

Fair Isle Bird Observatory

BULLETIN



Edited by
PETER E. DAVIS

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FAIR ISLE BIRD OBSERVATORY BULLETIN

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75. The Rarer Birds, Spring 1961

WHITE-BILLED DIVER *Gavia adamsii*. An adult in full breeding-plumage was watched in South Harbour on 14th May. The characteristic up-curved bill, pale straw-yellow in colour, was held at an angle of about twenty-degrees above the horizontal. The plumage was similar to that of an adult Great Northern Diver *G. immer* except that the white patches on the mantle were much larger, and the white lines on the larger neck-patch also seemed more prominent. The record is the first for Fair Isle.

GOLDEN EAGLE *Aquila chrysaëtus*. An immature observed at close range in the north-eastern part of the isle, on 7th and 8th April. This bird had prominent whitish patches at the base of the inner primaries and secondaries, and a whitish base to the tail. This is the first substantiated record for the island.

BUZZARD *Buteo buteo*. One present from 15th to 17th April; the earliest of our few spring records of this species.

QUAIL *Coturnix coturnix*. One April 30th, the earliest ever recorded in the isle. Other single birds seen on 14th and 31st May, 12th and 20th June; the last three records were in the same area and could refer to the same individual.

COLLARED DOVE *Streptopelia decaocto*. Single birds well-seen on 12th and 24th May. There are two previous records, both in spring 1960.

NIGHTJAR *Caprimulgus europaeus*. A male present on 2nd June. Most of the few Fair Isle records are in spring.

WRYNECK *Jynx torquilla*. One found newly-dead on 27th April; another dead on 6th May, and one alive; one present 28th May to 6th June.

SHORT-TOED LARK *Calandrella cinerea*. A red-crowned bird of one of the southern races, present 20th to 30th April.

SHORELARK *Eremophila alpestris*. One seen at close quarters by James Wilson on 16th April.

BLUETHROAT *Cyanosylvia svecica*. Single females 18th to 21st May and 5th June.

MARSH WARBLER *Acrocephalus palustris*. An olive-tinged reed-warbler with pale legs, seen briefly on 21st June, was very probably this species.

ICTERINE WARBLER *Hippolais icterina*. One trapped on 31st May.

WOOD WARBLER *Phylloscopus sibilatrix*. One on 4th May and on 18th June. A very rare spring visitor in recent years, though apparently quite frequent in the early years of the century.

- GREY-HEADED WAGTAIL *Motacilla flava thunbergi*. A male at Easter Lothar on 27th May.
- GREAT GREY SHRIKE *Lanius excubitor*. A female trapped on 8th April.
- RED-BACKED SHRIKE *L. cristatus collurio*. A female 29th May, two males and three females next day, the females still present 31st. Another male 3rd June.
- NORTHERN BULLFINCH *Pyrrhula p. pyrrhula*. A female seen 15th April.
- RED-HEADED BUNTING *Emberiza bruniceps*. Single males, both trapped, on 20th-21st April and 5th-7th June. The second bird had badly-broken primaries and rectrices, and was almost certainly a recent escape.
- ORTOLAN *E. hortulana*. A male 3rd May, two males 7th May, single females 18th and 23rd-26th May.
- LAPLAND BUNTING *Calcarius lapponicus*. Unusually numerous, reflecting the large arrivals of September 1960. Single males were seen on 17th and 19th April; there were two 20th and four 22nd and 23rd, when the first female appeared. Six birds were present 24th, three until the 28th.

76. The Early-April Drift at Fair Isle in 1961

PETER DAVIS

The spring migration at Fair Isle in 1961 was one of the least inspiring of the past decade. March brought nothing but blustery northerly or westerly winds, and only thirty birds were ringed in the whole month, compared with up to 330 in earlier years. In May, again, there was little except north or north-west wind, and only in the first and last days of the month was there any appreciable fall of summer migrants. Passage to the north-west was poor, apart from moderate numbers of Wheatears and Meadow Pipits in the second half of April.

April had a number of redeeming features. The weather was changeable, but did at least produce a few nights of easterly wind, particularly in the first two weeks. This month began with the heaviest snowfall of the winter; on Easter Day (the 2nd) there were three inches of snow overall, and deeper drifts. By the 4th, however, the north wind was veering east, and in the afternoon it freshened from the south-east. Three Hedge Sparrows came in during the afternoon—two trapped were grey-bellied birds of the British form *occidentalis*—and a Pied Wagtail also appeared. On the morning of the 5th the wind was backing again, but still in

the east, strong to gale. It rained heavily all morning; there was nothing in the traps, and the only newcomers were a few Fieldfares and Redwings. The first sign of movement came when a Song Thrush, and then a Robin, were taken in the observatory trap about an hour after noon. We set off for the south, catching ten Robins and two thrushes on the way but it was not until we entered the crofting-area that we appreciated the size of the fall. The fields west of the "west road" were crowded with Song Thrushes, to the total of at least 500, and with them Fieldfares and Redwings, perhaps fifty of each. Other species included two or three Wood Pigeons, at least five Ring Ouzels, half-a-dozen Wheatears (both new species for the year), odd White Wagtails and a Brambling. Robins were scarce in the south, but abundant in the trapping-area, and by dark we had ringed 25 of these but only 15 Song Thrushes. Several of the islanders confirmed that the arrival had come with the cessation of the rain, soon after midday.

It is doubtful if there were any new birds in the moderate NNE breeze on the 6th, but there were certainly no decreases, and a much completer survey of the south swelled the previous day's estimates, and added several new species. The Song Thrush total was at least 800—much the largest ever recorded by the observatory; there were well over 100 Robins, 120 Fieldfares, 80 Redwings, about twelve Ring Ouzels, several Wheatears, and in addition a Mistle Thrush, three about fifteen Meadow Pipits, and just seven Blackbirds, a pitiful score for what is normally our "bread-and-butter" bird in early spring! One Robin trapped on the 6th wore a Leiden Museum ring; it had been ringed in the outskirts of Amsterdam in late October 1960.

About half of the commoner thrushes and Robins had gone by the 7th, but the Ring Ouzels maintained their score, and we saw about six Mistle Thrushes (some probably overlooked before on the hill), a Sparrowhawk, Blackcap, Chiffchaff, Goldcrest, Grey Wagtail, and a magnificent Golden Eagle. The wind was now west of north, and the only addition of the 8th was a Great Grey Shrike.

Most of the Robins from the big fall departed on the 8th and 9th, but the remaining Song Thrushes made a protracted stay; there was no further significant reduction until the 11th, and the rest left gradually between the 13th and 15th. Meanwhile there had been a second wave of Robins (c.25 increasing to c.50) on the 11th, again with south-easterly weather ahead of an occlusion. They were accompanied by several Chiffchaffs, an early Willow Warbler, and a Sand Martin.

The big Song Thrush and Robin fall would involve birds which breed in Scandinavia and winter in Iberia. The Robins

of this stock seem to reach Fair Isle in some numbers in late March or early April, given the necessary east wind, more often than do the Song Thrushes. The early spring has only been regularly watched since 1958, and it was in that year, on 30th March, that a comparable fall of Song Thrushes last occurred. On that occasion there were about 600, with over 500 Robins.

Since night-migrants normally begin their flights about dusk, it is probable that the birds had been airborne for 16-18 hours when they reached Fair Isle after noon on the 5th. The weights of the birds trapped that afternoon were on the light side, but not abnormally low; the Song Thrushes were mostly around 55-65 grammes (two at 53) and the Robins about 15-16 grammes (two at 14).

This stage of the journey is most unlikely to have begun further south than Holland or north-west Germany, as a warm front with a wide belt of overcast and rain extended across England and the southern North Sea into Holland and Germany at dusk on the 4th. This front moved northwards during the night, and reached from the north of Scotland to Denmark at dawn. Later in the morning it was receding southwards, and the clearance at Fair Isle around noon was due not to its passing but to its withdrawal. The pre-frontal winds were SE to E, and the weather-maps indicate they were around 15-20 knots in strength, though at Fair Isle they were at least 25 knots on the morning of the 5th.

The movement has been mentioned by Kenneth Williamson in *Bird Migration* Vol. 2, p. 9, where he suggests that it probably originated in the area of Denmark or southern Norway. If it did so, it would be difficult to reconcile the arrival-time with either a downwind directed flight or a completely passive disoriented drift at the speed of the air, unless the birds had been so unorthodox as to make their departure on the early morning of the 5th or at midday on the 4th. The data seem to me to accord better with a movement commencing in the area to the south of the German Bight, and progressively deflected west by cross-winds.

77. Early Records of Spring Migrants in 1961

Several of the spring passage-migrants at Fair Isle were first recorded on unusually early dates in 1961; probably as a result of the very mild late-winter and early-spring enjoyed by much of southern and western Europe.

The first of these birds was the Stonechat, which has seldom appeared before the first or second weeks of March. The earliest records I can find were on the 26th February in 1927

and 1929. In the very mild February of 1961, however, a male was seen on 17th February; there were two on the 21st, and two (perhaps the same) from the 25th onwards. The migrants which normally arrive in March were all retarded by the cold northerly winds, though the Meadow Pipit achieved a fairly normal first-date on the 19th. There were no Ring Ouzels, Wheatears, or wagtails in March this year; the first wagtail was a Pied on the 4th April, and Ring Ouzel, Wheatear, and White Wagtail made their debut on the 5th, over a week later than average. A Chiffchaff on 7th April was fairly normal, but a cock Blackcap on the same day was eleven days earlier than any other record (and the birds of 18th April 1959 were themselves ten days earlier than any other notice!). This year there were several April Blackcaps, two 15th, one 16th and two 27th, probably a reflection of the extraordinary numbers in the autumn of 1960. A Willow Warbler trapped on 11th April was our second-earliest, three days later than one recorded over fifty years ago. A Sand Martin on the same day was earlier than in most years. A Grasshopper Warbler came on the 16th, our earliest by five days. Swallow on the 21st, and Redstart on the 22nd, were average dates, but a Common Sandpiper on 23rd was equalled in only one other year. A string of "firsts" for the season followed on 27th April: Corncrake (only two earlier records, for 25th and 26th April), Wryneck (earliest-ever by five days), Whinchat (beaten only once before, on 26th April 1949), Whitethroat (normal), Tree Pipit (early but not unique), and Yellow Wagtail (earlier than most). Then on the 30th came our first April record of the Quail, which had once been seen on 1st May, in 1952. The arrivals in the first week of May were not spectacularly early, but Sedge Warbler on 4th and Pied Flycatcher on 5th have seldom been preceded. Three Swifts on the 5th were however our earliest ever, the previous record being held by one on 7th May 1959.

P. D.

78. The Arctic Skua Colony in 1961

PETER DAVIS

The study of the Fair Isle Arctic Skuas *Stercorarius parasiticus* continued in 1961, along the same lines as in earlier years. The colony increased by two pairs, to sixty-seven. The area occupied was much the same as in 1960, with isolated territories persisting at the north end of Wirvie Brecks, and in the north and south parks of Hjon; but a southern outlier at

the Rippack, over a mile from any other site, was reoccupied by the same pair as was there in 1959. The original core of the colony, around the airstrip and Homisdale, became rather hollow, with the vacation or absorption of four old-established sites, and the number in Vaadal decreased from three to one. On the northern fringes, at Brunt Brae and Swey, however, four pairs contrived to install themselves among those already there. At the eastern end of Brunt Brae there were seven nests within an area about 150 yards by 100, a density previously unrivalled in this colony.

The netting-programme was somehow completed, in spite of the very unfavourable weather in June; and we are indebted to Malcolm Ogilvie for his ready help in this contest with wind, rain, and time. This will be the last season in which we shall attempt to catch and colour-ring all the adults; though in 1962 it should still be possible to have a complete picture of the colony's composition, while leaving untouched the increment of unringed birds.

One hundred and twenty-one marked birds had survived at the end of the 1960 summer, and of these 101 returned to the breeding-strength. The loss of experienced birds was therefore 16.5%, exactly as in the previous year, but well below the norm for earlier seasons. In 1961, two of the breeders died during the summer, and two others remained unringed, so 130 may be looked for in 1962. This is a higher proportion than ever before. Unfortunately the P.V.C. colours are beginning to let us down (several of those applied in 1958 had been lost), and since many birds once trapped are very net-shy, even after the lapse of several years, it is unlikely that anything approaching the present coverage could be achieved in future years. We can only deplore the lack of a really durable colour-marking method during the past eight seasons.

Age-groups of the 1961 breeders.

In this season there were still 17 birds (12.7% of the total) which first bred in 1954 or earlier; 19 (14.2%) joined the colony in 1955, 17 in 1956, 11 (8.2%) in 1957, 12 (9.0%) in 1958, 15 (11.2%) in 1959, 17 in 1960, and 26 (19.4%) were new in 1961. The last figure may possibly include two birds that were unringed in 1960, and not accounted for in 1961.

There were still four or five birds which were known, from plumage and from fidelity to the original territory, to have nested since at least 1948. These include the pair at Homisdale Springs, which have been mates in at least fourteen consecutive years. The pair at Tarryfield, which also persisted in 1961, have been together since 1950. The age of the other 1961 matings is shown in Table I.

TABLE I.

Continuance of Matings established in									
1948 or before	1950	1954	1955	1956	1957	1958	1959	1960	1961 (New)
1	1	1	2	7	3	6	10	11	25
1.5%	1.5%	1.5%	3.0%	10.4%	4.5%	8.9%	14.9%	16.4%	37.3%

Changes in the Matings.

Sixty-one of the 1960 matings were still intact at the end of that summer, and 42 of them persisted in 1961. Fifteen of the changes were caused by the death or disappearance of one bird, three by the disappearance of both birds, and one by divorce. Eleven of the broken partnerships had been founded only in 1960, compared with only eight out of thirty-one formed in earlier years, and still together in 1960.

The divorce involved the pair at Brunt Brae Upper in 1960. A bird which was then breeding for the first time now moved to the adjoining Brunt Brae Middle ground, and both birds took new mates.

Intermittent Breeding.

Two birds which had bred in 1959 were recognised as non-breeders in 1960. One of these was not seen in 1961. The other, a Pale bird that nested at Brae Middle in 1950-59, again returned to the same territory with the unringed Pale that had joined it in 1960. They still did not breed, nor did they repeat their curious behaviour of 1960, when they "incubated" in an empty Eiders' nest. This is our first record of an adult failing to breed in two successive years. The bird has never been definitely sexed, though it was thought from its distraction-display in earlier years to be a male.

Four other skuas which nested in 1959, but were not identified in 1960, returned to breed again. One from Homisdale West 1954-59 bred nearly at a new territory, Brunt Brae Edge; one from the Rippack territory of 1959 re-established it in company with its former mate, which had bred elsewhere in 1960; one from Eas Brecks North-West 1954-59 re-appeared and nested at Sukka Burnside; and one from Brae Hilltop South 1959 bred on a new site nearby, at Swey Summit North.

Return of Young Birds.

Eight skuas ringed as chicks on the island joined the breeding-strength in 1961. Two had been reared in 1955, two in 1956, and four in 1957. This brings the total number of local-born young retrapped as breeders to forty-six, of which

seven were three years old when they first bred, twenty-five were four years old, eleven five years, and three six years.

Since durable rings were first used for marking chicks, in 1954, the proportion of each season's young returning to the isle has varied markedly. Only six out of 43 ringed chicks reared in 1954 rejoined, whereas no less than sixteen of the 53 reared in 1955 have done so. The returns for the 1956 generation may still be incomplete, but only seven out of 58 have come back. We have already had four of the 49 ringed in 1957. It is interesting to note that four of the 1956 chicks were recovered (three dead and the other exhausted) during their first autumn migration, whilst none of the 1955 or 1957 generations was reported at this time. The low returns for some seasons may therefore reflect a high mortality of juveniles after they have left the island. Most of our autumn recoveries can be correlated with on-shore gales.

Breeding Success in 1961.

The sixty-seven pairs of Arctic Skuas in 1961 produced 122 eggs, hatched 95, and reared 81 young. Breeding success (young reared from eggs laid) was therefore 66.4%, slightly above the average of 64.4% for the previous twelve years. Very few eggs were lost to predators; most of the unsuccessful ones were infertile or chilled, or fractured by the parents.

Some newly-hatched chicks were killed by heavy rain; one or two died after scouring badly from some internal infection; but most casualties were predated by Bonxies or corvids. These were nearly all late chicks, killed near or after fledging.

Clutch-Size.

The mean clutch-size for the colony in 1961 was 1.82, which is low when compared with averages of 1.92 to 1.95 in the previous three seasons. The figure is of course affected by the proportion of young females in the colony, since these often lay only one egg, but it is worth noting that in 1961 there were four females with several years' breeding-experience, which laid only one egg although previously they had always laid two. In three of these, the hatching-date indicated the egg had been freshly-laid when the nest was found, so that it is unlikely that one had been lost. The fourth egg did not hatch. So far as I am aware, this is the first time we have recorded the laying of single-egg clutches (other than replacements) by females that have normally laid two eggs. This may occur more commonly in the northernmost populations, as it does in other Arctic species, as a response to food-scarcity. However, food seems to have been more plentiful in 1961 than it was in 1959 or 1960, judging by the good rate of success.

There was again a three-egg clutch, at Brae North-East, and as in 1960 none of the eggs was hatched, although two were incubated well beyond the normal period.

In the report on the 1960 season (*antea*, para. 65, p. 165) it was stated that the female at Brunt Brae Upper (which laid three eggs each year between 1954 and 1959, and never hatched any of them) had now disappeared. This statement was due to a misidentification; actually she had shifted to the nearby territory of Swey West, and replaced another female with a very similar plumage. We had been unable to catch her in 1960 (two colour-rings were missing) but did so in 1961. In both years she laid only two eggs, and all were infertile, so it is probable that her three-egg layings of earlier years were also unviable.

79. The Fair Isle Bonxies, 1961

In 1961 the population of Bonxies (*Catharacta skua*) at Fair Isle remained at twenty pairs, as in 1960. This did not indicate any great stability in the colony, as there were in fact more territorial changes and altered matings than in previous years.

Only eleven pairs were believed to be unchanged from 1960, and at four other sites it was thought there was some continuity from that season. The remaining territories were either on new ground or on sites that had been occupied before 1960 but not in that year. There was a marked concentration of the breeding pairs into the south-western part of the hill scattald, and no less than fifteen pairs nested in this area, between the West Hill Cups and the Hill Dyke. Three 1960 territories on Vaasetter were abandoned (leaving only two), as were the ones at Byerwall, and on Swey. The totals both at Sukka Mire and in the Mire of Vatnagard increased from four to six. An old site was reoccupied at Wirvie Brecks.

The concentration in the south-west of the hill was unfortunate, since it is in this area that most of the "discouragement" of the Bonxies by certain young islanders has taken place in recent years. Breeding-success was the lowest we have known. The 20 pairs laid 35 eggs, hatched 26, and reared only twelve young. There were six apparently infertile eggs, and three others (all singles from clutches of two) disappeared. At least ten chicks were probably destroyed (three were found strangled or trampled) and at least one adult was killed. Other chicks were hatched too late for there to be much prospect of their successful fledging.

One bird wearing a ring, and probably marked as a chick, bred at Eas Brecks, but would not allow us to trap it.

P. D.

80. The Tree Sparrows' Return

A happy outcome of the recent increase in records of Tree Sparrows at Fair Isle (see *Bulletins* Vol. 4, Nos. 3 and 6) was the breeding of at least three pairs during the past summer. This is the first established record of breeding on the island since the local colony became extinct thirty-six years ago, apart from the nesting of an isolated pair in 1936.

The eleven birds that over-wintered on the isle in 1960-61 were joined by at least three others on 12th April, and the numbers increased again to sixteen on 29th May and twenty next day. There were still about twenty on 6th June, but some appear to have passed on after this date. The breeding-pairs apparently segregated from the rest quite late in the spring, about the middle of June, and nesting was very late. Single pairs were feeding young at nests in the cliffs at Furse and in North Haven from about 20th July onwards; the North Haven young were fledged about the end of the month. Later, on 9th August, an adult was seen feeding a recently-fledged juvenile in the South Reeva, and it is possible that a fourth pair used the south-east cliffs in the vicinity of Busta Geo. Other birds summered as non-breeders, perhaps because there was a predominance of one sex among the pioneering groups.

In Shetland, where there has been no record of breeding for well over thirty years, nesting by several pairs was established at the Kergord plantations in Weisdale, Mainland. On 3rd June Mr L. A. Urquhart found about six pairs in residence at the plantation known as Lindsay Lee, and saw one bird carrying nest-material. On 17th July Mr C. J. Booth independently discovered these birds, having seen none on a previous visit on 16th May. He now located four nests, all untidy domed structures built in the densest branches of the conifers; three had young and the brood had had evidently just left the fourth. Several other fledged broods were seen, and he estimated that at least ten pairs had bred. Three more nests with young were found a few days later, and two pairs were feeding fledged young in another of the Kergord plantations. Altogether, Mr Booth puts the population at over ten and possibly as many as twenty pairs.

No other reports of Tree Sparrows in Shetland have come my way, apart from a rumour of three in Unst in June, but it is unlikely that breeding was confined to the one area, and visitors to the islands could usefully look out for them in the summer of 1962.

P. D.

81. Some Fair Isle Breeding Birds, 1961

PEREGRINE. A pair again nested at Gunnawark. The nest was in a more accessible site than in other years, and the single eyass was ringed on 14th June. It fledged about ten days later.

CORNCRAKE. Three pairs nested. A clutch of nine eggs, just chipping, was exposed during the hay-cutting at Gaila on 20th July, and was unfortunately deserted. A second nest with eight eggs was found when the Kennaby hay was cut on 7th August; the bird continued to incubate, and all hatched on 17th and 18th August. A brood of well-grown chicks was seen in the Middle Leys on 10th August.

LAPWING. About sixteen pairs bred, an increase of about six over the 1960 population. The pairs were mostly in Gilsetter and the adjoining Hjon parks, but there were also two at Tarryfield, one or two in upper Vaadal, and one in Homisdale. The first eggs were laid about 12th or 13th April.

OYSTERCATCHER. The first eggs were found on 13th May, a rather late date. A clutch of four eggs was laid on the Brae of Roskalie.

RINGED PLOVER. Two pairs bred, at Buness and Meoness. The old-established Buness pair had 3 eggs on 23rd April (our earliest record), and 4 next day. These hatched on 19th and 20th May. By 19th June three young were well-fledged, which hatched on 13th July. Young were also reared from the second brood, as in 1960. At Meoness a nest with three eggs was found on 15th May, and these hatched on the 23rd. It is believed that young were safely reared.

SNIPE. There was considerable increase over the one or two pairs of recent years. Birds were calling throughout the spring and early summer at Gilsetter (up to three birds in separate areas), Homisdale, upper Vaadal, Sukka Mire, the Water (north of the Kirk), and at Quoy. Only one nest was found, at Sukka Mire, but it is probable that several pairs bred.

RAVEN. Four pairs nested, at Malcolm's Head, Gunnawark, South Ramnigeo, and near Wester Lother, but only the last pair reared young.

P. D.

82.

Recoveries, 1960

Sixty-seven recoveries of birds ringed at Fair Isle were reported during 1960.

SHAG. The nineteen reports of Shags have already been discussed in the Bulletin (*antea* para. 68, pp. 166-8). They included our first recovery of the species in Holland: 1008038, a 1959 chick, was found oiled at Vlissingen, Zeeland, on 12th March, 1960.

KESTREL. 2020913, a 1st W ♀ ringed 12th October 1960, was found dead at Mastenbrock Polder (Overijssel), Holland about 8th December.

RUFF. V 76652, a juvenile male caught in a mist net at Schoolton on the 11th September, 1958, was shot "before 15th November, 1959" in the Marismas del R. Guadalquivir, (Sevilla), Spain (37°07'N, 6°10'W). Only three Ruffs have so far been ringed on the Isle.

ARCTIC SKUA. Two of the young birds marked in 1960 were recovered on their southward migration. 3075742 was reported twice; off Kincardine (Fife) on 25th August, and at Dunbar (E. Lothian) on the opposite shore of the Forth on 5th September. Both finders said that it was unable to fly. The second bird, 3075650, was recovered at Algiers on an unspecified date in August.

GREAT BLACK-BACKED GULL. Three chicks ringed on the Sheep Craig on 10th July, 1959, were recovered as follows: 412685 near Dinnet, Aboyne (Aberdeenshire), on 27th January, 1960; 412681 near Cabrach (Banff) on 18th March; and 412688 at Terneuzen (Zeeland), Holland, on 29th September. There was also a most unexpected return of a first winter bird ringed AT 64624 during one of our nocturnal dazzle-netting expeditions to a roost on Bunes on 2nd November, 1959; this bird was found freshly dead on the island of Skomer (Pembrokeshire), Wales on 12th July, 1960.

RAZORBILL. Four more birds were shot during the autumn and winter in the dangerous waters off south-west Scandinavia. AT 64022, an adult of 21st May, 1959, was at Ramsøy off Christiansund (Vest-Agder), Norway on 15th January, 1960, and AT 64236, a chick ringed on 8th July, 1959, at Kolding Fjord (Jutland), Denmark on 29th October, 1960, while AT 67092 and AT 67172, both ringed as chicks on 7th July, 1960, were respectively near the Holmengra Light (Hordaland), Norway (60°61'N) and off Batalden Island (Sogn og Fjordane), Norway (61°39'N) in October, 1960.

GUILLEMOT. AT 64267, a chick of 8th July, 1959, was caught in a fishing net off Nes, Fosna (Sør-Trøndelag), Norway (63°48'N on 15th February, 1960; AT 67134, a chick ringed

on 7th July, 1960, was shot off Karmøy Island (Rogaland), Norway (59°15'N) on 17th October.

REDWING. The two recoveries both concerned birds of the Continental form, *T. m. iliacus*. X 30212 was ringed in its first winter in October, 1954, and found dead at Meleski, near Põltsamaa, Estonian S.S.R., on 15th April, 1960. R 78434, another 1st W bird ringed 9th October, 1959, was killed at Margueron near St Foy-la-Grande (Gironde), France in February, 1960.

BLACKBIRD. Two migrants ringed at Fair Isle were recovered in the presumed breeding areas, and seven others in Autumn and Winter. R 20406, an adult male ringed 5th November, 1958, was shot at Sekken Island, near Molde (Møre og Romsdal), Norway 62°44'N) on the 14th July, 1960, and R 78993, another adult male of 23rd March, 1960, was killed by a cat at Kyrksaeteröyra near Hemne (Sør-Trøndelag), Norway (63°16'N) about 8th May. The last is one of our most northerly Blackbird recoveries. R 78617, ringed as Ad ♂ on 30th October, 1959, was shot at Folkestadbygd near Vollda (More og Romsdal), Norway (62°09'N) on 25th October, 1960. The other autumn and winter returns were, with one exception, in the normal winter areas of passage migrants at Fair Isle. S 87612, ringed 31st October, 1957, at Attyman (Galway), Ireland, about 10th January, 1960; R 78036, ringed 2nd June, 1959, near Achfary, Loch More (Sutherland) on 13th March, 1960; R 78374, ringed 5th October, 1959, at Bridge of Orchy (Argyll) on 26th October; R 78343 ringed 14th October, 1959 at Muir of Ord (Ross) about 25th January; and R 78956 ringed 23rd March, 1960, at Ballina (Mayo), Ireland on 8th December. The exception was V 76135, ringed during the great "rush" of 31st March, 1958, and found dead at Le Foeil, near Quintin (Cotes-du-Nord), France on 31st January, 1960. This is our first Blackbird recovery in France.

RING OUZEL. Our first recovery report of this species was of a female ringed 22nd May, 1960, and killed at Ambax, near L'Isle-en-Dodon (Haute Garonne), France on 20th October.

WHEATEAR. The Moscow Ringing Bureau is not renowned for the speed with which it reports on ringing recoveries. Its reputation was confirmed in the case of A 61819, which was ringed as an adult male on the 1st September, 1955, and recovered (presumably on a Russian vessel) "off Shetland Islands" on 2nd May, 1956, but not reported until 1960. 606382, a 1st W bird ringed 4th September, 1959, was killed by overhead wires at Sigoules (Dordogne), France about 7th May, 1960, and 613729, a chick of 24th June, 1960, was killed at Noves (Toledo), Spain on 27th September, 1960.

ROBIN. There were no recoveries of Fair Isle-ringed Robins

before 1960, but five were reported during this year, and we also trapped one ringed elsewhere. 53659, ringed on 14th October, 1959, was at Sanguinheira near Cantanhede (Beira Litoral), Portugal about 15th January, 1960; 53511, ringed 5th October, 1959, was killed by a cat at Jar, near Oslo, Norway, on 21st May, 1960; 53818, ringed 24th November, 1959, was caught and released at Kirkabister, Bressay, Shetland on 12th February, 1960, and seen there for at least two weeks afterwards. E 57249, a bird from the big passage prior to 7th April, 1958, was killed by a car at Papenburg (Niedersachsen), W. Germany, about 24th March 1960, and there was a quick return of a fifth Robin ringed 53945 on 18th May, 1960 and recovered at Trischen Island, Heligoland Bight, Germany on 30th May. The ringed immigrant had been marked J 25157 at Minsmere, Suffolk, by H. E. Axell on 11th October, 1959, and was trapped at Fair Isle on 5th April, 1960.

BLACKCAP. A female ringed 53670 on 19th October, 1959 was caught and killed at Elche (Alicante), Spain on 24th April, 1960. This was our first recovery of a warbler further away than Orkney.

SPOTTED FLYCATCHER. A 1st W bird ringed 89651 on 27th August, 1960 was killed at Valdagno (Vicenza), Italy on 27th October. This is our first recovery of this species.

PIED FLYCATCHER. An adult male ringed H 32574 on 23rd September, 1960 was shot at Zarauz (Guipuzcoa), Spain between 16th and 23rd October. Another "first."

MEADOW PIPIT. Two juveniles ringed 89409 and 89422 on 22nd July, 1960 were killed in Portugal during November, near Nazare (Estramadura) on the 19th and near Aljezur (Algarve) about the 25th. Another marked 89417 on 25th July was found at La Linea de la Concepcion (Cadiz), Spain (near Gibraltar) on 19th October, 1960.

ROCK PIPIT. C 66392, a juvenile ringed 6th August, 1957, was found injured at Macduff (Banffshire) on 1st January, 1960, and 618022, a juvenile of 9th July, 1960, was found dead at Warsetter, Sanday (Orkney) about the 1st December.

STARLING. Four local juveniles were reported as follows: X 30823, ringed 20th July, 1955, at North Ronaldshay (Orkney) about 5th July, 1960; R 78100, ringed 27th June, 1959, at Arbroath (Angus) about 20th March, 1960; R 78158 ringed 7th July, 1959, at Croyhouse, Eday (Orkney) about 28th January, 1960; and R 78211, ringed 22nd July, 1959, at Barry, near Carnoustie (Angus) on 1st September, 1960. A passage migrant ringed 18th November, 1959, was found dead near Brøndbyrester, near Copenhagen, Denmark, on 7th July, 1960.

REED BUNTING. A migrant female ringed 53563 on 6th October, 1959, was found dead during severe weather at Ste. Eulalie-en-Borne (Landes), France on 16th January, 1960. This was the first British-ringed Reed Bunting to be recovered abroad.

SNOW BUNTING. An adult male ringed 7th April, 1959, was caught at Tilting, Fogo Island, Newfoundland on 1st May, 1960. This is the first British-ringed passerine to be recovered in America. It was most probably from the Greenland population, and may have wintered in Europe in one year and in America in the next.

83. Spring Migrants on the Shetland Mainland, 1961

C. J. BOOTH

(with additional notes from Foula, Burra, and Mainland by L. A. Urquhart and others).

GREAT NORTHERN DIVER. Present around the coast throughout the spring. Five on 1st April.

SLAVONIAN GREBE. Last seen on 14th April.

LITTLE EGRET. One at Loch Spiggie for several days in second half of June (T. Henderson).

WIGEON. Maximum of 25 on 21st March.

SHOVELER. A male 11th May. Loch Spiggie.

SCAUP. A pair in Tingwall Valley, 30th May.

TUFTED DUCK. Maximum at Loch Clickhimin, 30 on 29th March.

GOLDENEYE. Loch Clickhimin, maximum 23 on 30th March. Last seen 28th May.

LONG-TAILED DUCK. Last seen on 26th April.

VELVET SCOTER. Two pairs at Sullom Voe, 21st May.

GOOSANDER. Pair on 2nd April, Wadbister.

SMEW. A drake on the Loch of Grista, Tingwall, on 25th May. This is a very late date and well outwith the "mid-March" limit given by the Venables in *Birds and Mammals of Shetland* (L.A.U.).

GREY-LAG GOOSE. Fourteen on 26th April, Loch Spiggie; one 29th April, Lunna.

WHITE-FRONTED GOOSE. Three 23rd April, one 26th April, Spiggie.

BARNACLE GOOSE. Eighteen 23rd April, Loch Spiggie.

WHOOPEE SWAN. Maximum 39 at Loch Spiggie, 26th March. One immature Loch Clickhimin, 19th May.

KESTREL. Single birds seen 16th and 30th April.

BLACK-TAILED GODWIT. One at the Pool of Virkie on 12th April; one in full breeding plumage at Loch Spiggie, 23rd April.

- BAR-TAILED GODWIT. One seen several times at Pool of Virkie between 26th March and 4th May.
- KNOT. Two 11th May, Pool of Virkie.
- DUNLIN. Three Pool of Virkie, 11th May.
- SANDERLING. One 10th June, Scatsta.
- LESSER BLACK-BACKED GULL. One Scandinavian bird from 26th March, Pool of Virkie.
- COLLARED DOVE. One at Hamnavoe, Burra Isle, on 31st May. (L.A.U. and E. Goose). The first record from the county, except in Fair Isle.
- CUCKOO. One 9th May.
- SHORT-EARED OWL. One 3rd June.
- SWIFT. One at Mousa, 5th May (J. Fisher).
- SWALLOW. Three on 5th June.
- HOUSE MARTIN. One 10th June, three 16th June.
- FIELDFARE. An influx on 8th April (C.J.B.). One at Foula on 31st May (L.A.U.).
- SONG THRUSH. An arrival noted on 8th April, some still present 9th (C.J.B.). One at Foula, 31st May (L.A.U.).
- REDWING. A male singing at Kergord, 2nd and 3rd June (L.A.U.).
- RED-BACKED SHRIKE. A female at Foula on 31st May (L.A.U.).
- RED-HEADED BUNTING. A male in Dunrossness in mid-June (per T. Henderson).
- SNOW BUNTING. Last recorded by C. J. B. on 8th April.

84. Notes from Haroldswick, Unst, Spring 1961

MAGNUS SINCLAIR

Mr Sinclair was away from Unst during the period 11th March to 25th April, so that his notes are less comprehensive than usual.

- GREAT NORTHERN DIVER. One in full summer plumage, 6th June.
- ARCTIC/Common TERN. First arrivals on 11th May.
- SANDWICH TERN. Two seen on 3rd June.
- OWL (probably *Asio* sp.). One being mobbed by Common Gulls on 21st May.
- SWALLOW. Mrs W. A. Sinclair saw two on 24th April. Occurred in small numbers in the last week of May.
- HOUSE MARTIN. One seen on 3rd May.
- FIELDFARE. One on 27th February. Ten on Saxa Vord on 6th May, and four next day.
- REDWING. Scarce during the winter. None in February; one 3rd March.
- RING OUZEL. A male on the Burrafirth cliffs on 15th May.
- REDSTART. Seen singly during the last week of April. Two 7th May, and one next day.

- ROBIN. One wintered until March. One seen 9th May.
 WHITETHROAT. One on 4th May.
 WILLOW WARBLER. A single on 1st May, and two from 4th to 8th.
 PIED FLYCATCHER. A male and a female at Saxa Vord on 7th May.
 PIED/WHITE WAGTAIL. Both races were seen during the last week of April, and single Whites during May.
 GREENFINCH. Three on 26th April.
 SISKIN. Male and female on 7th June.
 SNOW BUNTING. The largest winter flock seen was 100 on 10th March. Three during the last week of April, one 10th May; a male on Saxa Vord on 3rd and 4th June.

85. Notes on Shetland Breeding Birds in 1961

Most of the following records have been supplied by C. J. Booth, a keen bird-watcher who started work as a Dental Officer in Shetland on 19th March 1961. Other notes have been provided by L. A. Urquhart of Glasgow, and by L. S. V. Venables.

- RED-THROATED DIVER. Pair in breeding plumage displaying, Loch of Tingwall, 29th March (C.J.B.).
 FULMAR. A dark-phase bird present on the cliffs at Muckle Roe (C.J.B.).
 TUFTED DUCK. Miss M. Sanderson saw 15 adults and one chick about one-third grown at the Loch of Collaster, Sandness, on 1st August (per L.S.V.). There are only three previous breeding records.
 SHELDUCK. Maximum of twelve recorded by C.J.B. at the Pool of Virkie, on 20th March. A pair present at Sullon Voe.
 MERLIN. Three nests had young by 10th June (C.J.B.).
 MOORHEN. Pairs breeding at Tingwall and in Dunrossness (C.J.B.).
 WHIMBREL. First seen 11th May; pairs present on breeding-ground 13th May (C.J.B.). A nest with 4 eggs found in a West Mainland area (L.A.U.).
 COMMON SANDPIPER. Three displaying near Voe, 3rd June; one Loch of Girlsta, 8th June (C.J.B.).
 REDSHANK. Two pairs found breeding in Dunrossness, and one at Tingwall (C.J.B.). Bird seen with four small young at Lax Firth, Tingwall, 28th May (L.A.U.).
 DUNLIN. Song first heard at breeding-ground, 14th May (C.J.B.).
 ARCTIC SKUA. First seen on breeding-grounds 30th April (C.J.B.).
 BONXIE. First one seen on 18th April (C.J.B.).

- LESSER BLACK-BACKED GULL. First breeding birds seen on 15th April (C.J.B.).
- BLACK-HEADED GULL. Colony of about 100 pairs breeding at Spiggie Marsh on 15th May, but no birds present when this locality was revisited on 6th June (C.J.B.).
- WOOD PIGEON. Maximum, 20 on 19th and 28th April at Kergords. At least five pairs breeding there. First nest with eggs seen 28th April. One bird at Voxter, 20th May (C.J.B.).
- LONG-EARED OWL. Nest with two eggs, Kergord, on 16th May. The nest was empty on 17th July, but to judge from castings etc., young may have fledged. (C.J.B.). Venables' *Birds and Mammals of Shetland* (1955) gives only one nesting record, at Kergord in 1935.
- RAVEN. Flock of at least forty present at Lerwick rubbish-tip until beginning of June, when numbers decreased. An early nest at Muckle Roe had newly-hatched young on 8th April. (C.J.B.).
- HOODED CROW. Flock of 100 feeding with Rooks at Kergord, during April (C.J.B.).
- ROOK. At least forty occupied nests at Kergord plantations; small young in nest on 28th April. (C.J.B.).
- JACKDAW. Three pairs breeding at Kergord. Four birds seen at the Noup of Noss, 5th June. (C.J.B.).
- WHEATEAR. First record, two 12th April (C.J.B.).
- STONECHAT. A nest with five well-grown young found at Voe on 10th May. The young were ringed. (C.J.B.). The first breeding record for Shetland, and probably the most northerly site ever occupied in western Europe!
- CORN BUNTING. Maximum recorded was 20 on 19th April. (C.J.B.).
- REED BUNTING. A pair on 6th June at Loch Spiggie. (C.J.B.).

86. Measurements of Birds Trapped at Fair Isle

THE LATE H. G. BROWNLOW

(*Editor's Note.*—This analysis of Fair Isle measurements was one of the last of Guy Brownlow's many practical contributions to Bird Observatory work, made shortly before his tragic death in September 1961. We have long been hampered by the necessity of comparing our data with the inadequate samples given in such works as the *Handbook*; and there have been misgivings about direct comparison with measurements of skins which can shrink considerably. The appendices to this paper go a long way towards removing these disabilities.—P.D.).

1. Measurements of thirty eight species of birds trapped up to the end of 1960 have been abstracted. Certain measure-

ments that have been measured or booked in error or which were taken in the periods of complete moult have been rejected. All such rejections have been discussed and agreed between the writer and Peter Davis.

2. The species fall into three categories:

(a) Those in which small numbers, comparable to the samples used in the *Handbook of British Birds*, have been trapped. These are given in Appendix A and compared with the *Handbook* figures to show how completely unreliable such small samples are.

(b) Those in which numbers up to about 100 have been trapped. Of those species only observed ranges are given. There is probably a chance of the order of 1:100 of catching a bird with measurements outside the given ranges. These are given in Appendix B. Some species with larger sample numbers but with bimodal distributions are included.

(c) Those in which numbers giving reasonably big samples have been trapped. They are given in Appendix C. In these, in some cases, theoretical ranges have been calculated. Such calculations are possible when the distribution of measurements has a reasonable resemblance to the standard bell-shaped curve of statistics. Some distributions, however, resemble a low, flat topped house or a sharp church steeple rather than a bell; others have a pronounced skew. In these cases only observed ranges are given. Bill and tarsus measurements almost invariably are of the church steeple variety. In calculating theoretical ranges the mean plus and minus 3.3 standard variations has been used as the basis for calculating. In the standard curve of statistics, a range of three standard deviations from the mean in either direction includes 99.73% of the distribution leaving 0.27% excluded. That means a probability of 0.0027 excluded. Odds are strictly the probability divided by 1 minus the probability, but with low probabilities, the divisor can be taken as 1. The odds of catching a bird with a measurement outside the range is therefore the reciprocal of 0.0027, or about 1:370. For a range of 3.3 standard deviations, the probability of exclusion is 0.001, giving odds of catching a bird outside the range of about 1:1000. The respective chances are actually at least the figures given, as bird measurements have finite limits. These species are listed in Appendix C.

3. In some species in which sexes cannot be distinguished by plumage, the distributions of wing measurements gave strongly bimodal distributions. When these were plotted on squared paper, it was possible to draw extrapolations of the two modes, which, bearing in mind the usual excesses

of large-sample ranges over the *Handbook* ranges, gave reasonable estimates of upper limits of female and lower limits of male measurements. It was interesting also to note that two tail distributions were slightly bimodal. These are given in Appendix B & C.

4. *Wheatears*. It was impossible to distinguish by measurements alone between the local birds and passage migrants. Retappings of local birds show that wing lengths can exceed 100 mm by up to 4 mm. The distribution of ♂ and ♀ wing lengths showed only very slight bimodal shape. Though the difference between local birds and Greenland Wheatears may, to some extent, be masked by intermediate Faroe and Iceland birds, it appears impossible to make any clear distinction between Greenland and local birds by wing length. Tail length may in some cases help in identification. ♂♂ with tail length over 61 mm and ♀♀ with tail length over 60 mm were caught only in the autumn rushes. Birds with wing lengths over 100 mm and tails of those figures or above are, therefore, probably Greenland Wheatears.

The first winter birds tentatively sexed by colour-separation in the outer tail feathers were also abstracted. Their distributions resembled the distribution of definitely sexed adults so little that that method of sexing seems completely unreliable.

Reliability of Results.

The measurements have admittedly been taken by several ringers. In a large sample, inaccuracies of measurement will tend to cancel out, but it may be argued that the outside figures in observed ranges may be due to inaccuracy. It is claimed, however, that they can generally be relied upon, for three reasons:—

- (1) As indicated in para. 1 above, all improbable figures have, after careful consideration, been rejected.
- (2) The outside figures of observed ranges generally fit well with the general pattern of the distribution, though with samples of less than about 100 this is sometimes difficult to judge.
- (3) In cases where theoretical ranges have been calculated these ranges, which, of course, depend on all the measurements in the distribution, either exceed the observed range or, in some cases where the distribution is slightly skew, coincide with one end of it.

In all appendices sample numbers on which ranges are based are given in brackets. The larger the sample number is, the greater will be the reliability of the range.

APPENDIX A.

Comparison of small-range observations with Handbook ranges.

SPECIES		Wing	Bill	Tarsus	Tail	Samples
Wryneck	H	83 - 91	14½ - 17½	19 - 20	61 - 71	12
	F	85 - 95	14 - 17	17 - 22	63 - 71	28
Swallow	H	116 - 129	10 - 13	10 - 13	93 - 122	44
	F	116 - 137	8½ - 13½	10½ - 13½	81 - 140	48
Grasshop- per Warbler	H	59 - 67	12 - 14	20 - 23	54 - 60	12
	F	59½ - 65	12 - 15	19½ - 23	49 - 60	10
Reed Warbler	H	62 - 70	15 - 17	23 - 24	49 - 55	12
	F	62 - 71	13½ - 18	21 - 25½	44 - 55	17
Icterine Warbler	H	72 - 81	12 - 15	18 - 21	52 - 56	12
	F	74 - 79½	13½ - 17	19 - 27	47 - 55	17
Yellow-brn. Warbler	H	52 - 60	9½ - 11	17 - 18½	38 - 44	12
	F	51½ - 58	10 - 12½	17 - 20	35 - 42½	15
Lapland Bunting	H	88 - 96♂	10 - 11½	19 - 23	61 - 67	12
	H	83 - 93♀				
	F	90 - 100♂	11 - 15	20 - 24	60 - 70	24
	F	85 - 96♀				

H=Handbook figures.
F=Fair Isle figures.

Note: In some cases Fair Isle samples of bill, tarsus and tail are less than is stated because in the early days of the Observatory only wings were measured.

APPENDIX B.

Observed ranges only.

SPECIES	Male	Wing	Female	Bill	Tarsus	Tail
Water Rial		107 -131(59)		33 - 47 (74)	35 - 47 (65)	45 - 64(44)
Ringed Plover		125 -137(50)		12 - 16 (28)	23 - 29 (49)	55 - 66(49)
Woodcock		175 -204(45)		70 - 82 (32)	31 - 41 (32)	71 - 88(28)
Purple Sandpiper		119 -136(36)		29 - 36 (36)	22 - 29 (36)	55 - 65(36)
Skylark	108 -119(27)		96 -108(47)*	12 - 17 (42)	22 - 28 (44)	54 - 78(40)
Fieldfare	138 -155(39)		137 -152(34)	18½- 27 (86)	31½- 37 (83)	94 -116½(81)
Song Thrush		109 -124(217)		17 - 24 (192)	30 - 36 (160)	72 - 90(158)
Wheatear	91 -109(290)		90 -108(260)	14 - 19 (500)	24½- 31 (500)	♂ 50 - 66(180) ♀ 49 - 62(186)
Whinchat	72 - 80½(41)		71½- 80(68)	12 - 15½(133)	19 - 25 (139)	40 - 51(130)
Bluethroat	70 -82½(35)		70 - 77(28)	12½- 18 (63)	24 - 30 (61)	50 - 61(55)
SedgeWarbler			57 - 68(53)	11 - 16 (62)	19 - 24 (63)	44 - 53(51)
Barred Warbler			82 - 92½(70)	13½-19 (69)	22½- 28 (57)	68 - 77(65)
Lesser Whitethroat			60 - 69½(46)	10 - 14 (47)	19 - 23 (48)	49 - 62(45)
Goldcrest	51½- 59(85)		50 - 55(108)	8½- 12½(111)	16 - 20 (110)	32 - 44(168)
Spotted Flycatcher			81 - 92(95)	12½- 17 (80)	14 - 18 (80)	55 - 66(80)
Pied Flycatcher	75 - 86(66)		74 - 83½(85)	9 - 14 (171)	15½- 21 (212)	48 - 60(123)
Hedge Sparrow			64 - 74(102)	11½- 15½(100)	19 - 24½(100)	53 - 60(102)
White Wagtail	85 - 94(69)		83 - 91½(59)	12 - 17 (134)	19 - 26 (134)	78 - 98(78)
Starling	126 -139(179)		124 -138(105)	25 - 31 (300)	27 - 35 (300)	55 - 73(179)
Redpoll <i>C.f.rostrata</i>			71 - 85(84)	9 - 14½(81)	14 - 21 (81)	55 - 69(67)
Crossbill <i>L.c.curvirostra</i>	91 -101(53)		90 -100(58)	15½- 22 (139)	15 - 22 (127)	51 - 62(126)
Chaffinch	84 - 96(119)		76 - 87(59)	12 - 16 (163)	17 - 21 (138)	55-72(147)**
Brambling	86 - 96(55)		82 - 92(44)	12 - 16 (83)	17 - 23 (84)	55 - 68(85)
Snow Bunting	101 -114(61)		97 -109(37)	10 - 16 (83)	19 - 25 (92)	59 - 74(79)
House Sparrow	71 - 79(55)		69 - 77(33)	11 - 16 (194)	16 - 22 (190)	48 - 61(70)

*Distribution markedly bimodal in spite of the small samples of ♂ and ♀ wings listed.

**Slightly bimodal in tails at 65 and 68.

APPENDIX C.

SPECIES	Male	Wing	Female	Bill	Tarsus	Tail
Wren mainly	OR	43 - 53(240)		11 - 16(173)	15 - 22(199)	26 - 39(163)
<i>T. t. frid</i>	TR	41½-54				24½- 39½
Redwing <i>T. i. iliacus</i>	OR	109 -127(391)		16. - 25(787)	26 - 34(787)	69 - 89(710)
	TR	107½-127				68½- 91½
Redwing <i>T. i. coburni</i>	OR	115 -131(397)		17 - 24(389)	29 - 36(389)	78 - 93(391)
	TR	113 -133				75½- 95
Blackbird	OR	118 -141(742)	118 -137(697)	21½- 29(462)	30 - 38(465)	91 -120(212)
	TR	116½-137				
Redstart	OR	74 - 87(214)	72 - 83(219)	11½ - 16½(400)	20 - 26(400)	52 - 64(284)
	TR	72 - 87	71 - 84			50 - 65
Robin	OR	65 - 79(813)		10 - 16(500)	21 - 30(500)	50 - 66(565)
	TR	64½- 79				49 - 66
Blackcap	OR	69 - 80(269)		11 - 16½(192)	18½- 24(209)	55 - 69(202)
	TR	66½- 80½				53 - 69½
Garden warbler	OR	71 - 84(349)		10 - 15(401)	17 - 23(400)	48 - 63½(295)
	TR	70 - 85				46½- 64
White- throat	OR	65 - 77(187)		10 - 15(232)	20 - 24(234)	53 - 69(196)
	TR	62½-77½(243)				50½- 70½
Willow warbler	OR	58 - 72(550)		9 - 14(500)	17 - 24(500)	39 - 57 (452)
	TR	63 - 72*	58 - 69*			39 - 58
Meadow pipit	OR	72 - 89(387)		11 - 16½(350)	19 - 25(350)	52 - 70(340)
	TR	71½- 89½				50½- 70
Tree pipit	TR	81½- 92½(108)		12 - 16½(88)	19 - 26(76)	56 - 68 (80)
	TR	81½- 94				
Rock pipit	OR	79 - 97(389)		13 - 18½(406)	21 - 28(406)	56 - 76(333)
	TR	87 - 97*	79 - 92*			53½- 78
Twite	OR	70 - 80(265)	69 - 79(188)	7 - 12(1200)	14½-20½(1200)	49 - 67(314)
	TR	70 - 81	68½- 79½			49 - 67½

OR=observed range.

TR=theoretical range.

Redwing (*coburni*): One bird had wing/tail of 133/93, and two "giants" measured by P.D. on same day had wing/tail of 135/97 and 131/101.

Blackbird: ♂ wing distribution negatively skewed; tail distribution very flat.

Blackcap and Whitethroat: ♂ and ♀ wings were abstracted separately, but it was found that there was no significant difference between them.

Willow warbler: Tail distribution bimodal at 47 and 51.

*estimated by extrapolation of plotted distributions, not calculated.

87. Pipistrelle Bat at Fair Isle

A Pipistrelle (*P. pipistrellus*) was found by the Stout children from Midway, clinging to a wall at Gaila on 1st June. They kept it for us in a jam-jar, and after examination we released it in the hostel garage. It had gone next morning.

There have been no records of bats at Fair Isle for many years, though Geo. Stout of Field recalls finding one or two nearly half a century ago. The Pipistrelle's normal range extends to the north of Scotland, and there had been southerly winds for some days before the occurrence.

P. D.

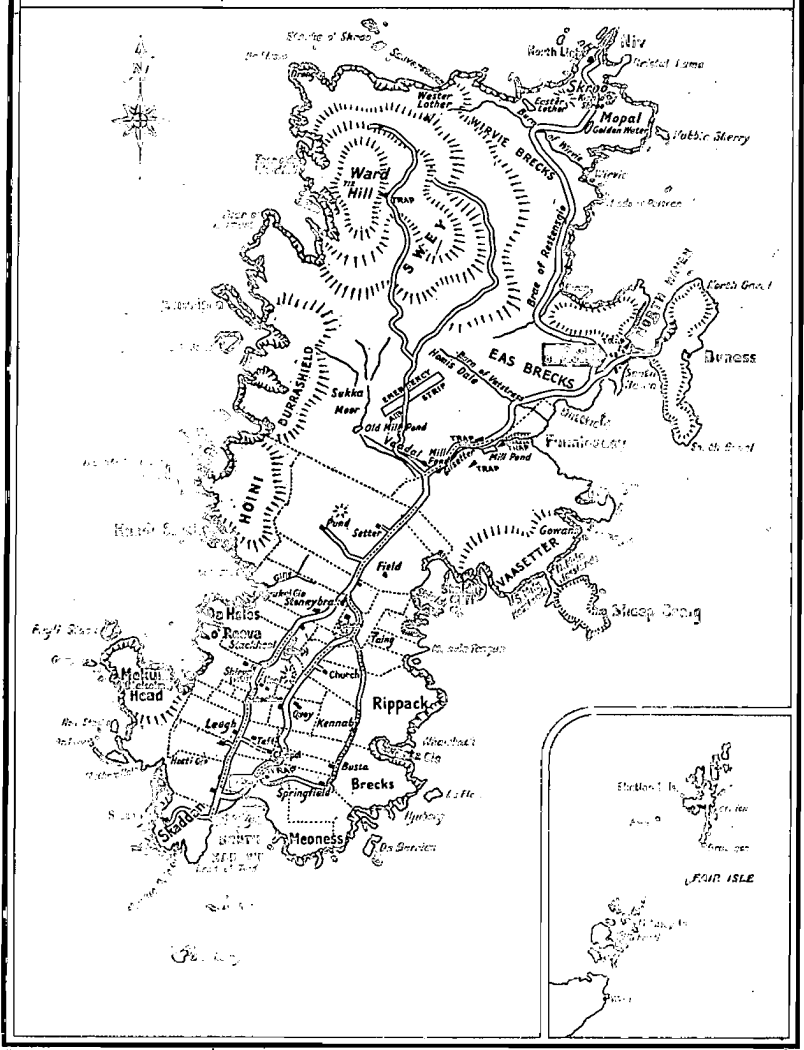
Appendix of Scientific Names

(excluding those given in the text).

- Great Northern Diver *Gavia immer*.
 Red-throated Diver *G. stellata*.
 Slavonian Grebe *Podiceps auritus*.
 Fulmar *Fulmarus glacialis*.
 Shag *Phalacrocorax aristotelis*.
 Little Egret *Egretta garzetta*.
 Wigeon *Anas penelope*.
 Shoveler *Spatula clypeata*.
 Scaup *Aythya marila*.
 Tufted Duck *A. fuligula*.
 Goldeneye *Bucephala clangula*.
 Long-tailed Duck *Clangula hyemalis*.
 Velvet Scoter *Melanitta fusca*.
 Eider *Somateria mollissima*.
 Goosander *Mergus merganser*.
 Smew *M. albellus*.
 Grey-lag Goose *Anser anser*.
 White-fronted Goose *A. albifrons*.
 Barnacle Goose *Branta leucopsis*.
 Whooper Swan *Cygnus cygnus*.
 Sparrowhawk *Accipiter nisus*.
 Peregrine *Falco peregrinus*.
 Merlin *F. columbarius*.
 Kestrel *F. tinnunculus*.
 Water Rail *Rallus aquaticus*.
 Corncrake *Crex crex*.
 Moorhen *Gallinula chloropus*.
 Oystercatcher *Haematopus ostralegus*.
 Lapwing. *Vanellus vanellus*.
 Ringed Plover *Charadrius hiaticula*.
 Snipe *Capella gallinago*.
 Woodcock *Scolopax rusticola*.
 Whimbrel *Numenius phaeopus*.
 Black-tailed Godwit *Limosa limosa*.
 Bar-tailed Godwit *L. lapponica*.
 Common Sandpiper
Tringa hypoleucos.
 Redshank *T. totanus*.
 Knot *Calidris canutus*.
 Purple Sandpiper *C. maritima*.
 Dunlin *C. alpina*.
 Sanderling *Crocethia alba*.
 Ruff *Philomachus pugnax*.
 Great Black-back *Larus marinus*.
 Lesser Black-back *L. fuscus*.
 Black-headed Gull *L. ridibundus*.
 Common Tern *Sterna hirundo*.
 Arctic Tern *S. macrura*.
 Sandwich Tern *S. sandvicensis*.
 Razorbill *Alca torda*.
 Guillemot *Uria aalge*.
 Wood Pigeon *Columba palumbus*.
 Long-eared Owl *Asio otus*.
 Short-eared Owl *A. flammeus*.
 Swift *Apus apus*.
 Skylark *Alauda arvensis*.
 Swallow *Hirundo rustica*.
 House Martin *Delichon urbica*.
 Sand Martin *Riparia riparia*.
 Raven *Corvus corax*.
 Hooded Crow *C. corone cornix*.
 Rook *C. frugilegus*.
 Jackdaw *C. monedula*.
 Wren *Troglodytes troglodytes*.
 Mistle Thrush *Turdus viscivorus*.
 Fieldfare *T. pilaris*.
 Song Thrush *T. philomelus*.
 Redwing *T. iliacus*.
 Ring Ouzel *T. torquatus*.
 Blackbird *T. merula*.
 Wheatear *Oenanthe oenanthe*.
 Whinchat *Saxicola rubetra*.
 Stonechat *S. torquata*.
 Redstart *Phoenicurus phoenicurus*.
 Robin *Erithacus rubecula*.
 Grasshopper Warbler *Locustella naevia*.
 Reed Warbler *Acrocephalus scirpaceus*.
 Sedge Warbler *A. schoenabaenus*.
 Blackcap *Sylvia atricapilla*.
 Barred Warbler *S. nisoria*.
 Garden Warbler *S. borin*.
 Whitethroat *S. communis*.
 Lesser Whitethroat *S. curruca*.
 Willow Warbler *Phylloscopus trochilus*.
 Chiffchaff *P. collybita*.
 Yellow-browed Warbler *P. inornatus*.
 Goldcrest *Regulus regulus*.
 Spotted Flycatcher *Muscicapa striata*.
 Pied Flycatcher *M. hypoleuca*.
 Hedge Sparrow *Prunella modularis*.
 Meadow Pipit *Anthus pratensis*.
 Tree Pipit *A. trivialis*.
 Rock Pipit *A. spinoletta*.
 Pied/White Wagtail *Motacilla alba*.
 Grey Wagtail *M. cinerea*.
 Yellow Wagtail *M. flava flavissima*.
 Starling *Sturnus vulgaris*.
 Greenfinch *Chloris chloris*.
 Siskin *Carduelis spinus*.
 Twite *C. flavirostris*.
 Redpoll *C. flammea*.
 Crossbill *Loxia curvirostra*.
 Chaffinch *Fringilla coelebs*.
 Brambling *F. montifringilla*.
 Corn Bunting *Emberiza calandra*.
 Reed Bunting *E. schoeniclus*.
 Snow Bunting *Plectrophenax nivalis*.
 House Sparrow *Passer domesticus*.
 Tree Sparrow *P. montanus*.

FAIR ISLE BIRD OBSERVATORY

0 100yds. 440yds. 800yds. 1 mile
 Roads == Bird Trap ◀ TRAP Boundaries



McIlhen

Edm