

Any development plans affecting the lough should take account of its scientifi value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —43

Scale : 1 inch to 1 mile

Name of Area	LOUGH ESKE
Acreage	c. 1,800 acres
Grid Reference	G. 9,8.
Scientific Interest	Ecological, zoological, botanical
Rating	Regional Importance
Priority	B

Description of Area

The area of interest on shown on Map 44.

The lough holds exceptionally large stocks of char and is the only lake in Ireland where this fish occurs in large quantities.

Several rare Irish plants have been recorded around the margins of the lake. These include greater spearwort, Ranunculus lingua, waterwort, Elatine hexandra and whorled caraway, Carum verticillatum, though only the latter has been seen in recent years. (See figs. 15, 16 and 17).

Evaluation

The lough was classified as of regional importance in the lists of the Departmen of Agriculture and Fisheries, Fisheries Division (Inland)* because of its stock of char. The botanical interest of the area strengthens the case for such a rating.

The area does, of course, have great amenity value because of its great scenic beauty and proximity to Donegal town, Stranorlar and Ballybofey.

Threats to Area

Uncontrolled development around the lough could threaten both scientific

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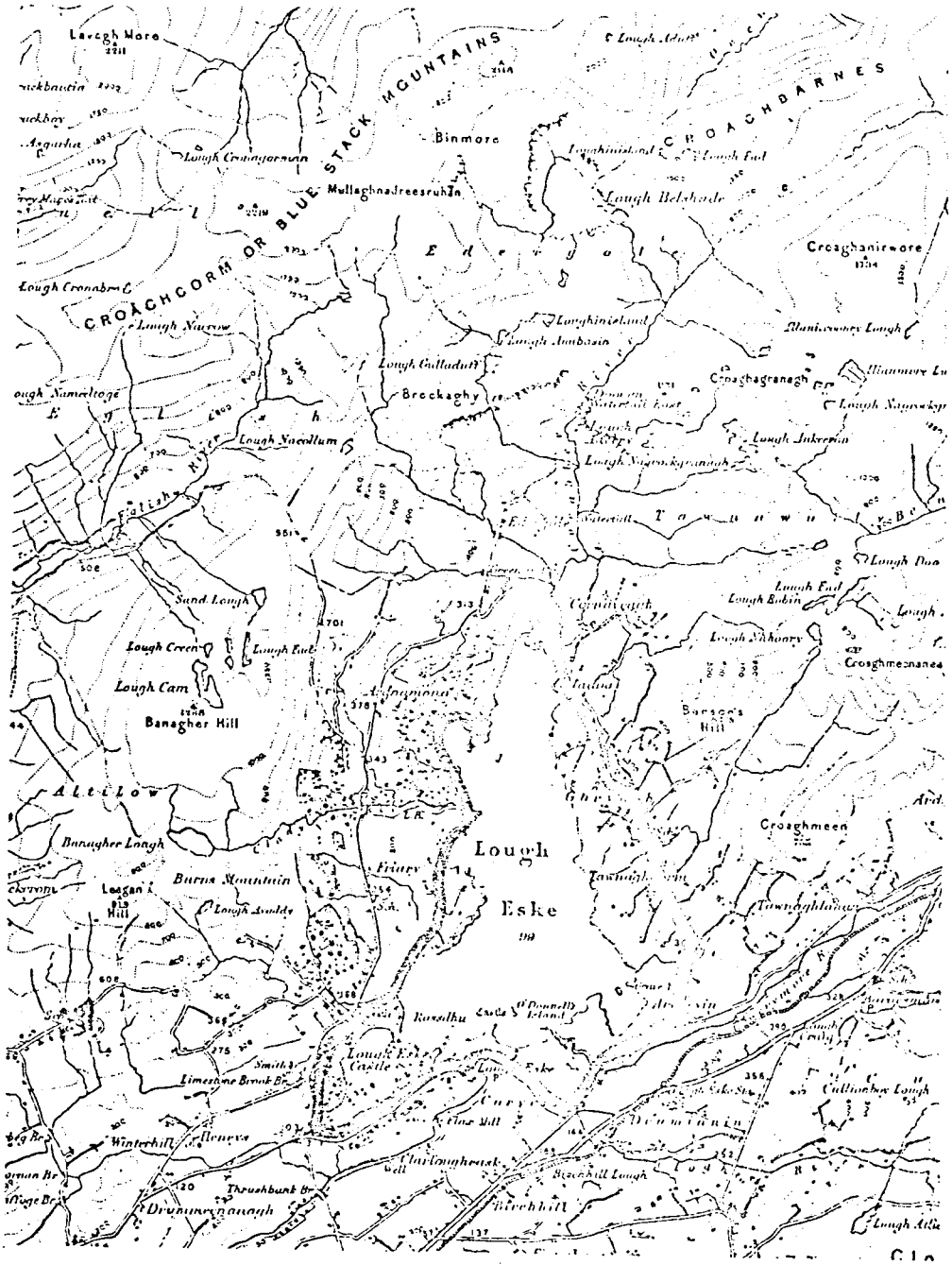
* op. cit.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —44

Scale : 1 inch to 1 mile



and amenity values. The recently produced development plan for the Lough Eske area* outlines adequate controls to prevent such undesirable development.

Recommendations

The basic conservation proposals made in the recent development plan should be adhered to, though variations in detail may, of course, be necessary.

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* Eske and Gartan Loughs. Plans for development and conservation. Dartington Amenity Research Trust, 1972.

Name of Area	WEST OF ARDARA - MAAS ROAD
Acreage	c. 3,600 acres
Grid Reference	G. 6/7; 9.
Scientific Interest	Ecological, botanical, ornithological.
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 45.

The whole of this broad, low-lying peninsula has been treated as a single area of scientific interest because of the large number of small areas of scientific interest contained within it.

Though the entire area is of general ecological interest, points of particular note are:-

1) There are some fine examples of oceanic heath by the Rossbeg-Portnoo road and the lakes alongside this road hold some interesting aquatic plants, particularly the pipe-wort, Eriocaulon septangulare. This plant is rare in Ireland and Britain (see fig. 18) and probably endemic, though a closely similar plant is widespread in N. America.

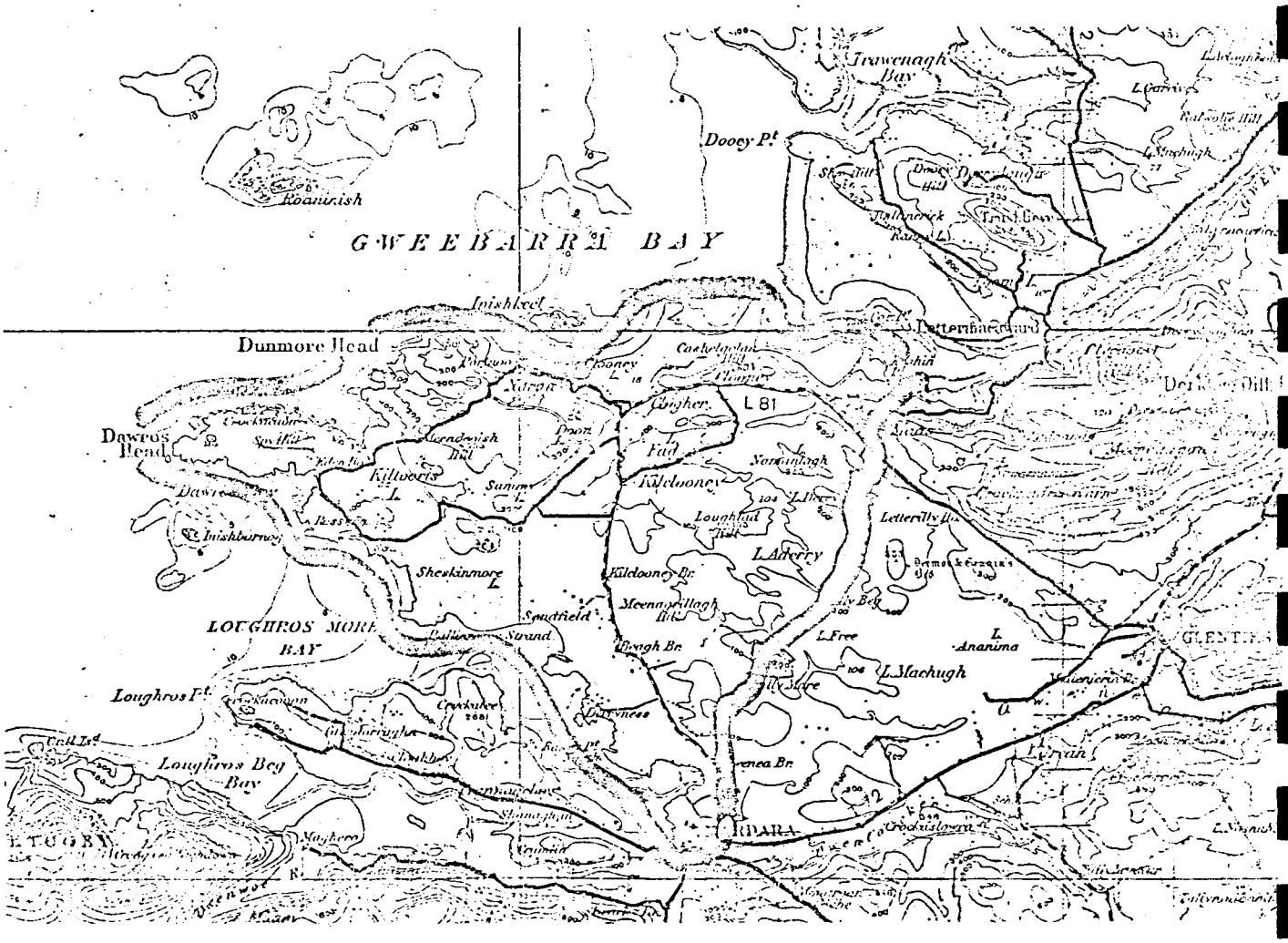
2) One of the lakes in the north of the area is one of a very few Irish breeding sites for a rare waterbird.

3) Sheskinmore lough, it's surrounding wetlands, and the nearby dunes, are of ecological and some ornithological interest.

4) Dawros Head has some interesting plant communities in an area of marsh and fen once occupied by a lake. When this area was visited in October, '72, the rare lesser reedmace, Typha angustifolia was found here, a plant not seen in Co. Donegal for many years (see fig. 19). There was also an abundance of the widespread but uncommon floating scirpus, Eleogiton fluitans (see fig. 20)..

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 45

Scale : ½ inch to 1 mile



Evaluation

The large number of sites of scientific interest in this area, several of which could be rated as of regional interest in their own right, has resulted in the whole area being classified as one of regional interest.

Threats to Area

Many of the small areas of interest could be physically damaged by buiding etc. and the lakes could be seriously affected by sewage disposal.

Recommendations

Development within this area should be carefully controlled. It should seldom be necessary to prohibit a proposed development from the whole area, but certain parts of the area may be unsuitable for any particular development.

The Conservation and Amenity Advisory Service, An Foras Forbartha, could advise on specific cases.

Name of Area	GARTAN LOUGH AND LOUGH AKIBBON
Acreage	c. 1,100 acres
Grid Reference	C. ~~9,1~~ [illegible]
Scientific Interest	Botanical, ecological
Rating	Regional Importance
Priority	B

Description of Area

The area of interest, is shown on Map 46.

This is the Irish headquarters of two northern plants, globe flower, Trollius europaeus, and bird-cherry, Prunus padus. Both occur on the stony lake-shores, whilst Prunus is also in the areas of scrub east of lough Akibbon. (See figs. 21&22). Another plant of interest in the area is reddish pond-weed, Potamogeton alpinus, recorded in the river between the loughs. (See fig 23)

The loughs themselves are fine examples of large, oligotrophic lakes, and their extensive rocky shores are excellent collecting areas for one in search of their typical benthic fauna.

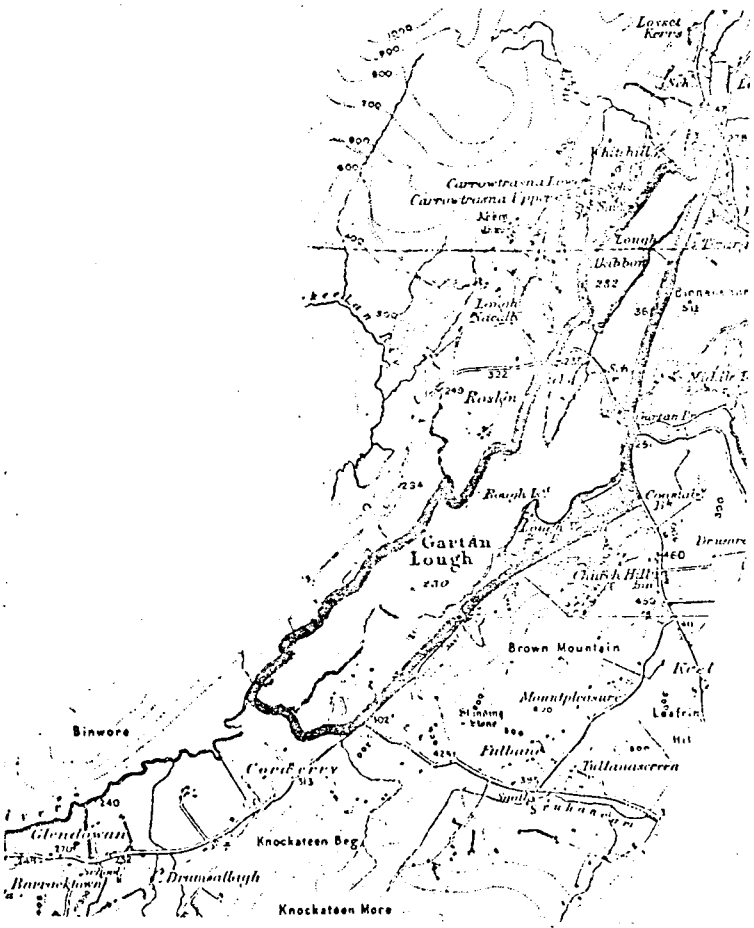
Evaluation

The botanical interest of the area is sufficient to justify its classification as regionally important. Recent proposals to establish a Field Centre on the shores of Lough Gartan increase the scientific importance of the lakes and their surrounds.

The area also has great amenity value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 46

Scale : 1 inch to 1 mile



Threats to Area

Uncontrolled development around the lake could be detrimental to both the amenity and scientific values of this area. The recently produced development plan for the Gartan area* outlines adequate controls to prevent such undesirable development.

Recommendations

The basic conservation proposals made in the recent development plan should be adhered to, though variations in detail may, of course, be necessary.

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* Eske and Gartan Loughs. Plans for development and conservation. Dartington Amenity Research Trust. 1972.

Name of Area	MURVAGH LOWER
Acreage	c. 780 acres
Grid Reference	G. 89, 73.
Scientific Interest	Ecological, botanical.
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 47.

This is a broad, sand spit with dunes over its western half and low-lying grassland grading into saltmarsh on the east side. The west side of the spit now appears to be being eroded slightly by the sea, a low cliff having been cut into the face of the foredunes.

The southern part of the spit has recently been planted with conifers.

Evaluation

The wide variety of habitats in this area and interest both in the performance of the conifers on the dunes and in their effects on the dune soils and plant and animal communities, result in this area being classified as one of regional importance.

Threats to Area

Recreational pressure could result in dune erosion. This is more likely since access to the area was recently improved by the construction of a tarred road and carpark, in the vicinity of which erosion is most likely. No other threats to the area appear likely.

Recommendation

A watch should be kept for signs of dune erosion in the vicinity of the carpark. Necessary control measures could then be taken to prevent further damage to the dunes.

Name of Area	CARNDONAGH WOOD
Acreage	c. 30 acres
Grid Reference	C. 45, 45.
Scientific Interest	Ecological
Rating	Regional Importance
Priority	B

Description of Area

The area of interest is shown on Map 49.

This is an old oakwood dominated by Quercus petraea, with some birch, Betula pubescens, and an occassional rowan, Sorbus aucuparia, also in the high canopy. Rowan, hazel, Corylus avellana, willow, Salix sp., and holly, Ilex aquifolium, form the understorey and greater woodrush, Luzula sylvatica, and bilberry, Vaccinium myrtillus, are abundant in the ground zone vegetation.

Evaluation (see p. 8)

This fine stand of old oakwood, although probably much modified by man in the past, is now in a more or less natural condition. It is thus classified as an area of regional importance.

Threats to Area

Total or partial clearance is the most likely threat.

Recommendations

This area should be protected by a Tree Preservation Order under Section 45, Local Government (Planning and Development) Act, 1963. This order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

The patch of scrub already referred to is dominated by hazel but also contains birch, willow, Salix sp. and ash, Fraxinus excelsior.

Evaluation (see p. 8)

This is the best grown oakwood in the county, the only comparable areas being the oak-dominated parts of Ardnamona wood (see p. 49). It is little known however and details of its flora and fauna are not available.

The area is thus certainly of regional importance and it is possible that its classification as an area of national importance could be justified.

Threats to Area

Total or partial clearance is the most likely threat.

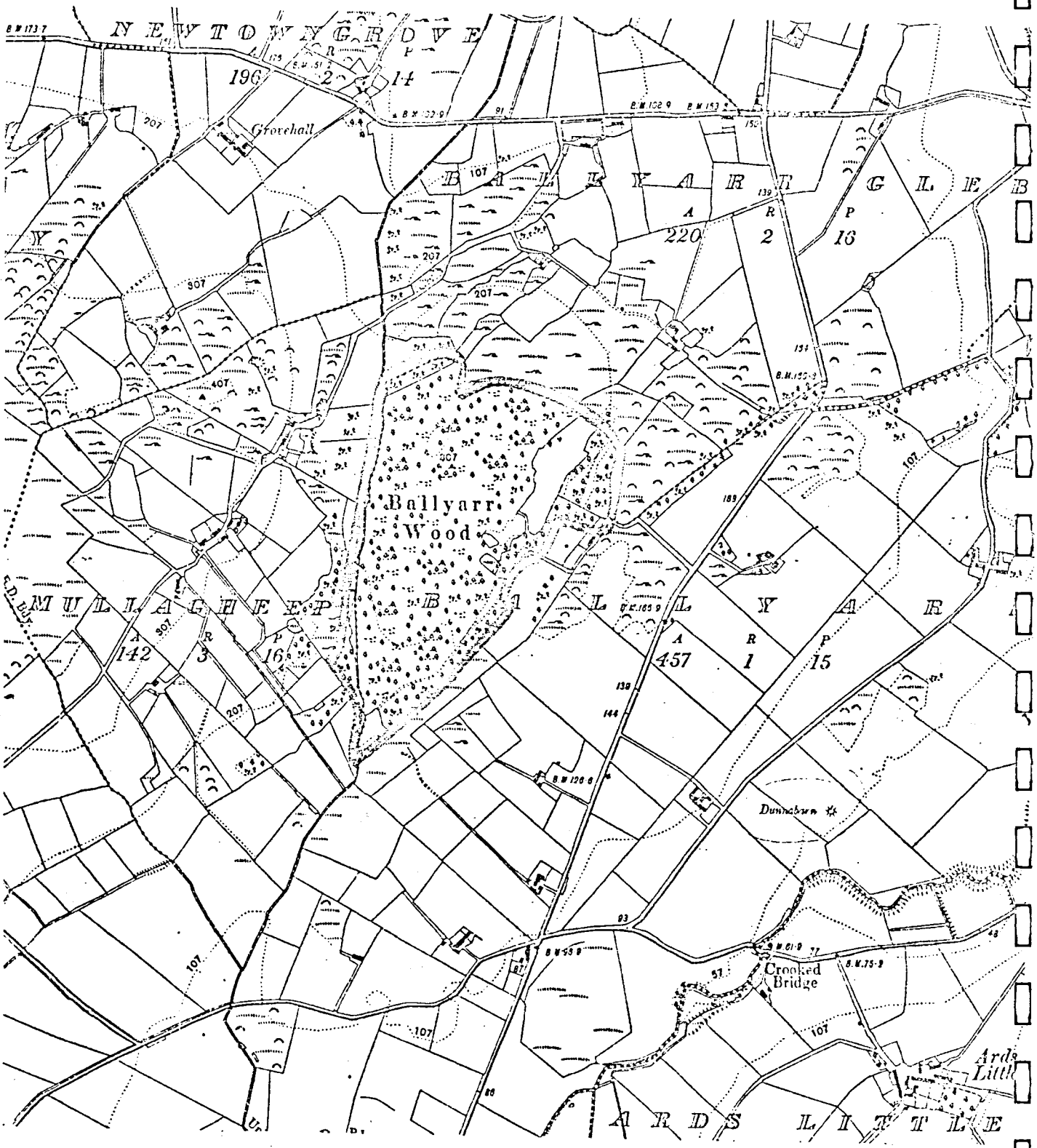
Recommendations

This area should be protected by a Tree Preservation Order under Section 45, Local Government (Planning & Development) Act, 1963.

This order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 48

Scale: 6 Inches to 1 Mile



Name of Area	BALLYARR WOOD
Acreage	c. 55 acres
Grid Reference	C. 18, 20.
Scientific Interest	Ecological
Rating	Regional Importance
Priority	B

Description of Area

The area of interest is shown on Map 48.

With the exception of the small isolated patch of hazel scrub in the east, this area is a fine mature oakwood. The high canopy is formed of old, well-grown oaks, Quercus petraea, with occassional birches, Betula pubescens, and rowans, Sorbus aucuparia, and there is a well-developed understorey of hazel, Corylus avellana, blackthorn, Prunus spinosa, and holly, Ilex aquifolium. Important plants of the ground zone are:-

Luzula sylvatica	greater woodrush	c, la
Vaccinium myrtillus	bilberry	c, la
Blechnum spicant	hard fern	c
Dryopteris aemula	hay-scented buckler fern	f
Lonicera periclymenum	honey scukle	f
Rubus fruticosus	bramble	f
Succissa pratensis	devil's bit scabious	f
Dryopteris dilatata	broad buckler-fern	o
Hedera helix	ivy	o
Oxalis acetosella	wood sorrel	o
Potentilla erecta	common tormentil	o
Pteridium aquilinum	bracken	o

Within the wood there is evidence of its regeneration in the form of seedling and saplings of the oak. Seedlings of rowan, holly and hazel were also seen.

Carradoan Woods

Threats to the Area

Total or partial clearance of scrub or, more particularly, mature woodland in the area would reduce its ecological interest.

Recommendation

Ideally, this whole area should be covered by a Tree Preservation Order, under Section 45, Local Govemment (Planning and Development) Act, 1963. Failing this, Back Wood should certainly be protected by such an Order.

Either Order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

Name of Area	CARRADOAN WOODS
Acreage	c. 480 acres
Grid Reference	C. 28, 30
Scientific Interest	Ecological; botanical
Rating	Regional Importance
Priority	B

Description of Area

The area of interest is shown within the dotted line on Map 50. It is a complex of rough pasture, birch scrub developing towards oak woodland, and established oakwoods.

The oldest and most interesting patch of oakwood is Back Wood, shown inside the thick black line on Map 50. The oaks, Quercus petraea, are small and gnarled and the canopy is rather open. Birch, Betula pubescens, holly, Ilex aquifolium, hazel, Corylus avellana, hawthorn, Crataegus monogyna, and blackthorn, Prunus spinosa, were noted growing amongst the oak on the dryer slopes, whilst in wetter places, alder, Alnus glutinosa and willows, Salix sp. occur. The other mature woods in the area, at its eastern end, are also dominated by oak, but here there is a well-developed hazel understorey and patches of hazel scrub in places.

When the area was visited in October, 1972, the yellow bartsia, Parentucellia viscosa, was seen growing in pasture in the east of the area. This species has not previously been recorded in Donegal west of Lough Swilly and is very local in Ireland and Britain as a whole. (See Fig. 23).

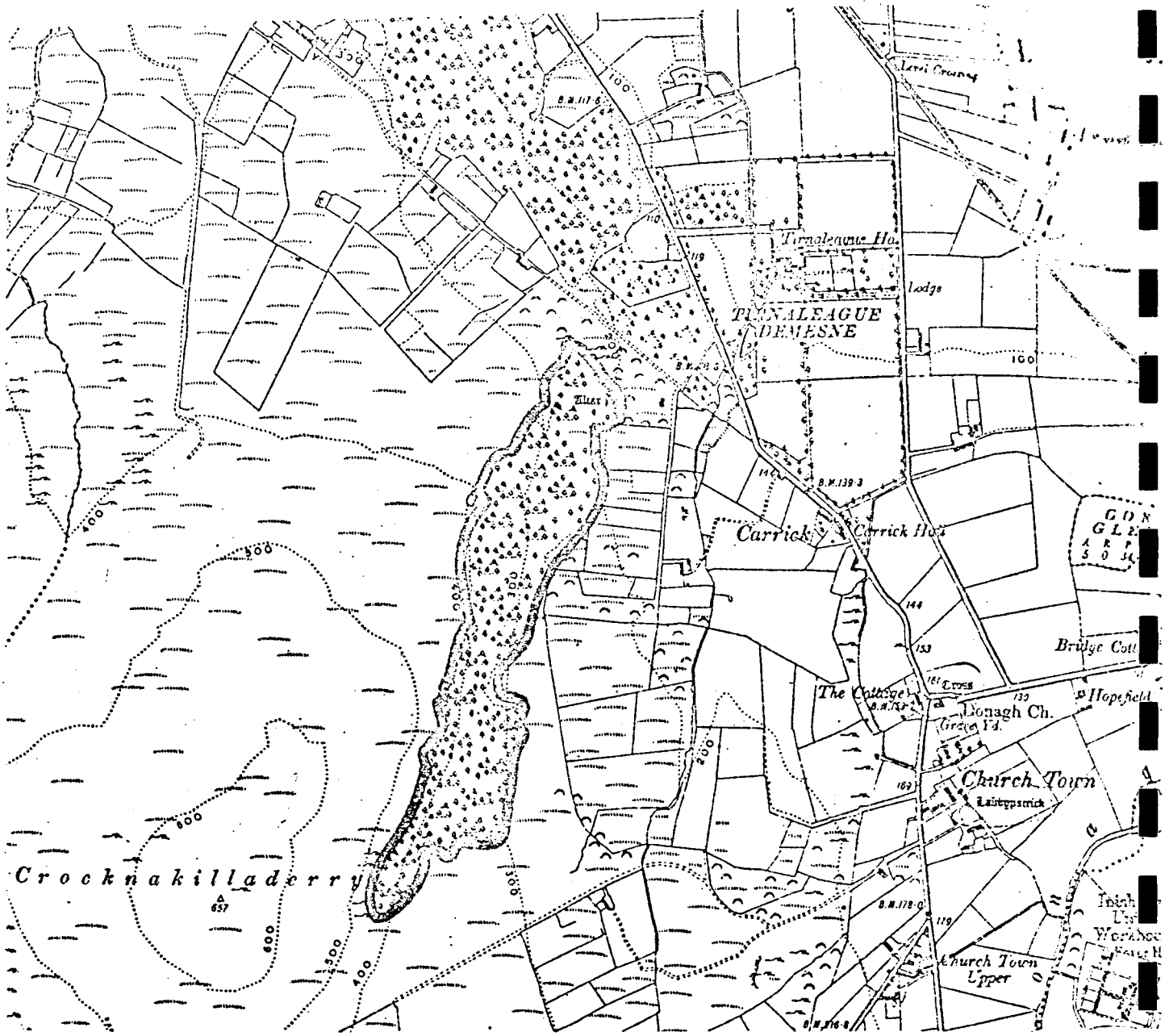
Evaluation (See p. 8)

This whole area is of ecological importance because, in addition to its mature oak woodland, part of which (Back Wood) is very old, it contains a variety of stages in the succession from open pasture, through birch scrub, to oakwood.

The occurrence of Parentucellia viscosa increases the interest of the area.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —49

Scale: 6 Inches to 1 Mile



Name of Area	CREESLOUGH WOOD
Acreage	c. 45 acres
Grid Reference	C. 06, 30
Scientific Interest	Ecological
Rating	Regional Importance
Priority	B

Description of Area

The area of interest is shown on Map 51.

Most of this woodland is dominated by birch, Betula pubescens, but a variety of other deciduous trees and shrubs occur, several of which are dominant over small areas. During a brief visit ash, Fraxinus excelsior, alder, Alnus glutinosa, blackthorn, Prunus spinosa, hazel, Corylus avellana, holly, Ilex aquifolium, oak, Quercus sp, and rowan, Sorbus aucuparia, were all noted in the wood.

On Map 51, taken from the O.S. 6" map revised in 1902-3, this wood is shown as consisting of a mixture of deciduous and coniferous trees. The wood is now therefore clearly secondary in nature, the result of recolonisation by deciduous species after clearance.

An interesting feature of the wood is its rich bird life, unusual in County Donegal. Chaffinches are common, as are blue and great tits, whilst robins, wrens and goldcrests can also be easily seen. The abundance of small birds here is probably a result of the woods east of Duntally Bridge being dominated by beech, a producer of abundant food in the form of its nuts.

Evaluation (see p. 8)

The secondary nature of the wood and its ornithological richness result in this area being classified as one of regional importance.

Threats to the Area

Total or partial clearance is the most likely threat.

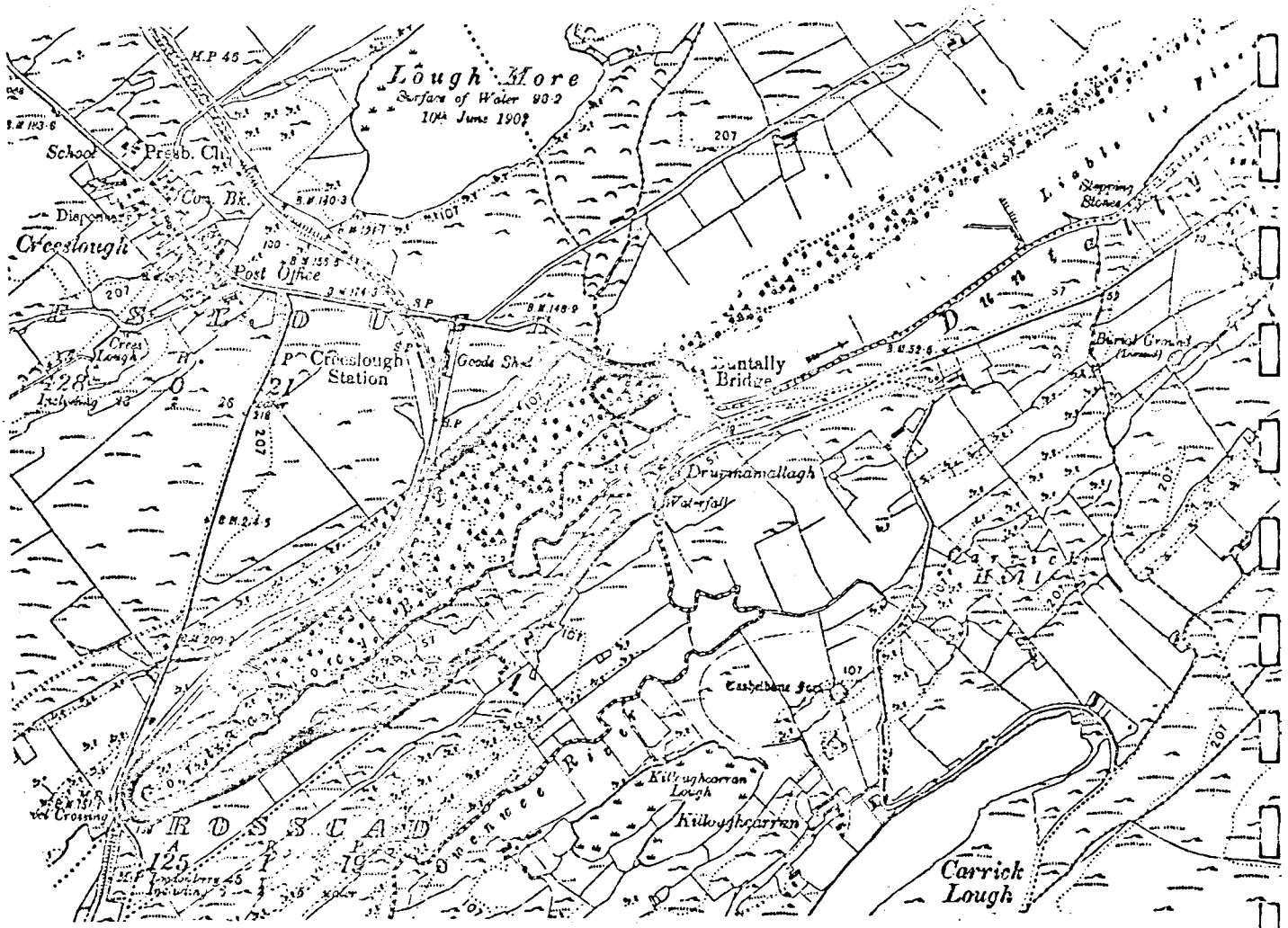
Recommendation

This area should be protected by a Tree Preservation Order under Section 45, Local Government (Planning and Development) Act, 1963.

This Order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —51

Scale: 6 Inches to 1 Mile



Name of Area	SLIEVE SNAGHT
Acreage	c. 2,000 acres
Grid Reference	B. 92, 15
Scientific Interest	Botanical; ecological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 52. The boundaries of this area are somewhat arbitrary as records of the rare plants of the area (see below) are rather vague as to their exact places of occurrence.

This is an area of blanket bog, containing several high level lakes, whose interest lies mainly in the rare plants that have been recorded growing on the crags and in the gullies*, viz. brittle bladder fern, Cystopteris fragilis, alpine clubmoss, Lycopodium alpinum, purple saxifrage, Saxifraga oppositifolia, stiff sedge, Carex bigelowii, alpine saussurea, Saussurea alpina and mountain sorrel, Oxyria digyna. (See Figs. 24 - 29). Several of these plants have not been seen for many years and a re-investigation of the flora of the area is needed.

Evaluation

The interesting flora of this area results in its classification as an area of regional importance.

Threats to the Area

None likely.

Recommendation

Development plans affecting this area should take account of its scientific interest.

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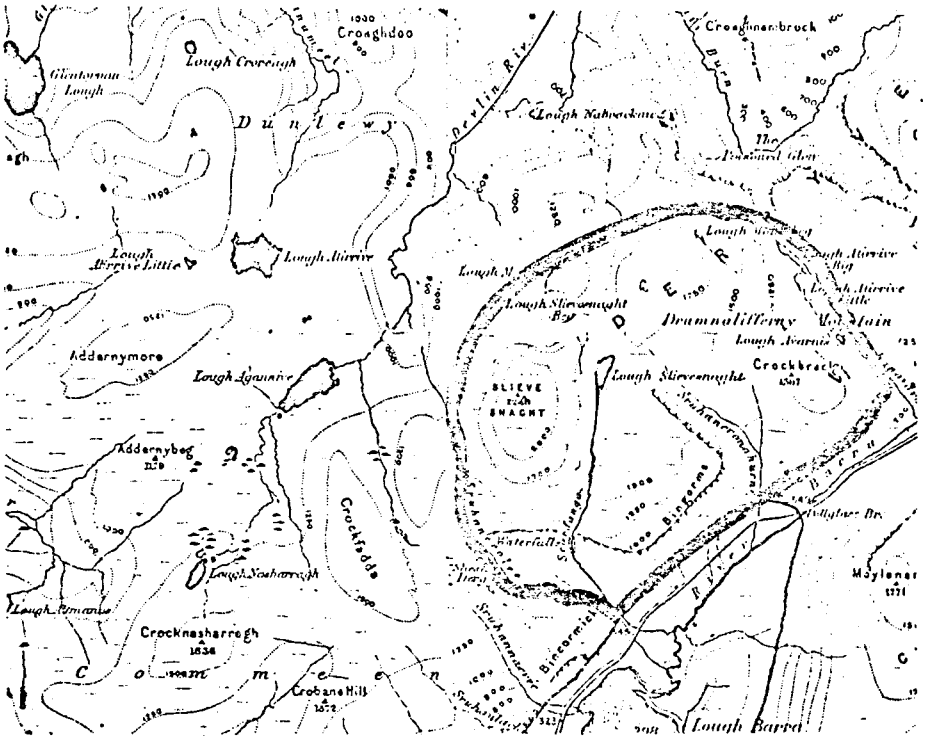
* Hart, H.C. Flora of County Donegal. 1898.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —52

Scale : 1 inch to 1 mile



Name of Area	INISHDUFF
Acreage	c. 5 acres plus intertidal rocks
Grid Reference	G. 647, 723
Scientific Interest	Ornithological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 53.

This is a small rocky, grass-covered island (about 300 metres long by 100 metres across and no higher than 15 metres) on which there is an unusually high concentration of breeding birds of several species. Although there exists close on 30 miles of suitable coastline on either side of the island, storm petrels, shags, great black-backed gulls, herring gulls, eider duck and black guillemots have chosen the island as their breeding headquarters. Predators, including man, are most likely the cause of this breeding concentration. Barnacle geese also graze on the island in some years.

Evaluation

The concentration of breeding birds on the island results in its classification as an area of local ornithological importance.

Threats to the Area

Human disturbance of breeding populations appears to be the only likely threat.

Recommendation

Development plans affecting the island should take account of its ornithologic interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —53

Scale : 1 inch to 1 mile

Name of Area	INISHBARNOG
Acreage	c. 12 acres plus intertidal rocks
Grid Reference	G. 640, 962
Scientific Interest	Ornithological
Rating	Local Importance
Priority	B

Description of Area

This is a low-lying, grassy island surrounded by intertidal rocks. Its position is shown on Map 54.

The island has a large breeding colony of eider duck and a small tern colony which struggles along from year to year.

Evaluation

The breeding colonies of eider duck and terns result in the island being of local ornithological importance.

Threats to the Area

The island is easily accessible by boat from Rossbeg and Portnoo and, as with Roaninish (p. 65), the main threat to the area is from egg collectors and disturbance of the breeding birds by day visitors.

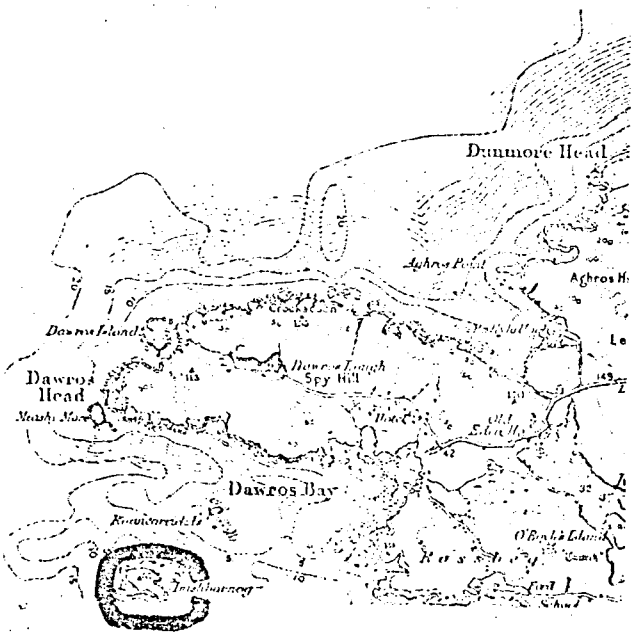
Recommendation

Access to the island should be strictly controlled during the breeding season, i.e. May, June and July.

Protection could be conferred by a Conservation Order under Section 45, Local Government (Planning and Development) Act, 1963. The Order could be drawn up in draft form by the Conservation and Amenity Advisory Service, An Foras Forbartha.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —54

Scale : 1 inch to 1 mile



Name of Area	INISHKEEL
Acreage	c. 80 acres
Grid Reference	B. 707, 001
Scientific Interest	Ornithological
Rating	Local Importance
Priority	C

Description of Area

The area of interest, a low-lying, more or less flat, grassy island, very close to the mainland, is shown on Map 55. It holds large breeding colonies of a variety of seabirds.

Evaluation

The concentration of breeding seabirds here results in the island being of local ornithological importance.

Threats to the Area

Disturbance of the breeding colonies appears to be the main danger, particularly in view of the accessibility of the island.

Recommendations

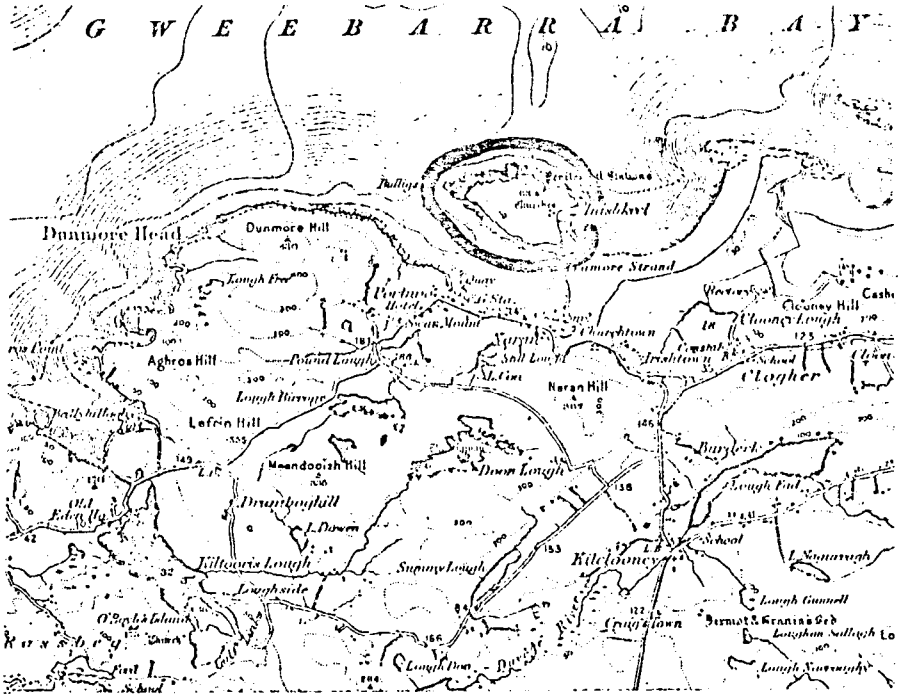
Development plans affecting the island should take account of its ornithological interest.

Access to the island should be controlled during the breeding season, i.e. May, June and July.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —55

Scale : 1 inch to 1 mile

N



Name of Area	TORMORE ISLAND AND THE NEIGHBOURING CLIFFS
Acreage	c. 140 acres, almost entirely cliffs
Grid Reference	G. 55, 90
Scientific Interest	Ornithological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 56.

There are large breeding colonies of seabirds on the island and on the extensive mainland cliffs nearby.

Evaluation

The large numbers of breeding seabirds result in this area being of local ornithological importance.

Threats to the Area

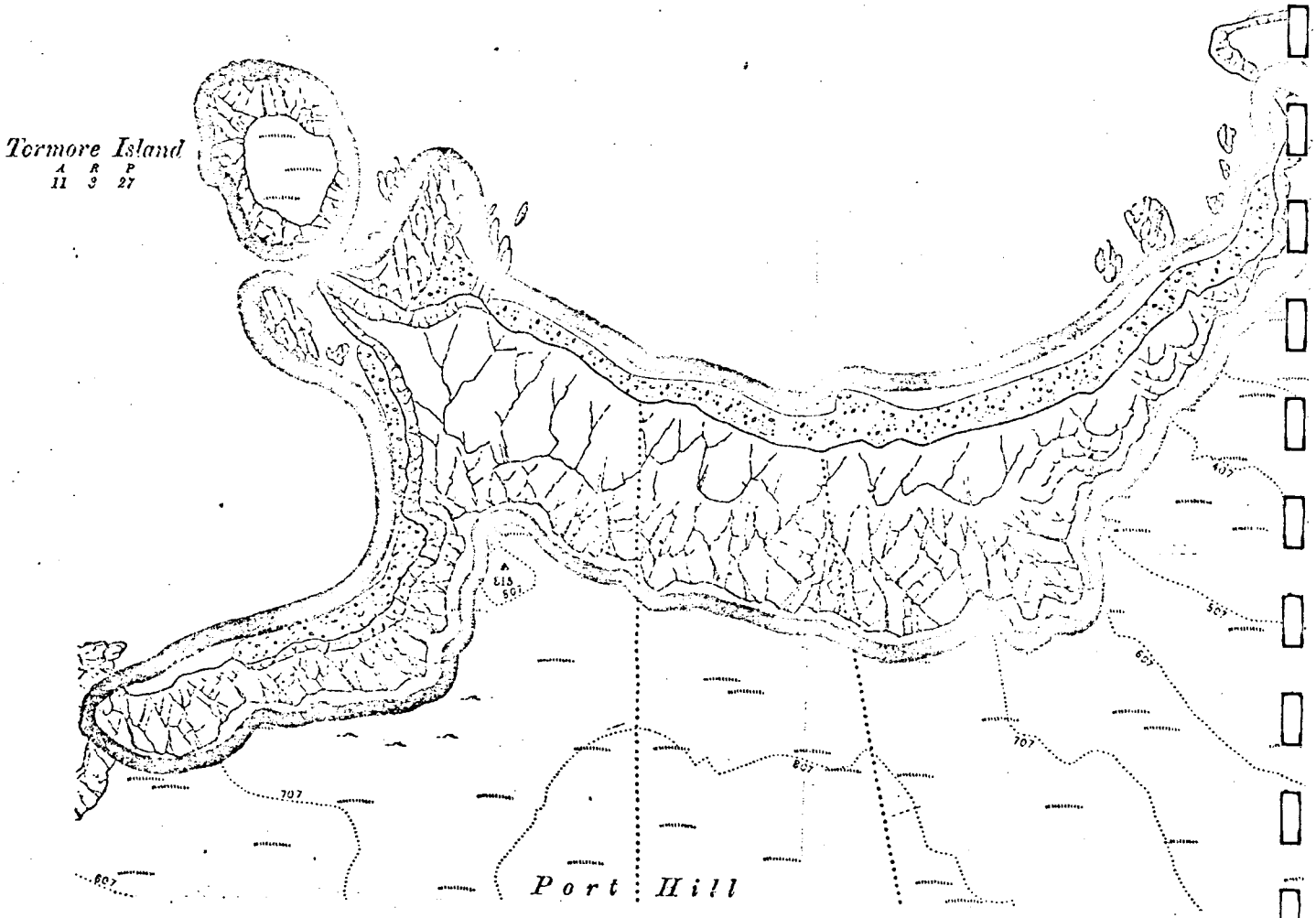
None likely.

Recommendation

Any development plans affecting this area should take account of its ornithological interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 56

Scale: 6 Inches to 1 Mile



Name of Area	BALLYNESS BAY AND DUNES
Acreage	c. 2,300 acres
Grid Reference	B. 9, 3
Scientific Interest	Ornithological; ecological
Rating	Local Importance
Priority	B

Description of Area

The area of interest is shown on Map 57. It includes the attractive, shallow bay, important as an overwintering area for Brent geese and other wildfowl, the Dooey Peninsula and the dune area on the eastern side of the mouth of the bay.

The Dooey Peninsula is covered with sand dunes, which have grown to a considerable height near the tip of the peninsula, where however, erosion of them is now very marked. This dune system and the dunes across the bay are of general ecological interest.

This bay and its environs have great potential as an amenity area with possibilities of sailing from Gortahork and for exploitation of the Dooey Peninsula and its adjacent beaches for walking, bathing and picnicking, etc.

Evaluation

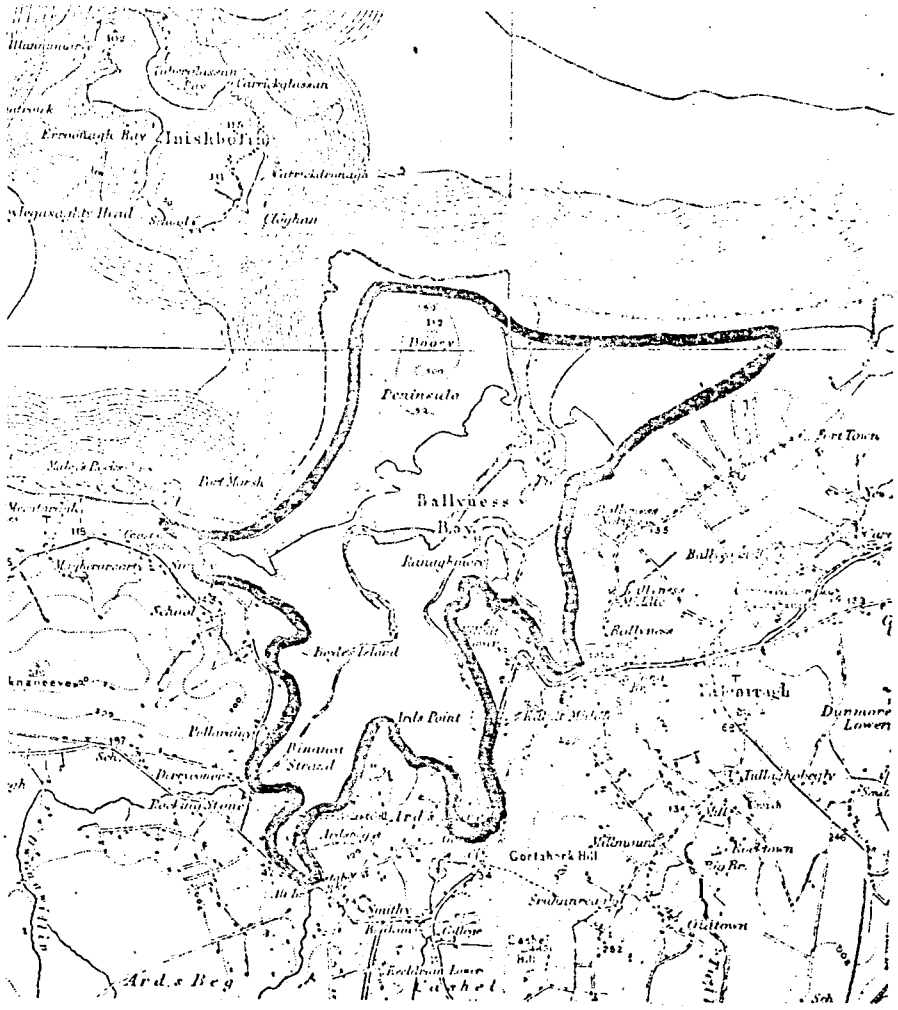
The overwintering brent geese and the general ecological interest of the dunes result in this area being classified as one of local scientific importance.

Threats to the Area

The only imminent threat to the scientific values of this area, and indeed to its amenity values also, seems to be the erosion which is already seriously affecting dunes on the Dooey Peninsula. Further uncontrolled recreational pressure on this dune system will undoubtedly accentuate this problem and

MAP SHOWING AREA OF SCIENTIFIC INTEREST —57

Scale : 1 inch to 1 mile



a management programme for the maintenance of the dune system is a priority, particularly if the proposal to build an access road down to the beach at Mageraroarty is carried through.

Recommendation

Any proposed developments that would be detrimental to the scientific and amenity values of this area should be prevented.

A programme of dune management should be started on the Dooey Peninsula, aimed at checking the dune erosion there. Detailed advice on this matter can be given by the Conservation and Amenity Advisory Service, An Foras Forbartha.

Name of Area	LETTERMACAWARD DUNES
Acreage	.c. 400 acres
Grid Reference	B. 76, 01
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 58. It includes an extensive sand dune system grading into heath at its northern end, and a large area of dune grassland, parts of which have been subjected to drainage and cultivation in the past and part of which is used as a football pitch.

There is some erosion of the high dunes in the south-west part of the dune system and of its northern seaward edge.

Evaluation

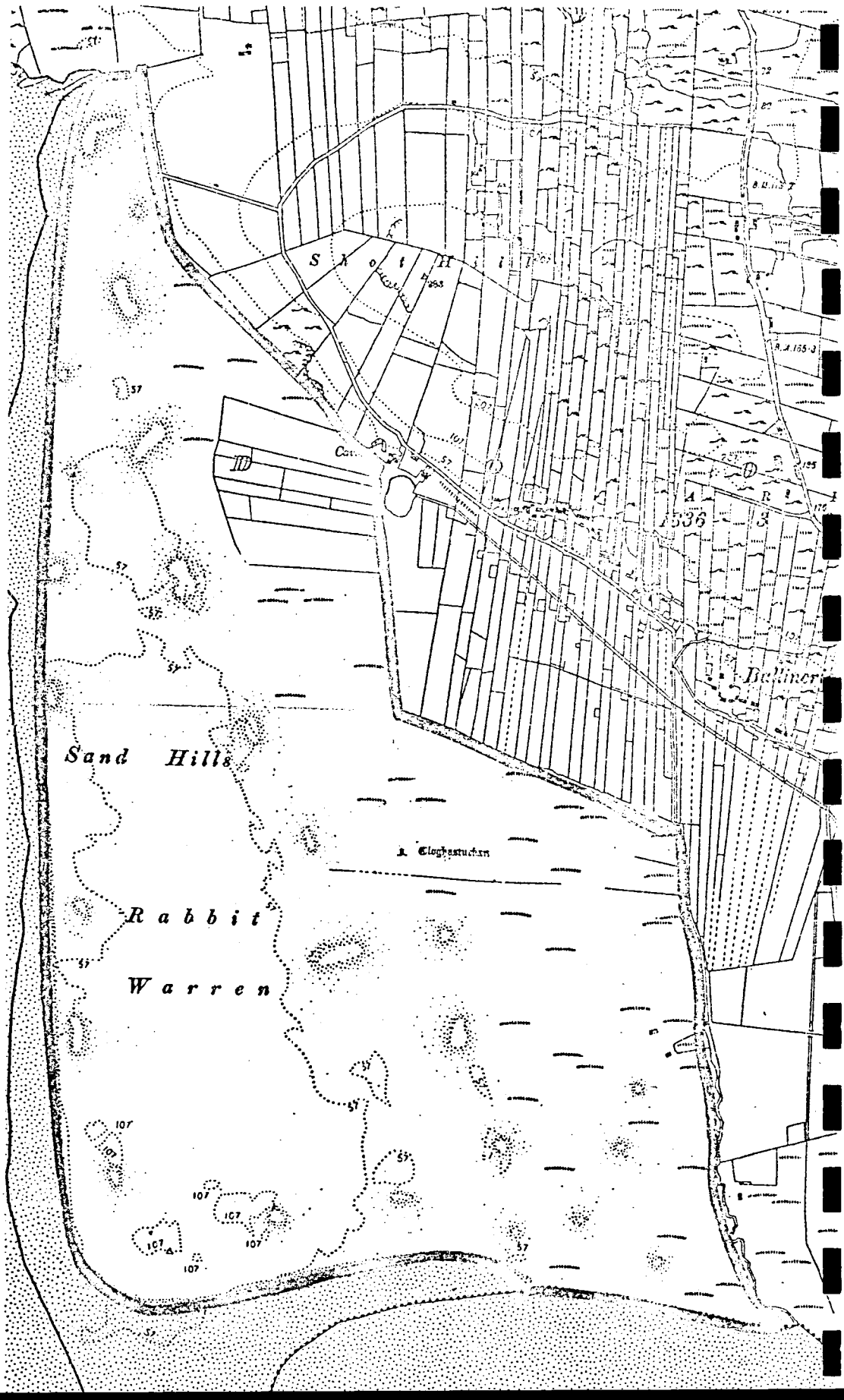
Though the sand dunes are relatively uninteresting, with only typical dune species growing on them, the large area of grassland behind them is of considerable ecological interest. The differing past treatments of certain parts of this makes it an ideal area in which to study the effects of different types of land use on dune grassland. The area has thus been classified as one of local importance.

Threats to the Area

In view of the remoteness of this area it is unlikely that any threat to these grasslands will arise. Proposals for development of a caravan site nearby or actually in the area would be likely to have little effect on the majority of the grassland as any associated recreational pressure would presumably centre on the beach and dunes.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 58

Scale: 6 Inches to 1 Mile



Recommendation

Any development plans affecting this area should take account of its scientific interest.

Name of Area	WOODS IN LEANAN VALLEY
Acreage	Area not strictly delimited
Grid Reference	G. ~~1,1~~ 1319
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The approximate area of interest is enclosed by the dotted line on Map 59. Within this area there are several patches of mature, oak woodland (two of which are indicated by the thick black lines on Map 59) and extensive areas of birch and birch/oak scrub, representing a variety of stages in the seral development of oakwood from open rough land.

The patches of established woodland have not been examined in detail, but they are certainly dominated by oak, Quercus sp, and appear to have a hazel, Corylus avellana, understorey.

Evaluation (see p. 8)

The fact that this area contains several patches of established oakwood and large areas of developing scrub and woodland results in it being classified as of local ecological importance.

Threats to the Area

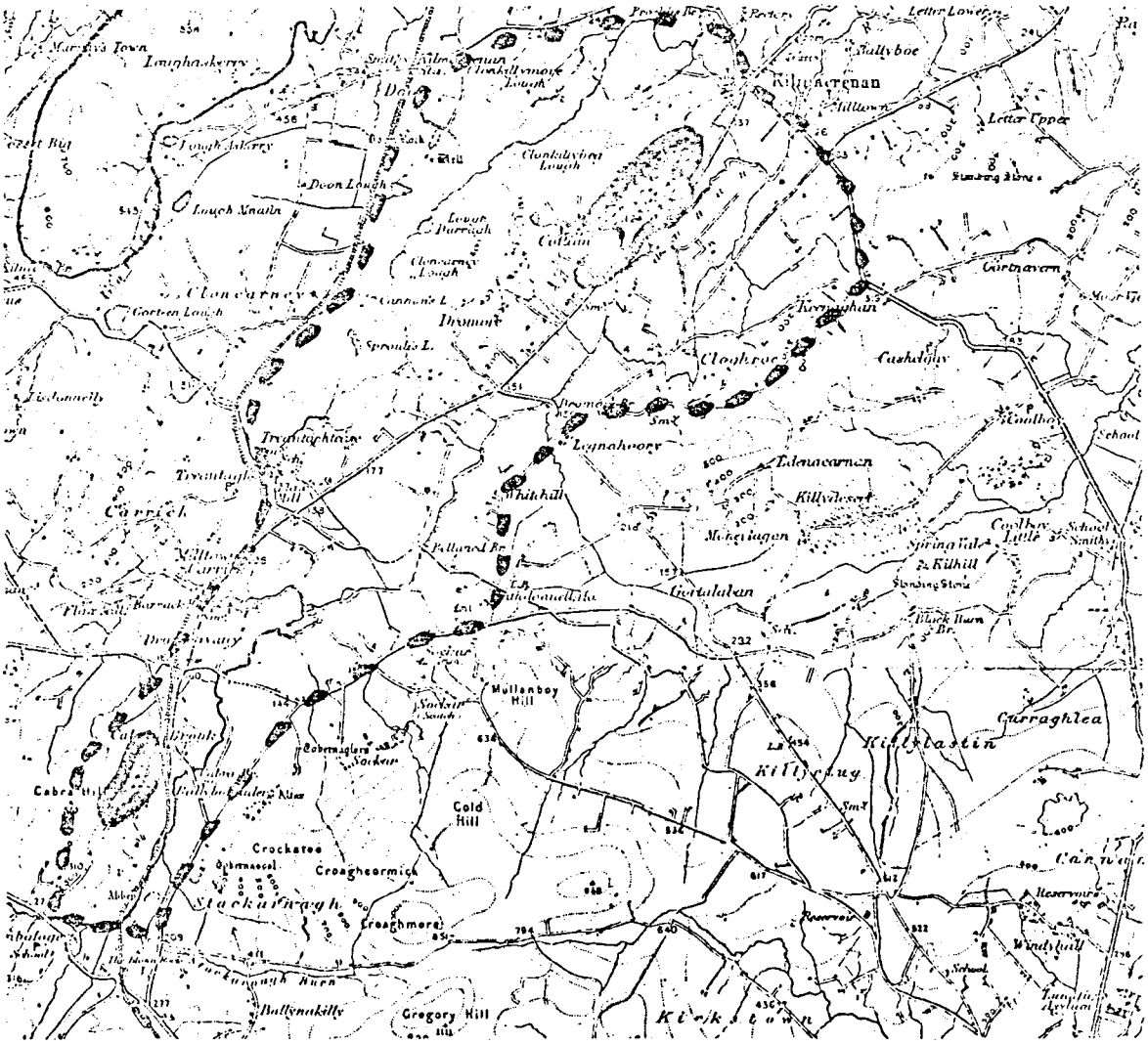
Clearance of the established woodlands or of areas of scrub appears to be the only likely threat. The former would be most damaging to the ecological value of the area.

Recommendation

Any development plans affecting this area should take account of its ecological value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST –59

Scale : 1 inch to 1 mile



Name of Area	WOODS AROUND LETTERKENNY
Acreage	Area not strictly delimited
Grid Reference	C. ~~1,0/1~~ 15 10
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

Within the area roughly delimited by the dotted line on Map 60 are many stands of deciduous, or predominantly deciduous woodlands.

Much of this woodland, e.g. at Rockhill, is clearly old, planted estate woodland, dominated by oak, Quercus sp, but with many conifers present. Elsewhere, however, the woods appear to be natural in origin, having formed by both primary and secondary succession. These woods are largely dominated by birch, Betula pubescens, with some oak and good examples can be seen on the north side of the main road at Newmills, i.e. Doon Wood and the wood immediately to its west.

These woodlands are of great amenity value, being vital to the attractive scenery around Letterkenny.

Evaluation (see p. 8)

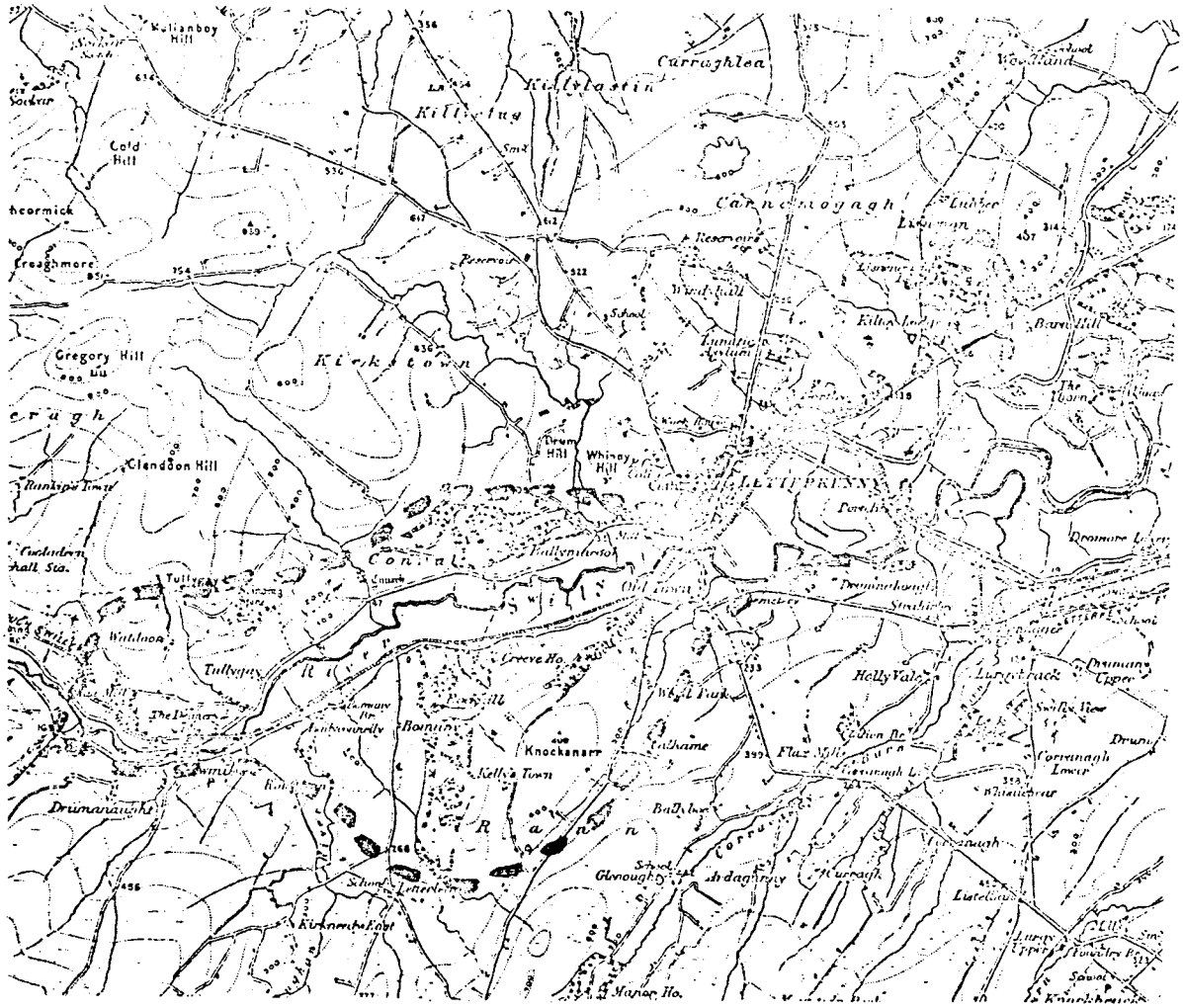
The ecological interest of this area lies in the variety of woodland it contains. It has some potential as a research area, but much more important, it constitutes a valuable educational and amenity resource for the town of Letterkenny.

Threats to the Area

Clearance of the woodlands.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —60

Scale : 1 inch to 1 mile



Recommendation

Any development plans affecting this area should take into account the scientific, educational and amenity value of the woodlands.

Name of Area	WOODS NEAR LETTERMACAWARD
Acreage	Area not strictly delimited
Grid Reference	G. 79, 99
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The approximate area of interest is shown by the dotted line on Map 61.

The ecology and appearance of the lower Gweebarra valley have been considerably altered in recent years by extensive afforestation. In this area, however, there are still some areas of natural or semi-natural deciduous scrub/woodland: a mixture of oak, Quercus sp., birch, Betula pubescens, and hazel, Corylus avellana.

Evaluation (see p. 8)

The more or less natural condition of the areas of deciduous scrub/woodland results in this area being classified as one of local ecological importance. Interesting comparisons are possible between the ecology of these deciduous areas and that of the surrounding conifer plantations.

Threats to the Area

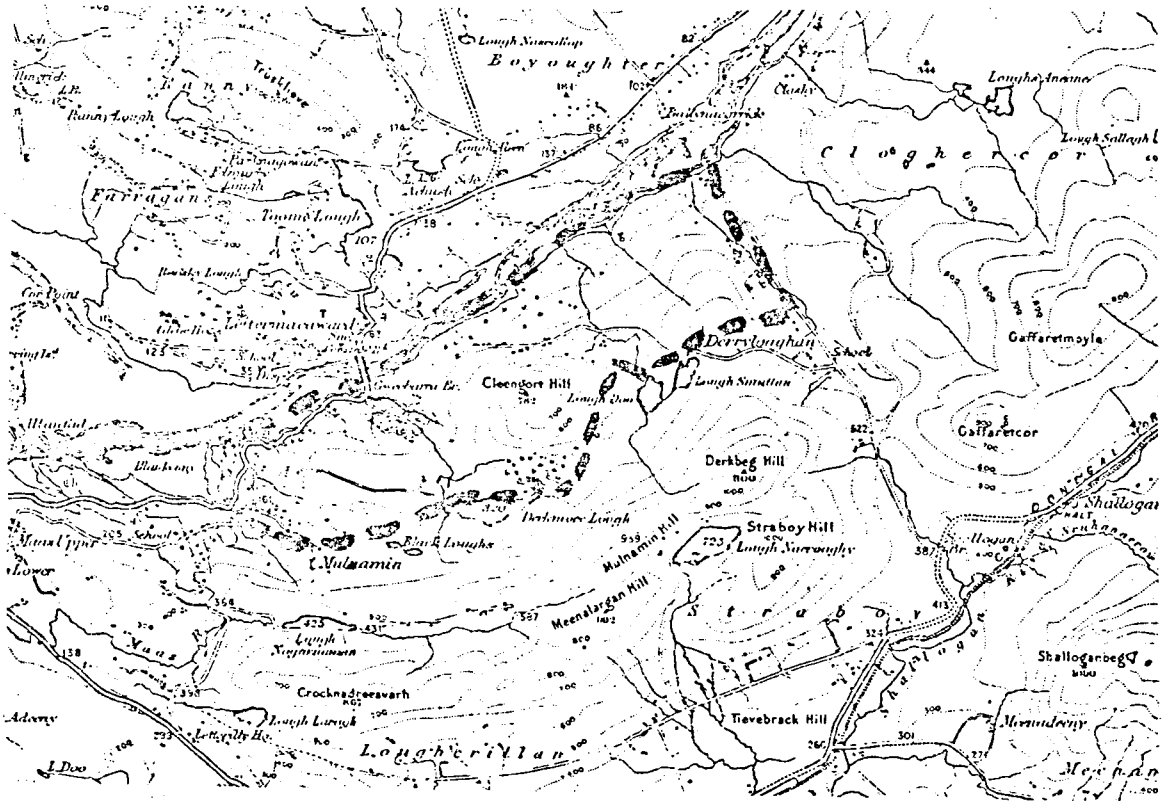
Clearance associated with forestry would appear to be the most likely threat.

Recommendation

Any development plans affecting this area should take account of its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —61

Scale : 1 inch to 1 mile



Name of Area	RATHMULLAN WOOD
Acreage	c. 110 acres
Grid Reference	C. 27, 27
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 62.

This is an area of mature deciduous woodland, mainly of oak, Quercus sp. but with some beech present, Fagus sylvatica. There is some development of birch, Betula pubescens, scrub around the upper margins of the wood.

Evaluation (see p. 8)

The area is of general ecological interest as a well-established deciduous woodland to which the presence of beech adds variety. It is thus classified as being of local importance.

Threats to the Area

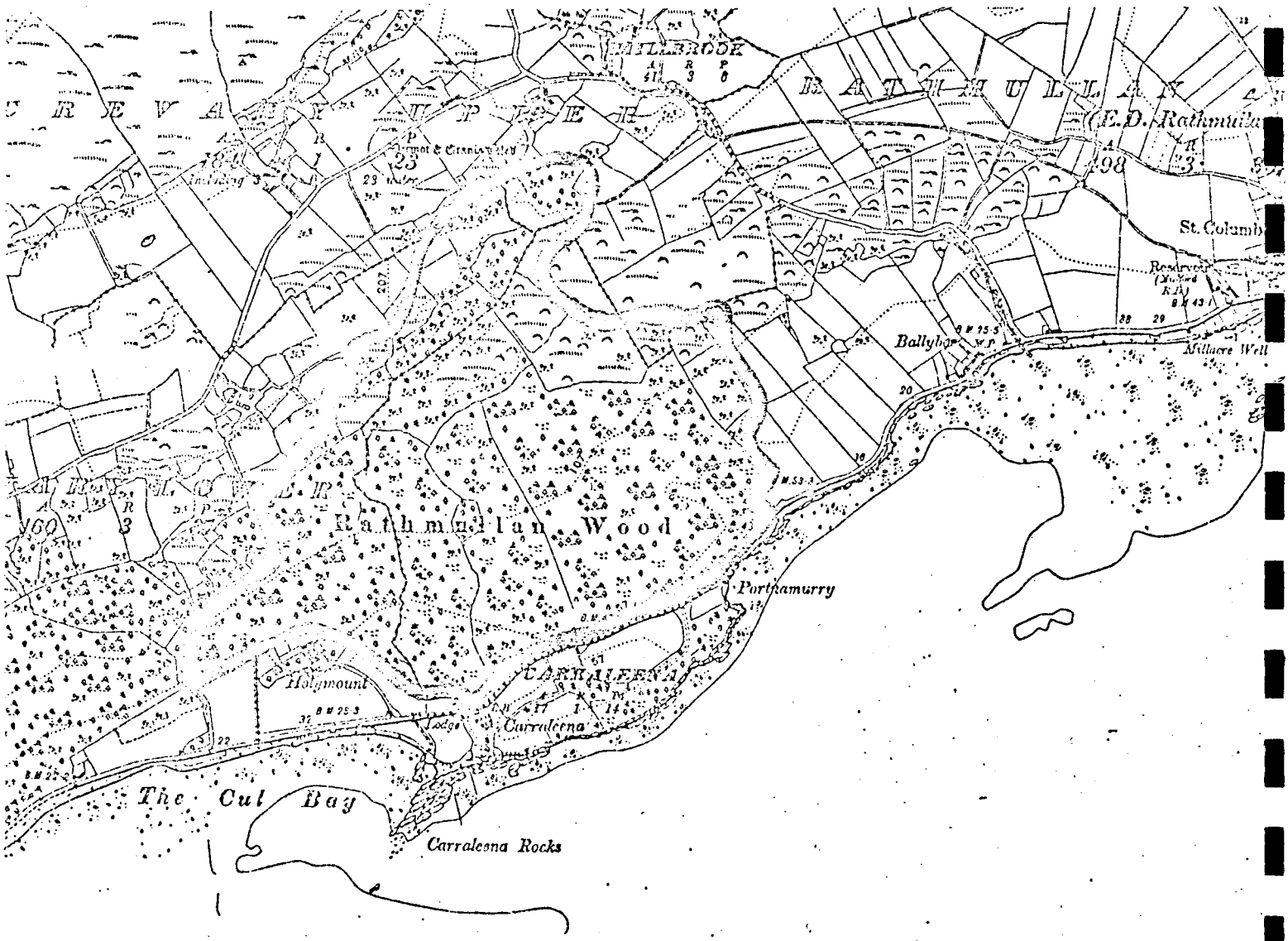
Clearance is the most likely threat, though underplanting with conifers would be equally detrimental in the long term.

Recommendation

Any development plans affecting this area should take account of its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 62

Scale: 6 Inches to 1 Mile



Name of Area	GLEN ALLA
Acreage	c. 140 acres
Grid Reference	C. 24, 27
Scientific Interest	Ecological; botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 63.

These are mature estate woodlands clearly of artificial origin, being a mixture of oak, Quercus sp, beech, Fagus sylvatica, and a few conifers. Of particular interest are the areas of large beeches with a holly understorey, Ilex aquifolium, and very little ground zone flora. An established introduced herb in parts of the woodland is the wood spurge, Euphorbia amygdaloides, a species not native in northern Europe. (See Figure 30).

Evaluation (see p. 8)

The main interest of these woodlands lies in the contrasts they provide with the more natural woodlands listed elsewhere in this report. The establishment of the Euphorbia so far north is also interesting.

The woods are thus rated as of local scientific importance.

Threats to the Area

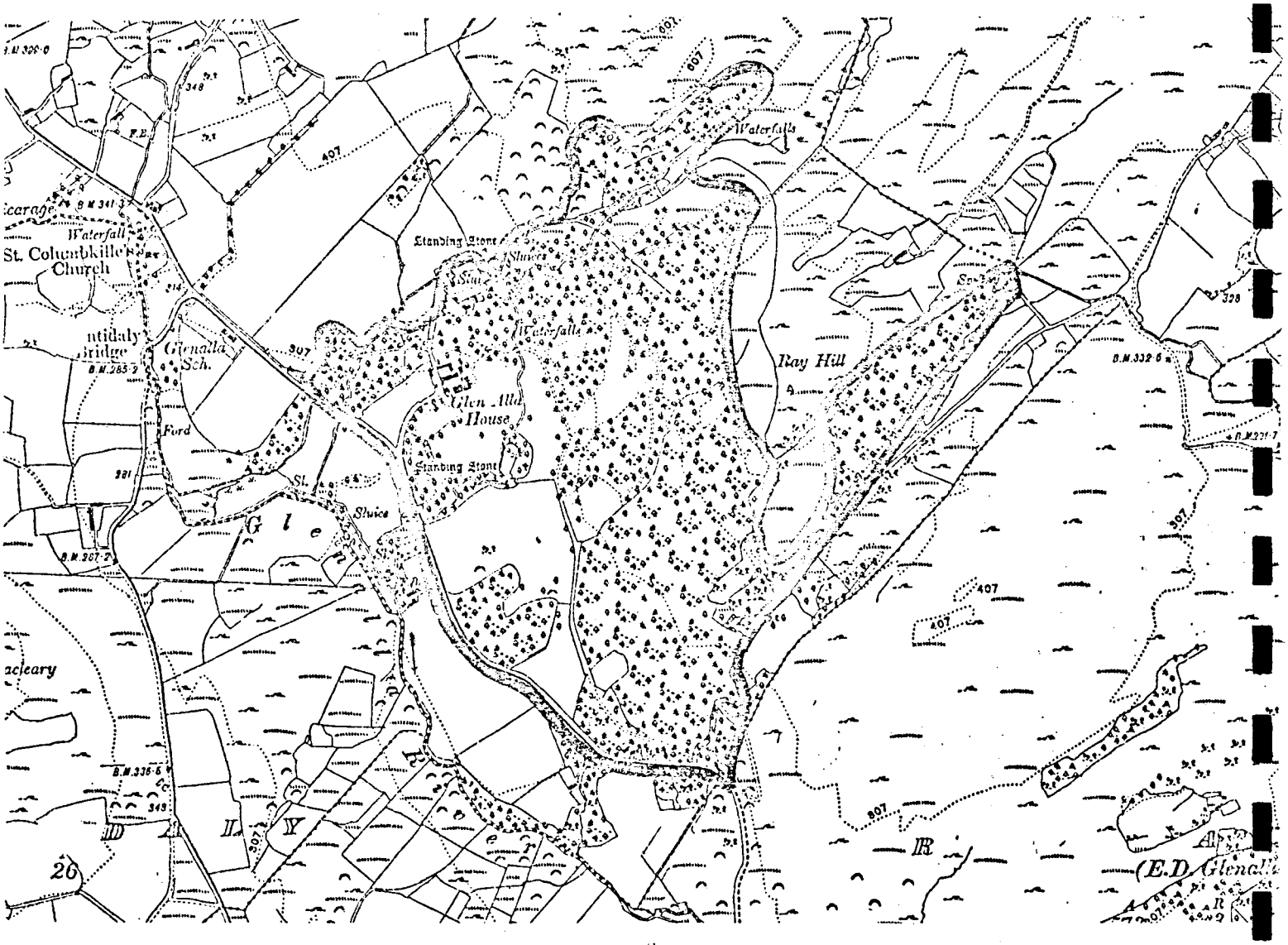
Clearance would appear to be the most likely threat.

Recommendation

Any development plans affecting this area should take account of its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 63

Scale: 6 Inches to 1 Mile



Name of Area	MELMORE LOUGH
Acreage	c. 10 acres
Grid Reference	C. 12, 43
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 64.

This apparently deep, L-shaped lough overlies acid intrusive bedrock but nevertheless appears to be calcareous. This is probably because the deposits of wind-blown sand which surround it are of a calcareous nature. In the peculiarly opaque waters of the lough grows an interesting variety of aquatic plants including stoneworts, Chara spp., water buttercup, Ranunculus sp., amphibious bistort, Polygonum amphibium, shoreweed, Littorella uniflora, fennel-leaved pondweed, Potamogeton pectinatus, broad-leaved pondweed, Potamogeton natans, bur-reed, Sparganium sp and spiked water-milfoil, Myriophyllum spicatum.

Evaluation

The water chemistry and general ecology of this lough would seem worthy of study and it has thus been classified as an area of local scientific importance.

Threats to the Area

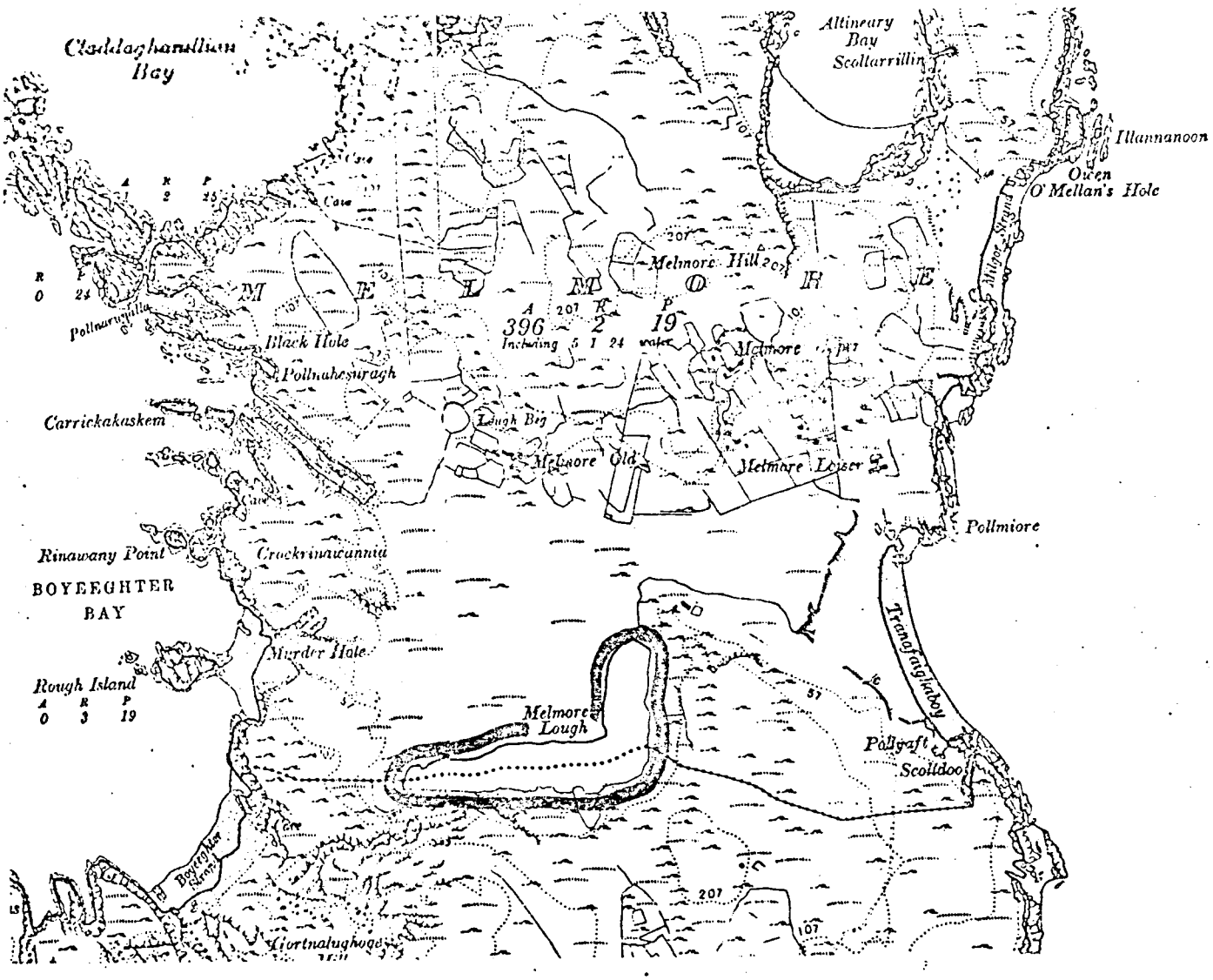
None likely.

Recommendation

Any development plans affecting this area should take account of its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —64

Scale: 6 Inches to 1 Mile



Name of Area	ROSEPENNA LOUGH
Acreage	c. 5 acres
Grid Reference	C. 11, 38
Scientific Interest	Ecological; botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 65.

This is a very shallow, extremely calcareous lough surrounded by calcareous blown sand. The waters are choked with vegetation including a variety of stoneworts, *Chara spp.*

Evaluation

The extreme calcareousness of this lough in a region of acid lakes results in it being classified as a site of local ecological importance.

Threats to the Area

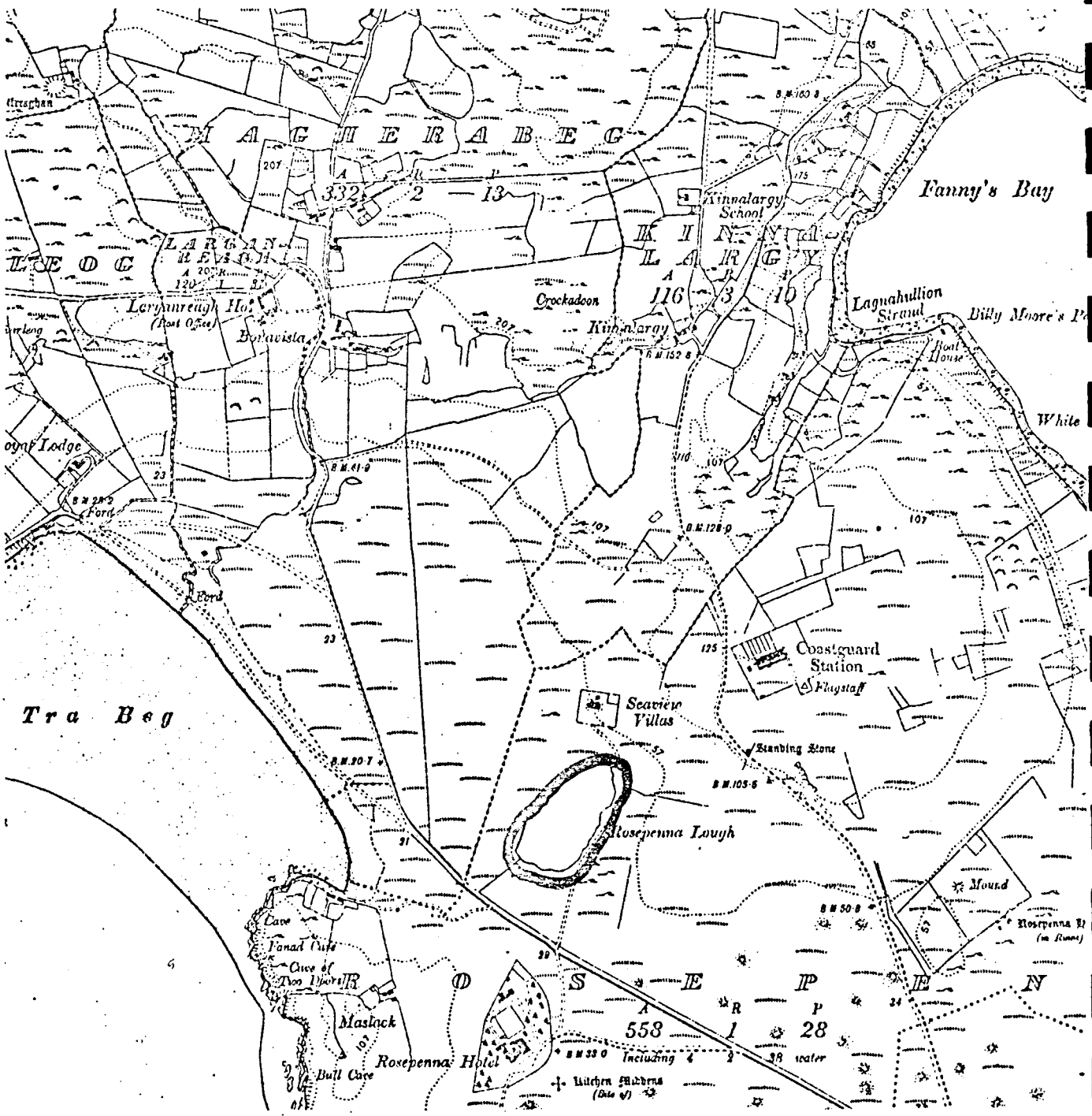
None likely.

Recommendation

Any development plans affecting this area should take account of its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —65

Scale: 6 Inches to 1 Mile



Name of Area	MULLAGHDERG LOUGH
Acreage	c. 220 acres
Grid Reference	B. 76, 20
Scientific Interest	Botanical; ecological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 66.

A shallow lough with a very irregular shoreline, fringed by extensive beds of reed, Phragmites communis. In and around the lough occur several plants rare in Ireland, i.e. pipewort, Eriocaulon septangulare, flexible naiad, Najas flexilis, long-stalked pondweed, Potamogeton praelongus, grass of Parnassus, Parnassia palustris, and hoary whitlow grass, Draba incana, (see Fig. 18 and Figs. 31 - 34).

Evaluation

The rare plants occurring here make this lough an area of local scientific importance.

Threats to the Area

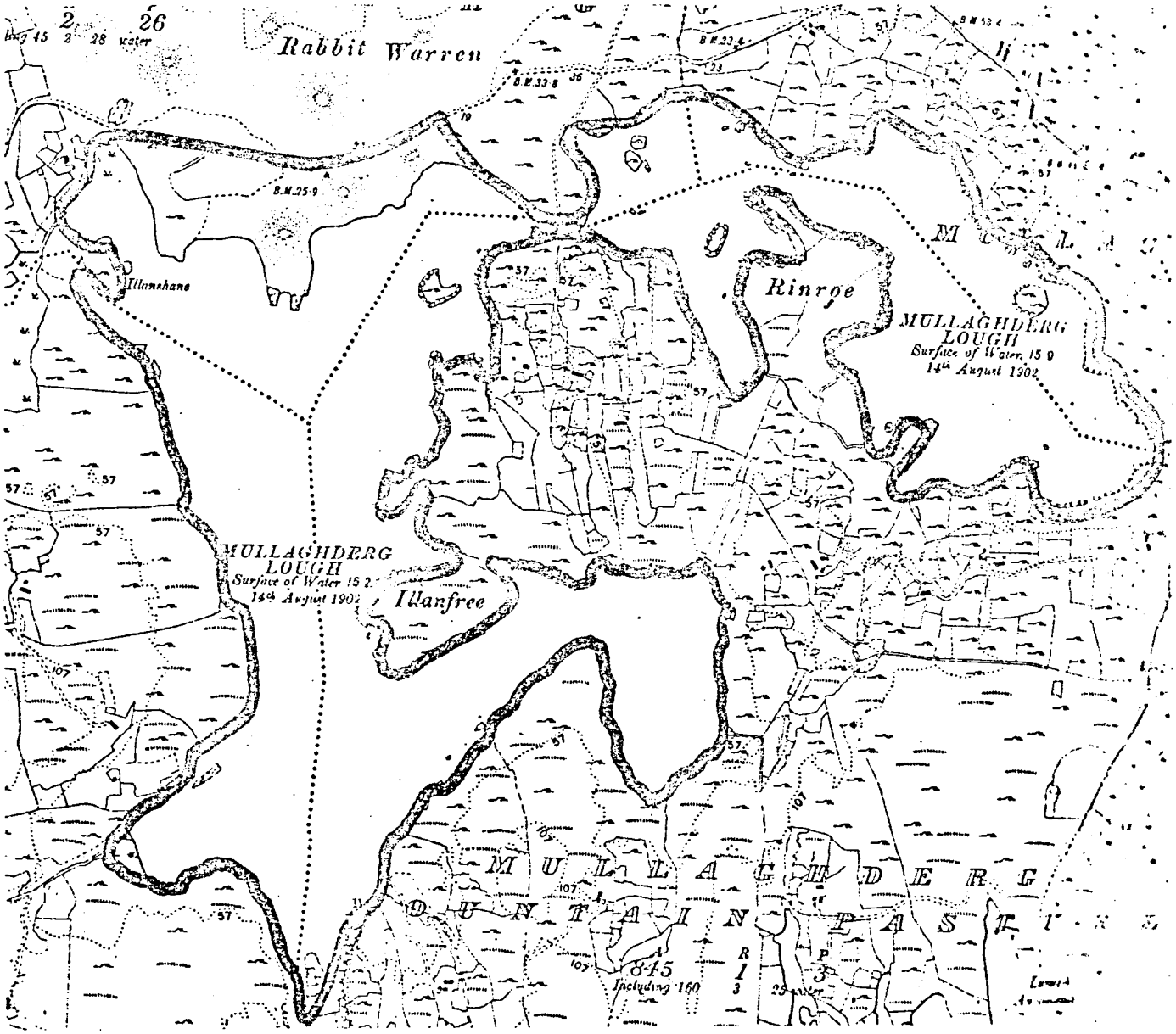
None likely.

Recommendation

Any development plans affecting the lough should take account of its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —66

Scale: 6 Inches to 1 Mile



RECOMMENDED ACTION FOR EACH AREA OF SCIENTIFIC INTEREST

	General Planning Control	Conservation Order	Tree Preservation Order	Other Recommendations	Priority
Slieve League area		* For two parts with "buffer zones" around them			B
Malin Head	*				B
Horn Head cliffs	*				C
Inch Lough		*		Request Minister for Lands to declare the lough a wildfowl sanctuary under Game Preservation Act, 1930.	A
Gannivegil bog	*				C
Lough Barra bog	*				C
Cliffs on Aran Island	*				C

	General Planning Control	Conservation Order	Tree Preservation Order	Other Recommendations	Priority
Kilkenny pebble dyke	*				C
Kindrum tinoid	*				C
Birra Lough		*		Request Minister for Lands to declare the lough a wildfowl sanctuary under Game Preservation Act, 1930.	B
Meenagoppoge bog	*				C
Dunragh Loughs area	*				C
Owenbeagh bog	*			Immediate erradication of Rhododendron ponticum	A
Sessiagh Lough	*				B
Lough Shore				An immediate study of the lough should be carried out to assess the ecological impacts of the new dam.	A

	General Planning Control	Conservation Order	Tree Preservation Order	Other Recommendations	Priority
Glenveagh woods			Possibly	Co-operation with landowner to ensure survival of woods	B
Ardnamona wood			*		A
Lough Nacung	*				C
Near Ballintra	*				C
Muckish	*				C
Barnes Gap railway cutting	*				B
Roadside near Ballyshannon	*			Clearance of gorse from part of the cliff	C
Muckross Head to Fintragh Bay	*				C
St. John's Point	*				C
Doorin Point	*				C

	General Planning Control	Conservation Order	Tree Preservation Order	Other Recommendations	Priority
Foreshore west of Bundoran	*				C
Finner Camp	*				C
Kildoney Point	*				C
Poisoned Glen	*				C
Roaninish		*		Restrictions on access	B
Inistrahull	*				C
Inishkeeragh	*				C
Dunfanaghy lake and dunes		*			B
Blanket Nook		*			B
Parts of Tory Island	*				C
Islands in Mulroy Bay	*				C
Trawbreaga Bay	*				C

	General Planning Control	Conservation Order	Tree Preservation Order	Other Recommendations	Priority
Lough Finn	*				C
Lough Kindrum	*				C
Lough Fad - W	*				C
Lough Ananima	*				B
Lough Derg	*				C
[illegible]h Eske	*				B
West of Ardara/Maas road	*				C
Gartan Lough and Lough Akibbon	*				B
Murvagh Lower	*			Dune erosion control if necessary	C
Ballyarr wood			*		B
Carndonagh wood			*		B

	General Planning Control	Conservation Order	Tree Preservation Order	Other Recommendations	Priority
Carradoan woods			*		B
Creeslough wood			*		B
Slieve Snaght	*				C
Inishduff	*				C
Inishbarnog		Possibly		Restrictions on access	B
Inishkeel	*			Restrictions on access	B
Tormore Island and neighbouring cliffs	*				C
Ballyness Bay and dunes	*			Initiation of dune management programme to check erosion	B
Lettermacaward dunes	*				C

	General Planning Control	Conservation Order	Tree Preservation Order	Other Recommendations	Priority
Woods in Leanan valley	*				C
Woods around Letterkenny	*				C
Woods near Lettermacaward	*				C
Rathmullan wood	*				C
Glen Alla woods	*				C
Melmore Lough	*				C
Rosepenna Lough	*				C
Mullaghderg Lough	*				C

APPENDIX 1

FIGURES 3 - 34

Each symbol on the map records the presence of the species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

Fig. 3 Distribution of Ligusticum scoticum in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

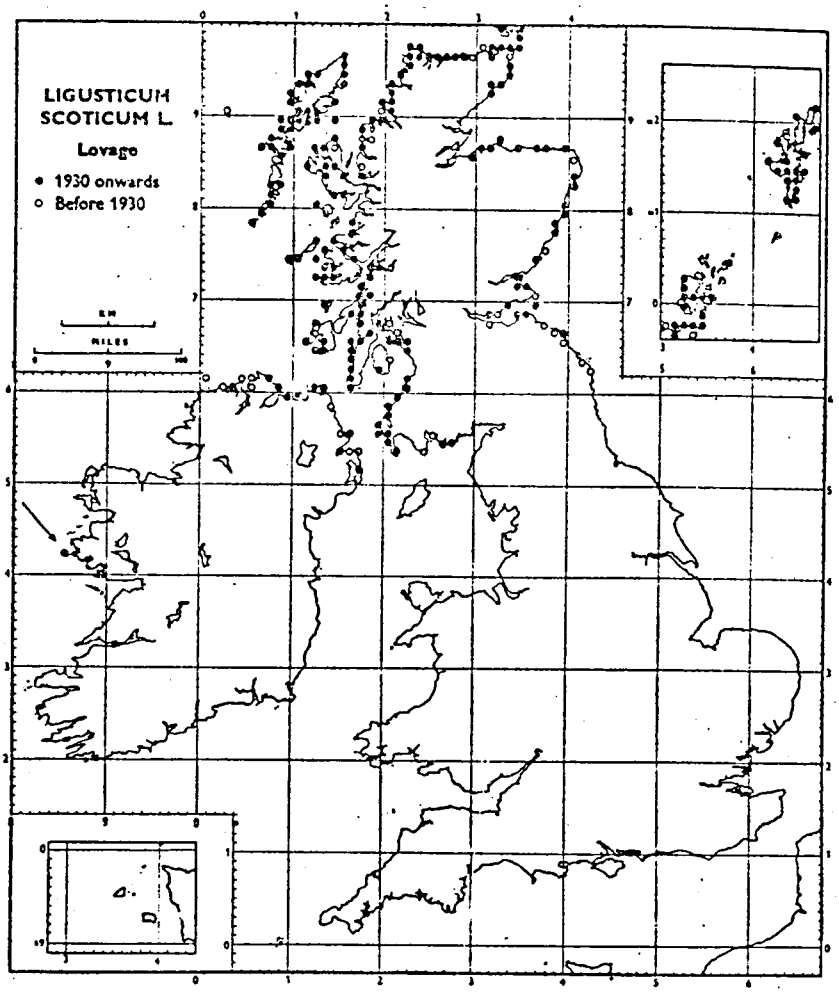


Fig. 4 Distribution of Mertensia maritima in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

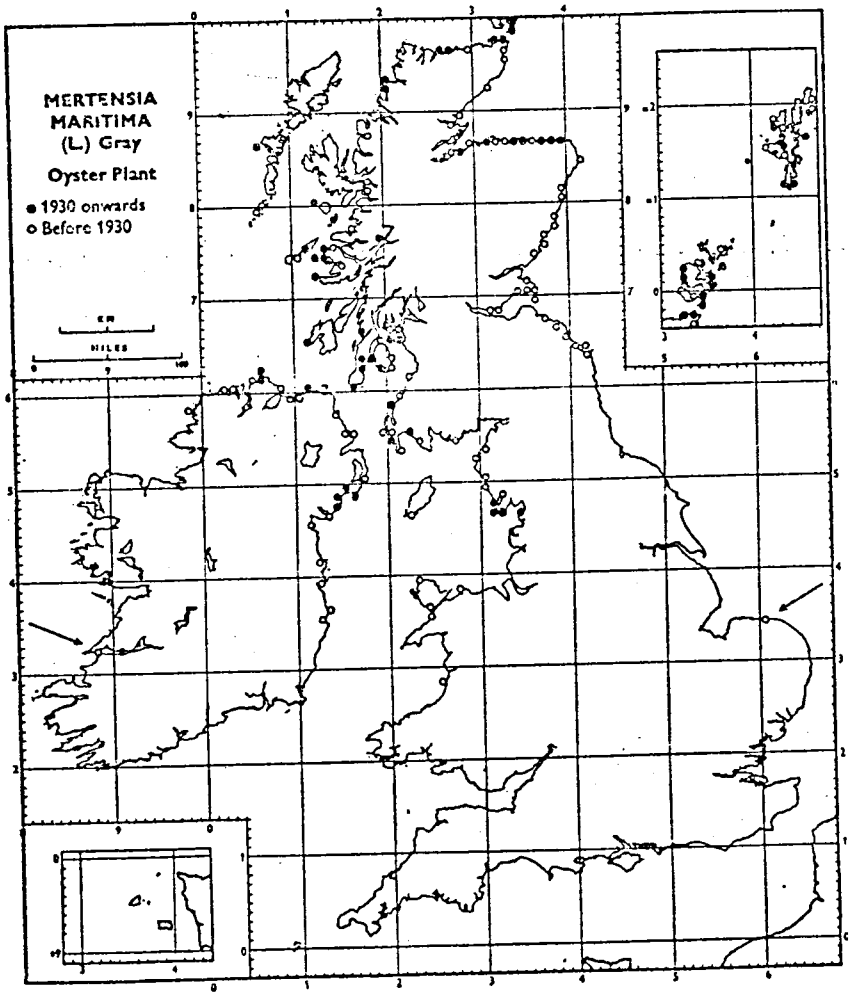


Fig. 5 Distribution of Hymenophyllum tunbrigense in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

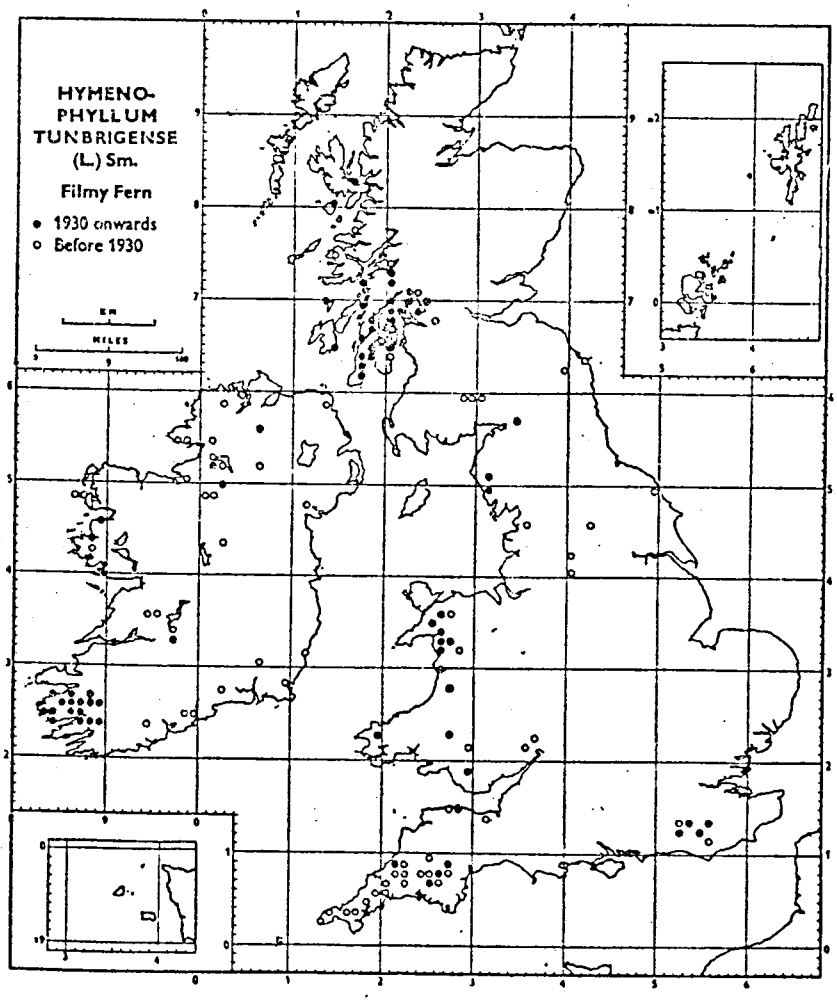


Fig. 6 Distribution of Helianthemum chamaecistus in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

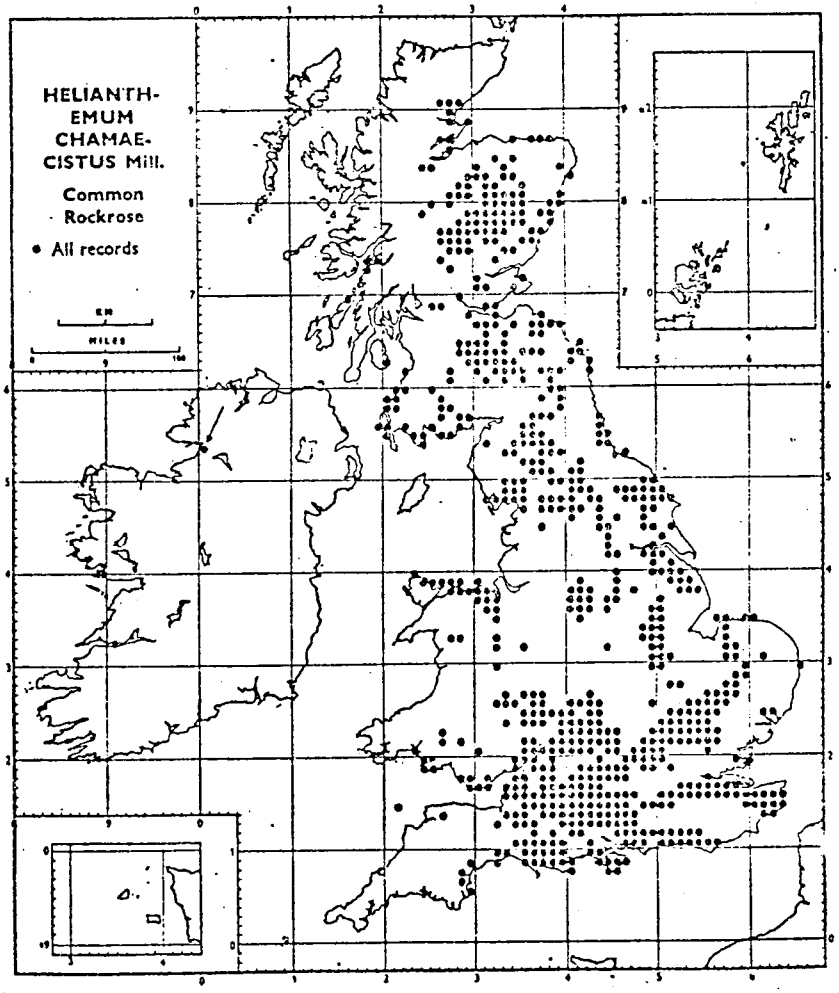


Fig. 7 Distribution of Geranium sanguineum in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

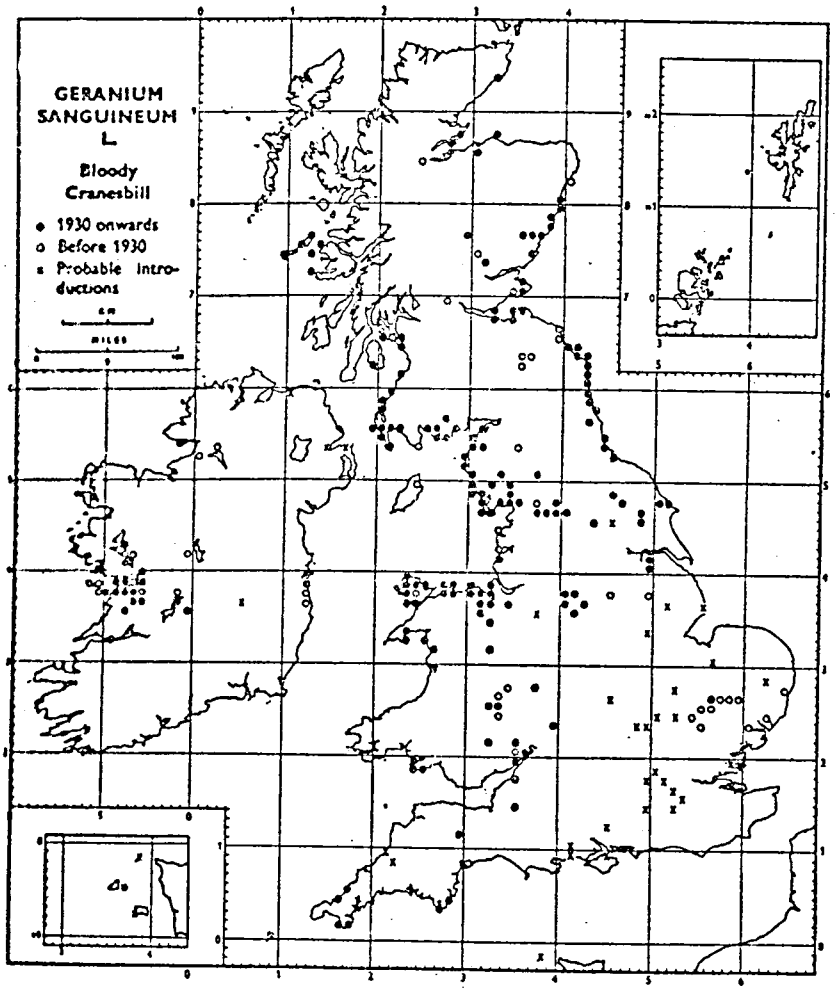


Fig. 8 Distribution of Galium boreale in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

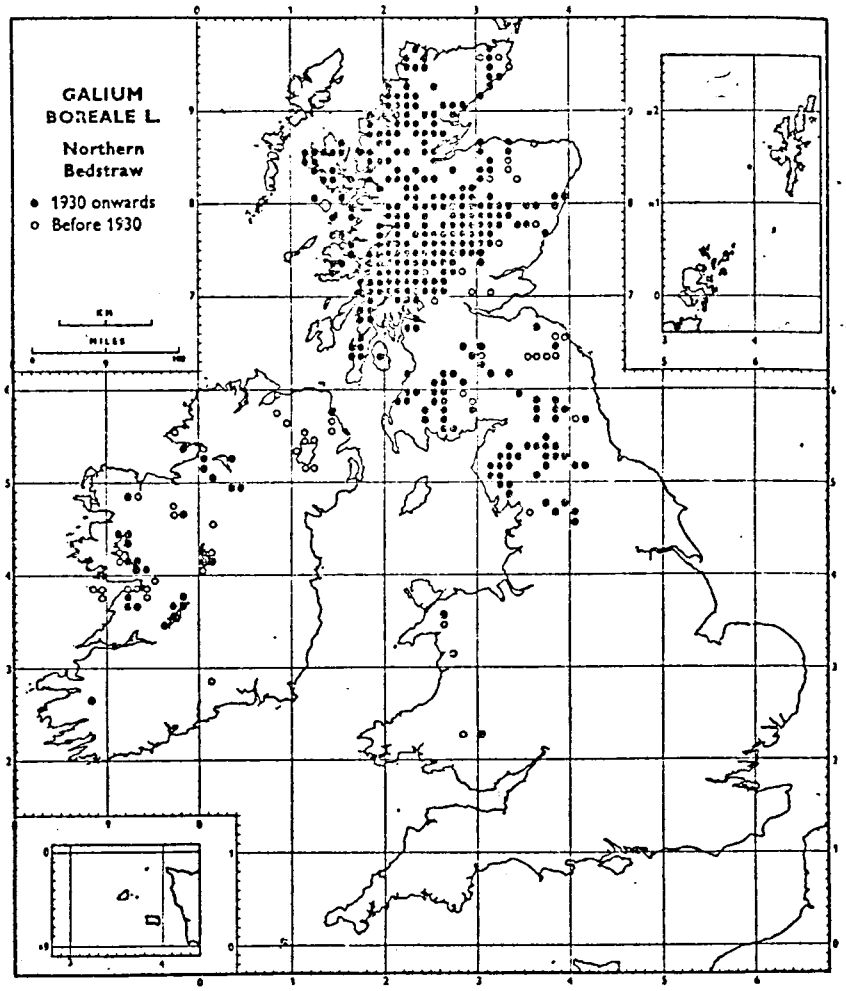


Fig. 9 Distribution of Rubus saxatilis in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

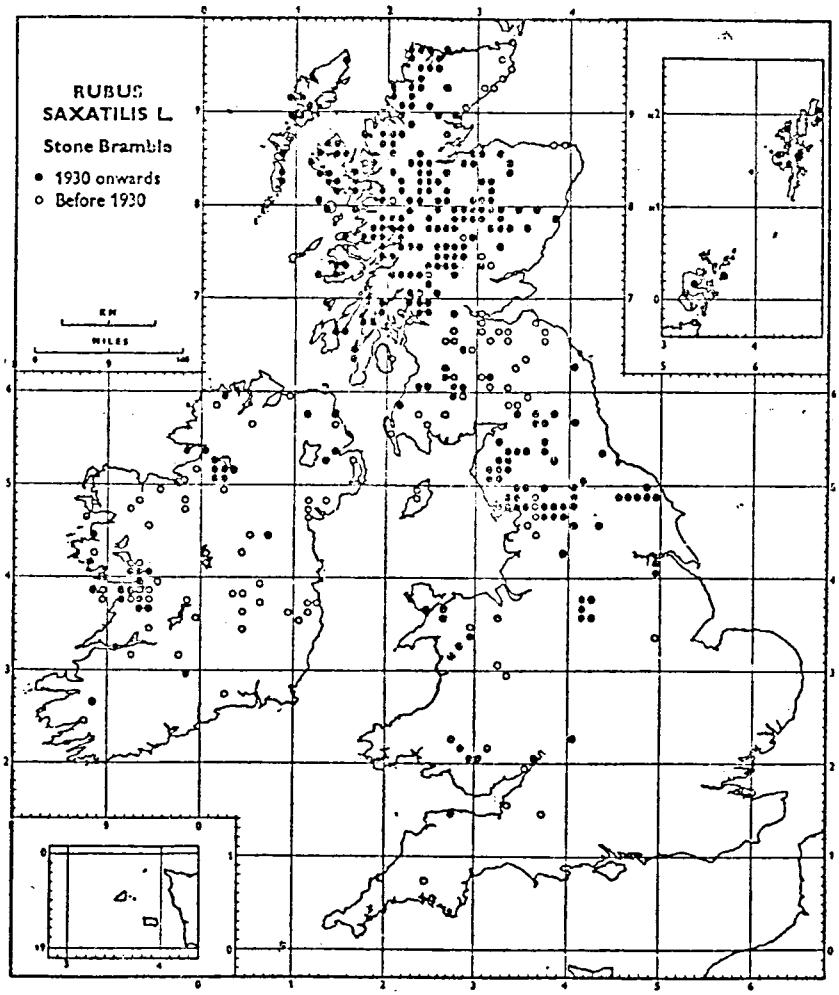


Fig. 10 Distribution of Sesleria caerulea in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

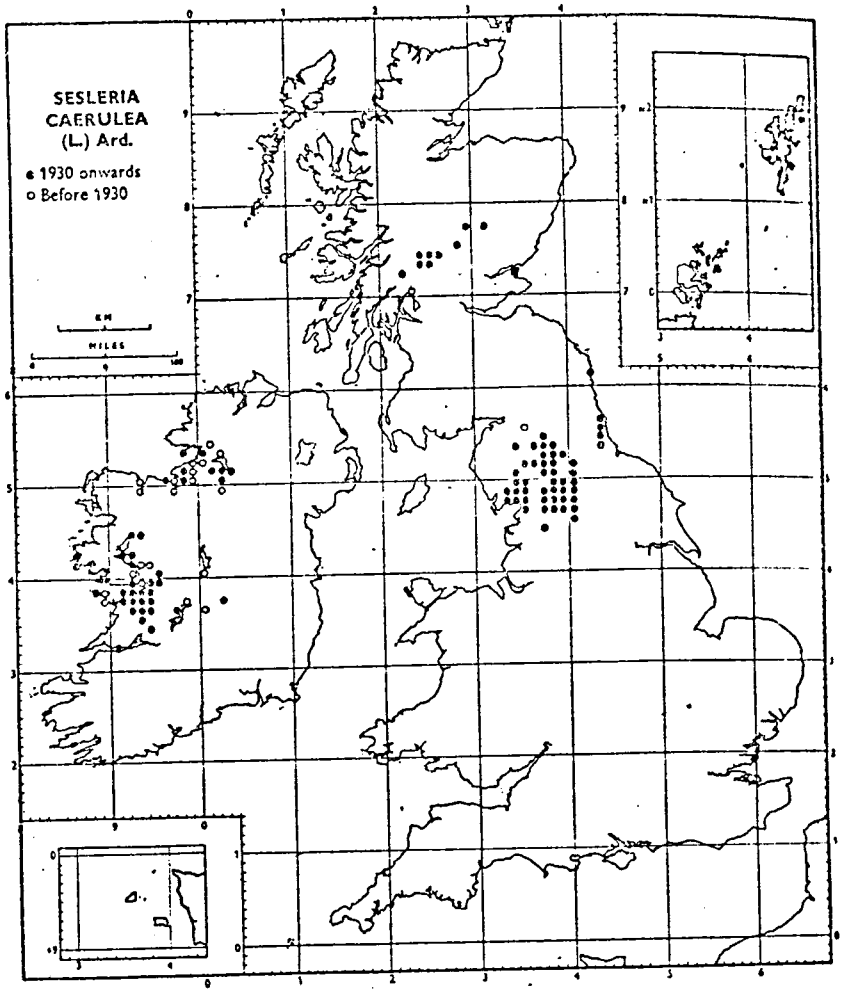


Fig. 11 Distribution of Trichomanes speciosum in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

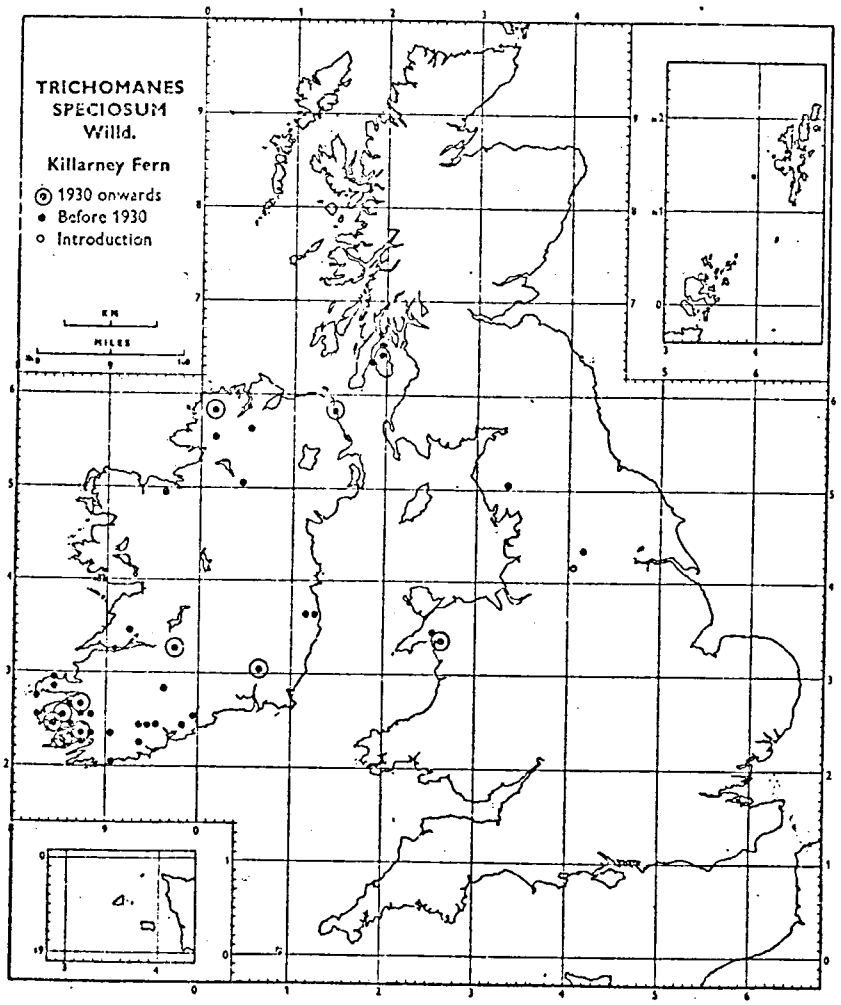


Fig. 12 Distribution of Euphorbia hyberna in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

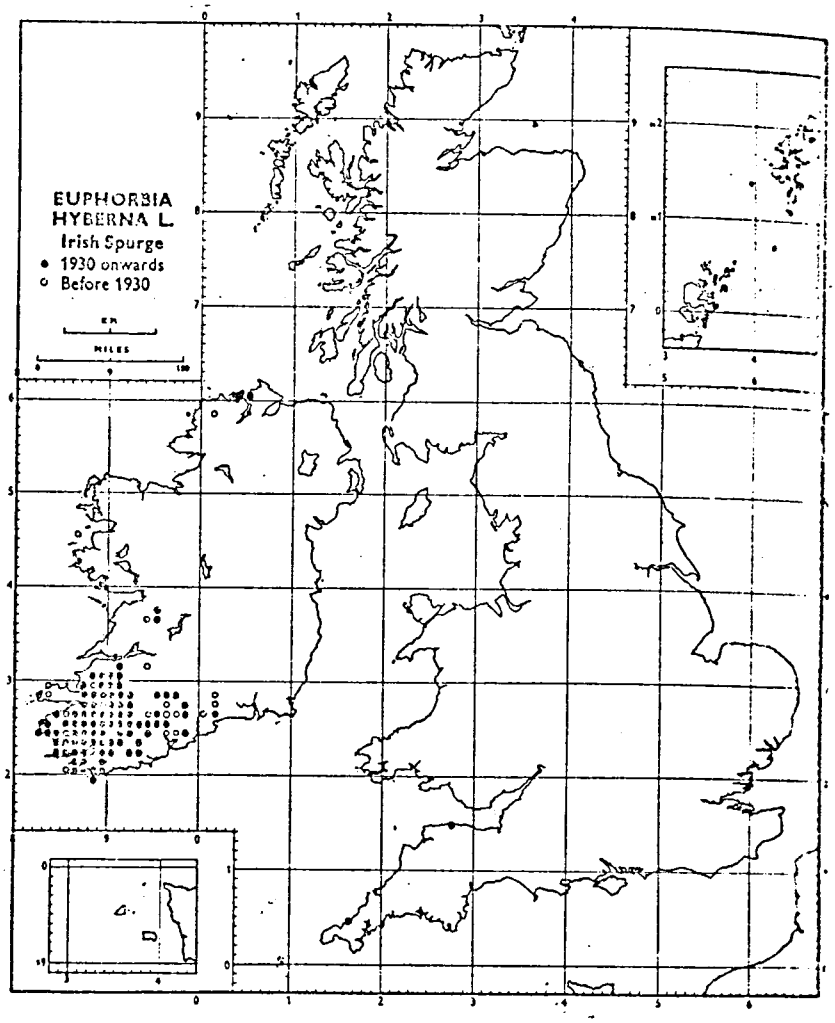


Fig. 13 Distribution of Zostera angustifolia in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

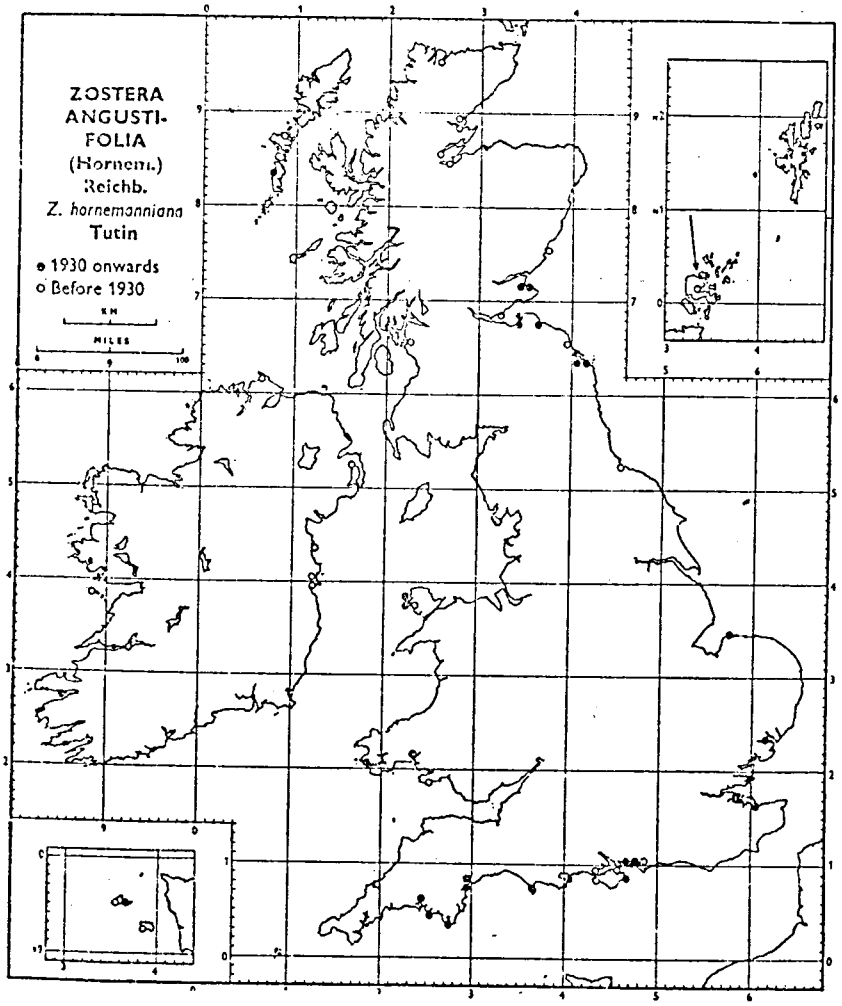


Fig. 14 Distribution of Eleocharis uniglumis in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

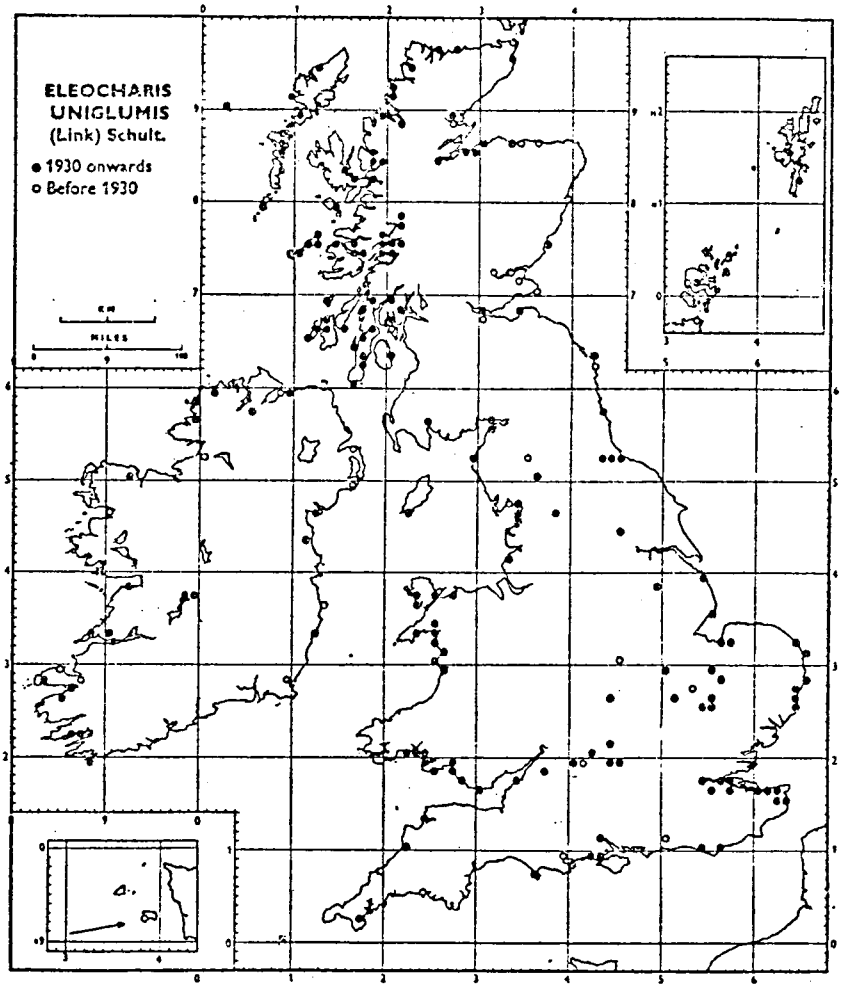


Fig. 15 Distribution of Ranunculus lingua in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

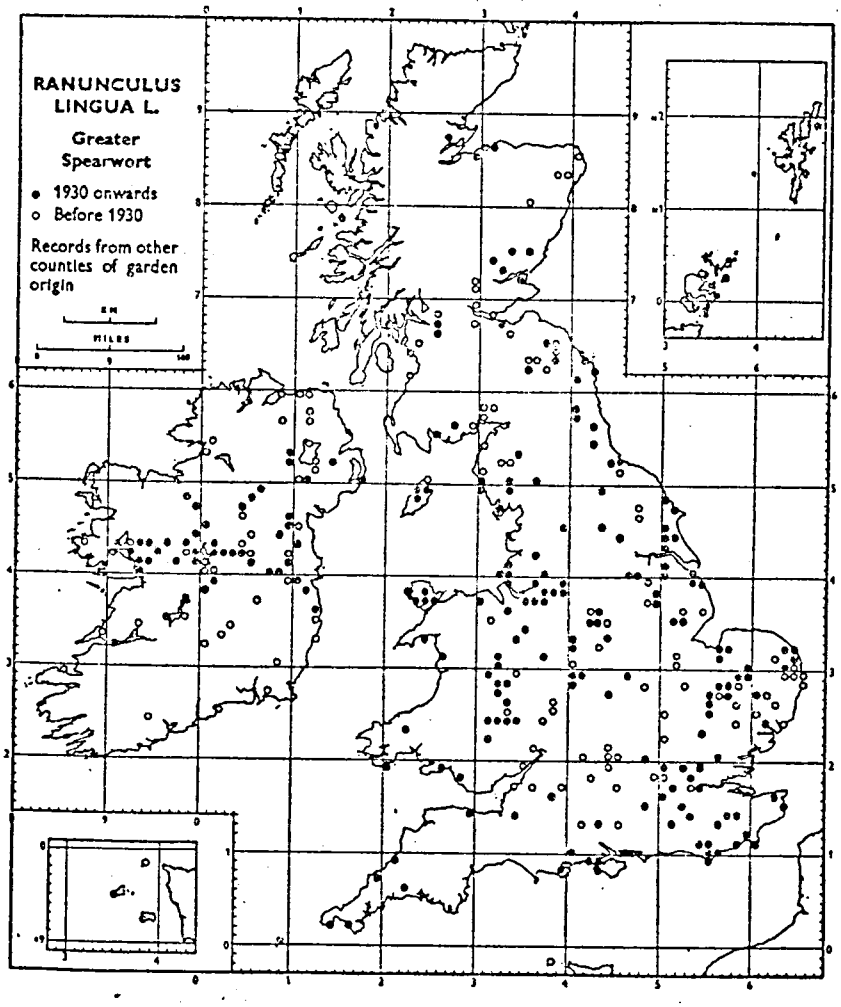


Fig. 16 Distribution of Elatine hexandra in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

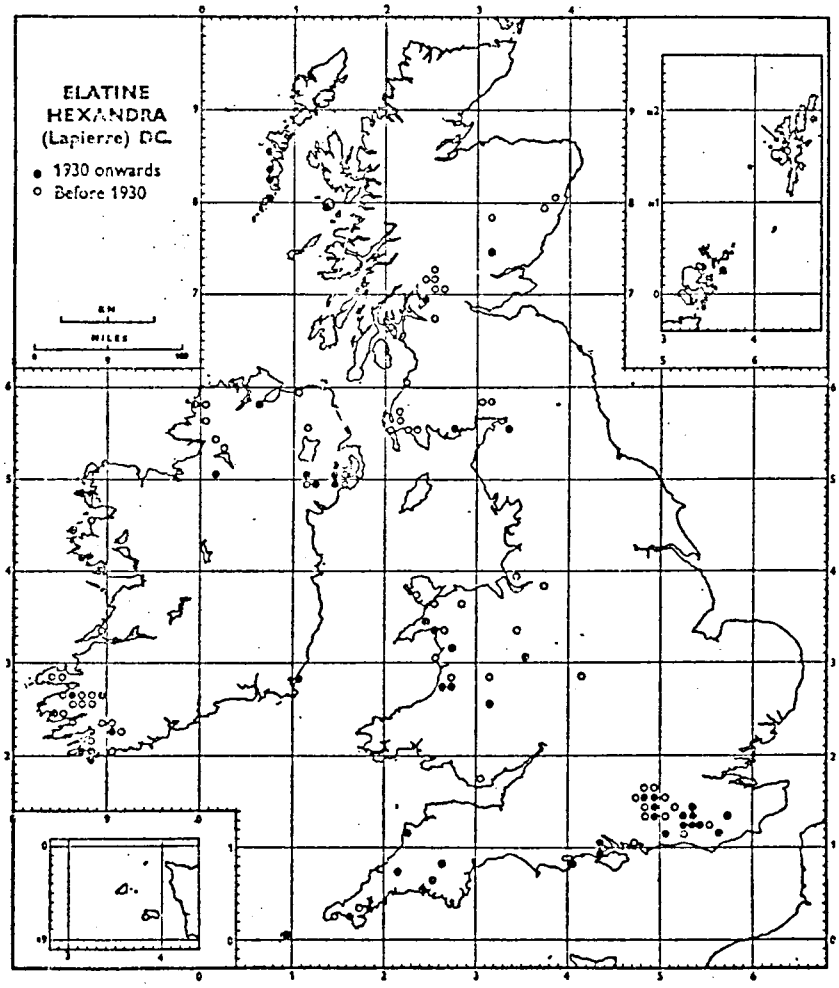


Fig. 17 Distribution of Carum verticillatum in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

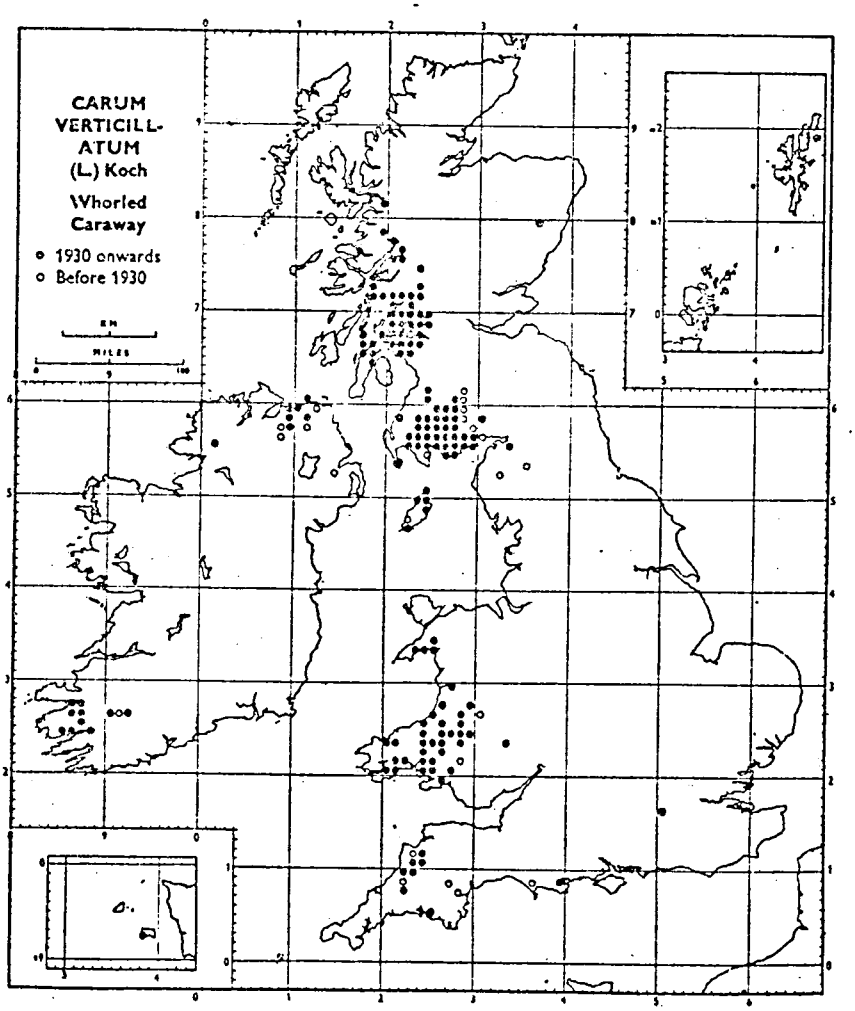


Fig. 18 Distribution of Eriocaulon septangulare in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

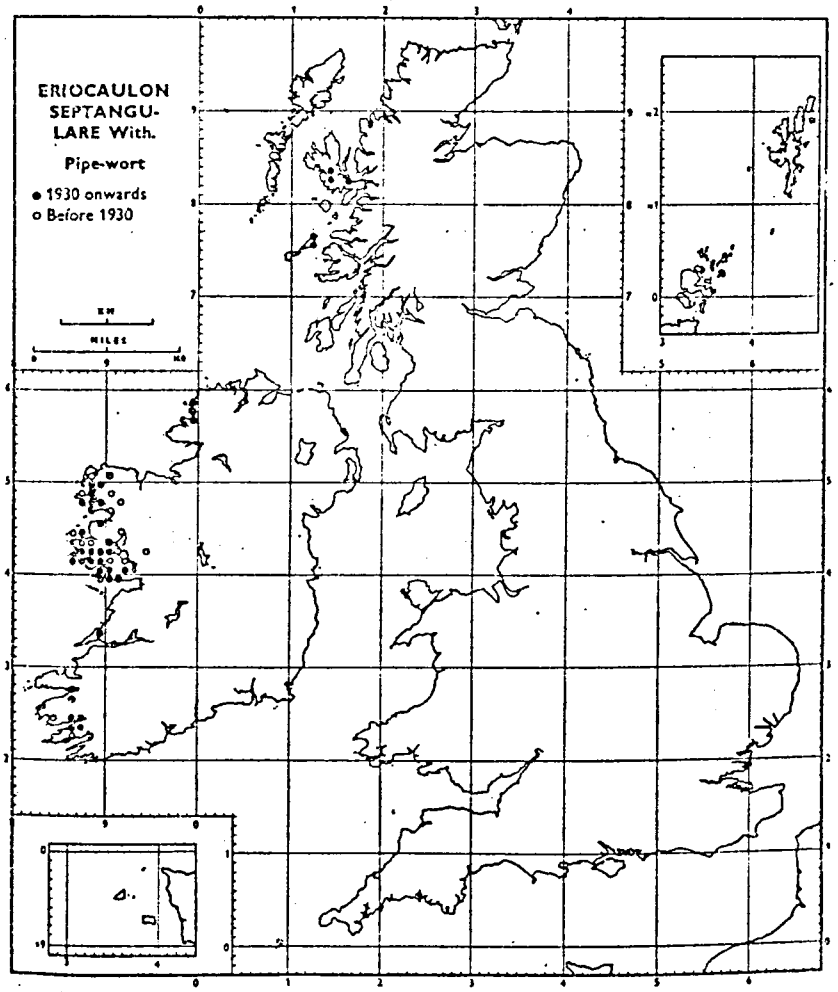


Fig. 19 Distribution of Typha angustifolia in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

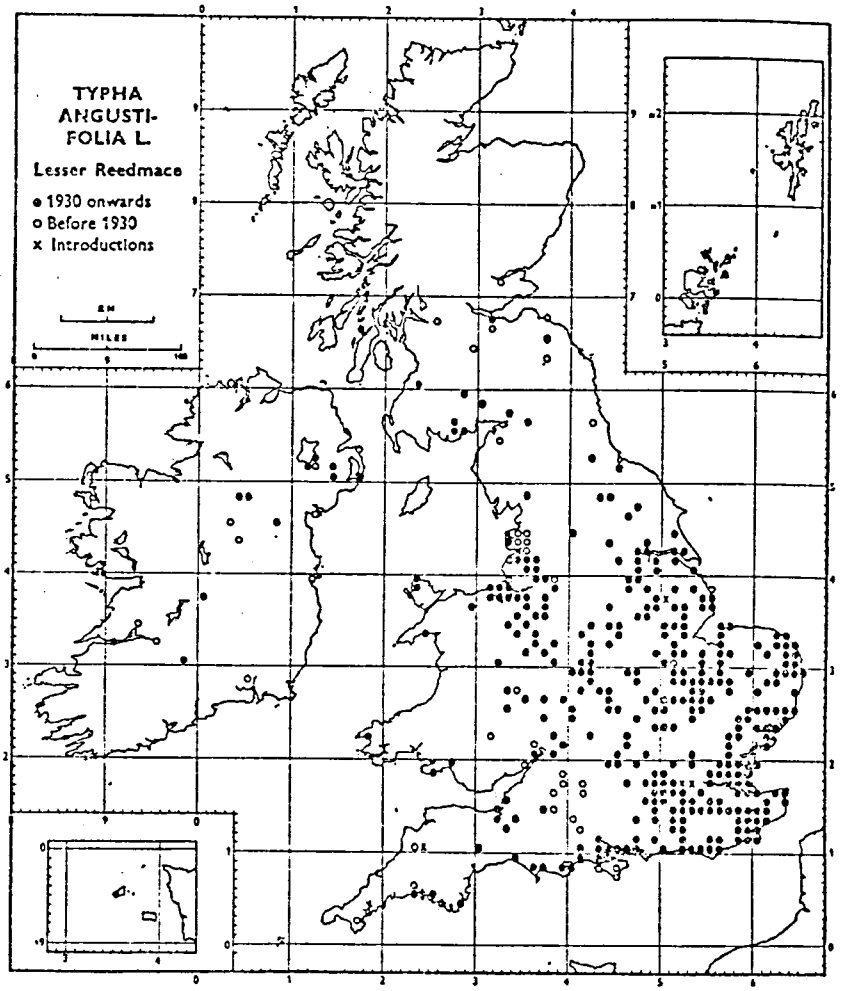


Fig. 20 Distribution of Trollius europaeus in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

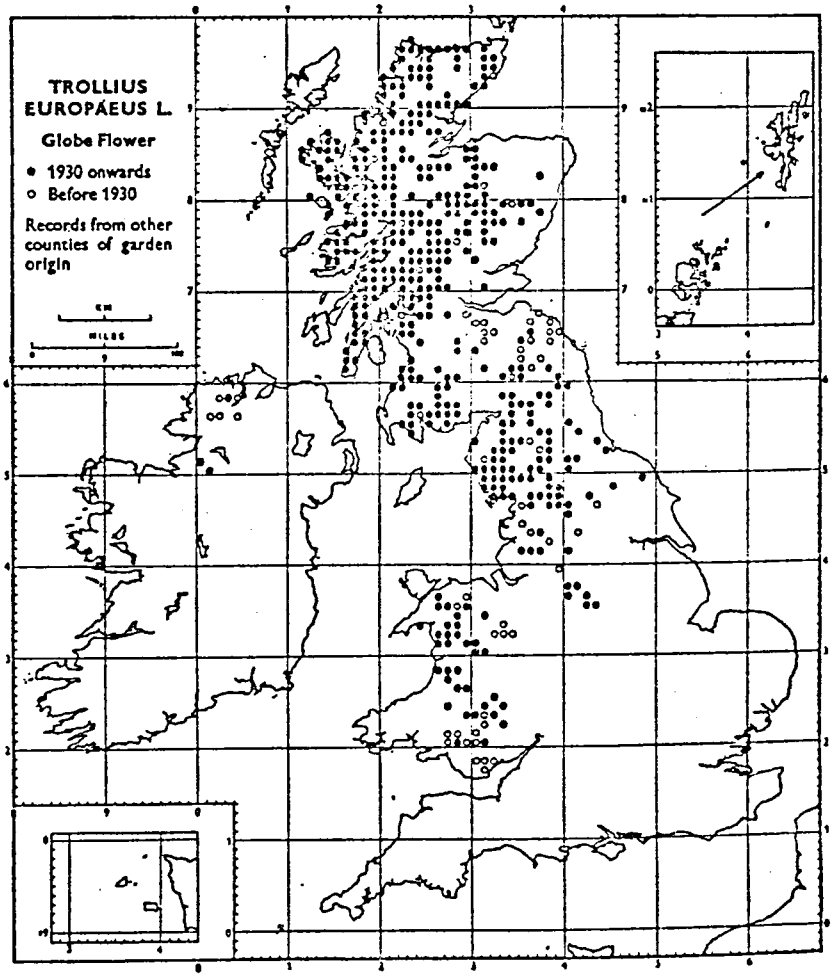


Fig. 21 Distribution of Prunus padus in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

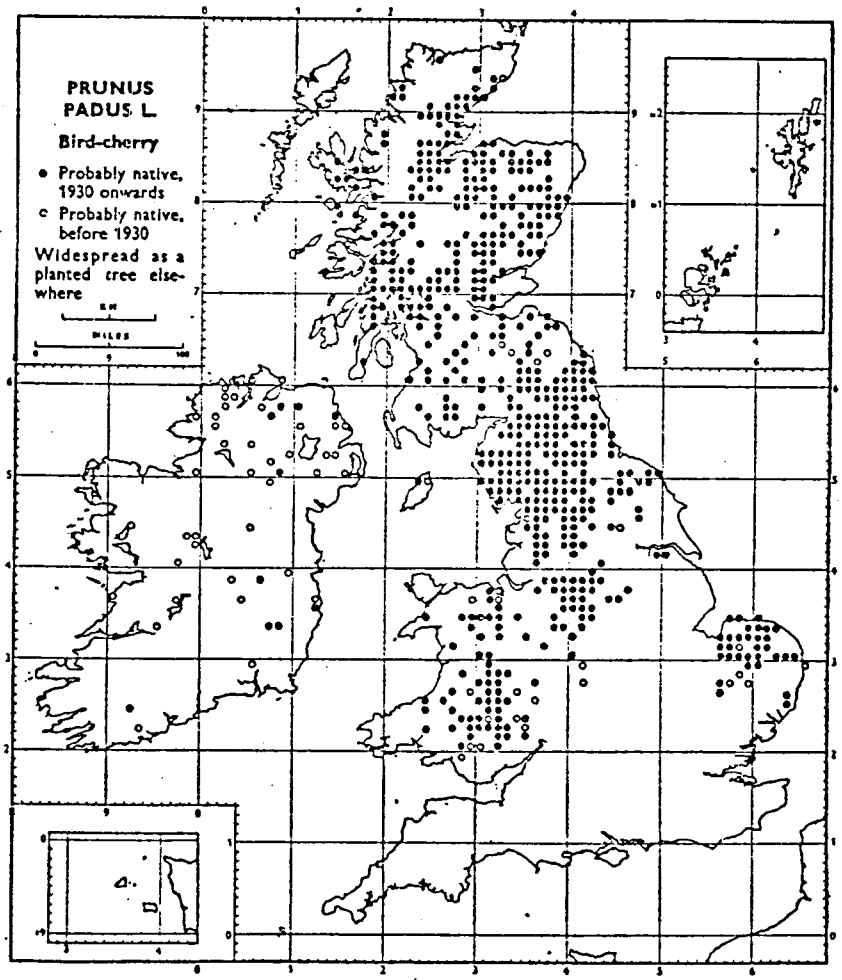


Fig. 22 Distribution of Potamogeton alpinus in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

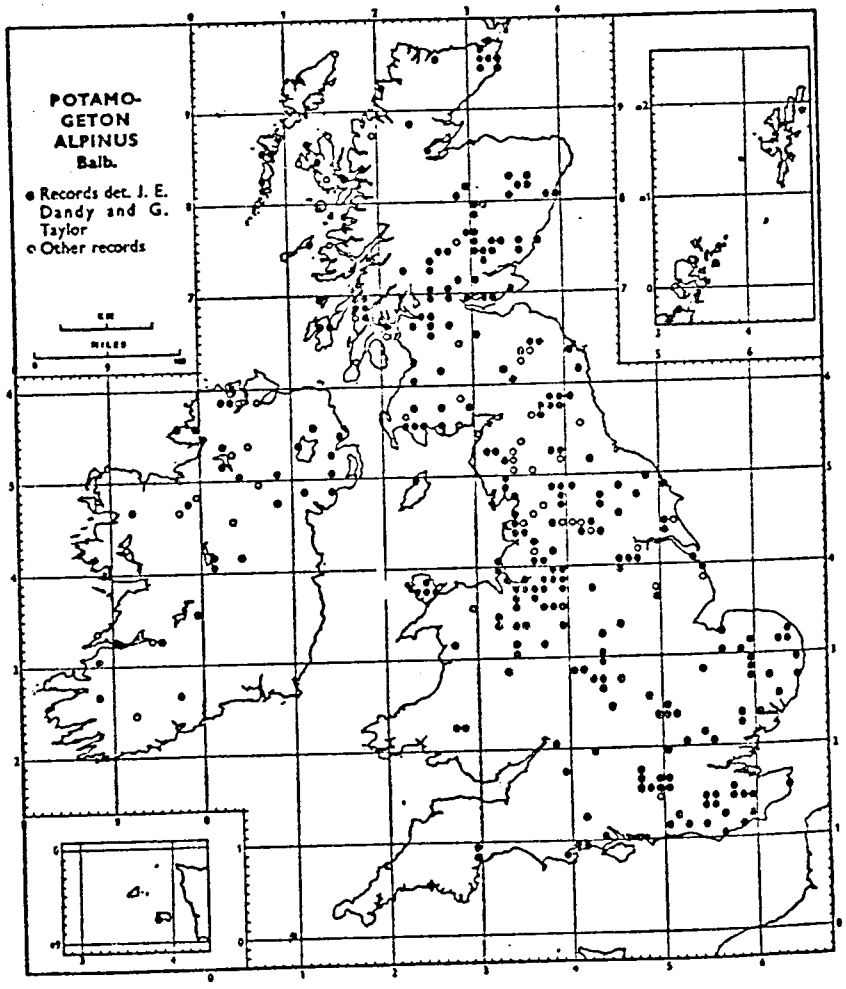


Fig. 23 Distribution of Parentucellia viscosa in Ireland and Britain.

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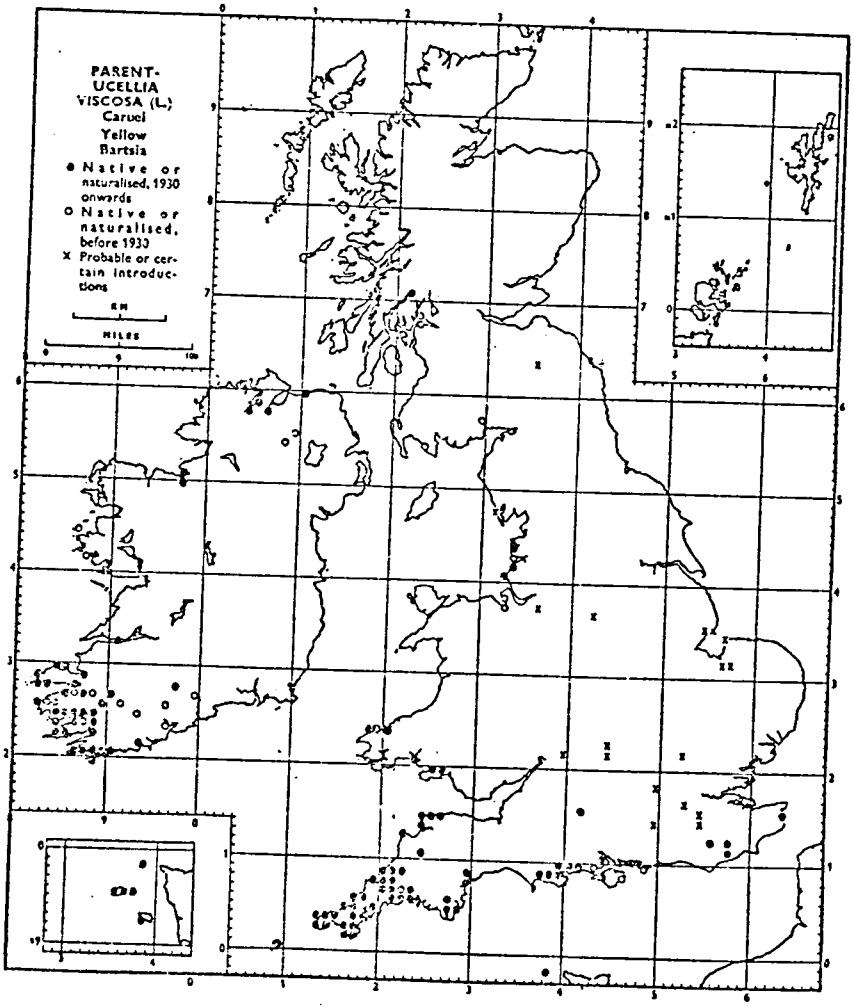


Fig. 24 Distribution of Cystopteris fragilis in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

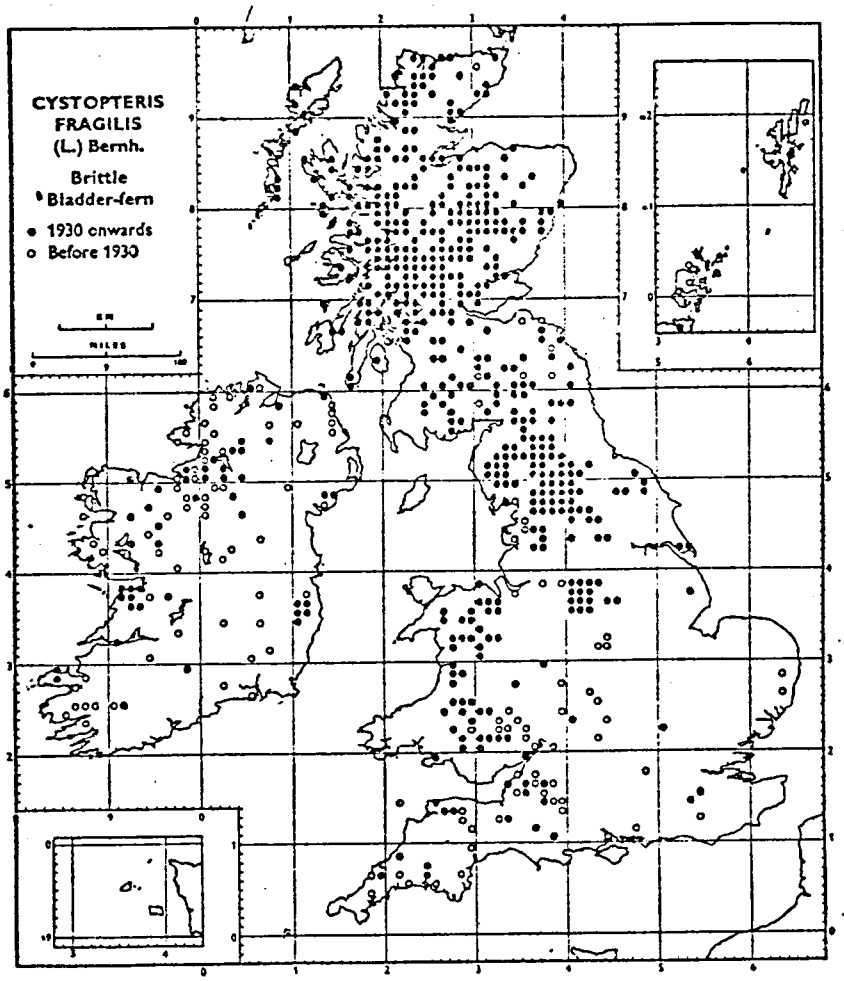


Fig. 25 Distribution of Lycopodium alpinum in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

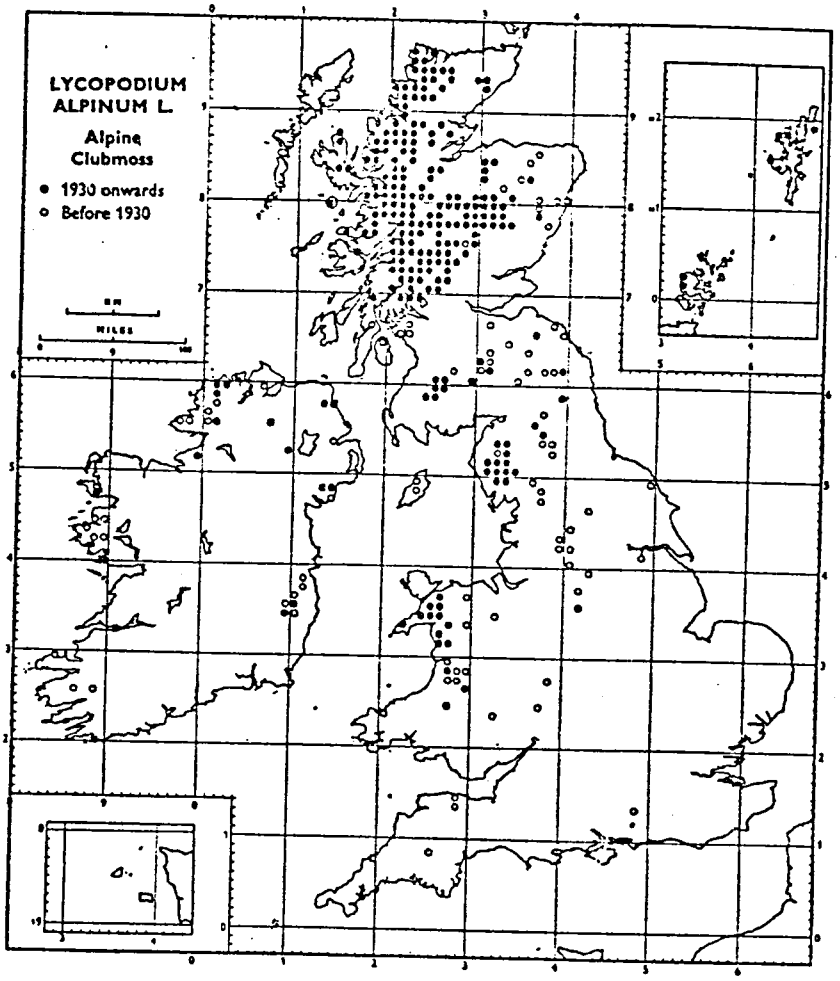


Fig. 26 Distribution of Saxifraga oppositifolia in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

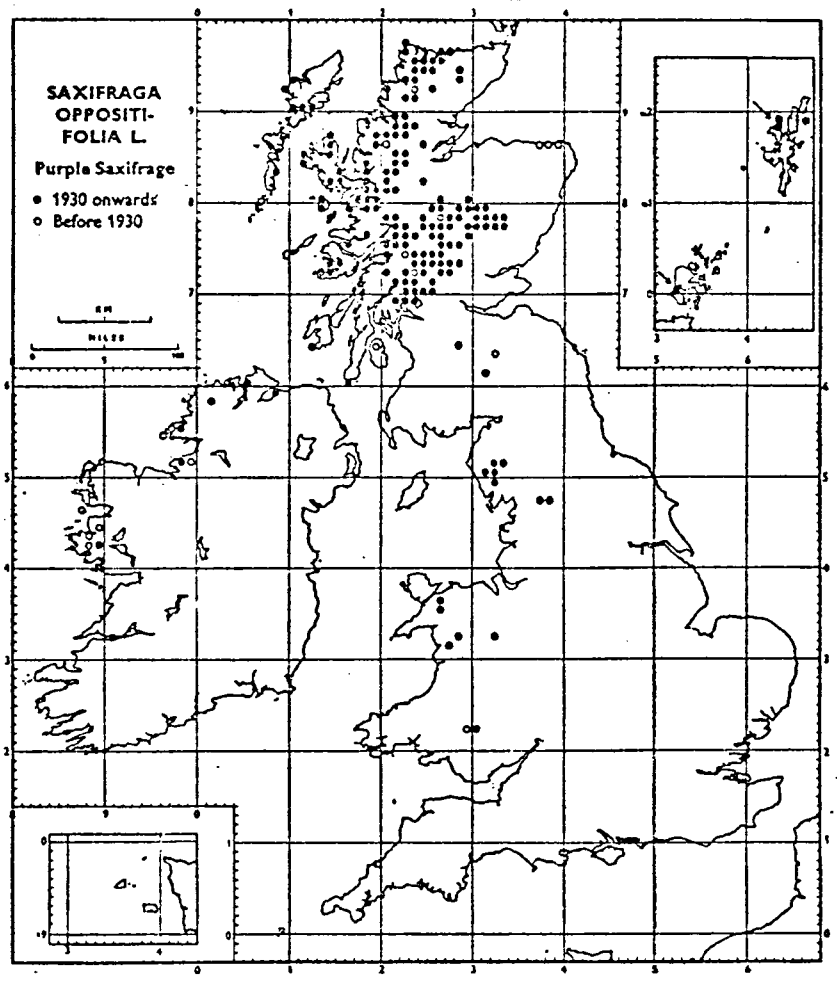


Fig. 27 Distribution of Carex bigelowii in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

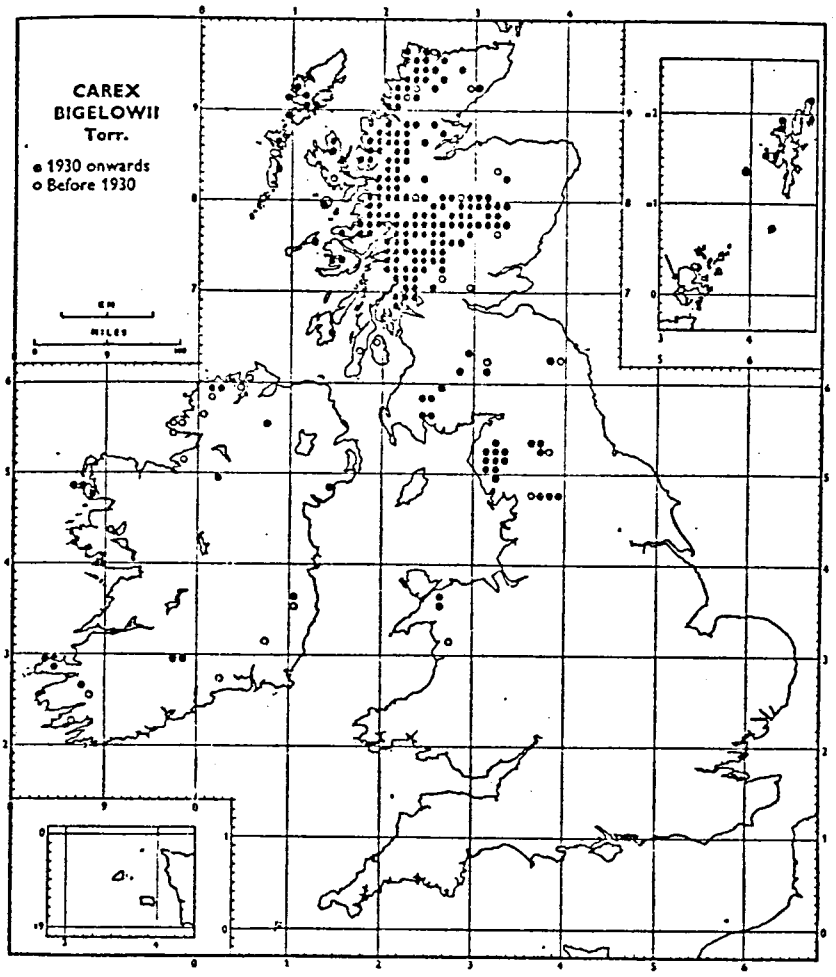


Fig. 28 Distribution of Saussurea alpina in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

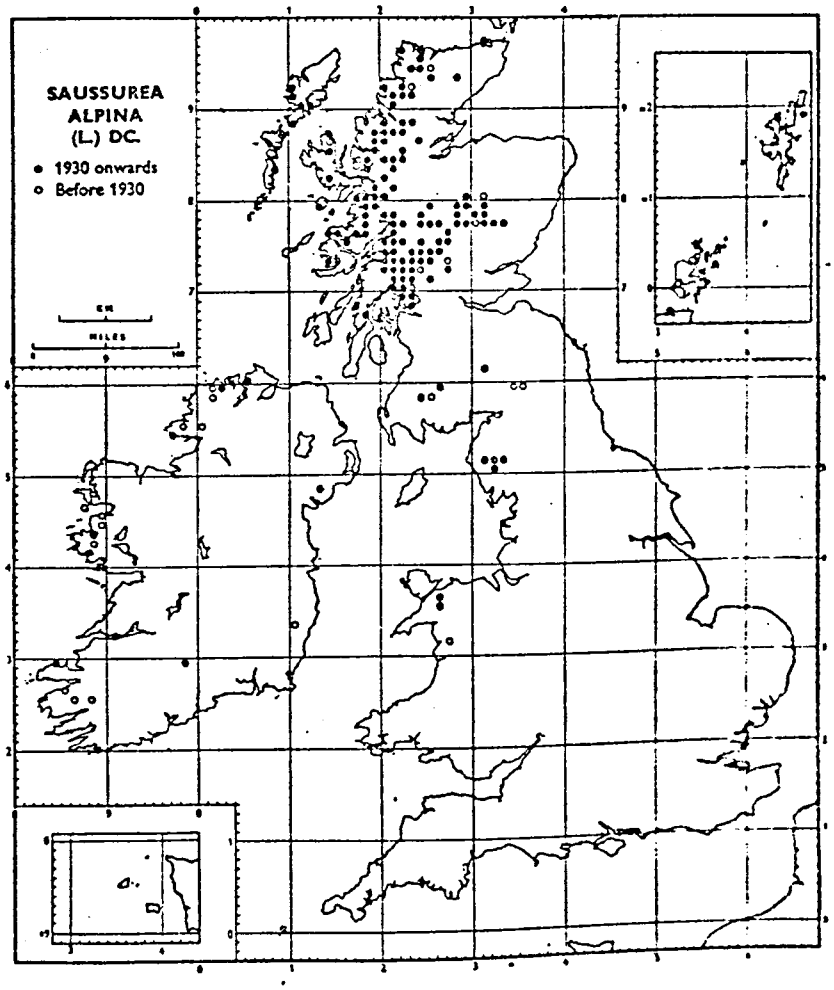


Fig. 29 Distribution of Oxyria digyna

in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

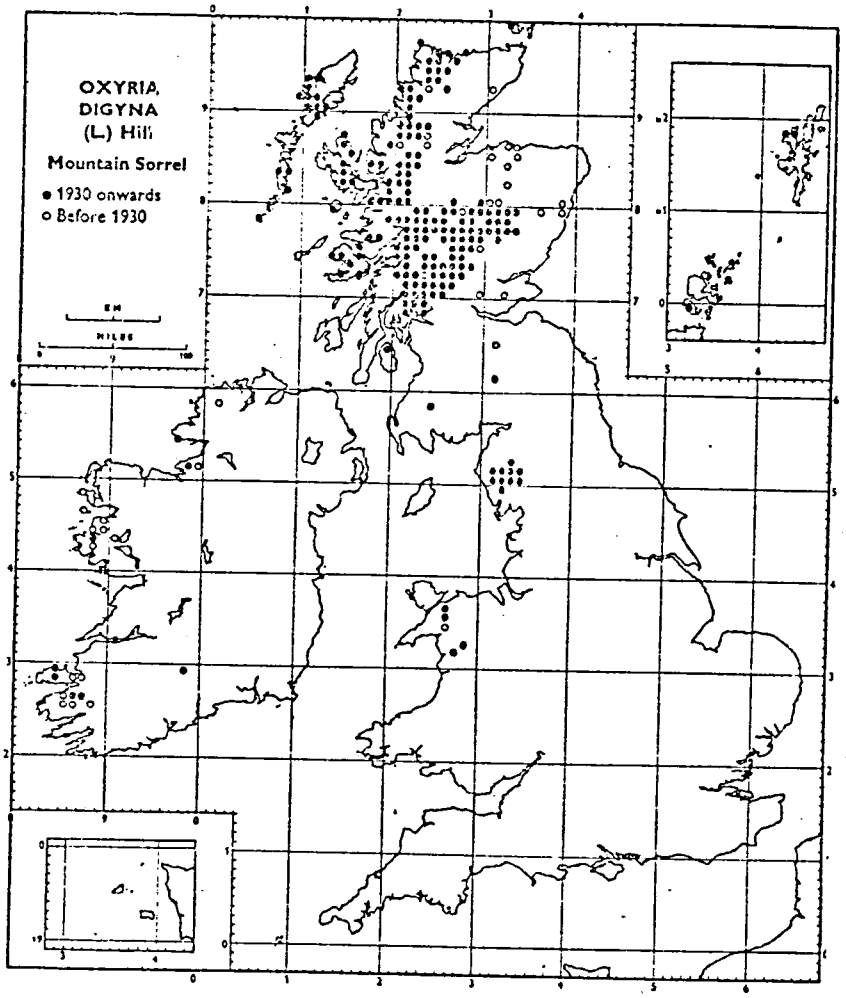


Fig. 30 Distribution of Euphorbia amygdaloides in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

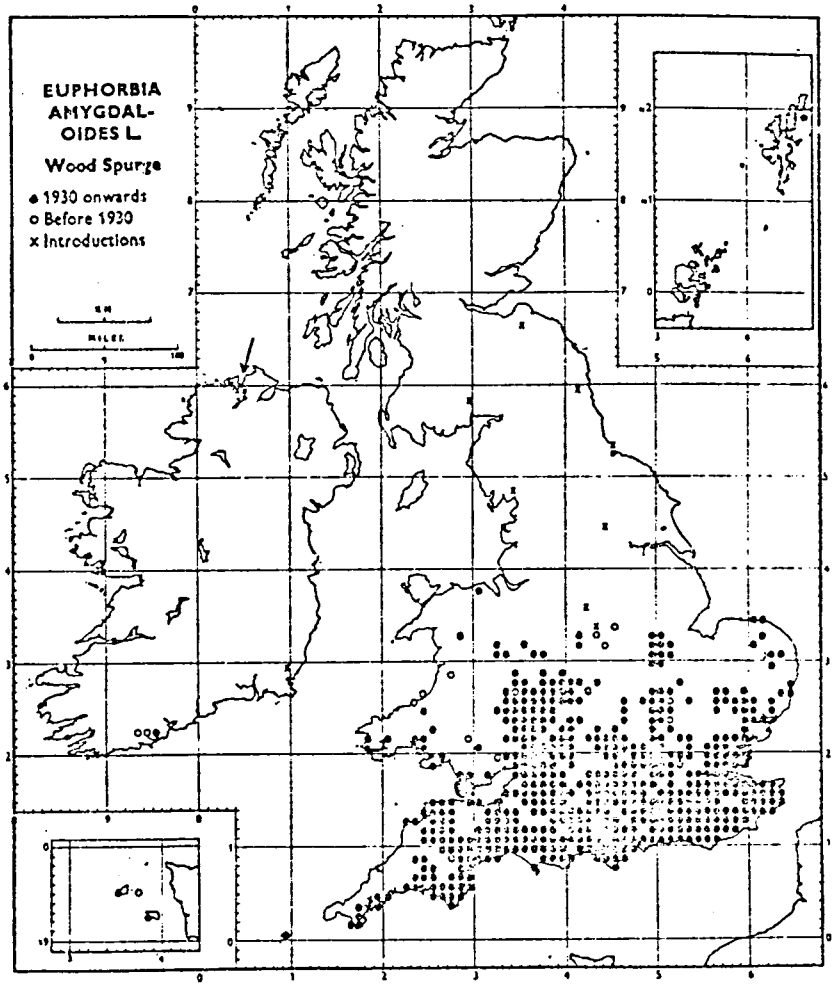


Fig. 31 Distribution of Najas flexilis in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.

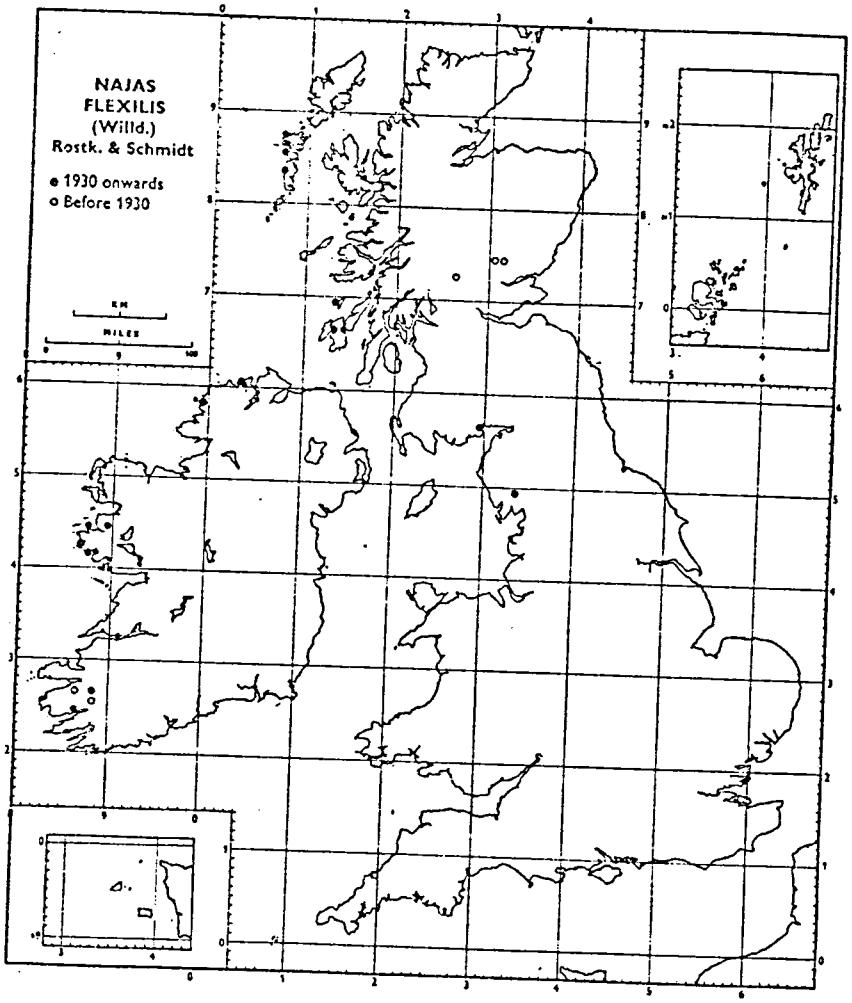
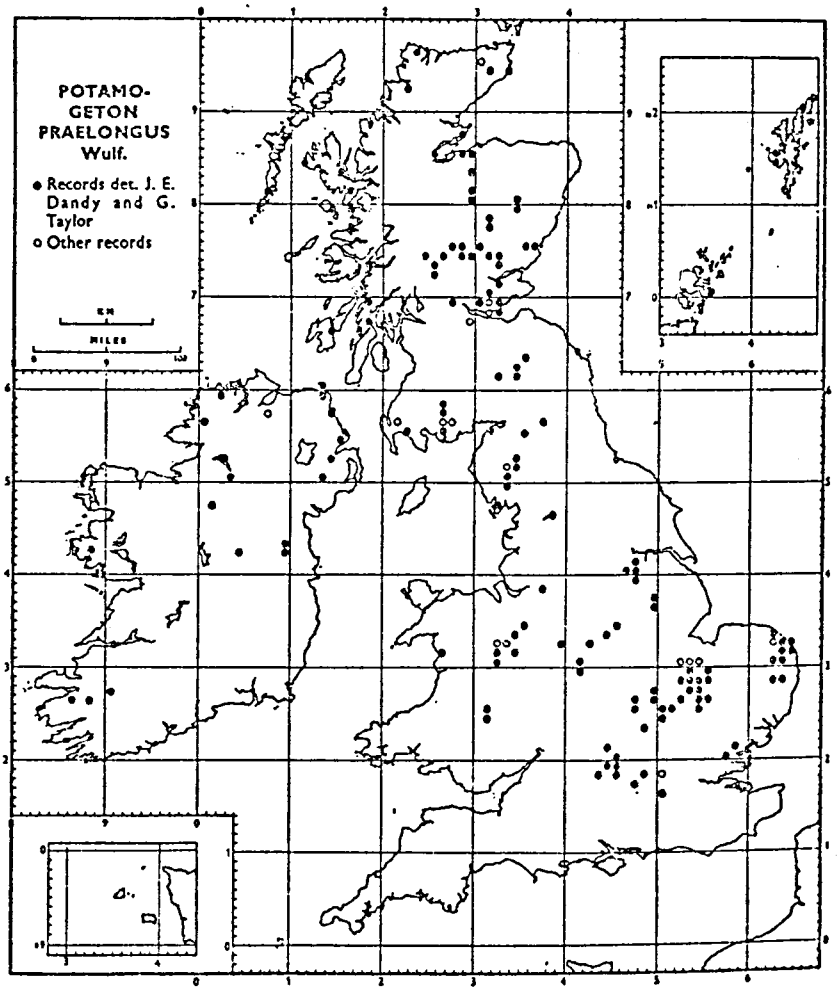


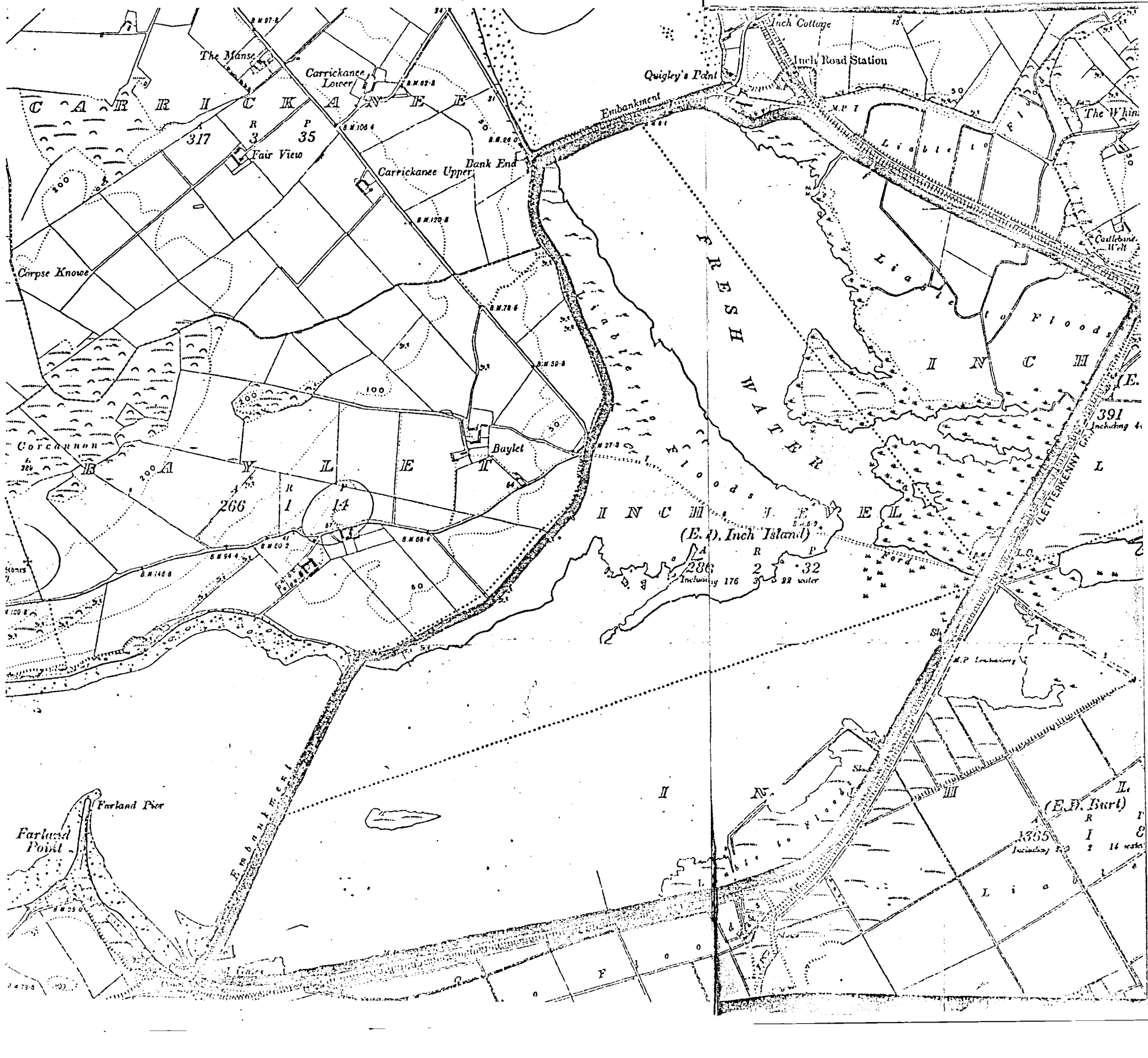
Fig. 32 Distribution of Potamogeton praelongus in Ireland and Britain.

Taken from "Atlas of the British Flora" prepared by the Botanical Society of the British Isles.



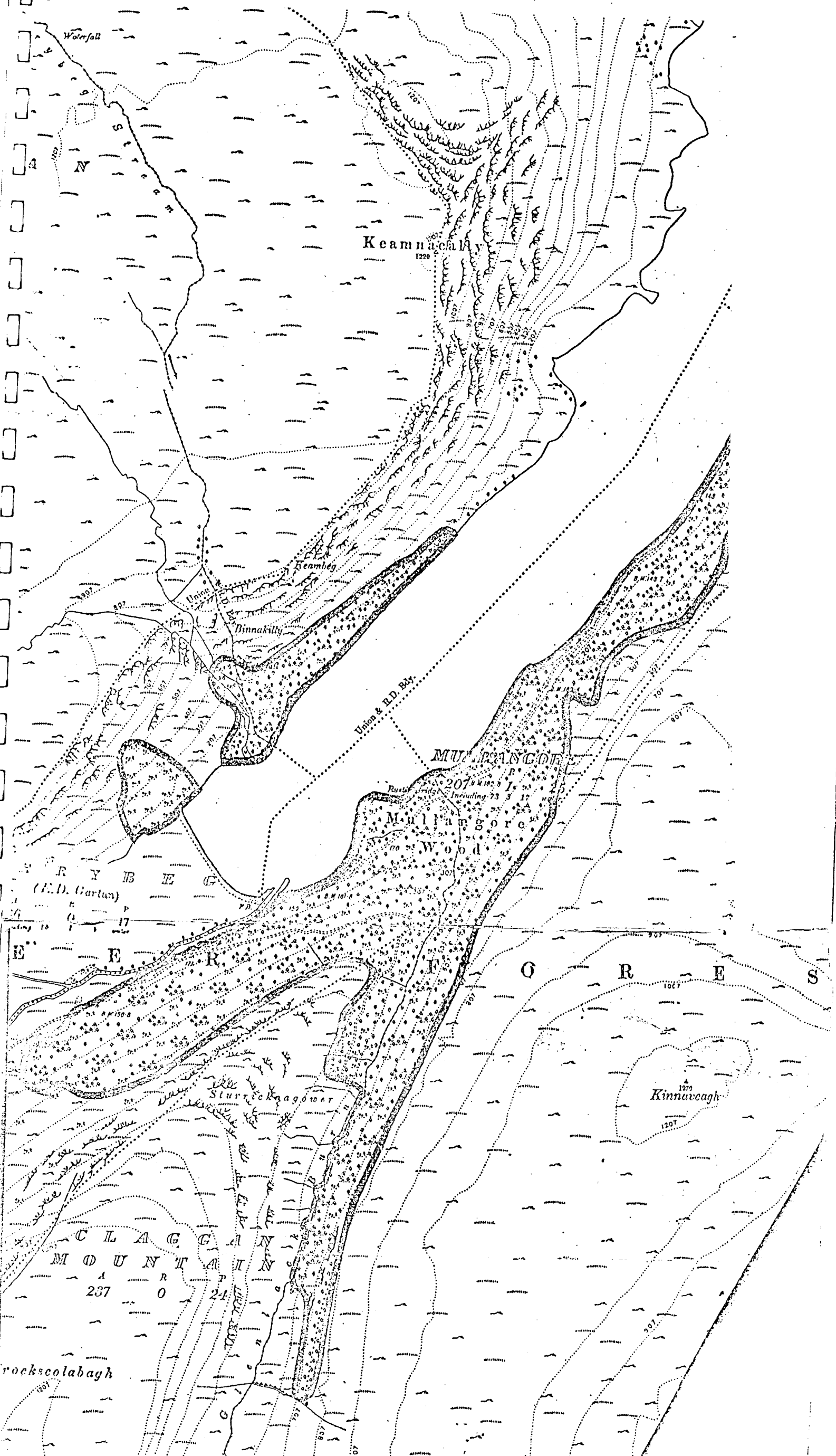
MAP SHOWING AREA OF SCIENTIFIC INTEREST — 4

Scale: 6 Inches to 1 Mile



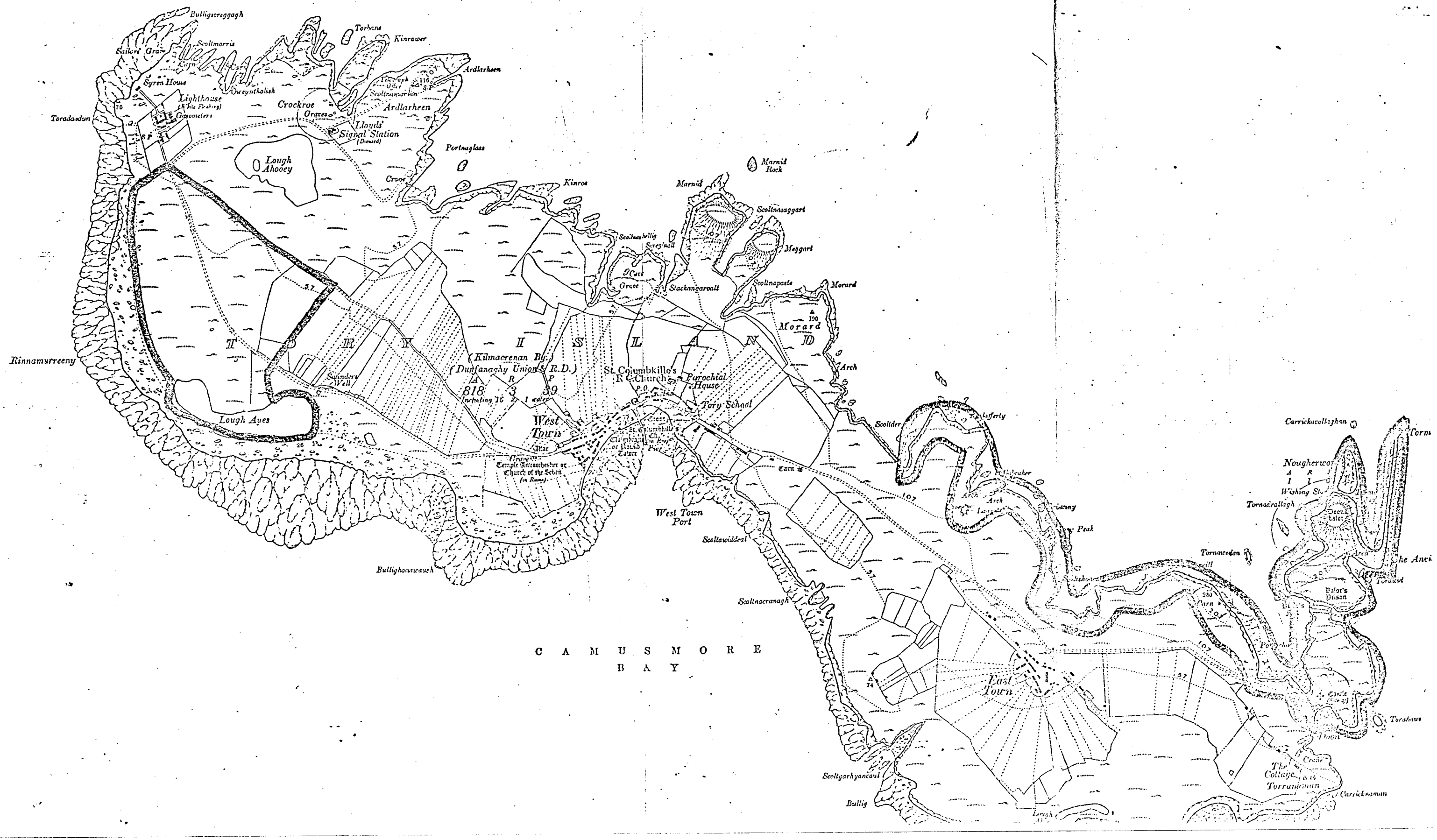
MAP SHOWING AREA OF SCIENTIFIC INTEREST — 16

Scale: 6 Inches to 1 Mile



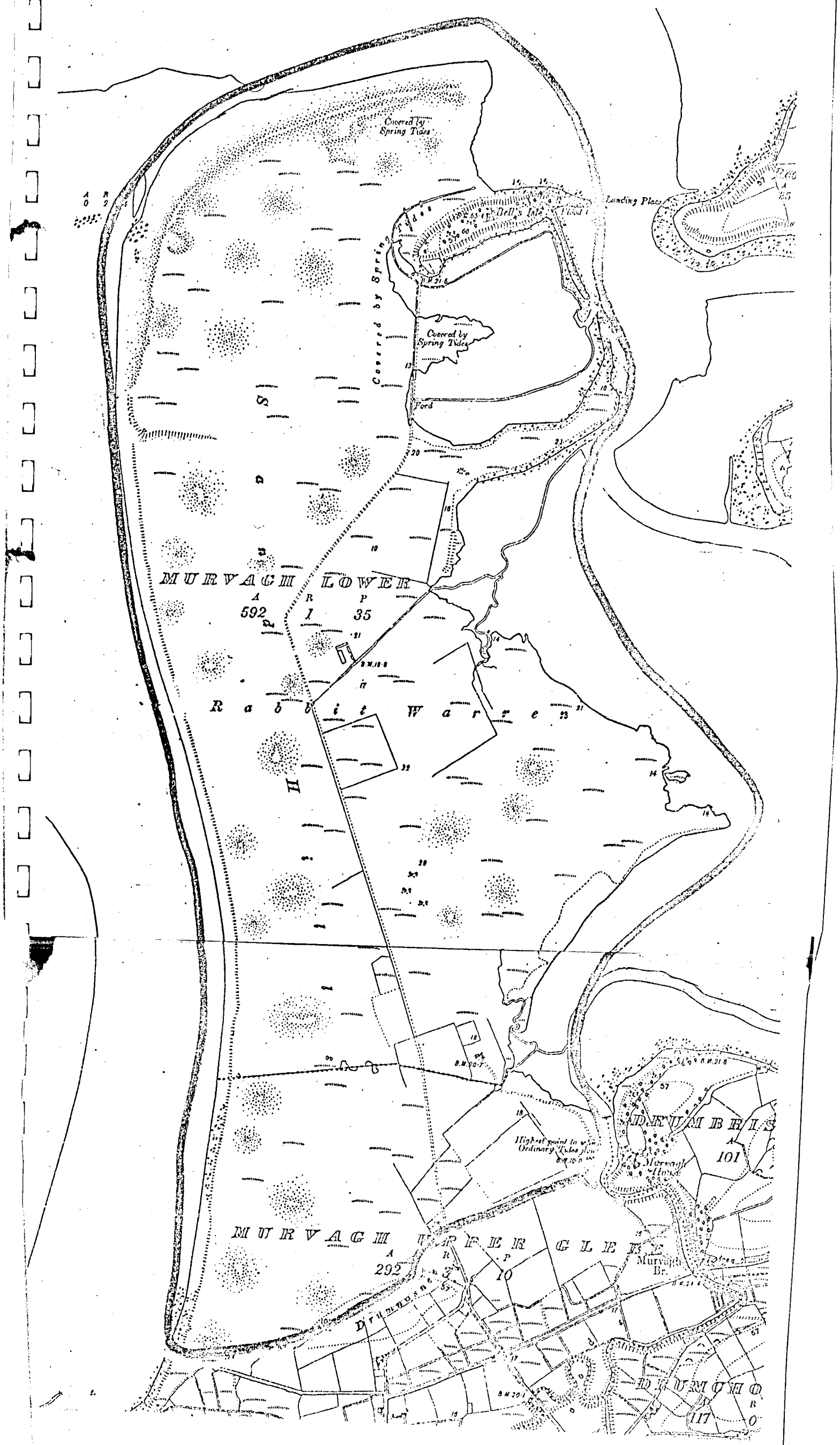
MAP SHOWING AREA OF SCIENTIFIC INTEREST—35

Scale: 6 Inches to 1 Mile



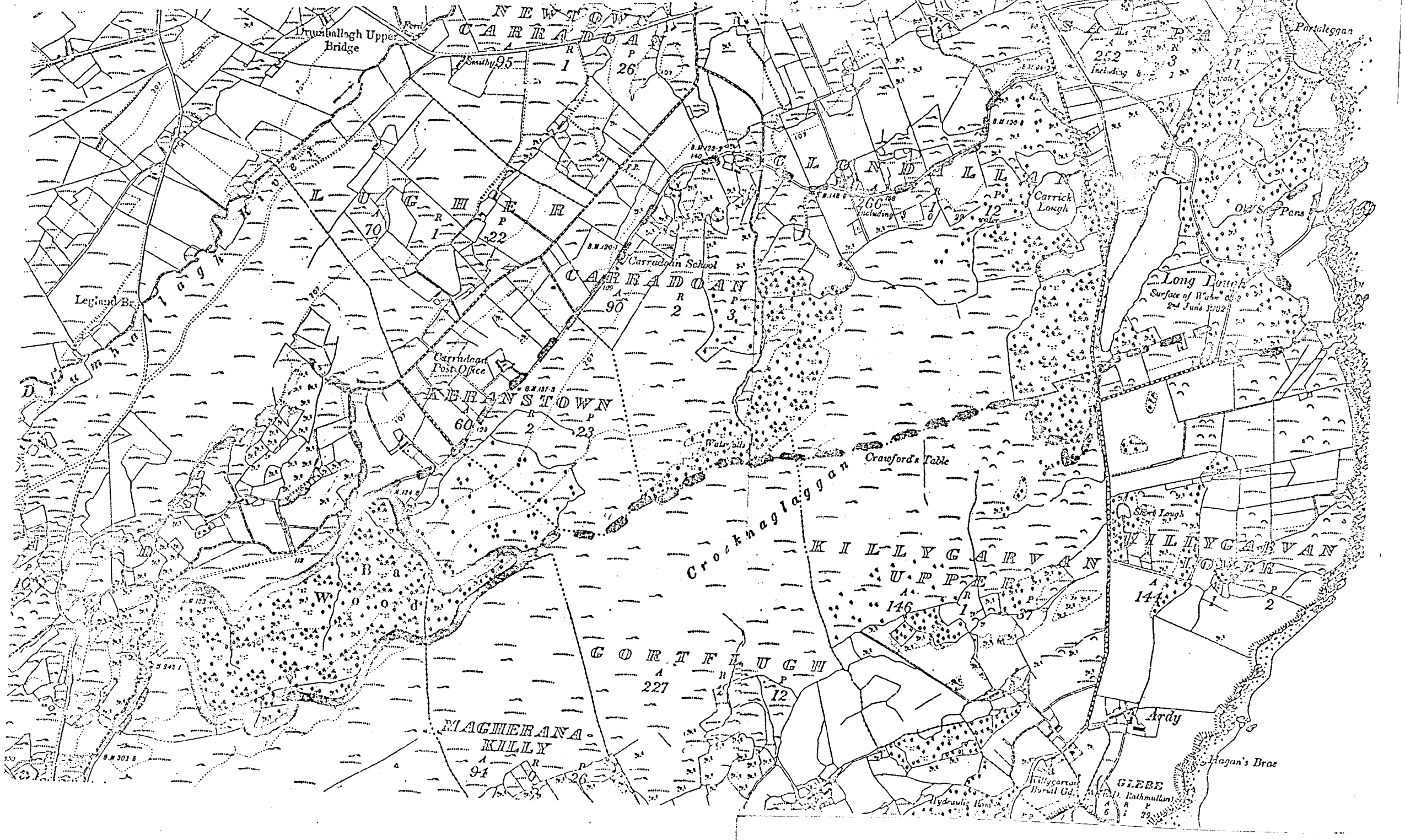
MAP SHOWING AREA OF SCIENTIFIC INTEREST — 47

Scale: 6 Inches to 1 Mile



MAP SHOWING AREA OF SCIENTIFIC INTEREST — 50

Scale: 6 Inches to 1 Mile



MAP SHOWING AREA OF SCIENTIFIC INTEREST — 33

Scale: 6 Inches to 1 Mile