THE ROYAL AIR FORCE

ORNITHOLOGICAL SOCIETY



JOURNAL

Advice to Contributors

The following is given as guidance to those submitting material for publication in the Journal.

- Articles on any aspect of ornithology are acceptable, but preference will be given to original work from areas, especially overseas, where R.A.F. personnel are or have been stationed, and to that which has some positive connection with the Royal Air Force.
- 2. The number of articles and therefore the variety presented in each issue of the Journal will depend on the length of each article.

 As the length of the Journal has to be limited to between 10,000 and 13,000 words, ammore balanced issue can be produced if the length of articles is between 1000 and 2000 words. Please try to keep to this as much as possible but do not withhold your article because it is above or below this figure. The number of words should be marked at the end of the article with due allowance for space not filled when tables or systematic lists are used.
- 3. Whenever possible submit material in typescript top copyplease, not a carbon with double spacing and on one side only. If a typewriter is not used, manuscript should be clearly written and well spaced.
- 4. English names of species should have capitals for the initial letter of each word, except after a hyphen (e.g. Alpine Swift, Needle-tailed Swift) but references to groups should be in small letters such as waders, buttings etc. Scientific names should follow, in brackets, the first mention of the English name, but not subsequently. The subspecific name should not be mentioned unless relevant to the discussion, and only the first letter of the generic (first) name should be a capital (eg Apus pacificus). Each scientific name should be underlined and put in brackets.
- Date in the narrative should take the form lst January, 1969, but can be abbreviated where space does not allow this in full.
- 6. Reference lists in particular should be checked for accuracy and should take the following form: CDUM, E.P. & PITELKA, F.A. 1939. Storm mortality in a winter Starling roost. Auk, 56: 451-455.

- Editor

THE ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY

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by

F Kime

Editorial Comment

Firstly, I must apologise for the series of setbacks that has delayed publication of this copy of the Journal. With assistance from Flt Lt Tony Lloyd, Sgt Peter Baker and the combined support of the HQ TC and HQ STC typing pools, these problems have now been resolved and Journal No 11 is already in the process of being compiled. As well as reflecting RAFOS efforts in Masirah and the Mull of Kintyre, Journal No 11 will include individual members articles from Mount Troodos in Cyprus and from the Maldivian island of Gan.

Secondly, may I pay tribute to Dave Bodley's splendid work in editing the Journal for the past six years - Thank you Dave!

Editor:

Sgt D Crassweller c/o Sgts Mess HQ STC RAF High Wycombe Bucks

Copies of this Journal are available from the Editor, price 30p

RAFCS FIELD MEETING HELD AT UNST - JUNE 1975

Two parties of bird watchers camped on the outskirts of RAF Saxa Vord on the Shetland Island of Unst during the month of June 1975 to make a broad survey of breeding birds, to record sea movement from certain prominent positions and to train inexperienced members in field work. Each party spent a period of two weeks in the field in order to cover the whole of the month of June. Apart from being treated to some excellent bird watching, observers were given a sample of the varied Shetland weather, with winds from most points of the compass accompanied by cold, wintry showers from the North East. Sea mist, fog, frost and some very hot sunny days were also encountered.

As the Islands breeding birds population had recently been studied by Graham Bundy (see Shetland Bird Report 1974), it was decided to split the time between field training and counting the sea bird movement.

The Nature Conservancy Council, the Seabird Group, the RSPB and the Shetland Bird Club were interested in the movement of the Islands auk population as they flew to and from their feeding grounds. Our field meeting was an ideal opportunity to study Auk movement and various counts were made. Unfortunately, the other Islands of the Group were not covered at the same time so although the size of the passage was recorded the actual feeding grounds were not located (for details refer to Auk Movements in Unst, Shetland June 1975, following the species sightings list).

A planned radar watch from Saxa Vord Hill had to be abandoned as the auk movement was obliterated on the radar screen by 'clutter' from wind whipped waves.

A car was hired locally to carry observers to their watch points on the Island to enable a simultaneous start to the watch period, and to permit individuals to visit alternative areas of interest. Care was taken to prevent disturbance of sensitive areas in which other organised groups were studying.

For the majority of watchers the close proximity of so many birds in their breeding surrounds was an unforgettable experience. The skuas, which in the South prey on the terms as they pass on passage far from the coast, could now be seen at extremely close quarters! Pellets were collected from the Skua territory and sent to the Royal Scottish and to the British Museums. Waders were viewed in their summer plumage - a marked difference from their drab grey winter coats; close views were obtained of the various auks and of course, the usual sprinkling of the uncommon. Altogether, a total of 104 species were recorded during the visit.

Of these sightings, a very uncrake-like Corncrake (Crex crex) allowed itself to be watched and photographed within 20 feet as it 'crowed' upon its calling stone, only pausing to walk slowly along a wall where it again posed and crowed for its audience.

A Carrion Crow (Corvus corone) together with a party of 32 Hooded Crow (Corvus cornix) was feeding amongst sea wrack at Balta Sound on the 4th.

An Osprey (Pandion haliaetus) flew round the southern part of the Island on the 6th and was seen by local observers as well. Whilst on the 11th, a Short-eared Owl (Asio flammeus) was present near the base camp site.

On the 7th, the first team visited Herma Ness where the wind attempted to blow members over the cliffs. Excellent views were had of the Puffin (Fratercula artica) and on one occasion it was observed that a Fulmar (Fulmarus glacialis) regurgitated over a Puffin in order to evict the bird from a ledge. The Puffin was seen to preen itself for over half an hour! Subsequent attempts by Puffins to use the ledge were

thwarted by the Fulmar. As the Fulmar appears to be spreading in many areas where Puffins previously nested, this viewed action would appear to support the theory that it is the Fulmar that has ousted the Puffin from its former colonies. On this occasion a pair of Great Skuas attacking members of the party from opposite directions, collided in mid-air, but neither bird was forced to land.

On the 21st, the second team spent a day on Hermaness from whence excellent views were had of the Black-browed Albatross (Diomedea melanophris) making masterly use of the air currents along the cliffs. A Buzzard was also observed thermalling before moving off towards Saxa Vord. A count of the Gannet nesting colony on the Stacks was also made and seen from Herma Ness were c.4150 nests. Amonst the Great Skua breeding colonies on Unst were four nests containing blue eggs.

Later, at the return point (Burra Firth) good views were obtained of Slavonian Grebe (Podiceps auritus) when a pair of birds were seen just off shore; their golden coloured ear tufts and chestnut neck showing up well in the afternoon sun. On the 22nd, the fish-giving ceremony between a pair of Red-throated Divers was observed at very close range and a tape recording was made of the pair calling.

Some members of the team travelled to the island of Fetlar on the 8th where they saw 3 Snowy Owls (Nyctea scandiaca) including a female on the nest. On the 24th a further visit was made to Fetlar by the second team, who observed the female Snowy Owl feeding her young with a Curlew chick brought in by the male. Whilst awaiting the ferry to Unst an Iceland Gull was seen and on the return journey a count of 104 Black Guillemot was made.

A very ragged Black Kite (Milvus migrans) was seen in the Herma Ness area on the llth. The tatty plumage was thought to be the result of the bird having been shot at. Field notes were taken (reproduced on a later page of this report) and forwarded to the appropriate authorities for acceptance of identification.

On the 12th, a Great Northern Diver (Gavia immer) was observed near Balta Sound. It looked to be a male bird coming into adult summer plumage.

A Richard's Pipit (Anthus richardi) was recorded on the 20th and 22nd at Lamba Ness, whils on the 23rd two Honey Buzzard (Pernis apivorus) were watched as they moved South East at Loch of Snarra Voe. Both of these records (reproduced later) have been forwarded to the Rarities Committee for acceptance.

An increase in the number of Reed Bunting (Emberiza schoeniclus) over previous years was noted. Five singing males were counted and on the 25th three juveniles were being fed in Nor Wick marshes.

A Merlin (Falco columbarius) nest was found containing four chicks, all of which fledged.

Wheatears (Oenanthe oenanthe) were watched on several occasions hovering 8 - 10 ft above the ground with feet extended. Flights varied in length from 10 - 20 seconds at a time before dipping in flight and moving a short distance followed by more hovering. It is not known whether they were trying to locate food, for the birds did not feed on completion of the manoeuvre.

Seven Oystercatchers (Haematopus ostralegus) were seen to have wool wrapped around one foot which hampered their movements. One bird with quite thick nylon string attached to the left leg was greatly hampered by a six inch trailing piece.

Two Wood Pigeon (Columba palumbus) were found to be nesting in Halligarth Wood. One bird was using the dis-used nest of a Hooded Crow. Although Collared Dove

(Streptopelia decaocto) were present no nests were found. Similarly, the male Redwing (Turdus musicus) heard and seen singing on most days, appeared not to have a mate and was therefore considered not to be breeding at Halligarth.

A count was made of House Sparrow (Passer domesticus) on Unst and a total of 637 were recorded. This species would therefore appear to be on the decline. The Artic Tern count of c1175 pairs is a slight increase on the 1973 count and comparable to the c1200 pairs of 1974.

Rings were taken from the legs of the following and details forwarded to the British Trust for Ornithology who supplied the following details:

| Species | Where ringed | Where recovered | Movement |
|---------------------------------------|---|-------------------------------------|------------|
| Shag | Foula, Shetland | Hoga Ness | 95 ks NE |
| (Phalacrocorax | 30 Jul 74 as | Shetland | |
| aristotelis) | pullus | 10 Jun 75 | |
| Oystercatcher (Haematopus ostralegus) | Wirral, Cheshire 15 Dec 74 as fully grown | Balta Sound Shetland 3 Jun 75 | 835 ks NNE |
| Great Skua | Foula, Shetland | Herma Ness | 105 ks NE |
| (Stercorarius | 20 Jul 67 as | Shetland | |
| skua) | pullus | 7 Jun 75 | |

Starling (Sturnus vulgaris) were nesting in most of the walls on the Island, but at one **spot** whilst waiting for the ferry at Toft, an adult bird was seen to carry food to its young through a hole in the ground at the base of a lamp standard. The nest was actually underground.

Special interest was taken in the species found breeding amongst the Great and Artic Skua colonies. Examples of this association were:

- a. Four female Divers were located sitting on eggs in the middle of four separate Artic/Great Skua breeding areas. Every time the Diver left or returned to its nest it was attacked, with the attacks continuing for 3 or 4 minutes after settling on the nest. One female on Herma Ness was discovered with newly hatched chicks in transit from the nest to a nearby pool. Neither the mother or the three chicks was attacked though the move was through a Great Skua breeding area and partly through an Artic Skua breeding area. Was it the chicks that reassured the Skuas? The Diver nests were all a considerable distance from the sea and some were on high ground a mile from the nearest stream giving access to the sea.
- b. Lapwing were found breeding on the outskirts of the Great and Artic Skua colonies but were not apparently attacked. However, when the Lapwing gave their alarm call the skuas reacted by taking to the wing.
- c. Golden Plover, Dunlin and Redshank were all located breeding on the outskirts of the Skua colonies without apparent danger from the Skua.

Where Great and Artic Skua's breeding areas were side by side it was observed that the Artic Skua was the aggressor if its territory was violated by a Great Skua, but rarely did the Great Skua attack the Artic Skua if its own territory was entered.

Curlew and Whimbrel breeding areas appeared to be associated with Common and Black headed Gulls which bred in adjoining areas.

Fulmar were found breeding in all areas of the island, on coastal cliffs and inland in croft ruins. In the latter, broken tops of walls were generally used, but in three crofts the central floor area was occupied, using the open doorway for access.

Two nests of Hooded Crow were located, one in Halligarth Woods consisting of twigs, string and plastic, and being occupied by a Wood pigeon, and the other in a ruined church at Lund consisting of sheep jawbones as a base with wool, fishing net, paper and plastic forming the nest.

Oystercatchers were observed to be breeding in close proximity to all other breeding species without apparent danger from attack.

Wrens were found to be breeding in several areas, using the dry stone wales as a nesting habitat. Many were observed to be feeding on the seaweed and rocks at low tide, and from the 20th flying juveniles were to be found in the parties.

At Norwich Marsh on the 28th, nineteen Snipe were drumming together whilst performing aerobatics over the heads of team members.

The Eider at Balta Sound began forming rafts on the 27th and a count of 128 young was made.

Tree pipits were seen at Norwich marsh on the 21st in display flight.

The Raven flock at Lamba Ness consisted of 26 birds that could usually be found on the rubbish tips by day. On the 27th six immature birds were observed with the flock as they went to roost on the Buss of Lamba Ness.

Auks and Shags were seen in various stages of oiling during the sea watches and some two dozen birds were found dead through oiling.

The various animals seen during the field meeting are shown at the end of the species list which follows these notes. On several occasions during broad daylight Hedgehogs were seen feeding in open fields. Unlike their Southern relatives these animals did not curl up when they were disturbed or touched.

FIELD DESCRIPTIONS OF THE UNUSUAL SIGHTINGS

Black Kite (Milvus migrans)

Seen at Haa, Unst for c15 mins in glasses 10 x 50 and telescope x 60. Visibility excellent, $\frac{3}{6}$ cloud, bright sunshine with light to the right.

General impression: Large dark brown bird of prey with slightly forked tail and light brown pattern on top; pattern was a straight line. The carpal joints projected forward on the wings. Abraded plumage - possibly shot.

Bird was circling, being chased by gulls.

Plumage: Head - forehead, crown and sides of head - buffish brown. Impression of darkish ear coverts.

Upper parts - Dark brown body, lighter in the sun.

Under parts - Nondescript dark brown. Primary coverts dark, secondaries and tertiaries coverts paler. Primaries, secondaries, retrices - deep chocolate brown.

Typical flat winged flight with flexing primaries and secondaries.

Carpals pushed forward in typical milvus attitude. Tail angled to correct thermals.

Great Northern Diver (Gavia immer)

Seen near Balta Sound on water opposite the Givv through 12×50 glasses. Good visibility with bright sunshine from the right. Also seen with sun behind clouds. Watched for c10 minutes from 100 yards to extreme range as it floated from observers.

Ceneral impression: Heavier, stockier, thicker necked than Red Throated Divers (Gavia stellata) seen during the week.

Plumage: Crown and back of head - dark. Dark colouration did not extend down to the eye. Cheeks, neck and breast - white. Lighter grey/brown looking back with greyer mottlings.

No tail to speak of.

Bill straight and strong looking and dark in colour.

Black patch half way down the neck both sides which did not meet at the front. White ring round this black patch.

Under parts of wing and body seen to be pale when the bird stood on the water and flapped its wings.

Acrocephalus (Sp)?

On the 8th one bird was seen in a croft garden in good light only details taken were:

Acrocephalus appearance; almost Starling (Sturnus vulgaris) size. Large bill. Brown above with clean white underparts, especially throat. Suggestions of 'pointy' head, had a supercillium. Much larger than nearby Willow Warbler/Chiff chaff.

Seen perched on stout grass stems. Flew boldly to bush and small tree.

Richard's Pipit (Anthus richardi)

Seen on 20th and 22nd at Lamba Ness in good light with bright sunshine. Seen as close as 20 feet.

General impression: A large, long tailed pipit, much larger than Meadow Pipit (Anthus pratensis).

<u>Plumage</u>: Whole of upper parts dark brown with darker streaking. Underparts buffish with dark brown streaks on front and side of breast. Tail long, dark with whitish outer tail feathers. Pale stripe running through eye. Bill dark and stout, legs long yellowish.

Call: Hard 'zeep, zeep'.

Observers have had previous experience with this species in the Far-east.

Honey Buzzard (Pernis apivorus)

Two birds seen moving south west at Loch of Snarravoe on 23rd June. Visibility good. Range 50 feet plus.

General Impression: Flat wings; soaring, then typical Honey Buzzard drooping wing glide towards Yell.

<u>Plumage</u>: Primary coverts, dark brown; black carpal patch. Secondries brownish/buff. Underparts brownish buff streaked dark brown. Tail long and narrow with black bars at base and end of tail.

EXPEDITION PERSONNEL - UNST 1975

| Team 1 | (1 - 1 | 4 June) | | |
|----------|--------|-----------|--------------------|--------------|
| Flt Lt | K | Bomber | RAF Lossiemouth | Team Leader |
| MO | F | Walker | HQ STC | Field Leader |
| Mrs | K | Bomber | | |
| Gp Capt | R | Dick | SHAPE | |
| Sgt | G F | Rivers | MOD (Air) | |
| Sgt | WP | Rees | HQ AFNORTH | |
| Sgt | P | Baker | HQ STC | |
| SAC | F | Peach | RAF Digby | |
| Jnr Tech | S J | Lumby | RAF Locking | |
| | | | | |
| Team 2 | (15 - | 28 June) | | |
| Wg Cdr | DB | Hamley | MOD (Air) | Team Leader |
| FS | R | Kersley | RAF Colerne | Field Leader |
| Maj | D | Counsell | | |
| Fg Off | D | Elliot | RAF Henlow | |
| Sgt | P | Tithecott | RAF Brawdy | |
| Cpl | I | Prophet | RAF Fairford | |
| Cpl | A S | Morgan | RAF Locking | |
| SAC | P | Triggs | RAF Thorney Island | |

Birds on 21st seen off Tonga. On 27th off Pair Isle Immature birds on 5, 6 and 9th with 2 on 19th June Breeding recorded Seen from Unst/ Yell ferry Page 8 REMARKS 9 10 11 1213 1415 1617 18 1920 21 2223 24 25 26 27 28 29 30 12 Breeding recorded in all areas visited - estimate 05000 breeding at Burra Firth cliffs OBSERVER - ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY œ root -4 m00+ 10 -Common and breeding in all areas - estimated 9004 birls in Lambaness area 9 27 21 5 8 2 14 13 26 c4150 6 14 8 00 1 -2 9 Common and breeding - nest count from Hermaness 7 -5 9 2 5 4 9 m -2 5 ω TSM 2 9 2 11 9 2 6 4 8 1975 JUNE -0 -00 4 4 11 ٣ 2 3 -~ 2 Black-browed Albatross (Diomedes Malanophrys) Cormorant (Phalacrocorax carbo) Shag (Phalacrocorax aristot-Manx Shearwater (Procellaria puffinus (Hydrobates pelagicus (Fulmarus glacialis) Eallard (Anas platyrhynchos) Great Northern Diver (Gavia immer) Black Throated Diver (Gavia arctica) SPECIES DATES Red Throated Diver (Gavia stellata) Slavonian Grebe (Podiceps auritus) Gannet (Sula bassana) Storm Petrel Fulmar ellis)

3 juv at Hoga Ness 10
3 rafts at Balta Snd
on 27th,93(72 juv),
49 (38 juv) 33 (18 juv
Female birds on 19th Male bird on 27th Breeding recorded All male birds Page 9 6 7 8 9 10 11 1213 1415 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 OBSERVER - ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY 99 101 194 ₫ N 18 41 99 70 75 30 60 + ~ 18 ~ m Common and breeding in all areas -m -1975 JUNE - UNIST 1 2 3 4 5 (Somateria mollissima) Red Breasted Merganser (Mergus serrator) Osprey (Pandion haliaetus) SPECIES/DATES Common Scoter (Mellanitta nigra) (Pernis apivorus) Tufted Duck (Aythya fuligula) Black Kite (Milvus Migrans) Grey Lag Goose (Anser anser) Buzzard (Buteo buteo) Teal (Anas crecca) Pintail (Anas acuta) Buzzard (Sp) (Buteo sp) Honey Buzzard Eider

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25th both immature 18th & in winter plumage in winter immature H = Heard Thought to be breeding at Norwich Marsh 27th at Norwich Marsh 19 birds drumming at same time At Lambaness non-breeding flock of up to 93 birds Breeding recorded Breeding recorded H = Heard Breeding recorded Sample counts REMARKS 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 \$ 3H 112 82 162 88 33 4 16 38 8 61 --3 12 7 5 2 2 2 2 00 8 10 100 6 2 -61 110 126 26 36 88 2 16 11 33 13 18 15 38 3 31 20 10 2 N 8 17 4 6 7 2 3 ,5 25 32 21 2 ш 2 8 16 N Ħ -18 ∞ d. а а а Common and breeding in all areas c24 Common and breeding in all pur --Ringed Plover (Charadrius hiaticula) 5 4 3 12 12 6 10 28+ 9 2 7 H 4 --Common - breeding confirmed 4 P P 2 N 4 (1) 2 4 4 1 16 2 9 2 Ħ --3 1 2 5 3 4 5 4 9 630 -10 4 Snipe (Gallinago gallinago) 1 1 2 2 7 щ н Golden Plover (Charadrius apricarius)8 8 Oystercatcher (Haematopus ostralegus) Roorhen (Gallinula chloropus) (Arenaria interpres) (Scolopax rusticola) Ouriew (Fumemius arquata) (Falco tinnunculus) (Falco comumbarius) SPECIES /DATES (Vanellus varel) Corncrake (Crex crex) (naematopus Turnstone Lapwing Kestrel Merlin

Breeding Recorded Counts for 8th & 24th were from Fellar Breeding recorded -dees not include sea counts (Table A) REMARKS Breeding Recorded Breeding Recorded Breeding. Recorded Page 11 25 26 27 28 29 30 1 OBSERVER - ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY 1 8 62 4 38 2 2 9 10 11 1213 1415 16 17 18 19 20 21 22 23 24 Д 28 4 5 6 14 1 10 -2 24 m 8 9 3 15 10 2 4 N 2 Д 7 Д Д 5 Д Д Д 2 2 m Д Д Д ω 2 Д 1975 JUNE - UNST 2 α 0 7 2 2 4 7 2 3 4 5 6 12 13 1 3 m 6 6 16 2 4 (Philomachus pugnax) Red-necked Phalarope (Phalaropus) SPECIES/DATES Black Tailed Godwit (Numerius phaeopus) Common Sandpiper (Tringa hypoleucos) Greenshank (Tringa nebularia) Knot (Calidris canutus) Dunlin (Calidris alpina) (Tringa totanus) Sanderling (Crocethia alba) (Limosa limosa)

Redshank

Whimbrel

Breeling recorded -does not include sea counts (Table 9)

92 16 199

v

186 80216

Common breeding species

Great Skua (Stercorarius skua)

Common breeding species

(Stercorarius pomarinus) | | | | | |

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Sighting of 21st -exhausted on rocks at Wick of Shaw Most signtings from Balta Sound area, small numbers at Norwich Bay Breeding recorded -300+ 25-27th flying North over Norwich in evening Feeding off Skaw Banks Breeding Recorded Breeding Recorded REMARKS Breeding Recorded Breeding Recorded Breeding Recorded Breeding Recorded 8 9 10, 11 12,13 1415 1617 18 1920 21 22 23 24 25 26 27 28 2930 108153102 ~~-49 5 | 56 | 76 | 42 | 22 | 9 | 12 | 29 | 33 | 46 343300275 Д, 37 157 38 66 w - u væ u α - 0 3 31 11 37 62 57 52 1562611 70105224 - 0.9 5 91 100 7 72 Common on all sea watches - breeding recorded 6 25 4 10 10 09 200 2 188 41 24 000 9 27 38 V IV -P 65 ~ 2 39 7-1 21 N 9 Д 56 32 Present during first fortnight Cormon breeding species Common breeding species Common breeding species -Common breeding species Common breeding species Common breeding species Common breeding species 1 2 3 4 5 6 2 N 2 Great Black-backed Gull (Larus marinus) Lesser Black-backed Guil (Larus fuscus) Sandwich Tern (Sterna sandvicensis) SPECIES/DATES Glaucous Gull (Larus hyperboreus) Herring Gull (Larus argentatus) [Leland Gull
(Larus glaucoides) Kittiwake (Rissa tridactyla) Black-headed Gull (Larus ridibundus) (Sterna hirundo) Arctic Tern (Sterna macrura) Common Gull (Larus canus) Razorbill (Alca torda)

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| | | 67 | 1975 JUNE | 1 | INST | ST | | OBS | OBSERVER - ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY | - ROY | AL A. | IR F | ORCE | ORN. | CTHO. | LOGI | CAL | 300 | CETY. | | Page 13 |
|--|---|-------|--------------------------|---------------|-------|--------|------------------------|-----------------|---|-------|--------------|---------|--------|----------|---------|-------|----------------|-------|----------|------|---|
| SPECIES/DATES | | cvi | 3 4 | 50 | 2 | ω | 1 01 6 | 11 12 | 1213 1415 16 17 18 | 15 1 | 617 | 18 | 192 | 19 20 21 | 22 23 | 23 24 | 1 25 | 26 | 26 27 28 | 2930 | REMARKS |
| Ouillemot (Uria aalge) | | | | | | - S | no uoi | - 111.e - | Common on all sea watches - breeding recorded | tches | - <u>;</u> - | reed | ling | F 26 - | rded | | | | | | Breeding Recorded |
| Black Guillemot (Uria grylle) | | - F - | Present | | - g - | - irst | during first fortnight | -ig- | | | 29 | 29 19 | 40 19 | 37 | 42 | 401 | - | 20 38 | 41 | | Sighted all round coast - 24th from ferry Fetlar/Unst |
| Puffin (Frateroula arctica) | | 7 1-1 | - Co | Common in all | all | | | d on | areas and on sea watches - breeding recorded | tches | | - pare | ling – | reco | rded | + | | | | ## | Breeding Recorded |
| Rock Dove (Columba livia) | | - G | Common in coastal cliffs | _ coa | stal | - 61 - | - fi | | | | Д | N | 8 7 | 14 25 | 2 | 19 28 | 5 | Ν. | 19 | | 4 flying juvs being fed on 24th |
| Wood Pigeon (Columba palumbus) | 0 | - | 17.3 | | 25 | | | | e12 | | 14 | 2 | 1 11 | _ | 2 | 4 | 9 | 2 | 4 | | Breeding Recorded |
| Turtle Dove (Streptopelia turtur) | | | | | | | | | - | | - | | - | | - | | | | | | |
| Collared Dove (Streptopelia decaceto) | 2 | 14 | 3 | | 13 6 | 6 3 | | | - | | 7 18 | | 8 19 | | 18 35 | | 11 | 33 35 | 2 | | Mostly in the Halligarth area |
| Snowy Owl (Nyotes scandiaca) | | | | | | 3 | | | | | | | | | | 4+ | | | | | 2 |
| Short-eared Owl (Asio flammeus) | | | | | | | - | | | | | | | | | | | | | | |
| OM1 (Sp.) | | | | | | | | | | | | | | | - | | | | | | |
| Swift (Apus apus) | | | | | - | | - | | | | | | | 4 | - 61 | | | | | | |
| Okylark (Alauda arvensis) | | | | Comp | ri no | al | area - | - 6 | Common in all areas of the islant - breeding recorded | lani | _ i _ | - ee di | - 12 | ecor | _ ted _ | | - - | | | | Breeding Recorded |

27 at Lamba Ness 13th and 27th (6 imm on this day) 2 juvs at Borrfirth on 19th. 27th - 28 in flock at Balta Sound 3 nests at Halligarth with 10 pulli - juvs being fed from 19th Greenland race 2 on 22nd, 3 on 27th. Breeding recorded Breeding recorded -juvs being fed 25-27th REMARKS Page 14 9 10 11 1213 1415 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 OBSERVER - ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY 21 31 25 41 75 21 17 19 21 -12 14 7 18 9 15 6 3 12 6 69 26 67 43 19 7 3 7 2 1 27 19 18 21 17 17 25 5 10 3 10 9 34 39 -22 4 ~ 14 5 15 20 2 P 14 27 -9 7 2 Д ∞ Present and breeding in all inland areas ρ, 27 Present and breeding in all areas Д d 9 2 N Д Common breeding species a, 8 Present and bree ling TSW. 12 ρ, 1 2 3 4 5 6 7 5 2 œ ľ 1 9 2 1975 JUNE -2 m --m (Troglodytes troglody-Black Redstart (Fnoenicurus ochruros (Oenanthe oenanthe) SPECIES /DATES (Hirundo rustica) House Martin (Delichon urbica) Sand Martin (Riparia riparia) (Turdus musicus) Blackbird (Turdus merula) (Corvus corone) (Corvus cornix) (Corvus corax) (Phoenicurus) Hooded Crow Redstart Wheatear Redwing Swallow Raven

| | | 197 | 1975 JUNE | I Eg | TSIE | Ľ, | | Ю | BSER | VER | - RC | OBSERVER - ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY | ALTR | FOR | 3 | ORNI | TOHI |)IDO' | CAL | SOC. | ETY | | | Page 15 |
|---|----------|---------|-----------|-----------------------------|-------|----------|-------|--|--------------|-------|-------------|---|--------|-------|-----------|----------|-------|----------|-----|------|----------|--------------|-------|--|
| SPECIES/DATES | | 2 | 12 | 5 6 | 1 | (1) | 9 110 | 11 | 1213 | 3 17 | 1415 | 16 | 17 18 | | 19 20 | 27 | 22 23 | 3 24 | 25 | 56 | 27 2 | 28 2 | 29 30 | REMARKS |
| Blackcap (Sylvia atricapiila) | | | | | | - | | | | | | <u> </u> | | | | | - | | 2 | | 2 | | | 25th and 27th at Halligarth woods |
| Garden Warbler (Sylvia borin) | | | | | | - | | | | | | | - | | | | | | - | | | | | Sighted at Fetlar on 8th - all other sightingsHalffgarth |
| Whitethroat (Sylvia communis) | | | | | | | | | | | | | | | - | | | | | | | | | 20th at House of Skaw |
| Willow Warbler/Chiff- chaff (Phylloscopus | | | | | | | - | | | | | | - | - | - | - | - | | 2 | - | 2 | | | one bird seen calling on 27th was a Chiffchaff |
| Spotted Flycatcher (Muscicapa striata) | | - | | | - | | | | | | | <u> </u> | - | | | | | | 1 | | | | | |
| Pied Flycatcher (Muscicapa hypoleuca) | | | | | | - | | | <u> </u> | | | | | | | | - | | | | <u> </u> | | | |
| Dunnock (Pruneila modularis) | | | | ļ | | | | | ļ | | | - | | | | | | <u> </u> | 8 | 2 | 2 | | | All at Halligarth Woods |
| Keadow Pipit (Anthus pratensis) | _ A | - sei | nt — | Present and breeding in all | eedin | - is - | _ a_ | — <u>E</u> — | inland areas | are _ | - s | - A | | _ A | 39 | Д | ρ, | д | 52 | Р. | 46 P | | | |
| Richard's Pipit (Anthus richardi) | | | | | | | | | | | | | | | - | | | | | | | | | |
| Tree Pipit (Anthus trivialis) | | | | | | | | | | | | 2 | - | - | 2 | 4 | | | | | | | | |
| Rock Pipit (Anthus spinoletta) | | Present | | a.11 a | rourd | the | | coast | - brg - | edi | - 8: - 1 | breeding recoried | _ ie _ | in | al! | areas | - g | | | | - | | | o regularly at Lamba Ness |
| Pied/White Wastail (Motacilla a.ba) | WI WI GI | 35 | ļ | # E | | 1F 1A 1W | ¥ | | ¥ 2 | | | | 1,3 | 41 WI | <u>n.</u> | 14 17 | 4 | | | - 9 | 1¥. | ļ | | P - Pied Wagtail W - White Wagtail A - Alba Wagtail |

m - male, f - female 300+ mostly juvs at Halligarth 21-27th Breeding at Norwich Marsh At Halligarth wood Total count for Unst - 637 Page 16 REMARKS 2 3 4 5 6 7 8 9 10 11 12,13 1415 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 Common breeling species - c70 at Hoga Ness on 10th and c60 roosting at Lamba Ness ORSERVER - ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY 1n 2h 2h 2f 3f 3f 3+ 3+ 3+ ---29 58 92 62 29 39 93 47 56 73 97 2 -1 Sf -N Common - breeding in all areas Common in all areas - breeding recorded 2 Д d 1 1 3 -Д 3 4 prs 1975 JUNE - UNST -2 н Snow Bunting (Plectophenax nivalis) 12 Twite (Carduelis flavirostris) Reed Bunting (Emberiza schoeniclus) Linnet (Carduelis cannabina) SPECIES /DATES Chaffinch (Fringilla coelebs) (Passer domesticus) Starling (Sturnus vulgaris) Yellow Wagtail (Motacilla flava) Red-backed Shrike (Lamius collurio) (Passer montanus) House Sparrow Tree Sparrow

| | | 19 | 73 | 21975 JUNE | l G | | UNST | | | 0 | SER | VER | 1 | OBSERVER - ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY | L A | H | ORC | 0 | RNIT | HOL | OGIC | AL | 200 | IET | ы | | g, | Page 17 |
|---------------------|---|----------------|----|------------|--------|---|------|--------------|-----------|----|--------------|--------|-------|---|-------|-----|----------------|-----|----------|-------|------|----|-----|-----|----|-------|------|---|
| SPECIES/DATES | 1 | 2 | 3 | 15 | 9 | C | σο | 0 | 10 | 11 | 1213 | 3 1 | 1415 | 16 | 16 17 | 18 | 19 20 | | 21 2 | 22 23 | 3 24 | 35 | 56 | 27 | 28 | 29 30 | - | REMARKS |
| Basking Shark | | 1 | - | 1 ~ | - | | | | | | | | | | | | | · · | | | | | N | | | | | |
| Hedgehog | | | | | - | 3 | - | | | | | | | | | | 3 | ,*1 | 3 | 7 | | | 5 | | | | | |
| House Mouse | | - | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mouse (Sp) | | | | | | | | | | - | - | | | | | | | | | | | | | | | | | |
| Otter | | | | m | | | - | | | | | | | | | | | | | | | | | | | | | |
| Porpoiss/Dolphin | | | д | | | | | N | · m | | | | | | | ω. | т | - | | | | | | | | | | |
| Rabbit | | - - | | | | | | Ple – | Plentiful | | - <u>:</u> = | - 11 - | areas | | f | the | island | and | | | | | | _ | | | | |
| Seal (Sp) | | | - | - | 1 | | 2 | - | | | | | | | | | | | | | | | | | | | | |
| Seal, Common | | | | | | | 3 | | - | 3 | - 2 | | | | | | 7 4 | 44 | | 12 | | | 6 | | | - | | |
| Seal, Atlantic Grey | | | | | | 8 | | | - | | 5 3 | | | | | - | 2 | | | 7 | | | 31 | | | | 7th | 7th at Muckle Flugga |
| Whale | | <u> </u> | | 9 | | | | | | | | | | | | | - | 8 | <u> </u> | | | | m : | | | | | |
| Rodent SP | 1 | | 1 | | | | † | + | 1- | | - | | | | | + | +- | 2 | 1- | | | 1- | 1 | 1 | + | | On r | On rocks at Skaw, size of small rat, |

| SPECIES /DATES | 1 | CI | m | 4 | 1.45 | 9 | 1- | 8 | 9 10 | H | 1213 | 17 | 15 | 1415 16 17 | 17 | 18 | | 1920 | 12 | 22 | 22 23 | 24 | 25 | 26 | 27 | 28 | 2930 | 000 | - | REMARKS | 1 |
|---------------------------------|---|----|---|---|----------|---------|--------------|----------|------|----|------|----|----|------------|----|----|---|------|----|----|-------|----|----|--|-----------|--------------|--|--|---|---------|---|
| Vole | | | | | | | | - | | | | | | | | | | | | | | | | - | | _ | - | | | | |
| Black Veined White Butterfly | | | | | | | д | | - | | | | | | | | | | | Д | д | д | | | ы | | | | | | |
| Large White Butterfly | | | | | | Д, | | <u>д</u> | | Д. | | | | | | | | | | д | | д | | | д | | | | | | |
| Large Tortoishell Butterfly | | | | - | <u> </u> | - | | - | | | | | | | | | | | | 8 | 100 | 1 | | | - | | | | | | |
| Brimstone | | | | | | | | | | | | | | | 8 | | 2 | | | m | | | | | | | | | | | |
| Buindle Bee | | | | | | д | д | щ | д | Д | | | | | | Д | д | д | Д. | д | д | д | д | д | - | | | | | - | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | - | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | - | | | | | | | | | | | | | - | | |
| | | | | | | | | | | | | | | | | | | | | | - | | | | | | | | | | |
| | | ļ | ļ | ļ | | | | | | | | | | | | | - | | | | | | | | | | | | | × | |

AUK MOVEMENT IN UNST - SHETLAND, JUNE 1975

Introduction

An attempt was made by members of the Royal Air Force Ornithological Society to collect, for interested parties, information on the movement of Auks off the island of Unst. The aims were to determine the size, duration and direction of movements by co-ordinated counts from several localities on the island.

Method

Two teams visited the island, the first from 3 - 13 June, the second from 17 - 27 June. The first team spent up to six hours a day on continuous sea watches. Teams of three worked together, two counting north and south movements, with the third member recording results. Tasks were rotated at five minute intervals. The general accuracy of the resulting counts was considered to be of a high standard.

The second team made sea watches on nine of the days, taking sample counts over a period of six hours of five minutes in every hour and determining an average hourly flow. The higher figures possibly reflect the greater number of young being fed. Teams of four worked together on each sea watch (see Tables 1 - 8).

Movements

It soon became obvious to the first team that few auks passed Hoga Ness and Mu Ness, and that the major movement was past Lamba Ness. Nevertheless, sample counts were taken from several localities including Tonga, Ness of Collaster, the Noup and Houllan Ness.

All Northerly auk movement past Lamba Ness was on a broad front with an average heading of 320° - 330° . Birds moved past in tight flocks, streams, or loose parties from within a few yards of the shoreline to the extreme range of binoculars. Heights were from sea level to approximately 5000 feet above sea level (height from known cloud base). Birds rounding the Holm of Skaw turned onto a north-westerly heading $(300^\circ-320^\circ)$ towards Herma Ness, with small parties breaking off to the colonies on the north coast of Unst.

Sample counts of species of auks moving off Lamba Ness was virtually impossible owing to the extreme range of many groups, but the second party observed that when large numbers of Guillemot passed Puffin numbers were low, and vice versa.

Off Lamba Ness the general movement of all species was northerly, over a broad front, with large numbers involved. The north to south numbers were low on every count, eg on the 18th June at 0915 hours (BST), 17,320 birds per hour were moving north, whilst 2412 birds were moving south. The tendency was for movement to decrease as the morning progressed, and to increase from 1600 hours, with full movements taking place again at 2200 hours. It was noticed that Black Guillemot used the sea off Lamba Ness as a feeding area, with an average count of 40+. Movements of other species is shown in Table 8.

Two periods spent on radar watches were inconclusive owing to considerable wave clutter up to the radar horizon.

Feeding

Many northerly flying birds observed from Lamba Ness and Hoga Ness were seen to be carrying fish, and these birds were subject to constant harrying by Great Skua (Stercorarius skua) and Artic Skua (Stercorarius parasiticus). Attacks were not

noticed on southerly moving birds. Rafts of auks totalling many thousands of birds were observed off the Wick of Skaw on 6th June between 1000 and 1200, on the 9th June between 0900 and 1100, and between Herma Ness and the Noup on 10th June from 0915 and 1010 hours together with sightings on the 21st and 22nd June between 0900 and 1200 hours.

Gannets on their northern passage were continuously parasited by Great Skua, which used two methods of harassment. One method was to attack from above and drive the Gannet into the sea continuing to harass from above until the Gannet had disgorged. The second method was to attack from above tugging the Gannets wing until the Gannet was forced to land in the water. The wing tugging would still persist until the Gannet disgorged. It appeared that the wing tugging method was quicker in getting the Gannets to disgorge. Artic Terns were also harassed by the Artic Skua, but they were not always successful in making the Terns disgorge.

Shags at times formed feeding rafts of 500+ to the north of Lamba Ness. On 25th June, between 1320 and 1335 hrs (BST) 500+ Shags were feeding in an area of circa 100 sq m amongst a large shoal of fish. Within five minutes 270 Gannets were diving and feeding amongst the same shoal. This suddenly ceased at 1335 as the shoal moved out to sea. During this activity, four collisions by Gannets and Shag were recorded, which left one Gannet unable to fly and a Shag virtually dead. Up to 29 Great Skuas and 19 Greater Black-backed Gulls were observed attacking Shag and Gannets during this period.

Observation

With the considerable sea bird movements to and from fishing grounds off Lamba Ness and large numbers of fish eating birds breeding in the Shetland area, any spillage from fractured oil pipes or damaged oil wells could result in a disastrous slaughter of wild life. If this did occur, would the sea birds of the Shetlands ever recover their former status, and would future generations of bird watchers be denied the pleasure and excitement that we have experienced in seeing these beautiful birds in their natural environment.

Reg Kersley

- Table 1. Hourly totals of all species off Lamba Ness, Unst 18-27th June 1975.
- Table 2. Hourly totals of auk movement off Lamba Ness 5-11th June 1975.
- Table 3. Hourly totals of auk movement off Lamba Ness 18-27th June 1975.
- Table 4. Hourly totals of auk movement off Hoga Ness, Mu Ness, The Noup and the Holm of Skaw 5-11th June 1975.
- Table 5. Comparative counts of auks Hoga Ness.
- Table 6. Hourly totals of the average movement of Cannets off Lamba Ness 18-27th
- Table 7. Hourly totals of the average movement of Fulmar off Lamba Ness 18-27th 1975.
- Table 8. Total numbers of species not covered in Tables 2-7 off Lamba Ness 18-26th June 1975.

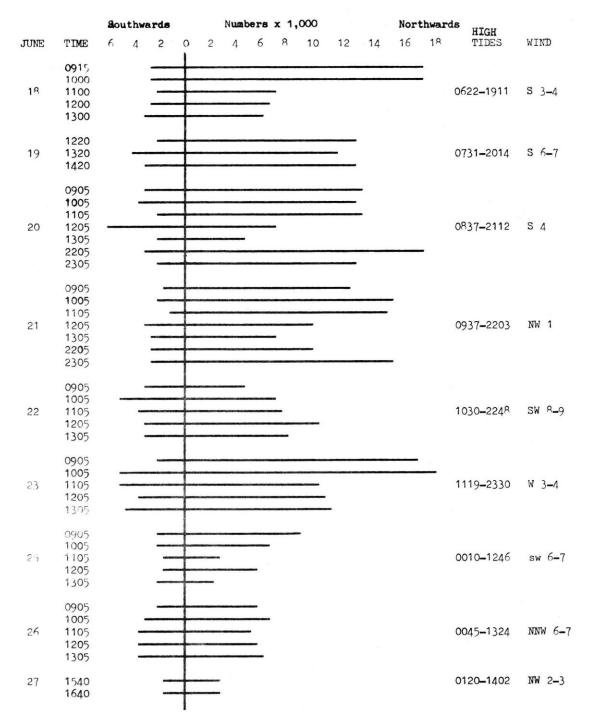


Table 1 - TOTAL HOURLY AVERAGE MOVEMENT - ALL SPECIES - LAMBA NESS UNST

18 - 27 JUNE 1975

Average Movement Northerly
Average Movement Southerly

9652 per hour

2909 per hour

TABLE 2

HOURLY TOTALS OF AUK MOVEMENT - LAMBA NESS, UNST 5 - 11 JUNE 1975

| SOUTH | 2nd Hour | 598 | 113 | 179 | | 514 | - Estimated Count | 140 | | - Estimated count | 5529 | | | | | |
|---------------|----------|-----------|-----------|-----------|-----------|-----------|-------------------|-----------|-----------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 1st Hour | 635 | 145 | 131 | 1680 | 502 | 250 | 373 | No count | No count | 5685 | No count |
| NORTH | 2nd Hour | 8612 | 542 | 731 | 1 | 5574 | 1 | 11095 | 5560 | 1 | | 2600 | 2760 | 9716 | 7216 | ı |
| ON | 1st Hour | 9632 | 029 | 657 | 11280 | 10602 | 2600 | 13520 | 6699 | 7980 | No count | 9048 | 4414 | 7656 | 9919 | 7864 |
| WIND | " | ESE 2-3 | ESE 5 | SE 6 | SE 4 | SE 4 | SE 4-6 | SE 4 | NE 5 | NE 5 | E 4 | | SE 3-1 | SE 2 | E 2 | Е 3 |
| HIGH TIDE BST | | 0815-2103 | | | 0909-2147 | | | | 1121-2340 | | | 1206 | | | 1248 | |
| TIME BST | | 0900-1100 | 1200-1400 | 1500-1700 | 0915-0945 | 1000-1200 | 1330-1400 | 2000-2200 | 0900-1100 | 1100-1200 | 2000-2200 | 0830-1030 | 1030-1230 | 1930-2130 | 0900-1100 | 1100-1200 |
| DATE | 1 | 5 June | | | 6 June | | | | 9 June | | | 10 June | | | 11 June | |

TABLE 3
HOURLY AVERAGE RATE OF AUK MOVEMENT - LAMBA NESS, UNST 18-27 JUNE 1975

| HOURET A | VERROE RATE OF A | OK PROVEHENT LAMBA N | ESS, UNST TO | 5-27 JUNE 1973 | |
|----------|------------------|----------------------|--------------|----------------|----------|
| JUNE | TIME BST | HIGH TIDE BST | WIND | NORTH | SOUTH |
| 18 | 0935 | 0622 - 1811 | s 3-4 | 13200 | 1152 |
| | 1120 | | | 6192 | 852 |
| | 1315 | | | 3552 | 3720 |
| 19 | 1150 | 0731 - 1914 | s 6-7 | 1220 | 1278 |
| | 1215 | | | 1067 | No count |
| | 1335 | | | 1412 | 1188 |
| 20 | 0925 | 0837 - 2012 | S 4 | 12744 | 2250 |
| | 1025 | | | 21600 | 2600 |
| | 1045 | | | 16000 | 3600 |
| | 1200 | | | 9900 | 1600 |
| | 1250 | | | 8636 | 3200 |
| | 2215 | | | 17124 | 1320 |
| | 2300 | | | 17140 | 3760 |
| 21 | 0935 | 0937 - 2103 | NW 1 | 11556 | 1320 |
| | 1050 | | | 14604 | 1668 |
| | 1145 | | | 9456 | 2304 |
| | 1320 | | | 4512 | 2472 |
| | 2150 | | | 9770 | 1900 |
| 22 | 1005 | 1030 - 2248 | ŚW 9 | 3473 | 2720 |
| | 1105 | | | 4360 | 1910 |
| 23 | 0920 | 1119 - 2330 | W 3-4 | 16560 | 2572 |
| | 1020 | | | 13392 | 4668 |
| | 1120 | | | 10068 | 4380 |
| | 1250 | | | 8532 | 3036 |
| 25 | 0945 | 0010 - 1246 | SW 6-7 | 3780 | 2005 |
| | 1045 | | | 1270 | 920 |
| | 1145 | | | 2230 | 900 |
| | 1245 | | | 3840 | 1226 |
| | 1300 | | | 3054 | 1820 |
| 26 | 0935 | 0045 - 1324 | NW 6 | 5076 | 698 |
| | 1035 | | | 2940 | 660 |
| | 1135 | | | 2184 | 552 |
| | 1250 | | | 210 | 10 |
| 27 | 1555 | 0120 - 1402 | WNW 2 | 2640 | 288 |
| | 1640 | | | 2364 | 526 |
| | | | | | |

Hourly average totals of Auks for above period:

North per hour 7590 South per hour 1859

TABLE 4

HOURLY TOTALS OF AUK MOVEMENT - HOGA NESS, MU NESS, THE NOUP AND THE HOLM OF SKAW 5 - 11 JUNE 1975

| Title 1 | WIND | SE 2 SE 3-4 SE 6 | SE 3 SE 4 SE 6 | SW S | SW 3 | E E | E 2-3 | | SE 4 | E 4-1 | E 2-4 |
|---------------|---------------|---|---|-------------|----------------------------|----------------------------|-------------|------|-------------|----------------------------|--------------|
| TH | 2nd Hour | 1136 820 136 | 97 | 920 | 2 No count | 250 800 | 342 | EAST | No count | No count No count | 1973 |
| SOUT | 1st Hour | 1069 897 135 | 69 25 32 | 1290 | 14 No count | 265 864 | 350 | ы | No count | No count No count | 1830 |
| NORTH | 2nd Hour | 164 143 784 | 607 | 145 | 3379 | 200 | 104 | ST | 2004 | 800 | 5356 |
| ON | 1st Hour | 435 152 862 | 1240 163 292 | 229 | 3 5650 | 222 153 | 140 | WES | 2577 | 1427 840 | 6926 |
| TOT TATE HOLI | nich libe bai | 0815 - 2103 | | 0909 - 2147 | | 1121 - 2340 | 1206 | | 1121 - 2340 | 1206 | 1248 |
| BOO SMIRE | LIME DOL | 0900 - 1100 1200 - 1400 1500 - 1700 | 0900 - 1100 1200 - 1400 1500 - 1600 | 1000 - 1200 | 1000 - 1200 2000 - 2200 | 1000 - 1200 2030 - 2230 | 0900 - 1100 | | 0900 - 1100 | 0915 - 1015 1100 - 1200 | 1000 - 1200 |
| MOTHADOT | LOCALTON | Hoga Ness | Mu Ness | Hoga Ness | Mu Ness | Hoga Ness | Hoga Ness | | The Noup | The Noup | Holm of Skaw |
| 1 | DALE | 5 | | 9 | | 6 | 10 | | 6 | 10 | 11 |

TABLE 5

COMPARATIVE COUNTS OF AUKS - HOGA NESS

| JUNE | TIME BST | GUILLEMOT | PUFFIN | BLACK GUILLEMOT | RAZORBILL |
|------|-----------------|-------------|-------------|--------------------|-------------|
| 9 | 1000-1200 North | 233 (53.2%) | 176 (40.2%) | 17 (3.9%) | 12 (2.7%) |
| | South | 224 (39.8%) | 301 (53.3%) | 39 (6.9%) | Nil |
| 10 | 0900-1100 North | 72 (29.5%) | 122 (50.0%) | 13 (5.3%) | 37 (15.1%) |
| | South | 186 (26.8%) | 419 (60.0%) | 53 (7.6%) | 34 (4.9%) |
| 19 | 1200-1300 North | 48 (19.7%) | 119 (48.8%) | 14 (5.7%) | 49 (20.1%) |
| | South | 198 (13.3%) | 659 (44.2%) | 90 (6.0%) | 544 (36.5%) |

| JUNE | TIME BST | HIGH TIDE BST | WIND | NORTH | SOUTH |
|------|------------------------------|------------------|--------|---------------------------|--------------------------|
| 18 | 1015 1140 | 0622 - 1911 | S 3-4 | 600 804 | 648 120 |
| 19 | 1140 1400 | 0731 - 1400 | s 6-7 | 1658 588 | 988 864 |
| 20 | 0937 1010 1110 | 0837 - 2112 | S 4 | 456 276 504 | Ni1 12 60 |
| | 1210 2210 2310 | | | 1056 730 610 | 72 396 290 |
| 21 | 0945 1110 1210 2215 | 0937 - 2203 | NW 1 | 492 564 696 722 | 444 468 612 369 |
| 22 | 1010 1100 1200 1335 | 1030 - 2248 | NW 8-9 | 228 372 324 700 | 28 348 192 240 |
| 25 | 0930 1030 1130 1230 | 1119 - 2330 | W 3-4 | 786 826 912 912 | 492 324 288 192 |
| 25 | 0940 1040 1140 1240 | 0010 - 1246 | SW 6-7 | 240 420 840 1620 | 132 120 476 360 |
| 26 | 0940 1040 1140 | 0045 - 1324 | NW 6-7 | 240 180 204 | 156 36 204 |
| 27 | 1550 | 0120 - 1402 | NW 2-3 | 204 | 24 |

Note: Average hourly movement of Cannets for the above period

North 625 per hour outh 299 per hour

TABLE 7

HOURLY TOTALS OF AVERAGE MOVEMENTS OF FULMER, LAMBA NESS UNST 18-27 JUN 1975

| JUNE | TIME BST | HIGH TIDE BST | WIND | NORTH | SOUTH |
|------|----------------------|------------------|--------|----------------------|-------------------|
| 18 | 1030 1250 | 0622 - 1911 | S 3-4 | 1416 516 | 336 120 |
| 19 | 1205 1250 1415 | 0731 - 2014 | S 6-7 | 1065 2184 2292 | 220 796 810 |
| 20 | 0945 1205 2300 | 0837 - 2112 | S 4 | 648 626 68 | 250 120 22 |
| 21 | 1020 1250 2230 | 0937 - 2203 | NW 1 | 852 910 678 | 99 120 220 |
| 22 | 1020 1200 | 1030 - 2248 | NW 8-9 | 2168 444 | 148 138 |
| 23 | 0940 1045 1155 | 1119 - 2330 | W 3-4 | 3984 2556 2016 | 244 193 72 |
| 25 | 1130 1250 | 0010 - 1246 | SW 6-7 | 1600 3900 | 627 2500 |
| 26 | 1015 1115 | 0045- 1324 | NW 6-7 | 4188 2280 | 696 2076 |
| 27 | 1610 | 0120 - 1402 | NW 2-3 | 1392 | 108 |

Note: Average hourly totals of movement of Fulmers for above period

North 1705 per hour South 473 per hour

TABLE 8

TOTAL NUMBERS OF SPECIES NOT COVERED IN TABLES 2 - 7: LAMBA NESS UNST 18-26 JUNE 1975

| | 18 0915-1315 North Sout | ч | 19 1115-1430 North South | | 20 0905-1305 North South | 1305 South | 21 0915-1315 North South | l 1315 South | 22 0915-1300 North South | | 23 0900-1300 North South | 1300 South | 25 0900-1300 North South | 3 1300 South | 26 0900-1300 North South | 5 1300 South | Hourly Average North Sout | y ge South |
|--------------------|-------------------------------|-----|--------------------------------|----|--------------------------------|---------------|--------------------------------|--------------------|--------------------------------|-----|--------------------------------|---------------|--------------------------------|--------------------|--------------------------------|--------------------|---------------------------------|------------------|
| Great Skua | 38 | 30 | ı | 1 | 74 | | 42 | 29 | 12 | 14 | 14 | 6 | 87 | 56 | 40 | 24 | 39 | 25 |
| Arctic Skua | 2 | 5 | ı | 1 | 13 | 9 | 22 | 20 | 9 | 9 | 6 | 9 | 19 | 10 | 37 | 6 | 16 | 6 |
| Arctic Tern | 30 | 126 | 52 | 55 | 27 | 20 | 19 | 13 | 98 | 70 | 38 | 64 | 170 | 220 | 40 | 12 | 28 | 11 |
| Sandwich Tern | 1 | ı | ı | 2 | ı | 1 | 1 | 1 | 1 | 1 | 1 | ı | 1 | 1 | ı | 1 | ı | 1 |
| Diver Sp? | က | ı | 1 | ı | ı | ı | 1 | ı | 1 | ı | • | 1 | 9 | ı | ı | ٠ | ٠ | ı |
| Red throated Diver | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | ı | 1 | 1 | ı | 1 | 1 | 1 | 1 | 1 |
| Eider | 1 | 1 | 1 | 1 | 1 | 1 | 9 | 1 | 4 | 5 | 2 | 1 | 1 | ı | 1 | . 1 | 1 | 1 |
| Greater Black back | 1 | 7 | 12 | 7 | 14 | 6 | 9 | 20 | 14 | 26 | ı | 6 0 | 1 | 28 | 47 | 10 | 11 | 15 |
| Common Gull | 1 | 1 | 3 | 6 | 1 | 1 | 2 | 6 | 2 | - | ı | J | 9 | S | 1 | 1 | 1 | 1 |
| Black headed Gull | 1 | ť | 18 | 32 | ı | I | 1 | ī | 1 | ı | ı | 1 | 1 | • | • | ı | • | ı |
| Lesser Black back | 1 | 1 | 1 | ı | 1 | 1 | 1 | 1 | 12 | 9 | 1 | 1 | 9 | 7 | 1 | | 1 | 1 |
| Oyster Catcher | 14 | 21 | ı | ı | ı | 1 | 3 | 1 | 72 | 2 | 16 | 7 | ı | 1 | 1 | • | 1 | • |
| Shag | 1 | 1 | 27 | 16 | 120 | 38 | 52 | 80 | 118 | 169 | 63 | 33 | 526 | 380 | 380 | 426 | 167 | 130 |
| Cormorant | 1 | ı | 2 | 9 | ı | 2 | 1 | ī | 2 | 1 | ı | 1 | ı | 1 | 1 | - | 1 | 1 |
| Kittiwake | 1 | 1 | 24 | 2 | 120 | 220 | 117 | 33 | 81 | 27 | 15 | 114 | 170 | 130 | 12 | 9 | 67 | 29 |
| Manx Shearwater | ı | ı | ı | 14 | 1 | 1 | 1 | 1 | ı | 1 | ı | 1 | 27 | • | • | • | 1 | 1 |
| Black Guillemot | ∞ | 12 | 40 | • | 19 | • | 22 (2) | 37 | 42 | 2 | 3 | 7 | 10 | 9 | 7 | - | CA | 07 |

Some Birds of The Zaire River Expedition 1974/75

By

Michael Gallagher

Scierie Forest

Dawn came late in the Scierie Forest, south west of Kindu in eastern Zaire, where we slept in hammocks under dense, dripping trees; but it was signalled shortly after 5 am by the many birds of the canopy far above us, and, on one unusually sunny morning, by the delightful, delicate cascade of song of a sunbird, delivered from a twig along-side my basha.

The first to call was usually the Great Blue Turaco, with a slow, resonant 'ko-ko-kok', developing into louder and more rapid calls as parties of these huge, colourful birds awoke and flew off with a whirring of their foot-long primaries to feed in other trees. The Trumpeter Hornbill, here nearly at the northern limit of its range, rivalled the turaco with croaks, braying and wailing like so many forest monsters. As it became lighter and the acrid smoke of our camp fire began to drift upwards into the tree tops the medley of sounds increased and formed the most memorable dawn chorus that one could wish to hear; the musical notes of the Grey Parrot, several tinker birds, ten or more species of bulbul and greenbul, Tambourine Dove and many more, unseen amongst the dense foliage, enlivened my three weeks stay in this remnant of primary equatorial forest in support of scientists on the Zaire River Expedition 1974/75.

Upemba

Being a member of the Scientific Group enabled me not only to share in some of the navigation of the Lualaba and Zaire Rivers (formerly the Congo) by the giant inflatable craft, but also to make minor expeditions to places of scientific interest up to 400 km away from the main river. We had flown to Zaire (previously the Belgian Congo and later the Democratic Republic of the Congo) on 4th October 1974, and within a week I had driven a party of five scientists, studying fish, their ecology and parasites, to Le Parc National de l'Upemba in the south-eastern uplands. Here, on the 1,800 metre high grassy plateaux 8° south of the Equator, was a great variety of larks, weavers, bishops and widow-birds, profitting from the various stages of growth of the vegetation. One Saddlebill Stork and one Woolly-necked Stork were present at separate water holes during my two weeks there; a party of Yellow-billed Duck was at one of the pools with a Greenshank and some Wood Sandpipers. Wattled Crane, Ground Hornbill, Denham's and Flack-bellied Bustard were regularly seen, as were several vultures and eagles, Crowned Lapwing assembled noisily in the evenings, and once a party of six African Marsh Owl quartered the ground over us as we drove back to Lusinga camp at dusk.

Sorties of up to 80 km were made on most days to reach the different rivers in the heat below and we camped overnight on the banks of the Lufira river. Here the African Pied Wagtail and the Pied Kingfisher were common, but Spur-winged Goose and the Long-tailed Cormorant flew by only briefly. Amongst other kingfishers along one small stream I was delighted to find the small, remarkably crested Malachite Kingfisher. Thick trees overhanging the river banks were often seemingly alive with birds, but these were extra-ordinarily difficult to see. The Little Bee-eater, hawking from boughs and bushes was less of a problem, though rather similar to the larger Bluebreasted Bee-eater; parties of European Bee-eater, seen and heard moving west on some days in October, recalled my watching similar migrations over Bahrain six months before. Turning one's back to the river was to change the scene to dry bush and the

birds to Whistling Cisticola, Tawny-flanked Prinia, Cordon-bleu, Yellow-fronted Serin and smaller seed eaters; to Black Cuckoo-shrike in some tall trees; Black-headed Puff-back Flycatcher and Black-collared Barbet resting on high, bare branches, whilst Scimitar-bill searched tree-trunks, and Violet-backed Starling and a Spotted Flycatcher fed in or under the trees. As we gathered for supper at dusk (and met mosquitoes gathering for a similar purpose) Guinea Fowl gave us a cackling chorus as they assembled to roost.

Mulongo

From the Upemba park we had a long day's drive to spend a week on the banks of the Lualaba River near Mulongo whilst we waited for the River Group to sail through the lakes. I awoke on the first day to the call of the African Pied Wagtail, which may be found breeding at most times of the year. A Palm-nut Vulture flew silently downstream through a fine dawn mist, and Black Kite flapped their way upstream over the heads of some Zairios skilfully paddling their dug-out log pirogues to market. In scrub and tall grass on our bank parties of bishops, Black-head Weaver, Red-headed Quelea, and Pin-tailed Whydah in undistinguished non-breeding dress, were already feeding before sunrise, the smaller Bronze Manikin and fire finches feeding more openly on grass stems and on pathways. Blue-spotted Dove was common but rather shy, feeding quietly on the ground amongst low vegetation. Mournful calls echoed across the water from some birds hidden in the reeds, but the owner of cheerful, musical 'tooryoo' calls (and some swearing in reply) flew briefly into view when chased by another, and proved to be Black-headed Gonalek here near the south of its range - their crimson under-parts contrasting well with the glossy black upperparts, yellow eye and buff under tail coverts. Another shrike, but of the open spaces, was the common black and white, and often motionless and silent, Fiscal, whilst the clear fluty song of the Black-headed Bush Shrike provided further contrast amongst the local members of this family. Coucals, Black-lored Babblers, a Blue-breasted Kingfisher (one of several examples of an extension of known range), Copper Sunbird and a Long-tailed Nightjar were also seen nearby, whilst across the river I found a flock of 20 White-faced Tree Duck on a pool behind the river bank with one Black-headed Heron; a party of Open-bills roosted on the river-side thorn trees.

To Ituri Forest

Leaving Mulongo on 2nd November I made a ten-day journey by landrover, inflatable river craft (one Goliath Heron, one Anhinga, Palm Swift, White-rumped Swift, the Palaearctic migrant Whiskered Tern, are a few of those seen), and then by railway, to Scierie Forest and the three weeks amongst forest birds I mentioned earlier. In December, after eight more days travel, I spent nearly three weeks in tropical rain amongst the pygmies of Ituri - a memorable experience of yet more different forced (and bats, monkeys, Elephant Shrew, pangolin, Gaboon Viper, spiders), including Scaley-breasted Illadopsis amongst the secretive bulbuls; Red-headed Malimbe, a weaver of the forest canopy, black except forehead orange-red; the little known Spotted Honey Guide; the silent Black Dwarf Hornbill, and once again the Great Blue Turaco.

Kisingani

Reluctantly I had to return briefly to our new advanced base camp on the Tshopo River at Kisingani, NE Zaire, but even here there were birds of interest: Woodland Kingfisher, White-throated Bee-eater, Didric Cuckoo, Orange-cheeked Waxbill, bulbuls, Tiny Sunbird with wing 43-48 mm, Pigmy Kingfisher, weavers, cisticolas and even Yellow Wagtails; the list grew daily and indicated the variety one could see as well as hear over open grassland between river and woodland.

Yangambi

There followed a week in forest near Yangambi, and NW of Kisingani, reached by a succession of thumbed lifts from very kindly people, where at first I found few birds. Gradually they returned to the cutting in the forest recently occupied by the entomologists, and I was able to see such unusual and colourful birds as the Redbilled Dwarf Hornbill, Blue-headed Bee-eater and a Western Black-headed Oriole. Shortage of water and of time obliged me to return to Kisingani for the last time, as planned, via the pleasant agriculture research station on high ground at Yangambi overlooking the very broad Zaire River.

Kinshasa

It was now mid-January and the small River Group was well on its way down the final stretch of river, with the worst rapids, from Kinshasa to the Atlantic. I was authorised to fly westward to Kinshasa, leaving the rest of the Scientific Group, their projects completed, to sail down by river steamer. And so for the last ten days of this remarkable and very well worth while expedition I was able to continue my work in the field.

The return of the River Group by road from the Atlantic Ocean at Banana signalled the successful end of the expedition and on 26th January, before we boarded a DC 10 of Air Zaire, we were received by President Mobutu, who had shown such interest and had given such support throughout the expedition and the preparations for it. Although the tremendous distances we had to cover naturally limited our time in static camps I had been able to make a fair survey of the bird life in some little visited places, identifying over 300 species. My thanks are due to the Scientific Exploration Society for inviting me to attend, to the Daily Telegraph and others for sponsoring the expedition, but in large measure to the people of Zaire, whom I found to be cheery, friendly and most helpful.

Michael Gallagher

Scientific names of birds in the order mentioned in the text (following Mackworth-Praed, C W & Grant, C H B 1970, 1973. Birds of West Central and Western Africa. 2 vols. London: Longmans)

Scierie Forest

Sunbird

Great Blue Turaco Trumpeter Hornbill

Crey Parrot Tinker birds

Bulbuls, greenbuls Tambourine Dove

Upemba

Larks

Weavers

Bishops and widow-birds

Saddlebill, Jabiru

Woolly-necked Stork

Yellow-billed Duck

Greenshank Wood Sandpiper

Wattled Crane Ground Hornbill

Denham's Bustard

Black-bellied Bustard

Vultures, eagles

Crowned Lapwing

African Marsh Owl African Pied Wagtail

Pied Kingfisher

Spur-winged Goose

Long-tailed Cormorant

Malachite Kingfisher

Little Bee-eater

Blue-breasted Bee-eater

European Bee-eater Whistling Cisticola Tawny-flanked Prinia

Cordon-bleu

Nectariniidae

Corythaeola cristata (Musophgagidae)
Bycanistes bucinator (Bucerotidae)

Psittacus erithacus (Psittacidae)

Capitonidae

Pycononotidae

Tympanistria tympanistria (Columbidae)

Alaudidae

Ploceidae

Ploceidae

Ephippiorhynchus senegalensis (Ciconiidae)

Disoura episcopus (Ciconiidae)

Anas undulata (Anatidae)

Tringa nebularia (Scolopacidae)
Tringa glareola (Scolopacidae)

Bugeranus carunculatus (Balearicidae)
Bucorvus leadbeateri (Bucerotidae)

Neotis denhami (Otididae)

Lissotis Melanogaster (Otididae)

Falconidae

Stephanibyx coronatus (Charadriidae)

Asio capensis (Strigidae)

Motacilla aguimp (Motacillidae)

Ceryle rudis (Alceninidae)

Plectropterus gambensis (Anatidae)

Phalacrocorax africanus (Phalacrocoracidae)

Thataerocorax arricanas (Thataerocorae)

Corythornis cristata (Alceninidae) Melittophagus pusillus (Meropidae)

Melittophagus variegatus (Meropidae)

Merops apiaster (Meropidae)

Cisticola lateralis (Sylviidae)

Prinia subflava (Sylviidae)

Uraeginthus angolensis (Ploceidae)

Yellow-fronted Serin

Seed-eaters

Black Buckoo-shrike

Black-headed Puff-back Flycatcher

Black-collared Barbet

Scimitar-bill

Violet-back Starling Spotted Flycatcher

Guinea-fowl

Mulongo

Palm-nut Vulture

Black Kite

Black-head Weaver
Red-headed Quelea
Pin-tailed Whydah
Bronze Mannikin
Fire-finches

Blue-spotted Wood-dove
Black-headed Gonolek

Fiscal

Black-headed Bush-shrike

Coucals

Black-lored Babbler Blue-breasted Kingfisher

Copper Sunbird

Long-tailed Nightjar White-faced Tree Duck Black-headed Heron

Open-bill

To Ituri Forest

Goliath Heron

Anhinga, Darter, Snake-bird

Palm Swift

White-rumped Swift

Whiskered Tern

Scaly-breasted Illadopsis

Red-headed Malimbe

Serinus mozambicus (Fringillidae)

Fringillidae

Campephaga sulphurata (Campephagidae)

Batis minor (Muscicapidae)
Lybius torquatus (Capitonidae)

Rhinopomastus cyanomelas (Phoeniculidae)
Cinnyricinclus leucogaster (Sturnidae)

Muscicapa striata (Muscicapidae) Numida meleagris (Phasianidae)

Gypohierax angolensis (Falconidae)

Milvus migrans (Falconidae)

Ploceus melanocephalus (Ploceidae)

Quelea erythrops (Ploceidae)

Vidua macroura (Ploceidae)

Lonchura cucullatus (Ploceidae)

Lagonostica spp. (Ploceidae)

Turtur afer (Columbidae)

Laniarius erythrogaster (Laniidae)

Lanius collaris (Laniidae) Tchagra senegala (Laniidae)

Cuculidae

Turdoides melanops (Timaliidae)

Halcyon malimbicus (Alcedinidae)

Cinnyris cupreus (Nectariniidae)

Scotornis climacurus (Caprimulgidae)

Dendrocygna viduata (Anatidae)

Ardea melanocephala (Ardeidae)
Anastomus lamelligerus (Ciconiidae)

Ardea goliath (Ardeidae)

Anhinga rufa (Anhingidae) Cypsiurus parvus (Apodiae)

Apus caffer (Apodiae)

Chlidonias hybrida (Laridae)

Trichastoma albipectus (Timaliidae)
Malimbus rubricollis (Ploceidae)

Spotted Honey Guide Black Dwarf Hornbill

Kisingani

Woodland Kingfisher
White-throated Bee-eater

Didric Cuckoo

Orange-cheeked Waxbill

Tiny Sunbird Pigmy Kingfisher Yellow Wagtails

Yangambi

Red-billed Dwarf Hornbill Blue-headed Bee-eater Western Black-headed Oriole <u>Indicator maculatus</u> (Indicatoridae) Tockus hartlaubi granti (Bucerotidae)

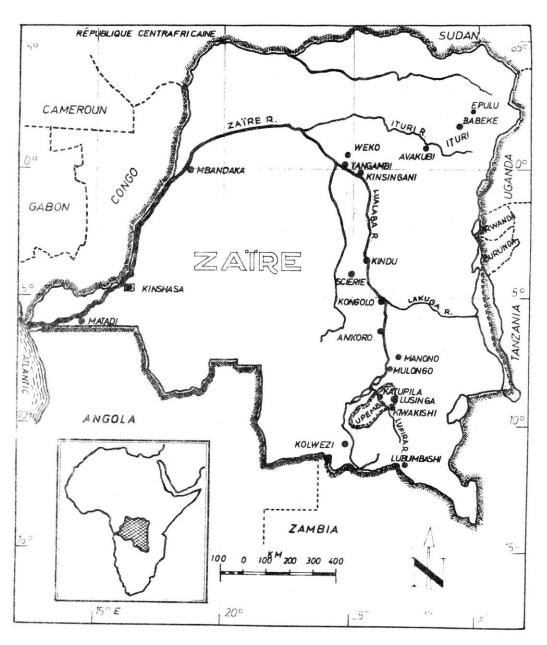
Halcyon senegalensis (Alcedinidae)
Aerops albicollis (Meropidae)
Chrysococcyx caprius (Cuculidae)
Estrilda melpoda (Poceidae)
Cinnyris minullus (Nectariniidae)
Ispidina picta (Alcedinidae)

Budytes (Motacilla flava) sp. (Motacillidae)

Tockus camurus (Bucerotidae)

Melittophagus muelleri (Meropidae)
Oriolus brachyrynchus (Oriolidae)

The map of the Republic of Zaire (shown on the following page), shows the course of the Zaire-Lualaba Rivers followed by the Zaire River Expedition 1974/75, and the location of scientific camps.



THE ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY

AN ORNITHOLOGICAL EXPEDITION TO CENTRAL LABRADOR, CANADA

AMM. The aim of the expedition was to carry out a study of the bird population in a specific area of Central Labrador. The time scale was to coincide with the Spring migration, the Spring thaw, and before the start of the Black Fly season. The study was to establish the bird population during the Spring, with particular reference to migration and breeding.

In an effort to obtain as broad a coverage as possible over the diverse habitats, the method adopted was the selective and repetitive use of line-transects. The expedition party included nine observers who were divided into four parties, three being available daily for the transects, with the fourth doing camp chores. The area selected was the Goose Bay military reserve. within road transportation distance of the RCAF Base. This limited the expedition to a locale centered around the only road in the area between Goose Bay, the settlement at Northwest River, and the derelict military site at Northwest Point. During the pre-expedition planning it was decided to site the base camp on the cleared ground around the derelict site at Northwest Point. A series of line-transects were planned to provide as wide a coverage of habitats as possible in the designated area. This would result in an area of eight miles east-west and eighteen north-south, with a coverage of all habitats found in Central Labrador: the tidal waters of Lake Melville, The Bight, Goose Bay and the eastern partof Little Lake, the fresh waters of Grande Lake, The Rapids, the western part of Little Lake, and Goslin Lake; rivers including Hamilton River, Goose River, and Goslin Brook; muskeg in an area bordered by the road, Goslin Lake and Goose Bay; marsh and wet scrub in an area north of Northwest River and inland from The Bight; dry scrub and heath in an area around Northwest Point, and Black and Sitka Spruce forest mainly to the north-west of the road. Unfortunately, on arrival we found all our extensive planning of the linetransect routes was negated by the nature of the terrain, ground conditions and weather being far worse than anticipated. So an on site re-planning was carried

MARRATIVE. The expedition took place between 18th May and 6th June 1975. On our arrival, which was during a period of persistent snow falls, it was found that the Spring thaw had washed the road away, making vehicle access to Northwest Point impossible. This meant that the base camp had to be resited along the road close to the washout in conditions that reflected the area - bleak! Preparatory reconnaissance proved our worst fears that ground conditions would make access to all habitats very difficult, for we found deep snow drifts, and lakes, muskeg and marsh completely frozen over. It also made any anticipation of bird life being present improbable, but we were to be surprised - pleasantly I must say - to find White-crowned Sparrow, Slate-coloured Junco, Ruby-crowned Kinglet, Boreal Chickadee, Rusty Blackbird and small flocks of American Robin already in residence, with single males singing. Camp was made on the frozen ground with some difficulty, and we were very soon adopted by the camp scavengers, five Grey Jays, who became very tame.

During the first week the thaw became more noticeable, with free water appearing on all lakes. Little Lake was 90% clear, and it was here that the sea duck were found in numerous rafts spread across the Lake, predominant amongst which were Common Goldeneye, Greater Scaup, Old-squaw, and Scoter - nainly

Common but with small numbers of Surf and White-winged. At this time Osprey were quite numerous as they circled and fished over the lake. The rivers had become turbulent floods of angry water and icefloes, and it was only in the quiet backwaters that Common Goldeneye, Great Scaup, and Common Merganser roosted in small numbers of paired birds. Belted Kingfishers were a common sight noisily flying low along the river. The forest tracks had become barely passable with progress still hindered by deep drifts, but in spite of this, bird life was still progressing in the forest itself, with Ruby-crowned Kinglet - the commonest bird - in full song and courtship. Common Redpoll were present in small parties, making their way to nowhere in particular. Isolated flocks of White-winged Crossbills were seen quietly feeding on the spruce cones close to the camp site, together with a single pair of Pine Grosbeak. Single Boreal Chickadee were seen moving and foraging through the forest. During this first week, Robins were still in small parties nervously occupying the forest fringes. The water level on the flooded muskeg had dropped considerably leaving isolated pools in which waders took up residence, the most vocal being the Greater Yellowleg, with the Lesser Yellowleg and Solitary Sandpiper seen and heard calling from deep in the muskeg. Overflying both muskeg and forest were male and female Marsh Hawk, Rough-legged Hawk and Red-tailed Hawk, all single birds with one observation of two Red-tails together. On the dry scrub during the beginning of the week flocks of Snow Bunting, Lapland Longspur and Horned Lark were seen feeding. Towards the end of the week this movement had dwindled to single pairs of Longspur and Horned Lark.

The second week saw Little Lake with completely free water which carried on through the Rapids into Grande Lake. Also, the Bight had become free water and this stretched well into Lake Melville, although beyond Montagnais Island it still looked wintery and inhospitable. The flocks of sea duck had increased steadily, coinciding with the Bight becoming free, and it was here that they were all to be found, having forsaken Little Lake. Around the entrance to the Rapids, Common Loon were congregating and were heard to call, whilst on most ice outcrops Glaucous Gull were roosting in twos and threes and showing little sign of movement. In contrast Herring Gull, Great Black-backed Gull and Ringbilled Gall were observed constantly moving between lakes. A small party of Northern Phalarope were seen resting on Little Lake, with one female resplendent in summer plumage. The Osprey appeared to have dispersed, with only single blads seen on the odd occasion. It was during this period that those on ir insects along the shoreline were experiencing a new hazard. Whereas regionally we had made rapid progress across frozen shore ice, the thaw had ged the scene and the formerly solid mud flats were becoming soft and The of rous. Whilst walking across apparently inshore ice one could, and did, find a leg disappearing suddenly up to the thigh into very cold water extremely uncomfortable, and with the frightening possibility of a broken limb which would have been hazardous for the isolated observer. This change in the choreline encouraged the tidal flow which attracted the waders, with Shortbilled Dowitcher, Semipalmated Plover and Semipalmated Sandpiper seen prodding the tidal mud. Meanwhile, the forest floor growths were sprouting through the rapidly clearing snow, and at this time the appearance of the Spruce Grouse was noted. A number of these extremely tame birds were encountered in the most unusual places, such as roosting in the centre of the road and needing encouragement to move. Woodpeckers were not numerous and were hard to come by, but the Yellow-shafted Flicker and both the Northern and Black-backed varieties of the Three-toed Woodpecker were present. An effort was made to estimate the

numbers of Three-toed whilst on the forest transects by a count of drunmings heard; we approximated one bird to every two square miles. It was during this second week that, on the 20th, with excitement and anticipation, the first of the Wood Warblers was seen - a single Tennessee Warbler moving rapidly along the line of the forest stream close by the camp site. This was followed on the next day by the first of many Myrtle Warblers, the number of which increased rapidly until, towards the end of the week, we were counting fifty to sixty a day. The Palm Warbler made a brief appearance during this week, with no sightings after the 30th. Other Wood Warblers did not appear on the scene until after the 20th, when a general influx started to build up. They were seen moving through the river bottomland and lake shores in appreciable numbers and included Magnolia Warbler, Black-and-White, Blackpoll, Tennessee, Myrtle, Wilson's and Blackthroated Green, together with the Northern Waterthrush and American Redstart. The majority of these species were at the extreme limit of their range, with the Black-and-White Warbler well beyond it. The same can be said for the single sightings of the Flycatchers, an Eastern Wood Pewee and the Eastern Phoebe. Both were heard calling whilst behaving flycatcher fashion amongst dead trees in the river bottoms. On the dry scrub nesting activity was starting, with Common Redpoll and White-crowned and White-throated Sparrows singing from lofted perches, and nest sites were noted in the vicinity. The Robins had dispersed from the forest fringes and were now in evidence as numerous individuals in scrub and willow. The general influx of the American Sparrows started after the 24th, and these included Fox Sparrow, Lincoln, Song, Swamp and Clay-coloured. All were at the extremity of their northern range, whilst the Clay-coloured, being a central prairie migrant, was way off course.

During the third week, commencing on 1st June, we could feel that at last Spring was in the air, with hot sunny days replacing the damp overcast conditions that had been with us from the start. It was in these conditions that we looked for signs of the dreaded Blackfly but fortunately none were in evidence. But in spite of the rising day time temperatures it still dipped rapidly at sundown to below freezing, so we did not relax our nightly routine of dressing for bed, donning everything from woolly nightcap to woolly socks. It was in this attire that individual members caused much amusement during the morning rush to the woodland toilet; were any outsiders to witness such goings-on they would certainly have been bemused and bewildered. It was early in the third week that the habitats in the river bottoms, lake foreshores, scrub, marsh and forest margins, and the village surrounds, became alive with bird life; that is, all except the muskeg, which remained quiet and desolate and only in the isolated pocks did the Greater Yellowlegs, Solitary Sandpiper and Lesser Yellowlegs show an sign of breeding, with the odd pair of Black Duck rising on being disturbed. It was on the edges where Spruce battled for a foothold in the sodden ground that most bird life prevailed, with Rusty Blackbirds very active in pairs whilst singing their peculiar song. In the isolated scrub islands in the depths of the muskeg, single Swamp Sparrows were to be found proclaiming their territory, whilst Wilson's Warblers were foraging through the willow thickets. In the village, Tree Swallows were beginning to occupy the nest boxes that appeared in every garden, whilst Robins scurried noisily for cover, with Myrtle Warblers and Ruby-crowned Kinglets seeming to occupy every bush.

As we left Goose Bay the feeling remained that, although we had witnessed the area coming to life from the stupor of winter, the high point of this Spring awakening had not been reached, and the breeding season had really only just started. There is still a great deal to learn about the lives of the birds in this most forbidding land.

CONCLUSION. The original aim of the Expedition, to establish the bird population during the Spring period and to categorise this into Breeding or Migratory, was accomplished beyond our expectations, and this was done regardless of the atrocious ground conditions, with the weather at times making everyone wish they had fur-covered webbed feet, and taking into account the fact that the majority of the members were new to American birds and all new to life under canvas in Arctic conditions. May I record a word of thanks to each individual member for their sterling efforts and a job well done. Criticisms, yes, for it was in the individual members' planning of equipment with which to live in these conditions that proved the Expedition's weakness. We were ill-prepared for those extremely cold nights, and any future expedition would be advised to make more use of equipment available in Service Expedition Stores. The timing of our presence was correct for that particular year, but climatic conditions do vary the seasons considerably, so it is a gamble. As already stated, another week would have been to our advantage for then we would have witnessed the completed influx of migratory birds and perhaps the climax of breeding numbers.

To summarise the conclusions, the reader will find relevant information under:

- a. The Population Census by Daily Totals at Annex A.
- b. The Breeding and Migratory Survey at Annex B.

References:

Field Guides: 'Birds of North America' by Robbins, Bruun & Zimm - Golden Press.

'A Field Guide to the Birds (Eastern)' by Peterson.

Scientific Titles: Birds Protected List, by the United States
Department of the Interior.

Onada Goose Subspecies: 'Waterfowl Tomorrow', by the United States
Department of the Interior.

anally, the Expedition members were:

Fit Lt K L Crouch RAF Swanton Morely Team Leader

To F Kime RAF Leconfield Deputy Leader

(and Author of this article)

FS W Corris

Ch Tech D W Bodley

RAF West Drayton

RAF Boulmer

RAF Brampton

RAF Brampton

RAF Brampton

RAF Brampton

RAF Brampton

RAF North Luffenham

Cpl A J Joyce RAF Digby

A Breeding & Migration Survey - Goose Bay, Labrador - Spring 1975

| a breeding a Migravior | | - | | souse bay, bablacor - spring | • • |) i j |
|--|------------|--------------------|----------|--|----------|--|
| | Bre | edin | g | | | |
| Species | COMPLANTED | edir propa e | ർത്തർക്ക | Notes and Comments | | <u> Habitat</u> |
| Common Loon Gavia immer | • | X | x | paired and calling peaked numbers 15-27th | <u>-</u> | Lake Melville Little Lake |
| Canada Goose (Atlantic) | | X | х | paired birds seen small flock, 22nd/29th | - | irregular flights marsh, Little Lake |
| Black Duck Anas rubripes | | x | | pairs at likely sites | - | muskeg pools |
| Pintail Anas acuta European Teal-Common Anas crecca Green-winged Teal Anas carolinus | | x x | | males chasing females & a number of pairs male & female - 22nd two males -25th only odd pairs, mainly males seen a mixed flock on one | = | |
| Blue-winged Teal Anas discors | | | | day | - | llight |
| Greater Scaup Aythya marila Lesser Scaup Aythya affinis | | x | Х | fluctuating numbers paired and display | - | Little Lake & Lake Melville Lake Melville |
| Common Goldeneye Bucephala clangula | | X | | males displaying | - | Lake Melville |
| Oldsquaw Clangula hyemalis | | | X | small numbers between the 21st and 27th | | Little Lake |
| Common Scoter Oidemia nigra Surf Scoter Melanitta perspercillata White-winged Scoter Melanitta deglandi | | | x | commonest duck, numbers in hundreds, very restless fluctuating numbers with Common Scoter fluctuating numbers the rarest scoter | - | Little Lake & Melville Little Lake & Lake Melville Little Lake & Lake Melville |
| Common (American) Merganser Mergus merganser Red-breasted Merganser Mergus serrator | | x | | pairs seen most days extremely restless pairs seen most days also very restless | - | Lake Melville & Goose River Lake Melville & Little Lake |
| Goshawk Accipiter gentilis | | | | single female in flight on the 20th | - | north along coast of Lake Melville |
| Marsh Hawk Circus cyaneus | | | | male and female seen on the 20th | - | mainly over forest |
| Rough-legged Hawk Buteo lagopus Red-tailed Hawk Buteo jamaicensis | | | | singles seen - one obs' of a 'Light-phase' two seen soaring together on the 21st | - | over forest and margins over forest |
| Peregrine Falcon Falco perigrinus Pigeon Hawk Falco columbarius Sparrow Hawk (American) Falco sparverius | x x | | | single observation, in fast high flight - SE nest site and pair seen inland from The Bight observed mating on the 21st | - - | over Little Lake wet & dry scrub derelict building Northwest Point |
| Osprey Pandion haliaetus | | | X | numbers peaked between 21st and 25th Max-10 | | numbers - Little Lake singles all Lakes |

| | Br continued | edir Propane | og passantap | Water and Committee | | W.A.C. |
|---|--------------|-----------------|--------------|---|-------------|--|
| Spruce Grouse Canachites canadensis Ruffed Grouse Bonasa umbellus Willow Ptarmigan Lagopus lagopus | merd | e X | | 22nd and 4th single bird seen on the 20th - a male | | Habitat forest, clearings and roadside Spruce clearing Northwest Point lake shore close to Northwest River |
| Common Snipe(Wilson's) Capella gallinago American Woodcock Philohela minor | | x | | display flight on the 30th. Widespread over area two seen on the 31st | - - | Wellburn Bay wet scrub close to the Bight. |
| American Bittern Botaurus lentiginosus | | | | single bird seen on the 3rd and 4th | - | bottom-land, Goose River |
| Semipalmated Plover Charadrius semipalmatus Spotted Sandpiper Actitis macularia | | x | х | 21st to 31st, peaked 26th | | foreshore. The Bight. Welburn Bay stream outlets to The Bight & Melville |
| Solitary Sandpiper | | X | | display flight - 27th | - | over muskeg |
| Tringa solitaria Greater Yellowlegs Totanus melanoleucus Lesser Yellowlegs Totanus flavipes White-rumped Sandpiper Erolia fuscicollis | | x x | x | numericaly most numerous display flight -24th only three sightings, display flight -27th movement on the 31st | - - | over muskeg pools deep in muskeg lake foreshore |
| Least Sandpiper Erclia minutilla Short-billed Dowitcher Limnodromus griseus Semipalmated Sandpiper Ercunetes pusillus | | | x | movement on the 26th, 28th & static number during Obs. | _ | tidal mud. The Bight. tidal mud. The Bight tidal mud. The Bight. |
| Northern Phalarope Lobipes lobatus Glaucous Gull Larus hyperboreus Iceland Gull | | | - | small mixed party on the 26th on the center of lake static population increased in numbers, peak on 28th single observation | - - - | Little Lake ice outcrops Grande, Melville The Bight |
| Larus glaucoides Great Black-backed Gull Larus marinus Herring Gull Larus argentatus Ring-billed Gull Larus delawarensis Ivory Gull | | | х | numerous, peaked at 75 on the 22nd static population, daily average sightings 28 possible movement as numbers peaked between the 21st & 4th, max* on 27th single obs of 2 with | | all lakes and flight between all areas except forest all lakes and flights between roosting on ice, |
| Pagophila eburnea Black-legged Kittiwake Risea tridactyla | | | | other gulls on 28th singles on 28th, 31st pair on 30th | - | 'spit' The Bight on open water, The Bight. |

| | Breeding | | | | |
|--|----------|---------|--|---|---|
| Species | органия | വർത്തൻയ | Notes and Comments | | <u> Habitat</u> |
| Mourning Dove Zenaidura macroura | | | single observation on the 28th | | |
| Hawk Owl Surnia ulula Short—eared Owl Asio flammeus | | | two single obs on the 22nd & 25th four single obs on 18th, 20th, 22nd, 24th | | derilict building & flight over lake all in flight in |
| Boreal Owl Aegolius funerea | | | single obs and good hearing of call-18th | - | area of Base camp scrub area in Goose Bay Camp |
| Belted Kingfisher Megaceryle alcyon | x | | nest-site observed max* of 5 seen | - | river bank, Goose River. |
| Yellow-shafted Flicker Colaptes auratus | | | one obs of single paired birds M & F. Otherwise singles. | - | Spruce forest close to road |
| Hairy Woodpecker Dendrocopos villosus Black-backed Three-toed Woodpecker | X | | nest-hole obs on the 29th singles seen on the 29th, 30th, 1st, 3rd. | | Spruce bottomland Churchill River all to the west of the road, in forest |
| Picoides arcticus Northern Three-toed Woodpecker Picoides tridactylus | | | singles, male & female seen on 27th, 28th, 1st similar density as above. | - | same area as above |
| Eastern Kingbird Tyrannus tyrannus | | | single male in willow scru Northwest Point, on 1st, 2 | | |
| Eastern Phoebe Sayornis phoebe | | | single obs on the 3rd very active in habitat and calling. | - | dead trees, river bottoms, Goose River |
| Eastern Wood Pewee Contopus virens | | | single obs in Birch on the 30th and calling | - | Birch & Willows bottom land, Goose |
| Horned Lark (Northern) Eremophila alpestris | | X | movement 20th to 31st peaked at 120 on 21st | - | heath, NW Point & scrub in village |
| Tree Swallows Iridoprocne bicolor Bank Swallow Riparia riparia | х | | movement started on 22nd to nestboxes on 2nd obs on the 22nd & 23rd only, total 3 each day | | village nest boxes most in flight over water & Spruce |
| Gray Jay Perisoreus canadensis Common Grow Corvus brachyrhynchos Common Raven Corvus corax | х | | fledglings seen on the 2nd, very common single obs on widely spaced dates seen most days singles, pairs and calling | | Spruce forest & clearings village surrounds village surrounds rubbish-tip, forest |
| Black-capped Chickadee Parus atricapillus Boreal Chickadee Parus hudsonicus | x | | pair seen feeding on the 2nd heard singing most dates with single tail—chase | | Spruce cutting through muskeg Spruce forest |
| Ruby-crowned Kinglet Regulus calendula | X | | very common, many singing, nest obs on 31st | - | Spruce forest willow, clearings |

| В | reed | ing | | | |
|--|---------|-----------|-----------|---|---|
| Species | COMHINE | риорадоне | മർത്തർത്ത | Notes and Comments | <u> Habitat</u> |
| Robin (American) Turdus migratorius | X | | | the 25th, then single males singing | forest edges |
| Hermit Thrush Hylocichla guttata Swainson's Thrush Hylocichla ustulata Mockingbird Mimus polyglottos | | X | | 28th, 30th and 1st single obs on the 1st & heard singing after | Spruce forest clearings stream-bed close to camp-site willow scrub, Northwest Point |
| Water Pipit Anthus spinoletta | | | X | movement 23rd to 4th peaked at 31 on 1st | foreshore The Bight |
| Starling Sturnus vulg aris | | | | small flock of 12 | the village and rubbish tip |
| Tennessee Warbler Vermivora perigrina Myrtle Warbler | X X | | | singing males 3rd | willow scrub, river bottomland Spruce forest |
| Dendroica coronata Magnolia Warbler | | | | singing males 29th singles on the 3rd & | edges, clearings willows. birch. |
| Dendroica magnolia Black-throated Green Warbler Dendroica virens | • | | | 4th single on 28th, pair on - the 3rd | willows |
| Blackpoll Warbler Dendroica striata | | | | pair on 22nd, three on the 4th | willow |
| Palm Warbler Dendroica Palmarum Wilson's Warbler Wilsonia pusilla | | | Х | small movement 27th to 30th but only singles single on 29th, three on the 1st, two on the 3rd | forest edges and road—side. wet willow scrub |
| Black and White Warbler Mniotilta varia Northern Waterthrush Seiurus noveboracensis | х | | | | forest edges shoreline scrub, willow thickets |
| American Redstart Setophaga ruticilla | | | | single female on the - 1st and 4th | |
| Rusty Blackbird Euphagus carolinus | Х | | | seen on first day, max' - 38 on 27th singing males | village surrounds muskeg scrub |
| Pine Grosbeak Pinicola enucleator | X | | | pair obs around camp, - singing male, not common | Spruce forest |
| Purple Finch Carpodacus purpureus | | | | male/females on 28th single on the 3rd | Spruce and Birch |
| Hoary Redpoll Acanthis hornemanni | v | | v | the 20th, 23rd, 24th 25th | Spruce |
| Common Redpoll Acanthis flammea | Х | | X | movement from 19th to 4th - peaked at 24 on 24th Nest noted on 27th - | willow scrub |
| Pine Siskin Spinus pinus | | | | two on 19th, four 29th three on the 2nd. males/females | |
| White-winged Crossbill Loxia leucoptera | | | | movement in flocks, max of - 19th on the 29th | Spruce |

A Breeding & Migration Survey - Goose Bay, Labrador - Spring 1975
Breeding

| Species | COMPTEED | prop abe | മുക്കുന്നു കൂട്ട | Notes and Comments | | <u>Habitat</u> |
|--|----------|----------|------------------|--|---|---------------------------------------|
| Savannah Sparrow | X | | | males in song on the 2nd | - | Alder, muskeg |
| Passerculus sandwichensis | | | | | | |
| Slate-coloured Junco | X | | | very common from 1st day, | - | Forest edges & |
| Junco hyemalis | | | | territorial/singing males | | scrub |
| Tree Sparrow | | | X | movement 18th to 22nd, max | - | Road-side scrub |
| Spizella arborea | | | | 13 on 19th | | |
| Clay-coloured Sparrow | | | | single male in song on | - | Perched on top of |
| Spizella pallida | | | | 2nd (western prairie) | | Spruce, NW Point |
| White-crowned Sparrow | X | | | very common, singing male | - | Scrub and forest |
| Zanotrichia leucophrys | | | | on the 18th | | |
| White-throated Sparrow | X | | | common after the 23rd, | - | Spruce scrub |
| Zanotrichia albico | 77 | | | singing males on 28th | | S |
| Fox Sparrow | Х | | | common after the 28th | - | Spruce scrub & |
| Passerella iliaca | | | | singing males on 29th | | clearings |
| Lincoln's Sparrow | | | | singles after 29th | - | Willow scrub, NW Point |
| Melospiza lincolnii | х | | | | | |
| Swamp Sparrow | Y | | | singing/territorial male on the 2nd | - | Spruce growth, in muskeg |
| Melospiza georgiana | Х | | | | | |
| Song Sparrow | Λ | | | singing males on the 30th | - | Forest edges to |
| Melospiza melodia | | | v | | | lake, Welborn Bay Heath and scrub, |
| Lapland Longspur Calcarius lapponicus | | | Λ | movement from 19th to 24th, peaked with 13 on 20th | - | NW Point |
| Snow Bunting | | | v | • | | As above |
| Plectrophenax nivalis | | | Λ | with above, on the 19th total 6 | _ | ns above |
| r recurophenax nivaris | | | | COLOR O | | |

THE ROLL ATA TORGE CHITTHOLOGICAL SOCIETY EXPEDITION - GOOSE BAY, LABRADOR - DAILY TOTALS

| | THE ROLLS | - | 1. C. | 10 FC | ? | 00.10 | AL SU | 1771 | 2.Arth | LITON | 3 | GOOSE BA | 4 | ASKALOR | - DAILY | 27. 17 | IALS | | | |
|-------------------------|-----------|----|-------|-----------------|------|---------|-------|------|--------|-----------|-----|----------|-----------------|----------|----------|----------|------|----|--------|---|
| Species | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 56 | 27 | 2,5 | 53 | 30 | 33 | June 1 | N | æ | 4 | Status | |
| | | | | | | , | | | , | ; | , | | , | | \ | , | | ١, | | ı |
| Common Loon | | | | | | - | | | 2 | 15 | N | | - | | | 2 | | ~ | P. P. | |
| Red-necked Grebe | | | | | | - | | | | | | | | | | | | | | |
| Common Egret | | | | | | | - | | | | | | | | | | | | | |
| American Bittern | | | | | | | | | | | | | | | | | - | - | | |
| Canada Goose (Atlantic) | | ~ | _ | | 121 | | - | | 8 | - | - | 11 | 2 | 4 | | 8 | | | P, BP | |
| Black Duck | | | 2 | | 10 | 9 | α. | Ÿ | 46+ | 5 | | 7 | 4 | 33 | | | 0 | ٧ | BP | |
| European Widgeon | | | | - | | | | | | | | | | | | | | | | |
| American Pintail | | - | | | 194 | <u></u> | + | 9 | 4 | 7 | 5 | | - | N | | | - | 12 | BP | |
| Shoveller | | | | | | | | | | | | | | | | | | 8 | | |
| European Teal | | | | | 2 | | | 3 | | | | | - | | | | | | | |
| Green-winged Teal | ٣ | | | | 12 | 12 | 5 | 19 | 20 | 9 | 7 | | 7 | 23 | • | _ | | | BP | |
| Blue-winged Teal | | | | | 10 | | | | 4 | | - | | - | 8 | | | | | | |
| Greater Scaup | | | | 24 | 2 | 3 | | 9 | 56+ | 18 | 50 | | 20 + | | 7 | * | 112 | 8 | Д, | |
| Lesser Scaup | | | | | | | | | * | | | | 6 | | | | | | BP | |
| Ring-necked Duck | | | | | | - | | | | | | | | | | | | | | |
| Common Goldeneye | | | - | 20 + | ¥ 40 | + 53+ | + 72 | 16 | 82+ | 17 | 55+ | 2 | 21+ | 21+ 100+ | -, | 2 | 0 | ci | BP | |
| Barrows Goldeneye | | | | | | | - | | | 8 | | | | | | | | | | |
| Old Squaw | | | | 4 | 9 | | - | | 36 | 14 | | | | | | | | | ρ. | |
| Common Scoter | | | | 204 | t t | α | | 17 | | 200+ 160+ | 74+ | | 200+ 200+ | 200+ | | | 260 | 0 | D. | |
| | | | | | | | | | | - 45 | 1 | | | | | | | | | |

THE ROYAL AIR FORCE ORNITHOLOGICAL SOCIETY EXPEDITION - GOOSE BAY, LABRADOR - DAILY TOTALS

| | THE WOLLD | 1 | 200 | | 1 | | | - | 100 | 1 | | 2 | | 1000 | - | | | | | |
|------------------------|-----------|----|-----|----|----|----|----|----|------|----|-----------------|----|-----|------|-----------|---|---|-----|----------|----|
| Species | May 18 | 19 | 50 | 21 | 22 | 23 | 54 | 25 | 56 | 27 | 28 | 53 | 30 | 31 | June 1 | 2 | 3 | 4 | Status | sa |
| Surf Scoter | | | | | 8 | | | | 100+ | 37 | | | | 30 | | α | - | 120 | а | |
| White-winged Scoter | | | | 3 | | | 4 | | | 12 | | | | 2 | | | | 20 | Д, | |
| Common Merganser | | | | 2 | 8 | 4 | v | α | 22 | 49 | 92 | | 14+ | 14 | | | 9 | 7 | BP | |
| Red-breasted Merganser | | | | | | 4 | 16 | | 9 | 6 | 20 + | | 17 | 25 | | 0 | | 12 | BP | |
| Goshawk | | | - | | | | | | | | | | | | | | | | | |
| Rough-legged Hawk | | | ٣ | | | | 8 | | | | 8 | - | | 8 | | | | - | | |
| Red-tailed Hawk | | | | 8 | | - | - | | - | | | | | - | 8 | | - | 2 | | |
| Golden Eagle | | | | | 2 | | | | | | | | | | | | | | | |
| Marsh Hawk | | | 0 | | | | | - | | | - | | | - | | | | | | |
| Osprey | | | ~ | œ | 6 | σ. | 10 | 5 | - | - | 2 | 2 | 8 | - | | | 8 | 8 | A | |
| Peregrine Falcon | | | | - | | | | | | | | | | | | | | | | |
| Pigeon Hawk | - | | - | | ń | 7 | | | | 8 | | | | 3 | | | | | BC | |
| American Sparrow Hawk | _ | 8 | - | 0 | | - | - | | - | 2 | | - | | - | N | | | | BC | |
| Spruce Grouse | | | - | | 4 | | | | - | | | - | - | | | - | - | 4 | BP | |
| Ruffed Grouse | | | - | | | | | | | | | | | | | | | | | |
| Willow Ptarmigan | | | | - | | | | | | | | | | | | | | | | |
| Semipalmated Plover | | | | 3 | 9 | 6 | 3 | | 28 | 8 | 4 | | œ | 8 | | | | | P, BP | |
| Black-bellied Plover | | | | | | | | | | | | | | - | | | | | | |
| Common Snipe | | | | | - | 8 | 8 | - | 4 | 7 | 8 | - | α | 9 | 3 | | | - | BP | |
| | | | | | | | | | | ; | | | | | | | | | | |
| | | | | | | | | | | 07 | ı | | | | | | | | | |

THE ROTAL AIR FORCE OFFITHOLOGICAL SOCIETY EXPEDITION - GOOSE BAY, LABRADOR - DAÍLY TOTALS

| Species | %ay 18 | 19 | 50 | 21 | 22 | 23 | 24 | 25 | 56 | 27 | 28 | 59 | % | 31 | June 1 2 | 8 | 4 | Status | |
|-------------------------|-----------|----|----|----|----|----|----|----|----|--------|----|----|----|----|-------------|---|----|------------|---|
| | | | | | | | | | | | | | | | | | | | 1 |
| American Woodcock | | | | | | | | | | | | | 2 | | | | | | |
| Spotted Sandpiper | | | | | | | | | | | | | Ξ | | 2 | - | | BP | |
| Solitary Sandpiper | | | | | | - | 7 | - | | 2 | | | ~ | | | | | ВР | |
| Greater Yellowlegs | | 3 | | - | | - | 14 | 17 | 15 | 2 | 10 | 3 | 3 | 7 | 4 | - | - | BP | |
| Lesser Yellowlegs | | | | 2 | | | | | | - | - | | | | | | | ВР | |
| White-rumped Sandpiper | | | | | | | | | | | 2 | | | 7 | | | | Д | |
| Least Sandpiper | | | | | | | | - | 3 | | 10 | | - | 5 | | | | Q. | |
| Short-billed Dowitcher | | | • | | | | | | 13 | | 21 | | - | 9 | | | 9 | ρ, | |
| Semi-palmated Sandpiper | | | | | | 2 | 2 | | 21 | | 8 | | 5 | | | | | Д | |
| Northern Phalarope | | | | | | | | | 3 | | | | | | | | | Д, | |
| Glaucous Gull | | | • | - | 5 | 10 | α | | 0 | 15 | 19 | 6 | 4 | α | 3 | | | <u>α</u> , | |
| Iceland Gull | | | | | - | | | | | | | | | | | | | | |
| Great Black-backed Gull | | 25 | 45 | 70 | 75 | 40 | 17 | 44 | 20 | α | 21 | 5 | 14 | 15 | α | | Ξ | <u>a</u> | |
| Herring Gull | 4 | 3 | 47 | 14 | 28 | 22 | 41 | 49 | 56 | 19 | ζ. | 0 | 16 | 27 | α ε | 7 | 33 | | |
| Ring-billed Gull | | | | 20 | 7 | 3 | 3 | - | 5 | 49 | α_ | | 25 | 1 | 4 | 4 | 4 | | |
| Ivory Gull | | | | | | | | | | | 8 | | | | | | | | |
| Black-legged Kittiwake | | | | | | | | | | | - | | 2 | - | | | | | |
| Mourning Dove | | | | | | | | | | | - | | | | | | | | |
| Hawk Owl | | | | | - | | | - | | | | | | | | | | | |
| | | | | | | | | | | - 47 - | | | | | | | | | |

THE ROBEL AIR FORCE CENTIFICIOGICAL SOCIETY EXPEDITION - GCOSE BAY, LABRADOR - DAILY TOTALS

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|-----|--|--|--------|----|-----|------------|------|------|-----|------|----|------------|----|--------------|---|--------------|-----|------|----|--------|
| | Species | May 18 | 16 | 50 | 21 | 22 | 23 | 24 | 25 | 56 | 27 | 28 | 59 | 30 | 31 | June 1 | ~ | 8 | 4 | Status |
| | | _ | | | | | | | | | | | | | | | | | | |
| 5,7 | Short-eared Owl | - | | - | | - - | | | ~ | | | | | | | | | | | |
| | Boreal Owl | - | | | | | | | | | | | | | | | | | | |
| - | Belted Kingfisher | | | 3 | | | | 5 | - | | - | - - | | 4 | | - | | 4 | 2 | ВС |
| • | Yellow-shafted Flicker | | | 3 | - | - | 2 | ~ | - | - | | 2 | - | - | 2 | 2 | 2 | 2 | 2 | |
| - | Hairy Woodpecker | | | | | | | | | | | | - | | | | | | | ВС |
| | Black-backed or Artic Three-toed Woodpecker | - | | | | | | | | | | | - | - | | - | | - | | |
| | Northern Three-toed Woodpecker | | | | | | | | | | - | - | | | | ~ | | | | |
| - | Eastern Kingbird | | | | | | | | | | | | | | | | - | | | |
| _ | Wood Peewee | | | | | | | | | | | | | - | | | | | | |
| - | Eastern Phoebe | | | | | | | | | | | | | | | | | - | | |
| - | Horned Lark | | | 86 | 120 | | 40 | 14 | 22 | 19 | 5 | 4 | 23 | 4 | 14 | | - | - | | O4 |
| - | Tree Swallow | | | | | 2 | α | | | - | | 10 | α | 10 | 15 | 23 3 | 37 | 6 | 19 | BC |
| - | Bank Swallow | ······································ | | | | 3 | 3 | | | | | | | | | | | | | |
| 2 | Grey Jay | | 4 | 15 | 6 | 3 | 9 | 12 | α | 3 | 3 | 11 | 12 | ~ | 4 | 7 1 | 16 | 5 | 10 | ВС |
| ~ | Raven | 2 | - | 5 | 3 | 5 | 7 | - | 4 | 4 | 2 | - | 3 | - | 3 | | | - | - | |
| _ | Common Grow | | | | | - | | | 3 | - | | | - | - | | - | | | | |
| | Black-capped Chickadee | | | | | | | | | | | | | | | | 2 | | | |
| .7 | Boreal Chickadee | <u>~</u> | \sim | 10 | - | 1 | 9 | 7 | 2 | α | 14 | ~ | 7 | 13 | 5 | 3 | 13 | 5 | 14 | BC |
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|--|---------------------------------|---|----------|----------|---|----------|----|----|----|----|----------|-----|-------------|----------|----|----------|---|------------|----|--------|
| an Robin | | | | | | | | | | | | 28 | 29 | 30 | 31 | Jun 1 | | ٣ | 4 | Status |
| Thrush 1 | | | | | | | | | | 17 | | | | | | | | 15 | 25 | BC |
| 1 1 1 1 1 1 1 1 1 1 | Hermit Thrush | | | | - | - | | | | | | - | | 2 | | 5 | | | | |
| Pipit Pipit 1 6 2 7 2 12 12 12 12 12 12 12 12 12 12 12 12 1 | Swainson's Thrush | | | | | | | | | | | | | | | - | | | | ВР |
| Pipit 1 | Mockingbird | | | | | | | | | | | | | | | - | - | | | |
| 1 | | 7 | | | | | | | 52 | 7 | | | | 16 | | | | 21 | 24 | BC |
| 1 6 2 7 2 12 12 31 1 1 8 1 1 1 8 1 1 1 1 8 1 1 1 1 8 1 | Veery | | | | | - | | | | | | | | | | | | | | |
| 12 6 10 4 2 12 12 3 13 7 1 1 2 1 19 2 8 17 17 34 50 63 21 17 43 16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Water Pipit | | | - | | | 9 | 2 | 7 | 2 | | | | | | 31 | - | - | α | Δ. |
| 3 13 7 1 2 1 19 2 8 17 17 34 50 63 21 17 43 16 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Starling | | | _ | 2 | | 10 | 4 | | 2 | | | 12 | | | | 2 | | 12 | |
| 1 2 1 19 2 8 17 17 34 50 63 21 17 43 16 2 1 1 2 1 1 2 3 3 4 5 4 5 4 5 4 5 6 3 3 3 1 3 1 3 5 6 6 38 12 8 6 5 3 3 1 3 3 3 1 3 3 3 1 3 | Tennessee Warbler | | | ~ | | | | | | | | | | | | 3 | | 13 | 7 | ВС |
| 2 1 2 1 1 4 5 4 1 1 1 4 5 4 1 1 1 4 1 1 1 1 1 | Myrtle Warbler | | | | - | 2 | | 19 | 2 | | | | | | | | | 43 | 16 | ВС |
| 2 1 2 1 3 5 6 3 3 1 2 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 | Magnolia Warbler | | | | | | | | | | | | | | | | | - | - | |
| 3 1 2 1 3 6 6 38 12 8 6 3 3 1 3 1 3 | Black-throated Green Warbler | | | | | | | | | | | · • | | | | | | 0 | | |
| 1 2 1 1 4 5 4 1 1 4 5 4 1 1 4 5 4 1 1 4 1 5 4 1 1 1 4 1 1 1 1 | Blackpoll Warbler | | | | | N | | | | | | | | | | | | | 8 | |
| 1 1 4 5 4 5 4 1 1 3 5 6 6 38 12 8 6 3 3 1 3 1 3 | Palm Warbler | | | | | | | | | | ~ | 2 | | - | | | | | | Д |
| 3 1 2 1 3 3 4 2 1 3 6 6 38 12 8 6 3 3 1 3 1 3 | Northern Waterthrush | | | | | | | | | | | | | - | 4 | | | 2 | 4 | ВС |
| 3 1 3 6 6 38 12 8 6 3 3 1 3 | Wilson's Warbler | | | | | | | | | | | | ~ | | | 3 | - | 2 | - | Д |
| 3 1 4 2 1 3 6 6 38 12 8 6 3 3 1 3 | American Redstart | | | | | | | | | | | | | | | - | | | | |
| 1 4 2 1 3 6 6 3 ^R 12 R 6 3 3 1 3 | Black & White Warbler | | | | | | | | | 3 | | | | | | | | - | | |
| | Rusty Blackbird | | - | | 4 | N | - | 3 | 9 | | 38 | 12 | α. | 9 | 3 | | 3 | - - | 3 | BC |

| | 000000 | Xay | 1 | | | Na paragraphic | 6 | c | 30 | 70 | 7.0 | ac | - | all a second | | June | | 1 | | i |
|---|------------------------|-----|-----|------|------|----------------|----|----|-------------|----|-----|-------------|----|--------------|----------|-------|-------------|----|-------------------------------------|--|
| 1 | 20001000 | | 5 | 53 | 7 | 77 | 62 | 77 | 67 | 97 | 17 | C7 | 63 | 20 | 31 | | 2 | 1 | 4 | Status |
| | | | | | | | | | | | | | | | | | | | | |
| | Pine Grosbeak | | | | | 0 | 2 | 2 | - | | 2 | | | | | | - | _ | | ВС |
| | Purple Finch | | | | | | | | | | | ~ | | | | | - | | | |
| | Hoary Redpoll | | | | - | | 20 | - | - | | | | | | | | | | | |
| | Common Redpoll | | ,,, | 2 | 10 | 5 4 | | 24 | - | 12 | α | œ | œ | 9 | 2 | 4 | 4 | 2 | 10 | BC, P |
| | Pine Siskin | ~ | | 2 | | | | | | | | | 4 | | | 80.5 | ~ | | | |
| | White-winged Crossbill | | 4 | 4 | | | | 17 | 2 | 7 | | | 19 | 2 | | 4 | 2 | | - | |
| | Savannah Sparrow | - | | 7.5 | 2 | | | | | | | | | | ~ | | 7 | 2 | | ВС |
| | Slate-coloured Junco | ٣ | 9 | 0 12 | 2 39 | 9 24 | 10 | 6 | 5 | - | 2 | 7 | 17 | 12 | 7 | 12 10 | 6 | | 12 | ВС |
| | Tree Sparrow | - | 13 | | 3 10 | 7 0 | - | 2 | | - | | | | | - | | | | | Д |
| | Song Sparrow | | | | | | | | | | | | | 9 | 3 | *** | 3 | 01 | | BC |
| | White-crowned Sparrow | α | 13 | 3 24 | 4 25 | 5 11 | 56 | 5 | 17 | 13 | 32 | 21 | 50 | 15 | 34 2 | 21 1. | 3 | 1 | 19 | BC |
| | White-throated Sparrow | | 1.1 | ω. | 5 | - | 12 | 7 | | 3 | 3 | 6 | 7 | 13 | 13 | 9 | 8 12 | | 10 | ВС |
| | Fox Sparrow | | | | | _ | | 4 | | | - | 5 | 4 | 3 | 2 | 2 | 9 | | 9 | BC |
| | Lincoln Sparrow | | | | | | | | | | | | * | - | - | *. | - | | | *ringed |
| | Swamp Sparrow | | | | | | | | | | | | | 2 | | | _ | | | ВС |
| | Lapland Longspur | | Ů, | 9 13 | | 2 | - | 3 | | | | | | | | | | | | д |
| | Snow Bunting | | v | 9 | | | | | | | | | | | | | | | | Q. |
| | Clay-coloured Sparrow | | | | | | | | | | | | | | | | τ- | | | |
| | | | | | | | | | | 1 | 2 | | | | | NB | P = BC = BC | | Passage Breeding P Breeding C | Passage Breeding Probable Breeding Confirmed |
| | | | | | | | | | | | | | | | | | | | | |