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THE JOURNAL OF THE
SCOTTISH ORNITHOLOGISTS' CLUB

Volume 7 No. 5

SPRING 1973

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THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB



Vol. 7 No. 5

Spring 1973

Edited by Tom Delaney assisted by D. G. Andrew and B. G. Grattage

Editorial

Editorial arrangements. Alert readers will have noticed the recent appearance of a new name in the heading of the Editorial section of *Scottish Birds*. Two years with the journal have amply demonstrated to the editor that Parkinson's Law is not reversible: spare time cannot be expanded to cover all the increasing demands on it and indeed seems to be an ever diminishing commodity. We are therefore fortunate in having been able to obtain the services of B. G. Grattage to help deal with the production of the Short Notes section. He is ideally suited to the task, having some 30 years of ornithological experience, a methodical but enthusiastic approach to the work involved and some spare time to devote to it. We bid him welcome to the Order Scribendiformes.

Oil developments. The Nature Conservancy have appointed Robin Donally as 'oil developments officer' to support the work of the Nature Conservancy staff in this field and to provide an advisory and consultative service on all aspects of North Sea oil developments that affect conservation interests.

The RSPB are to appoint a conservation officer to study the problems associated with the development of oil and natural gas around the coast, and to help combat potential threats by putting forward the conservation point of view.

These appointments, both based in Scotland, are welcome indicators of the growing resources being applied for conservation in the face of current developments.

Rare breeding birds. A problem encountered from time to time in the preparation of bird reports concerns records of rare breeding birds. For reasons of security, observers may decide not to report such records or may stipulate that they should not be passed on or published. The desire to protect the birds from the pressures that are all too likely to follow publicity is, of course, laudable. On the other hand, the overall picture it is possible to form of the status, distribution and success of

rare breeders may as a result often be incomplete or inaccurate. It seems a pity that data of such scientific interest and importance in the planning of the conservation of these species should effectively be lost in this way. To overcome the problem a safe central repository for such records was obviously required, able to command the full confidence of observers; to this end in 1968 the RSPB formed the Rare Breeding Birds Panel. The Panel has recently been reconstituted as an independent body by the BTO, the RSPB and *British Birds*, with a representative from the Nature Conservancy.

Full details of the Panel, its organisation and arrangements are given below. The safeguards provided concerning the security of information seem sensible and practical and should satisfy most people. By allowing records of rare breeding birds to be gathered together safely in one place, the Panel offers a valuable service to ornithology; we commend its work to our members.

Rare Breeding Birds Panel

In 1968 the council of the Royal Society for the Protection of Birds established a subcommittee, known as the Rare Breeding Birds Panel, to collect together in one place the records of rare breeding birds in Britain. This subcommittee consisted of A. W. Colling, Peter Conder, I. J. Ferguson-Lees, David Lea (Secretary) and Dr J. T. R. Sharrock. Details of the scheme were circulated to 46 county and regional report editors, and the great majority approved it (43 in favour, one against, two not replying).

While many records were received by the Panel, the response was less complete than had been hoped. As a result of this and also the departure to Orkney of David Lea, the Panel was reconstituted in December 1972 as an autonomous body separate from the RSPB, financed jointly by the British Trust for Ornithology, the RSPB and *British Birds*, and including, as before, a representative of the Nature Conservancy.

The members of the Panel are fully aware that the data on rare breeding birds submitted to them are usually confidential and that the records will continue to be sent only if county recorders and others can be sure that the information will remain secret. Basically, this comes down to having confidence in the individuals concerned. Over the years there are bound to be changes in the Panel's composition and it has, therefore, been agreed that any such changes shall be subject to approval by the councils of the BTO and the RSPB and the editors of *British Birds*. David Lea's departure has already necessitated such a change, and these bodies have approved R. H. Dennis as the Panel's new member and Dr Sharrock as its Hon. Secretary.

The aims of the Panel are to collect in one place all information on rare breeding birds so that changes in status—both increases and decreases—can be monitored, and so that essential information is not lost (as has happened in the past) through the deaths of those keeping breeding records secret.

Data sent to the Panel will not be divulged to any other person (not even members of the councils or staffs of the BTO and RSPB or the editors of *British Birds*) without the prior permission of the person supplying the information (during his or her lifetime) except that an annual summary in very general terms will be published. Localities will never be listed in this unless all concerned consider it safe to do so (e.g. Snowy Owls on Fetlar, Ospreys at Boat of

Garten) and often the county and even the region will be omitted. When specifically asked not to publish, the Panel undertakes to honour this request. Typical entries (all hypothetical) in this annual report might read:

Scaup *Aythya marila*. Successful breeding of four pairs occurred at three sites (two of them new) in Ross-shire, Sutherland and Inverness-shire—a higher number than in any year since 19XX.

Bee-eater *Merops apiaster*. Three pairs nested, one rearing two young successfully, at a locality in southern England. This is the first case of proved breeding since 19XX.

Fieldfare *Turdus pilaris*. Breeding of 18 pairs was proved at 17 localities in northern England and Scotland, this shows a continuing increase from the 19XX figures of 11 and 9 respectively.

County recorders and others having relevant information are asked to submit breeding records of the species listed below, in duplicate, on the Panel's special forms. These will be obtainable free on request from the Secretary and should be returned to him. We hope that with very few exceptions the information will come to the Panel via the county recorder concerned. When information does not come from him, the supplier's permission is sought, on the form, for the county recorder to be informed.

Only the two copies of the original data supplied to the Panel will exist, and these will be kept under lock and key, at separate places to guard against risk of fire. The duplicate set will be referred to only in such an emergency. The main set will be consulted only by the Secretary, but a summary prepared by him will be shown to the other members of the Panel at an annual meeting. This summary will be returned to the Secretary at the end of the meeting, and copies will not be taken by the other members of the Panel.

The Panel hopes that all ornithologists, and particularly all county and regional recorders, will appreciate the importance of full co-operation, so that the spread of increasing species and the decline of decreasing ones can be monitored and so that isolated breeding records are not lost.

List of species for which records are required

This list is confined to those species known to have bred in Britain since 1960.

Great Northern Diver	Spotted Crake	Golden Oriole
Slavonian Grebe	Dotterel	Short-toed Treecreeper
Black-necked Grebe	Black-tailed Godwit	Fieldfare
Pintail	Wood Sandpiper	Redwing
Scaup	Temminck's Stint	Black Redstart
Goldeneye	Ruff	Bluethroat
Common Scoter	Avocet	Cetti's Warbler
Goshawk	Red-necked Phalarope	Savi's Warbler
Red Kite	Stone Curlew	Marsh Warbler
Honey Buzzard	Mediterranean Gull	Dartford Warbler
Marsh Harrier	Black Tern	Firecrest
Montagu's Harrier	Snowy Owl	Red-backed Shrike
Osprey	Hoopoe	Serin
Hobby	Wryneck	Snow Bunting

Various species which bred in Britain prior to 1960 may do so again (e.g. Long-tailed Duck, Green Sandpiper, Brambling), while others which have not yet been proved to breed here have been suspected in recent years (e.g. Little Bittern). Observations are required for species such as these, and also in cases where breeding has been suspected but not proved or where a male has held an established territory.

Dr J. T. R. Sharrock (Secretary, Rare Breeding Birds Panel), 59 Curlew Crescent, Bedford, MK41 7HY.

Current ornithological research in Scotland

A survey compiled by I. H. J. LYSTER

Introduction

In a recent editorial (*Scot. Birds* 7: 105-6) the setting up of the SOC's Research Committee was announced: its primary purpose is to provide impetus and co-ordination for Club members and others wishing to take part in useful ornithological fieldwork in Scotland. Besides recommendations for specific projects, the Committee also suggested that, for general information and to help put workers in touch with one another, a list of research projects currently in progress in Scotland should be published in *Scottish Birds*. Accordingly a questionnaire was devised and circulated, and this survey has been drawn up from the answers received.

Copies of the questionnaire were sent to all local recorders in Scotland, to secretaries of Club branches, to most BTO and RSPB local representatives and to zoology or biology departments of universities etc.; there was a very good response, and I am grateful to all those who completed the forms or helped with information. Nevertheless it is expected that some projects will have been missed. I apologise to those concerned, but it is intended that the survey will be updated from time to time, and to this end I shall be glad to receive additions or amendments.

The survey deals mainly with field ornithology, but within that scope the term 'research' has been given a broad interpretation, covering the compilation of check-lists as well as studies of populations, breeding, behaviour, food etc. An important factor in selecting items for inclusion has been the worker's intention to publish. Many ornithologists make regular observations and counts of birds, but not all intend to share this knowledge. Although it is hoped that the publication of this list may encourage observers to help one another by passing on useful records or observations, more important perhaps is the hope that it will provide ideas and a stimulus to observers to undertake planned fieldwork projects that will contribute to our growing knowledge of bird life in Scotland.

A small number of returns covered laboratory research on such topics as physiology. These have been included under the heading of general topics, but no attempt has been made to produce an exhaustive list of such work in Scotland.

It is clear from the results of the survey, that some individuals and institutions are very active, and they appear several times in the list. Species of economic importance, such as game birds and wildfowl, also figure prominently, since they

come in for a great deal of attention, particularly from the institutions; seabirds too are generally well covered. Many species, however, are completely untouched: nobody, for example, appears to be studying Crested Tit, although it is a notably Scottish bird, and indeed is the symbol of our Club. It is hoped that this compilation will also be useful by demonstrating such gaps in present work.

Some ornithologists may feel that the study of a single species or genus is too restricting; they prefer to watch all birds, though at the same time they would be willing to help in something worthwhile. For such people there are many co-operative projects run by national bodies, for which extra help is needed; such schemes can add an extra interest to a day's birdwatching, and the results can be of considerable value. The section on nationally organised projects lists the main bodies concerned and gives details of some schemes at present in force in Scotland.

Finally, two important points were made by several people in response to the questionnaire: first, workers should not without prior discussion ring birds in an area already being studied in detail by another ornithologist; apart from confusion caused by retraps (not to mention colour-ringing) the extra disturbance may adversely affect years of work; secondly, they must make sure they have any necessary licence from the Nature Conservancy.

Projects listed by species

The species sequence is that used in the Scottish Bird Report. Researchers are listed alphabetically, with a brief description of their work. Where appropriate, the body sponsoring the research is named in brackets after the description, followed by the names of co-workers and requests for assistance. Co-workers involved in other research projects in their own right are named in heavy type. Addresses of all researchers are listed at the end of the paper.

Abbreviations

BTO is the British Trust for Ornithology.
NERC is the Natural Environment Research Council.
SRC is the Science Research Council.
RSPB is the Royal Scottish Society for the Protection of Birds.
SOC is the Scottish Ornithologists' Club.
WAGBI is the Wildfowlers' Association of Great Britain and Ireland.
Names of other bodies are given in full.

BLACK-THROATED DIVER and RED-THROATED DIVER

Dennis, R. H. Monitoring of breeding success at a representative selection of sites in the Highlands and Islands. Information is collected on causes of failure, disturbance, type of loch etc. Casual and past records welcomed. (RSPB).

GREAT CRESTED GREBE

Smith, R. W. J. Survey to locate all breeding pairs in Scotland and determine breeding success. See *Scot. Birds* 7: 213. (SOC).

SLAVONIAN GREBE

Dennis, R. H. Monitoring of annual breeding numbers and success of Scottish populations; includes the collecting of information on causes of failure, disturbance, type of loch etc. Some conservation and protection work is also undertaken, including the provision of floating islands. (RSPB and SOC). Co-workers, M. I. Harvey and others.

FULMAR

Dunnet, Prof G. M. Population study (especially in relation to survival and age at first breeding) on Eynhallow, Orkney. (University of Aberdeen). Co-workers, M. A. Macdonald, A. Anderson.

Macdonald, M. A. A 3-year investigation into winter assembly, breeding biology and dispersal at sea. Northeast Scotland, principally Forvie, Aberdeenshire, and Eynhallow, Orkney. (NERC).

MANX SHEARWATER

Wormell, P. Study of populations and the ecology of colonies on the island of Rhum. (Nature Conservancy).

STORM PETREL

Brathay Exploration Group. Comprehensive study of the birds of Foula, Shetland, especially Storm Petrel and Great Skua.

Standring, K. T. Investigation of the colony on Eilean nan Ron, Sutherland. Work includes ringing, biometrics, mapping of area used and artificial extension of the colony by provision of nestboxes and man-made burrows. Co-workers, J. H. Morgan, J. Allsop.

GANNET

Mitchell, J. Census of the colony on Ailsa Craig; collection of eggs under licence for chemical analysis. (Nature Conservancy).

Nelson, Dr J. B. Long-term study of ecology and behaviour. Work is based on the Bass Rock colony, but comparative information from other colonies is badly needed. (Aberdeen University). See also *Enquiries* (p. 269).

CORMORANT

Durham University. Census and ringing, Mochrum Loch, Wigtownshire.

SHAG

Coulson, Dr J. C. Study of breeding biology, irruptions and pollution by insecticides, Isle of May. (Durham University). Contact wanted with anyone willing to ring Shags annually in either Orkney or Shetland.

DUCKS, GENERAL

Allison, A. General study of the ducks of Loch Leven, Kinross-shire. Work includes regular counts, annual assessment of breeding success and predation, a ringing programme and a study of the feeding area. (Nature Conservancy).

Allison, A. and Maitland, P. S. Analysis of the gut contents of ducks from Loch Leven. (Nature Conservancy).

Allison, A. and Harrison, Dr J. G. National Duck Production Survey. Analysis of duck wings received from Loch Leven, Dornoch Firth, Solway, Orkney and three English sites. (Nature Conservancy).

TUFTED DUCK and GOLDENEYE

Pounder, B. Feeding habits of both species (and Mute Swan) in polluted waters in the Tay. Information wanted on wintering flocks, e.g. numbers and estimates of sex ratios.

EIDER

Love, J. A. Predation by Eider (and Oystercatchers and Herring Gulls) on the mussel beds of the River Ythan, Aberdeenshire. Also a study of the food of Eiders. (University of Aberdeen).

Mendenhall, Miss V. A 3-year (Ph.D.) study on the productivity of Eiders on the Ythan estuary includes assessing the survival of ducklings, laboratory and field studies of growth rate and conditions, possible effects of weather on survival, feeding ecology and behaviour and relations between females and young. Supervisor, **Dr H. Milne**.

Milne, Dr H. Nesting and hatching success. (Aberdeen University).

Pike, Dr A. W. Parasitology of Eiders on the Ythan Estuary. (Aberdeen University).

Pounder, B. Movements and behaviour in the Tay area.

SHELDUCK

Jenkins, Dr D. Numbers and breeding of Shelducks at Aberlady Bay Nature Reserve. (Nature Conservancy). Co-worker, M. Murray.

GEESE, GENERAL

Ogilvie, M. A. Regular monitoring of British populations of geese by means of censuses and counts. Includes annual census in early November of Icelandic Greylag and Pink-footed Geese wintering in Britain and regular counts at major haunts of Svalbard and Greenland Barnacle Geese, Greenland Whitefronts, Bean Geese, etc. Age-ratio and brood-size counts are made each winter on as many populations as possible. (Wildfowl Trust, Nature Conservancy and NERC). Assistance from amateur goose counters always wanted.

See also under WILDFOWL TRUST.

GREYLAG GOOSE and PINK-FOOTED GOOSE

Newton, Dr I. Feeding ecology of Greylag and Pink-footed Geese on farmland, to define points of conflict with agriculture. (Nature Conservancy).

Development of a management policy for the geese at Loch Druidibeg, South Uist. Involves assessing numbers, distribution and breeding success of Hebridean geese and their damage to crops. (Nature Conservancy).

Thompson, D. Reintroduction of Greylag Geese at Achray Forest Reserve near Callander, Perthshire. (WAGBI).

BARNACLE GOOSE

Owen, Dr M. Ecology of Barnacle Geese at the East Park Refuge, Caerlaverock, and on the Caerlaverock National Nature Reserve, Dumfriesshire. (Wildfowl Trust). Co-worker, C. R. G. Campbell. See also Enquiries (p. 269).

Roberts, E. L. Studies at Caerlaverock National Nature Reserve, Dumfriesshire, and in Kirkcudbrightshire. (Nature Conservancy).

CANADA GOOSE

Dennis, R. H. Study of the moult migration to Beaully Firth from York-shire; includes occasional round-ups for ringing. Co-workers, Wildfowl Trust, A. Walker, Hon. D. N. Weir and others.

SWANS

May, L. Some aspects of communication in Mute Swans. This study is being carried out in North and South Uist, particularly Loch Bee. Contact is wanted with anyone in Ross-shire or Harris with a knowledge of Mute Swan herds.

Ogilvie, M. A. Counts collected of Mute, Whooper and Bewick's Swans. (Wildfowl Trust, Nature Conservancy and NERC).

Pounder, B. Feeding habits of Mute Swan (and Tufted Duck and Golden-eye) in polluted waters in the Tay.

RAPTORS, GENERAL

British Falconers Club. Trained birds of prey are being marked with a large, red-dyed letter on the underside of each wing, and with anklets bearing an address and serial number. Details are wanted of any sightings of birds so marked. Such information will be used to study the movements and survival of lost or released birds, not only to determine the effect of controlled falconry on bird-of-prey populations, but also because it has been suggested that the training provided by falconers might prove useful for re-establishing young captive-reared birds in suitable areas.

Roberts, L. Long-term study of birds of prey in Galloway. (Nature Conservancy).

Stark, D. M. Distribution and status of birds of prey and owls in Caithness. Reports welcomed.

Tay Ringing Group. Breeding distribution of raptors particularly Sparrowhawk, Kestrel and Short-eared Owl in Fife.

GOLDEN EAGLE

Balharry, R. Breeding success in northwest Scotland, together with study of food supplies, egg failures and the effects of climate. Co-workers, Dr J. D. Lockie and Dr A. Watson.

Dennis, R. H. Monitoring of breeding success and assessing possible threats to the species in its main habitat types, West Cairngorms (RSPB).

Gregory, M. J. P. Status and breeding in South Argyll. (Nature Conservancy and RSPB).

McMillan, R. L. Distribution and breeding success in Perthshire.

Watson, Dr A. Long-term study of breeding and populations in Deeside. (Nature Conservancy).

Wormell, P. Monitoring of populations on Rhum and other small islands off northwest Scotland. (Nature Conservancy).

BUZZARD

Picozzi, N. and Weir, Hon. D. N. Numbers and breeding in Speyside. (Nature Conservancy and RSPB).

Weir, Hon. D. N. Population dynamics in Speyside.

SPARROWHAWK

Moss, D. Censusing of bird populations in forestry plantations in Dumfriesshire and woodlands on Speyside. Relation of these results to Sparrowhawk densities. This is a 3-year study supervised by Dr I. Newton. (Nuffield Foundation).

Newton, Dr I. Population dynamics and interaction between Sparrowhawks and their prey. (Nature Conservancy).

See also under Tay Ringing Group, RAPTORS, GENERAL, and Moss D. under CHECK-LISTS AND CENSUSES.

HEN HARRIER

Balfour, E. Long term study of behaviour, population dynamics, polygamy, winter roosting. Includes ringing and the use of coloured leg jesses and wing-tags. (RSPB). Co-worker, Dr J. Cadbury.

Dickson, R. C. Breeding and winter prey in southwest Scotland. Assistance wanted in the analysis of pellets.

Picozzi, N. The effects of Hen Harriers on Red Grouse breeding success. (Nature Conservancy).

Shaw, G. Research on hunting habits, behaviour, distribution throughout the year, breeding success, roost habits etc. in Stirlingshire, Perthshire and part of Argyllshire; to supplement work being carried out by others. Records of distribution (breeding and wintering) and counts would be welcomed, also supplies of pellets for analysis.

OSPREY

Dennis, R. H. Monitoring of spread and breeding success (RSPB).

PEREGRINE

Dennis, R. H. Long-term monitoring of a population little affected by organochlorine pesticides, West Cairngorms. (RSPB).

Ratcliffe, D. A. Regular monitoring of sample populations. (Nature Conservancy).

Watson, Dr A. Long-term study of breeding and populations in Deeside. (Nature Conservancy).

MERLIN

Dickson, R. C. Winter prey and hunting range in Wigtownshire. Assistance wanted in analysis of pellets.

Wilson, Lt. Cdr. R. A. Distribution and status of Merlins in Britain. Any information regarding this species in Scotland would be most welcome.

KESTREL

Riddle, G. A study in the area between Ayr and Ballantrae to build up data on the breeding population and to monitor changes. Information (especially Ayrshire records) is sought on nest-site preference, breeding (clutch size, dates etc.), reasons for success or failure; other Scottish records would be welcomed for comparison.

See also Tay Ringing Group, under RAPTORS, GENERAL.

RED GROUSE and PTARMIGAN

Moss, R. and the Nature Conservancy Grouse Team. Food selection, food availability and nutrition of Red Grouse and Ptarmigan in relation to their populations and behaviour in the wild. Testing the mechanism of food selection of captive grouse and Ptarmigan by palatability trials. Testing the effects of nutrition on egg production in captive birds. Digestibility trials on the nutrition of Grouse and Ptarmigan.

Picozzi, N. The effects of Hen Harriers on Red Grouse breeding success. (Nature Conservancy).

Watson, Dr A. and the Nature Conservancy Grouse Team. Population studies of Red Grouse and Ptarmigan. Behaviour studies of territory, survival, social status and inheritance in the Red Grouse. Studies of the inheritance, viability and behaviour of Red Grouse and Ptarmigan chicks in captivity and in the wild.

BLACK GROUSE

SOC, Stirling Branch. Survey of leks and a study of behaviour there. Survey Secretary S. Mitchell.

CAPERCAILLIE

Weir, Hon. D. N. Population and game-management study in northeast Scotland. Data wanted on clutch and brood sizes etc.

WADERS, GENERAL

Furness, R. Wader roosting habits in the Edinburgh area.

Gibson, I. A study of the roosting and feeding behaviour of waders on the Erskine-Woodhall stretch of the Clyde. It is hoped to relate this to the distribution of food species (invertebrates) in the intertidal mudflats, which may be undertaken by the Biology Department of Paisley College of Technology. Informal assistance wanted. Co-worker, H. Galbraith.

OYSTERCATCHER

Love, J. A. Predation by Oystercatchers (and Herring Gulls and Eiders) on the mussel beds of the River Ythan, Aberdeenshire. (University of Aberdeen).

RINGED PLOVER

Taylor, R. C. Geographical variation and taxonomy of Ringed Plover and Purple Sandpiper. The study is based chiefly on museum specimens, but measurements taken in the field and the results of ringing recoveries would be welcomed. Other waders will be similarly studied in the future. (SRC).

GOLDEN PLOVER

Ratcliffe, D. A. Breeding biology in Scotland. (Nature Conservancy).

GREENSHANK

Nethersole-Thompson, D. Studies of breeding biology, voice, behaviour, ecology and relations with other waders. (NERC). Co-workers, B., P. and R. Thompson.

PURPLE SANDPIPER

Craggs, Prof J. D. Organized survey in Great Britain and Ireland of the movements of Purple Sandpipers by means of colour-ringing at various sites. See *Scot. Birds* 7: 103. The organizer for Scotland is **D. L. Clugston**. Contacts are wanted in the Inner and Outer Hebrides, and observers are particularly requested to look out for and note the details of any colour ringed Purple Sandpipers they may see. (Hilbre Bird Observatory and BTO).

See also RINGED PLOVER.

GREAT SKUA

Brathay Exploration Group. Ecology of Great Skua on Foula, Shetland, with particular reference to their effects on the water, soils, flora and fauna. Information from **R. Furness**. Assistance wanted in the chemical analysis of soils and water.

GULLS, GENERAL

Clegg, T. M. Aging and species variation. Wing samples from dead gulls of any species would be welcomed. The sample should consist of the hand section, including all the primaries, from one wing or both, and if possible birds should be sexed internally. Polythene bags can be supplied to collectors.

LESSER BLACK-BACKED GULL and HERRING GULL

Chabrzyk, G. H. The age structure and breeding biology of a mixed colony of Lesser Black-backed and Herring Gulls on the Isle of May. Aspects of population growth and subsequent control measures are also being investigated. The project will last three years and is being supervised by **Dr J. C. Coulson**. (NERC). Information is wanted on sightings or breeding records of Isle of May colour-ringed gulls.

Colling, A. W. and Gordon, Miss N. J. Programme of control of the colony of Lesser Black-backed Gulls and Herring Gulls on the Isle of May and a study of the effects of the control measures. (Nature Conservancy).

Monaghan, Miss P. Feeding behaviour of Herring Gulls in winter on a tip at Cadder Wilderness, Bishopbriggs. (University of Glasgow). Records are wanted of Herring Gulls marked on the neck with black dye.

Thomas, G. J. The management of Herring Gull populations on Inchmickery and Fidra in the Firth of Forth, to release areas for breeding terns and to monitor the effects of control measures. (RSPB).

LITTLE GULL

Clegg, T. M. Biology and behaviour in areas north of the Tay; particularly seasonal habitat choices. Observations welcomed.

See also Love, J. A. under EIDER.

KITTIWAKE

Coulson, Dr J. C. Growth of colonies mainly in the Forth area but also elsewhere for the 10-yearly census. Census data and information about new colonies wanted. (Durham University).

LITTLE TERN

Dunbar, J. J. Breeding biology at the St Cyrus National Nature Reserve, Kincardineshire.

SANDWICH TERN

Smith, A. J. M. The life history of the species.

RAZORBILL

Parslow, J. L. F. Detailed population/ecological study of breeding Razor-bills and Guillemots at Clo Mor, Sutherland, for direct comparison with similar breeding colonies in more polluted areas, notably the Irish Sea. (Nature Conservancy, NERC). Co-worker, Dr D. J. Jefferies.

GUILLEMOT

Birkhead, T. R. Breeding biology, survival, interaction with other species, etc. Examination of museum specimens to seek a method of sexing Guillemots in the hand. Field work is based on Skomer Island but it is hoped to extend the study to Clo Mor, Sutherland. (NERC). Ideas on sexing Guillemots, and information concerning any collections of sexed Guillemot skulls or skins (particularly of the southern race) would be welcomed.

Broad, R. A. Egg loss and chick mortality on Fair Isle. (Fair Isle Bird Observatory Trust).

See also Parslow, J. L. F. under RAZORBILL.

BLACK GUILLEMOT

Slater, Dr and Mrs P. J. B. Observation of behaviour at a colony on Fair Isle.

PUFFIN

Broad, R. A. Monitoring of colonies on Fair Isle as a measure of movement and change in numbers. One aim is to establish a basic, reproducible counting technique. (Fair Isle Bird Observatory Trust). Co-worker, **Dr M. P. Harris.**

Harris, Dr M. P. Decline of Puffin populations in Scotland. Study areas are the Shiant, Isle of May, Fair Isle and Faraid Head, Sutherland. (Nature Conservancy).

OWLS, GENERAL

Hardy, A. R. A 3-year study of the predation by owls on small mammals in Aberdeenshire. (NERC).

SHORT-EARED OWL

Dickson, R. C. Breeding biology in Wigtownshire.

See also entries under RAPTORS, GENERAL and OWLS, GENERAL.

PASSERINES, GENERAL

Caryl, Dr P. G. Control of song in the domesticated Zebra Finch and other grassfinches. (Moray Fund).

Clegg, M. Passerines (particularly corvids) feeding in littoral habits.

Mitchell, J. Study of passerine migrants at Loch Lomond National Nature Reserve. (Nature Conservancy).

Stead, Dr D. M. Life cycles and movements of garden birds (Blue Tits, Great Tits, Coal Tits, Robins and Dunnocks). Involves the use of coloured rings, and reports of colour-ringed birds of these species would be welcomed.

Williamson, K. Structure of breeding populations of passerines in the Cairngorms, Loch Lomond, and Rhum National Nature Reserve and the Arriundle Forest Nature Reserve, Argyll. Common Bird Census. (BTO).

HOUSE MARTIN

Bryant, Dr D. M. Breeding biology of House Martin and ecology of aerial feeding birds. (University of Stirling). Information wanted on clutch size,

hatching success, nestling mortality, growth and any other data on the breeding of House Martins in Scotland.

RAVEN

Dickson, R. C. Breeding biology in Wigtownshire.

CARRION/HOODED CROW

Cook, A. Factors controlling the differences between Carrion Crow and Hooded Crow, including : ecological field work on production and habitat; egg and blood protein analysis; study of skins, and analysis of other existing data including ringing returns. (SRC).

Crow hybrid-zone enquiry (SOC). See *Scot. Birds* 7: 213.

Yom-Tov, Dr Y. A 2-year study of the effect of food and predation on the breeding density and success of Carrion Crows in Aberdeenshire.

Bowen, H. M. and Houston, D. C. Breeding and movements of Hooded Crows in the West Highlands. The main study area is near Oban. The work is particularly concerned with interaction between crows and hill-sheep farming. (Department of Agriculture). Information is wanted on Hooded Crows bearing wing tags seen more than ten miles from Oban.

ROOK

Munro, J. H. B. Scottish winter Rook roost survey. See *Scot. Birds* 6: 166 and 6: 438. (SOC). Information is wanted on the location of roosts in Scotland north of the Forth-Clyde line.

Stark, D. M. Winter roosts in Caithness.

GREAT TIT and BLUE TIT

Brown, H. Biology of Great Tit and Blue Tit. As many adults and nestlings as possible are being ringed within about four miles of Pitlochry. Information is being gathered on weights, wing-lengths and retraps. (Tay Ringing Group).

See also Stead, Dr D. M. under PASSERINES, GENERAL.

REDWING

Dennis, R. H. Breeding survey to document the spread and build-up in numbers of the species in Scotland. (SOC). Co-worker, M. Harvey. Observers are encouraged to submit full details of breeding records, including, if possible, clutch size, breeding success, causes of failure etc. Observers visiting nests are reminded that they need the appropriate licence.

STONECHAT

Macdonald, D. Effect of weather on wintering Stonechats in southeast Sutherland.

Phillips, J. S. Survey by questionnaire on the numbers and habitat preference of the species throughout the year, with special attention being paid to areas of young afforestation. Contact is wanted with observers throughout Scotland.

WHITETHROAT

Macdonald, D. Study of the breeding cycle in southeast Sutherland.

MEADOW PIPIT and ROCK PIPIT

Gerrard, E. C. Primary moult of the juveniles in relation to their breeding locality.

STARLING

Duncan, A. Distribution and movements of British and Scandinavian Starlings wintering in northeast Scotland. Reports are wanted of colour-ringed Starlings; each bird has two colour rings, and the exact combination is important.

Georgeson, Miss V. Seasonal production of testicular hormones in relation to behaviour. Study of Starlings breeding in nest boxes at Culterty Field Station. (Aberdeen University and Kilgour Scholarships).

SCOTTISH CROSSBILL

Nethersole-Thompson, D. Study of breeding biology, voice, food and distribution. A monograph is in preparation. (NERC). Notes of numbers, breeding distribution and voice, particularly beyond Speyside, would be welcomed (locations will be kept confidential).

CORN BUNTING

Macdonald, D. A general study of the species. Information welcome.

REED BUNTING

Tay Ringing Group. Study of a roost at Guardbridge, Fife.

HOUSE SPARROW

Stead, Dr D. M. Homing tendencies of House Sparrows.

TREE SPARROW

Tay Ringing Group. An attempt to find criteria for age determination by a study of moult.

Research on general topics**FEATHER STRUCTURE AND COLOUR**

Auber, Dr L. Study of colour-producing factors in the fully formed feathers of *Psittacidae*, *Meropidae* and *Pittidae*; the feather germs of *Porphyrio poliocephalus melanotis* (*Rallidae*); *Megalaima lineatum* (*Capitonidae*); *Pitta brachyura* (*Pittidae*); *Peophila gouldiae* (*Estrildinae*); and *Chlorophanes spiza* (*Coerebo-Thraupinae*). (Royal Society of London).

Clegg, T. M. Albinism and melanism in birds. Records are wanted of albinism or melanism in seabirds.

Lyster, I. H. J. Study of feather colour and structure in relation to taxonomy. (Royal Scottish Museum).

NAVIGATION

Gerrard, E. C. Bird navigation and responses, including the behaviour of birds attracted to high-level lights and the tracking of birds by radar.

PARASITOLOGY

George, R. S. The distribution of British fleas is being mapped. Sample nest contents of House Martin and Sand Martin are urgently wanted from all areas except the east coast of Scotland. Samples should be collected just before the breeding season, packed securely and sent with full details of where found. (Biological Records Centre, Monks Wood).

Pike, Dr A. W. Parasitology of Eider and other species of the Ythan estuary, Aberdeenshire. (University of Aberdeen).

PHYSIOLOGY

Friedman, Dr M. B. Survey of the patterns of avian eye and head movements with reference to the evolution of body form and brain structure. (Part of a study of the role of eye and head movements in visual perception). (U.S. National Institute of Health and the University of Edinburgh). See also Enquiries (p. 269).

Macdonald, J. W. Investigation of causes of death of wild birds from all areas of the United Kingdom. (Ministry of Agriculture, Fisheries and Food).

Thomas, Dr D. H. Comparative physiology of salt and water metabolism in birds. (SRC).

See also Georgeson, Miss V. under STARLING.

BIOLOGICAL STUDIES

Bourne, Dr W. R. P. Investigation of the distribution and ecology of birds at sea. Some specimens are collected under licence for studies of stomach contents, parasites and toxic chemicals. This material and corpses of beached birds are kept in a deep freeze and are available for study by

others. Studies of oil and other pollution of coastal developments likely to affect seabirds. Studies of the birds of the Buchan area. (Seabird Group, Aberdeen University, NERC). Co-workers include **Prof G. M. Dunnet**, T. J. Dixon, C. J. Bibby, D. Saunders and Dr J. A. Bogan. See also Enquiries (p. 269).

Clegg, M. Study of the bird population at West Haven, Carnoustie, Angus, particularly in relation to food resources. Also a wider investigation of the ecology of a restricted area containing sand-mud-rock faunas in which birds are used as indicators.

Cobb, Dr J. L. S. Relationship between ground cover and behaviour of resting migrants; the project is being carried out at Fife Ness.

Dennis, R. H. Monitoring, conservation and protection of rare breeding birds (Goldeneve, Osprey, Wood Sandpiper and Snow Bunting) in the Highlands. (RSPB). Casual and past records welcomed.

Pounder, B. Effluent discharges into Scottish coastal waters and their effects on bird populations (SOC). Assistance will be sought in due course.

Shaw, G. Birds of developing conifer plantations.

Check-lists and censuses

This section lists only work reported to the compiler. Similar work is done by many others not mentioned here, and the list is therefore incomplete. Nevertheless it is considered worthwhile to include these items to give an indication of what work of this kind is being done by observers in Scotland. It is also recognised that many of these observers may have no particular intention of publishing results other than in such places as the Scottish Bird Report.

Allison, A. Status of the breeding birds of Loch Leven National Nature Reserve. (Nature Conservancy).

Booth, C. G. Past and present status of the birds of Islay. Records and ringing recoveries are wanted.

Critchley, D. Common-bird census on Vane Farm, Loch Leven, Kinross. (RSPB).

Dickson, R. C. Census of seabird colonies on the Mull of Galloway, Wigtonshire. (Nature Conservancy).

Kindrogan Field Centre. Recording of species seen during bird courses at the centre. (Scottish Field Studies Association).

Macmillan, Miss M. P. Birds of the Isle of Seil, Argyll.

Maguire, E. J. Census work on the north bank of the Perthshire Tay from Invergowrie Bay west to Inchyra, to assess the importance of the estuary for passage migrants and winter visitors. Work is also being done on the breeding species, particularly of the reed beds. Co-workers, R. C. Calligan and R. L. McMillan.

Rainier, Mrs D. H. A daily count has been made since 1963 of all birds seen in a variety of habitats in Mid Argyll. Co-workers, Mrs Roberts and the Rev and Mrs Duncan-Jones.

SOC Stirling Branch. Survey of status changes of local breeding species.

Standring, K. T. General observation and annual count of the seabirds on Eilean nan Ron, Sutherland, and subsidiary rocks. Co-workers, J. H. Morgan and J. Allsop.

Stark, D. M. Seabird populations on the coasts of Caithness.

Wakefield, Dr W. C. Distribution and density of birds in the breeding season in the Cumraes and in a mainland area south and east of the Clyde. Territorial requirements of the larger species are being studied

in more detail. A pilot winter survey is also being run in 10km squares NS 24 and 25 on the behaviour and movements of birds in each square kilometre. Co-workers, J. Burton, I. Cornelius, H. Galbraith and I. Gibson. Field recorders are wanted, particularly in Greenock, Gourrock and Clydebank.

See also Moss, D. under SPARROWHAWK.

Observatories

FAIR ISLE BIRD OBSERVATORY

Daily census of all migrant species; ringing of migrants and breeding birds, and recording weights and measurements; monitoring of seabird colonies (in conjunction with the RSPB). (Fair Isle Bird Observatory Trust.

ISLE OF MAY BIRD OBSERVATORY AND FIELD STATION

Routine recording and ringing of migrants together with studies of breeding and wintering birds.

Nationally organised projects

This section lists some national schemes in which observers may participate locally. Full, and up to date, details can be obtained from the bodies concerned; where appropriate the organiser's name is given in brackets.

BRITISH TRUST FOR ORNITHOLOGY

The Trust is a nationwide network of amateur observers with a headquarters staff of professional biologists. The emphasis is on the systematic collection of information on British birds, generally by co-operative ventures, though individual studies are also encouraged. Current schemes include:

Bird Ringing Scheme. Members have the opportunity of receiving training. Ringing is strictly controlled to ensure both the safety of the birds and to maintain high standards of accuracy in the recording and analysis of data. (Ringing Office).

Moult Enquiry. To discover as much as possible about the sequence and timing of the moult in different species.

Common Birds Census. An annual census designed to monitor bird-population changes country wide. (Kenneth Williamson).

Nest Record Scheme. To collect comprehensive data on the breeding biology of British birds and to monitor their nesting success. (Mrs G. Bonham).

Estuaries Survey (jointly with the RSPB). To enquire into the distribution and abundance of estuary birds. Counts of non-breeding birds are made from July to May, providing information on both passage and wintering birds. (A. J. Prater). (See also *Scot. Birds* 6: 178).

Ringed Plover and Little Ringed Plover Survey. To determine the number of breeding pairs and details of habitats. (A. J. Prater).

Other projects are being planned. Details are circulated to members of the Trust through their newsletter, *BTO News*, and there are Regional Representatives throughout Scotland to deal with the organisation of projects locally.

THE WILDFOWL TRUST

The Trust is involved in a number of research projects given in the main list. In addition there are:

National Wildfowl Counts. These are made monthly from September to

March. As well as ducks, geese, swans and Great Crested Grebes are also counted. Regional Organisers are listed in *Scot. Birds* 7: 105.

International Wildfowl Census. The Wildfowl Trust organises counts as the British contribution; these take place in mid November and mid January.

THE ROYAL SOCIETY FOR THE PROTECTION OF BIRDS

Apart from its conservation activities, the Society is also responsible for many local research projects currently being carried out in Scotland, as the main section of this survey shows. There are also a number of other enquiries it organises on a national scale which also need help:

Beached Bird Survey. To monitor the effects of chronic oil pollution, possible pollution by other toxic chemicals and damage caused by specific incidents. There is close liaison with the Nature Conservancy, RSPCA and Seabird Group.

Breeding populations of Auks, Kittiwakes and Fulmars. To monitor a sample of colonies with the hope of detecting gross population fluctuations. There is close liaison with the Nature Conservancy and the Seabird Group. (C. J. Bibby).

See also Estuaries Survey under BRITISH TRUST FOR ORNITHOLOGY.

SCOTTISH ORNITHOLOGISTS' CLUB

Research Committee. Details of all current SOC research projects are given in the main list.

Endowment Fund. Grants are made for the advancement of ornithology in Scotland. (See *Scot. Birds* 6: 406 and 7: 224).

Scottish Bird Report. The Report, published annually in *Scottish Birds*, gives a species-by-species account of the status, distribution and movements of birds in Scotland. It is compiled by R. H. Dennis from reports submitted by local recorders, to whom observers should send details of interesting records, counts, assessments of breeding success etc. Their names and addresses are given in *Scot. Birds* 7: 111 and 7: 166.

Addresses

- Allison, A. The Nature Conservancy, Benarty, by Vane Farm, Kinross.
 Auber, Dr L. Department of Natural History, Royal Scottish Museum, Edinburgh EH1 1JF.
 Balfour, E. Isbister House, Rendall, Orkney.
 Balharry, R. Anancaun, Kinlochewe, Ross-shire.
 Birkhead, T. R. The Edward Gray Institute, Department of Zoology, South Parks Road, Oxford OX1 3PS.
 Booth, C. G., Cairn Cottage, Cairnmore, Port Ellen, Isle of Islay, Argyll, PA42 7AT.
 Bourne, Dr W. R. P. Zoology Department, Tillydrone Avenue, Aberdeen AB9 2TN.
 Bowen, H. M. Department of Agriculture and Fisheries for Scotland, East Craigs, Edinburgh.
 Brathay Exploration Group, Brathay Hall, Ambleside, Westmorland.
 British Falconers Club. Marked bird records to J. B. Murray, c/o Royal Scottish Museum, Edinburgh EH1 1JF.
 British Trust for Ornithology, Beech Grove, Tring, Hertfordshire.
 Broad, R. A., Warden, Fair Isle Bird Observatory, Fair Isle, Shetland.
 Brown, H., Craigowan, Ballinluig, Perthshire.
 Bryant, Dr D. M. Department of Biology, The University of Stirling, Stirling FK9 4LA.
 Caryl, Dr P. G. Psychology Department, 60 Pleasance, Edinburgh.
 Chabrzyk, G. H. C/o Zoology Department, University of Durham, Durham.
 Clegg, T. M. City Museum and Art Gallery, Albert Square, Dundee DD1 1DA.
 Clugston, D. L. 72 Meikleriggs Drive, Paisley, Renfrewshire PA2 9NP.

- Cobb, Dr J. L. S. Gatty Marine Laboratory, St Andrews, Fife KY16 8LB.
Collett, Mrs P. Sandyquoy, Scrabster, Caithness.
Colling, A. W. Nature Conservancy, 12 Hope Terrace, Edinburgh EH9 2AS.
Cook, T. Zoology Department, Edinburgh University, West Mains Road, Edinburgh.
Coulson, Dr J. C. Zoology Department, Durham University, Durham.
Craggs, Prof J. D. University of Liverpool, PO Box 147, Liverpool L69 3BX.
Critchley, G. Loch Leven Nature Centre, Vane Farm, Kinross.
Dennis, R. H. The Old Manse, Rothiemurchus, Aviemore, Inverness-shire PH22 1QP.
Dickson, R. C. 3 Galloway Place West, Freugh, by Stranraer, Wigtownshire.
Dunbar, J. J. Kinnaird Mill, Kinnaird, Brechin, Angus.
Duncan, A. 12 Cairncry Avenue, Aberdeen AB2 5DS.
Dunnet, Prof G. M. Culterty Field Station, Newburgh, Aberdeenshire AB4 0AA.
Fair Isle Bird Observatory Trust, 21 Regent Terrace, Edinburgh EH7 5BT.
Friedman, Dr M. B. Department of Psychology, University of Edinburgh, 60 Pleasance, Edinburgh EH8 9TJ.
Furness, R. 13 Dick Place, Edinburgh.
George, R. S. 8 St Peter's Street, Duxford, Cambridge.
Georgeson, Miss V. Culterty Field Station, Newburgh, Ellon, Aberdeenshire AB4 0AA.
Gerrard, E. C. Isle of Pabay, Broadford, Skye, Inverness-shire.
Gibson, I. 41B Mossvale Street, Paisley PA3 2LU.
Gordon, Miss N. J. The Nature Conservancy, 12 Hope Terrace, Edinburgh EH9 2AS.
Gregory, M. J. P. 4 High Bank Park, Lochgilphead, Argyllshire.
Hardy, A. R. Culterty Field Station, Newburgh, Ellon, Aberdeenshire AB4 0AA.
Harris, Dr M. P. Nature Conservancy, Hill of Brathens, Glassel, Banchory, Kincardineshire AB3 4BY.
Houston, D. C. Department of Forestry and Natural Resources, University of Edinburgh, Kings Buildings, Mayfield Road, Edinburgh EH9 3JU.
Isle of May Bird Observatory and Field Station, Regional Officer, East Scotland, Nature Conservancy, 12 Hope Terrace, Edinburgh EH9 2AS.
Jenkins, Dr D. The Nature Conservancy, Hill of Brathens, Glassel, Banchory, Kincardineshire AB3 4BY.
Kindrogan Field Centre, Scottish Field Studies Association, Enochdhu, Blairgowrie, Perthshire.
Love, J. A. Culterty Field Station, Newburgh, Ellon, Aberdeenshire AB4 0AA.
Lyster, I. H. J. Royal Scottish Museum, Edinburgh EH1 1JF.
Macdonald, D. Elmbank, Dornoch, Sutherland IV25 3SN.
Macdonald, J. W. Veterinary Laboratory, Eskgrove, Lasswade, Midlothian.
Macdonald, M. A. Culterty Field Station, Newburgh, Ellon, Aberdeenshire AB4 0AA.
Macmillan, Miss M. P. An Fhuaran, Clachan Seil, Oban PA34 4TL.
McMillan, R. L. 29 Lewis Place, N Muirton, Perth.
Maguire, E. J. C/o McMillan, 29 Lewis Place, N Muirton, Perth.
Maitland, Dr P. S. The Nature Conservancy, 12 Hope Terrace, Edinburgh EH9 2AS.
Marshall, W. University of Edinburgh, Department of Zoology, Kings Buildings, West Mains Road, Edinburgh.
May, L. Old School House, Eochar, South Uist, Scotland.
Mendenhall, Miss V. Culterty Field Station, Newburgh, Ellon, Aberdeenshire AB4 0AA.
Mitchell, J. 22 Muirpark Way, Drymen, by Glasgow.
Mitchell, S. 9 Gladstone Place, Stirling.
Monaghan, Miss P. Zoology Department, Glasgow University, Glasgow.

- Moss, D. Department of Forestry and Natural Resources, Kings Buildings, Mayfield Road, Edinburgh EH9 3JU.
- Moss, R. The Nature Conservancy, Hill of Brathens, Glassel, Banchory, Kincardineshire AB3 4BY.
- Munro, J. H. B. 9 Capelaw Road, Edinburgh.
- Muttitt, M. 4 Ellington Park, RAF Kinloss, Nr Forres, Morayshire.
- Nelson, Dr J. B. Zoology Department, University of Aberdeen, Tillydrone Avenue, Aberdeen AB9 2TN.
- Nethersole-Thompson, D. Ivy Cottage, Culrain, Ardgay, Ross-shire.
- Newton, Dr I. The Nature Conservancy, 12 Hope Terrace, Edinburgh EH9 2AS.
- Ogilvie, M. A. The Wildfowl Trust, Slimbridge, Glos.
- Owen, Dr M. The Wildfowl Trust, Slimbridge, Glos.
- Parslow, J. L. F. Monks Wood Experimental Station, Abbots Ripton, Huntingdon.
- Phillips, J. S. 73 Whitletts Road, Ayr.
- Picozzi, N. The Nature Conservancy, Blackhall, Banchory, Kincardineshire AB3 3PS.
- Pike, Dr A. W. Department of Zoology, University of Aberdeen, Tillydrone Avenue, Aberdeen AB9 2TN.
- Pounder, B. 64 Forfar Road, Dundee.
- Rainier, Mrs D. H. Strone, Achnamara, by Lochgilphead, Argyll.
- Ratcliffe, D. A. The Nature Conservancy, 19/20 Belgrave Square, London S.W.1.
- Riddle, G. Rowantree Cottage, Culzean Country Park, Maybole, Ayrshire.
- Roberts, E. L. Tadorna, Hollands Farm Road, Caerlaverock, by Dumfries. Royal Society for the Protection of Birds, The Lodge, Sandy, Bedfordshire. Scottish Office 17 Regent Terrace, Edinburgh EH7 5BN.
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Isle of May Bird Observatory and Field Station Report for 1972

Prepared for the Observatory Committee by

NANCY J. GORDON, *Honorary Secretary*

The Observatory was manned for a total of 210 days between 27th March and 5th November 1972. The number of observer-nights was 1039. Coverage of the whole season was probably better than ever before, with only a few odd days when no observers were present.

Spring migration was fairly continuous, but much lighter than usual in April and only moderately good in early and mid May despite prolonged east winds; however quality made up for lack of quantity. The autumn pattern consisted of movement of waders in July, sea passage in early August and good falls of passerine migrants at the end of August, in mid and late September and at almost weekly intervals through October.

No new species were recorded in 1972, but the year's highlights included a Rustic Bunting in May, the first spring Scarlet Rosefinch (also in May) and four more in September, four Firecrests on 2nd October and an invasion of 65 Mealy Redpolls in mid October. Other notable events were the large-scale cull of gulls in May, a number of research projects and a special Christmas visit to ring Purple Sandpipers.

Spring migration

Observers were on the island from 27th March to 12th May and from 15th May onwards.

March-April The season started with strong west winds, but for most of April the winds and weather were variable, and migration was light (though continuous) throughout the month, with no falls of even medium size. Dates of first appearance of the early migrants were :

- 27th March—first Wheatear
- 9th April—first Ring Ouzel and Black Redstart
- 16th April—first Willow Warbler
- 17th April—first Chiffchaff and Redpoll
- 26th April—first Redstart
- 29th April—first Swallow
- 30th April—first Blackcap

There was a very small, steady passage of Skylarks, thrushes and Wheatears during the first three weeks of April, peak numbers being only 8 Skylarks (2nd April), 13 Fieldfares and

6 Redwings (both 10th April), 6 Song Thrushes (8th April), 20 Blackbirds (4th April) and 8 Wheatears (8th April). There were never more than 1 or 2 Robins, Willow Warblers or Chaffinches, nor more than 10 Dunnocks or Goldcrests. Linnets numbers were low, except for 20 on the 2nd and 31 on the 9th. By far the biggest passage was of Meadow Pipits, whose numbers reached 500 on 2nd April. The only other noteworthy April record was of a Peregrine on the 9th.

May The month started well with east winds and spells of poor visibility, which (apart from a short change to westerlies on the 10th and 11th) persisted until the 24th, to be followed by strong west winds until the 31st. The best spells for migrants were 1st-3rd, 7th, 9th-10th, and 18th-19th May. Further first appearances of spring migrants were :

- 1st May—first Cuckoo
- 2nd May—first Whinchat and Lesser Whitethroats
- 4th May—first Whimbrel
- 5th May—first Wryneck
- 6th May—first Whitethroat
- 7th May—first Grasshopper and Sedge Warblers
- 9th May—first Spotted Flycatcher and Sandwich Tern
- 10th May—first (and only) Sand Martin
- 15th May—first "Comic" terns; first (and only) Pied Flycatchers
- 19th May—first Garden Warbler
- 23rd May—first House Martin
- 28th May—first (and only) Swifts

Passage of thrushes and Wheatears continued into May, but still in small numbers, with single Redwings, Ring Ouzels and Song Thrushes, peaks of no more than 8 Fieldfares (on the 3rd and 7th), 7 Blackbirds (on the 2nd) and 20 Wheatears (on the 2nd and 7th). Redstart numbers reached 10 on the 7th, Whinchats 12 on the 18th. Warbler numbers were low (with a maximum of 40 Willow Warblers on the 7th), but there were more Lesser Whitethroats than usual (15 on the 7th). Meadow Pipit movement continued until the 12th (up to 50 daily). Very few flycatchers were seen, and no Kestrels were recorded this spring.

Other interesting records during the month were Collared Doves (2 on 1st May, 3 on the 20th), 2 Shovellers on the 6th, a Raven on the 7th and 9th, single Merlins on the 10th and 26th, a Rustic Bunting on the 12th, a Long-eared Owl on the 15th and 16th, 2 Bluethroats and a Stonechat on the 18th, an Ortolan Bunting on the 19th, a Red-breasted Merganser on the 26th, 2 Tree Pipits on the 30th, and the first spring record of a Scarlet Rosefinch on the 31st, (a splendid adult male).

June The only noteworthy record in June was a tired Fieldfare on the 30th.

Autumn migration

The observatory was manned throughout the season until 6th November except on 12th August, and from 31st October to 3rd November. Autumn migrants, especially waders, were on the move earlier than usual, and there are several July records worth noting : a Green Sandpiper on the 1st, a Green-shank on the 2nd, 3 on the 5th and one on the 23rd, single Whimbrels on the 22nd and 27th, a Knot, 2 Dunlins and 31 Golden Plovers on the 31st. The first Purple Sandpipers arrived on the 2nd. Wheatear passage started on 18th July, and solitary Willow Warblers, Chiffchaffs, Whitethroats, Pied Flycatchers, Crossbills and Redpolls were seen during the month.

August Winds in August were highly variable, and the only spell of several consecutive days of east winds came at the end of the month, which not surprisingly coincided with the best visible migration. Some good sea passage was recorded earlier in the month, including 110 Manx Shearwaters on the 1st, 140 on the 20th, one Sooty Shearwater on the 1st, 3 on the 3rd, 17 Common Scoters on the 7th, single Great Skuas on the 1st and 5th, up to 5 Arctic Skuas daily on ten days in the month, 49 Common Gulls on the 14th and a steady trickle of terns (with a maximum of 38 Sandwich Terns on the 17th). Wader numbers built up at the beginning of the month, and maximum August counts were 375 Turnstones on the 15th, 200 Redshanks on the 18th and 230 Purple Sandpipers on the 11th. The first appearance of wintering Greater Black-backed Gulls was on the 15th (75 counted). Passage of Swallows and Wheatears from mid August onwards reached a maximum on the 21st, with 60 and 16 respectively. There were very few Swifts or martins. First dates of the autumn passerine migrations were :

- 6th August—first Willow Warblers
- 10th August—first (of only three) Sedge Warblers
- 13th August—first Pied Flycatchers
- 15th August—first Whinchat
- 16th August—first Redwing
- 24th August—first Brambling
- 25th August—first Goldcrest
- 27th August—first Garden Warbler
- 29th August—first Fieldfare
- 30th August—first Blackcap, Redstart and Whitethroat

Warblers were scarce; for example the maximum of even Willow Warblers was only 15 on the 18th. Passage of Meadow Pipits was fairly constant, with up to 26 daily. Other records were a Short-eared Owl on the 1st, a Black Redstart, 2 Greenshanks and 3 Tree Pipits on the 9th, a Collared Dove on the 13th, up to 3 Whimbrels on 13 days, a Scarlet Rosefinch and a Barred Warbler on the 28th and a Cuckoo on the 29th.

September The month started with fog and variable winds, mainly westerly until the 12th, followed by a week of east winds and then a further spell of variable weather. The best falls of migrants were on the 14th, 18th, 24th and 27th, but other days produced interesting records. Sea passage produced 1 or 2 Red-throated Divers on four days, up to 6 Manx and 4 Sooty Shearwaters on four days, flocks of Wigeon, the odd Heron, Teal and Scoter, up to 4 Arctic Skuas on most days, up to 3 Great Skuas on 11 days, small numbers of Common, Arctic and Sandwich Terns. The wintering wader flocks became fairly well established, and were augmented by visits from the odd Lapwing, Knot, Dunlin, Golden Plover and Whimbrel. Swallow passage continued until the end of the month, with daily maxima of 40 on the 12th and 30th. Skylark passage started in earnest on the 13th with up to 15 daily, and there was an average of 10 Wheatears a day until the 26th. Meadow Pipits reached an autumn peak of 200 on the 3rd and 18th, and there was a build-up of thrushes at the end of the month (highest on the 27th, with 15 Song Thrushes, 60 Redwings and 7 Blackbirds), but Fieldfares were scarce. There was a small trickle of Whinchats, Redstarts and Redpolls; also single Grey Wagtails and a fair passage of *alba* Wagtails (between 10 and 20 per day on the 15th, 18th, 23rd and 25th). Warblers were few but varied—an Icterine and 4 Barred Warblers on the 14th, a Yellow-browed Warbler on the 28th and a few Garden Warblers, Whitethroats (Common and Lesser) and Chiffchaffs throughout the month. The highest count of Willow Warblers was 20 on the 14th. Other September records were, single Sparrowhawks on the 5th and 9th, single Great Spotted Woodpeckers on the 14th (Northern) and 24th, a Red-breasted Flycatcher on the 18th, 2 Black-tailed Godwits on the 20th, single Lapland Buntings on the 21st, 25th and 27th, a Grey Plover and 6 Jack Snipe on the 26th, a Spotted Redshank on the 27th, a Bluethroat on the 28th, and 11 Long-tailed Tits and 2 Snow Buntings on the 30th. The rarities of the month were three further Scarlet Rosefinches, which arrived on the 6th, 9th and 18th, with a possible fourth on the 19th.

October East winds, which at the beginning of the month brought a good fall of migrants, continued until the 19th, not returning until the 26th. The best dates for migrants were the 1st and 2nd, overnight 3rd/4th, 7th-8th, 14th-15th, 18th, 21st, 27th and 28th. Sea-watchers were well rewarded during the first half of the month: sightings included a Red-throated Diver on the 14th, 4 Manx Shearwaters on the 15th, 1 or 2 Sooty Shearwaters on the 13th and 15th, 4 Velvet Scoters on the 16th, 5 Common Scoters on the 15th, 28 Wigeon on the 1st, 70 Greylags on the 3rd, a Brent Goose on the 11th,



PLATE 17. Isle of May—Departure of the lighthouse keepers' families, 9th August 1972.
Photographs by Hector Galbraith





PLATES 18 and 19. Seabird photographs by William S. Paton, A.R.P.S. *Above* Gannet shading its chick from the sun, Ailsa Craig (plate 18a). *Below* Puffin in repose, Handa, Sutherland (plate 18b). *Opposite* Contrasting life styles of Kittiwake, Ailsa Craig (plate 19a) and Common Gull, Ayrshire (plate 19b).

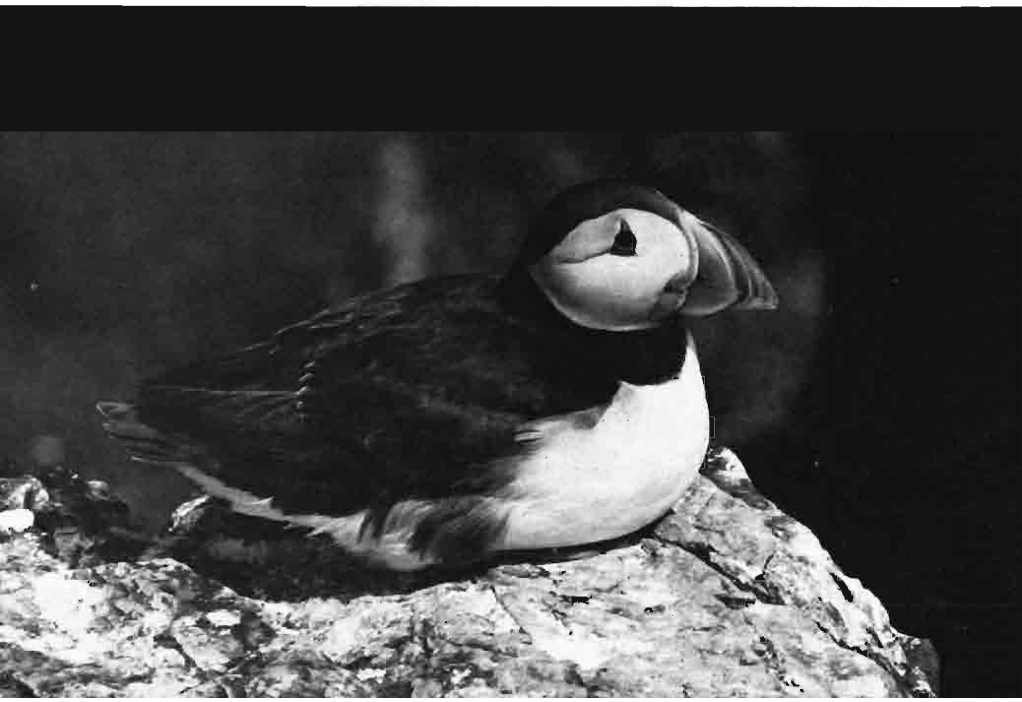






PLATE 20. The eyes have it—character studies of two young raptors: (a) the defiance of a Peregrine eyass; (b) the baleful stare of a young Long-eared Owl.

Photographs by Dennis Coult



3 Canada Geese on the 18th, 10 Whooper Swans on the 15th and 1 or 2 Great and Arctic Skuas up to the 16th. The 15th was also a good wader day, with a Ringed Plover, 3 Golden Plovers, 4 Snipe, a Jack Snipe and a Greenshank. There was a passage of up to 42 Skylarks daily. Wrens (which had started building up in mid September) reached a peak of 24 on the 13th. October saw the main thrush passage, with three peaks: 2nd October, with 15 Fieldfares, 150 Song Thrushes, 300 Redwings, 15 Ring Ouzels and 100 Blackbirds—rising to 300 next day; 15th October, with 500 Fieldfares, 2000 Redwings, 600 Blackbirds; and 21st October, with 300 Redwings and 500 Blackbirds. Peak numbers of Goldcrests were 150 on the 2nd and 200 on the 18th. There was some passage of Robins early in the month (36 on the 2nd), and numbers of Meadow Pipits increased to 50 on the 8th and 9th but dropped thereafter. An influx of warblers on the 2nd included 30 Blackcaps, 2 Barred Warblers, 2 Reed Warblers, 2 Common and 2 Lesser White-throats, a Sedge Warbler, 10 Chiffchaffs and a Yellow-browed Warbler. Other arrivals on this date were a Black Redstart, a Great Spotted Woodpecker, a Great Grey Shrike, a Yellow Wagtail, a Red-breasted Flycatcher, 10 Redstarts, 2 Stonechats and, best of all, 4 Firecrests (2 Firecrests were first seen on 1st October). There was passage of up to 40 Bramblings and 15 Reed Buntings daily in the first half of the month. The other October highlight was an invasion of Mealy Redpolls in the middle of the month: the peak was more than 65 on the 21st, dwindling to 2 by the 27th; 47 were ringed.

Other October records included: single Merlins on the 8th and 25th, a Long-eared Owl on the 13th, a Shore Lark on the 2nd and 3rd (possibly another on the 28th-30th), one of the only two Spotted Flycatchers of the autumn on the 1st, 1 or 2 *alba* and Grey Wagtails, another Yellow Wagtail on the 5th, 3 Lapland Buntings and 2 Snow Buntings on the 1st, another Lapland Bunting on the 14th. Some latest dates of migrant passerines were:

2nd October—last Whinchat
9th October—last Willow Warbler
10th October—last Whitethroat
12th October—last Pied Flycatcher
15th October—last Wheatear and Garden Warbler
16th October—last Redstart
19th October—last Chiffchaff
28th October—last Blackcap
29th October—last Swallow
30th October—last House Martin

November The two days in November when observers were on the island, the 4th and 5th, were in westerly weather but not without interest: up to 15 Mealy Redpolls were present, up to 20 Fieldfares, 10 Song Thrushes, 40 Redwings and 30

Blackbirds; 7 Bramblings and a few Linnets and Snow Buntings were counted on the 4th, and a Merlin, a Dunlin and 5 Snipe on the 5th. Also noteworthy is the increased size of the flocks of feral pigeons frequenting the island—up to 80 in October and 190 in December.

Unusual occurrences

- Manx Shearwater** Higher than usual numbers recorded early in autumn : 110 on 1st August, 140 on the 20th.
- Sooty Shearwater** One and three, 1st and 3rd August respectively. Earliest records (no spring records).
- Fulmar** 200, 28th December. Highest winter count.
- Grey Plover** One, 26th September. Sixth record.
- Black-tailed Godwit** Two, 20th September. Fifth record.
- Arctic Skua** Three and five on 2nd and 4th August respectively. Earliest autumn records.
- Icterine Warbler** One, 14th September. Latest autumn record.
- Firecrest** Two, 1st October; four, 2nd October. Sixth year of occurrence, (previous records all singles).
- Pied Flycatcher** One, 24th July. Earliest autumn date.
- Tree Pipit** Three, 8th-9th August. Earliest autumn date.
- Mealy Redpoll** Influx in mid October (present 15th October to 5th November), maximum 65 on 21st.
- Scarlet Rosefinch** One, 31st May. First spring record. Four or five birds between 28th August and 19th September.
- Rustic Bunting** One, 12th May. Sixth record.

Breeding populations

No estimates were made of the cliff-nesting seabird populations, but new nesting sites were noted of Shags (on the east and north cliffs), of Kittiwakes (at Colms Hole) and Fulmars (Rona). Four more Farnes-ringed Shags were noted among the breeding population, bringing the total of such records to 22. A census of gulls attempted before the cull gave an approximate figure of 39000 (34000 Herring Gulls and 5000 Lesser Black-backed Gulls) including non-breeders. A few adult Greater Black-backed Gulls were among the colony at the start of the breeding season, but any attempts to nest must have been thwarted by the cull activities. At least 100 pairs of Eiders nested, and more ducklings hatched than usual, judging by the numbers on the loch and round the island's shores, but fledging success is not known. The surveys of the Puffin colonies on the island have produced an estimate of 4000 occupied burrows, and at least 7000 birds (a considerable increase over the last few years). The first of the breeding birds arrived in late March, and most had left by mid August. One pair of Shelducks reared three young, and about ten pairs of Oystercatchers nested. Of the smaller birds, three pairs of Swallows reared young, and the usual two or three pairs of Dunnocks and Blackbirds nested. A leucistic Rock Pipit among the resident breeding population attracted much interest (and some initial speculation) between July and October.

Ringling and recoveries

A total of 4208 birds of 62 species were ringed (double the 1971 ringing total, but comprising fewer species). The main species were Herring Gull, Shag and Puffin. Record totals were ringed of Shags (780), Purple Sandpipers (116), Turnstones (76), Kittiwakes (148), Puffins (343), Wrens (67), Lesser Redpolls (27), Mealy Redpolls (47) and Scarlet Rosefinches (4). The total of 20 Lesser Whitethroats ringed was the second highest, but totals of Redstarts, Whinchats, Whitethroats, Dunnocks, Spotted Flycatchers and Sedge Warblers were lower than usual. A Mallard was ringed for the first time on the island, and a juvenile Arctic Tern was the first ringed since 1956. Other noteworthy ringing records were Firecrest (the fourth ringed), Rustic Bunting (the fifth) and Lapland Bunting (the second—the previous one was in 1946).

There was a total of 128 recoveries (not including gulls from the cull) of which 54 were Herring Gulls and 48 were Shags. The foreign recoveries and controls are listed below :

		Ringed	Recovered	
Lesser Black-backed Gull	Pull	25. 7.66	Vila de Conde, Douro Litoral, Portugal	0. 7.68
Herring Gull	Pull	30. 6.67	Bremerhaven, Germany (control)	8. 1.72
Herring Gull	Pull	24. 6.67	Bremerhaven, Germany (control)	26. 1.72
Song Thrush	Ad	3. 4.64	Oliveira, Povoia de Lanhoso, Portugal	3. 2.72
Song Thrush	PJ	9.10.65	St Jean de Marsacq, Landes, France	18.11.71
Blackbird	1st+Y♀	28.10.69	Vanse, Lista, Agder, Norway	24. 3.72
Blackbird	Ad?	5.11.71	Kjolsdalen, Sogn and Fjordane, Norway	23. 5.72
Blackbird	Ad♀	15. 4.70	Svine, Harbo, Sweden	1.11.72

Puffin controls included six more breeding birds ringed as pulli on the Farne Islands and one ringed as an adult on Fair Isle. There were also the first retraps of Purple Sandpipers (one ringed in April 1967 and two in September 1969).

Gull control

Following a request from the Observatory Committee, the Nature Conservancy planned and initiated a large-scale gull-control programme aimed at reducing the island's huge breeding population of Herring and Lesser Black-backed Gulls. The cull was carried out during 16th-24th May by a team of 7-10 Nature Conservancy staff and volunteers led by A. W. Colling; it received favourable Press and television coverage. More than 16000 gulls were killed, of which nearly 10% were Lesser Black-backs. The cull was timed to coincide with the main

period of egg-laying in order to achieve humanely and economically the maximum selective kill of breeding gulls. Eight sections of the gull colony (Rona, North and South Plateau, and parts of the east side) were treated in rotation: bread baits containing a lethal dose of the narcotic alpha-chloralose were placed at each nest. Each section received two or three treatments. The collection, transport and incineration of the gull corpses occupied most of the time and manpower. Some 13000 gull corpses were recovered from the cull area: in addition, owing to disturbance of treated areas and prolonged east winds, some of the poisoned gulls moved off and died in the sea around the island; 3000 were washed ashore along the Fife coast and had to be collected and disposed of.

Each stage of the whole operation was documented and photographed, and a programme was initiated to monitor gull numbers and behaviour on the island throughout the season and to monitor vegetation changes. A number of gull corpses were retained for chemical and pathological analysis and other studies by various authorities.

Full details of the cull planning and operation will be published elsewhere, but to sum up the results, more than 70% of the breeding gulls in the cull areas were killed; of the remaining birds that attempted to nest after the cull, most nests were destroyed; thus very few chicks hatched out from the cull areas, which had previously held 10000-12000 nests. The 1972 operation was the first successfully executed gull-control project of this size and kind. The success of this arduous and mainly unpleasant task was due to the efforts of the cull team and the co-operation of all those involved in the project.

Research

Gulls Research by Durham University on the gull population has been in progress since 1966, producing valuable data on breeding biology and behaviour. In addition 15500 pulli were colour-ringed between 1966 and 1969. The present Durham research project was started in 1972 by G. Chabrzyk, who was on the May from April until the end of July. He carried out detailed studies of the breeding gulls (especially of ringed birds) in the uncultured study areas (North Ness, Tarbet and Colms Hole) and ringed a further 1288 Herring Gull pulli. He has also started an important series of projects associated with the cull, including studies of recruitment and behaviour and observations of colour-ringed birds in the cull areas. During the cull a team from Durham collected and studied over 400 colour-ringed corpses, and 200 corpses were taken for subsequent anatomical and physiological examination.

Puffins Dr M. P. Harris of the Nature Conservancy made some initial studies of the unusual and growing colony on the

May and ringed over 300 birds. In June Prof D. Bellamy and students from University College Cardiff and Dr D. Thomas of Aberdeen University carried out a survey and census of the colony. Head counts and burrow counts were used to assess the size of the population, and quadrats were set up on Rona, Three Tarn Nick, Cornerstone Cove, Lady's Bed and Burrian in order to assess burrow density and vegetation cover.

Other studies Other work carried out by the Cardiff team included surveys of isopods, ants, molluscs, mice and rabbits. No estimate of the rabbit population was reached, but a survey of warrens and burrow density and associated vegetation was carried out. A summary report of the Cardiff projects has been received.

Vegetation In addition to the Cardiff surveys and the Nature Conservancy's vegetation quadrats and soil-sampling to monitor the effects of the cull, valuable additional work was carried out during several visits by D. Sobey of Aberdeen University, in connection with his Ph.D. project on vegetation of gull colonies in Aberdeenshire. He has prepared a vegetation map of the island, the first complete map since 1936. Another welcome botanical visitor was Dr E. V. Watson, who came at the request of the Observatory Committee to assess changes, especially in the bryophyte vegetation, since his previous visits and surveys.

Further useful botanical observations on the status of species on the Isle of May list were made in June and August by H. Galbraith. Confirmation of old records included the discovery of a plant of henbane and a species of liverwort; several other species were sought in vain, however, and may have become extinct on the island. Many observers enjoyed the sight of a fine flowering specimen of northern marsh orchid beside Holymans Road.

Invertebrates Apart from the Cardiff surveys, a number of observers added to the records; a list of insects collected in August was received from N. K. Atkinson.

House mouse Research was continued by G. Triggs, assisted by members of St Andrews University, on the island's mouse population. This included census work, studies of mortality, nesting, and other aspects of breeding biology.

Christmas visit Special mention must be made of the dedication of two regular contributors to the Observatory, N. K. Atkinson and M. Nicoll, who spent Christmas 1972 on the island. They achieved their main aim of ringing Purple Sandpipers (a record total of 48) as part of a current enquiry and colour-ringing scheme on this species. Their captures included three birds ringed in previous winters. They also ringed 10 Redshanks and 9 Turnstones and as well as doing wader counts censused

all other species on the island, adding valuable information to the sparse records for December; the species total reached 45 over the week, and the most interesting records were 200 Fulmars, the first Mallard to be ringed, a Merlin, a Moorhen and flocks of Twites.

Map An accurate large-scale map of the island is being prepared by the Nature Conservancy cartographers from the 1972 ground-survey data and aerial photographs.

Publication J. C. Coulson, I. R. Deans, G. R. Potts *et al.* 1972. Changes in organochlorine contamination of the marine environment of East Britain monitored by Shag eggs. *Nature* 236 : 454-6.

General observations

The number of grey seals remained constant at around 50 individuals. Rabbits fluctuated in numbers owing to the varying toll of myxomatosis; they appeared most plentiful in the autumn, with a proportion of white animals in the population. T. Daniels found a skull on Burrian which was later identified as that of a stoat, a new record for the island, though presumably imported by an avian predator. A common eel and a shoal of 3-spined sticklebacks were recorded from rock pools in April.

The ringing hut was re-roofed by the builders who were renovating the byre for the mouse research. Various repairs to the Low Light and traps were carried out, mainly by observers, for which the Committee are most grateful. The only drawback associated with the excellent renovation of the water tanks was the lack of water, for the well remained dry during most of this exceptionally rainless summer and autumn. Drinking water had to be transported from the mainland, and thanks are due to the boatmen for all the help they gave. Special thanks are also owed to the Principal Keeper, Magnus Pearson, and his staff for invaluable assistance during the gull cull, and for their help and forbearance at all times. A historic event of the year was the departure of the keepers' families to Edinburgh on 9th August with the reclassification of the island as a "rock" lighthouse station. No doubt the change is welcomed by most of the lighthouse families because of the isolation of the May, which was previously classed as a "shore" station, but most observers will regret the ending of this era.

Amendment to 1971 Report (*Scot. Birds* 7: 75-89): The Lazuli Bunting recorded on 22nd-23rd May 1971 was accepted by the Rarities Committee as to species, but considered an escape.

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Short Notes

Winter range of a Red Kite in East Inverness-shire

A Red Kite was present near Laggan Bridge from 9th January to at least 5th February 1972. It was an adult in almost perfect plumage and probably bore a ring. With the help of R. H. Dennis, Mrs I. Richardson, D. Sharpe and others, I collected data on the bird's roosting, hunting range and relations with other birds. The kite roosted in a large, mature Scots-pine planting near Cluny Castle, about 950 feet above sea level, but the roost tree or trees were not found. On six days the bird approached the wood between 1530 and 1620 hrs GMT, usually flying about near the edge until about 1600 hrs. Buzzards using the same wood went to roost 30 to 60 minutes later. Frequent sightings throughout the period were made at a point 1.6 km west of the roost wood, always between 0945 and 1130 hrs, indicating a regular routine. The table shows progressive extension of hunting range during the study period, although 19 of all 25 observations were in the range west of the roosting wood, established during days 1-5. The method of range mapping can give only an approximation and might indeed be misleading, as Hewson (*Scot. Birds* 6: 18-22) has shown for Great Grey Shrike.

Progressive extension of winter range of a Red Kite, East Inverness-shire, 1972

Day	Max. observed extent E-W (km)	Max. observed extent N-S (km)	Area (ha)	Sightings
1 - 5	1.6	0.8	128	8
6 - 14	1.2	2.4	288	11
15 - 28	4.5	2.4	1080	6
overall		4.5 x 3.0 km = 1350 ha		

Most hunting was done over permanent pasture or rough grassland between 900 and 1200 feet above sea level, but the bird was twice seen hunting over young conifers at 1100 feet and once over arable land in the valley floor at 800 feet. No pellets were found nor were food items recorded, but the kite was sighted near a sheep carcass where a raptor had very recently fed. Resident Buzzards hunted mostly in the valley floor at this season, and there was only one record of overlap (i.e. both species hunting a restricted area on the same day). There were more than ten records of overlap with Kestrels, two with Ravens and one with an immature Golden Eagle. Overlap with Carrion Crows was common, and aggression by both species was observed. I made one attempt to catch the

kite on 13th January, using a captive decoy Buzzard and noosed dead bait; the kite ignored the baits and only briefly attacked the Buzzard.

D. N. WEIR.

Autumn aggression of Capercaillie

On 10th September 1972 while we were picking blackberries near Bridge of Orchy, Inverness-shire, my wife, who was some distance away from me, saw a cock Capercaillie land within a few yards of her and begin to display. Knowing what kind of bird it was, she was very pleased to see it at such short range. She was unpleasantly surprised, however, when the bird flew at her head and started to attack her. While trying to fend it off she lost her footing and fell backwards down the hillside. The Capercaillie continued the attack and only stopped when she scrambled to her feet and ran for safety.

N. G. MACDONALD.

(Although it is well known that some Capercaillie cocks are extremely aggressive towards human intruders in spring, there appear to be no previous records of such behaviour in autumn. N. Picozzi comments that on two occasions in the past ten years at Banchory, Kincardineshire, there have been September records of aggressive Red Grouse that would attack both people and cars. Hon. D. N. Weir reports that in late September captive young male Capercaillies in Inverness-shire became quite aggressive towards females and displayed.—Ed.)

Bonaparte's Gull in Fife

On 26th February 1972 at Luthrie, near Cupar, Fife, A. Grieve and I noticed among a party of Black-headed Gulls a bird that was quite different from them in both size and 'jizz'. We watched it for a few minutes through 10 x 50 binoculars at distances down to 50 yards. P. N. J. Clark also saw the bird briefly before it flew to another field and subsequently disappeared.

I visited the farm again the following day and found the gull in the same ploughed field among other gulls. I watched it for about five minutes until it once again flew off.

The bird was smaller than Black-headed Gull (perhaps three-quarters of the size) with wings noticeably smaller but of the same proportions as that species, long and pointed—not like those of Little Gull, which look rounded. The flight was most eye-catching, the wing-beats being shallow and almost tern-like, not as buoyant as in Little Gull, and lacking the latter's habit of sudden changes in direction of flight. The

upper head, back and wings were light grey, and the forehead, underparts and rump white. A dark smudge ran from the half-way point where wing meets body out to near the extreme of the leading edge. A similar though less obvious smudge ran along the trailing edge. The area of the upper wing enclosed by the forward smudge was darker grey than elsewhere—like the grey on a Common Gull. On the upper wing the primaries were very pale, tipped with black, and the area of the carpal joint had an obvious white triangular marking. The outer under-side of the wings was difficult to see, owing to our elevation, but my general impression was that it was light in colour. There was a well-defined black spot behind the eye, not like the smudged effect on Black-headed Gull. The tail was white, with a fairly narrow, black terminal band. The bill, which looked dark, was finer than Black-headed Gull's but not quite as fine as shown in the Peterson field-guide. The legs were orange.

I looked out for the bird over the next three days but never saw it again: much of the neighbouring farmland was being ploughed at the time.

Although the darker grey on the forward wing does not correspond with field-guide descriptions, the bird was certainly a Bonaparte's Gull.

D. W. OLIVER.

(This is the third Scottish record. The previous ones were in Dunbartonshire in 1850 and in Sutherland in 1967.—ED.)

Collared Pratincole on Fair Isle

On 2nd June 1971 a Collared Pratincole was present on Fair Isle. It was first seen by T. A. Boothroyd and others at about 10.30 a.m. and was watched by many observers for an hour during the morning and again for half an hour in the afternoon. It frequented an open grassy field and a cultivated strip planted with potatoes. On the ground the bird would stand with a curious hunched attitude, its breast bulging forward and its head drawn down onto the body. It also walked and ran about, and seemed about the size of a Common Tern, but bulkier.

In flight the bird was buoyant and ternlike; it circled gracefully, rising easily to catch insects. The tail, though not often spread, was seen to be deeply forked, dark brown or black, contrasting with the square white rump. Several times when the bird was overhead and the light in a suitable direction the axillaries were seen to be reddish brown, though otherwise they appeared black.

Description Crown, nape and mantle buff sandy brown. Lores darker buff; a thin black line extending downwards from the eye joined across

the upper breast in a semicircle, within which the throat and chin were yellowish-buff, becoming lighter towards the breast. Lower breast pale sandy buff becoming whiter towards the belly. Belly and vent white. Primaries very dark brown, wing points extending just beyond tip of tail. Legs and bill black, with gape and base of mandibles red. A thin dark line ran from bill to eye. Eye dark brown with incomplete buff-white eye-ring below.

R. A. BROAD.

(The sixth Scottish and third Fair Isle record. The previous birds at Fair Isle occurred in 1934 and 1935.—ED.)

Barn Owls nesting close together

In the 20-yard strip between a minor road and a loch in Wigtownshire stands a dilapidated old sandstone building. It is about 15 feet by ten and has a good roof; the walls are some ten feet high and inside form an 18-inch ledge around the top.

As I went into this building on 10th May 1972 two Barn Owls flew out over my head, and several pigeons left through the windows. On the ledge I found two owls' nests, each with three warm eggs, and several pigeons' nests also with eggs. The owls' nests were about 15 feet apart—at opposite ends of the building—and both appeared to be being incubated. The two sitting birds would have been quite visible to each other.

J. CALLION.

(It is possible that these nests may have been associated with polygamous breeding.—ED.)

Red-rumped Swallows in Shetland

On Whalsay on 23rd September 1971 J. Bruce saw a bird like a Swallow but with a pinkish-red rump, and the underparts a dirty pinkish buff; he also thought there was a dark gorget. He watched the bird at distances down to 20 feet as it hawked insects along a cliff.

On the 25th I found the bird hawking over a small loch and had it in view for 15 minutes in perfect conditions at ranges down to 20 yards. It hawked in typical Swallow fashion, sometimes low over the water, several times rising to 200-300 feet.

From the rather brownish appearance of the wings, mantle and crown with little bluish gloss, and from the fact that the tail streamers were shorter than an adult Swallow's (somewhere between Swallow's and House Martin's in length), I suspected that it was a bird of the year.

Description Crown, back, mantle and wings brownish black, darkest on mantle and back; collar pinkish buff. Tail brown black with streamers shorter than those of adult Swallow. Rump pinkish buff, shading

to reddish buff on upper rump. Chin, throat, breast and belly pinkish buff, smudged and dirty on breast and throat.

The pinkish rump and collar, and the pinkish-buff underparts without a dark gorget left me in no doubt the bird was a Red-rumped Swallow.

J. H. SIMPSON.

I saw a Red-rumped Swallow flying east and then south over Sumburgh Head, Shetland, at about midday on 29th May 1972. It was roughly ten feet above the ground and 25-30 feet away from me. The creamy orange-buff underparts extending from throat to upper belly were clearly visible, and there was a total absence of any gorget. The lower belly and tail were dark, probably black.

As the bird flew out to sea its upperparts could be seen, and the contrast between the creamy orange rump and the blue-black back, wings and tail was quite obvious. The bird seemed less graceful than a Swallow, with a slightly more compact appearance.

S. J. BROYD.

(These are the second and third Scottish occurrences: the first was of three birds at Fair Isle in June 1906.—ED.)

White's Thrush on Fair Isle

At 12.30 p.m. on 13th February 1971 I noticed a male Peregrine hovering over a bird in my yard at Setter, Fair Isle. I approached within ten yards of the crouching bird and saw at once, by its golden and black-speckled back, that it was a White's Thrush. As it flew off I could see its underwing pattern of black-and-white bars. It landed again, and I was able to watch it in good light at a range of 30 yards. The head and upperparts were golden brown, with crescent-shaped black markings; its throat, breast and belly were much the same colour as the upperparts. The wings and tail were a rich, warm brown, legs pale brown and bill dark brown. The bird was larger and slimmer than a Mistle Thrush.

I followed the bird for about 15 minutes as it moved to stubble, then to a heather bank and finally away over the hill. That day there was an increase in thrush species on the island; in all I saw six species. The wind had been southeasterly for four days.

G. J. BARNES.

(Fifth Fair Isle record, eighth for Scotland.—ED.)

Thick-billed Warbler in Shetland

On Whalsay at about 5.00 p.m. on 23rd September 1971 I found a large, reddish-brown warbler skulking among cabbage and turnip crops. I thought it could be a Thick-billed Warbler, and, with J. Bruce, noted all the details we could during the next two hours.

In flight the large size, reddish-brown colour and long tail were noticeable features. At rest, there was little contrast between the upperparts and the buff underparts, but we noted a yellowish flush on the breast and a whitish throat. Close examination with binoculars showed a rufous tinge on the rump, a grey mark in front of the eye, and strong lead-blue legs and feet.

The big, thick-looking bill, the way it raised the crown feathers, and the bold, dark eye gave the bird a rather fierce look. The long tail was often held at a peculiar angle, depressed almost to the vertical, while the bird's body was nearly horizontal—a parrot-like stance. The tail was also constantly spread out—so that the end must have been more than two inches wide, when it had a very graduated, rounded appearance. Sometimes I could see the tip of each feather separately, and this gave a saw-tooth effect. The bird had very skulking habits and stayed hidden for long periods.

As darkness fell we managed to catch the bird and by consulting *The Popular Handbook of Rarer British Birds* and ringers' guides were able to confirm that it was a Thick-billed Warbler.

By nightfall a strong northwest gale had sprung up, with very heavy rain. We arranged to keep the bird for a night and to send it to Lerwick in the morning for release in a plantation, where it would find both food and shelter.

J. H. SIMPSON.

On 24th September 1971 BM collected the box containing the Thick-billed Warbler from a fishing boat at Lerwick. We noted a full description of the bird, took a few photographs and released it near bushes in the plantation at Helendale. It shook itself and preened a little before disappearing into denser cover.

Description A large, brown and white *acrocephalus* warbler, very lively, which emitted a loud squawking when handled. Measurements: wing (right) 81 mm; bill 19 mm; tarsus 27 mm; tail 84 mm; width of bill at nostrils 6 mm. Weight 22 g. Bill conspicuously broad with four rictal bristles at each side. Upper mandible dark horn with yellow cutting edge and tip, tip slightly hooked. Lower mandible fairly bright yellow, pinkish on under surface. Gape yellow, tongue yellow with small area of brown at extreme tip. Iris brown; legs blue grey, feet a little darker. Plumage: all feathers fresh, suggesting a first-year bird; crown olivaceous brown; nape, mantle and back rather duller brown;

rump brown, more rufous than mantle. Tail markedly rounded, slightly less rufous than rump. Lores brownish buff, forming a paler area extending from front of eye to base of bill, with a very narrow and inconspicuous extension of this colour above and slightly behind the eye (not a superciliary stripe). Ear coverts as crown, but feathers with paler shafts. Wing-coverts as back, but feathers had slightly darker centres. Scapulars slightly darker than back. Primaries and secondaries grey-brown with buffish brown edges; no wing-bar. Throat, chin and belly nearly white, flanks buffish-white. Breast, vent and under tail-coverts yellow buff.

A full set of wing and tail-feather measurements were also taken.

On 25th September we were very disappointed to hear that the bird had been found dead, practically on the doorstep of a nearby house. Its condition suggested that it had been caught and mangled by a cat. Half the tail was missing. We put the carcass into a deep freeze and later sent it to the Royal Scottish Museum in Edinburgh.

B. MARSHALL, R. J. TULLOCH.

In the Natural History Department of the Royal Scottish Museum I made a complete examination of the Warbler received from Shetland, and was able to confirm that it was a Thick-billed Warbler. It was not possible to determine the sex by simple internal examinations, without serious damage to the skin. This, and the state of the wing and tail feathers, suggest that it may be a first-winter bird. It is still in deep freeze, and will eventually be freeze-dried, possibly as a mount.

I. H. J. LYSTER.

(IHJL also submitted a detailed description. The record is accepted by the Rarities Committee of *British Birds*. It is the second Scottish and British record. The first was at Fair Isle in October 1955.—Ed.)

Pechora Pipit on Fair Isle

On 29th September 1972 on Fair Isle, ISR and PH found a pipit in a crop of potatoes; unlike a Meadow Pipit it flew out of the crop and then dived straight back in again. When flushed again it repeated the performance, diving into cover before anyone could get a clear view of it. Later it flew to a patch of cabbages, where it proved to be equally skulking. However, on several occasions it perched on the top of the plants or on top of a fence before it dived out of sight. It did not associate with Meadow Pipits, which invariably left the cover first. When the bird perched, several features stood out instantly: it had two very prominent wing-bars (one more so than the other); it had two well-defined whitish lines running from the nape of the neck down the length of the mantle, giving the

appearance of distinct 'braces'; it had bright pink legs. It seemed to be about the same size as a Meadow Pipit or slightly larger, but this impression could easily have been exaggerated by the bird's habit of stretching upwards when perched on top of a cabbage, its neck very extended.

In flight its general appearance was very dark, but the wing-bars contrasted and were plainly visible. When seen on the ground it appeared much lighter, with white belly, much cleaner than in Meadow or Tree Pipit, and dark, distinct flank streaks. A dark moustachial streak was probably responsible for the appearance of a dark mark on the sides of the neck. Throat and upper breast were buff, streaked blackish. The bill seemed to be large for the size of bird. As it dropped into, or was flushed from cover, the outer tail-feathers were seen to be white (much as in Meadow Pipit); the area of white on the outer feathers seemed quite extensive.

We all agreed that the bird was probably a Pechora Pipit, but we were worried that the outer tail-feathers were white (they are supposed to be buff). Also PH had seen a Red-throated Pipit that had fairly well-marked 'braces'. Having watched the bird for at least an hour and having flushed it several times without hearing a single call, we decided to catch it. We put up a mist-net at the end of its 'favourite' patch of potatoes and flushed the bird into it.

The bird was ringed and compared with the one Pechora Pipit skin in the Observatory collection. It was also shown to J. Wilson who had seen several previous Fair Isle Pechora Pipits and he agreed wholeheartedly with our identification.

We released the bird into a cabbage patch at Setter, hoping it would call, but heard nothing. The bird was seen again on 3rd October, but again it did not call.

R. A. BROAD, P. HOLMES, I. S. ROBERTSON.

(A fully detailed description was submitted. This is the first record since 1966. All 16 previous Scottish records are from Fair Isle. RAB comments that there seems to be considerable overlap in the characters given by authorities such as Svensson, Hall and the *Handbook* for Pechora Pipit and Red-throated Pipit in the autumn.—Ed.)

ORNITHOLOGICAL CONFERENCE IN BRUSSELS

To celebrate its tenth anniversary, the Society AVES is organising an ornithological conference in Brussels on Saturday and Sunday 6th and 7th October 1973. The subject is current problems in ornithology. Inquiries and registration to: Dr A. RAPPE, President, 43 Avenue des Constellations, 1200 Brussels, Belgium.

Reviews

The Palearctic African Bird Migration Systems. By R. E. Moreau. London, Academic Press, 1972. Pp. xv + 384: 31 black-and-white photographs, 9 text figures; 162 distribution maps. 25½ x 16½ cm. £7.80.

R. E. Moreau first became interested in birds during his boyhood in Britain, but it was in Africa, working as a civil servant from 1920 to 1946 in Egypt and Tanganyika, that he educated himself in ornithology, freely helped by many brilliant and original people. For 13 years (until 1960) he edited *Ibis*, while also working at the Edward Grey Institute in Oxford; during that time he wrote (and stimulated others to write) many papers on African birds and the Palearctic birds that winter in Africa. In 1966 he published *The Bird Faunas of Africa and its Islands*, zoogeography on a grand scale, and in his own words "an ecogeographical discussion with its roots in the past". That same year, although arthritis "rather abruptly foreclosed" on him, he set down to write the present work.

The book epitomises Moreau's immense knowledge of the subject. It is not simply an account of the movements of birds but includes discussions of the influence of geography and of the climate to-day and in the past, the physiology of flight and of the migrants in winter, the numbers of birds involved and the relation between Palearctic and Ethiopian birds.

No work on such a vast subject would be readable if it contained all the known information: no ornithologist with less than Moreau's grasp of essentials could have presented it in such an intelligible form for the general reader, while also including a mass of data for the specialist.

We in temperate latitudes are so used to thinking of *our* long-distance migrants arriving to benefit from a flush of soft-bodied insects in a reasonably moist climate, that it comes as something of a surprise to learn that more Palearctic migrants winter in the dry northern tropics than in the wetter southern tropics. Indeed not only do the birds arrive, their energy reserves nearly exhausted, in these semi-arid regions in the drier period after the rains, but they remain in areas where the habitat appears to deteriorate throughout the winter, reaching its worst about the time that the last spring migrants must leave for the north. Moreau's Paradox, as this has been called, must be more apparent than real, for the species involved seem to have survived all these natural hazards over the years.

The book begins with short and simple chapters on the factors that affect the birds and their migrations in general. There follows a series of accounts of the migration and distribution of individual species or groups of species. A short chapter on "maintenance needs" is a useful summary of the little that is known about the physiology of the wintering birds. The next chapter deals just as economically with "recurrence in winter quarters and itinerancy": a paper in *Ibis* (1972) by Nisbet and Medway on Eastern Great Reed Warblers wintering in Malaysia confirms Moreau's suggestions that individuals can regularly return to the same place to winter, and that some birds undertake regular movements in winter, rather like well-off people doing an annual round of the same old resorts. There are 162 maps showing the breeding areas of species in the Palearctic Region (after Voous) and their wintering areas in Africa, with distinctions clearly made between these groups and others of the same species that winter in the Oriental Region.

The author died in 1970. Although the text was virtually complete, Moreau might have wished to include a chapter of conclusion, or even speculation. For instance the Sahara has been steadily drying up and

becoming more hostile. If the crossing becomes impossible, what will happen to Palearctic nesting species?

The book had to be seen into print. This has been most ably done by Dr James Monk, and there is an appendix contributed by K. D. Smith on all the species recorded in sub-Saharan Africa, which had been omitted from the author's text. The book is a fascinating introduction to the subject for the novice and a masterly summary for the expert, including the many whose work for years was inspired by Moreau himself.

C.G.H.

Encyclopaedia of Aviculture. Vol. 2 (of 3). Edited by A. Rutgers and K. A. Norris. London, Blandford Press, 1972. Originally published in Dutch as *Encyclopaedie voor de Vogelliefhebber* 1964-68. Pp. 308; 28 coloured plates, 129 black-and-white half-tone illustrations, numerous text illustrations. 29½ x 20½ cm. £8.

Volume 1 of this work was reviewed in *Scottish Birds* in 1970 (6: 222). In volume 2 three-quarters of the book is devoted to the order Psittaciformes (parrots), and it is claimed that practically all known species have been described in enough detail to make identification possible. A description of habits in the wild state is followed by detailed instructions on the management of each species in captivity. The Australian parrots are dealt with by J. M. Forshaw, whose beautiful book *Australian Parrots* has since been published. Species from the rest of the world are described by K. Kolar of Austria and K. A. Norris of England, and authoritative articles on budgerigars are supplied by well known writers W. Watmough and A. Rutgers. The crowning achievement is the provision of 22 splendid plates with coloured illustrations of 125 different species of parrots and fine coloured plates illustrating 40 varieties of budgerigar. The paintings of parrots and budgerigars by J. F. van den Broecke, whose work we particularly like, and H. J. Slijfer, are very good indeed.

The rest of the work dealt with the orders Cuculiformes (plantain eaters, cuckoos and couculs), Strigiformes (owls) by K. A. Norris, Caprimulgiformes (oil birds, frogmouths, potoos, owl-nightjars, nightjars and goatsuckers) and Apodiformes (swifts and humming birds). The humming birds are specially dealt with by Jean Delecour on habits and maintenance in aviary, and seven species are well illustrated in an excellent colour plate by van den Broecke. The difficulty of finding easily anything in the literature about the other orders is indeed a measure of the usefulness of this book: it supplies much information on little known species in handy form. An appendix brings Volumes 1 and 2 up to date, mainly with first breedings, corrections to Volume 1, a bibliography and Latin and English indexes. Due acknowledgment is now made of indebtedness to Gould for some of the half-tone illustrations.

One does not have to be an aviculturist to appreciate this book, for it provides a compact account of the parrots of the world, really well illustrated in colour and black and white, at a most reasonable price. We look forward to the completion of the series, but volume 2 alone amply justifies this publication, which is indeed a credit to the compilers, the publishers and the printers.

RITCHIE SEATH.

A Field Guide to Birds' Nests. By Bruce Campbell and James Ferguson-Lees. London, Constable, 1972. Pp. xiii+545; 10 black-and-white photographs; line drawing, distribution map and breeding-season chart given for most of the 234 species. 17½ x 12 cm. £2.50.

This comprehensive work is an extension of Bruce Campbell's *Finding Nests* (1953). Since that book is long out of print, this new publication will be welcomed by all those interested in the technique of bird-nesting.

The book contains a wealth of information and can be opened at random

and knowledge gleaned from any page. The birds are treated in species order, and the details given for each include breeding-distribution maps for Britain and Ireland and a chart showing when eggs and young can be found. As well as describing the nest, nest-site, habitats and methods of finding the nest, the text also covers the bird's range, numbers, and details of clutch and brood size etc.

The distribution maps seem accurate enough and reasonably clear; the breeding charts are also helpful, though it must be remembered that in Scotland the dates for most species are later than those given here: in northeast Scotland, for example, I have never found Dunnock's eggs earlier than 12th April, whereas the chart in the book gives mid March. The sketches of the birds do little to enhance the text; illustrations of the nest, which are described in such detail, might have been more to the point.

The nest-finding techniques, which for many will be the main feature of the book, are based largely on the well proven methods of *Finding Nests*, with additional ideas developed by the authors and others.

At £2.50 this book of more than 500 pages is reasonably priced and should be a sound investment for novice and expert alike.

E. PICKARD.

Orkney Birds—Status and Guide. By E. Balfour. Orkney, Charles Senior, 1972. Pp. 64. Illustrated with black-and-white photographs, line drawings and maps. 65p.

The booklet opens with a concise but thorough ornithological geography of the islands and two brief, general chapters on the breeding and migrant birds. The main text lists 314 species, detailing the status of each. An essential buy for anyone interested in Orkney and its birds.

T.D.

Letters

Sir,

Birds on Rockall

In the last number of *Scottish Birds* J. Butler gives an interesting account of the birds of Rockall in June 1972 (*Scot. Birds* 7: 201). He concludes by saying that it seems impossible for birds to breed on Rockall as waves regularly sweep over the rock. This was certainly true for the exceptionally stormy June of 1972, but June 1946 was a very different month. That year Lord Tedder of the RAF placed a Sunderland flying boat at my disposal for a flight to Rockall to investigate the possibility of Guillemots laying on the broad ledge just below the summit of the rock.

I was picked up in Portree Bay, Isle of Skye, on the morning of 24th June. Our flight was high over the Gannet colony of St Kilda. As we approached Rockall a flock of Kittiwakes flew nervously out to sea—they were not nesting. At least 70 Guillemots crowded the broad ledge near the summit, which was whitened by their droppings. On our first run most of these Guillemots at once took wing. We made nine low runs over Rockall, and from my notes I see that six birds continued to brood, in the attitude that tells the observer who has made a close study of the species that they are certainly brooding

eggs or small chicks. The roar of the Sunderland's engines must have been a hard test of their courage, but we failed to dislodge even one of them.

The hatching of an egg on Rockall must depend on moderately calm weather continuing throughout the period of incubation. This is rare, and I imagine the Guillemots laying on Rockall are all inexperienced birds.

SETON GORDON.

Sir,

Habitat of Redwings in Wester Ross

As the colonisation of parts of north and west Scotland by Redwings no longer seems a matter of secrecy, following the widespread interest in their distribution aroused by the Atlas project (Sharrock, *Scot. Birds* 7: 208) and in view of the current SOC Enquiry into their status, it seems worthwhile putting on record observations on this species made in the spring of 1968 by a team of BTO members who carried out census studies in and near the Beinn Eithe National Nature Reserve in Wester Ross. These notes may be particularly useful at this time, as they considerably extend the information on habitat and nest-sites given by Sharrock from his own field experience in 1971-72.

The combined observations of the BTO party provided evidence of confirmed breeding at ten sites (eight near the head of Loch Maree, two close to Badachro), with a probable minimum of 20 sites in all. Broods were reared at six sites, and at three others the clutches (2 x c/5, 1 x c/6) disappeared from the nests. There was strong evidence that birds were double-brooded at two sites, at one of which the second clutch was completed on 29th May. A nest found with one egg on 31st May had a full complement of five eggs on 5th June; a third contained two fresh eggs on 8th June. At three of the known nests the broods (including one of six young) fledged between 29th May and 2nd June. In one instance the young were still being attended by both parents six days after fledging.

Sharrock records that 15 of his singing Redwings were in the gardens of large houses and that none were present in open birch woodland. A nest found by R. Balharry was in a Kinlochewe garden, but this was the only one found in this kind of habitat; it was possibly this male that sang from Scots pines on the edge of the garden, a larch plantation across an adjacent field, and tall birches nearby. Several of the nests found were associated with scattered birches, and three of the singing males were in remote hillside birch woods, one in a steep gully. Two males sang 'against' each other on the edge of an oak wood at Badachro, sometimes penetrating the wood to a depth of 100-150 yards.

Most of the pairs at the head of Loch Maree were associated

with stands of coppiced alders, interspersed with patches of gorse, on alluvial soil. Two nests were only a foot or so above the ground among the coppice stems branching from the base, two others were at a height of about five feet in the crown of gorse bushes, and two (one a nest of a former season) were side by side in an earth bank, the material of the new nest interwoven with that of the old one. Elsewhere two nests (and one old one) were built into the upturned roots of wind-thrown trees, a site also used by Song Thrushes in this area. An occupied nest was built into a deep cavity nine feet up the main stem of an oak where a fork branch had broken away; and another very exposed nest was at the base of suckers on a horizontal bough of a rowan overhanging a stream, hardly three feet above the water.

Eight of the eleven nests (including old ones) were close to running water; the remaining three were beside wet grassy areas. In no instance was there 'dense shrub undergrowth'. Clearly there is wide variation even in one locality in the choice of nest-site, but propinquity to running water and access to wet grassy areas for feeding may be important in determining the selection of territory.

K. WILLIAMSON.

Enquiries

Gannets. Contact is wanted with anyone willing to gather information from the remoter Gannet colonies for comparison with Bass Rock data. Dr J. B. Nelson, Zoology Department, University of Aberdeen, Tillydrone Avenue, Aberdeen AB9 2TN.

Barnacle Geese are being colour-ringed at Caerlaverock. The rings have three black letters on a yellow ground. Reports of ringed birds, giving place and size of flock, should be sent to Dr M. Owen, The Wildfowl Trust, Slimbridge, Gloucester.

Film wanted. Anyone possessing 16 mm film showing birds feeding, walking, landing or taking off is invited to loan it for a short period so that the movements can be analysed as part of a study of bird eye and head movements. Dr M. B. Friedman, Department of Psychology, University of Edinburgh, 60 Pleasance, Edinburgh EH8 9TJ.

Seabird records. Notes would be welcomed of birds seen at sea or of seabirds passing the shore. At sea, the number met in a 10-minute period while under way should be counted, and spot counts made of birds following the boat, coming to the trawl, resting on land passed etc. Dr W. R. P. Bourne, Zoology Department, University of Aberdeen, Tillydrone Avenue, Aberdeen AB9 2TN.

Goosanders. Since 1966 the Northumbrian Ringing Group have been ringing young Goosanders on the rivers North Tyne and Coquet in Northumberland. Recoveries from Scotland total about 12 and come from the Solway, Ayrshire, Aberdeenshire, Speyside and as far north as Bonar Bridge, Sutherland. To extend their work, the Group wish to locate post-breeding moulting sites in Scotland. Anyone able to assist should contact B. Little, 37 Stella Hall Drive, Stella Park, Blaydon-on-Tyne, Northumberland.

The Scottish Ornithologists' Club

SUMMER EXCURSIONS

Important Notes

1. Members may attend excursions of any Branch in addition to those arranged by the Branch they attend regularly.
2. Where transport is by private car, please inform the organiser if you can bring a car and how many seats are available. All petrol expenses will be shared.
3. Please inform the organiser in good time if you are prevented from attending an excursion where special hire of boats is involved. Failure to turn up may mean you are asked to pay for the place to avoid additional expense for the rest of the party.
4. Members, friends and visitors attending any Club excursion do so at their own risk. Neither the Leader nor the Club can be held responsible for an accident or injury sustained on an excursion.
5. Please bring meals as indicated (in brackets) below.
6. Members visiting breeding colonies are reminded of the need to take great care to avoid disturbance of the birds or damage to the nests.

AYR

Saturday 19th May THE HIRSEL, COLDSTREAM (by kind permission of Sir Alec Douglas-Home) and **YETHOLM LOCH**. Leader: R. H. Hogg. Coach leaves Wellington Square, Ayr, 8.30 a.m. Early applications with s.a.e. to the Branch Secretary (lunch and tea).

Wednesday 13th June DOONHOLM (by kind permission of Mr & Mrs B. B. Kennedy). Leader: Dr M. E. Castle. Meet Wellington Square, Ayr, 6.45 p.m. or 7 p.m. at the estate gates.

Saturday 15th September MULL OF GALLOWAY. Leader: A. G. Stewart. Cars leave Wellington Square, Ayr, 8.30 a.m. (lunch and tea).

Further information about all excursions from the Branch Secretary, R. M. Ramage, 57B St Quivox Road, Prestwick, Ayrshire KA9 1JF (tel. 0292 79192). Please send s.a.e. if writing.

DUMFRIES

Sunday 13th May MONIAIVE area. Leader: J. F. Young. Leave Ewart Library, Dumfries, 1 p.m. (tea).

Sunday 17th June LANGHOLM MOOR. Leaders: T. Irving and R. Smith. Meet Market Place, Langholm, 2.15 p.m. (tea).

Sunday 8th July MULL OF GALLOWAY. Meet at Mull Lighthouse 1 p.m. (lunch and tea).

Sunday 26th August ROCKCLIFFE MARSH, CUMBERLAND. Leader: L. T. Collie. Leave Ewart Library, Dumfries, 12 noon (lunch and tea).

DUNDEE

All excursions by private car leaving City Square, Dundee (lunch and tea for all excursions). Further information from Mrs A. Noltie, 14 Men-teith Street, Broughty Ferry, Dundee DD5 3EN (tel. 0382 75074). Please send s.a.e. if writing.

Sunday 20th May GLEN CLOVA. Leader: J. E. Forrest. Depart 8 a.m.

Sunday 10th June CATTERLINE AND DISTRICT. Leader: Dr D. G. Adamson. Depart 8 a.m.

Sunday 8th July LOCH ORDIE. Leader: D. B. Thomson. Depart 9 a.m.

Sunday 12th August SHELLY POINT. Leader: B. Pounder. Depart 9 a.m.

Sunday 9th September FIFE NESS AND KILCONQUHAR LOCH. Leader: Mrs J. A. R. Grant. Depart 9 a.m.

EDINBURGH

Saturday 5th May ABERLADY BAY NATURE RESERVE. Leader: K. S. Macgregor. Meet Timber Bridge 2.30 p.m. (tea).

Wednesday 23rd May BLACKFORD HILL. Leader: Dr L. L. J. Vick. Meet Blackford Pond 7 p.m.

Saturday 26th May THE HIRSEL, COLDSTREAM (by kind permission of Sir Alec Douglas-Home). Excursion by private cars leaving Edinburgh from square behind National Gallery 10.30 a.m. for Hirsell 12 noon. Applications with s.a.e. to J. B. Murray, Woodlea, 49 Lochend Road, Edinburgh EH6 8DQ (tel. 031-554 1934) stating number of seats available or required (lunch and tea).

Sunday 10th June ISLE OF MAY. Leader: Alastair Macdonald. Boat leaves Anstruther Harbour 9 a.m. Applications by 10th May with boat fare of £1.10 and s.a.e. to the organiser Mrs C. M. Adams, 18 Braehead Loan, Edinburgh EH4 6BL (tel. 031-336 4320) (lunch and tea).

Saturday 30th June HUMBIE WOODS (by kind permission of Mrs C. W. Bayne-Jardine). Leader: G. L. Sandeman. Meet Humbie Kirk 2.30 p.m. (tea).

Saturday 21st July BASS ROCK (by kind permission of Sir Hew Hamilton-Dalrymple). Leader: F. D. Hamilton. Numbers limited. Boat leaves North Berwick Harbour 2.30 p.m. Applications by 30th June with boat fare of £1.00 and s.a.e. to the organiser R. J. E. Whitworth, 6 Charteris Court, Longniddry, East Lothian (tel. Longniddry 2101) (tea).

Saturday 15th September ABERLADY BAY NATURE RESERVE. Leader: K. S. Macgregor. Meet Timber Bridge 2.30 p.m. (tea).

GLASGOW

Saturday 28th April Instruction in identification of sea and shore birds. MUSSELBURGH LAGOONS, EAST LOTHIAN. Leader: Russell Nisbet. Meet at the Gasworks, Musselburgh Racecourse 11 a.m. Applications with s.a.e. to Mr Nisbet, 46 Greenwood Road, Clarkston, Glasgow G76 7JN (tel. 041-638 0132). Please state if car seats available (lunch and tea).

Saturday 12th May BARR LOCH. Leader: Robert Caldow. Meet Lochwinnoch Station Yard, 2.30 p.m. (tea).

Sunday 27th May ROWARDENNAN WALK (8 miles approx.). Leader: Angus Maciver. Meet Forestry Car Park, Rowardennan, 11 a.m. Excur-

sion limited to 24. Applications with s.a.e. to Mr Maciver, 19 Lee Avenue, Glasgow G33 2QY (tel. 041-770 7864). Please state if car seats available (lunch and tea).

Saturday 9th June INCHCAILLOCH, LOCH LOMOND. Meet Balmaha Car Park 10 a.m. Applications by **31st May** with s.a.e. to Mrs Helen Halliday, Dunard, Clydesdale Road, Mossend, Bellshill, Lanarkshire. Please state if car seats available. Return boat fare 15p approx. (lunch and tea).

Sunday 8th July Instruction in identification of Woodland Birds. ALLAN-
DER WATER. Leader: Angus Maciver. Meet Tannoch Loch, Milngavie, 10 a.m. (lunch and tea).

INVERNESS

Sunday 20th May STRATHERRICK. Leader: Roy Dennis. Meet Cathedral Car Park 10 a.m. (lunch and tea).

Friday 15th June to Sunday 17th June SUTHERLAND WEEKEND. Applications with s.a.e. by **12th May** to Mrs W. Morrison, 83 Dochfour Drive, Inverness, from whom all details about the weekend should be obtained.

Sunday 9th September WADERS AND WILDFOWL—FIRTHS. Leader: Malcolm Harvey. Meet Kessock Ferry, Inverness, 10 a.m. (lunch and tea).

ST ANDREWS

Applications with s.a.e., not later than one week before each excursion, to Miss M. M. Spires, Greenacre, Hepburn Gardens, St Andrews, Fife (tel. 033 481 2418).

Saturday 5th May KILCONQUHAR LOCH (by kind permission of Elie Estates). Meet North Lodge, 2.30 p.m. (tea).

Saturday 9th June RED HEAD AND CLIFFS. Cars leave car park, Kennedy Gardens, by Kinburn Park, St Andrews, 2 p.m. (tea).

Sunday 17th June AN ANGUS GLEN. Cars leave car park, Kennedy Gardens, 9.30 a.m. (lunch and tea).

Saturday 30th June TENTSMUIR. Cars leave car park, Kennedy Gardens, 2 p.m. (tea).

STIRLING

The Stirling Branch will be holding excursions to places of local ornithological interest on the following Sundays :

13th May; 10th June; 15th July; 19th August and 9th September.

For full details please write with s.a.e. at least three weeks before each excursion to the Branch Secretary, D. M. Bryant, Biology Department, University of Stirling, Stirling.

WOODCARVING EXHIBITION

Mrs V. M. Tulloch, a Club member from the island of Gigha, will be holding an exhibition of her own woodcarvings in the old Royal High School buildings, Regent Road, Edinburgh, during the first week in June. She intends to donate the proceeds of the exhibition to organisations concerned with combating pollution of our environment, and will be very grateful for help in manning it during the daytime. Anyone who is interested and who can help is asked to write direct to Mrs Tulloch at 11 Kenilworth Court, Bridge of Allan, Stirling.

S.O.C.

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Birds of Korea. <i>Gore & Won Pyong-Oh</i>	£9.65
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LOCAL RECORDERS

- Shetland (except Fair Isle)** R. J. Tulloch, Reafirth, Mid Yell, Shetland.
- Fair Isle** R. A. Broad, Bird Observatory, Fair Isle, Shetland.
- Orkney** E. Balfour, Isbister House, Rendall, Orkney.
- Outer Hebrides (except St Kilda)** W. A. J. Cunningham, Aros, 10 Barony Square, Stornoway, Isle of Lewis.
- St Kilda** Dr I. D. Pennie, Varkasaig, Scourie, Lairg, Sutherland.
- Caithness** Mrs P. Collett, Sandyquoy, East Gills, Scrabster, Caithness.
- Sutherland, Ross-shire (except Black Isle)** D. Macdonald, Elmbank, Dornoch, Sutherland.
- Inverness-shire (within 18 miles of Inverness) Ross-shire (Black Isle only)** Dr Maeve Rusk, Arniston, 51 Old Edinburgh Road, Inverness.
- Inverness-shire (mainland more than 18 miles from Inverness)** R. H. Dennis, The Old Manse, Rothiemurchus, Aviemore, Inverness-shire.
- Nairnshire, Morayshire, Banffshire** J. Edelsten, 14 South High Street, Portsoy, Banffshire, AB4 2NT.
- Aberdeenshire, North Kincardineshire** Alan Knox, Zoology Department, Aberdeen University, Tillydrone Avenue, Aberdeen, AB9 2TN, and W. Murray, Culterty Field Station, Newburgh, Aberdeenshire, AB4 0AA.
- South Kincardineshire, Angus** G. M. Crighton, 23 Church Street, Brechin, Angus.
- Perthshire** Miss V. M. Thom, 19 Braeside Gardens, Perth.
- Kinross-shire** Miss Bridget H. Moore, Vane Farm Reserve, Kinross.
- Isle of May** Miss N. J. Gordon, Nature Conservancy, 12 Hope Terrace, Edinburgh EH9 2AS.
- Fife, Clackmannanshire, East Stirlingshire** D. W. Oliver, East Cottage, Balass, Cupar, Fife.
- West Lothian** Prof. T. C. Smout, 19 South Gillsland Road, Edinburgh EH10 5DE.
- Forth Islands (except May), Midlothian** R. W. J. Smith, 33 Hunter Terrace, Loanhead, Midlothian.
- East Lothian, Berwickshire** K. S. Macgregor, 16 Merchiston Avenue, Edinburgh EH10 4NY.
- Peeblesshire, Roxburghshire, Selkirkshire** A. J. Smith, Glenview, Selkirk.
- Argyllshire, Inner Hebrides, Skye** M. J. P. Gregory, 4 High Bank Park, Lochgilphead, Argyllshire.
- Dunbartonshire, West Stirlingshire, Renfrewshire, Lanarkshire, Ayrshire, Arran, Bute** R. W. Forrester, 29 Crandleyhill Road, Prestwick, Ayrshire.
- Dumfriesshire** D. Skilling, 86 Auchenkeld Avenue, Heathhall, Dumfries and R. T. Smith, Applegarthtown, Lockerbie, Dumfriesshire.
- Kirkcudbrightshire, Wigtownshire** A. D. Watson, Barone, Dalry, Castle Douglas, Kirkcudbrightshire.

THE SCOTTISH ORNITHOLOGISTS' CLUB

THE Scottish Ornithologists' Club was formed in 1936 and membership is open to all interested in Scottish Ornithology. Meetings are held during the winter months in Aberdeen, Ayr, Dumfries, Dundee, Edinburgh, Glasgow, Inverness, St Andrews, Stirling and Thurso at which lectures by prominent ornithologists are given and films exhibited. Expeditions are organised in the summer to places of ornithological interest.

The aims of the Club are to (a) encourage and direct the study of Scottish ornithology; (b) co-ordinate the efforts of Scottish Ornithologists; (c) encourage ornithological research in Scotland; (d) hold meetings at which Lectures are given, films exhibited and discussions held, and (e) publish information regarding Scottish ornithology.

There are no entry fees for Membership. The Annual subscription is £2.00, or 50p in the case of Members under twenty one years of age or University undergraduates who satisfy Council of their status as such at the times at which their subscriptions fall due. The Life subscription is £50. Joint Membership is available to married couples at an Annual subscription of £3.00, or a Life subscription of £75. 'Scottish Birds' is issued free to Members but Joint Members will receive only one copy between them. Subscriptions are payable on 1st October annually.

'Scottish Birds' is the Journal of the Club. Published quarterly it includes papers, articles and short notes on all aspects of ornithology in Scotland. The Scottish Bird Report is published in the Journal.

The affairs of the Club are controlled by a Council composed of the Hon. Presidents, the President, the Vice-President, the Hon. Treasurer, the Editor of 'Scottish Birds', the Hon. Treasurer of the House Fabric Fund, and ten other Members of the Club elected at an Annual General Meeting. On the Council is also one Representative of each Branch Committee appointed annually by the Branch.

The Scottish Bird Records' Committee, appointed by Council, produces an annual Report on 'Ornithological Changes in Scotland'.

The Club tie in dark green,, navy or maroon terylene and a brooch in silver and blue, both displaying the Club emblem, a Crested Tit, can be obtained by Members only from the Club Secretary or from Hon. Branch Secretaries.

The Club-room and Library at 21 Regent Terrace, Edinburgh EH7 5BT is available to Members during office hours (Monday to Friday 9 a.m. to 1 p.m. and 2 to 5 p.m.), and, by prior arrangement, in the evenings during the week in the winter months from 7 to 10 p.m. Members may use the Reference Library, and there is a small duplicate section, consisting of standard reference books and important journals which can be lent to students and others wishing to read a particular subject.

The Bird Bookshop is also at 21 Regent Terrace, Edinburgh. It is managed by the Club and the profits help to maintain services to ornithologists at the Scottish Centre.

Application for Membership form, copy of the Club Constitution, and other literature are obtainable from the Club Secretary, Major A. D. Peirse-Duncombe, Scottish Centre for Ornithology and Bird Protection, 21 Regent Terrace, Edinburgh EH7 5BT (Tel. 031-556 6042).

NOTICE TO CONTRIBUTORS

1. General notes (not of sufficient importance to be published on their own as Short Notes) should be sent to the appropriate local recorders for inclusion in their summary for the annual Scottish Bird Report, not to the editor. A list of local recorders is published from time to time, but in cases of doubt the editor will be glad to forward notes to the right person. All other material should be sent to the editor, Tom Delaney, 31 Starbank Road, Edinburgh, EH5 3BY. Attention to the following points greatly simplifies the work of producing the journal and is much appreciated.

2. If not sent earlier, all general notes for January to October each year should be sent to the local recorders early in November, and any for November and December should be sent at the beginning of January. In addition, local recorders will be glad to have brief reports on matters of special current interest at the end of March, June, September and December for the journal. All other material should of course be sent as soon as it is ready.

3. All contributions should be on one side of the paper only. Papers, especially, should be typed if possible, with double spacing. Proofs will normally be sent to authors of papers, but not of shorter items. Such proofs should be returned without delay. If alterations are made at this stage it may be necessary to ask the author to bear the cost.

4. Authors of full-length papers who want copies for their own use MUST ASK FOR THESE when returning the proofs. If requested we will supply 25 free copies of the issue in which the paper is published. Reprints can be obtained but a charge will be made for these.

5. Particular care should be taken to avoid mistakes in lists of references and to lay them out in the following way, italics being indicated where appropriate by underlining.

DICK, G. & POTTER, J. 1960. Goshawk in East Stirling. *Scot. Birds* 1: 329.

EGGELING, W. J. 1960. *The Isle of May*. Edinburgh and London.

6. English names should follow *The Handbook of British Birds* with the alterations detailed in *British Birds* in January 1953 (46:2-3) and January 1956 (49:5). Initial capitals are used for names of species (e.g. Blue Tit, Long-tailed Tit) but not for group names (e.g. diving ducks, tits). Scientific names should be used sparingly (see editorial *Scottish Birds* 2:1-3) and follow the 1952 B.O.U. *Check-List of the Birds of Great Britain and Ireland* with the changes recommended in 1956 by the Taxonomic Sub-Committee (*Ibis* 98:158-68), and the 1957 decisions of the International Commission on Zoological Nomenclature (*Ibis* 99:396). When used with the English names they should follow them, underlined to indicate italics, and with no surrounding brackets.

7. Dates should normally be in the form "1st January 1962", with no commas round the year. Old fashioned conventions should be avoided—e.g. use Arabic numerals rather than Roman, and avoid unnecessary full stops after abbreviations such as "Dr" and "St".

8. Tables must be designed to fit into the page, preferably not sideways, and be self-explanatory.

9. Headings and sub-headings should not be underlined as this may lead the printer to use the wrong type.

10. Illustrations of any kind are welcomed. Drawings and figures should be up to twice the size they will finally appear, and on separate sheets from the text. They should be in Indian ink on good quality paper, with neat lettering by a skilled draughtsman. Photographs should either have a Scottish interest or illustrate contributions. They should be sharp and clear, with good contrast, and preferably large glossy prints.

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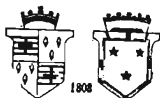
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