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THE BIRDS OF THE ISLE OF MAY

W. J. EGGELING

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The birds of the Isle of May—a revised assessment of status

W. J. EGGELING

Introduction

The Isle of May Bird Observatory, established in 1934, had been operating for only four years when, under the threat of approaching war, it was forced to close. The Observatory was re-opened in 1946, migration data steadily accumulated, and in 1960 an attempt was made in my book *The Isle of May* (published by Oliver & Boyd, but now out of print) to summarise all the bird records for the island from the first early references and later visits and through the Observatory period up to the end of 1959.

Since the publication of that handbook many more records have accumulated, additional species have been identified, others have bred for the first time, and there have been some remarkable changes in the populations of the breeding seabirds, notably of the gulls, Puffins and Shags. In 1972, because of the vast and continuing expansion of the Herring Gull colony, the Nature Conservancy began a massive gull-reduction campaign directed at arresting and if possible reversing the widespread destruction of the plant cover of the island and the consequent loss of soil caused by the large numbers of breeding and roosting gulls present throughout the year. In order to monitor the results of this policy, a base-line against which to measure change is essential, and it is partly to provide this and partly to make available to observers a new and up-to-date assessment of the bird life of the island that the following accounts of status have been prepared. They summarise all observations and counts to the end of 1973.

In those last 14 years, 13 species and three subspecies have been added to the island's bird list. Excluding records not fully authenticated, records that may have involved escapes from captivity and records of birds previously treated as distinct species but now considered to be subspecies, we find that

altogether 234 species had been recorded from the island by 31st December 1973. Undoubtedly, still more will be recorded in the years ahead, for several that might reasonably be expected to occur have yet to be noted. A total of 250 species by the year 2000 is by no means improbable.

The scientific and common names of species and the sequence followed are those given in *A Species List of British and Irish Birds*, published by the BTO in 1971. Scientific names of subspecies are those given in *The Status of Birds of Britain and Ireland* prepared by the Records Committee of the BOU and published by Blackwood in 1971.

I am grateful to the Trustees of the late Dr E. V. Baxter's Trust for the grant which has made possible the publication of this Supplement.

Species list

*Species not recorded before 1960 are indicated with an asterisk.

BLACK-THROATED DIVER *Gavia arctica*. Surprisingly, only four records (three between 29th September and 1st October, one mid April) although the species is normally present in the Forth from September to early May.

GREAT NORTHERN DIVER *Gavia immer*. Seven records only; three in September, one each in October, November, December and February.

RED-THROATED DIVER *Gavia stellata*. Present in the surrounding sea from August to early May. Most frequently observed in September (25 records) and in October and April (six times each). Highest number in a day, six, in September.

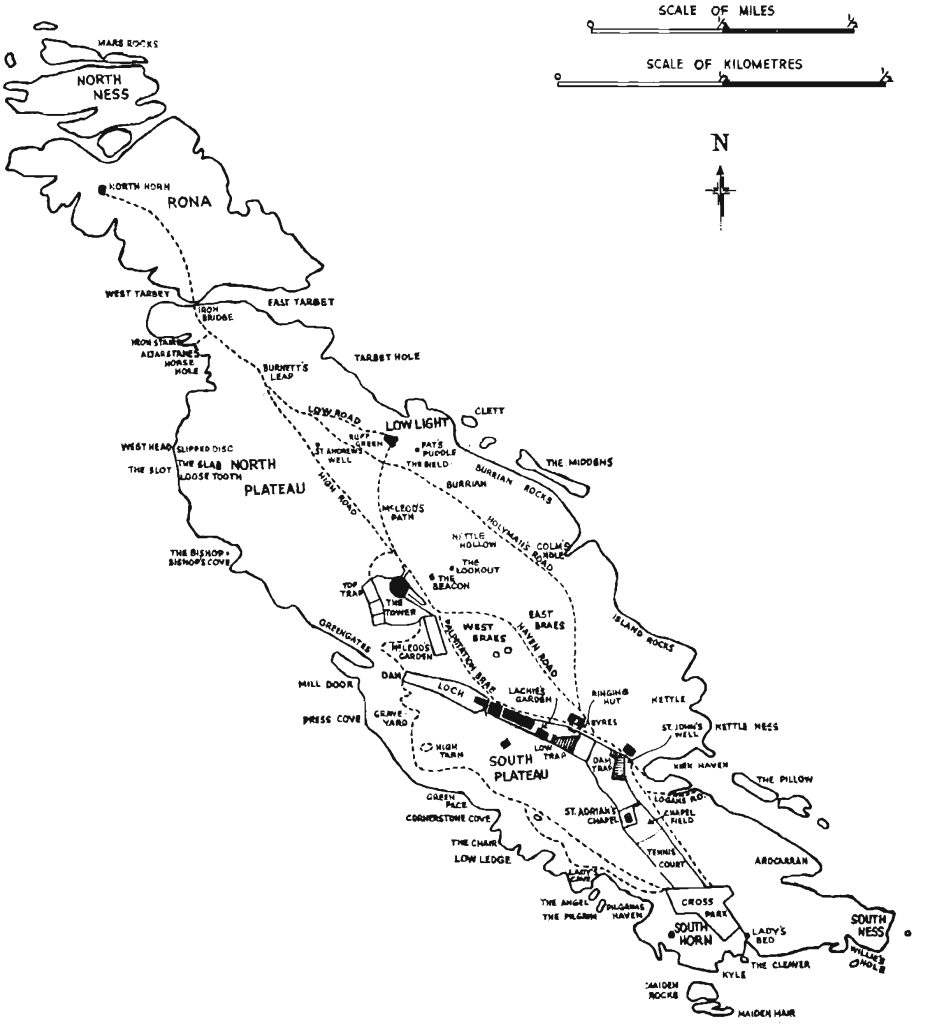
GREAT CRESTED GREBE *Podiceps cristatus*. Remarkably, only three records; one 21st March, one 8th April and one 19th September.

RED-NECKED GREBE *Podiceps griseigena*. Noted occasionally between early September and the end of October; also thrice between mid March and 5th April.

SLAVONIAN GREBE *Podiceps auritus*. Six occurrences; four in October, one each March and April. Oddly, though it winters in the Forth, the Black-necked Grebe (*P. nigricollis*) has never been recorded from the May.

LITTLE GREBE *Tachybaptus ruficollis*. Recorded several times in September and October, once in November and once in March.

[BLACK-BROWED ALBATROSS *Diomedea melanophrys*. The albatross that frequented the Bass Rock throughout the summers of 1967 and 1968 was never observed from the May by a recognised ornithologist. What was almost certainly this


SCALE OF MILES
SCALE OF KILOMETRES
N
MARS ROCKS
NORTH NESS
NORTH HORN
RONA
WEST TARBET
IRON BRIDGE
EAST TARBET
TARBET HOLE
BURNETT'S LEAP
LOW ROAD
LOW LIGHT
CLETT
PAT'S PUDDLE
THE SHELF
BURRIAN
BURRIAN ROCKS
THE MIDDENS
WEST HEAD
SLIPPED DISC
THE SLOT
THE SLAB
LOOSE TOOTH
NORTH PLATEAU
HIGH ROAD
MCLEOD'S PATH
NITTLE HOLLOW
HOLYMANS
COLM'S HOLE
THE BISHOP
BISHOP'S COVE
THE LOOKOUT
THE BEACON
TOP TRAP
THE TOWER
GREENGATE
MCLEOD'S GARDEN
WEST BRAES
EAST BRAES
HAVEN ROAD
ISLAND ROCKS
MILL DOOR
DAM
LOCH
LACHIE'S GARDEN
RINGING HUT
KETTYLE
KETTLE NESS
PRESS COVE
GRAVE YARD
HIGH TARN
SOUTH PLATEAU
LOW TRAP
DAM TRAP
ST JOHN'S WELL
KIRK HAVEN
THE PILLOW
GREEN PACE
CORNERSTONE COVE
ST ADRIAN'S CHAPEL
CHAPEL FIELD
THE CHAIR
LOW LEDGE
TENNIS COURT
ARDCARRAN
THE ANGEL
THE PILGRIM
PILGRIMS HAVEN
CROSS PARK
SOUTH HORN
LADY'S BED
SOUTH NESS
THE CLEAVER
KYLE
MAIDEN ROCKS
MAIDEN HAIR

bird was however seen offshore by several of the light-keepers, including Messrs Dundas and Swankie, in June 1968.]

FULMAR *Fulmarus glacialis*. First recorded in May 1914; now common and (since 1930) a regular breeder. As a rule, not many are observed between mid September and late March or April; the counts of 42 on 5th November 1972 and 200 on 28th December 1972 are exceptional. Dark-phase (or "blue") Fulmars have been recorded occasionally.

MANX SHEARWATER *Puffinus puffinus*. Occurs fairly regularly at sea, mostly in small numbers, between April and early November, but especially in May and (more notably) September; least often recorded in June and July. Over 500 were seen on 25th September 1959, and over 100 have been counted on several other occasions in autumn.

GREAT SHEARWATER *Puffinus gravis*. Recorded twice; single birds on 1st September 1953 and 3rd October 1935.

SOOTY SHEARWATER *Puffinus griseus*. Only six occurrences before 1959 (four 1910-13, one 1921, one 1931) but observed on numerous occasions in 11 of the 15 years from 1959 to 1973. All the records relate to the period August-October, the majority being in September (notably the Septembers of 1959 and 1971). Usually only single birds or small numbers are seen, but more than 500 were counted on 25th September 1959.

STORM PETREL *Hydrobates pelagicus*. There are a few old records of birds at the lantern in October and November; also five widely spaced appearances in April 1962, May 1922, June 1916 and (twice) July 1971.

LEACH'S PETREL *Oceanodroma leucorrhoa*. Has occurred once in August (in 1881) and once in October (in 1908).

GANNET *Sula bassana*. Seen at sea throughout the year. Bred for a time in the first half of the 19th century.

CORMORANT *Phalacrocorax carbo*. Single birds or small numbers occur at all seasons, least frequently in summer. The roost on the West Cliffs has held over 100 birds in September; dates of occupation and numbers are wanted. A few pairs of Cormorants may have bred in the 1820's and 1830's.

SHAG *Phalacrocorax aristotelis*. Scarce at the beginning of the century, now common throughout the year and continuing to breed in ever increasing numbers—six pairs in 1934, over 300 in 1957, and over 1100 pairs in 1973.

[PELICAN *Pelecanus* sp. A bird recorded on 8th August 1960 is thought to have been the immature "Crested Pelican from Africa" that escaped from Bellevue Zoo, Manchester, on 27th June 1960 (*Scot. Birds* 3: 390-391).]

GREY HERON *Ardea cinerea*. Occurs infrequently and irregularly in small numbers at all seasons (most in a day, nine); there is sometimes a slight passage in August-September, perhaps of Continental birds. In some years none is recorded.

[NIGHT HERON *Nycticorax nycticorax*. Recorded once—on 14th May 1960. The possibility that this bird was a wanderer from the free-living colony in the Edinburgh Zoo cannot be excluded, although the weather conditions and the fact that three other Night Herons turned up in Great Britain in the spring of that year suggest that the bird may have been genuinely wild.]

*SPOONBILL *Platalea leucorodia*. One record only—a single bird on 16th September 1964.

MALLARD *Anas platyrhynchos*. Single birds, pairs or small parties may be seen at all seasons, though only rarely in June and July. Occurrences tend to be most frequent in March and early April and again (and more noticeably) from August into October or later. Twenty-four were counted on 29th December 1972. Two pairs nested in 1968.

TEAL *Anas crecca*. Regular in small numbers (maximum nine) from the latter part of August through winter to the end of May. Recorded once in early April and once in June. A pair nested unsuccessfully in 1960.

GARGANEY *Anas querquedula*. One record only—a single bird in August 1953.

WIGEON *Anas penelope*. Not infrequent in small numbers September-May. Easily the highest count is of a pack of over 80 on 18th September 1957.

PINTAIL *Anas acuta*. Four occurrences of single birds between February and May; also two (of two birds each time) in September and October. Not recorded since 1954.

SHOVELER *Anas clypeata*. Three occurrences in May, three in September. Thrice single birds; thrice pairs.

SCAUP *Aythya marila*. Surprisingly, only 12 records, all since 1934, all between September and May. Most at a time, 12.

TUFTED DUCK *Aythya fuligula*. Has occurred only six times—one bird in July, ten in September, and a single female in November.

POCHARD *Aythya ferina*. Single birds recorded on seven occasions, twice in spring (April), five times in autumn (August-September).

GOLDENEYE *Bucephala clangula*. About 20 occurrences September-April; mostly single birds, once three.

LONG-TAILED DUCK *Clangula hyemalis*. Seen fairly often between early October (exceptionally September) and the end of April (exceptionally May).

VELVET SCOTER *Melanitta fusca*. Occasional from late August until mid March; once in May. Most at a time, ten.

COMMON SCOTER *Melanitta nigra*. Not infrequent, mainly in small numbers August-April (occasionally into May); recorded once in July. Most in a day, 35.

EIDER *Somateria mollissima*. Present throughout the year; particularly numerous just before and during the first half of the laying season, i.e. in April and May. Towards the end of May, when many of the ducks are still incubating, the first of the drakes begin to leave the island to moult, probably off the East Lothian coast. By the end of June (and throughout July and August) no adult drakes, or very few, are present. A few moulted drakes return in September and October, but at the end of October there are seldom more than 50 Eiders of both sexes around the island, and numbers do not rise substantially until the following March. Nowadays there are probably between 70 and 100 nests in most years.

KING EIDER *Somateria spectabilis*. The only record is of a drake and four or five others in October 1884.

RED-BREASTED MERGANSER *Mergus serrator*. Recorded occasionally July-November (mainly September-October); also once in April and thrice in May. Most in a day, four. Probably occurs also in winter.

GOOSANDER *Mergus merganser*. Two records only, both in October (1929 and 1934).

SMEW *Mergus albellus*. Two records, both of males—on 30th September 1926 and 31st March 1935.

SHELDUCK *Tadorna tadorna*. In years when Shelducks are nesting or prospecting on the island, the regular presence from March until June of the few birds concerned obscures a slight and irregular spring movement observed in other years, involving mostly single individuals (but once as many as 12 in a day), chiefly in April and May. There is an equally irregular and slight movement in autumn between August and October (most in a day, 19, in September). One or two pairs breed, sporadically.

GREYLAG GOOSE *Anser anser*. Single birds and skeins have been recorded occasionally September-December.

WHITE-FRONTED GOOSE *Anser albifrons*. Recorded once—a single bird on 27th October 1913. Race not recorded but probably *A. a. flavirostris* (Greenland White-front).

PINK-FOOTED GOOSE *Anser brachyrhynchus*. Twenty records: 13 in September-October; 2 in November; one each in December, February and March; two in April. Largest number in a day, about 200.

BRENT GOOSE *Branta bernicla*. Has appeared four times in October (race not recorded); most at a time, four. A single Dark-bellied Brent (*B. b. bernicla*) was present for over three weeks in July-August 1959, an unexpected date.

BARNACLE GOOSE *Branta leucopsis*. Twelve appearances between 30th September and early April. Nearly all single birds, once 15. Also, and remarkably, a single bird on 2nd July 1970, perhaps an escape.

CANADA GOOSE *Branta canadensis*. Five records; 25 birds on 27th September 1966, two on 3rd October 1935, three on 18th October 1972, singles on 5th April 1952 and 1st May 1962.

MUTE SWAN *Cygnus olor*. Recorded on five occasions; once in August, twice in September, once in October, once in December. Three singles, once two together, once five together.

WHOOPER SWAN *Cygnus cygnus*. Ten occurrences (mostly of small parties), four in spring (February-April) and six in autumn (September-November); largest skein, twelve.

BEWICK'S SWAN *Cygnus bewickii*. One record only—a single bird not long dead on the East Tarbet rocks on 15th April 1956.

[SPOTTED EAGLE *Aquila clanga*/LESSER SPOTTED EAGLE *A. pomarina*. A single record of one or the other of these species on 18th September 1969.]

BUZZARD *Buteo buteo*. Eight occurrences; one in May, seven between 28th August and 28th October.

SPARROWHAWK *Accipiter nisus*. A fair number of records between late August and November (mostly October) and between late March and late May. Also three summer records between early July and early August. The birds involved are probably wintering immigrants from the Continent. Ringing has shown that British birds are mainly sedentary.

HEN HARRIER *Sircus cyaneus*. Four records; three early October, one early November.

OSPREY *Pandion haliaetus*. Fourteen occurrences, nine in May, two in June, one in July, two in September. Eight of these appearances have been since 1963.

PEREGRINE *Falco peregrinus*. Occasional, mostly March-April and September-October. Again, some of the passage birds may be of Continental origin. Used to breed.

MERLIN *Falco columbarius*. Occasional in spring from mid March to mid April, sometimes into May; fairly regular in small numbers in autumn between late August and November (main passage September-October); once July and once December. It is possible that both British and Continental birds (all *F. c. aesalon*) are involved and possibly also the

Iceland Merlin (*F. c. subaesalon*) which is regular on Fair Isle in October, though no specimen assignable to this race has yet been trapped on the May.

*RED-FOOTED FALCON *Falcovespertinus*. Has appeared twice: 5th-12th May 1969 and 19th May 1973.

KESTREL *Falco tinnunculus*. Although individuals may turn up at any time, there is also a fairly regular movement in spring (mostly April-May, occasionally March) and a much more pronounced autumn passage from the end of July to October or into November. There was an exceptional influx on 18th September 1969, when 31 were recorded. British birds are largely sedentary, and there is little doubt that Continental immigrants are principally involved. A Kestrel ringed on the island in September was recorded in a later April in Norway.

QUAIL *Coturnix coturnix*. Ten records; one April, eight May, one October, all since 1932.

WATER RAIL *Rallus aquaticus*. Occasional in spring (thrice April, once May); more frequent in autumn (four times September, a good many times October-November). As with Merlin, both British and (possibly more frequently) Continental birds (all *R. a. aquaticus*) are likely to be involved, also perhaps occasionally the Icelandic race (*R. a. hibernans*), which should be looked for when specimens are trapped.

*SPOTTED CRAKE *Porzana porzana*. Recorded only once—a single bird on 22nd September 1967.

CORNCRAKE *Crex crex*. Occasional between mid April and mid May; also August-October. Two records June, one November.

MOORHEN *Gallinula chloropus*. Moorhens (probably mainly Continental birds) have occurred a fair number of times between late March and early June; also twice in late August, twice in early October, once in December. A pair bred in 1934.

COOT *Fulica atra*. Eight occurrences between February and May. No indication of origin or destination.

OYSTERCATCHER *Haematopus ostralegus*. Present throughout the year, with passage in February-May and August-November. High counts have been : nearly 50 in April, about 75 in August and up to 50 in September and November. Some eight to 15 pairs nest as a rule. A bird ringed on the May almost certainly as a juvenile was recovered in a later August in France (ring number only partially decipherable).

LAPWING *Vanellus vanellus*. Spring passage (mostly in small numbers) mainly mid February-mid April, with stragglers to the end of May; also individuals and small parties not infrequently in June and July. Autumn passage (again mostly

in small numbers) from August-November. Occasional in winter. Continental birds as well as British are undoubtedly involved in many of these passage and weather movements, e.g. a chick ringed in Denmark in May was recorded on the May in December. A pair is reputed to have bred in 1897.

RINGED PLOVER *Charadrius hiaticula*. Single birds and small parties of nominate *hiaticula* occur occasionally and irregularly at any time between March and October but chiefly in April-May and August-September, when most of the birds are probably of Continental origin. The Arctic Ringed Plover (*C. h. tundrae*), which breeds in northern Scandinavia, Russia and Siberia, has not yet been identified, although it has been recorded from the whole length of the east coast of England and as far north as Orkney.

GREY PLOVER *Pluvialis squatarola*. Six records only; one in March, four in September, one in October; all since 1951.

GOLDEN PLOVER *Pluvialis apricaria*. Spring passage in small numbers from March to the end of May or early June; autumn passage (mid August-early November) more marked but still in small numbers—a flock of 20 is exceptional. Three July records and a few in winter. Northern birds (*P. a. altifrons*) have been identified as well as the more usual *P. a. apricaria*.

DOTTEREL *Eudromias morinellus*. Recorded twice in spring (end May and 1st June) and seven times in autumn (August-September). On the night of 30th/31st August 1914 there were hundreds at the lantern, and a few were killed: these birds (and perhaps some other occurrences) were almost certainly drifted migrants from northern Scandinavia or further east.

TURNSTONE *Arenaria interpres*. Chiefly a passage migrant and winter visitor but recorded throughout the year, though less regularly and mostly in smaller numbers in June and early July. The autumn passage usually begins to build up about the third week of July (exceptionally from the end of June) and continues into October or early November. Some birds remain until the spring, and there is now conclusive evidence that individuals may return to the island in successive years to overwinter. Both in spring and autumn several hundred birds may be present, though numbers fluctuate greatly from day to day. The maximum recorded is over 1000 on (unexpectedly) 28th March—as a rule, the highest counts are in April, August and September. A bird ringed on the May in October was recovered breeding in Greenland in June, two years later.

SNIPE *Gallinago gallinago*. Passage in small numbers between March and the end of May, and from mid September to mid

November; occasional at other times. As many as three birds in a day is unusual but up to eight have been recorded in December.

JACK SNIPE *Lymnocryptes minimus*. Irregular passage in small numbers between March and mid May and again from mid September to October. Not infrequent in some winters; recorded once in August. Years with no birds at all are commonplace. Most in a day, six.

WOODCOCK *Scolopax rusticola*. Very irregular in its appearances; occurs in spring on return passage to the Continent in very small numbers, mainly March-April, very rarely in summer. Autumn arrivals usually more numerous (but in some years none), chiefly in late October and (especially) early November; occasional in winter. Over 150 were recorded on 7th November 1962—an exceptional number. Some of these arriving winter visitors pass quickly westwards to Ireland; two ringed on the island in November were shot a month later in Tipperary.

CURLEW *Numenius arquata*. Occurs at all seasons. Spring passage (usually in small numbers) March-May; autumn movements much more marked, extending from late July into November and possibly throughout winter, sometimes several hundred birds in a day. It is assumed that many of these Curlews are of Continental origin.

WHIMBREL *Numenius phaeopus*. Spring passage in very small numbers, mainly in May (exceptionally as early as the very end of March); autumn passage more pronounced, mostly from August to mid September, sometimes with late birds into October. One June record, a few in July. Most in a day, 22 (in August).

BLACK-TAILED GODWIT *Limosa limosa*. Five records; two in April, one in late May, two in September. Most in a day, two. No indication of race.

BAR-TAILED GODWIT *Limosa lapponica*. Unusual in spring and summer (one record each for April, June and July), more frequent in autumn (one record August, about 15 in September, two in October, one in November). Most in a day, 30 (in September).

GREEN SANDPIPER *Tringa ochropus*. About ten occurrences in spring (all April-May); two in July; over 20 in autumn (all August). Mostly single birds, occasionally two, once three or four. First recorded in 1938, next in 1947, but since 1950, has occurred in 18 out of 24 years. Individuals frequently remain on the island for several days.

WOOD SANDPIPER *Tringa glareola*. Recorded four times in spring (between 7th and 24th May) and four times in autumn (between 15th August and 14th September); most in a day, two.

In five of these eight occurrences the birds remained on the island for four days or more.

COMMON SANDPIPER *Actitis hypoleucos*. Irregular passage in small numbers between mid April and late May; autumn passage more regular, from July to late September. Three June records, two in October; most in a day, seven (in August).

REDSHANK *Tringa totanus*. Present in variable numbers in most months, including winter, but usually absent from late April or early May to early July. Spring passage (in small numbers and frequently ill defined) extends from late March to early May. During the autumn passage, which is much more pronounced and extends from early July to mid October or into November, counts of 30-60 or more birds in a day are not unusual, and up to about 120 have been recorded (November); it is possible that Icelandic *robusta*, British *britannica* and Continental *totanus* are all concerned. A pair bred in 1912.

SPOTTED REDSHANK *Tringa erythropus*. Sixteen occurrences, all in autumn, all between 19th August and 9th October, all singles. No records before 1958.

GREENSHANK *Tringa nebularia*. Only one spring record (a single bird in early May); well over 40 autumn occurrences of single birds (and one of two birds) between 8th August and 20th October (chiefly late August-late September).

KNOT *Calidris canutus*. Has appeared only four times in spring (once March, thrice May) but frequently in autumn between late July and October (mainly September) and several times in winter. Most reports are of single birds or small numbers, but flocks of up to 120 have occurred.

PURPLE SANDPIPER *Calidris maritima*. Passage migrant and winter visitor present in variable but mostly small numbers from July until the middle or end of the following May. Recorded only thrice in June. Peak numbers are recorded in August-November when 200-400 birds are sometimes counted; over 100 is high for July, and there are usually many fewer in winter and spring, and indeed on most days in the year. An adult ringed on the May in September was recorded in Norway in the following July, and ringing shows that individual birds have returned to the May to over-winter in subsequent years, e.g. two birds ringed in September 1969 retrapped in December 1972 and in December 1973.

LITTLE STINT *Calidris minuta*. First recorded in the autumn of 1946 (one to ten birds on 11 days between 28th August and 3rd October); since then about 16 occurrences (of up to three birds together) between 12th August and 6th October. No spring records.

DUNLIN *Calidris alpina*. Occurs very irregularly in spring in small numbers, chiefly in May; most in a day, 30. The autumn passage (also in small numbers) is more pronounced but still irregular; it extends from August to October (chiefly September). Occasional birds appear in winter. There are no records for June and only a few for July. In the absence of positive identification it is assumed that most of the birds are *C. a. alpina* from northern Scandinavia, but Icelandic and European (including British) *C. a. schinzii* may occur also.

CURLEW SANDPIPER *Calidris ferruginea*. Only five records, all between 7th August and 14th October; once two together, remainder singles.

SEMI-PALMATED SANDPIPER *Calidris pusillus*. One record—a single bird on 19th September 1957.

SANDERLING *Calidris alba*. Six occurrences of one to four birds between 19th August and 15th September. Since 1956 the only records have been of one on 19-22nd August 1973 and of four on 14th September 1973.

RUFF *Philomachus pugnax*. Has been recorded once in May, five times in August and about a dozen times in September. Most in a day, five.

STONE CURLEW *Burhinus oedicnemus*. Recorded twice only; single birds in April 1937 and May 1946.

GREAT SKUA *Stercorarius skua*. Four occurrences in spring (two April, two May), over 60 in autumn (three July, ten August, about 50 September-October, two early November). Most in a day, seven.

POMARINE SKUA *Stercorarius pomarinus*. Single birds recorded 11 times between 27th August and 22nd September. No spring records.

ARCTIC SKUA *Stercorarius parasiticus*. Formerly regular in small numbers on spring passage (May only). Now infrequent, a single bird on 20th April 1973 and two single birds in May 1968 being the only records in recent years. Still regular in small numbers in autumn between early August (exceptionally July) and early October (chiefly September); recorded once in November. Counts of 20 (August), 29 (September) and 17 (October) have been quite exceptional; even the next highest, seven, is an unusually large number.

LONG-TAILED SKUA *Stercorarius longicaudus*. Single birds recorded thrice—twice 19th September, once 9th October.

GREAT BLACK-BACKED GULL *Larus marinus*. Mainly a winter visitor, perhaps mainly from Norway, northwest Russia and possibly Iceland but also, as ringing has shown, including birds of British stock. From March (or earlier) until mid

July there are seldom more than 20 present—excluding any breeding pairs—and most are immatures. From late July onwards, and particularly from the second half of September, numbers build up steadily until in October-December several hundreds or 1000 or more birds, the majority adults, may be using the island as a roost. Most of them depart in the first few months of the following year..

The first nest on the May was in 1962; one of the chicks from it, ringed in early August, was recovered in Belgium in August 1967. By 1969, and also in 1970 and 1971, four pairs were breeding, and the same number was present in the early spring of 1972, although it is possible that four of the eight adults were killed shortly afterwards in the course of the cull of that year.

LESSER BLACK-BACKED GULL *Larus fuscus*. Used to occur (like the Herring Gull) on migration only, but because the species has nested since 1930 passage movement is no longer distinguishable. The breeding birds (*L. f. graellsii*)—numbering nearly 2500 pairs in 1972—arrive from mid March; all have left by late September or early October. Out-of-season occurrences are exceptional. There have been several recoveries of Isle of May birds from Morocco; none from further south. Eleven of the breeding Lesser Black-backs killed in the 1972 and 1973 culls had been ringed as young birds on the Farne Islands (Northumberland) in earlier years.

The Scandinavian Lesser Black-back (*L. f. fuscus*) has been recorded occasionally in May, thrice in September and thrice in November.

HERRING GULL *Larus argentatus*. Present in large numbers throughout the year, using the island both as a breeding area and as a roost. Passage has been noted in the past in August and September but is nowadays impossible to distinguish from the daily movements to and from adjacent coasts. The first nest on the island was in 1907; in 1959 about 3000 pairs were breeding and in May 1972 there were probably about 38000 Herring Gulls (15000 breeding pairs plus 8000 non-breeders) on the island just before the cull.

Ringing has revealed nothing remarkable; an adult ringed in October and recovered in Norway in May five years later was presumably a winter immigrant; 11 *pulli* recovered in Denmark (one), the Netherlands (five), Germany (three) and France (two) within three years may indicate no more than the wanderings of immature birds; two *pulli* recovered in Germany in January and at the end of May, five years after ringing, may have settled there as residents.

Eight of the breeding Herring Gulls killed in the 1972 and 1973 culls had been ringed as *pulli* on the Bass Rock, Farne

Islands (three), Inchkeith, Craigleith, Tain and Newburgh Warren, but the last recovery has been questioned.

COMMON GULL *Larus canus*. Spring passage irregular, mostly in small numbers, between late March and May; autumn passage generally similar, extending from August until early November but chiefly September. Occasional in winter. Counts of more than 30 in a day are unusual.

High-flying birds, audible but not always visible, have been recorded occasionally in early August, suggesting that some movement may be overlooked. The extent to which British breeding stock is involved is uncertain, but most of the passage movements are almost certainly of Scandinavian immigrants.

GLAUCOUS GULL *Larus hyperboreus*. Over 20 records of single birds between September and May. Nearest breeding grounds, Iceland and Greenland.

ICELAND GULL *Larus glaucoides*. Five occurrences involving seven birds (twice two together), all between September and April. Breeds Greenland.

LITTLE GULL *Larus minutus*. Thirteen occurrences of either one or two birds in autumn (three in August, eight in September, one each in October and November); only one in spring (April). All but three of the records are since 1959.

BLACK-HEADED GULL *Larus ridibundus*. Occurs in small numbers in all months. Fifty and 40 birds in a day in June, 31 in August and 13 in October have been high counts. Although there is little evidence of regular passage, the periods of greatest movement are March-June and August-October; dispersing British birds and immigrant Continentals are probably both involved.

KITTIWAKE *Rissa tridactyla*. Present, at sea or nesting, throughout the year. The breeding birds (about 3450 pairs in 1972 and 1973) arrive in the first half of March, and the cliffs are often not finally vacated until late October or November, though nesting is over by the end of August. Passage can sometimes be observed in September. Young birds ringed on the Farne Islands (Northumberland) and Craigleith (Firth of Forth) have been found breeding on the Isle of May in later years.

BLACK TERN *Chlidonias niger*. First recorded in 1954 (single birds on 12th and 14th May and up to ten birds a day 15th-20th September). Also three on 25th August 1959 and one on 25th September 1967. Nearest breeding area, south Sweden to France.

COMMON TERN *Sterna hirundo*. Regular on passage, mostly in small numbers, from about the first week of May onwards

through June; numerous records for July and early August. Autumn passage (mainly late August and September but some early October) considerably more pronounced and in greater numbers than in spring; the passage of at least 10000 Common/Arctic Terns on 30th September 1960 was, however, exceptional. Used to nest but has not done so since 1957, except for one pair that laid in June 1973.

ARCTIC TERN *Sterna paradisaea*. As for Common Tern, except that spring passage appears to begin a week or so later. An adult ringed on the May in July 1947 was found recently dead at Tentsmuir, Fife, in June 1961 (at least 14 years old).

ROSEATE TERN *Sterna dougallii*. Irregular on passage in small numbers both in spring (mostly May) and autumn (chiefly August) but recorded in only three of the past 12 years (most recently in 1966). Used to nest but has not done so since 1956.

LITTLE TERN *Sterna albifrons*. Has occurred once in May, once in June and 12 times in August-September. Most in a day, eight.

SANDWICH TERN *Sterna sandvicensis*. Spring passage in small numbers, mostly early March to late June or into July; autumn passage also in small numbers, mostly early August to end September. Used to nest but has not done so since 1956. There have been 13 recoveries in Africa of chicks ringed on the May (one in Morocco, three in Senegal, one in Liberia, two in Gold Coast, six in Angola).

RAZORBILL *Alca torda*. Long-established breeder (*A. t. islandica*). The nesting ledges are occupied permanently from about mid April until the latter part of July but massive visits are sometimes paid to the cliffs at other times in favourable weather, e.g. over 800 on 9th November 1971. There are birds in the surrounding sea throughout the year; some of them may be nominate *torda*.

LITTLE AUK *Plautus alle*. Occasional in winter between mid October and April either on the sea or wrecked.

GUILLEMOT *Uria aalge*. Status similar to that of Razorbill. The breeding race is nominate *aalge*. Over 4400 were present on 9th November 1971, and about 4300 on 28th December 1972.

BLACK GUILLEMOT *Cepphus grylle*. Numerous records of one's or two's up to an exceptional nine birds in a day off the island between the Kettle and East Tarbet from the end of August until the end of May. Summer occurrences are very unusual. A few pairs were breeding in the early 19th century.

PUFFIN *Fratercula arctica*. Although in 1959 only about five pairs were breeding, there has been a phenomenal increase since then, and 3000-4000 pairs nested in 1972. The birds

arrive in late March and depart about the middle of August. There are small numbers in the surrounding sea in winter. Both adults and young ringed on the Farne Islands (Northumberland) have been found breeding on the May in subsequent summers. An adult ringed on Fair Isle in July was recovered on the May in the same month three years later.

PALLAS'S SANDGROUSE *Syrrhaptes paradoxus*. Three were shot from a flock of about 40 on 30th May 1888, the year of the great irruption.

STOCK DOVE *Columba oenas*. Single birds appear occasionally both in spring (April-May) and autumn (September-October), and there has been one occurrence in April of four birds together and two others (also April) of two birds together. As the British breeding stock is mainly sedentary, these records suggest an irregular passage of Continental birds. No Stock Doves have been recorded since 1962.

ROCK DOVE/FERAL PIGEON *Columba livia*. Pure Rock Doves were breeding on the Isle of May in the first part of the 19th century; they were last recorded with certainty (single birds) in 1884 and 1885. Birds with Rock Dove characteristics are, however, seen regularly, mostly in the company of quite obviously feral doves, but few (if any) can be of pure wild stock. Flocks of 100 or more of these feral pigeons occur in late autumn and winter, and smaller numbers at other times. A pair or two sometimes breed in the sea caves.

WOODPIGEON *Columba palumbus*. Irregular passage in small numbers both in spring (March-May) and autumn (September-October), also a number of records of (mostly) single birds in summer. Larger movements have sometimes been recorded in winter, e.g. about 300 on 8th November 1971 and "large flocks" passing from north to south on 16th December 1962, and these may not be particularly unusual. Except in summer, most of the birds concerned are probably of Continental origin.

TURTLE DOVE *Streptopelia turtur*. Recorded a good many times in May, June and September; also five times in July, thrice in August and twice in early October. Mostly single birds but occasionally two together, twice three and once four.

*COLLARED DOVE *Streptopelia decaocto*. First recorded on 7th June1963, two occurrences each year in 1964 and 1966, three each in 1967 and 1969, four in 1970, five each in 1971 and 1972. Of these 25 appearances, two have been in April, 18 in May, two in June and one each in July, August and September. Mostly single birds, once two.

CUCKOO *Cuculus canorus*. Spring passage in small numbers (most in a day, five) from the end of April (once mid April)

to mid June. Autumn passage, chiefly of immature birds, from early July to late September.

BARN OWL *Tyto alba*. Three records of the White-breasted Barn Owl (*T. a. alba*) all in 1961 (one June, two October); only one of Dark-breasted *T. a. guttata*, in December 1934.

[TAWNY OWL *Strix aluco*. According to the *Migration Report of 1883* of the Committee of the British Association, a Tawny Owl was seen on the Isle of May on 28th April of that year. In *The Birds of Scotland* (1953), the Misses Baxter and Rintoul state that they feel very doubtful of the authenticity of this record. For that reason, and because there has been no other reported occurrence, it is placed here in square brackets.]

LONG-EARED OWL *Asio otus*. Eleven occurrences between 6th April and 27th May; three June records, two July, one August; fairly regular September-November. Most in a day, four; seven were trapped between 2nd and 7th November 1963.

SHORT-EARED OWL *Asio flammeus*. Occasional between early March and the third week of May; regular (sometimes in fair numbers; most in a day, four) from September or occasionally the last half of August (once 1st August) to November or later.

NIGHTJAR *Caprimulgus europaeus*. Three May records, four in June, one each in July, August, September and October.

SWIFT *Apus apus*. Spring passage from late April to early June; autumn passage from the end of July to early October. A few summer records, probably visitors from the mainland. Numbers very small, only a few records annually.

KINGFISHER *Alcedo atthis*. Four occurrences, all between 13th August and 2nd September.

HOOPOE *Upupa epops*. Four times in spring, between 18th April and 3rd May; five times in autumn, between 26th September and 7th October.

GREAT SPOTTED WOODPECKER *Dendrocopus major*. Only one spring record, a single bird of nominate (Northern) *major* in mid May, as against a considerable number between 27th August and 1st November (the great majority between 7th September and 16th October) in eight separate years.

All the birds sub-specifically identified have been of the Northern race, and all the occurrences have been of single birds, except for two to four birds daily between 12th and 16th October 1962 and the unusual record of up to seven birds almost daily from 12th September to 9th October 1949.

WRYNECK *Jynx torquilla*. Not infrequent in the first half of May (twice the last week of April) and again between 23rd August and 21st September (twice in the first week of October).

Highest number in a day, 15 on 23rd August 1970; next highest, 14 on 6th-7th May 1968.

WOODLARK *Lullula arborea*. Five occurrences in spring between 22nd March and 12th May; about a dozen in autumn, one on 27th August, the rest between 26th September and 4th November.

SKYLARK *Alauda arvensis*. Passage mainly, but not always, in small numbers, from February to May and from mid August or more commonly mid September to mid November. Occasional in summer, frequent in winter. Daily counts of over 100 are unusual; 550 on 25th September 1970 was exceptional.

SHORE LARK *Eremophila alpestris*. Recorded six times in April-May and 12 times in October. Largest number in a day, four.

SWALLOW *Hirundo rustica*. Spring passage regular in small numbers from the second week of April to early June; well marked autumn passage from early August to mid October (rarely early November). The largest numbers pass in September when daily counts of 100-500 are not exceptional (a count of about 1000 birds has been recorded once). At least one pair (maximum three pairs) have nested annually since 1959; they are sometimes joined for short periods by visitors from the mainland.

HOUSE MARTIN *Delichon urbica*. Spring passage irregular and in small numbers from mid April to mid June (mainly May); autumn passage usually similar, from the latter half of August to mid October (thrice late October, once 4th November), mostly with daily counts of fewer than 20 but sometimes with high numbers in September (exceptional counts have been 155, 250, 300 and about 1000). Occasional in summer.

SAND MARTIN *Riparia riparia*. Spring passage irregular and in small numbers, mainly from mid April (earliest 3rd April) to the end of May; autumn passage similar, from mid July to mid September or exceptionally into early October. Occasional in June and early July.

GOLDEN ORIOLE *Oriolus oriolus*. Recorded twice; single birds on 14th June 1969 and 13th-14th September 1913.

RAVEN *Corvus corax*. Five occurrences; single birds on 25th March 1951, 7th and 9th May 1972, 1st September 1969; two together on 22nd October 1954. It is not known where these wanderers came from.

CARRION CROW/HOODED CROW *Corvus corone*. Carrion Crows (*C. c. corone*) are recorded in small numbers at all seasons, perhaps sometimes casual callers from the mainland but more frequently—since 1920 at any rate—the birds of a

semi-resident or regularly visiting pair that have bred, attempted to breed or been present throughout the breeding season in certainly 41 of the past 53 years. There is in addition a clearly recognisable but irregular passage in spring (chiefly April) of small numbers (seldom more than five or six in a day, maximum 13) and a suggestion too of a much more irregular passage in autumn between late September and early November. The origin and destination of these passage birds is unknown.

Hooded Crows (*C. c. cornix*) were formerly regular passage migrants in fair numbers in spring between March and May. They used to appear even more markedly in autumn between the end of September and mid November, and there were some occurrences also in summer and winter. Although the pattern of movement remains, the number of birds now is only a fraction of what it was, and occurrences are much less frequent. Since 1959, Hoodies have been noted on only ten occasions in only six of the 14 years—a single and two together in March, five singles in April, three birds once in May, four and up to five together in late October and early November respectively. The origin of these Hoodies is believed to be Scandinavia.

A hybrid between the two subspecies has been recorded once.

ROOK *Corvus frugilegus*. A few records in most years, chiefly in April but some in March and May. Autumn occurrences are irregular (only six in the past 15 years), mostly September-October but two in August and two in November. Numbers are nearly always small; ten in a day is unusual, more than that exceptional. It is probable that most of the birds are of Continental origin.

JACKDAW *Corvus monedula*. Irregular but in total fairly numerous occurrences of single birds or a few together, mainly between April and mid May (exceptionally early June) and again between mid September and the end of October. A few records in March, one in August, two in late November. Highest counts, six and 15. It is probable that both winter-visiting (Scandinavian) *C. m. monedula* and British-breeding *C. m. spermologus*, perhaps from the neighbouring mainland, are concerned, but no Jackdaws have yet been examined in the hand.

GREAT TIT *Parus major*. Has occurred thrice in autumn (between 8th and 24th October) and thrice in spring (between 4th and 24th April). The birds in two of the autumn occurrences and in one of those in spring were Continental Great Tits (*P. m. major*); the remaining birds were not subspecifically identified. There is thus as yet no record of the British Great Tit (*P. m. newtoni*).

Three of the six occurrences were of single birds and one was of two; the other two occurrences are of particular interest. In the second week of October 1959 a party of at least four Continental Great Tits arrived, and four were still present on 10th November when all were trapped and ringed. Three of these birds remained until 4th April 1960, when five more Continentals joined them; six birds were seen on the 5th and two from the 6th to the 12th, when both left the island.

BLUE TIT *Parus caeruleus*. Recorded once in March and on seven occasions between the end of September and late November, single birds each time. The March individual and two of those in autumn were of the British subspecies (*P. c. obscurus*), the other five were not subspecifically identified, although there is a suspicion that a November bird in 1959 may have been of Continental origin (i.e. nominate *caeruleus*).

COAL TIT *Parus ater*. Four occurrences only, all of single birds between 30th September and 15th October, involving on one occasion the British subspecies (*P. a. britannicus*) and on another the Continental (*P. a. ater*). The other two birds were not subspecfically identified.

LONG-TAILED TIT *Aegithalos caudatus*. Parties of between four and 16 individuals have appeared 12 times between 26th September and 5th November, and there is one record of a single bird and another of two birds within the same dates. All are believed to have been the British subspecies (*A. c. rosaceus*).

TREECREEPER *Certhia familiaris*. Recorded 28 times; thrice in spring between 30th March and 5th April, twice in summer between 24th July and 2nd August, 23 times in autumn between 18th August and 21st October (mainly September); always single birds. Only eight of these individuals were subspecifically identified: seven (all August or September) were of the British race (*C. f. britannica*), only one (September) was a Northern Treecreeper (*C. f. familiaris*), although the latter is suspected to have occurred on at least one other occasion (in mid October).

WREN *Troglodytes troglodytes*. Slight passage from late March to mid May; also a much more pronounced movement combined with over-wintering arrivals extending from September to mid November, with the highest numbers in late October and early November, when up to 30 individuals may be on the island at a time. Single birds occur occasionally in summer, and usually a dozen or more are present throughout the winter. There is as yet only one certain record of a bird returning in successive winters, but this may not be as uncommon as presently appears.

Although both the common British breeding race (*T. t. indigenus*) and nominate Continental *troglodytes* may be involved in the passage movements, it is probable that the vast majority are Continentals. Nevertheless, from nearly 700 Wrens ringed on the island, there has so far been no recovery to confirm this. In the same way it is not known to which race the over-wintering birds belong: it has been assumed that they are British *indigenus*, but this requires confirmation. There is one breeding record—in 1957.

DIPPER *Cinclus cinclus*. Single birds recorded thrice in April, twice in August and once in December. Two of the April occurrences were of the British subspecies (*C. c. gularis*), the remaining four birds were not racially identified. There is as yet, therefore, no record of nominate *cinclus* (Black-bellied Dipper), although it may well have occurred.

MISTLE THRUSH *Turdus viscivorus*. Irregular in small numbers (usually only a handful of occurrences in a year and sometimes none) both in spring (February-May) and autumn (September-mid November). Only a few records for July and August. Highest number in a day, about 12.

FIELDFARE *Turdus pilaris*. Irregular passage in spring in small numbers (more than 40 in a day is unusual) from March to May. Autumn passage much more regular and sustained, mostly developing from October onwards but sometimes starting in the second week of September and exceptionally in August. The greatest numbers passing, occasionally over 1000 in a day, are generally recorded in the latter part of October or in November. There are movements also later in winter. Occurrences in summer (June-July) are very unusual.

The only significant recovery is of a first-winter bird ringed in October found in Sweden in the following July.

SONG THRUSH *Turdus philomelos*. Spring movements, mostly in small numbers, irregular and not well defined, perhaps most noticeable in February-March but sometimes extending into May; counts of over 20 are unusual, though exceptionally up to 150 in a day have been recorded in April. The autumn passage (mainly September-October, but with a few birds in late July or August and some also in November) is much more pronounced; daily counts of more than 300 are, however, unusual even in October, although about 800 were recorded on 2nd October 1962 and about 3000 on 6th October 1966, and there have been a few other occurrences of similar magnitude.

Though Continental Song Thrush (*T. p. philomelos*) has been identified only about a dozen times in spring (once mid April, remainder in the first three weeks of May), the passage

in autumn (usually between the end of September and early November is undoubtedly composed chiefly of Continental birds, and this is almost certainly true also of any major influx in the earlier part of the year.

Up to four pairs of British Song Thrush (*T. p. clarkei*) have bred on the island from time to time, although none did so during 1939-1970. There was a nest again in 1971, and two or three pairs bred in 1973, but none in 1972. Birds of this subspecies turn up occasionally in June and July. There are usually a few Song Thrushes of perhaps disparate origin present in winter.

REDWING *Turdus iliacus*. Irregular and poorly defined spring passage in small numbers (over ten birds in a day unusual) from February to May (chiefly March-April). Autumn passage much more marked and involving bigger numbers, mainly October-November but occasionally from the latter part of September or even earlier; some movement also in winter. Not recorded June or July; exceptional in August. High counts have included "thousands" on 26th October 1964, 4000 on 12th October 1967, over 3000 on 6th October 1966 and approaching 2000 on 12th October 1970 and 15th October 1972.

SIBERIAN THRUSH *Turdus sibiricus*. The first British record is of an adult male (race not determined) present on the island on 1st October 1954 and for a few days thereafter.

RING OUZEL *Turdus torquatus*. Occurs on passage, mainly in small numbers, from the end of March to the end of May (mostly mid April to mid May; once 2nd June) and between early September and late November. High spring counts have been 30 and 60 in the first week of May 1968 and 1969 respectively, but "hundreds" were on the island on 27th September 1922, there was a big passage on 6th October 1926, and 50 were recorded on 26th September 1965.

BLACKBIRD *Turdus merula*. Spring passage in moderate numbers (over 75 in a day is unusual) from March to early May; autumn passage from late September (exceptionally August) well into November, with the most pronounced movements (often involving many hundreds or several thousands of birds in a day) usually in the last week of October or first week of November. There is some movement in winter also, but summer-visiting Blackbirds are unusual. There have been numerous recoveries in Norway, Sweden and Finland in the breeding season of birds ringed on passage on the Isle of May. Between one and four breeding pairs are generally resident although there were no nesting birds in 1953-61.

WHEATEAR *Oenanthe oenanthe*. Regular passage of the typical race from the latter half of March to mid June and from early

July to mid October (latest 4th November). Counts exceeding 50 in a day are unusual, but exceptionally 200 or more have been recorded both in spring and autumn. The size of the breeding population varies: from 1951 to 1956 between two and four pairs nested; between 1957 and 1962 probably never fewer than five pairs and up to 11 pairs; since then, never more than two pairs and in the last five years none, unless a very young juvenile seen in June 1973 is evidence of breeding on the island.

A Wheatear ringed on the island on 30th September 1950 was recovered in eastern Sweden on 9th May of the following year.

Birds of the Greenland race (*O. o. leucorrhoa*) occur on passage between mid April and the end of May and from late August to late October.

BLACK-EARED WHEATEAR *Oenanthe hispanica.* One record only —an immature male of the black-throated form of the typical (Western) race), present from 30th September to 8th October 1949.

PIED WHEATEAR *Oenanthe pleschanka.* One record, a female of the typical race on 19th October 1909.

STONECHAT *Saxicola torquata.* Irregular passage (sparse in recent years) between early March and mid May and between early September and late October (mostly mid September to mid October); one July record and one August. Most of the occurrences have been of single birds or two together, but up to six have been recorded in a day in autumn. Since 1960 only ten birds have occurred in ten years in spring, just 16 in nine years in autumn, and one in mid July.

All but one of the Stonechats recorded from the island have been the British subspecies (*S. t. hibernans*); the exception is the immature male Siberian Stonechat (*S. t. maura*), which was 'obtained' on 10th October 1913.

WHINCHAT *Saxicola rubetra.* Very regular on passage—in spring from the end of April to mid June, in autumn mainly from mid August to early October. Occasional occurrences in July. The largest daily counts have been 50 in spring (May) and 80 in autumn (September).

REDSTART *Phoenicurus phoenicurus.* Well marked spring passage from mid April (exceptionally early April) to mid June; the heavier autumn passage begins in August and extends into the first week of October, with occasional birds as late as the first week of November. Eight summer records between late June and end July. The largest number reported in a day has been 50 in spring (May) and 200 in autumn (September).

BLACK REDSTART *Phoenicurus ochruros*. Appears with fair regularity in small numbers (most in a day, seven) both in spring and autumn, mainly from mid March to early June and between mid September and early November. Recorded once in July, thrice in August, once early September. A bird ringed on the island in April was recovered in the Harz Mountains in Germany two months later.

NIGHTINGALE *Luscinia megarhynchos*. Single birds have occurred about ten times in spring between 29th April and 22nd May; also twice in autumn between 26th and 31st August.

*THRUSH NIGHTINGALE *Luscinia luscinia*. Two birds, if not three, in the period 9th-17th May 1970.

BLUETHROAT *Luscinia svecica*. Numerous but irregular occurrences both in spring and autumn, all between either 7th and 29th May or 3rd September and 10th October; also one summer record—an adult male on 25th June 1955. High daily counts have been 13 (in May) and seven (in September). Most of the records refer to the Red-spotted race (*L. s. svecica*); there have been only three certain occurrences of the White-spotted (*L. s. cyanecula*), all between 10th and 17th May.

ROBIN *Erithacus rubecula*. There is a spring passage of British Robins (*E. r. melophilus*) in small numbers from early March to late May and an autumn passage in slightly larger numbers between mid August and early October. A few regularly over-winter, arriving between mid August and late October and departing between early March and mid April. There is one record of a bird returning to the island in five successive winters, another probably did so four times and a third returned thrice. Surprisingly, there is no breeding record; occurrences in June and July are rare.

Continental Robins (*E. r. rubecula*) occur irregularly and mostly in small numbers both in spring (late February to late May) and autumn (mostly mid September to early November), but there can be large arrivals at both seasons in easterly weather, e.g. 200 on the island on 10th-11th April 1966, 400-500 on 21st April 1965, over 600 on 1st-2nd October 1951 and over 1000 on 14th October 1966. There have been three spring and summer recoveries in Norway of Continental Robins ringed on migration on the Isle of May.

GRASSHOPPER WARBLER *Locustella naevia*. A few appear in most years in spring (mostly single birds but up to nine in a day) between 15th April and 24th May. Only ten autumn occurrences, all of single birds, between 5th August and 7th October.

REED WARBLER *Acrocephalus scirpaceus*. Four spring records, all of single birds between 17th May and 14th June. About

22 autumn occurrences between 11th August and 4th October, mostly of single birds but once of three.

*MARSH WARBLER *Acrocephalus palustris*. Identified only once —two birds on 25th May 1968.

SEDGE WARBLER *Acrocephalus schoenobaenus*. Main movement a small but usually fairly steady trickle in May (extreme dates 16th April and 8th June); usually well under ten daily, but 80 on 23rd May 1950 and over 200 on 16th May 1970. Autumn birds (so few as scarcely to constitute a passage) appear mostly in August-September (extreme dates 14th July and 8th October); most in a day, 15 (an exceptional figure).

AQUATIC WARBLER *Acrocephalus paludicola*. Six records of single birds between 14th August and 26th September.

MELODIOUS WARBLER *Hippolais polyglotta*. One record only— an adult female on 27th September 1913.

ICTERINE WARBLER *Hippolais icterina*. Recorded three times in spring (19th-24th May) and about 15 times in autumn (8th August-14th September). Most records have been of single birds, but between 5th and 13th September 1949 up to six per day were present, and a total of nine were trapped.

*OLIVACEOUS WARBLER *Hippolais pallida*. A bird of the race *elaeica*, trapped on 24th September 1967, was the first record of this species for Scotland. It was killed by a Great Grey Shrike on the 27th.

BLACKCAP *Sylvia atricapilla*. Spring passage in small numbers (most in a day, ten) mainly from the latter half of April but occasionally early April) to late May. Autumn passage usually in slightly larger numbers (most in a day, 100, next 35, both in October) from mid August to mid November, with one exceptional occurrence in December and one in February. Recorded seven times in June, twice in July, once early August.

BARRED WARBLER *Sylvia nisoria*. At least a few immature birds occur in most autumns (earliest 8th August, latest 13th October). The largest number recorded in a day was eight. There have been no spring occurrences.

GARDEN WARBLER *Sylvia borin*. Regular passage in small numbers in spring, mainly in May (twice April) but sometimes extending into the first half of June. Autumn passage again usually in small numbers, mostly September to mid October but sometimes from early August and occasionally with odd birds as late as November; there have been four occurrences in July. Since 1955 nine exceptionally large arrivals of Garden Warblers from northern Continental Europe have been recorded, three in the latter part of August (about 50 birds each time) and six in September (four times between 40 and 100 birds, once about 180, once about 200).

WHITETHROAT *Sylvia communis*. Spring passage mainly from the latter part of April throughout May and sometimes into June. Autumn passage mainly from mid August to early October; occasional in July. Largest number in a day about 100 (thrice in May, in different years).

LESSER WHITETHROAT *Sylvia curruca*. Spring passage of typical race in small numbers mainly in May, but one record late April and five records June. Most in a day, seven—apart from two exceptional counts of between 20 and 30 and between 30 and 40, both in May. Autumn passage again in small numbers, between the second week of August and mid October; once early November.

Birds resembling the Siberian race (*S. c. blythi*) have occurred about seven times in autumn between 9th September and 24th October, never in spring.

SUBALPINE WARBLER *Sylvia cantillans*. Has occurred twice (single birds, race not determined)—on 30th May 1924 and in the third week of July 1958.

WILLOW WARBLER *Phylloscopus trochilus*. Spring passage of the typical race in considerable numbers, mainly from mid April to the end of May, occasionally into early June. Autumn passage mainly early August to mid October, but some movement late June and July. Largest number of birds in a day, 500 (in early May). A pair bred in 1922.

The Northern race (*P. t. acredula*) has been recorded fairly often in spring between 20th April and the end of May (once in June); most in a day, 13. There are only three definite autumn records, all between 8th September and 6th October. A September-ringed Willow Warbler (race not stated but presumably *acredula*) was recovered in Norway on 29th May of the following year.

GREENISH WARBLER *Phylloscopus trochiloides*. One record only—a bird of the subspecies *viridianus* remained from 27th August to 3rd September 1955.

CHIFFCHAFF *Phylloscopus collybita*. Between 30 and 35 spring occurrences of the typical race, nearly all of single birds (most in a day, 15), mainly between the second week of April and late May (earliest 29th March, latest 17th June). There is one record (of a bird of the year) at the end of June and one on 6th July. Fairly regular in autumn between the latter half of August (once 2nd August) and October (latest mid November). Most in a day, 200 (in October).

Northern Chiffchaffs have been recorded a fair number of times in autumn. Most have been *P. c. abietinus*, but individuals resembling *P. c. fulvescens* and the very similar *P. c. tristis* have also been observed. Most of these occurrences have been in October (earliest 23rd September, latest mid November).

PLATE 9. (a) The Low Light seen from the Tower.
(b) The Bain Trap and Crow Trap, with the Chapel and South Horn beyond.
Photographs by N. J. Gordon

PLATE 10. Horn path, Rona, Isle of May.

Above Thrift (sea pink) heath in full bloom, 1936. (The North Horn was not built until 1938-39).

Photograph by G. M. Cowie

Below Part of the same area, early April 1969. No permanent vegetation; thrift tussocks all dead.

Photograph by W. J. Eggeling

PLATE 11. Site immediately west of North Horn.

(a) Thrift and sea campion carpet, end May 1957.

(b) Thrift and sea campion gone; chickweed is the only plant visible, early June 1969.

(c) Closer view, July 1969; dense chickweed cover and a few docks.

Photographs by W. J. Eggeling

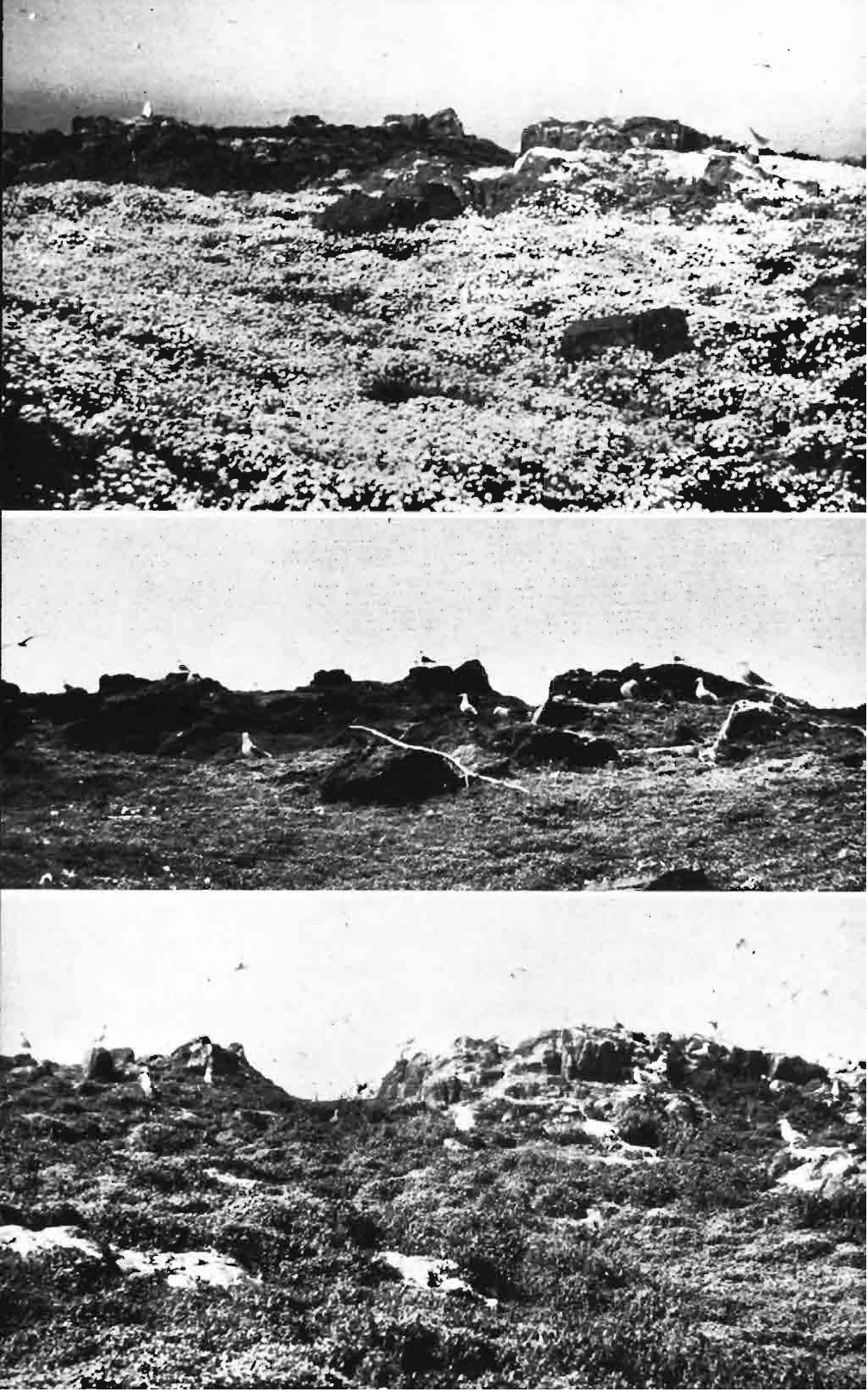


PLATE 12. West cliffs, with breeding colonies mainly of Guillemots and Razorbills.
Photograph by J. F. Young

WOOD WARBLER *Phylloscopus sibilatrix*. About 11 occurrences in spring—but none in recent years—all between 3rd May and 3rd June; most in a day, two. Nearly 30 autumn occurrences, mostly in August and the first week of September (earliest 12th July, latest 13th September); most in a day, three.

*ARCTIC WARBLER *Phylloscopus borealis*. Recorded thrice—single birds on 30th-31st August 1967, 5th-6th September 1961, 7th September 1970. Subspecies not determined but probably *P. b. talovka*.

YELLOW-BROWED WARBLER *Phylloscopus inornatus*. About 38 occurrences in autumn (none in spring), nearly all between 16th September and mid October, exceptionally later in October, once 3rd November. Most in a day, five.

*RADDE'S WARBLER *Phylloscopus schwarzi*. Two records—single birds on 8th October 1962 and 22nd October 1968.

GOLDCREST *Regulus regulus*. Spring occurrences chiefly in April but sometimes in March, with stragglers into May. Most in a day, 80. Autumn occurrences mainly September-October but exceptionally as early as the second week in August and some in November. Also a few winter records and one of a single bird in July. The autumn movements are much more marked than those of spring and can be on a large scale, with sometimes 200 or more birds on the island at a time. The two highest autumn counts have been of about 600 and over 1000 birds. All large falls and probably the great majority of other occurrences, certainly in autumn, are of birds of Continental origin.

FIRECREST *Regulus ignicapillus*. Six occurrences (the first in 1959), five of single birds, the other of a party of four. One mid June, five between 22nd September and 7th October.

SPOTTED FLYCATCHER *Muscicapa striata*. Spring passage in small numbers, mainly in the last three weeks of May, but sometimes with occasional birds in June. Autumn passage, also in small numbers, chiefly mid August to mid October; six records in July. Largest counts in a day, 25 in spring (May) and 30 in autumn (September).

An adult Spotted Flycatcher ringed on the Isle of May in September 1955 was recovered in Norway in July of the following year.

PIED FLYCATCHER *Ficedula hypoleuca*. Like its relative the Redbreasted Flycatcher, this species is, on the Isle of May, an indicator of the Continental origin of the falls of migrants that are a product of southeasterly weather. The numbers seen in spring are usually small, appearing mainly between the end of April (earliest mid April) and the end of May or

occasionally early June. The autumn movement is in larger numbers and extends from early August (once 24th July) to mid October. The largest number in a day in spring has been about 20, and in autumn over 150 (on 29th August 1966). A first-year female ringed in Rogaland (Norway) on 19th August 1970 was trapped on the Isle of May three days later.

RED-BREASTED FLYCATCHER *Ficedula parva*. Recorded only thrice in spring (between 8th May and 2nd June) as against about 45 occurrences in autumn, the majority between mid September and 7th October (earliest 8th September, latest 13th October). Highest daily count, three. At least 12 birds (eight trapped) appeared between 13th September and 7th October 1949. Has recently been appearing much more regularly than before.

DUNNOCK *Prunella modularis*. A slight passage of the common British subspecies (*P. m. occidentalis*) can sometimes be noted in spring (between March and May) and again in autumn (between mid September and mid November). Single pairs of this race are known to have nested in 1884, 1958, 1961, 1965 and 1966, since when between two and six pairs have bred annually. The nesting birds are mostly resident, and their presence tends to mask any passage movement. In addition a few other individuals may sometimes over-winter.

Continental Hedge Sparrows (*P. m. modularis*) have been recognised with certainty about a dozen times in spring between the end of March and mid May. Normally only one or two are seen at a time, but there have two major falls, one at the the end of March 1958 (highest daily count, 80) and one at the end of April 1965 (highest daily count 300). Continental birds occur also in autumn, between September and November, but never more than a very few at a time.

A Continental Hedge Sparrow ringed on the island on 6th April 1971 was recovered in Norway a month later, on 7th May.

*RICHARD'S PIPIT *Anthus novaeseelandiae*. Single birds recorded thrice—on 17th-18th September 1968, 19th-21st September 1968 (a different individual) and 18th-26th October 1969.

*TAWNY PIPIT *Anthus campestris*. Single birds recorded thrice —on 24th October 1962, 26th-28th May 1964 and 27th-28th September 1971.

MEADOW PIPIT *Anthus pratensis*. The spring passage, mainly from mid March to mid May but occasionally persisting to the end of May, is well defined and regular but not, as a rule, in great numbers (counts of about 750 on 7th April 1953 and about 1000 on 16th April 1950 are quite exceptional). The autumn passage, in which much larger numbers are regular-

ly involved (sometimes 1000-2000 in a day), extends from the end of August (exceptionally early August) to early November. Between three and ten pairs bred annually throughout the 1950's and earlier, but not more than three pairs have done so in any year in the past decade and none at all in 1966 and 1968-70, and only one pair in 1971 and 1972, though there were at least two pairs in 1973. The breeding population arrives in the second half of March or early in April and leaves as a rule in August or September, although occasionally some individuals have remained into November.

TREE PIPIT *Anthus trivialis*. Irregular passage in spring, mostly in small numbers, from 7th April (once 20th March) throughout May and occasionally into early June. Autumn passage more regular but again mostly in small numbers, mainly from the last week of August to mid October (earliest 11th August, latest 24th October). Highest daily count, 80 (in May) but several counts of 20-50 have been recorded both in May and (rather more frequently) September. There was an exceptionally well sustained spring passage in May 1969 and again in May 1970.

*RED-THROATED PIPIT *Anthus cervinus*. One record only—a single bird on 9th-10th September 1971.

ROCK PIPIT/WATER PIPIT *Anthus spinoletta*. Between 30 and 60 pairs of Rock Pipits (*A. s. petrosus*) were nesting throughout the 1950's, and did so long before. Although there has been no recent assessment, the breeding population has undoubtedly diminished greatly in the last ten or 12 years. Not all the breeding birds winter on the island but some quite certainly do, and their presence tends to mask any movements. Passage has however been observed in May and sometimes in April, and there is also an irregular passage in autumn, occasionally involving up to 100 or more birds in a day, extending as a rule from mid September into early October but sometimes beginning in late August and continuing into early November. Although it is highly probable that a good many of these passage birds are Scandinavian *A. s. littoralis*, this race has been identified with certainty only once, on 27th May 1965.

There have been six recoveries of Rock Pipits ringed on the Isle of May, three ringed as adults or full-grown and three as nestlings or post-juveniles; all were recovered on the adjacent Fife mainland.

In 1972 a leucistic Rock Pipit was reared on the island. It was first seen in July as a member of a family party comprising the parents and at least two other juveniles and was still present on 20th October.

PIED WAGTAIL/WHITE WAGTAIL *Motacilla alba*. Both White Wagtails (nominate *alba*) and Pied Wagtails (*M. a. yarrellii*) are involved in the spring and autumn movements, but White predominate. The spring passage is chiefly in April and early May, the autumn passage extends normally from mid August to mid October. The latest spring date for a White Wagtail is 1st June, the earliest autumn date 11th August. As a rule only small numbers are involved, but in spring about 20 birds in a day have been recorded five times and about 40 once; in autumn 20 birds appeared on one occasion on two successive days. Occasional *alba* wagtails, both Pied and White, have been seen in winter.

Between one and four pairs of Pied Wagtails are believed to have bred regularly on the island from the 1880's at latest until the early 1960's. Since 1962 there has been a nest only in 1966 and 1967.

GREY WAGTAIL *Motacilla cinerea*. Only nine spring records, all of single birds between 17th March and 16th April, as against about 40 in autumn again mostly of single birds (but on ten occasions two birds, once three and once four) between 14th August and 27th October, the great majority in September.

*CITRINE WAGTAIL *Motacilla citreola*. Has occurred once—a single bird on 20th September 1968.

YELLOW WAGTAIL/BLUE-HEADED WAGTAIL/GREY-HEADED WAGTAIL *Motacilla flava*. Well over 60 spring records of *flava* wagtails, almost all in the first three weeks of May, exceptionally in the second half of April and into early June, compared with about 20 in autumn between the end of August and early October. Mostly single birds but exceptionally up to four in a day. About 40 of the spring occurrences were identified as Yellow Wagtails (*M. f. flavissima*), seven as Blue-headed Wagtails (the typical race) and seven as Grey-headed Wagtails (*M. f. thunbergi*). Five of the autumn birds were Yellow Wagtails and two Blue-headed; no Grey-headed Wagtail has yet been recorded in autumn.

WAXWING *Bombycilla garrulus*. Has been recorded in late autumn between 17th October and 26th November in nine irruption years. Largest flock, 24.

GREAT GREY SHRIKE *Lanius excubitor*. Only about six spring appearances, all between 5th April and 5th May, as against about 30 in autumn between 24th September and 7th November. Mostly single birds but up to five in a day recorded. During two consecutive days in April 1971 no fewer than seven were trapped and ringed.

WOODCHAT SHRIKE *Lanius senator*. Recorded twice—singles on 12th May 1921 and 19th October 1911.

RED-BACKED SHRIKE *Lanius collurio*. Birds of the typical race have occurred irregularly in May and the first half of June and—again irregularly but more often (some 33 records)—between mid August and early October. One July record. Most in a day, four.

An individual of one of the eastern races of *L. collurio* was identified on 26th September 1950—the first British occurrence of an *isabellinus*.

STARLING *Sturnus vulgaris*. Spring passage, in small numbers and often not clearly discernible, extends from mid February to mid April or even into May. Autumn passage, which begins on a similarly small scale in mid September and extends to mid November or December, reaches its maximum in late October and early November, when not infrequently 1000-3000 or more have been recorded to pass daily. The spring and the earlier and less conspicuous of the autumn movements are to an appreciable extent masked by the presence of the adults and (in autumn) progeny of a mainly resident breeding population of ten-20 pairs, all of which nest in fissures in the cliffs.

Starlings ringed on migration at the Isle of May in spring and autumn have been recorded in the breeding season in North Germany, Denmark, Norway, Sweden and Finland.

HAWFINCH *Coccothraustes coccothraustes*. One record only, a bird killed at the lantern on the night of 30th-31st October 1937.

GREENFINCH *Carduelis chloris*. Spring appearances very irregular and usually in small numbers (exceptionally up to about 50 in a day), mainly mid March to mid May. Autumn movements equally irregular and again usually in small numbers (most in a day, 30), chiefly in October and November, exceptionally a few in September. Recorded thrice in June, once in August. Small parties sometimes visit the island in winter. There is no evidence of the origin of any of these birds.

GOLDFINCH *Carduelis carduelis*. Sporadic in small numbers in April-May and again but less frequently in October-November and in winter. About 41 records, 21 in spring. Highest count, 20; next highest, eight. Goldfinches have appeared more often in the past five years than previously. It is possible that birds from the Continent (nominate *carduelis*) may sometimes occur, but so far only the British race (*C. c. britannica*) has been identified.

SISKIN *Carduelis spinus*. About 20 spring occurrences, mostly of single birds (highest counts 15 and 25), between 17th March and 26th May. Irregular passage in autumn, again mainly in small numbers but exceptionally up to about 100

in a day, chiefly between early September and mid October, occasionally into November. Recorded once only in summer (June) and once in winter (February). It is probable that most if not all the birds involved are from the Continent.

LINNET *Acanthis cannabina*. There is usually a reasonably well defined movement in spring between March and early June but mainly in April; most in a day, 35. The autumn movements are more irregular, chiefly in September-October, and there may be appearances throughout the winter and sometimes an overwintering flock of up to about 50. All the birds concerned are nominate *cannabina* unless one is prepared to accept as distinct the doubtfully distinguishable (Scottish) *A. c. autochthona*. It is possible that most of the movements are of birds that breed in Scotland and winter either in England or on the Continent, but there may also be a reverse movement of Continental birds.

Up to ten pairs of Linnets have nested from time to time; the last sustained spell of breeding was from 1953 to 1960, although there was a nest with eggs (later deserted) in 1968 and two pairs nested in 1973.

TWITE *Acanthis flavirostris*. Between 1911 and 1967, Twites were recorded on only six occasions (one appearance each month in February, April, May, September and November; two in October), once two birds together, remainder singles. In 1970 the species was recorded on four days in March, ten days in April and one day in November (highest counts: 13 in March, 45 in April, 35 in November); in 1971, Twites were present on five days in April (34 on the 5th and five on the 26th); in 1972, two or three birds were seen on various dates between February and May—just possibly the same small group throughout—and there were 13 on the island in the latter part of December. It is difficult to assign a status to a species as unpredictable as this, especially when there are no ringing returns to suggest the origin of the birds concerned. Most probably all are native *pipilans*, some of which are known to winter on the Continent, but Norwegian *A. f. flavirostris* could also occur, though there is as yet no evidence that it does.

REDPOLL *Acanthis flammea*. Recorded irregularly but fairly frequently, nearly always in small numbers, both in spring and autumn. The following assessment deals only with occurrences in which the race has been identified.

There are about 30 records of Lesser Redpoll (*A. f. cabaret*) between April and early June, and about the same number between mid August and the end of October or a little later (most in a day, five). An adult ringed on the Friesian Islands (Netherlands) in September and recovered on the

Isle of May early in the following May was probably a British bird that had emigrated to the Continent and was returning to its homeland to breed—as many are known to do.

Mealy Redpolls (typical *flammea*, from the Continent) have been identified occasionally in spring between mid April and the first week of June. They appear also sporadically in autumn between the latter part of September and early November and sometimes during the winter. As a rule only small numbers are involved (as many as ten in a day is unusual) but exceptionally large flocks have appeared, e.g. during the irruptions of 1910 and 1913. Some 70-80 were on the island on 21st October 1972.

There is only one record—in October 1934—of a Greater (or Greenland) Redpoll (*A. f. rostrata*).

BULLFINCH *Pyrrhula pyrrhula*. Bullfinches (singles or male and female together) have been recorded on seven occasions—once (a Northern bird) in April, four times in October, twice in November. In two of the October occurrences the subspecies involved was not determined. The British Bullfinch (*P. p. pileata*) has been identified with certainty only once—a female on 1st and (probably the same bird) 5th November 1963.

The Northern Bullfinch (nominate *pyrrhula*) has occurred at least four times: a female on 5th-7th April 1971; a male on 20th-21st October 1961 (when a female, subspecies not determined, was also present); several from 22nd to end October 1910, part of a large irruption into Scotland; and a male on 4th-5th November 1963; on the 5th a female British was also present).

SCARLET ROSEFINCH *Carpodacus erythrinus*. The only spring occurrence is of a splendid adult male on 31st May 1972, but there have been over 20 occurrences in autumn (late August-late October) of either first-summer birds or females. Once, two birds appeared together; all other records were of singles.

PINE GROSBEAK *Pinicola enucleator*. One record only—a female on 8th-9th November 1954.

CROSSBILL *Loxia curvirostra*. A sporadically irruptive immigrant recorded in 12 invasion years. Several of the appearances (all of nominate *curvirostra*) have been of parties of ten-35 birds (once 85), remaining for a period in diminishing numbers. Most of the arrivals have been in July-September, but there have been a few in October, and there is one record of a single bird in December and another at the end of May.

PARROT CROSSBILL *Loxia pytyopsittacus*. Recorded once—a single bird on 18th September 1953.

CHAFFINCH *Fringilla coelebs*. The spring movements, extending from early March to the end of May, are usually in small numbers (exceptionally high counts have been 30, 60 and 70); the autumn movements, extending from mid September to early November, are also usually in small numbers but have not infrequently included considerable falls (most in a day, 200). There are occasional small influxes in winter. In 1944 a single male remained on the island from 5th June to 19th September.

Both the British subspecies (*F. c. gengleri*) and the Continental (*F. c. coelebs*) have been identified; when a high count is recorded the birds seem generally to be Continental winter visitors either arriving or departing. There have been two recoveries in Norway in the breeding season of Chaffinches ringed on the Isle of May in previous autumns. Another bird ringed on the island on 19th April was recovered at sea near Stockholm, Sweden, on the 4th of May.

BRAMBLING *Fringilla montifringilla*. Spring passage usually in small numbers (most in a day, 80), mainly in April (earliest 10th March) but exceptionally up to the end of May or first few days of June. Autumn passage mainly in October (earliest 1st September, latest 17th November), usually in quite small flocks but exceptionally involving large numbers, e.g. about 4000 on 6th October 1966 and "thousands" on 10th October 1909.

There are three foreign recoveries—all from Belgium—of Bramblings trapped on the island: of two ringed in October, one was recovered in the same month of the following year, the other in the sixth November after ringing; the third bird, ringed in May, was recovered in November two years later.

CORN BUNTING *Emberiza calandra*. Nine occurrences, six in May, one mid August, two early September. Most in a day, two (twice). Probably birds of Continental origin.

YELLOWHAMMER *Emberiza citrinella*. Irregular spring passage in small numbers, chiefly of single birds (most in a day, four), mainly in April (earliest 16th March, latest 7th June). Two records July, one August. The autumn passage, between late September and mid November, is just as irregular and sparse, consisting nearly always of single birds. There are occasional appearances in winter. All the birds critically examined have been British *E. c. caliginosa*, but nominate *citrinella* from northern Europe could quite conceivably occur and may not have been recognised.

BLACK-HEADED BUNTING *Emberiza melanocephala*. One record only, a female on 22nd September 1949.

YELLOW-BREASTED BUNTING *Emberiza aureola*. Six records of single birds, all between 22nd August and 7th October.

[RED-HEADED BUNTING *Emberiza bruniceps*. Three occurrences of single males, the first from 28th to 29th August 1960, the second from 30th August to 2nd September 1966, the third in the first three weeks of June 1973. All must be suspect as escapes.]

CIRL BUNTING *Emberiza cirlus*. Vagrants of unknown origin have appeared on the island on three occasions—twice in September 1935 (single birds), once in October 1947 (three together).

ORTOLAN BUNTING *Emberiza hortulana*. Occasional in spring (most in a day, six) between 2nd May and 8th June. Occasional also in autumn (nearly always single birds, once two, once three) between late August and late October.

RUSTIC BUNTING *Emberiza rustica*. Six occurrences of single birds, three arriving between 6th and 12th May, three between 11th and 30th September.

LITTLE BUNTING *Emberiza pusilla*. Has appeared twelve times in autumn (mainly single birds, once four together) between 20th September and 25th October). No spring occurrences. Last recorded in 1959.

REED BUNTING *Emberiza schoeniclus*. Irregular spring passage mainly in May but some movement also in March and April. One occurrence in June. Autumn passage again irregular, mainly from late September to early November (earliest 3rd September, latest 7th November). Although the numbers involved are usually small, counts of up to 50 in spring and 24 in autumn have been recorded. These larger figures reflect the departure and arrival of winter visitors from the Continent.

LAPLAND BUNTING *Calcarius lapponicus*. Nearly 40 autumn records (chiefly of single birds but exceptionally up to seven in a day), mainly between mid September and mid October (earliest 6th September, latest 26th October). No spring occurrences.

SNOW BUNTING *Plectrophenax nivalis*. Sporadic in small numbers in spring, mainly in March and the first half of April but with occasional strays to late May. Equally unpredictable in autumn, again in small numbers (as many as 40 in a day exceptional), from mid September to November and with occasional occurrences in winter. All specimens examined critically have been nominate *nivalis*.

[LAZULI BUNTING *Passerina amoena*. One, on 22nd-23rd May 1971, was judged to have been an escaped cage-bird.]

HOUSE SPARROW *Passer domesticus*. Single birds and small parties (largest number, seven) appear fairly regularly between April and early June, occasionally also between September

and early November. One record in July; one in August. A pair nested in 1907 and there was a resident breeding population of about six pairs, diminishing latterly, from 1925 to 1947.

TREE SPARROW *Passer montanus*. A few occurrences in most springs; almost always in May, occasionally in late April or the first week of June; more than four birds at a time unusual; highest counts 16, 22 and 47. The autumn passage was previously larger than that in spring, occurring chiefly in October and the first week of November, but in the last four decades there have been only four autumn records all in October (in 1964, 1968, 1969 and 1973). Up to six pairs bred, probably continuously, between 1907 (or earlier) and 1922; none has done so since.

Breeding birds

The accounts in this section summarise and bring up to date the information given in *The Isle of May* (1960) on the past and present breeding birds of the island.

The increases in the past 14 years in the breeding populations of nearly all the seabirds are demonstrated by the figures for 1959 and 1972 in table 1; numbers in the 1880's (when the first estimates of populations were made) and in 1946 (during a period when there was a large tern colony on the island) are also given for comparison. All the figures are of breeding pairs; those for Puffin are derived partly from an assessment of occupied burrows. Although based on counts, some of the larger figures may be no more than intelligent approximations; nevertheless, none in likely to be grossly wrong.

Table 1. Isle of May seabird populations (breeding pairs) 1880's to 1972

	1880's	1946	1959	1972
Fulmar	0	7	37	50+
Shag	1-3	12	400	1000
Eider	30-50	20-30	60-80	100
Oystercatcher	1	12-15	12-15	8-12
Great Black-backed Gull	0	0	0	4
Lesser Black-backed Gull	0	73	250	approx.2500
Herring Gull	0	750	3000	15000*
Kittiwake	'some hundreds'	2000	1650	3450
Common Tern	0	5000-6000	0	0
Arctic Tern	0	400-500	0	0
Roseate Tern	0	15-20	0	0
Sandwich Tern	0	1400-1500	0	0
Razorbill	a few hundreds	400	300	600
Guillemot	1000-1500	2000	2000	3500
Puffin	20-40	10	5-6	3000-4000

*About 34000 birds in early May, 4000 not breeding.

It is remarkable how small the seabird populations were towards the end of last century compared with the levels of today. Only Eiders, Kittiwakes, Razorbills and Guillemots were present in any quantity and probably only Razorbills in anything like today's numbers. There were no breeding Fulmars, none of the larger gulls was nesting, and there were fewer than 50 pairs of Shags and Puffins, taken together.

Over the years, both in the present century and earlier, the number of nesting Kittiwakes, Razorbills and Guillemots appear to have fluctuated considerably; terns (four species) have sometimes nested and sometimes not. The past decade, however, has seen increases in all the major nesting populations of seabirds (the terns excepted) to levels far higher than have ever before been recorded. Especially notable have been the dramatic increase in Puffin numbers, from about five pairs in 1959 to 3000-4000 pairs in 1972, and the massive build-up of breeding Herring and Lesser Black-backed Gulls from about 3250 pairs to some 17500 pairs within the same period.

The fantastic expansion of the gull populations has profoundly altered the character of the island's vegetation and has affected the stability of its soils. To take but two examples, the once turf-clad Maiden Rocks have been converted into a nearly bare skerry, and the great expanses of sea pink on Rona exist no longer. Like the whole of the North Ness and many other portions of the island, these places were by 1972 just components of one vast gull-slum.

Despite the environmental changes they have caused, the effects of the large numbers of nesting and roosting gulls on other bird species have not been marked. It might with some reason be argued that the terns, which from time to time in the past have nested in considerable numbers (e.g. over 4000 pairs in 1936 and about 7500 pairs in 1946) may have been prevented from returning to their preferred breeding ground because of the dense tenancy of the Herring and Lesser Black-backed Gulls, which are already nesting when the terns arrive from their winter quarters. Nevertheless, terns are notoriously unpredictable in their behaviour, and there have been long periods when none has bred on the May, despite the complete absence of nesting gulls. The fact that Puffins have established so successful a colony on the island, on gull-occupied ground, does not imply that terns, even if they arrived *en masse*, could do the same. Puffins lay in burrows and rear their young underground; terns' eggs—and their young, until they reach the flying stage—are openly exposed and are often predated by gulls.

On the same theme, it may be noted that the great increase in gull numbers has not prevented a big expansion of the Kitti-

wake colonies, another species that might be considered a likely target for gull predation. The Eider population also appears to have been but little affected in general; there are in fact more nests now than ever before.

In regard to breeding land birds, the period since 1959 has seen the demise and partial recovery of the most recent of a widely spaced succession of Linnet colonies, the cessation (one hopes only temporary) of the breeding of Pied Wagtails and Wheatears, and a noticeable drop in the number of nesting pipits—probably in the case of Rock Pipit related to a reduction by gulls of the extent of suitable nesting cover. It is possible, of course, that the food supplies of some species have been affected adversely by habitat changes, nevertheless Blackbirds, Hedge Sparrows and Swallows have continued to nest successfully, and Song Thrush reappeared in 1971 and 1973 as a breeding species, after a lapse of more than 30 years. Obviously, much more remains to be learned about the food requirements of the birds concerned and about food availability both on the land and in the sea, before these population changes can be explained. Particularly, one wonders why the years 1955-59 (and especially 1957 and 1958) should have been so favourable to the nesting of Pied Wagtail, Meadow Pipit, Rock Pipit, Wheatear and Linnet, for in one or other of these years each of these species had its peak nesting numbers this century. It was during this period also that Swallows started to nest and that a Wren nested for the only time ever.

In the accounts that follow species that have bred on the island in the past, but not within the last ten years and those that have nested only once in that period are marked †: they are not a characteristic feature of the present-day breeding picture. Species that have nested since 1959 and had not done so before are indicated by an asterisk.

FULMAR *Fulmarus glacialis*

The Fulmar is a comparatively recent addition to the island's breeding seabirds. Site-prospecting was first recorded in 1921, two sites were occupied in 1922 and six by 1929; breeding was proved conclusively in 1930 by the finding of a chick. Since then there has been a slow but steady increase in the breeding population to over 60 pairs, as shown in table 2.

Until 1965 all the Fulmar nests were on the West Cliffs between the West Head and the Pilgrims' Haven. Since then there have been nests also at the Horse Hole, on the western side of Rona, on the Burrian Rocks, in Colm's Hole and at various places at the South End.

At present, in the longer-tenanted sites at any rate, chicks are being reared successfully from about half the eggs laid.

Table 2. Colonisation of the May by Fulmars 1921-73

1921	prospecting began	1957	34 occupied sites; at least 26 eggs laid
1922	two sites occupied	1959	37 occupied sites
1929	six sites occupied	1964	at least 17 young reared—perhaps as many as 24
1930	breeding first proved	1966	30-35 pairs bred
1936	four pairs bred	1967	about 40 pairs bred; 26 young reared
1939-44	up to six pairs bred	1969	46 breeding pairs; 7 pairs of non-breeders
1947-49	seven to ten pairs bred	1972	over 50 pairs bred
1954	at least 26 occupied sites: at least 19 eggs laid	1973	68 pairs counted

†GANNET *Sula bassana*

Gannets bred for a time in the first half of the 19th century, when adults were shot and young birds taken. A pair attempted to breed in 1922; a nest was started but never finished.

†CORMORANT *Phalacrorax carbo*

A few pairs may have bred in the 1820's and perhaps a pair in the 1880's, although confusion with Shag is probable. In 1938, birds were seen carrying nest material to the cliffs, but laying was not proved.

SHAG *Phalacrocorax aristotelis*

The breeding population of Shags has increased remarkably in the past 25 years. A few pairs were nesting in the 1820's and one of a pair was shot in 1864; thereafter we have no firm information until the early 1900's, although a few pairs may have been present throughout (as they certainly were between 1907 and 1925). There were still only 12 pairs in 1946, but 50 by 1951, over 300 by 1957, and there are over 1100 pairs now.

Table 3. Breeding population of Shags, Isle of May, 1907-1973

1907-25 — 1 - 3 pairs	1957 — about 315 pairs
1934 — 6 pairs	1959 — about 400 pairs
1946 — 12 pairs	1961 — about 550 pairs
1951 — about 50 pairs	1965 — about 750 pairs
1952 — 70 - 80 pairs	1969 — about 880 pairs
1955 — 175 - 200 pairs	1973 — about 1130 pairs

There are many instances of Shags ringed as nestlings on the Farne Islands (Northumberland) being found breeding on the Isle of May in subsequent years.

†*MALLARD *Anas platyrhynchos*

In early April 1965 a pair of Mallards was seen on a couple of occasions, apparently prospecting for a nest site; the birds

remained for some time, but no nest was found. On 29th April 1968, a well hidden nest containing 11 eggs was discovered at the foot of Colm's Hole. On 11th May, three ducklings not more than a week old, from a different but never located nest, were found trapped in a concrete sump near the West Landing; all three died subsequently. These two nests are the only records of breeding in the island's history.

†*TEAL *Anas crecca*

Although springs or pairs of Teal are seen fairly regularly on the island between autumn and the end of winter it came as a surprise when on 18th May 1960 a Teal duck was flushed from its nest under a slanting plank of jetsam on the North Ness. The eggs vanished later, believed taken by gulls. This is the only known breeding record.

EIDER *Somateria mollissima*

Johannis Blaeu, who died in 1638, noted that the Eider was one of the commonest birds of the May; Sibbald in 1710 recorded it too. An account in the 1890's reported that the species was breeding in annually declining numbers, but we do not know how long this decrease lasted and to what level the population was reduced. Estimates in the 1930's suggest that about 30 pairs were at that time breeding, and certainly there were not many fewer than this when the Observatory re-opened after the war, with a noticeable increase in the following decade. Because the clutches of disturbed brooding Eiders are liable to predation, few attempts have been made at an exact census of nests, but in 1956, when in the first half of June over 65 were counted, it was estimated that at least 70 females must have laid. In 1972 the activities of the gull cull made possible a more accurate assessment of Eider nests than for many years, and about 100 pairs were found to be breeding. On the whole, from the figures available, it is probably fairly safe to conclude that throughout the last 20 years between 60 and 100 pairs of Eiders must have nested annually—and latterly nearer 100 than 60. Surprisingly many of the clutches hatch out safely, but the fate of the ducklings is something of a mystery. Very few attain anything like adulthood around the island, yet there are few records of predation by gulls. Can it be that the ducklings are taken over to the mainland by the females soon after they hatch ?

Counts of Eiders round the coast have been made on a number of occasions just before and during the breeding season. Consistently, and making allowance for brooding females where appropriate, more birds of both sexes are present than actually nest, indicating that there is a considerable non-breeding population. To take two examples: on 18th May

1966, in a year when there were probably 60-100 nests and at a time when most of the breeding females must have been sitting, 260 drakes and 168 ducks were counted just off shore; similarly, on 5th-6th May 1972, a year with about 100 nests, there were 187 adult drakes, 19 immature drakes and 153 ducks off-shore. These figures indicate that spring counts of Eiders are not a reliable guide to the number nesting.

SHELDUCK *Tadorna tadorna*

There are no early records of breeding. In the springs of 1932, 1934 and 1935 a pair frequented the coast of the island, but breeding was not proved until 1936, when a nest containing ten eggs was located. In the spring of 1937 two birds were again present, and in 1938 one or even two pairs may have bred. After the wartime gap in recording there was no suggestion of breeding until in the spring of 1955 a pair was seen on and around the North Ness. Birds were present again in the spring of 1959, and in 1960 a pair successfully brought off eight ducklings. Since then between one and three pairs have probably nested annually; breeding was proved in 1961 (brood of 14 ducklings), 1970 (nest with four eggs), 1971 (brood of four ducklings), 1972 (brood of three ducklings) and 1973 (brood of six ducklings).

†PEREGRINE *Falco peregrinus*

Until 1929 a pair of Peregrines had bred on the island with fair regularity, although with breaks, for as far back as records go. A nest was mentioned in 1829, and an account of that period refers to the May possessing a pair "long renowned in deeds of falconry". We know that there was an eyrie in 1864 (and in 1869) and that for some time before and after 1907 there had been no breeding; also that the eyrie was unoccupied from 1922 to 1924. The last definite record of breeding was in 1929, though a pair may have attempted to nest in 1941, when at least one bird was present and what is believed to have been part of a Peregrine's egg was picked up near the Mill Door.

†MOORHEN *Gallinula chloropus*

A pair of Moorhens may have nested in 1933, when what was believed to have been an island-born juvenile was caught and an adult was seen. Breeding was proved in 1934, when a nest was discovered on the North Ness. The eggs hatched successfully and a second clutch was laid. This is the only certain record of breeding.

OYSTERCATCHER *Haematopus ostralegus*

There are records of Oystercatchers on the May as far back as 1710 and 1792, but breeding is not specifically mentioned.

We know, however, that a pair nested annually from the 1860's to the 1880's, that there were two pairs in 1911, seven pairs in 1921, 1924 and 1936, about ten pairs in 1939 and 1944 and that between 13 and 16 pairs nested from 1953 to 1957. Since then the breeding population has remained remarkably steady at about 12 pairs, although 20 pairs were estimated to be present in 1967. Between eight and 12 pairs bred in 1972 and 15 pairs were holding territory in 1973. Oystercatchers' eggs suffer more than those of any other bird on the island from predation by gulls (which are much assisted by any human disturbance that causes sitting birds to leave their eggs). For at least the last 20 years few young have been reared, latterly perhaps fewer than half-a-dozen annually.

†LAPWING *Vanellus vanellus*

A pair is reported to have nested in 1897; they were seen "feeding young". There is no other breeding record.

†REDSHANK *Tringa totanus*.

A nest containing eggs was found in 1912, the only breeding record.

*GREAT BLACK-BACKED GULL *Larus marinus*

Until 1962, when a single pair laid eggs and raised young, there was no certain record of this species breeding on the island. In the next three years the same pair nested again; in 1966 there were two pairs; in 1967-68, three pairs; and in 1969-72, four pairs. In 1973 one pair attempted to breed. It is probable that four of the eight adults comprising the breeding population were killed in the course of the Nature Conservancy's 1972 gull cull, and one adult and one immature were killed in the cull of 1973.

LESSER BLACK-BACKED GULL *Larus fuscus*

Lesser Black-backed Gulls did not begin to breed on the May until 1930 but, as indicated by the figures below, they increased at a markedly faster rate than did the Herring Gulls. Thus,

Table 4. Growth of Lesser Black-backed Gull breeding population, 1930-1972

1930 — 1 pair	1963 — about 500 pairs
1938 — 15 pairs	1966 — about 900 pairs
1946 — 73 pairs	1969 — about 2000 pairs
1954 — about 165 pairs	1972 — about 2500 pairs

in 1970 their population exceeded 2000 pairs, whereas after a similar period from first breeding the Herring Gull population had (in 1947) reached little more than a third of that figure. This was almost certainly because at no time had any particular effort been made to reduce Lesser Black-back numbers.

In the gull-reduction campaign of May 1972 approximately 1700 breeding Lesser Black-backed Gulls were eliminated, followed by about 1100 in 1973.

HERRING GULL *Larus argentatus*

The first nest of a Herring Gull on the island was found in 1907; in 1972 the breeding population was about 15000 pairs. This spectacular increase became particularly noticeable from 1954 onwards as the numbers snowballed, and a picture of it is provided by the population estimates in the Observatory records (summarised below), based on counts both of birds and of nests. It should be noted that the huge increase in breeding numbers occurred notwithstanding the removal of a considerable egg harvest in many years and despite attempts to reduce the population by deliberate egg destruction in the interests of other breeding species and of the vegetation. But for this, the Herring Gull population would assuredly have become unbearably large even sooner than it did. The massive reduction in gull numbers which was begun by the Nature Conservancy in 1972, when over 15000 adult Herring Gulls and about 1700 adult Lesser Black-backed Gulls were painlessly destroyed, and which will be continued as necessary, aims at reducing the gull populations to a level at which they no longer so drastically and adversely affect the island's plant and soil cover. In 1973 a further 9600 adult Herrings Gulls and 1100 adult Lesser Black-backed Gulls were destroyed.

Table 5. Growth of Herring Gull breeding population, 1907-1972

1907 — 1 pair	1951 — about 1100 pairs
1914 — 12 pairs	1959 — about 3000 pairs
1924 — 58 pairs	1964 — about 8000 breeding pairs
1936 — about 455 pairs	1968 — about 12000 breeding pairs
1947 — about 760 pairs	1972 — about 15000 breeding pairs

KITTIWAKE *Rissa tridactyla*

Although there are references to the occurrence and nesting of Kittiwakes on the Isle of May as far back as the early 17th century and the possibility of still earlier presence, there have been no estimates of the size of the breeding population until comparatively recently. It is recorded that "thousands" were nesting in 1881 and, perhaps more accurately, "some hundreds" in 1883 (statements which probably reflect but little change), but there is no firm information thereafter until the early 1920's, since when the following counts and estimates have been made:

The fluctuations in this 53-year period are of particular interest in that they took place at a time when the species was suffering a minimum of human disturbance. The high count of nests in 1936 and the low count in 1959, together with the

noticeable rise in numbers between 1966 and 1973, are well documented and in no way open to question. One wonders just how far the present wave of increase will go.

Table 6. Kittiwake breeding population 1921-73

1921 — about 1900 nests	1955 — over 2000 nests
1924 — about 2350 nests	1959 — about 1650 nests
1936 — about 2950 nests	1966 — about 2150 nests
1952 — about 2000 nests	1969 — about 3100 nests
1954 — about 1200 nests	1971 — about 3300 nests
	1973 — about 3430 nests

Although the Kittiwakes have been little, if at all, predated by man in the present century, this was by no means the case in the past: in June 1508 James IV of Scotland made a visit to the May, partly to pay his devotions at the shrine of St Adrian and partly to "schut at fowlis with the culveryn". Just what his quarry was we do not know, but it is not difficult to conjecture in the light of human behaviour in later centuries. Sibbald, in 1710, says of the Kittiwake that "it is held to be as savoury and as good meat as a Partridge", and the editor of the 1803 edition of his *History* adds that the young were still then a favourite dish with many people and that "the shooting of them when they come new-fledged from the nests on the cliffs is esteemed excellent sport". The Kittiwakes, it seems, were shot partly for food but also and even more for "sport". Montagu in his *Ornithological Dictionary* (1833) refers humorously to the use of Kittiwakes as appetisers: "In the Isle of May, at the mouth of the Forth, the rocks are covered with the dung of this species, being unmolested till the young are fit to take which . . . are eaten by the inhabitants before dinner, as a whet for their appetites. Of this a curious story is told of a gentleman who went to the Isle of May to eat Kittiwakes and, after eating a dozen, exclaimed that he did not find his appetite improved".

To obtain a picture of the "sport" involved one cannot do better than read the description in MacGillivray's *History of British Birds* (1840) : "Parties are formed on our eastern coast for the sole purpose of shooting them; and I have seen a person station himself on the top of the Kittiwake cliff on the Isle of May, and shoot incessantly for several hours, without so much as afterwards picking up a single individual of the many killed and maimed birds with which the smooth water was strewed beneath".

Recoveries of this species include one of a bird ringed as a *pullus* on the Isle of May on 7th July 1972 and found at Foxtrap, Conception Bay, Newfoundland, on 20th February 1973.

†COMMON *Tern Sterna hirundo*
†ARCTIC TERN *Sterna paradisaea*
†ROSEATE TERN *Sterna dougallii*
†SANDWICH TERN *Sterna sandvicensis.*

These four species of terns have all nested on the May in the past. Since 1957 the only record of nesting has been of a pair of Common Terns that laid eggs (fate unknown) between the Low Light and Tarbet in 1973. This is the sole piece of information to add to the tern accounts given in 1960 in *The Isle of May*. It may however be recalled that the highest recorded level of tern populations was in 1946, when 5000-6000 pairs of Common Terns, 400-500 pairs of Arctic Terns, probably 15-20 pairs of Roseate Terns and 1400-1500 pairs of Sandwich Terns bred. The only year in which the number of breeding pairs of any of the four species exceeded the 1946 figure was 1936, when about 800 pairs of Arctic Terns bred, but only 3400 pairs of Common, 2-3 pairs of Roseate and four pairs of Sandwich.

In the days of large-scale nesting by terns, the main breeding locality was the area immediately below the North Horn. Later, as Herring Gull numbers grew, the terns were forced to move on to more and more inhospitable ground, including the east side of Ruff Green, the tussocky area around St Andrews Well, a similar and adjacent site across the High Road towards the top of the North Plateau, and the slopes equally remote from the sea above the Holyman's Road between the Bield and the Lookout. In all these places the colonies were small, and the birds had little success in raising young. By the mid 1950's the end was approaching; in 1957 only a few birds appeared, and no young were reared; in 1958 not a single egg was laid.

RAZORBILL *Alca torda*

Razorbills are known to have nested on the May since the 1860's, and it is almost certain that they did so much earlier, both in Sibbald's time (early 18th century) and before. "A few hundreds" were breeding in the 1880's. The first attempted censuses were in 1921 (360 pairs) and 1924 (160 pairs), when the numbers present were considered to have been smaller than in the preceding 15 years. About 500 pairs bred in 1936, about 375 pairs in 1952 and perhaps about the same number in 1955, when 97 occupied sites were counted on 17th April between the Horse Hole and the Mill Door. Since then, unfortunately, there have been no counts, estimates or even guesses to suggest the size of the breeding population. However in the first five days of April 1968 there were about 450 Razorbills either on the cliffs or on the adjoining sea, and on 4th April 1972 there were about 1200 on the sea below the cliffs from

the Mill Door southwards. These two figures indicate the possibility of a substantial increase in the last five years, and my impression on 14th-15th June 1971 and 31st May 1972 was that more nesting Razorbills were present than in any of the past 20 years. Not unconnected may be the fact that new sites have recently been occupied, e.g. a chick was reared on the Maiden Rocks in 1972 for the first time ever.

Observers should note that counts of Razorbills on the cliffs in May and June are very much wanted.

An estimate for 1973, which has just come to light, is of about 500 pairs.

GUILLEMOT *Uria aalge*

Guillemots were breeding on the May in 1710—and doubtless long before—and they have done so ever since. In 1848 we have the first reference to the bridled variety, and in the 1880's the statement that Guillemots were the most abundant of the breeding seabirds, with an estimated population in 1888 of about 1500 pairs. Counts of 2596 pairs and 1664 pairs were recorded in 1921 and 1924 respectively, there were 2080 pairs in 1936 and about 2000 pairs in 1954 and 1955. Since then no counts have been made at incubation time, but there are rough estimates of 9000 birds on 7th July 1969 and of about 3750 birds on the sea from the Mill Door southwards on 4th April 1972, both of which figures suggest an increase. My impression in mid June 1971 and at the end of May 1972 was that 2500-4000 pairs were breeding and probably nearer the higher figure than the lower. As with the Razorbill, new sites are being colonised; there were at least eight eggs on the Maiden Rocks in 1972—the first time ever. Careful counts of Guillemots in May and June are greatly to be desired.

Between 3% and 5% of the Guillemots on the Isle of May are bridled.

An estimate for 1973, which has just come to light, is of about 3700 pairs.

†BLACK GUILLEMOT *Cepphus grylle*

A few pairs of Black Guillemots bred on the May in the 1820's and 1830's. The species probably ceased to nest some years before the middle of the century, though there may have been occasional attempts later.

PUFFIN *Fratercula arctica*

There are no early records of the Puffin on the Isle of May, though this does not necessarily mean that it did not occur. It was certainly breeding in the 1880's when the population was estimated variously at 20-40 pairs. There were, however, only 12 pairs in 1921 and just six in 1924. In 1934 not more than eight to ten pairs were judged to be nesting, though in 1936

a population of about 50 pairs was suggested. Between 1950 and 1959 it is almost certain that never more than ten pairs nested, and in most years only about five.

Until 1956 all the nests had been in fissures in the cliffs, but in 1957 and 1958 an attempt was made by at least 50 pairs to establish colonies on the Burrian and on the turfy cliff-top to the north of West Tarbet and around the Horse Hole, where in 1957 a dead chick and an abandoned egg were found and in 1958 a single chick was ringed. In 1959 a nest containing an egg was found near High Tarn, and in the same year I recorded (*The Isle of May*, p. 219) that "gulls and gulls alone have prevented more extensive breeding in the past three years". Within a short time this categorical and unfounded statement was shown to be totally incorrect. In 1960 and 1961 there was again no successful nesting except by the few pairs in the cliff fissures, although in the latter year 200-300 birds were prospecting once more on the Burrian. In 1962, nesting in the turf slopes above Colm's Hole was proved: at least eight eggs were laid, and two young were ringed. In 1963 eleven chicks were ringed at Colm's Hole and possibly two hundred pairs are thought to have bred; in 1964 more than 500 pairs were occupying breeding grounds at Colm's Hole and on Rona, and by 1972 the breeding population was estimated at between 3000 and 4000 pairs, chiefly in the Colm's Hole-Burrian area and on the west side of Rona and at the South End, but also on many other parts of the island. All this in the face of increasing gull numbers and with no appreciable predation by gulls; altogether a remarkable instance of successful colonisation.

ROCK DOVE/FERAL PIGEON *Columba livia*

There is good evidence that genuine pure-bred Rock Doves were nesting on the Isle of May in the first part of the 19th century. However, any *livia* pigeons that have nested within the past 100 years or more—as some from time to time do, in cliff fissures or in the sea caves—must have been of mixed feral blood. Nevertheless a fair proportion of the 'doocot doos' that seasonally frequent the island are of blue rock type, almost identical with the true wild Rock Dove. The most recent instance of one of these feral pigeons breeding on the May was in 1972 when on 20th October young birds were heard cheeping from the cave in the Horse Hole, and a newly fledged youngster still with down about its head was seen further along the West Cliffs.

The number of feral pigeons on the island, in late autumn and winter especially, has increased noticeably since the early 1960's. This is assumed to be because of the greater availability of suitable food, partly from the partially digested contents of

gull pellets and more particularly from the seeds of annual and other weeds, including *Stellaria, Chenopodium, Atriplex* and *Polygonum*, which because of the activities of the gulls have replaced permanent turf.

SWALLOW *Hirundo rustica*

The first record of breeding was in 1956 when a pair raised five young. Since then at least one pair, sometimes two pairs and once (1972) three pairs have bred, almost always successfully. Second broods are frequently raised.

CARRION CROW *Corvus corone*

Like the Fulmar, the Carrion Crow is a recent addition to the list of the island's nesting species. Breeding was first suspected in 1921, and from 1922 to 1929 a pair nested annually. From 1930 to 1945 successful breeding was not proved, although in some years a pair was present throughout the breeding season. In 1946 a nest was built, but no eggs were laid; in 1947 the nest was remade but not used; in 1948 a pair was present but did not breed; and in 1949 a nest was built but the eggs disappeared. In 1950, 1952 and 1953 young were reared successfully, there was an unsuccessful nest in 1959, and there was no attempt at nesting in 1960-63. In 1964 a pair was present during the breeding season, but no nest was found, and in 1968 a nest, which at first contained five eggs and later three chicks, was subsequently predated. Since then there has been no record of nesting.

†WREN *Troglodytes troglodytes*

The only breeding record is of a pair that nested successfully in 1957 on a low bank overhanging the Loch. A second cock summered in the same area, near the Low Light.

SONG THRUSH *Turdus philomelos*

A few pairs of Song Thrushes have bred at intervals on the Isle of May for a long time back. There were probably three or four pairs nesting in the early 1880's, at least one pair was breeding in 1911, and between one and three pairs nested from 1931 to 1938 or a year or two later. From about 1946 until 1971, no Song Thrushes nested. A single pair in 1971 raised one brood but deserted a second clutch. There was no nest in 1972 but at least two pairs and possibly three pairs nested in 1973.

BLACKBIRD *Turdus merula*

There is no mention of Blackbirds nesting on the May before the early 1880's, though they probably did. In the 80's they bred regularly in small numbers; they bred "freely" from 1907 until 1914, there were four pairs in 1921, two in 1924, none from 1926 to 1929, one pair again in 1930 and two or three

pairs in 1933. There were at least (and probably five) breeding pairs in 1935 and between two and four pairs from 1936 to 1946. Only one pair nested in the years 1947-50 and at most two pairs in 1951. In 1952 the single pair was a brother-sister mating; four eggs were laid, one chick died in the egg, one soon after hatching and the other two succumbed later. There was no further breeding until 1961. In that year and up to and including 1969 one pair bred, in 1970 three pairs, and in 1971, 1972 and 1973 two pairs for certain, with the possibility of a third pair in 1973.

WHEATEAR *Oenanthe oenanthe*

Wheatears were nesting regularly on the May in the 1880's but at some time after that they ceased to do so and certainly none bred between 1907 and 1919. Nesting began again in 1920, there were "unusually many" nests in 1921 (compared with later years up to 1934) but only two pairs in 1924. There is no information for the period 1925-35, but in 1936 probably three pairs bred and in 1937 probably between four and six pairs. From 1938 to 1948 none nested, only one pair bred in 1950, two pairs from 1951 to 1953, probably three pairs in 1954-55, and four pairs in 1956. There was an increase to eight or nine pairs (six nests located) in 1957 and a further increase to ten or 11 pairs (nine nests located) in 1958. No population estimates were made in the years 1959-61, but either five or six pairs bred in 1962. In 1963 and 1964 not more than two pairs were present (no nests found) and in the nine years since then no Wheatears have bred.

These records are incomplete, and until much longer runs are available it will be impossible to distinguish any pattern—if such exists. A steady build-up after a period of absence is perhaps not unexpected, and there was just such an increase—from one pair to ten or 11—between 1951 and 1958. But what are the reasons for abandonment? Why four to six pairs in 1937 and none in 1938? Why five or six in 1952, only one or two in 1953-54 and none at all since?

†WILLOW WARBLER *Phylloscopus trochilus*

The only record of nesting is of a pair that bred in 1922.

DUNNOCK *Prunella modularis*

A pair of Hedge Sparrows nested on the May in 1884 and reared two broods. After that it was 74 years before the next nest was recorded—in 1958. There was another nest in 1961, and since 1965 Hedge Sparrows have nested annually: one pair bred in 1965 and 1966, two pairs in 1967, five in 1968, four in 1969, six in 1970 and two in 1971, 1972 and 1973.

MEADOW PIPIT *Anthus pratensis*

The first mention of the Meadow Pipit on the island indicates that it was breeding regularly and not uncommonly in the early 1880's. Between 1907 and the mid 1920's there was a marked decrease in breeding numbers, and in 1924 only three pairs were nesting and in 1934 the same number. From then until 1952 between one and five pairs nested annually, and from 1953 to 1958 between two and ten pairs. In 1962 probably four pairs bred, but since then numbers have fallen further, with never more than three pairs present in any year, none breeding in 1966 and 1968-70, only one pair in 1971 and 1972, and at least two pairs in 1973.

It has been suggested that the recent decline may be due to a lack of suitable nesting sites resulting from the vegetation changes brought about by gulls. This would seem improbable. The main Meadow Pipit breeding area has always been the grassy middle slopes on the east side of the main island—the ground least affected by gulls.

ROCK PIPIT *Anthus spinoletta*

This is another species for which there are no early breeding records, though it was nesting commonly on the island in the 1880's and was considered to be "very common" in June 1892. There is said to have been a decrease in breeding numbers between 1907 and 1925, although 31 pairs were still nesting in 1924. There were 24 pairs in 1936, about 20 pairs in 1937, about 25 pairs from 1939 to 1949 and about 30 pairs in 1951, 1955 and 1956. In 1957, some 36 nests were found, and the population was estimated at 56 pairs. There were between 40 and 50 pairs in 1958 (again over 30 nests were located) and about the same number in 1959. No estimates have been made since; this is unfortunate, because there can be little doubt that the breeding population has in fact decreased considerably, with many of the former nesting territories no longer suitable because of the vegetation changes brought about by the gulls.

PIED WAGTAIL *Motacilla alba*

The earliest reference to the breeding of Pied Wagtails on the island is a note in 1883 that "a few wagtails nestle in the vicinity of the Loch". A year or two later four or five pairs bred, and it is probable that a few pairs nested regularly from then until 1961. A pair attempted to breed (unsuccessfully) in 1962, no birds appeared in 1963-65, and a single pair raised young in 1966 and 1967; there has been no nest since.

Between 1921 and 1958 the breeding population was assessed in 19 different years: on 14 occasions either two or three

pairs bred, on three occasions one pair, and on two occasions four pairs. The recent diminution in numbers, with no breeding birds present in nine of the last eleven years, is difficult to explain.

STARLING *Sturnus vulgaris*

Once again it is in the 1880's that we are provided with the first information about nesting, with the statement that "a good many breed on the face of the cliffs but always out of reach". The numbers involved have been estimated rather infrequently: there were 16 breeding pairs in 1921, 27 in 1924, distinctly fewer in 1925, only six pairs in 1936, six or seven in 1937, at least six in 1946, probably between ten and 15 pairs in 1947, about eight pairs in 1953, probably approaching 20 pairs in 1954 and about the same number in 1955-59. Since 1959 no estimate has been made of the size of the breeding population, but there has been no obvious drop in numbers, and a flock of up to 50 juveniles has been seen in June (in 1965). Probably between ten and 20 pairs at present nest annually, but it would be valuable if this could be confirmed.

Only one Starling's nest has been seen on the May away from the cliffs; every nest found has been inaccessible, and no Starling nestling has ever been ringed.

†LINNET *Acanthis cannabina*

A few pairs of Linnets bred on the island in the early 1880's but they ceased to do so some time later, and from 1909 to 1917 none nested. A pair bred in 1918 and two pairs in 1920 and 1921 but none from 1922 to 1947. In 1948 a pair built and laid eggs but deserted the nest, and four more years passed without any Linnets present. Then in 1953 three pairs bred successfully, probably three pairs again in 1954 (raising at least five broods between them), and at least six pairs in 1955 (probably raising at least ten broods). In 1956 five or six pairs bred; in 1957 probably between seven and ten pairs (raising at least 13 broods); and in 1958-59 between nine and ten pairs, of which about half nested on the ground, in turfy banks. This was in great contrast to the situation in the years 1953-57, when only the odd pair had not nested in the shrubs which provide cover in and around the bird traps. In 1960 one pair bred, or possibly two; since then there has been only one successful breeding, though there was a nest with eggs—later deserted—in 1968. Two pairs nested in 1973, and at least one brood fledged.

†HOUSE SPARROW *Passer domesticus*

A visitor to the May in the early 1830's recorded that "the sparrow" was resident. Whether this was House Sparrow or

Tree Sparrow it is impossible to say, and it is not until 1907, when a single pair of House Sparrows bred, that we have the first definite breeding record. After that there were no more nests until 1925, when there were two breeding pairs. The resident population seems to have remained fairly constant at about six pairs from 1927 to 1946, although towards the end of that period not all the pairs nested annually and in some years, e.g. 1946, none may have bred. The last record of breeding was in 1947, when there was at least one nest.

†TREE SPARROW *Passer montanus*

Information concerning Tree Sparrow on the island is scanty. There is no certain record of breeding before 1907, but between then and 1914 several pairs bred every year. Twelve birds were resident in the breeding season of 1917, but by 1921 only two pairs were nesting, and in 1922 only one pair. Since then, no Tree Sparrows have bred.

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).