An Foras
Forbartha
Teoranta

The National
Institute
for Physical
Planning and
Construction
Research

CONSERVATION AND AMENITY
ADVISORY SERVICE

# AREAS OF SCIENTIFIC INTEREST IN COUNTY SLIGO

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1978

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PREFACE

An Foras Forbartha has been engaged in preparing a comprehensive National Heritage Inventory for a number of years. The Inventory includes both man-made structures and the natural environment. One purpose of the inventory is to make available to local authorities specialist information for incorporation in Development Plans. Under the provisions of the Local Government (Planning and Development) Acts, 1963 and 1976 each planning authority is required to make a Development Plan for the area of the authority and to review it at least once in every 5 year period. The plan must contain objectives, inter alia for preserving, improving and extending amenities. It may also contain objectives in relation to any of the purposes mentioned in the third schedule to the Act including the preservation of buildings of artistic, architectural and historical interest. The other purpose of the inventory is to provide an authoritative and systematic record of the heritage as it exists. In fulfilling this second objective, An Foras Forbartha has discharged one of the main recommendations contained in its report The Protection of the National Heritage, published in 1969.

Following the publication of this report, a National Heritage Inventory Working Party, consisting of representatives of government departments and agencies concerned with the National Heritage, was established in December 1969 to ensure co-operation and to prevent duplication of effort in the preparation of the inventory. The departments and agencies represented on the Working Party are:

> Bord Failte, Bord na Mona, Department of Agriculture and Fisheries (Fisheries Division), Department of Lands (Forest and Wildlife Service), Department of Local Government, An Foras Forbartha, An Foras Taluntais, Geological Survey, National Gallery, Office of Public Works and the Ordnance Survey.

The establishment of the Conservation and Amenity Service by An Foras Forbartha in 1971 made it possible for additional specialist staff to be engaged by the Institute allowing work on the National Heritage Inventory to be speeded up.

Preliminary reports have now been completed for the twenty-seven administrative counties. The preliminary reports have been finished within six years, a remarkable achievement for which credit must go to those directly involved in undertaking the county surveys and to the members of the National Heritage Working Party for their considerable help and assistance.

Separate heritage inventory reports on the buildings of architectural interest and areas of scientific interest are being published for each county. These reports are of a preliminary nature. Omission of an item or area should not be interpreted as meaning that it does not have a heritage value. It is anticipated that these reports will be continuously expanded and improved and in this context comments and observations from individuals and organisations are invited.

This report has been prepared by Tom Curtis under the direction of Rod Young. It is based on a preliminary report on areas of scientific interest in Co. Sligo, prepared by Roger Goodwillie in 1972.

David Cabot,
Head of Conservation and Amenity Research,
Planning Division.

CONTENTS

# 1. INTRODUCTION

## Basis of the Survey

The survey was carried out in order to list a representative range of natural and semi-natural habitats as well as the sites of special significance in the county. These latter may, for example, be important in having unusual environmental conditions, or for showing exposures of rock that are valuable in elucidating geological history. In approach, the survey is basically a botanical one with inputs from geology and earth sciences, ornithology and other branches of zoology. There is good reason for this apparent bias. A biological site is of interest because of its diversity (number of species) or the density of one or a group of organisms. Both these things are a reflection of habitat conditions and where they are very high or low they show that unusual site factors are present. The problem is how to find these extremes and identify the real from the apparent ones.

Work on invertebrate animals (insects, snails, spiders etc.) is difficult and more time consuming than that on the larger plants. Consequently, the state of knowledge about this part of the Irish fauna is incomplete, and in many parts of the country practically non-existent. Repeated visits are required to measure either diversity or density and therefore many interesting communities must remain unknown at the present time. If they have been sampled they may be impossible to put into perspective — nobody knows whether they are unusual or not. The groups of animals which one can evaluate more conveniently are the larger, better-known organisms such as birds and to a more limited extent fish and butterflies. Data from these groups and from others, where it is meaningful, have been incorporated into the site analysis.

Since all animal life depends on plants for food, whether directly or indirectly through intermediate plant eating forms, diversity and density in the plant cover indicates diversity and density in all other forms of life. It therefore seems reasonable to give greatest weight to the botanical features of the environment.

An indication that unusual factors are present at any site is often given by the presence of a rare species of plant or animal : one which is intolerant of most environments and therefore restricted in its distribution. Such a species may be important in its own right as part of the Irish flora or fauna. As such it can be removed from the countryside and grown in a garden or a cage. However, the intricate community from which it comes is impossible to recreate, once it has been destroyed. For this reason, the community is a more valuable entity. It may conceal other unusual things, some of greater value to mankind.

The survey has concentrated on natural and semi-natural communities since these cannot be developed artificially, at least within a reasonable period. It does not of course exclude man-made ecosystems and where natural processes have led to the colonisation of these by secondary organisms, there is often considerable interest; for example, in manmade lakes and sloblands and sometimes in planted woods.

## Vulnerability of Natural Areas

In the course of normal development many natural areas are being and will continue to be subjected to different conditions than those to which they have become adjusted. All will be reflected by changes in the ecological balance and in some cases these will be to the detriment of the area. Slow modifications may be caused by the addition, or removal, of nutrients and by other selective pressures such as grazing, trampling and fire. They are not so noticeable as rapid changes due to drainage or physical destruction, but they may be just as damaging.

Woodland is one of the most vulnerable communities for it can be swiftly destroyed if a concerted effort is made. Clearance may be carried out to increase the agricultural area of a farm, to replant with other more productive tree species or, more locally, for road widening and housing development. When a deciduous wood is replaced by a coniferous one, either by felling and replanting or by underplanting, the associated community of animals and plants is totally altered. Although the actual numbers of birds and insects may build up again to their former levels, the species content is much more restricted and usually is of little interest. The belts and lines of mature trees that may be left, in no way maintain an intact community and contribute only to amenity. On the other hand quite small blocks of trees can preserve a good deal of their former interest.

In woodland, a low density of grazing animals may have only a slight effect on the community, preventing some species from flowering or spreading naturally. As it builds up, however, it gradually removes the undergrowth, changing the internal climate and affecting the insect (and bird) life. Tree seedlings are gradually killed or suppressed and no saplings are recruited. These are necessary for the survival of the wood itself. The trees become old and susceptible to rot and windthrow and the canopy is opened out. The evergreen shrub, Rhododendron ponticum, has a similar effect by shading, and constitutes a worse threat, or at least a more intractable one, to the future of many woods.

By contrast, grazing unmanaged grassland seldom does significant damage since this community is adapted to it. In places, grassland depends on a certain level of grazing to prevent scrub invasion but where the plant

cover is thin, physical damage can be caused by trampling on such sites as eskers and blanket bog. In places affected by human trampling, the pressure is often aggravated by vehicles or fires in sand dunes or on lakeshores the vegetation can break down and expose the soil to erosion.

Generally more serious to 'natural' grassland is the application of fertilisers. This is a different selective pressure and it favours coarse fast-growing grasses at the expense of the flowering plants that usually abound in such pastures. Certain species can disappear and with them their dependant butterflies and other insects. Local extinctions like this are seldom induced by grazing although it does often restrict flowering. Herbicides can obviously have a great effect where ever they are used. Generally, this is in greatly modified communities such as fields and gardens but where roadside verges are also treated, the depletion to the local flora and fauna can be significant.

## Methods of Protection

Because of limited public interest in conservation up to a few years ago, the legal framework necessary for the adequate protection of our natural heritage is only just coming into existence. However, even those statutes that have been available up to this have not been fully utilised.

The main laws concerned are the Local Government (Planning and Development) Acts of 1963 and 1976 and the Wildlife Act 1976. In addition, there are certain laws under which conservation can be secured as an incidental benefit of their main purpose. These include the Foreshore Act, 1933, the Forestry Act, 1946, the Fisheries (Consolidation) Act, 1959, and the Protection of Animals (Amendment) Act, 1965.

The Local Government Acts allow a planning authority to develop or secure the development of land for conservation under the general area of preserving or improving amenities. This includes both ecological and geological sites. If conservation objectives are written into a Development Plan it is the duty of the Local Authority to carry them out.

The actual means of carrying them out lies in three positive instruments and in the more general obligation for a developer to retain planning permission before development starts. Residential and industrial works can be prevented in any area in this way, but agricultural buildings and those connected with forestry are largely exempt. Similarly, the Local Authority is given no control over large scale agricultural changes such as drainage and afforestation.

The Special Amenity Area Order under this Act reinforces the process of development control and gives a stronger hand to the planning authority seeking to prevent development, as it has the backing of the full Council and later the Minister and Oireachtas. With such an Order, development can be prevented or controlled at a certain level in the interest of amenity and/or nature conservation. Where this latter aspect is important the authority can go further by making a Conservation Order to protect the flora or fauna in a particular area. The purpose of the Tree Preservation Order is to impose a management plan on trees and woodlands of special amenity value - protecting the more important trees, but allowing felling and replanting when necessary. Both these Orders can be made without compensating the owner, and the planning authority may be reluctant to use them for this reason. Provision is made for compensation, but this usually has to come from local rather than central funds. Once such an order has been made, yhe planning authority has the power to acquire the site. In some cases it can also be obliged to purchase land where development has been refused.

The most important development in recent years has been the passing of the Wildlife Act, 1976, which gives the Minister for Lands, in consultation with a Wildlife Advisory Council, wide powers for the conservation of all wildlife and their habitat. He is able to establish nature reserves on State land, including the seabed of territorial waters, and also to designate refuges for fauna on private land after compensating the owner. Where drainage schemes will affect nature reserves he can modify them to minimise or avoid damage.

## 2. DESCRIPTION OF THE COUNTY

The most outstanding geological feature of Co. Sligo is the high, extensive limestone plateau, which dominates the landscape in the north-east of the county. Here the upper beds of Carboniferous limestone, which have been eroded away over much of the Central Plain give a landform which is unique in Ireland. The plateau has several outliers, as at Knocknarea and further south at Keshcorran and the Bricklieve Mountains. The latter group are cut off from the main mass of the limestone mountains of Sligo by a ridge , over which limestone was once deposited but later removed by erosion. This ridge had its origins in the Caledonian orogeny and now forms the backbone of the Ox Mountains, the western parts of which are broad and high and consist of granite and gneissic rocks. Quartzite outcrops conspicuously at Collooney and a narrow wedge of gneiss continues eastwards, outcroping at the southern shore of Lough Gill and penetrating some of the limestone hills surrounding the lake. The rest of the surface of the county is lowlying and is drift covered.

The richest mountain flora in Ireland occurs on the cliffs of the Dartry Mountains and in Glenade, across the county boundary in Leitrim. Many rare species of higher plant, ferns and mosses grow here in abundance and for several species this is their only locality in the country. In such a rich community there is likely to be a rich and diverse invertebrate fauna, though little work has yet been done in the area. Because of the unique character of the flora, the area is of great scientific importance.

A similar, though reduced, flora occurs on the south side of the Glencar valley and on Keshcorran and the Bricklieve Mountains. The latter range has a complex topography, contains interesting plant communities and includes a well-known prehistoric settlement. In addition, the remains of several species of animals have been found in the caves of Keshcorran. The Ox mountains contain some of the species found in the Bricklieve range but, as acidic conditions generally predominate, the flora is not as diverse - though the cliffs of Knockalongy and Knockachree hold interesting communities.

As none of the rivers are of a large size there has been little opportunity for the development of a diverse riparian flora. However, there are numerous lakes scattered throughout the county, the largest of which are L. Arrow, L. Gara and L. Gill. The two former lakes are of interest for the numbers of wildfowl that winter there, Lough Gara being the most important site in the county for wintering birds. Lough Gill, lying between the limestone and metamorphic hills, is an important area scientifically. Its northern shores are bordered by steep limestone hills whilst to the south gneiss and schist occur, which changes the character of the flora dramatically - here acid oak woodland predominates. The smaller islands in the lake hold a native woodland vegetation which includes the Strawberry tree, (Arbutus unedo), which is found elsewhere only in Cork and Kerry.

On the mainland, however, native woodland occurs only at the edges of the lake, as areas formerly wooded have been greatly interfered with as a result of forestry operations. However, the lake shore still contains a rich flora including several uncommon species, though truly aquatic vegetation is poorly developed.

Many of the sites in this report occur along the coast and include several areas of geological interest, such as Streedagh Point and Serpent Rock. Though cliffs occur along the coast they rarely hold good examples of cliff vegetation, though that at Rosses Point holds a unusual [illegible] assemblage of species. Many sand dunes occur, but in only a few cases has a rich dune flora developed. This is due in part to erosion by wind, but in many of the areas vegetation cover has been damaged by over-grazing and recreational pressures. Management may be necessary in some of the dune areas to allow revegetation to take place and consequently the formation of stable dunes.

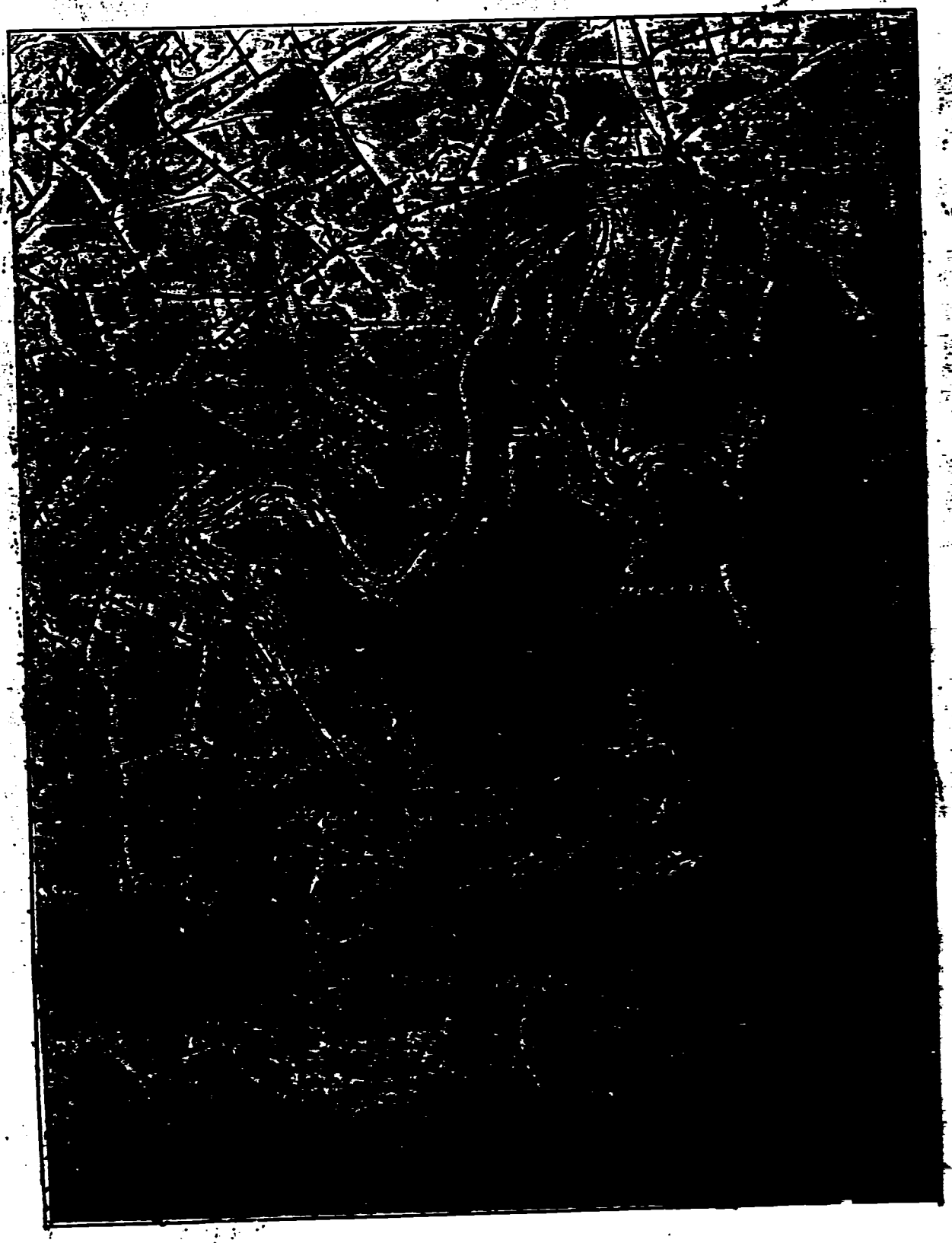
Few large marshes occur in the county, the only areas of interest being Ballygilgan and Ardtermon Fen. However, both Ballysadare Bay and Derinch Island hold good examples of brackish vegetation, whilst at Ballysadare there is salt marsh in which some unusual species of plant are found.

The largest island off the coast is Inishmurray, which is noted for its archaeological remains and its important sea-bird colonies. Ardboline and Horse Island also provide important habitats for colonies of breeding sea birds.

Several areas of woodland are included in this report and many of them are controlled by the Department of Lands, Forestry division. The most diverse stretches of woodland occur around L. Gill and both acid oak woodland and ash/oak woodland on limestone occur. The latter type is extremely rich floristically and it contains many uncommon species both in the shrub and field layer. The hedgerow flora at the fringes of these woodlands is also diverse and includes black bryony (Tamus communis), which is unknown elsewhere in Ireland.

As development occurs and scientific knowledge increases the scientific importance of various areas will change and continuous reassessment is required to monitor such changes. It will be seen that Co. Sligo contains many areas of scientific importance, each of which has been given a rating. These ratings may change however as development pressures destroy some sites and modify others. Thus a report like this can never be said to be complete.

BEN BULBEN UPLANDS.



Scale : 1 cm = 634 m (0.4 mile)

Sheets : ½" : 7 1" : 43 6" : Sligo 5,6,8,9

BEN BULBEN UPLANDS

| | |
|---|---|
| Area | c. 1400 ha |
| Grid Reference | G 69 43 |
| Scientific Interest | Ecological, botanical, geological |
| Rating | International Importance |

Ben Bulben and the Dartry Mountains consist of the upper beds of Carboniferous limestone capped in places by shales. They stand up in a high plateau 300-450 metres above the surrounding country and the edges, having been long exposed to denudation, form lofty cliffs ranging from 15-300 metres in height. Below these cliffs block scree usually occurs at an angle of 40-50 degrees slope.

The mesa type of landform which has arisen from the long exposure of the upland areas to erosion is of great interest geomorphologically, as are the upper Visean reefs exposed on the cliffs and on some of the summits. In addition, this region is also the type locality for the Ben Bulben shale, the Glencar limestone and the Dartry limestone.

Botanically the chief importance of the area lies in the profusion of alpine plants which occur on the cliffs throughout the area. A wide variety of alpine species occur, including some species not found elsewhere in Ireland. Nowhere else in the country are so many species to be met with in such abundance, particularly on the cliffs of the Gleniff valley.

Throughout the site the steeply sloping screes below the cliffs are well vegetated, though very wet owing to run-off from the higher grounds. Here Bent Grass (Agrostis stononifera), Golden Saxifrage (Chrysosplenium oppositifolium) and Yellow Mountain Saxifrage (Saxifraga aizoides) are common, with Sweet Vernal Grass (Anthoxanthum odoratum) and the Sedge, (Carex panicea).

Conditions on the cliffs are also extremely wet and here the alpine vegetation is best developed. The tree and shrub species include Willow (Salix phylicifolia), Yew (Taxus baccata) and Juniper (Juniperus communis). The commonest species occurring throughout the region include the ferns, (Cystopteris fragilis), (Asplenium viride), (Hymenophyllum wilsonii) and (Polystichum lonchitis), Meadow Rue (Thalictrum minus), Welsh Poppy (Meconopsis cambrica), Roseroot (Rhodiola rosea), Harebell (Campanula rotundifolia) and Viviparous Fescue (Festuca vivipara).

Species more restricted are Alpine Meadow Rue (Thalictrum alpinum), Hoary Rock Cress (Arabis hirsuta), Purple Saxifrage (Saxifraga

oppositifolia), Mossy Saxifrage (S. hypnoides), Mountain Sorrel (Oxyria digyna) and Mountain Avens (Dryas octopetala). Where the cliffs are interrupted by more gently sloping ground, grassy vegetation usually predominates, but where the underlying rock outcrops Mossy Campion (Silene acaulis) and Alpine Sedge (Carex bigelowii) are found. Several maritime species also occur commonly throughout the area e.g. Bladder Campion (Silene maritima), Sea Plantain (Plantago maritima) and Scurvy Grass (Cochlearia officinalis).

The summit of the plateau is peat covered and dominated by Ling (Calluna vulgaris) and Bell Heather (Erica cinerea), with Lesser Twayblade (Listera cordata) occurring commonly underneath the former. Denudation of the peat cover is taking place along the edges of the plateau and where conditions are more open Crowberry (Empetrum nigrum) and Cowberry (Vaccinium vitis-idaea) are frequent.

The list of bryophytes for the area is large and the region has been visited by many expeditions. Species of the following genera are known to occur: - Timmia, Blasia, Encalypta, Mnium, Amblystegium, Reboulia and Madotheca.

In view of the remarkable floristic richness of the area, many interesting invertebrates might be expected to occur, though to date no work has been carried out on any of the groups.

Evaluation

This plateau area and its extension into Leitrim has been called 'botanically, the richest in Ireland'. It provides the best example in the country of alpine and artic-alpine vegetation and includes two species which occur nowhere else in Ireland. It is rich also in species of bryophytes and promises to hold an interesting range of invertebrates. For these reasons it is of great interest ecologically.

However the re-opening of mine workings in the area may constitute a threat to many of the unusual species occurring on the cliffs and hence a thorough survey of the area surrounding the mine should be carried out and the potential changes to the cliff flora assessed.

GLENCAR CLIFFS

**Scale** 1 cm = 105 m (115 yds)

**Sheets** ½" : 7 1" : 43 6" : Sligo 9

GLENCAR CLIFFS

| | |
|---|---|
| Area | 31 ha |
| Grid Reference | G 73,41 |
| Scientific interest | Botanical; ecological |
| Rating | National importance |

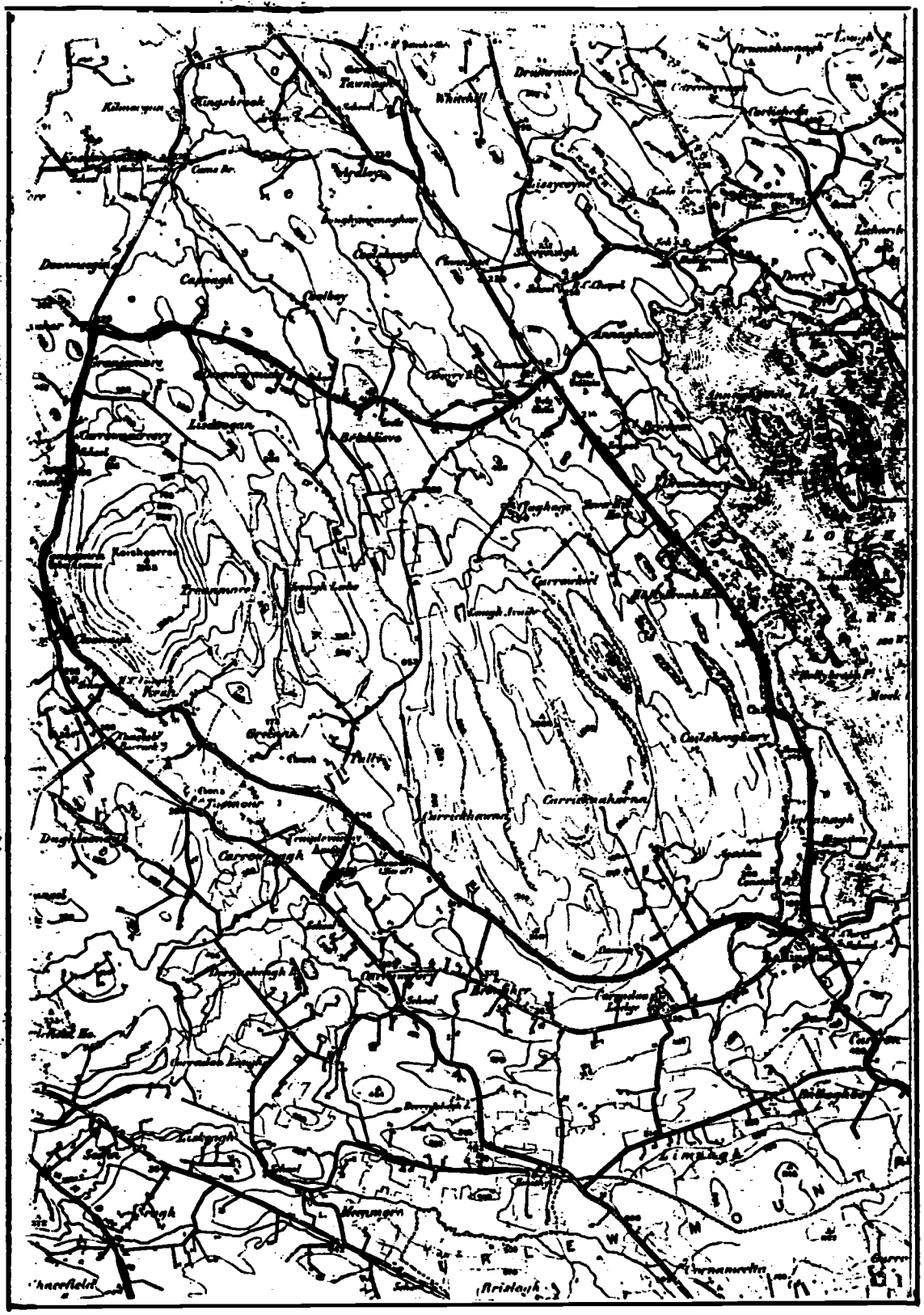
These cliffs are similar to those of the Ben Bulben region, but are considerably more eroded and wetter. The alpine communities found in the last area also occur here, but not in such abundance and many of the rarer species are absent. A few species absent from the Ben Bulben area, however, are common here, including several species of Hawkweed, (Hieracium spp.), Horsetail, (Equisetum variegatum), Butterwort, (Pinguicula vulgaris) and Whitebeam (Sorbus hibernica).

Several tree species occur on the cliffs, including Goat Willow, (Salix caprea), Birch, (Betula pubescens), and Hazel, (Corylus avellana). In the slumped hollows among the cliffs scrub vegetation has developed. Hazel and Goat Willow are the dominant species, but Sycamore (Acer pseudoplatanus), is frequent and is actively regenerating. The ground layer beneath the scrub is rich in bryophytes and Hart's Tongue Fern (Phyllitis scolopendrium), is common.

Evaluation

Though somewhat eclipsed by the floristic richness of the adjoining Ben Bulben area, these cliffs have an interest in their own right and contain several species not found in the latter region. In addition an interesting rare species of animal occurs.

BRICKLIEVE MTNS. AND KESHCORRAN.



Scale 1 cm = 634 M (0.4 mile)

Sheets ½" . 7 1" : 66 6" Sligo : 34. 40

BRICKLIEVE MTS. AND KESHCORRAN

| | |
|---|---|
| Area | 3140 ha |
| Grid reference | G,7,1 |
| Scientific Interest | Geological; botanical |
| Rating | National importance |

This site is a region of karst topography with caves, dry valleys and limestone pavements; its most striking feature being the series of parallel rifts running across the summit plateau. The walls of these valleys vary between 10-30 metres in height and on their floors small peat bogs have developed and in one case a small lake. Fossil coral reefs of Visean age are well exposed and have been called 'patch reefs' by Caldwell and Charlesworth (1).

Botanically the area is extremely rich and though the area is totally underlain by limestone, it is the acidic (cacifuge) flora that is best developed. This has been ascribed by Webb (2) to the humidity of the area.

Throughout the area patches of scrub and woodland occur, mostly on the steep slopes beside the cliffs. Hazel, (Corylus avellana), is the commonest species, followed by Ash, (Fraxinus excelsior), Rowan, (Sorbus aucuparia), Birch, (Betula pubescens), Goat Willow, (Salix caprea), and Holly, (Ilex aquifolium). Elm, (Ulmus glabra), is common throughout the eastern side of the area.

The ground flora beneath the woodland is rich, with Ramsons, (Allium ursinum), Hart's Tongue Fern, (Phyllitis scolopendrium), and Primrose, (Primula vulgaris), the commonest species. In addition, species characteristic of neutral to acidic conditions occur, including Foxglove, (Digitalis purpurea), Buckler Fern, (Dryopteris spinulosa), Water Avens, (Geum rivale), and Frochan, (Vaccinium myrtillus).

By far the most widespread community throughout the region is a calcareous grassland sward dominated by a Bent Grass, (Agrostis sp.), Fescue, (Festuca ovina), and Crested Dog's tail (Cynosurus cristatus) Associated species are False Oat, (Arrhenatherum elatius), Crested Hair-Grass, (Koeleria cristata), Heath Grass, (Sieglingia decumbens), Downy Oatgrass, (Helictotrichon pubescens), Yellow Oat, (Trisetum flavescens), Quaking Grass, (Briza media), Woodrush, (Luzula sylvatica), Heartsease, (Prunella vulgaris), Pignut, (Conopodium majus), Yellow Rattle, (Rhinanthus minor), Lady's Bedstraw, (Galium verum), and the Orchids, (Gymnadenia conopsea), Plantanthera bifolia, and P. chlorantha.

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(1)

(2)

There is also a distinctive flora on exposed limestone at the base of the cliffs and on the cliff ledges, some of the more frequent species being Marsh Valerian (Valeriana officinalis), Early Purple Orchid (Orchis mascula), Shining Cranesbill (Geranium lucidum), Rock Cress (Draba incana), Harebell (Campanula rotundifolia) and Brittle Bladder Fern (Cystopteris fragilis).

Evaluation

This area is of great interest geologically owing to the many karst features which are found here. Botanically it is extremely rich and contains several interesting plant communities - possibly as a result of the unique humidity factors which operate in the region. In addition, many caves occur in which remains of many animals now extinct in Ireland have been found. These include Reindeer, Artic Lemming, Bear and Wolf, and in all seventy species of animal were identified, ranging from snails and birds up to man. (Scharff et al.) (1)

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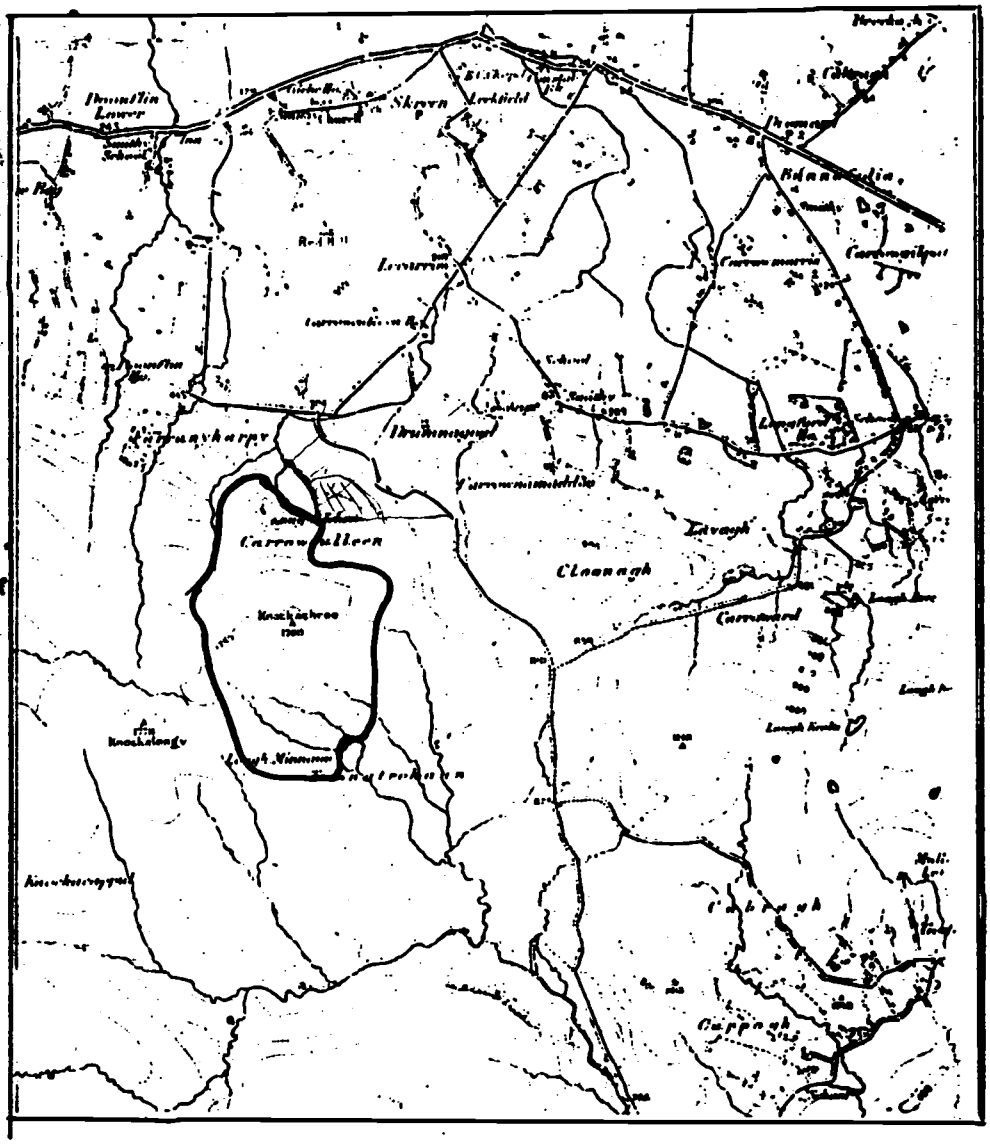
(1)

$x + 36 \quad 144$

$57 \cdot 144 \quad 82$

# KNOCKALONGY AND KNOCKACHREE CLIFFS




**Scale** 1 cm = 634 m (0.4 mile)

**Sheets** ½" : 7 1" : 54. 6" Sligo 18. 19

Evaluation:

As these cliffs provide one of the few habitats for alpine plants in the area, they are of great interest. Though gneiss is the major rock type, the presence of some calcicole species such as Neckera crispa, indicates that some of the more basic minerals are present and this allows the development of a fairly rich flora to take place on such an apparently acidic rocks.

BELVOIR AND STONY POINT

Scale : 1 cm = 105 m (115 yds)

Sheets : ½" : 7 1" 55. 6" Sligo 15.

BELVOIR AND STONY POINT

| | |
|---|---|
| Area | 4 ha |
| Grid reference | G. 713, 328 |
| Scientific interest | Botanical |
| Rating | National |

These two areas, on the south western side of Lough Gill are of interest because of the well-developed woodland, which has arisen under the prevailing sheltered conditions. On Stony Point the woodland is dominated by Oak, (Quercus petraea) whilst at Belvoir this species occurs in a mixed association with Ash, (Fraxinus excelsior), Willow, (Salix atrocinerea), Hazel, (Corylus avellana), and Sycamore, (Acer pseudoplatanus). Throughout both areas large trees of Yew, (Taxus baccata), and Strawberry Tree, (Arbutus unedo), occur.

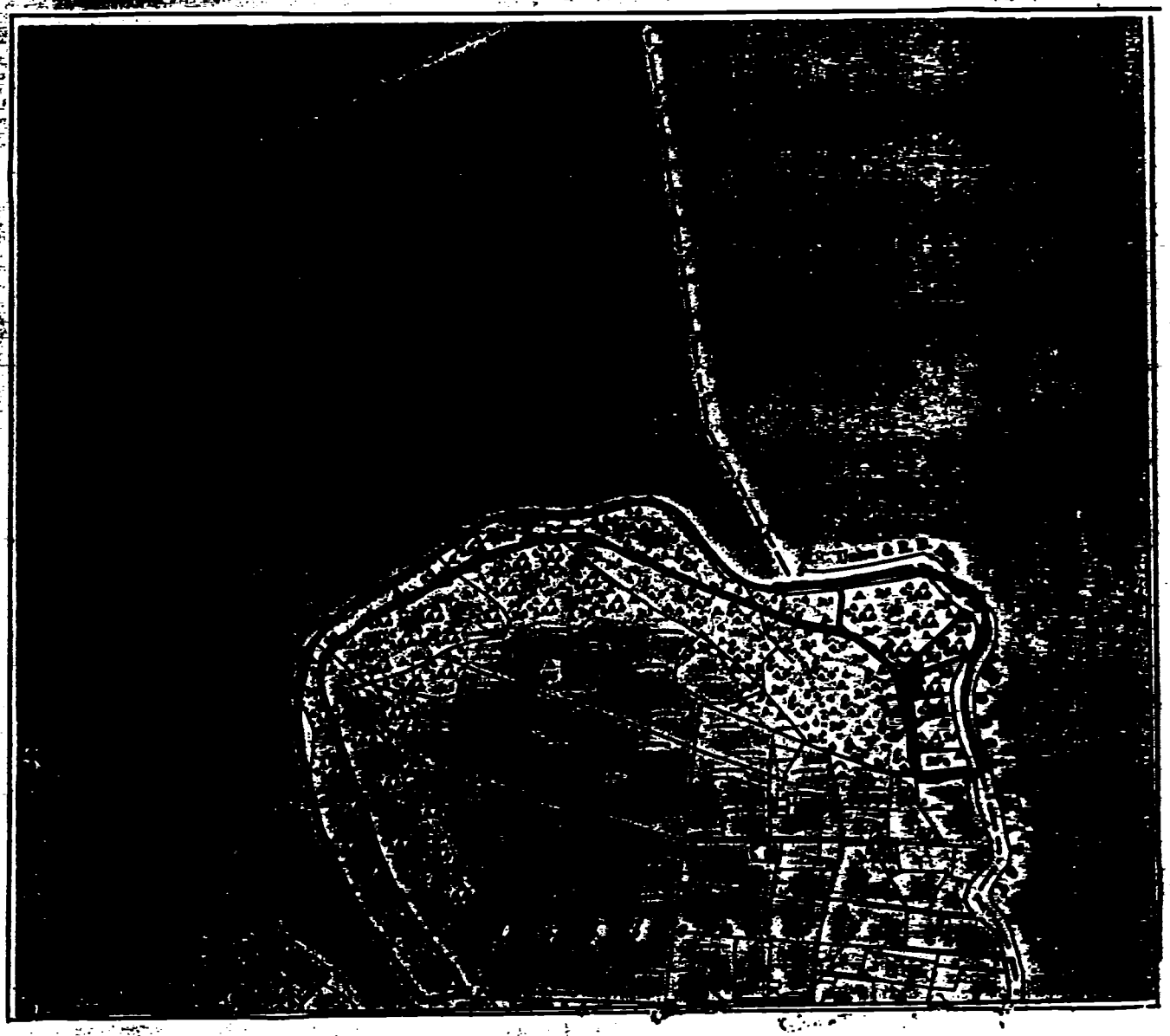
The ground floor of the woods is rich in species and the following are abundant:- Wild Garlic, (Allium ursinum), Bluebell, (Endymion non-scriptus), Wood False Brome, (Brachypodium sylvaticum), and Wood Sorrel, (Oxalis acetosella). Also occurring are Speedwells (Veronica montana) and (V. chamaedrys), Woodruff, (Galium odoratum), Pignut, (Conopodium majus), Wild Strawberry, (Fragaria vesca), Rough-stalked Meadow Grass, (Poa trivialis), Cuckoo Pint, (Arum maculatum), Woundwort, (Stachys sylvatica), Lady Fern, (Athyrium filix-foemina), Garlic Mustard, (Alliaria petiolata), Tutsan (Hypericum androsaemum) and Black Bryony, (Tamus communis), which occurs mostly at the edges of the woodland.

In addition, both areas are rich in bird-life and some uncommon species, such as Blackcap, breed in the woodland.

Evaluation

This portion of Lough Gill is extremely important for the number of trees of Arbutus unedo, which occur. This is the only area outside Cork and Kerry, where Arbutus occurs as a native tree and hence the locality is of great botanical interest. The woods at L. Gill also contain the only known station in the country for Tamus communis and this further enhances the scientific interest of the site. In addition, the ground flora of the woodland is fully representative of limestone woodland and it contains several species which are uncommon in the county.

BONET RIVER WOOD



Scale : 1 cm = 105 m (115 yds)

Sheets : ½" : 7 1" . 55 6" Sligo . 15

BONET RIVER WOOD

| | |
|---|---|
| Area | 9 ha |
| Grid Reference | G 78,34 |
| Scientific Interest | Botanical; ecological |
| Rating | National importance |

What remains of this wood occurs as a narrow strip along the river and the lake shore to Trawane Bay. The soils on which it occurs are derived from the underlying limestone and from silt deposited by the river. This has allowed the development of a rich flora, chiefly of Ash, (Fraxinus excelsior), Hazel, (Corylus avellana), and Oak, (Quercus petraea). Close to the river the trees attain a large size but get progressively more wind shorn as the lake shore is reached and the exposure becomes greater. The ground flora is also rich and includes some rare species.

The common herb species are Bluebell, (Endymion non-scriptus), Primrose, (Primula vulgaris), Remote Sedge, (Carex remota), Wild Anemone, (Anemone nemorosa), and Wood Sorrel, (Oxalis acetosella). Also present are Wood Sanicle, (Sanicula europea), Goldilocks, (Ranunculus auricomus), Cuckoo Pint, (Arum maculatum), Violet, (Viola riviniana), Garlic Mustard, (Alliaria petiolata), Early purple Orchid, (Orchis mascula), and Birds nest Orchid, (Neottia nidus-avis).

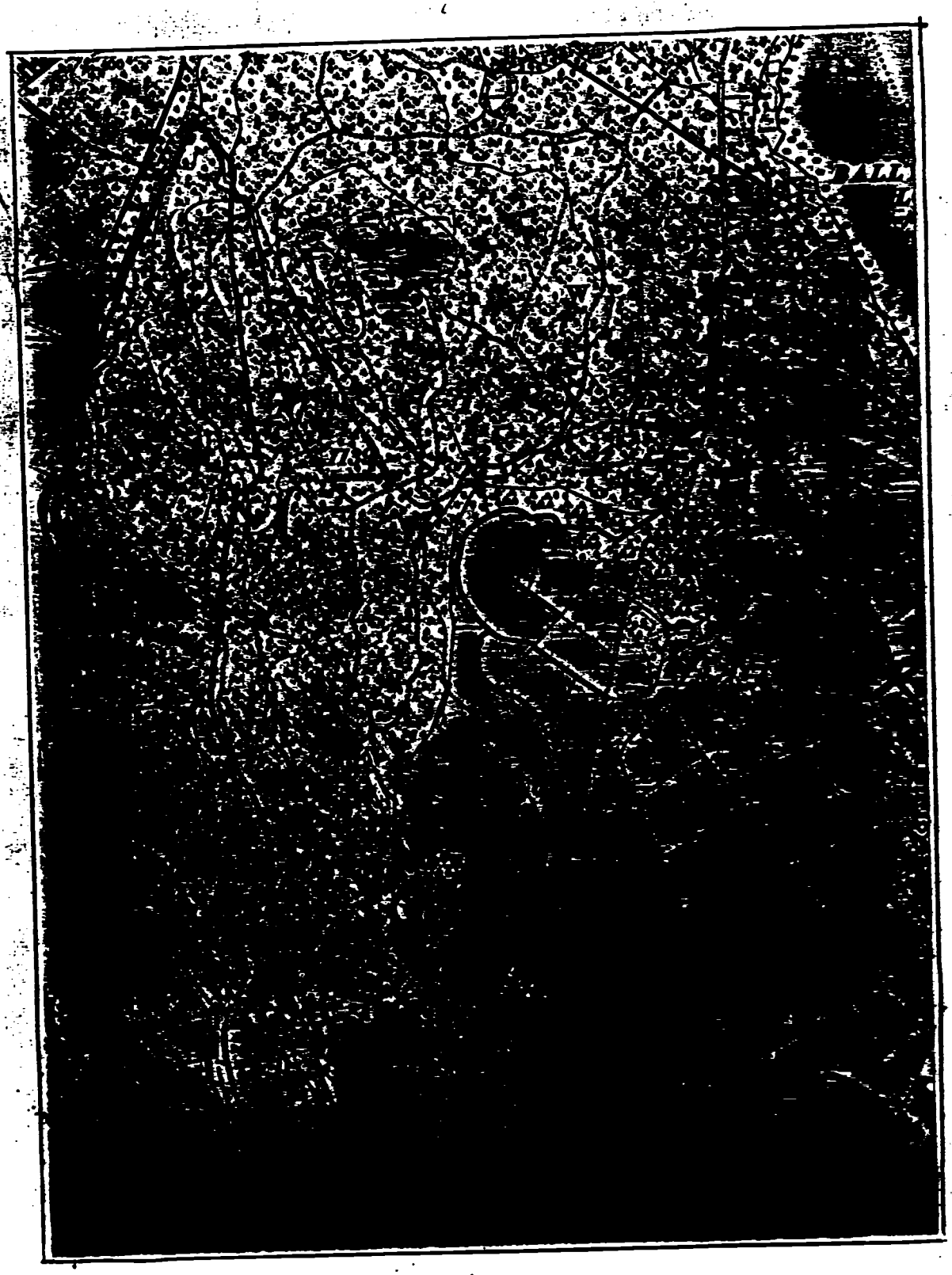
A limestone bluff at Bald Rock holds trees of Whitebeam, (Sorbus rupicola), and Yew, (Taxus baccata).

The lake shore holds a typical flora which includes some uncommon species. A sharp geological transition to the base-poor gneissic rocks causes the flora to become more calcifuge and the tree canopy becomes dominated by Oak and Birch, (Betula pubescens). The ground flora here is less rich, the common species being Frochan, (Vaccinium myrtillus), Hard Fern, (Blechnum spicant), and Wood Sorrel, (Oxalis acetosella). Accompanying these species are Crinkled Buckler Fern, (Dryopteris aemula), Broad Buckler Fern, (D. dilatata), Golden Rod, (Solidago vigaurea), and woodrush (Luzula sylvatica).

Evaluation

The flora of the woodland appears to be the richest in herb species in the county. This is due to the diversity of soil types which occur at the site allowing the development of a rich and diverse flora. Some uncommon species occur under the woodland canopy and along the adjoining lake shore.

UNION WOOD



Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7 1" : 55. 6" Sligo. 20

UNION WOOD

| | |
|---|---|
| Area | 28 ha |
| Grid Reference | G 68,28 |
| Scientific Interest | Botanical; ecological |
| Rating | National importance |

This woodland contains oaks of large stature, mixed with Rowan (Sorbus aucuparia) and Birch (Betula pubescens). The understorey is open with Holly (Ilex aquifolium), Hazel (Corylus avellana), and Ash (Fraxinus excelsior), scattered throughout the area. Holly is the only tree species that appears to be regenerating.

The ground layer holds a typical calcifuge flora, the underlying rock being gneiss. Woodrush (Luzula sylvatica) is abundant, with Prochan (Vaccinium myrtillus) and Bell Heather (Erica cinerea), the associated species.

The other species of the ground layer include Wood Sorrel (Oxalis acetosella), Bluebell (Endymion non-scriptus), Greater Stitchwort (Stellaria holostea), Bush Vetch (Vicia sepium) and Hard Fern (Blechnum spicant).

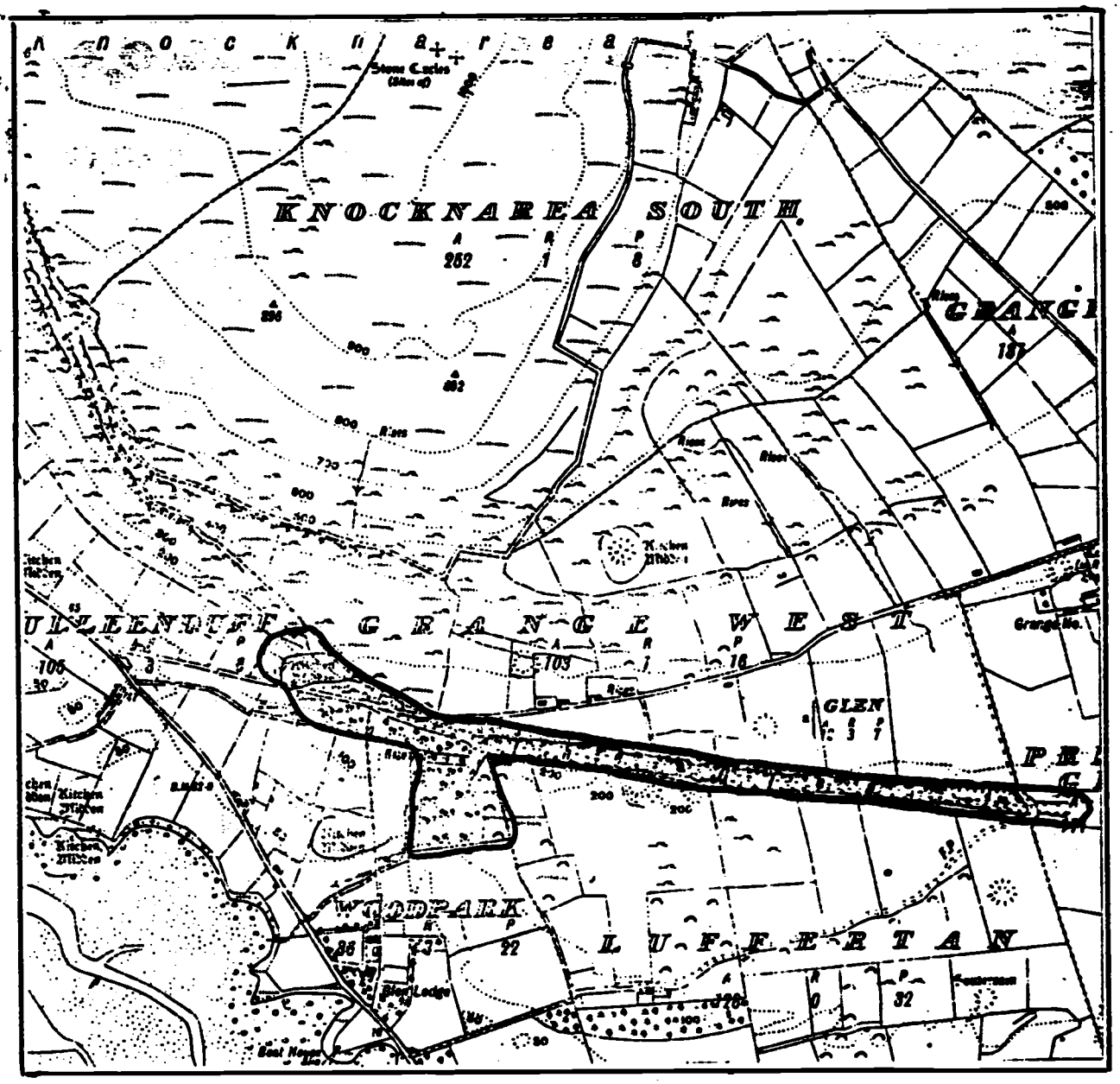
Also occurring are the Buckler Ferns, (Dryopteris dilitata), (D. aemula), and (D. borreri), Lady Fern (Athyrium filix-foemina), Foxglove (Digitalis purpurea), Bracken (Pteridium aquilinum), and Wavy Hair Grass (Deschampsia flexuosa).

Bryophytes e.g. (Dicranum majus), (Polytrichum formosum), (Mnium hornum), (Plagiothecium undulatum), and (Calypogeia asplenoides), are common throughout the wood. The tree trunks and rock outcrops were also rich in lichens, species of the following genera occurring:- (Lobaria), (Ramalina), (Physcia), and (Parmelia).

Evaluation

Following the almost complete destruction of Shish Wood, Union Wood has become the most important oakwood in the county. It holds a typical flora and contains many species typical of oceanic conditions. Further investigation of the lichen flora may yet produce many more interesting species. Regeneration is probably being prevented by Fallow Deer and in addition Rhododendron (Rhododendron ponticum) grows in a few places.

KNOCKNAREA GLEN




Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7 1" . 54:55 6" Sligo 14.

KNOCKNAREA GLEN

| | |
|---|---|
| Area | 76 ha 10 ha |
| Grid reference | G. 63, 34 |
| Scientific interest | Botanical, ecological |
| Rating | Regional importance |

This dry valley runs along the southern base of Knocknarea and is filled with oceanic woodland. Ash is a conspicuous tree here, with Elm (Ulmus glabra), hazel, and Spindle Tree (Euonymus europaeus). The ferns and other ground flora are luxuriant and several interesting bryophytes have been found: seepage from the limestone walls has formed deposits of tufa on which Hypnum commutatum and Weissia verticillata are conspicuous; Anomodon viticulosus grows on damp rocks; Climacium dendroides and Thamnium alopecurum grow in the wood proper. Species of Lejeunea, Jungermannia and Metzgeria are among the most interesting liverworts.

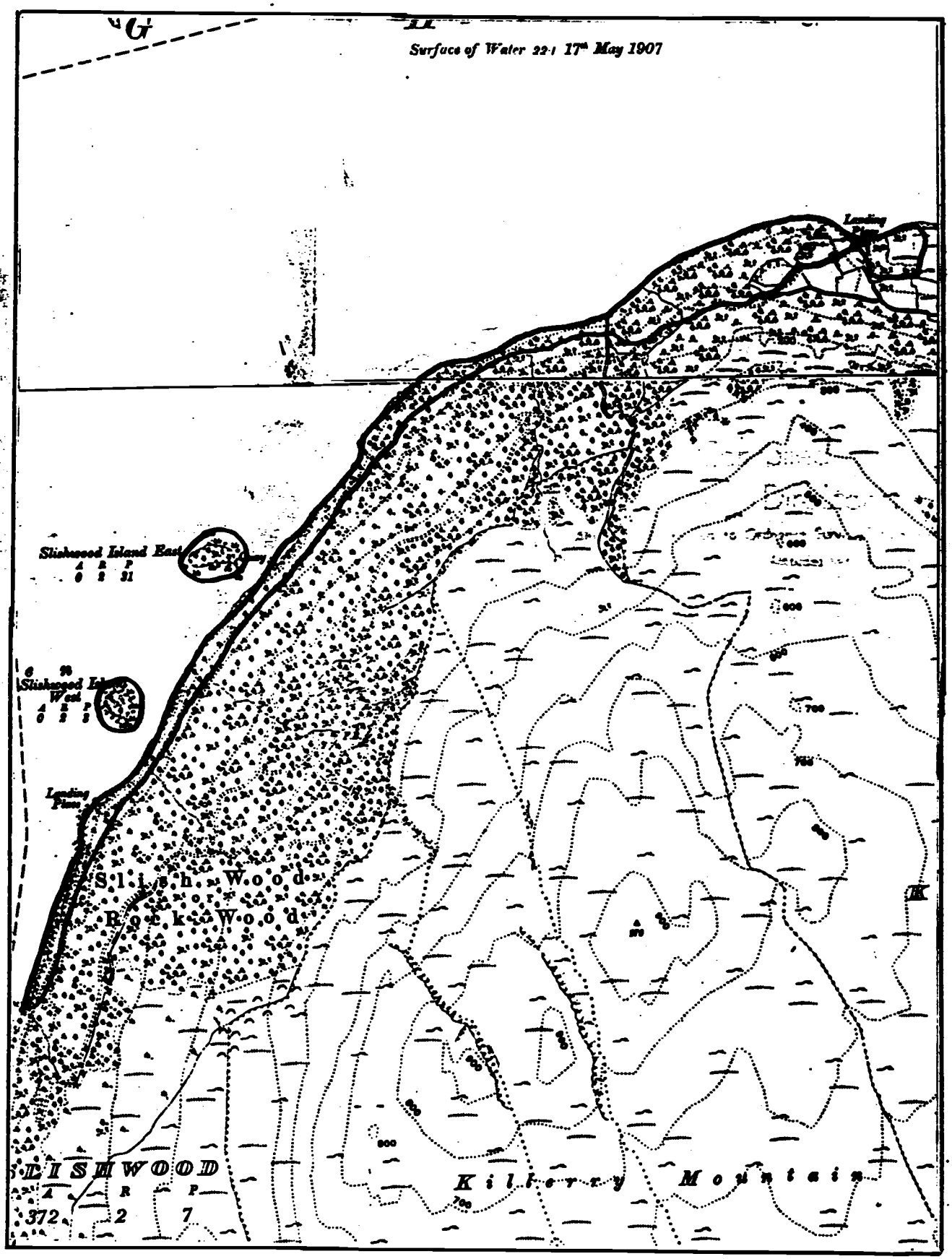
The ground flora is particularly rich: Hart's Tongue (Phyllitis scolopendrium), Bugle (Ajuga reptans), Wood Sanicle (Sanicula europea), Ivy Broomrape (Orobanche hederae), and Wood Fescue (Festuca altissima), are some of the more interesting species.

Evaluation

This is a well-known botanical locality, of interest mainly for its unusually moist conditions which give rise to a great luxariance of lower plants. It also is of geomorphological importance as its orientation and dry valley features are of interest.

The wood has suffered natural wind damage in the past which is unusual for an Irish woodland. The amount of rotting timber is therefore an important feature of the ecosystem.

# SLISH WOOD




Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7. 1" : 55 6" Sligo. 21

SLISH WOOD

| | |
|---|---|
| Area | 6 ha |
| Grid reference | G. 75,33 |
| Scientific interest | Botanical |
| Rating | Regional importance |

Slish Wood was formerly one of the four most important areas of oak woodland in the west of Ireland, but now it has been almost completely planted with coniferous trees. Now only a lakeside frings of mature decidous woodland occurs and even parts of this have been underplanted with Douglas Fir.

Because of the interference, only small reminants of typical deciduous woodland and flora occur. Several small areas hold natural oakwood where Oak (Quercus petraea) is dominant and much Rowan (Sorbus aucuparia), and Holly (Ilex aquifolium) occur throughout the understorey. A few tall Birch (Betula pubescens) are found scattered through the wood, whilst on the rocky lake shore Yew (Taxus baccata), Whitebeam (Sorbus rupicola) and Aspen (Populus tremula) occur. In addition, several introduced tree species are found, including Lime (Tilia europea) and Sycamore (Acer pseudoplatanus). There are also records for the Strawberry Tree (Arbutus unedo) in the area.

The ground layer consists of calcifuge species, with the Woodrush (Luzula sylvatica) dominant over much of the area. Of frequent occurrence are Frochan (Vaccinium myrtillus), Honeysuckle (Lonicera periclymenum) and Wood Sorrel (Oxalis acetosella). The commonest species of bryophytes are Dicranum majus, Thuidium tamariscinum and Plagiothecium undulatum.

At the eastern end of the area the vegetation becomes more open and the trees here are even-aged and very large. The ground flora includes Bluebell (Endymion non-scriptus), Wavy Hair Grass (Deschampsia flexuosa) and Red Champion (Silene dioica), with Bracken (Pteridium aquilinum) forming pure stands in a few places. No regeneration of tree species is apparently taking place in the wood.

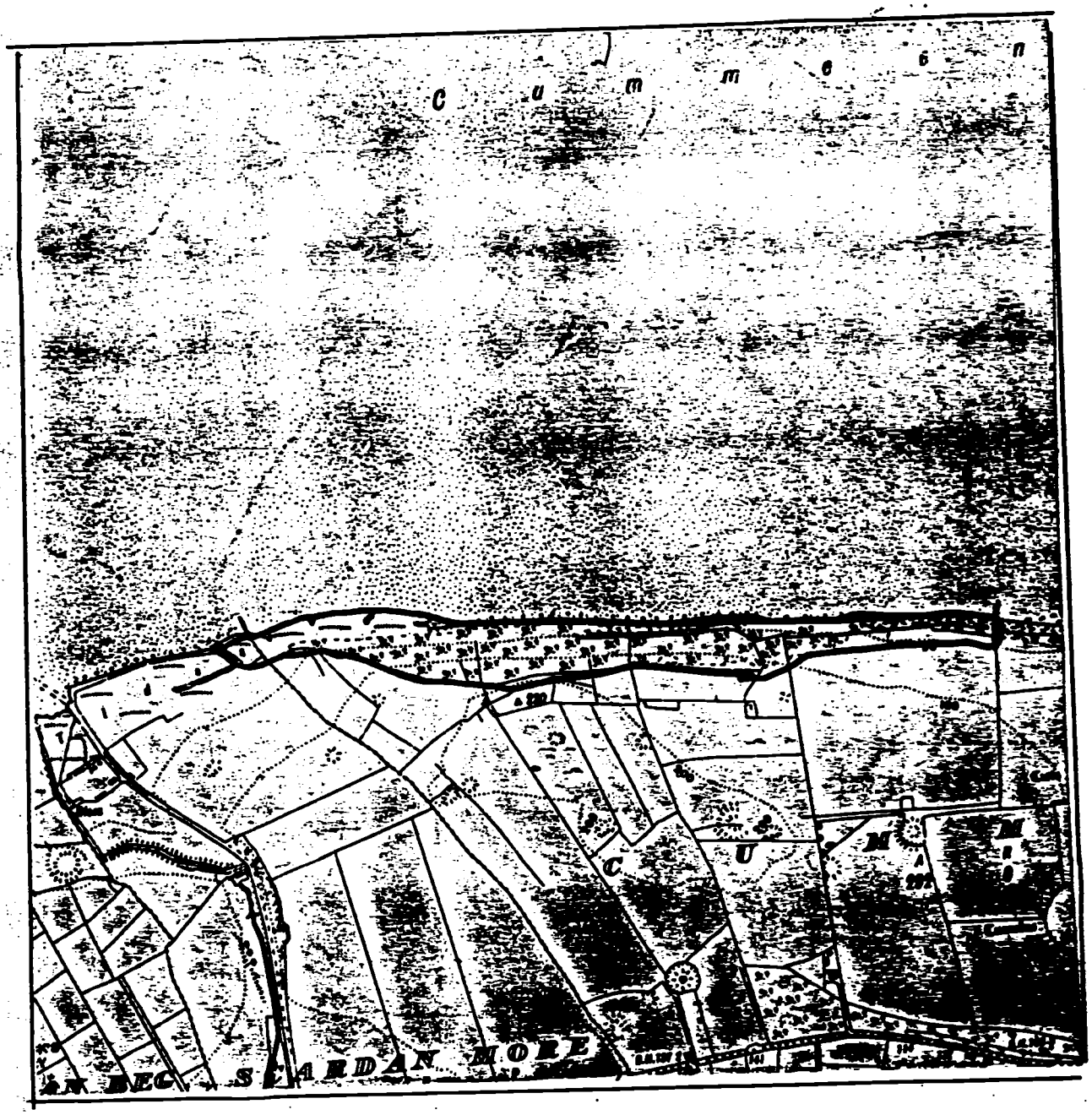
Many interesting species of lichen were recorded from Slish Wood before it was interfered with and it is possible that some of these still persist.

Evaluation

The remaining part of the wood is of considerable interest, as its tree

species are many and its higher and lower plants species are a good representative sample of a well-developed acid woodland flora. In addition, several species of mammal are found in the area including Fallow Deer and Badger.

# CUMMEEN WOOD




Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7 1" . 55 6" Sligo . 14.

CUMMEEN WOOD

| | |
|---|---|
| Area | 8 ha |
| Grid reference | G 64136 |
| Scientific Interest | Ecological; botanical |
| Rating | Local Importance |

Cummeen Wood is an area of young woodland on the south shore of Sligo Bay. It occurs on a steep slope and has been much shaped by wind action. The underlying rock is limestone and there are many outcrops of this in the area. Consequently the flora is calcicole and both the tree/shrub layer and ground flora are rich in species. Ash (Fraxinus excelsior) is typically dominant, with Hazel (Corylus avellana) and Blackthorn (Prunus spinosa) abundant in the shrub layer. Holly (Ilex aquifolium), Willow (Salix caprea and S. aurita) are frequent, with Alder (Alnus glutinosa) occurring commonly in the wetter areas of the wood. The rest of the shrub layer consists of Guelder Rose (Viburnum opulus), Hawthorn (Crataegus monogyna) and Spindle Tree (Euonymus europaeus). Sycamore (Acer pseudoplatanus) also occurs throughout the wood.

The ground flora consists of the following species:- Hart's Tongue (Phyllitis scolopendrium), Shield Fern (Polystichum setiferum), Cuckoo Pint (Arum maculatum), Bluebell (Endymion non-scriptus), Golden Saxifrage (Chrysosplenium oppositifolium), Bugle (Ajuga reptans), Wood Anemone (Anemone nemorosa) and Wood False Brome (Brachypodium sylvaticum). The Dog Rose (Rosa canina) and the Burnet Rose (Rosa pimpinellifolia) occur commonly along the margins of the woodland.

Evaluation

The chief importance of the area is the occurrence of a well-developed natural Ash/Hazel wood, which, because of the steepness of the slope upon which it occurs, is inaccesible to grazing animals. Thus the flora is very diverse and rich in species. The great exposure to which this site is subjected also makes it an interesting area for study.

# CORINE BIOTOPES INVENTORY

| | | | |
|---|---|---|---|
| 01 | Country | Ireland | 8 |
| 02 | Site No | | |
| 03 | Date | August 1995 | |
| 04 | Source | AFF, NHI | |
| 05 | Site Name | CULLHEEN STRAND | |
| | Location | | |
| 06 | Region Name | NORTH WEST | |
| 07 | Region Code | 8009 | |
| 08 | County | SLIGO. | |
| 09 | Coordinates | 08°32'W 54°17'N | |
| 10 | Area ha. | 700 | |
| 11 | Linear | | |
| 12 | Altitude m | | |
| | Mean | 8 | |
| | Max | 15 | |
| | Min | sealevel | |
| 13 | Site Description | Internationally important flock of brent geese (2,250) pause on mudflats to feed in October, when wigeon (2,000) are also present. About 200 geese remain through the winter, moving between Cunneen and Ballysadare Bay. The area is the richest site for waders in the county, especially for oystercatcher (700). | |

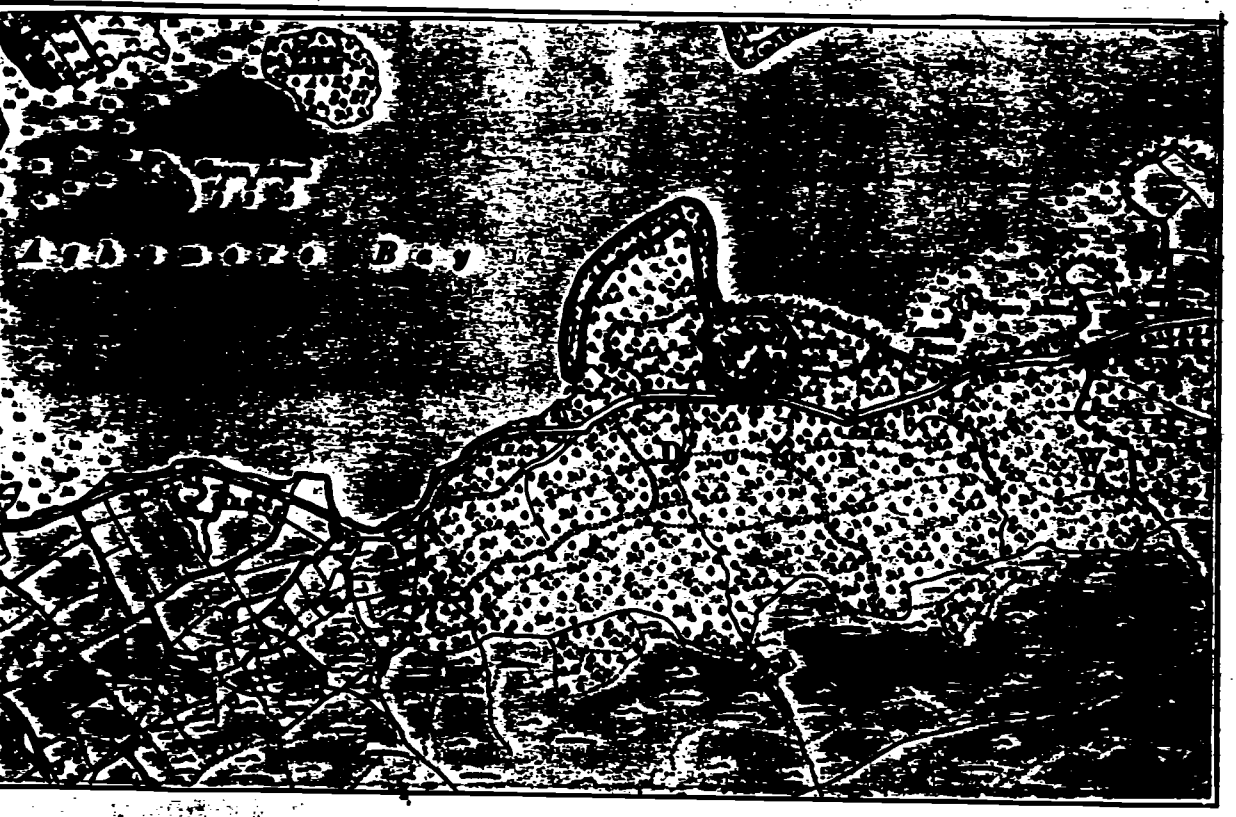
Cummeen Strand
Sligo Inch 62, 63, 54, 55.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST

SCALE : 1 inch to 1 mile

↑

DOONEE ROCK



**Scale** : 1 cm = 105 m (115 yds)

**Sheets** : ½" : 7 1" : 55 6" Sligo 21.

DOONEE ROCK

| | |
|---|---|
| Area | 12 ha |
| Grid Reference | G 72132 |
| Scientific Interest | Ecological |
| Rating | Local Importance |

Doonee Rock is an elevated limestone bluff on the southern shore of Lough Gill. A sheer cliff occurs on its northern side, the rest of it being surrounded by steep wooded slopes. As forestry plantations encroach on much of the area, natural vegetation is found only on the summit of the Rock and on the cliff.

Despite its small area, several interesting species occur. The wood on the summit consists mostly of Hazel (Corylus avellana), but some Ash (Fraxinus excelsior) and Oak (Quercus petraea) occur also. The ground flora is characteristic of mixed woodland and includes Wood Sorrel (Oxalis acetosella), Strawberry (Fragaria vesca), Bluebell (Endymion non-scriptus), Wood Sanicle (Sanicula europea) and Wood Anemone (Anemone nemorosa).

The flora of the cliff contains Spindle Tree (Euonymus europaeus), Yew (Taxus baccata), Guelder Rose (Viburnum opulus), Stone Bramble (Rubus saxatilis), Blue Moor Grass (Sesleria caerulea) and the Sedge' Carex flacca , the last two species being especially common.

The adjoining lake shore area contains both marsh and woodland communities. The latter is dominated by oak beneath which a typically calcifuge flora has developed. Species occurring here are Heath Pea (Lathyrus montanus), Bucker Fern (Dryopteris dilitata), Wood Melick (Melica uniflora) and Wood Brome (Zerna ramosa). Bracken is also frequent throughout the area.

The marsh is largely dominated by Purple Moor Grass (Molinia caerulea) and Bog Myrtle (Myrica gale), with Bog Thistle (Cirsium dissectum) and Yellow Loosestrife (Lysimachia vulgaris) the associated species. The edges of the marsh area holds the sedges' Carex elata and C. nigra' whilst at the waters edge Reed (Phragmites australis) occurs with Lesser Spearwort (Ranunculus flammula).

Evaluation

This area is already the site of a forestry nature trail and hence is of amenity and educational value. Several uncommon species occur though Yellow Birds Nest, (Monotropa hypopithys has apparently disappeared owing to the forestry operations. The occurrence of three different communities in such a small area, makes it of ecological interest.

WOOD NEAR FIVE MILE BOURNE

Scale : 1 cm = 105 m (115 yds)

Sheets : ½" : 7 1" : 55 6" Sligo 15

## WOOD NEAR FIVE MILE BOURNE

| | |
|---|---|
| Area | 2 ha |
| Grid reference | G. 77, 45 |
| Scientific interest | Ecological |
| Rating | Local Importance |

This wood is interesting in that it has only recently been re-established from limestone grassland. It consists mainly of Hazel (Corylus avellana) overtopped in places by Ash (Fraxinus excelsior) and Elm (Ulmus glabra), with the following species common in the shrub layer:- Willows (Salix atrocinerea and S. caprea), Holly (Ilex aquifolium) and Guelder Rose (Viburnum opulus).

The ground flora is rich and the following are the most frequent species:- Wood Sanicle (Sanicula europea), Broad Buckler Fern (Dryopteris dilatata), Male Fern (D. felix-mas), Lady Fern (Athyrium filix-foemina), and Wood Anemone (Anemone nemorosa). Of less frequent occurrence are Enchanter's Nightshade (Circaea lutetiana), the sedge, Carex sylvatica, Cuckoo Pint (Arum maculatum), Early Purple Orchid (Orchis mascula), St. John's wort (Hypericum androsaemum) and Pignut (Conopodium majus).

### Evaluation

The wood is at the transitional stage between scrubby grassland and mature woodlands and hence the site is of interest for the study of the phases of succession.

BALLYGILGAN

Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7 1" : 42:43 6" : Sligo 8

BALLYGILGAN

| | |
|---|---|
| Area | 28 ha |
| Grid reference | G. 64, 44 |
| Scientific interest | Ornithological |
| Rating | National Importance |

The site consists of fields, the low lying areas of which are flooded in winter. In the upper parts there is a grass sward of Fescue (Festuca spp., Sweet Vernal Grass (Anthoxanthum odoratum) and Yorkshire Fog (Holcus lanatus), in which the Thistles (Cirsium arvense and C. vulgare) are abundant. Other species occurring are:- Red Clover (Trifolium pratense), White Clover (T. repens), Crested Dog's Tail (Cynosurus cristatus), Sheep's Sorrel (Rumex acetosa), Field Horse Tail (Equisetum arvense), Silverweed (Potentilla anserina) and Rye Grass (Lolium perenne).

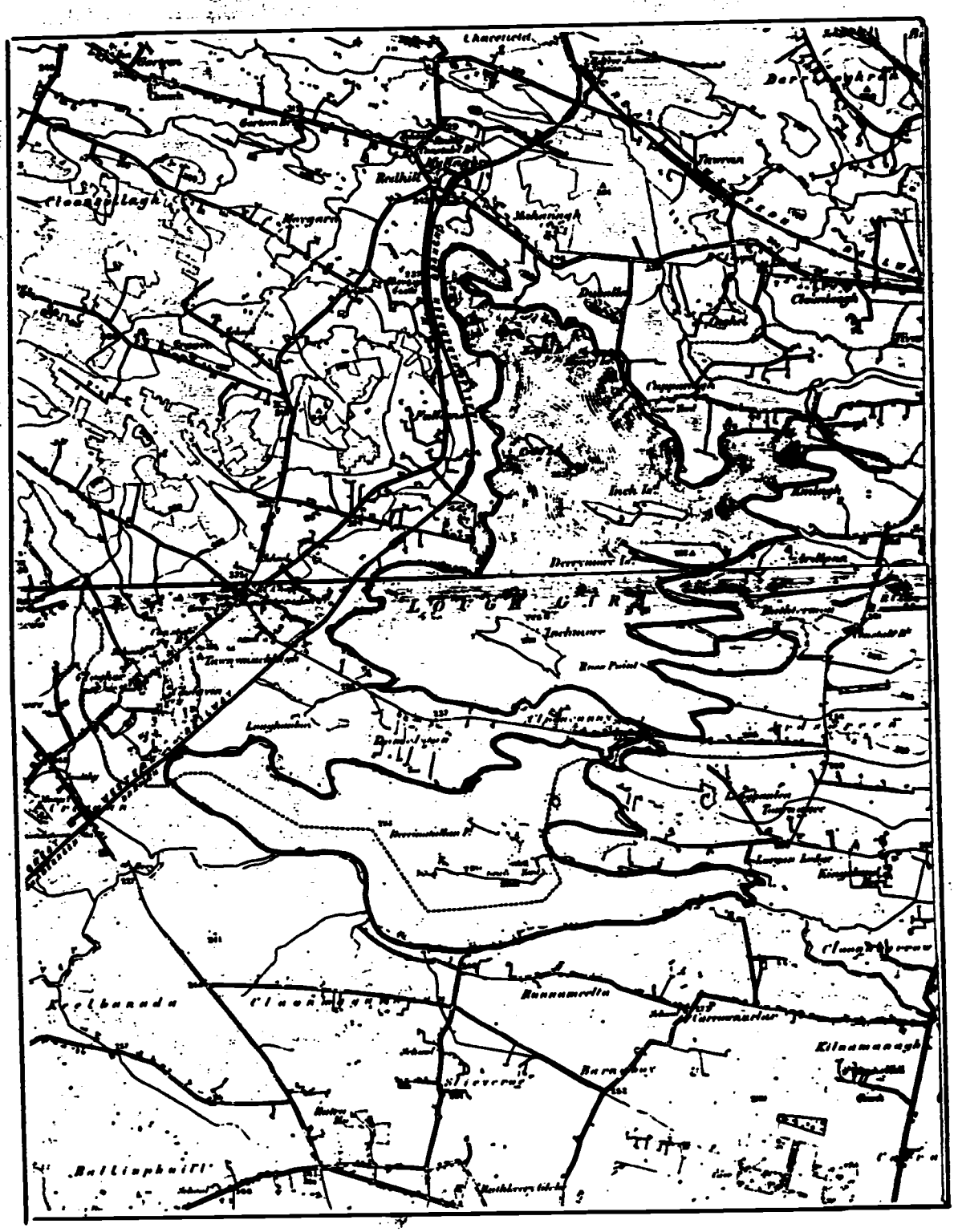
In the lower areas those species characteristic of periodically flooded areas occur, including Creeping Buttercup (Ranunculus repens), Marsh Foxtail (Alopecurus geniculatus) and Amphibious Bistort (Polygonum amphibium), all of which are common. Species frequently associated with these are the Sedges, Carex hirta, and C. nigra, Spike Rush (Eleocharis palustris), Lady's Smock (Cardamine pratensis), Reed Grass (Phalaris arundinacea), Soft Rush (Juncus effusus), and Bog Stitchwort (Stellaria alsine). Where there is little vegetation cover, Brooklime (Veronica beccabunga) and Water Cress (Rorippa microphylla) are found.

These fields form a mainland wintering area for Barnacle Geese and numbers vary from 250-400 in most winters.

Evaluation

Ballygilgan is the only regular mainland wintering area for Barnacle Geese in Ireland - 93% of our Barnacle population winter on offshore islands. The area is thus of great educational value; close to Sligo town, it is easily accessible and of great interest as a field-trip location.

LOUGH GARA



Scale : 1 cm = 634 m (0.4 mile)

Sheets : ½" 7 and 12. 1" : 66,77 6" SLIGO 44, 45, 46, 47

LOUGH GARA

| | |
|---|---|
| Area | 920 ha. |
| Grid Reference | G 71,,00 |
| Scientific Interest | Ornithological; botanical |
| Rating | Regional interest |

Lough Gara is surrounded by level shores which are either stony and well-drained or bog covered. Lowering of the lake level has resulted in large areas of the lake-bed being colonised by semi-aquatic vegetation, notably by the Spike Rush (Eleocharis palustris), which has formed extensive swards. The associated species include sedges (Carex rostrata, C.nigra and C. lepidocarpa), Water Mint (Mentha aquatica), Red Rattle (Pedicularis palustris), and Brooklime (Samolus valerandi).

Where the shore substrate becomes peaty, the Horsetail (Equisetum palustre), Marsh Cinquefoil (Potentilla palustris), Purple Loosestrife (Lythrum salicaria) and Marsh Pennywort (Hydrocotyle vulgaris) are found.

The upper, and consequently drier parts of the shore are being colonised by scrub vegetation - Willows, (Salix spp.), Hazel, Hawthorn, and Oak with scattered Ash and Holly. The commonest species found here are Tutsan (Hypericum androsaemun), Cow-Wheat (Melampyrum pratense), Rose (Rosa sherardii) and Rosebay Willow Herb (Epilobium angustifolium).

The area also displays a vegetation assemblage characteristic of an early stage of plant succession which would ultimately go to woodland, the commonest species being Creeping Willow (Salix repens), Meadow Fescue (Festuca pratensis) and Red Fescue (Festuca rubra), whilst occurring frequently are Coltsfoot (Tussilago farfara), Black Bog Rush (Schoenus nigricans), Quaking Grass (Briza media) and Northern Bedstraw (Galium boreale). The rarer species include Sneezewort (Achillea ptarmica) Grass of Parnassus (Parnassia palustris), Mountain Everlasting (Antennaria dioica) and Hop Trefoil, (Trifolium campestre).

Lough Gara is also an important wintering area for wildfowl and counts taken in 1965 and 1967 revealed the following:-

| | 1965 | 1967 (Aerial survey) |
|---|---|---|
| Mute Swan | 12 | |
| Whooper Swan | 66 | 172 |
| Bewick's Swan | 16 | |
| White-fronted Goose | 120 | 160 |
| Tufted Duck | 1,500 | |

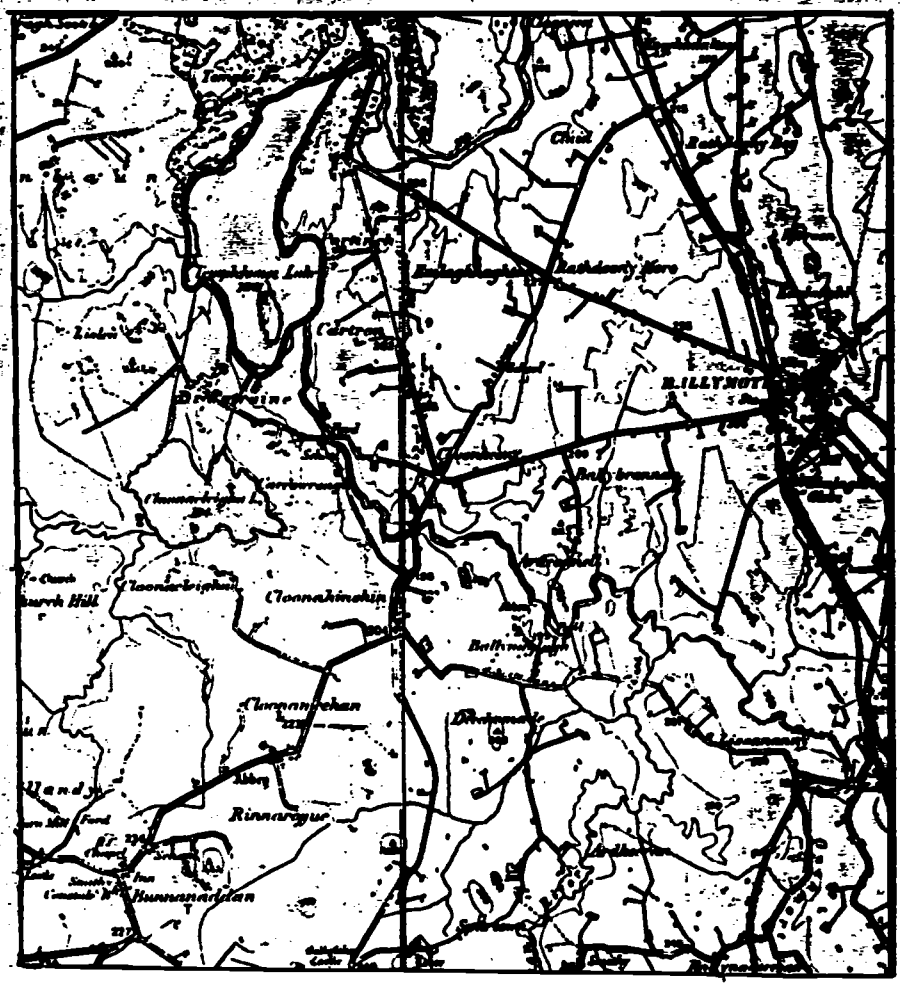
Also occuring in 1965 were 800 Pochard, 80 Mallard and 6 Great Crested Grebes. Other species were found to occur but in very small numbers.

Many species also breed at the lake and the islands hold large breeding colonies of Lesser Black-backed Gulls with smaller numbers of Herring Gulls and Common Terns. The lake shore also provides breeding habitats for Snipe, Curlew, Lapwing, Redshank and Ringed Plover, though nesting wildfowl are thought to be few in number.

Evaluation

Lough Gara is the most important lake in Sligo for wintering wildfowl and is also of some importance for its nesting birds. It also holds an interesting marginal flora, which shows an early stage in the plant succession to woodland and includes several species which are uncommon in the county.

TEMPLEHOUSE LAKE




Scale 1 cm = 634 m (0.4 mile)

Sheets ½" = 7. 1" = 65 6" : Sligo 32,33

TEMPLEHOUSE LAKE

| | |
|---|---|
| Area | 175 ha |
| Grid Reference | G 62,17 |
| Scientific Interest | Ornithological |
| Rating | Regional importance |

This lake is of considerable importance as a wintering and nesting area for wildfowl. Most of the lake shore is fringed by woodland, consisting both of native and introduced species, and occurring close to the waters edge are Willows (Salix atrocinerea and S. aurita), and the exotic Dogwood (Cornus stolonifera).

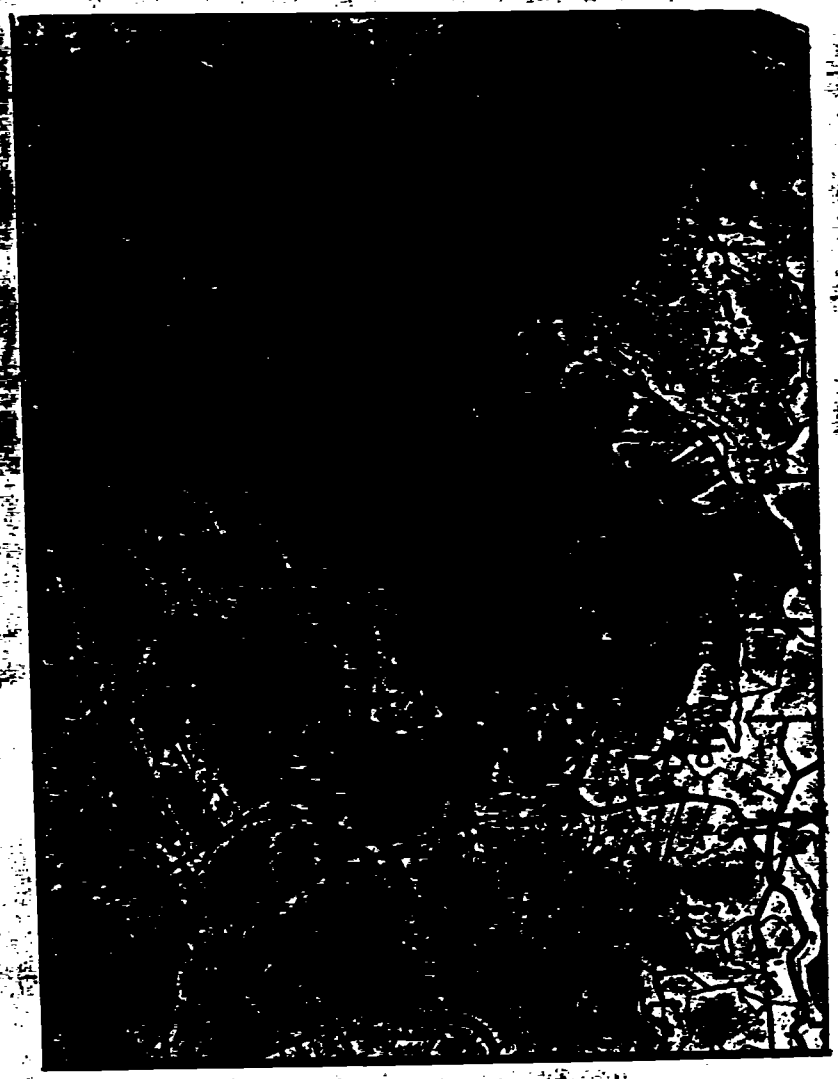
Wintering are:- Mallard 260, Teal 100, Wigeon 150, Shoveler 2, Tufted Duch 40, Goldeneye 30, Shelduck 15, Greylag Goose 13, White-fronted Goose 31., and Whooper Swan 19.

The numbers change depending on how much shooting occurs.

Evaluation

Templehouse lake is of importance regionally as it holds two species of Goose and a good variety of other wildfowl species. It possibly has the greatest breeding density of Mallard in the county.

LOUGH ARROW



**Scale** : 1 cm = 634 m (0.4 mile)

**Sheets** : ½" : 7 1" : 66 6" Sligo 34, 40, 41

LOUGH ARROW (parts)

| | |
|---|---|
| Area | 180 ha |
| Grid Reference | G 7, 1. |
| Scientific Interest | Ornithological |
| Rating | Local importance |

The shores of this lake are for the most part stony, but several sheltered bays occur in which Lake Rush, (Scirpus lacustris) and Reed, (Phragmites australis), are found in abundance. These areas form important cover for nesting and moulting wildfowl, the inlets near Ballinafad and Ballindoon holding the greatest concentrations of water-birds.

The wooded islands and some areas along the shore are used by nesting Tufted Duck. In winter the lake is frequented by flocks of Pochard, Tufted Duck, and Goldeneye, though dabbling duck numbers are low. Teal, however, frequent the lake's edge, where cover is provided by overhanging trees. No wildfowl counts are as yet available for the area.

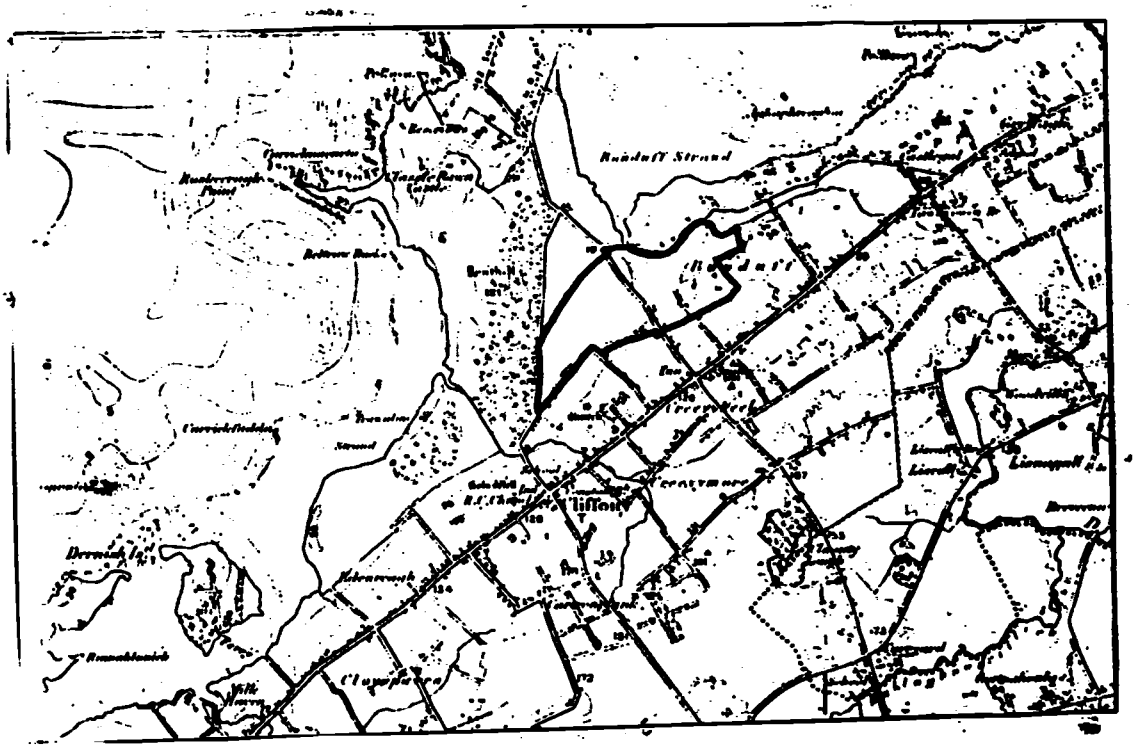
As cultivation practices extend right down to the shore, little of botanical interest is found, but a typical calcicole flora is found on drift deposits on the western side of the lake and here a rare lake-shore species has been found.

The old estate woodlands, bordering the lake have a rich bird fauna, largely of passerines, though Rhododendron (Rhododendron ponticum) has overrun much of the area and hence threatens these habitats.

Evaluation

The lake is of local interest ornithologically as it holds a considerable variety of wildfowl in winter and also provides several habitats for nesting wildfowl and passerines.

BUNDUFF LOUGH




Scale : 1 cm = 634 m (0.4 mile)

Sheets : ½" 7 1" : 54 6" Sligo 2,3.

BUNDUFF LOUGH

| | |
|---|---|
| Area | 87 ha |
| Grid Reference | G 72, 56 |
| Scientific Interest | Ornithological; botanical |
| Rating | Local importance |

This site is a lake of the lagoonal type, formed by the damming of a branch of the Duff river behind sand-dunes. The margins consist of reedswamp dominated by Bulrush (Typha latifolia), Reed (Phragmites australis), Water Horsetail (Equisetum fluviatile) and Burreed (Sparganium erectum). This gives way inland to a marsh association with Bog Bean (Menyanthes trifoliata) and Marsh Marigold (Caltha palustris) predominating. The associated species here are Spike Rush (Eleocharis palustris), Sedge (Carex nigra), Marsh Bedstraw (Galium palustre) and Meadow Sweet (Filipendula ulmaria).

The margins are dominated by Amphibious Bistort (Polygonum amphibium) where the substrate is stony and unable to support the Reedswamp community; while at the north-eastern end of the Lough, where conditions are drier, an association typical of wet grassland conditions occurs. Here Rough Meadow Grass (Poa trivialis), Yorkshire Fog (Holcus lanatus), Soft Rush (Juncus effusus) and Marsh Cinquefoil (Potentilla palustris) are dominant.

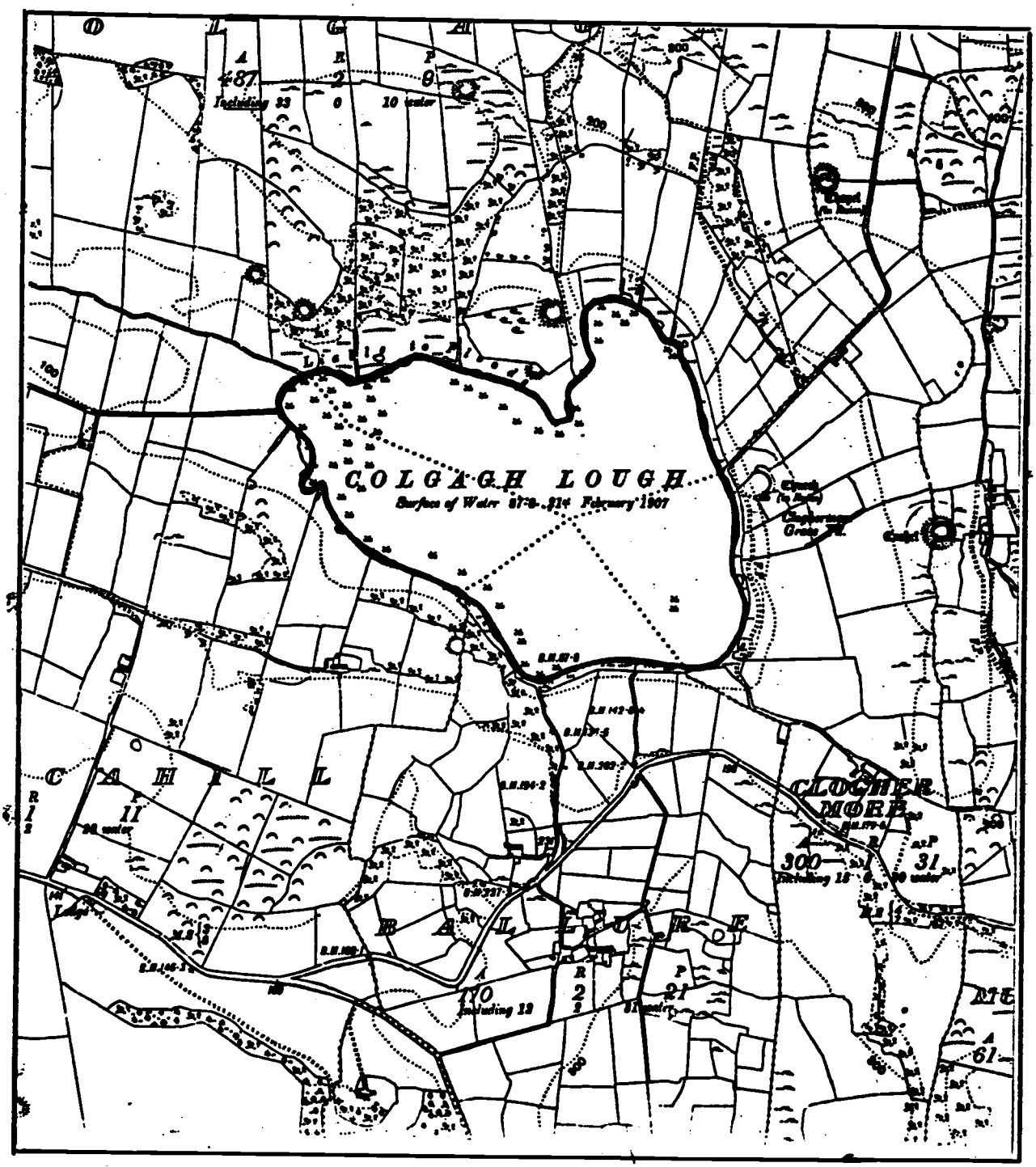
The lough is of great interest because of its populations of wintering wildfowl and account taken in 1967 revealed the following:-

Mallard 40, Teal 100, Wigeon 1, Shoveler 8, Pochard 70, Tufted Duck 10, Mute Swan 10, Whooper Swan 25, White-fronted Goose 35. In addition, the lough provides nesting habitats for Mallard, Teal, Water Rail, Coot and Little Grebe.

Evaluation:

The Bunduff area is the third most important haunt of ducks and swans in the county. Its chief value lies in the wide variety of species that occur there in winter and it forms an important location for field-trips. Botanically it is of interest as a large number of reedswamp and marsh species occur.

# COLGAGH LOUGH




Scale : 1 cm = 105 m (115 yds)

Sheets : ½" 7 1" 55 6" : Sligo 15

COLGAGH LOUGH

| | |
|---|---|
| Area | 36 ha |
| Grid Reference | GT 74,35 |
| Scientific Interest | Ecological |
| Rating | Local |

Colgagh Lough is a limestone lake with abundant marl deposits. This substance is derived from the decomposition of gelatinous algae and charophytes and it accumulates on the bottom of the lake and on the aquatic vegetation. Though it does not allow the development of a rich and diverse flora, Lake Rush, (Scirpus lacustris) is locally abundant, with Amphibious Bistort, (Polygonum amphibium), Pondweed, (Potamogeton coloratus), Water Mint, (Mentha aquatica) and Marsh Marigold, (Caltha palustris), the common associated species.

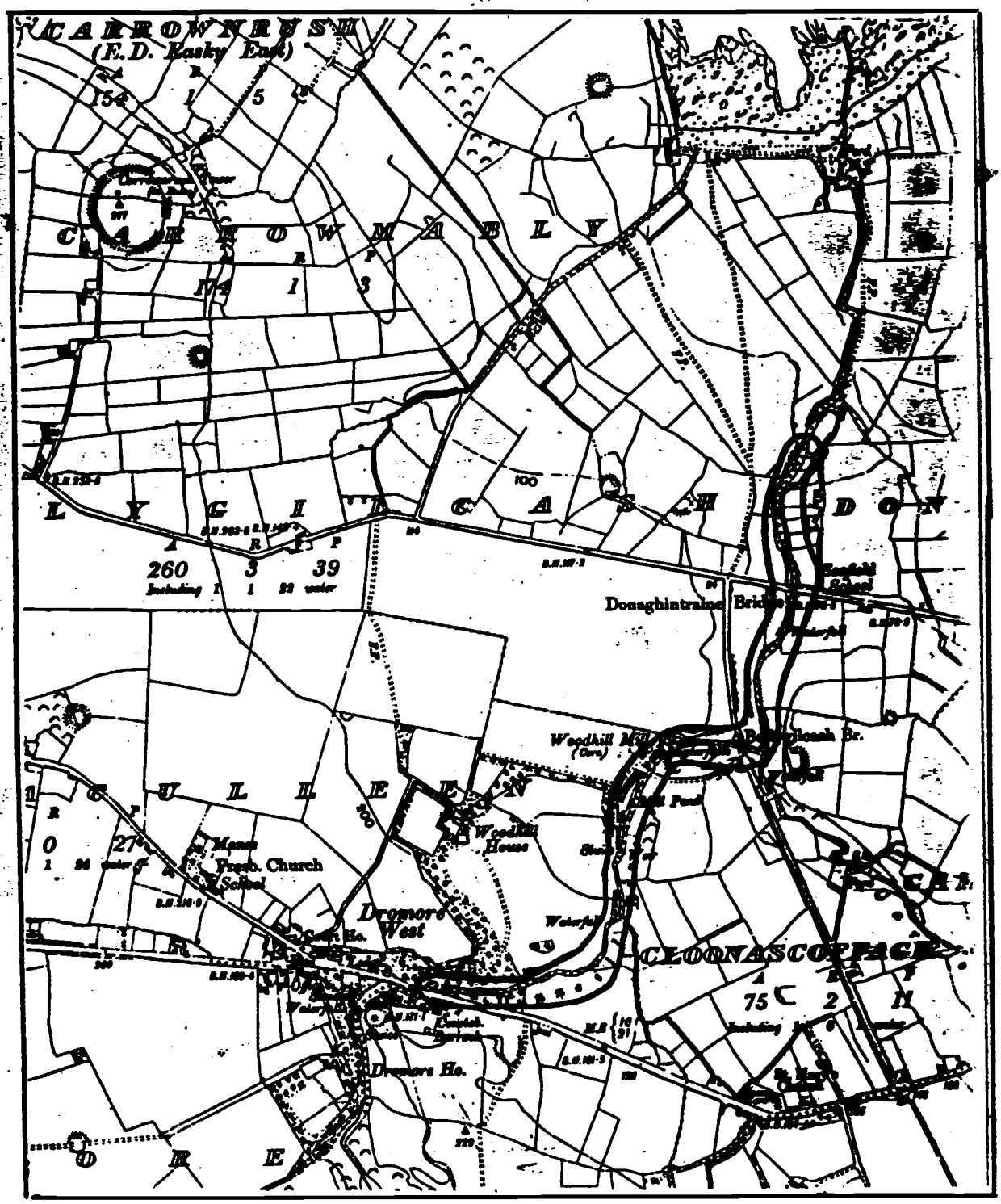
The invertebrate fauna is rich and includes many species of molluscs, Coleoptera and leeches.

The margin of the lake is stony and is dominated by a sward of grasses and sedges, in which the dominant species are Bent Grass, (Agrostis stonlonifera), Jointed Rush, (Juncus articulatus) and the sedge, Carex serotina. With these species occur the Lesser Spearwort, (Ranunculus flammula), Marsh Ragwort, (Senecio aquaticus) and the moss, Climacium dendroides.

Evaluation

This type of lake, with a marl substrate, is commonly encountered in the midlands but infrequently outside that area. Thus, this site is probably unique in county Sligo. It provides unusual habitat conditions, both for flora and fauna, and hence is of interest ecologically.

DUNNEILL RIVER




Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7 1" : 54 6" : Sligo 12.

DUNNEILL RIVER BELOW DROMORE WEST

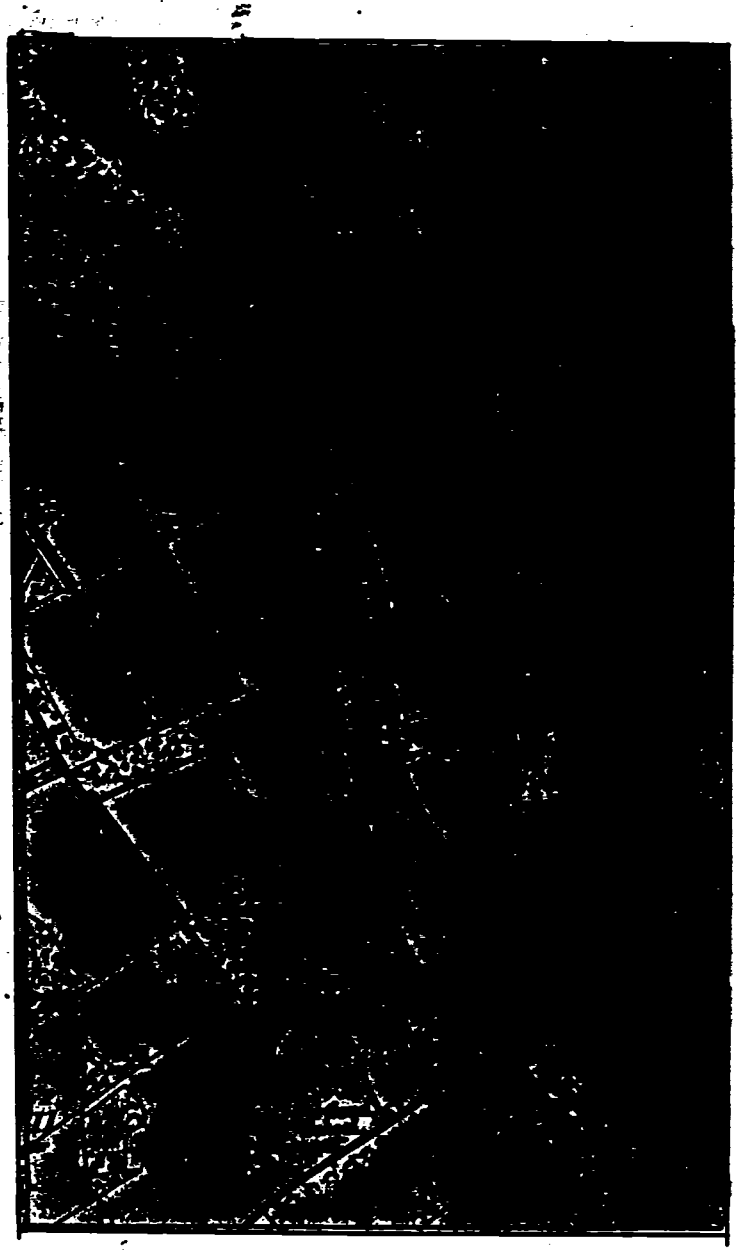
| | |
|---|---|
| Area | c 3 ha |
| Grid reference | G. 43, 34 |
| Scientific interest | Geomorphological; botanical |
| Rating | Local importance |

The Dunneill River has cut a vertical gorge in the limestone of this area and this has resulted in the formation of concave and convex walls now largely overhung with ivy and tree growth. These shady sites now contain an interesting community, especially of bryophytes, which includes one rare species.

Evaluation

The site is an excellent area for the study of fluvial action and its role in erosion processes. It also contains some interesting bryophytes.

EASKY RIVER



Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7 1" : 54 6" : Sligo 11.

EASKY RIVER

| | |
|---|---|
| Area | 13 ha |
| Grid Reference | G 38,36 |
| Scientific Interest | Botanical; ecological, |
| Rating | Local importance |

The river at this site is bordered by deposits of glacial drift which are very steeply sloping. Though Alder, (Alnus glutinosa), dominates the upper and lower slopes of the drift, calcareous marsh plant communities arise wherever water seepage from the drift occurs. This type of community is best developed on the eastern side of the river.

The dominant species of the community are Bog Rush, (Schoenus nigricans), the rushes (Juncus articulatus) and J. inflexus and the sedges, Carex hostiana, and C. lepidocarpa. Other associated species include Meadow Thistle, (Cirsium dissectum), Blue Moorgrass, (Sesleria caerulea), Bog Pimpernel, (Anagallis tenella), Spike Rush, (Eleocharis quinqueflora), Grass of Parnassus, (Parnassia palustris), Butterwort, (Pinguicula vulgaris) and two species of Marsh Orchid, (Dactylorhiza spp.).

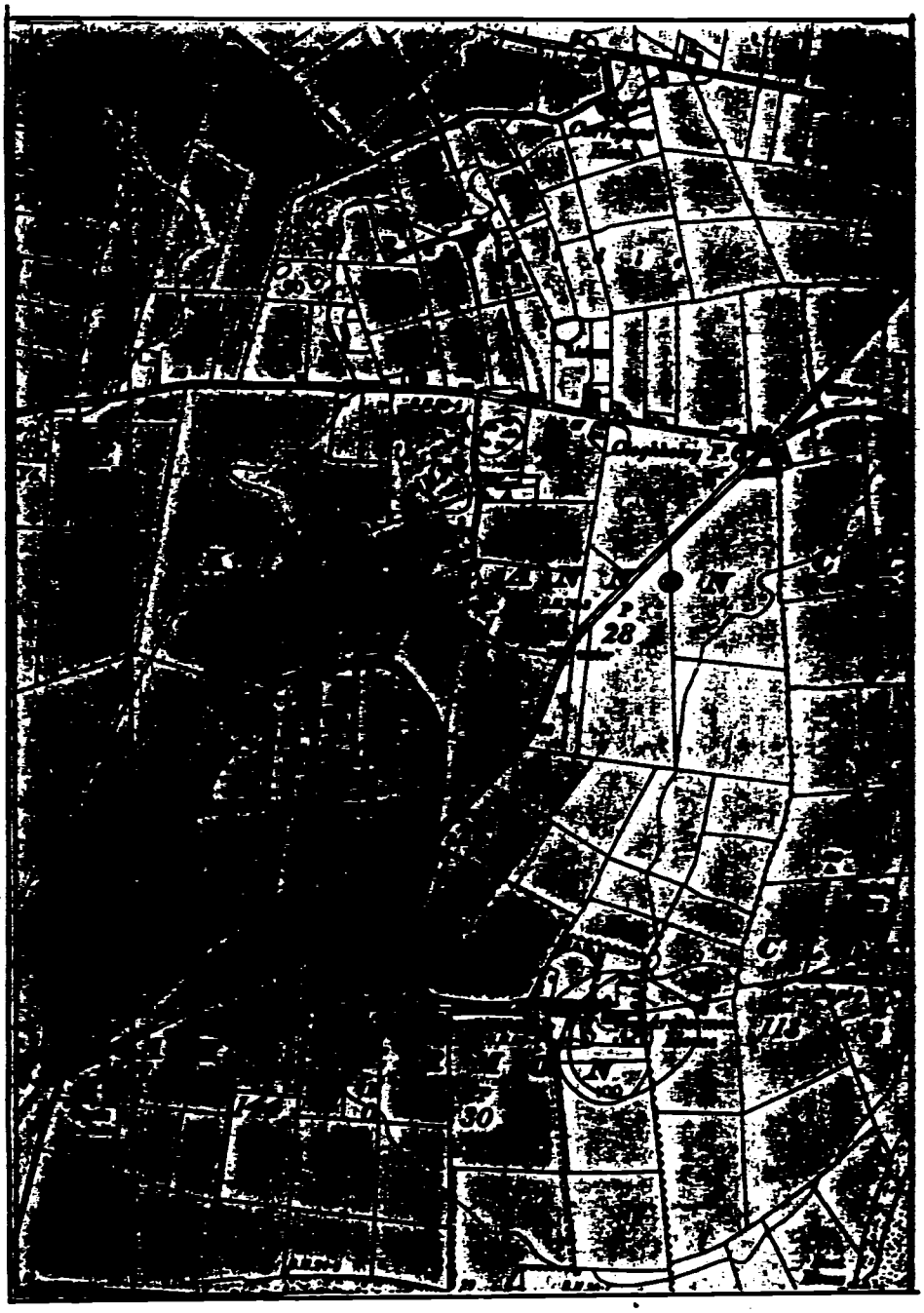
A line of woodland is found along the river for much of its length and consists mainly of the introduced species Horse chesnut and Sycamore. However, Elm, Ash, Oak and Hazel occur with a rich ground flora consisting of the following species:-

Wild Garlic (Allium ursinum), Bugle, (Ajuga reptans), Marsh Hawksbeard, (Crepis paludosa), Cuckoo Pint, (Arum maculatum), Twayblade, (Listera ovata), and Woodland Brome, (Bromus ramosus). Guelder Rose, (Viburnum opulus), is the commonest species of the shrub layer.

Evaluation

The calcareous flush areas hold interesting plant communities within which are found some rare species not found elsewhere in the county. The woodland, as well as having a rich ground flora, is of some importance locally for its bird and mammal populations.

ARDTERMON FEN



Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7 1" : 42. 6" : Sligo 7

ARDTERMON FEN

| | |
|---|---|
| Area | 6.5 ha |
| Grid Reference | G. 588, 436 |
| Scientific Interest | Ecological |
| Rating | Local |

This area contains both acid and calcareous plant communities in close proximity. It appears to be a cut-over raised bog from which almost all the peat has been removed. A very small remnant of the original bog surface remains and here those plant species characteristic of acid conditions are found, including the sedges, (Carex echinata), (C. panicea) and (C. demissa), the Woodrush (Luzula multiflora), Tormentil (Potentilla erecta), and the Spotted Orchid (Dactylorhiza maculata).

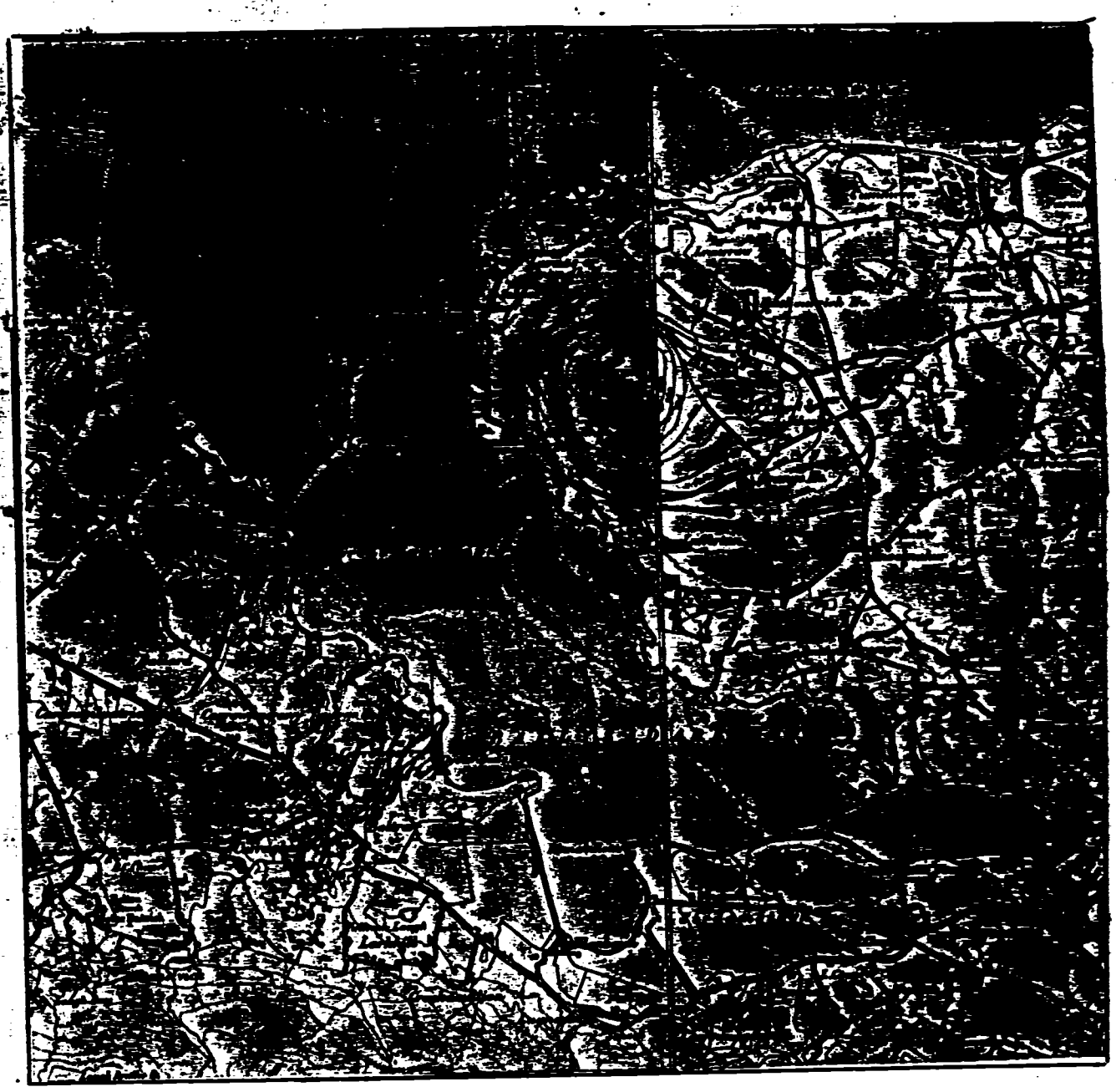
The greater part of the area is partly quaking and extremely calcareous. Stoneworts (Chara spp.), are abundant and their remains form a marly deposit, in which the following species occur commonly:- Sedges, (Carex lepidocarpa) and (C. rostrata), Bog Cotton (Eriophorum angustifolium), Bog Bean (Menyanthes trifoliata), and Spike Rush (Eleocharis palustris). Frequently associated with these species are Sedges, (Carex nigra) and (C. flacca), Mare's-tail, (Hippuris vulgaris), Lesser Spearwort (Ranunculus flammula), Marsh Pennywort (Hydrocotyle vulgaris), and Fool's Watercress (Apium nodiflorum). In some parts of the area Reed (Phragmites australis), is dominant and Iris (Iris pseudacorus), and Bur-reed, (Sparganium angustifolium), also occur.

A small raised area in the middle of the site holds small trees of Alder (Alnus glutinosa), among which Spruce has been planted. At its edges Sedge (Carex disticha), Common Rush (Juncus effusus), and Rough-stalked Meadow Grass (Poa trivialis), are common, with Twayblade (Listera ovata), Adders' Tongue (Ophioglossum vulgatum), and the moss, (Climacium dendroides), the associated species.

Evaluation

Despite the interference which this area has undergone, this area is ecologically interesting because of the presence of both base-rich and base-poor plant communities in close proximity, some of which are characteristic of several stages in the succession to raised bog.

BALLYSADARE BAY



Scale 1 cm = 634 m (0.4 mile)

Sheets ½" : 7 1" . 54. 55 6" Sligo 13, 14, 19, 20

BALLYSADARE BAY

| | |
|---|---|
| Area | c 1550 ha |
| Grid Reference | G 6,3 |
| Scientific Interest | Ornithological; botanical |
| Rating | Regional importance |

Ballysadare Bay is a large shallow estuary in which much mud is exposed at low tide. This mud provides an abundance of food for wildfowl and waders including Eel Grass, (Zostera marina) and Tasselweed, (Ruppia maritima), as well as numerous species of invertebrates upon which waders feed.

Substantial numbers of wildfowl frequent the area in winter and a count taken in November 1971 revealed that 1,100 birds were present though no species totals were taken. Species included Wigeon, Shelduck and Brent Geese, 50-60 of which were counted in 1967 and of which more probably occur at present. In addition, the Bay is the most important site in the county for waders.

A saltmarsh is found at the head of the Bay and consists of the typical species Sea Poa, (Puccinellia maritima), Mud Rush, (Juncus gerardii), Sea Blite, (Suaeda maritima), and Glasswort, (Salicornia europaea, agg.). In addition, several uncommon salt-marsh species occur eg., Red Blysmus, (Blysmus rufus), and Spike Rush, (Eleocharis quinqueflora). Though usually found only in tidepools, Tasselweed, (Ruppia maritima), occurs out on the open mud flats.

Evaluation

The bay is an important area for wintering wildfowl and waders and large numbers of birds occur there in winter. Also it holds a good example of salt marsh vegetation in which a few uncommon plant species are found.

INISHCRONE SPIT.

Scale 1 cm 105 m (115 yds)

Sheets ½" 6. 1" : 53. 6" . Sligo .16

## INISHCRONE SPIT

| | |
|---|---|
| Area | 84 ha |
| Grid reference | G 26, 29 |
| Scientific Interest | Botanical; ecological |
| Rating | Regional importance |

The sandhills at Inishcrone Spit consist of high, badly-eroded dunes at the western end of the area and some lower dunes closer to the mainland. South of the dunes an extensive dune slack occurs.

A foredune ridge occurs along the length of the southern portion of the spit and along the middle parts of the northern shore. Rapid erosion of these dunes is occurring and several large blowouts are found throughout the western half of the spit.

Little vegetation covers the dunes and consequently there are extensive areas of loose sand subject to drift by wind action none of the binding species of grasses can become established for any length of time. However, the following species are found:- Kidney Vetch (Anthyllis vulneraria), Bird's Foot Trefoil (Lotus corniculatus), Milkwort (Polygala vulgaris), Sand Cat's Tail (Phleum arenarium) and, where the dunes are relatively more stable, the moss, Tortula ruraliformis. The present erosion appears to be a result of overgrazing, which has weakened the plant cover and exposed large areas of bare sand.

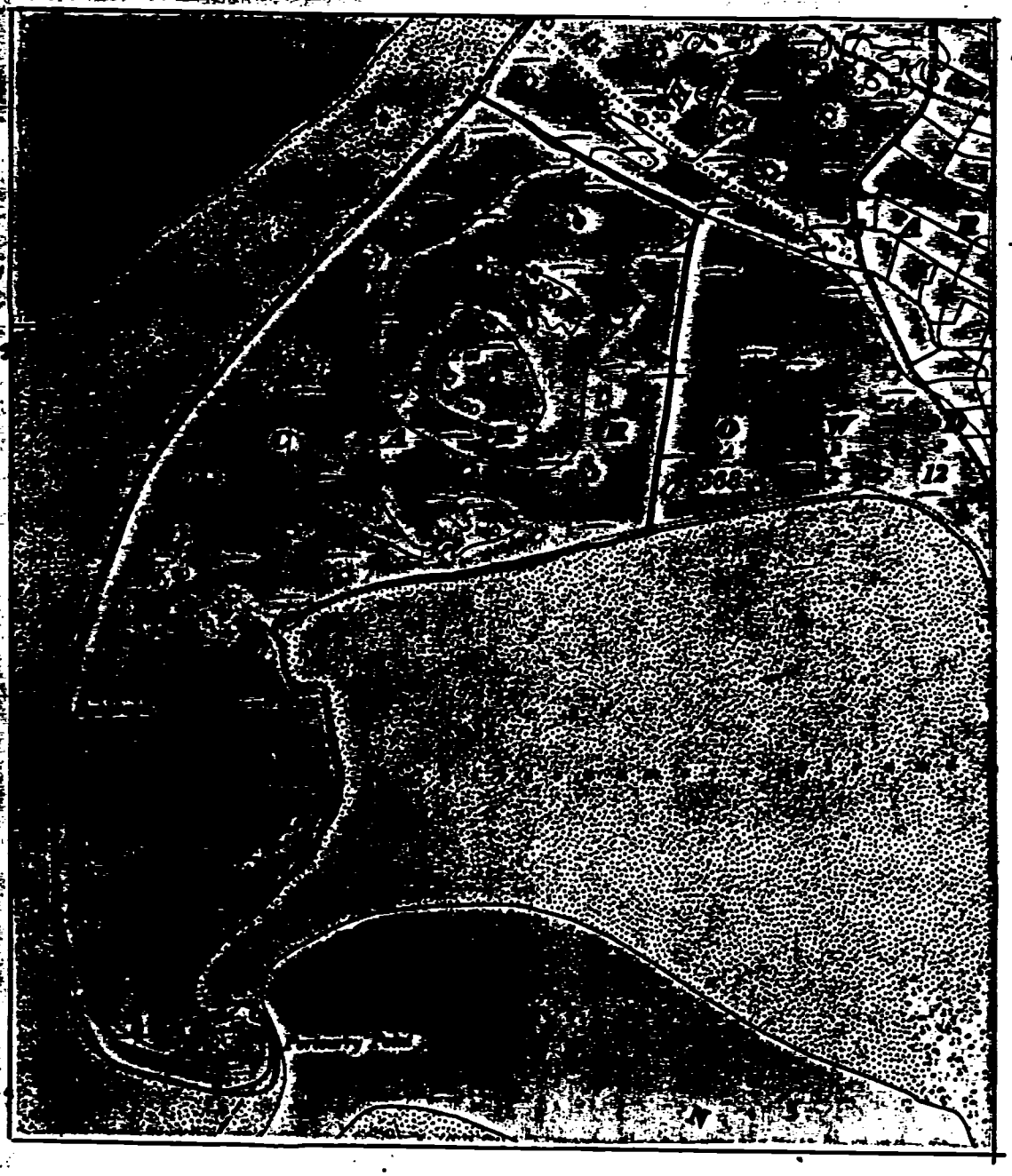
In the more stable areas of the dunes the flora is well-developed and the common species typical of these habitats occur. These are Carline thistle (Carlina vulgaris), Chickweeds (Cerastium semidecandrum and C. diffusum), Burnet Rose (Rosa pimpinellifolia), Wild Pansy (Viola tricolor), Rue-leaved Saxifrage (Saxifraga tridactylites) and Eyebright (Euphrasia occidentalis).

Dune slacks are few, but a slack in the southern part of the spit held the following species - Creeping Willow (Salix repens), Quaking Grass (Briza media), Heartsease (Prunella vulgaris), Silverweed (Potentilla anserina) and Water Mint (Mentha aquatica). Species ocurring less frequently are Marsh Helleborine (Epipactis palustris), Early Marsh Orchid (Dactylorhiza incarnata), Adderps Tongue (Ophioglossum vulgatum), Bog Thistle (Cirsium dissectum), Black Bog Rush (Schoenus nigricans), Butterwort (Pinguicula vulgaris) and Twayblade (Listera ovata).

## Evaluation

This area appears to hold the richest dune flora in the county and it also contains an extensive area of dune slack within which several uncommon species occur.

## STRANDHILL DUNES



Scale 1 cm = 105 m (115 yds)

Sheets ½" 7 1". 54 6" Sligo 13.

STRANDHILL DUNES

| | |
|---|---|
| Area | 68 ha |
| Grid reference | G. 59, 34 |
| Scientific interest | Ecological; botanical |
| Rating | Regional importance |

The Strandhill dunes link an island of morainic origin to the shore and are typical of west coast dunes in suffering badly from wind erosion. A huge blowout extends from the west side of the dunes to the centre of the dune system, giving off further blow-outs and gulleys, so that a considerable part of the area is bare sand.

However, in the southern part of the dunes, there is a large area of stable sand and in the absence of grazing animals (except for a few rabbits) a good cover of vegetation has developed. This is dominated by Marram Grass, (Ammophila arenaria) with abundant Red Fescue, (Festuca rubra), False Oat, (Arrhenatherum elatius), Cocksfoot, (Dactylis glomerata), and White Clover, (Trifolium repens).

In the areas less-dominated by grasses, the flora is diverse and contains many of the typical sand dune species. The most abundant are Wild Thyme, (Thymus drucei), Birds Foot Trefoil, (Lotus corniculatus), and Creeping Willow, (Salix repens). Frequent are Kidney Vetch, (Anthyllis vulneraria), Mouse-eared Hawkweed, (Pilosella officinarum), Sandwort, (Arenaria serpyllifolia), Carline Thistle, (Carlina vulgaris), and Biting Stonecrop, (Sedum acre). Of infrequent occurrence are the Orchids, Anacamptis pyramadalis and Ophrys apifera and Sand Timothy, (Phleum arenarium).

A variety of mammal species also occurs in the area.

Evaluation

This is a prime example of a wind-eroded system of dunes with large areas of bare, moving sand, close to a stable dune area that is densely vegetated. The vegetation, being ungrazed, is of interest and an uncommon plant species occurs here.

DERINCH ISLAND


Scale 1 cm = 634 m (0.4 mile)

Sheets ½" : 7 1" 54.55 6" Sligo : 19 : 20

DERINCH ISLAND

| | |
|---|---|
| Area | c 100 ha |
| Grid reference | G 60 30 |
| Scientific Interest | Ecological |
| Rating | Local importance |

The area is a reclaimed saltmarsh, consisting of wet meadow (through which drainage ditches have been cut), areas of brackish water and open pools.

Close to the sea wall, where the water is brackish, the following species occur:- Celery-leaved Crowfoot (Ranunculus sceleratus), sedges (Carex extensa and C. otrubae), Sea Clubrush (Scirpus maritimus) and Brooklime (Samolus valerandi). The drainage ditch margins hold a rich flora including sedges (C. rostrata and C. nigra), Sea Clubrush (Scirpus maritimus), Lesser Spearwort (Ranunculus flammula), Marsh Bedstraw (Galium palustre), Water Speedwell (Veronica anagallis-aquatica), Spike Rush (Eleocharis palustris) and Arrow Grass (Triglochin palustre).

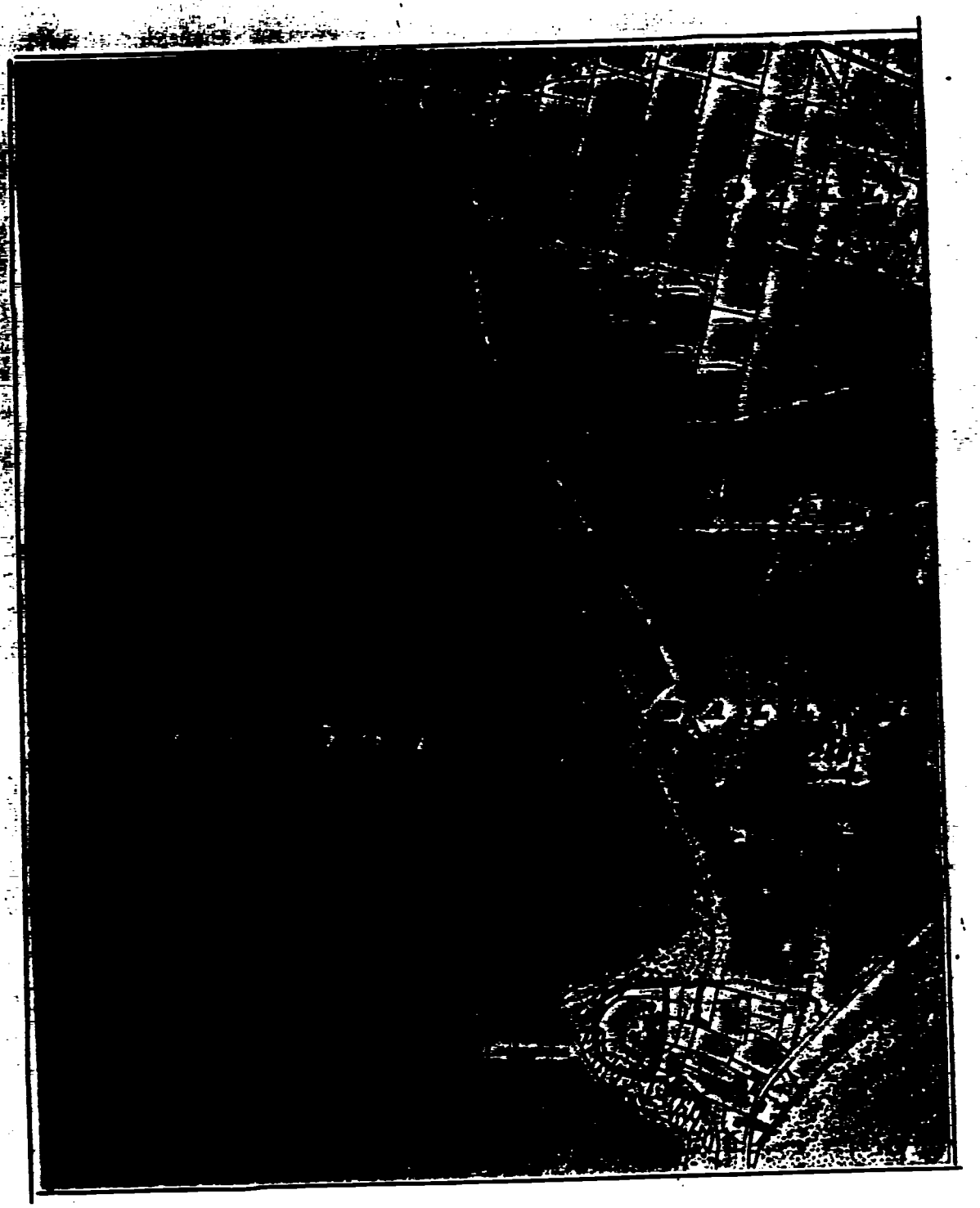
Forget-me-not (Myosotis caespitosa) and Bur-reed (Sparganium erectum) are common species of the pool margins, while in the open water are found Marestail (Hippuris vulgaris), Pondweed (Potamogeton berchtoldii) and Horsetail (Equisetum fluviatile).

Large numbers of passerines occur here throughout the year and the area provides a wintering habitat for many wildfowl and waders, including Mallard, Teal and Snipe. In addition the area is rich in invertebrates.

Evaluation

This area holds a very diverse and highly productive marsh system, with abundant invertebrate life and large numbers of wildfowl, waders and passerines occurring. Botanically it is very diverse owing to the number of aquatic and semiaquatic habitats found in the area. Another point of interest is the occurrence of a disused oyster farm, which is being rapidly colonized by many plant species.

YELLOW STRAND



Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7. 1" . 42 6" Sligo . 7.

YELLOW STRAND

| | |
|---|---|
| Area | 20 ha |
| Grid reference | G. 57, 44 |
| Scientific interest | Ecological |
| Rating | Local importance |

This area contains two sub-sites.

Sub-site 1

This site lies on the cliffs at Lackaneena, south of the Yellow Strand. The cliff top is closely grazed and is dominated by a Fescue (Festuca) - Clover (Trifolium) sward. Abundant throughout are Daisy (Bellis perennis) and Birdsfoot Trefoil (Lotus corniculatus), with the Plantains (P. Coronopus, P. lanceolata) and (P. maritima) occurring frequently. Also present are Bulbous Buttercup (Ranunculus bulbosus), Scurvy Grass (Cochlearia officinalis), Wood Rush (Luzula campestris), and Spring Sedge (Carex caryophyllea). The following are less frequently encountered, Crested Hair Grass (Koeleria cristata), Sea Milkwort (Glaux maritima) and Centaury (Centaurium erythrea). Two rare species occur at the site.

Sub-site 2

This area, lying behind the sand hills at the Yellow Strand, has been smoothed out by the deposition of large quantities of sand. The vegetation is of the machair type, i.e., a herb-rich community usually growing on a level surface formed from wind blown sand. The dominant species are Sand Sedge (Carex arenaria) and Meadow Grass (Poa pratensis), with the following associated species:- Lady's Bedstraw (Galium verum), Mouse Ear Hawkweed (Pilosella officinarum), Milk wort (Polygala vulgaris), Violet (Viola riviniana), Mountain ever-lasting (Antennaria dioica) and the Orchids, Dactylorhiza fuchsii and D. incarnata.

In the damper areas Creeping Willow (Salix repens) is abundant with the Black Bog Rush (Schoenus nigricans). Also occurring are Sedge (Carex flacca), Lady's Smock (Cardamine pratensis) and Bog Pimpernel (Anagallis tenella).

Evaluation

These two sub-sites hold two vegetation types of great interest and sub-site 2 may be the only locality for the machair type of vegetation in county Sligo. In addition several rare species of plant occur.

## DEADMAN'S POINT

Scale : 1 cm = 105 m (115 yds)

Sheets : ½" : 7 1". 42 : 43 6" Sligo. 8.

DEADMAN'S POINT (ROSSES POINT)

| | |
|---|---|
| Area | 4 ha |
| Grid Reference | G 62,39 |
| Scientific Interest | Ecological |
| Rating | Local importance |

This site consists of sea cliffs on which an unusual assemblage of plant species are found. This includes Sea Spleen wort, (Asplenium marinum), Mountain Everlasting, (Antennaria dioica), Blue Moor Grass, (Sesleria caerulea), Creeping Willow, (Salix repens), Kidney Vetch, (Anthyllis vulneraria), and Thyme, (Thymus drucei).

Along the southern side of the area an interesting community occurs on the shallow soils over the underlying limestone. Here Blue Moor Grass, (Sesleria caerulea), dominates with Sheep's Fescue, (Festuca ovina), and Downy Oat, (Helictotrichon pubescens).

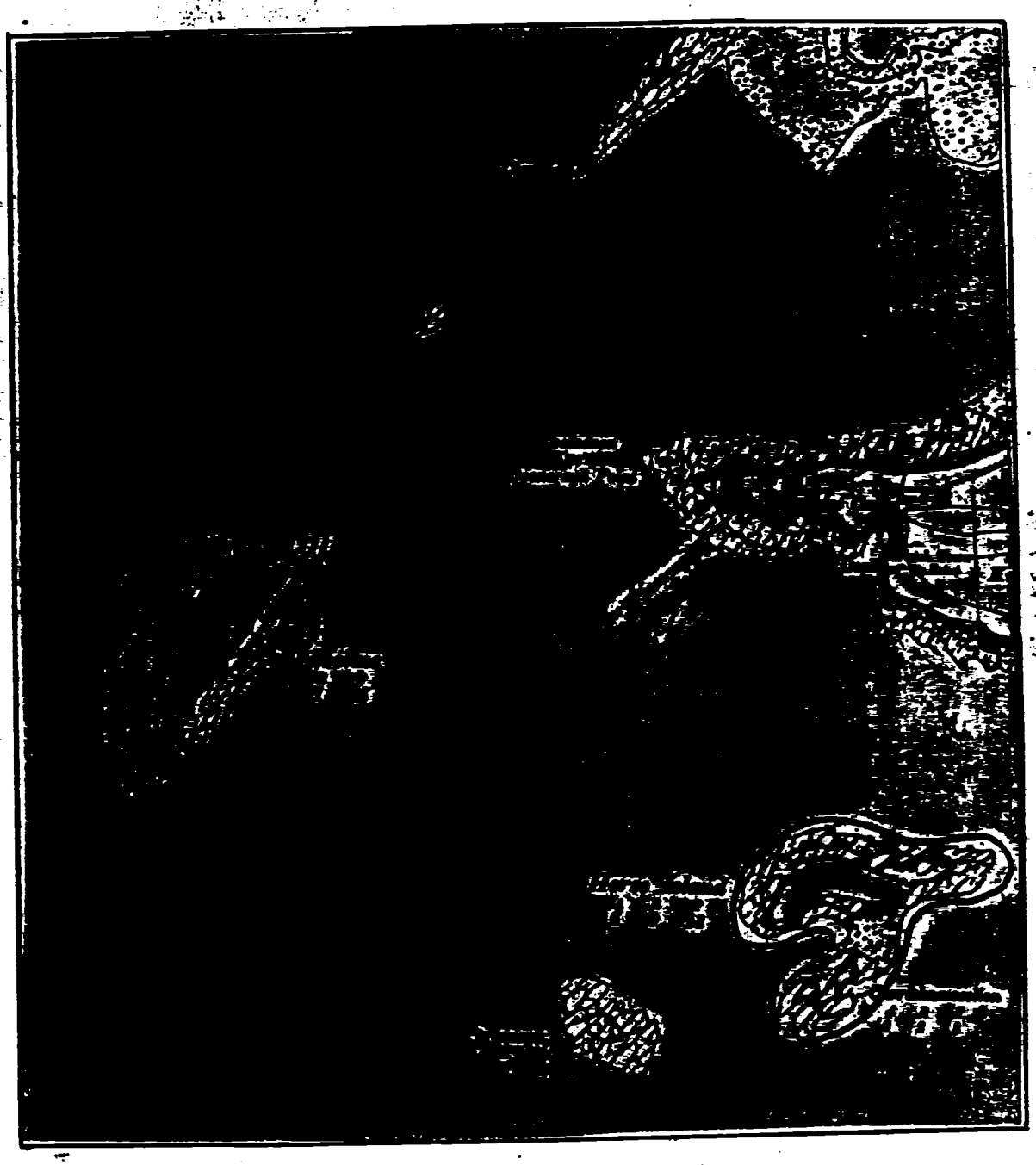
Several species characteristic of acid conditions are found, indicating an increase in the acidity of the soil on a predominantly calcareous substrate. These species are Ling, (Calluna vulgaris), Tormentil, (Potentilla erecta), Devil's-bit Scabious, (Succisa pratensis), and Spotted Orchid, (Dacylorhiza maculata).

This community is similar to that which occurs in the karst limestone areas of the west of Ireland and species such as Black Bog Rush, (Schoenus nigricans), Burnet Rose, (Rosa pimpinellifolia), and Crested Hair Grass, (Koeleria cristata), occur with the typical woodland types, Bluebell (Endymion non-scriptus) and Pignut (Conopodium majus).

Evaluation

The curious plant communities found at this site exemplify certain trends apparent in the vegetation of western Ireland, such as species indifference to soil acidity and habitat. In addition the grassland described appears to be a rare community and one which increases the value and interest of the site.

# ARDBOLINE AND HORSE ISLAND



Scale : 1 cm = 105 m (115 yds)

Sheets : ½" 7 : 1" 42. 6" Sligo : 7

ARDBOLINE AND HORSE ISLAND

| | |
|---|---|
| Area | 7.2 ha and 5.6 ha |
| Grid Reference | G 55,44 & G 56,45 |
| Scientific Interest | Ornithological |
| Rating | Regional importance |

This site consists of two islands, both of which are important for the numbers of nesting sea birds which they hold.

Ardboline

This island has high cliffs along its western edge and several species of bird nest here, including the Cormorant. 300 pairs of these nested in 1969, but much more recently the colony was estimated at 100 breeding pairs. This makes the island the most important Cormorant colony in county Sligo. Shags also nest, along with Great Black-backed gulls, Herring Gulls and a few Auks.

Horse Island

Horse Island resembles Ardboline in its bird fauna, holding substantial numbers of nesting Cormorants and Shags. Counts taken in 1969 revealed that Cormorants totalled 80 breeding pairs and Shags numbered about 20 pairs.

Evaluation

Both islands are of importance for the number of breeding sea birds which they hold. In addition Barnacle Geese winter on each of the islands.

INISHMURRAY

Scale 1 cm = 105 m (115 yds)

Sheets $\frac{1}{2}$" : 7 1" : 42 6" Sligo 1.

INISHMURRAY

| | |
|---|---|
| Area | 112 ha |
| Grid Reference | G 57/54 |
| Scientific Interest | Ornithological |
| Rating | Regional importance |

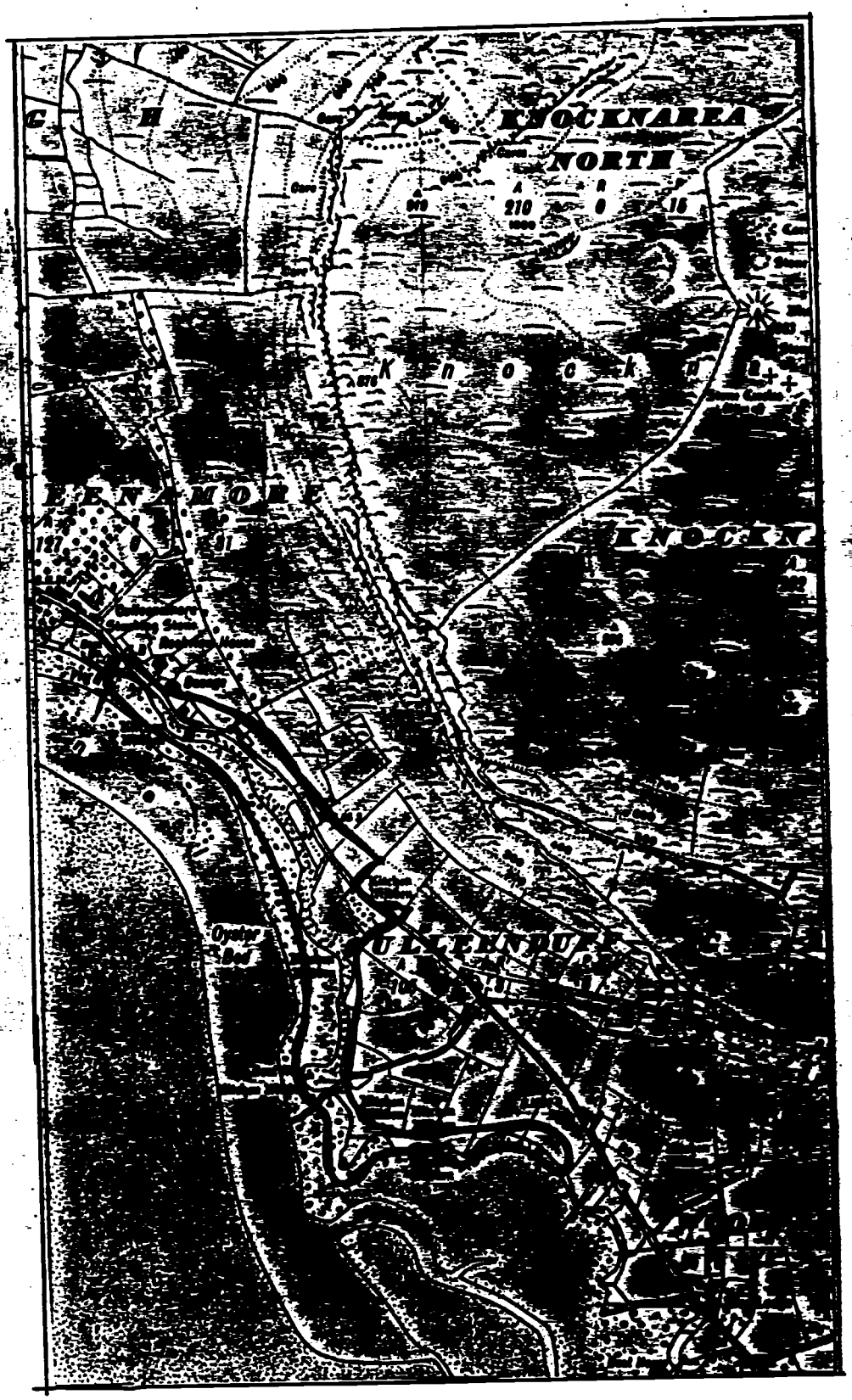
Inishmurray is a low-lying island of Sandstone, much exposed to Atlantic storms and whose surface is largely covered by wet acidic grassland. In the drier areas a fine close growing turf occurs with White Clover (Trifolium repens) and Red Fescue (Festuca rubra), predominating. The old fields on the island now hold a flora of the wet grassland type in which the following species commonly are found:- Bent Grass (Agrostis stolonifera), Marsh Bedstraw (Galium palustre), several species of Rush, including (Juncus articulatus and J. effusus), Purple Loosestrife (Lythrum salicaria) and Marsh Ragwort (Senecio aquaticus).

The chief interest of the island, apart from its archaeological remains, lies in the large nesting colonies of birds which occur. Fairly large populations of terns, including Artic terns, nest here and a sizeable colony of Eider ducks breed on the island. In addition a flock of Barnacle Geese (200 birds) over winters here.

Evaluation

The island is extremely important from the ornithological point of view, as Eider duck have only 4 colonies of a similar size in Ireland. It provides a nesting habitat for several species of tern, and holds a large flock of Barnacle Geese in winter.

CULLEENAMORE




Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7 1" : 54 6" Sligo 13. 14.

CULLEENAMORE

| | |
|---|---|
| Area | 7 ha |
| Grid Reference | G 60136 |
| Scientific interest | Geological; zoological |
| Rating | National Importance |

This is a site of a post-glacial oyster bed with the shells still in the position of growth. The bed now forms a low cliff about 4 feet in height at the back of the present beach and the feature is a striking example of a raised beach, indicating a change in sea level in the recent past.

Evaluation

This is an important site for the investigation of post glacial sea level changes and for the information it reveals about oyster growth before the influence of modern man. It is one of a series of similar features on the west coast and may be the most significant.

SERPENT ROCK

Scale : 1 cm = 634 m (0.4 mile)

Sheets : ½" : 7 1". : 42 6" Sligo 4, 7.

SERPENT ROCK

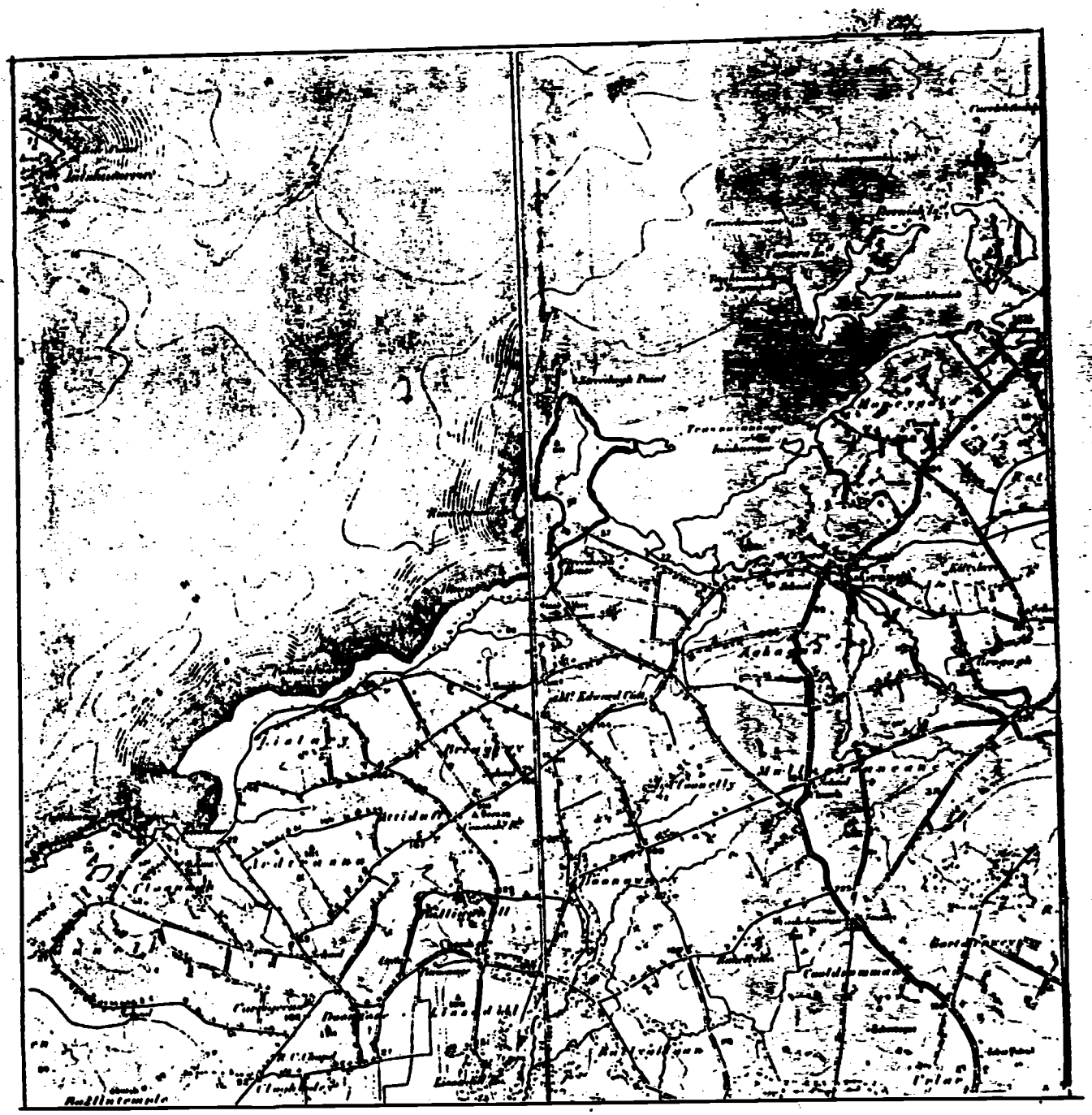
| | |
|---|---|
| Area | 63 ha |
| Grid reference | G 56145 |
| Scientific Interest | Geological |
| Rating | National Importance |

At Serpent Rock the most complete section of the north-western Carboniferous strata are exposed. It is thus one of the critical sites for geological research in the area. An excellent series of caninoid fossil corals occurs and these stand out from the rock matrix in certain sections of the strata.

Evaluation

In view of the excellent state of preservation of the strata and their importance in establishing a chronology for the Carboniferous period in this area, the site is of great interest geologically.

## STREEDAGH POINT



Scale 1 cm = 634 m (0.4 mile)

Sheets ½" . 17 1" . 42 6" Sligo. 5.

STREEDAGH POINT

| | |
|---|---|
| Area | 158 ha |
| Grid Reference | G 63151 |
| Scientific Interest | Geological; ecological |
| Rating | National Importance |

The succession of strata at Steedagh Point is identical to that of the lower part of Serpent Rock. It contains abundant remains of caninoid coral fossils but many other species occur here also. The rock types found here include argillaceous limestones, oolitic limestones, conglomerates and thin deposits of chert. The ecological interest stems from the slightly unusual structure of the sand dunes and shore communities. These are situated on a shingle spit of recent origin which runs north-east up to Conor's Island. Along the spit a storm beach lines the base of the sand dunes whilst in the dune-slack areas shingle is again exposed, making these areas drier than would nomrally be the case.

The sand dunes support a typical flora dominated by Marram (Ammophila arenaria), with the winter annuals Hair Grass (Aira praecox), Sand Cat's Tail (Phleum arenarium) and Chickweed (Cerastium diffusum), the moss Tortula ruraliformis and the perennials Biting Stonecrop (Sedum acre), Cats Ear (Hypochoeris radicata) and Red Fescue (Festuca rubra).

Close to Steedagh Point a short turf sloping towards the sea is composed of Sheep's Fescue (Festuca ovina), Sea Pink (Armeria maritima), Bog Pimpernel (Anagallis tenella) and Primrose (Primula vulgaris). This unusual association is probably due to the mild oceanic conditions which prevail at the site, allowing moisture loving plants to grow in a fairly dry habitat.

Evaluation

The site is as important as that at Serpent Rock for the establishment of a correct stratigraphy for the Carboniferous period in the area. The sand dunes and the plant associations at the Point are of ecological interest owing to the unusual habitat and climatic conditions which occur.

ABBEYTOWN MINE

Scale 1 cm = 105 m (115 yds)

Sheets ½" : 7 1" . 55. 6" Sligo. 20.

ABBEYTOWN MINE

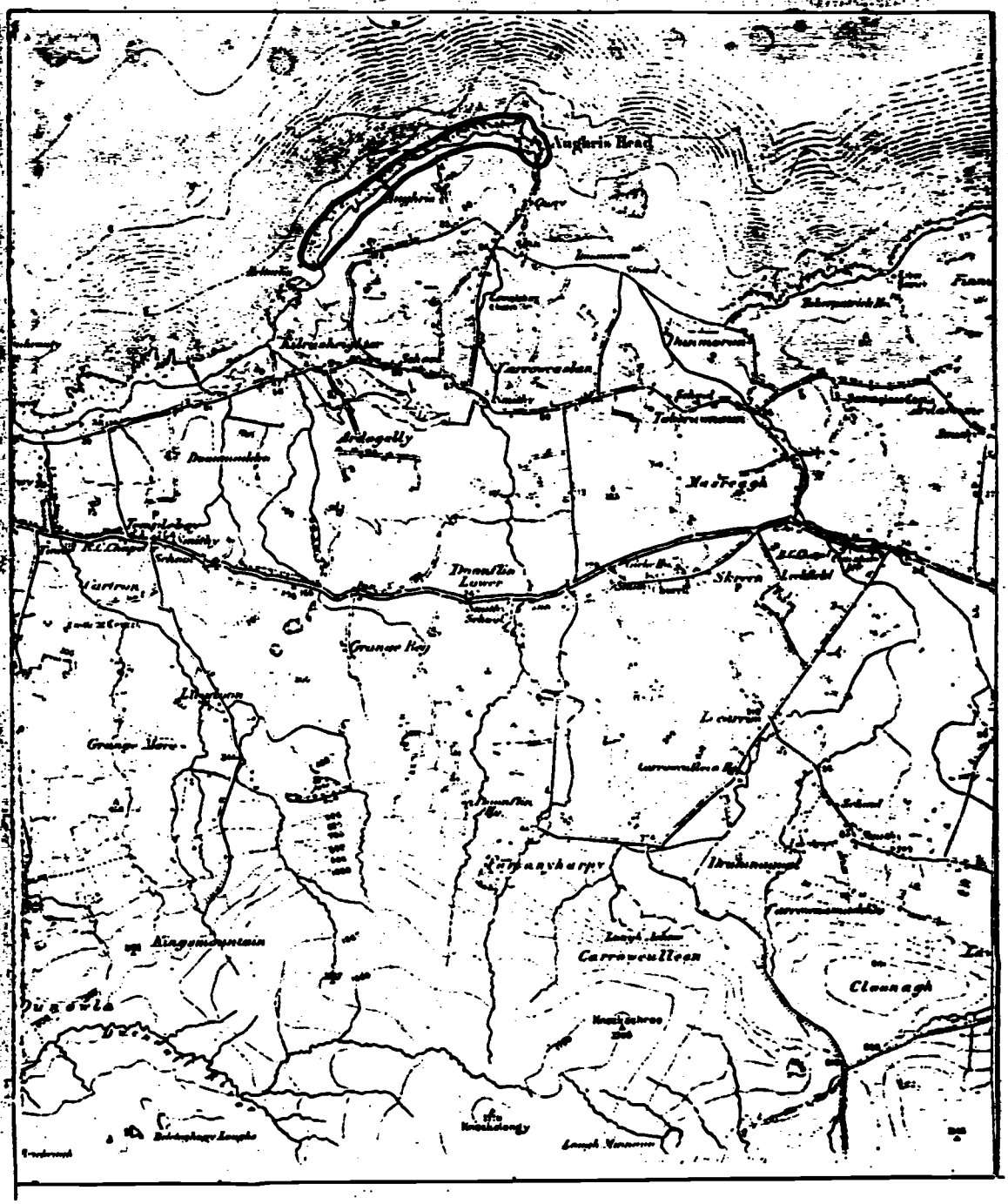
| | |
|---|---|
| Area | c 2 ha |
| Grid reference | G 66130 |
| Scientific interest | Geological |
| Rating | Regional Importance |

This is an old mine with exposed cores. Galena and sphalerite occur in the lower Visean limestones and significant quantities of each remain.

Evaluation

Abbeytown is a well-known site for the occurence of lead-zinc ore - one of the few known in limestone.

AUGHRIS HEAD




Scale 1 cm = 634 m (0.4 mile)

Sheets ½" : 7 1" : 54 6" Sligo. 12

AUGHRIS HEAD

| | |
|---|---|
| Area | 22 ha |
| Grid Reference | G 50 |
| Scientific Interest | Geological; ornithological |
| Rating | Regional |

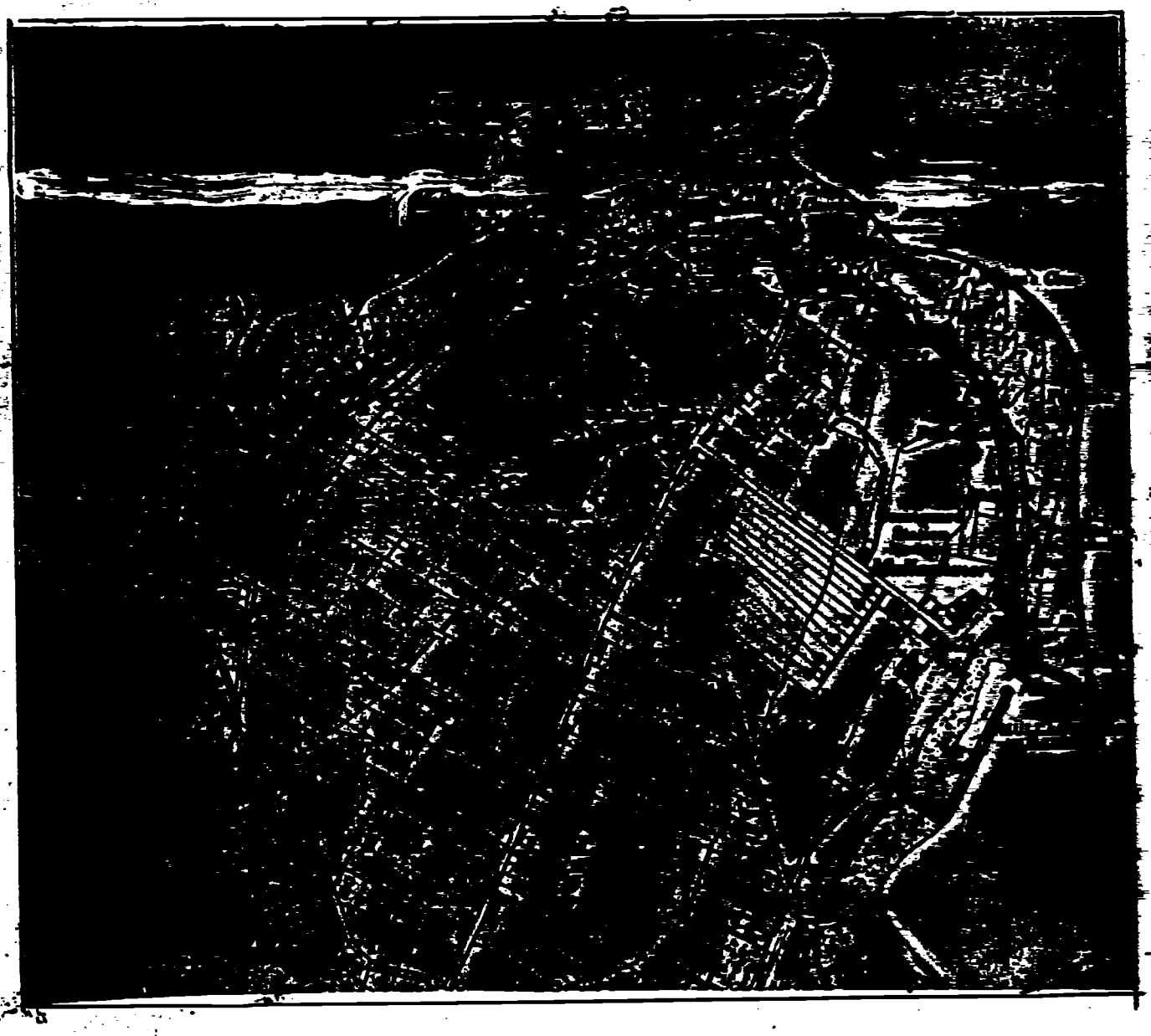
This site consists of upper Carboniferous strata with a Visean fossil fauna.

Its other feature is a sizeable seabird colony on the cliffs which includes numbers of auks and gulls as well as cormorant and shag.

Evaluation:

This site is of regional importance because of its stratigraphical interest.

MULLAGHMORE



Scale : 1 cm = 105 m (115 yds)

Sheets : ½" : 7 1" 42. 43 6" Sligo 2.

MULLAGHMORE

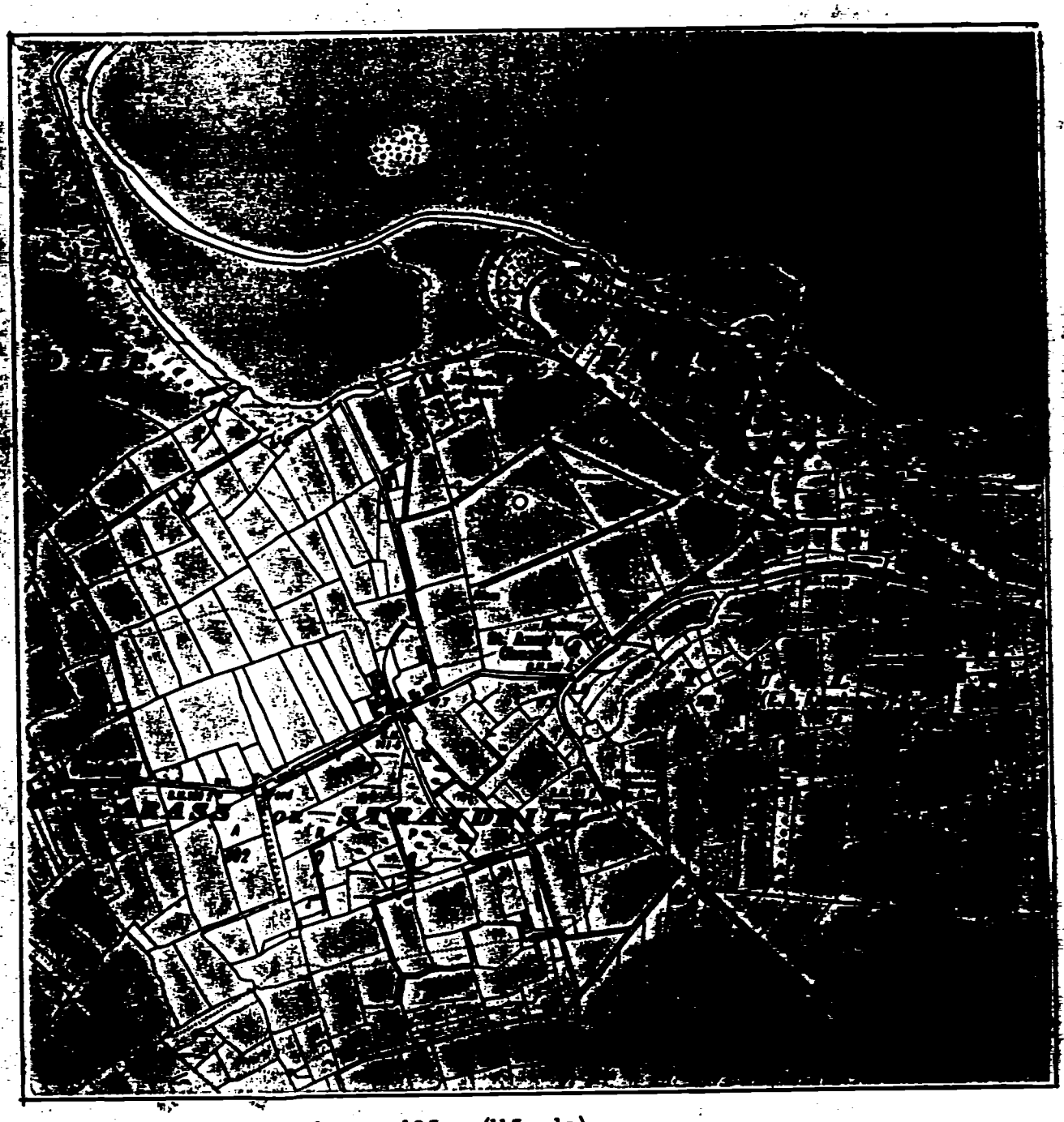
| | |
|---|---|
| Area | 35 ha |
| Grid reference | G 69156 |
| Scientific interest | Geological |
| Rating | Regional Importance |

The sea cliffs in this area contain a variety of sandstones and thin limestones both of which are of deltaic origin. The depositional features are also of interest with cross-bedding particularly well displayed, sometimes in three dimensions. Trace fossils occur in some of the strata: these include grazing trails and burrows.

Evaluation

This is the type area for the Mullaghmore sandstones but no type section has yet been described. The main exposures are on the cliffs and on wave cut platforms.

RINN



Scale :_ 1 cm = 105 m (115 yds)

Sheets : ½" : 7 1" . 54 6" Sligo 14.

RINN

| | |
|---|---|
| Area | 1.7 ha |
| Grid reference | G. 62, 36 |
| Scientific interest | Geological |
| Rating | Local Importance |

This is another part of the raised beach found at Culleenamore and is again composed mainly of oyster shells. It is also an archaeological site of some importance.

Evaluation:
Though of less value than Culleenamore at the moment, Rinn seems relatively secure from development and therefore is less likely to be interfered with. Thus it must be considered of local importance.