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REPORT

ON THE

MIGRATION OF BIRDS.

SEVENTH REPORT, 1885.

EDINBURGH:

PRINTED BY M'FARLANE & ERSKINE,

14 AND 19 ST JAMES SQUARE.

1886.

Price Two Shillings.

REPORT

ON THE

MIGRATION OF BIRDS

IN THE

SPRING AND AUTUMN OF 1885.

BY

MR J. A. HARVIE-BROWN, MR J. CORDEAUX,

MR R. M. BARRINGTON, MR A. G. MORE,

AND

MR W. EAGLE CLARKE.

SEVENTH REPORT.

(Vol. II., No. 2.)

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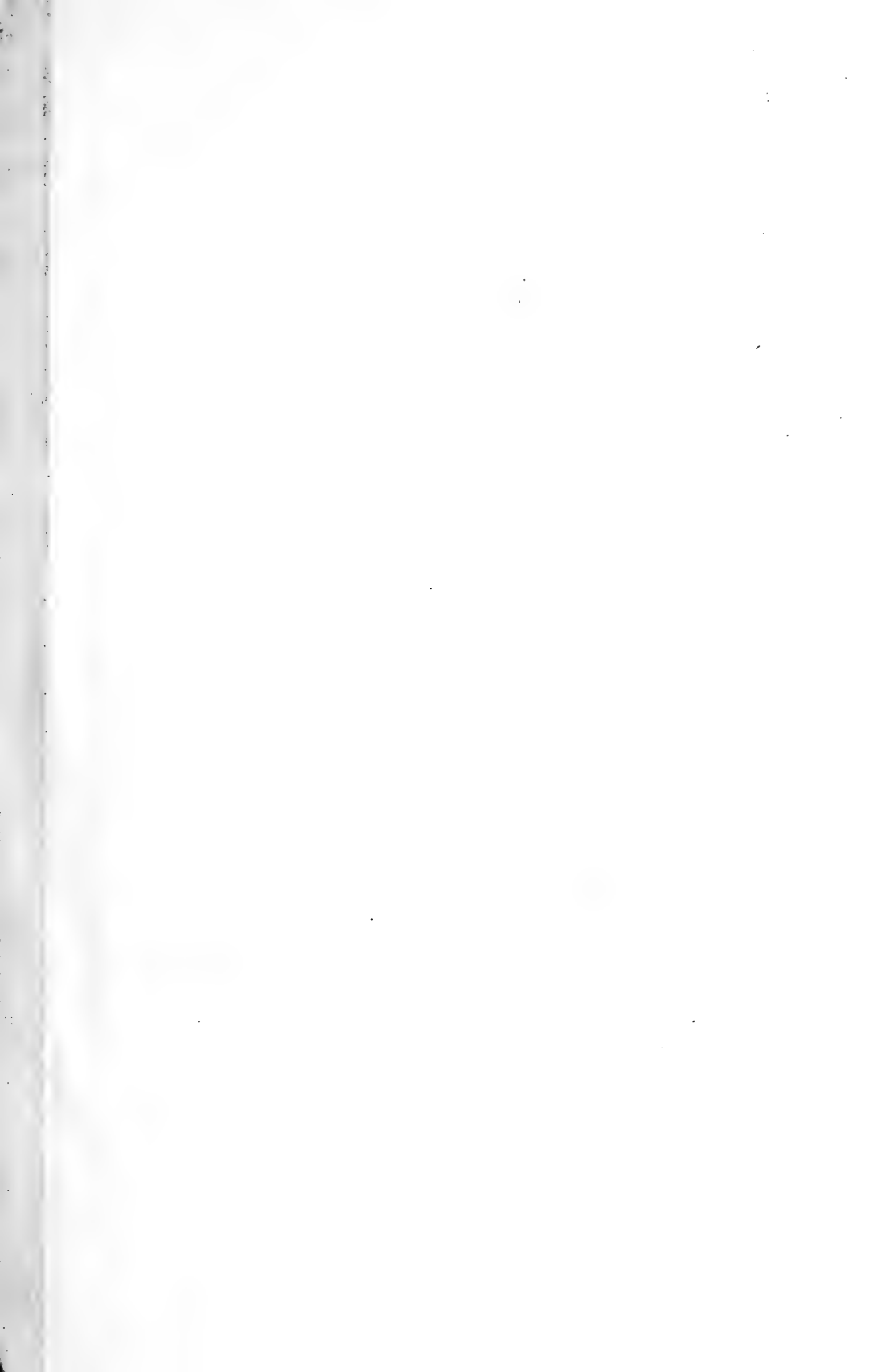
P R E F A C E.

THE following Report contains a summary of investigations of a Committee reappointed by the British Association for the Advancement of Science, at Aberdeen, in 1885, to consist of Professor Newton, Mr J. A. Harvie-Brown, Mr John Cordeaux, Mr W. Eagle Clarke, Mr R. M. Barrington, and Mr A. G. More, for the purpose of obtaining (with the consent of the Master and Elder Brethren of the Trinity House, the Commissioners of Northern Lights, and the Commissioners of Irish Lights) observations on the Migrations of Birds at Lighthouses and Lightships, and of reporting on the same at Birmingham in 1886. Mr Cordeaux to be the Secretary.

The returns relating to Scotland have been arranged by Mr J. A. Harvie-Brown; for the East Coast of England, by Mr Cordeaux; for the West Coast of England, by Mr W. Eagle Clarke; and those for the Coasts of Ireland, by Mr R. M. Barrington and Mr A. G. More.

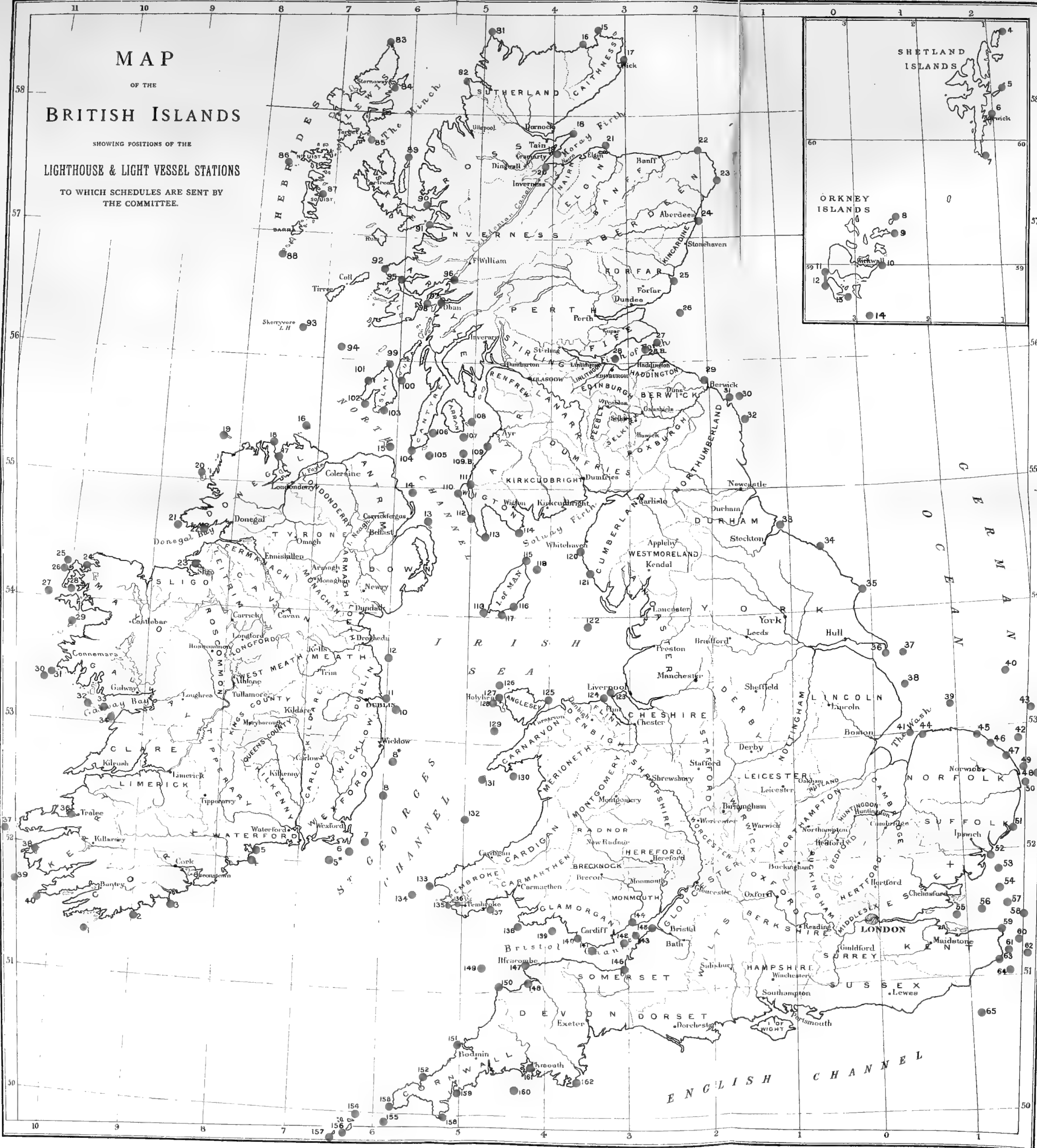
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MAP OF THE BRITISH ISLANDS

SHOWING POSITIONS OF THE
LIGHTHOUSE & LIGHT VESSEL STATIONS
TO WHICH SCHEDULES ARE SENT BY
THE COMMITTEE.



LIST OF STATIONS.

1. Iceland.
2. Do.
3. Faroe.
- 3b. Fair Isle.

Scotland—East Coast.

4. N. Unst.
5. Whalsey Skerries.
6. Bressay Sound.
7. Sumburgh Head.
8. N. Ronaldshay.
9. Start Point.
10. Anskerry.
11. Hoy Sound (Low).
12. Hoy Sound (High).
13. Cartick Head.
14. Pentland Skerries.
15. Dunnet Head.
16. Holborn Head.
17. Noss Head.
18. Tarbet Ness.
19. Cromarty.
20. Chanonry Point.
21. Covesea Skerries.
22. Kinnaird Head.
23. Buchan Ness.
24. Girdleness.
25. Montroseness.
26. Beil Rock.
27. Isle of May.
28. Inchkeith.
- 23b. Fidra (1885).
29. St Abbs Head.

England—East Coast.

30. Longstone L. H.
31. Inner Farn L. H.
32. Coquet Island L. H.
33. 5 Buoy Tees L. V.
34. Whitby High L. H.
35. Flamborough Head L. H.
36. Spurn Point L. H.
37. Spurn L. V.
38. Inner Dowsing L. V.
39. Dudgeon L. V.
40. Outer Dowsing L. V.
41. Llyn Wells L. V.
42. Hasbro' L. V.
43. Leman and Ower L. V.
44. Hunstanton L. H.
45. Cromer L. H.
46. Hasbro' L. H.
47. Winterton L. H.
48. Newarp L. V.
49. Cockle L. V.
50. Corton L. V.
51. Orfordness L. H.
52. Langard Point L. H.
53. Shipwash L. V.
54. Swin Middle L. V.
55. Nore L. V.
56. Tongue L. V.
57. Kentish Knock L. V.
58. Galloper L. V.
59. North Foreland L. H.
60. North Sand Head L. V.
61. Gull L. V.
62. Eastside L. V.
63. South Foreland L. H.
64. South Sand Head L. V.
65. Varne L. V.

Scotland—West Coast.

81. Cape Wrath.
82. Rhu Stoir.
83. Butt of Lewis.
84. Stornoway.
85. Island Ghlais.
86. Monach Isles.
87. Ushenish.
88. Barra Head.
89. Rona.
90. Kyleakin.
91. Isle Ornsay.
92. Ardnamurchan.
93. Skerryvore and Hynish Signal Tower, Tiree.
94. Dhuheartach.
95. Sound of Mull.
96. Corran Ferry.
97. Lismore.
98. Fladda, Easdale.
99. Rhuvaal.
100. M'Arthur's Head.
101. Skervuile.
102. Rhinns of Islay.
103. Lochindaul.
104. Mull of Kintyre.
105. Sanda.
106. Devaar.
107. Pladda, Arran.
108. Lamdash.
109. Turnberry.
- 109b. Ailsa Craig (building, 1885).
110. Corsewall.
111. Loch Ryan.
112. Portpatrick.
113. Mull of Galloway.
114. Little Ross.

Isle of Man.

115. Point of Ayre.
116. Douglas Head.
117. Langness (1880).
118. Chickens Rock.

England—West Coast.

119. Bahama Bank L. V.
120. St Bees L. H.
121. Selker L. V.
122. Morecambe Bay L. V.
123. Dee L. V.
124. Air L. H.
125. Menai L. H.
126. Skerries L. H.
127. Holyhead Breakwater L. H.
128. South Stack L. H.
129. Carnarvon Bay L. V.
130. St Tudwalls L. H.
131. Bardsey Island L. H.
132. Cardigan Bay L. V.
133. South Bishop L. H.
134. Smalls L. H.
135. Great Castlehead L. H.
136. Milford L. H.
137. Caldy L. H.
138. Helwick L. V.
139. Scarweather L. V.
140. Nash L. H.
141. Breaksea L. V.
142. Flatholm L. H.

143. English and Welsh Grounds L. V.
144. Usk L. H.
145. Avon L. H.
146. Burnham L. H.
147. Bull Point L. H.
148. Bideford L. H.
149. Lundy L. H.
150. Hartland Point L. H.
151. Trevoze Head L. H.
152. Godrevy L. H.
153. Longships L. H.
154. Sevenstones L. V.
155. Wolf-Rock L. H.
156. Scilly L. H.
157. Bishop's Rock L. H.
158. Lizard L. H.
159. Falmouth Harbour L. H.
160. Eddystone L. H.
161. Plymouth Breakwater L. H.
162. Start L. H.

Ireland.

1. Fastnet.
2. Galley Head.
3. Old Head, Kinsale.
4. Mine Head.
5. Dungarvan.
- 5*. Coningbeg Lt.-ship.
6. Barrels Rock Lt.-ship.
7. Tuskar.
8. Arklow S. Lt.-ship.
- 8*. Arklow N. Lt.-ship.
10. Kish Bank Lt.-ship.
11. Howth Baily.
12. Rockabill.
13. Copeland Island.
14. Maidens.
15. Rathlin.
16. Innishtrahull.
17. Dunree Head.
18. Lough Swilly.
19. Tory Island.
20. Aranmore.
21. Rathlin O'Birne.
22. Killybegs.
23. Oyster Island.
24. Broadhaven.
25. Eagle Island, E.
26. Eagle Island, W.
27. Blackrock, Mayo.
28. Blacksod Point.
29. Clare Island.
30. Slyne Head, N.
31. Slyne Head, S.
32. Arran Island, N.
33. Straw Island.
34. Arran Island, S.
36. Samphire Island.
37. Tearaght.
38. Valentia.
39. Skelligs.
40. Durse Island.

Outlying Stations.

- Heligoland.
 Stevns Fyr, Zealand.
 Malmo, Sweden.
 Casquets L. H., Alderney.
 Hanois L. H., Guernsey.

SEVENTH REPORT
ON
THE MIGRATION OF BIRDS
IN THE
SPRING AND AUTUMN OF 1885.

This year, in order to decrease the bulk of the Report, the Committee decided that Ocean Notes be not printed in the Report, but separately. Messrs Gray and Swinburne having again kindly kept notes for us, these will be retained for future publication.

GENERAL REMARKS.

OUR thanks are again due to the numerous Reporters, whose names are given under the "Diaries" of the two coasts.

Additions to our List of Stations are Fidra in the Firth of Forth, and also very shortly after this will be added a light-vessel off the Carr Rock, coast of Fife, holding an intermediate position between Bell Rock and Isle of May; and on the west coast the light upon Ailsa Craig. It is intended to introduce the electric light at Isle of May, and machinery and works are at present in course of erection.

We regret to learn that an order has been issued that light-house keepers shall no longer be allowed to read or write in the lantern-rooms; and we are glad that some little notice has been taken of the fact in the House of Commons on the 12th April 1886.

The 1885 schedules show distinctly the compressed nature of the migration, which, while very considerable in numerical im-

portance, was, at the same time, short, sharp, and decisive. The principal spring rush was similar, occupying only a few days at the comparatively late date of the beginning of May, particulars of which can be gleaned directly from the Diaries of the stations, and especially under *Turdidæ*, Fieldfares being unusually plentiful. This appears to have been the heaviest movement, taking all species together, but *Saxicolinæ* travelled all April and May, and *Silviinæ* about the middle of April.

Shortly, we may describe the migration of 1885 thus:—

In spring of 1885 the rush was pronounced, somewhat late, compressed, and in many respects very similar, but not so extensive as 1884. The prevailing winds were easterly and south-easterly in April and May, and had been very continuous. The effect was the compression spoken of—a closed fan. The largest migration ever witnessed at the Isle of May was on 3d May 1885.

In autumn the rushes partook of a similar nature,—short, sharp, and decisive, but very considerable in numerical importance. Previous to middle of October, migration was very slight at any stations, but great rushes took place between then and about the middle of November. An interesting note of the cross-migration of Woodcocks, and other birds, is given at the Isle of May. Woodcocks travelling towards the N.W., and striking the S.E. side of the glass, whilst other species were flying S.E., and striking on exactly the opposite side of the lantern, both flights being equally favourable, or nearly so, by the light E. wind. Another N.W. to S.E. rush took place during the day-time, of what must have been a very extensive migration, upon the 10th November; wind light south, and birds flying high. An unprecedentedly high gale as coming from the S.E. is recorded at Isle of May on the 23d.

We would like to ask our readers, and the British Association, of which we are a Committee, to recognise that the more we know about migration, apparently the less reason is there for scientists to use the term “Accidental.” At present “Abnormal” is better. “*Of accidental occurrence*” is a term or phrase which ought to be *expunged*, root and branch, from scientific records of migration. Every year’s statistics prove this more and more fully. “Probably an escape” is, no doubt, a safeguard against undue admission to the British List; but

we think it possible to carry this phrase too commonly into use, ignoring the fact that migration may account *much more simply* for such occurrences, under certain conditions, than escapes. A list of localities where foreign fowls, like *Porphyrio melanotus*, are kept throughout the United Kingdom, would greatly facilitate positive records of "occurrences;" and all such species as Canada Geese and ornamental Waterfowl, which are kept in confinement or partial domestication, might be returned to the Committee, or to the Association, by the proprietors, if they were asked to do so by circular.

From every succeeding year's statistics, we have come almost to similar conclusions regarding the lines of flight. Three salient routes on to our East Coast of Scotland are invariably shown, viz.: (1st) *viâ* the entrance of the Firth of Forth, and as far north as Bell Rock, both coming in autumn and leaving in spring; (2d) *viâ* the Pentland Firth and Pentland Skerries, both in spring and autumn; and (3d) *viâ* the insular groups of Orkney and Shetland, which perhaps may be looked upon as part of No. 2; and a fourth with almost certainty passes into the Moray Firth, but avoids the high cliffs of the east coast of Aberdeenshire.

On the other hand, three great areas of coast-line, including both favourably placed and favourably lighted stations, almost invariably, save in occasionally protracted easterly winds, and even then but rarely, send in no returns or schedules of the very scantiest description. These areas are Berwickshire, the whole E. coast south of the Moray Firth, and Caithness and E. Sutherland. Each and all of these areas possess high and precipitous coast-lines, if we except the minor estuaries of the rivers of Tay and Dee, and a small portion of lower coast-line in Sutherland, which face towards the east. Nevertheless these areas partake to a very large extent of the numbers of migrants which visit Scotland. Nowhere in Scotland, perhaps, is summer bird-life more abundant than in, at least, the two more southern of these areas—Berwickshire, and the interior of Aberdeen and Banff, and the valley of Spey and its tributaries. The question appears a natural one: by what route do these summer visitants reach us? or, by what route do birds reach us in autumn? Not, I believe, *over the high cliff edge* in the latter case, otherwise *some* migration would certainly be visible from the rock-

bound stations. As shown in one case, *positive* assurance is given by the reporter at Noss Head, that for eleven years scarcely a bird "*had been observed on migration day or night,*" and we have scarcely any statistics to show a contrary view, as regards the said area all through our seven reports.

Now, it is known with considerable certainty that Caithness owes its periodical passing visits of such species as Blackcap and Pied Flycatcher, both in spring and autumn, to its immediate proximity to one of the chief highways of migration—the Pentland Firth; and the configuration of the N.E. peninsula of that county clearly points to the route by which spring passing migrants reach the E. coast of the county, as we have already explained in previous remarks. They cross over a low-lying depression in the land from Dunnet Bay, and cut off the peninsula of Canisbay. Coming again in autumn, the same birds, to some slight extent, may return across this peninsula, but the undoubted fact remains that the compressed and strongest flights cross over the Pentland Skerries and through the Firth.

In the same way, it appears that while scarcely a bird is ever recorded at the stations along the E. cliff-edge of Aberdeen, yet, in autumn, a well-marked stream of migration enters the N.E. counties at a point westward of Troup Head, which forms the northern abutment of the dividing ridge, or watershed, between what are known as the Faunal areas of "Moray and Dee;" and that thence up the wide open valley of the Spey, and over the low-lying portions of the south coast of the Moray Firth, this stream is clearly traceable at many points. It is also known that an equally decided spring "return" descends the same great valley, and enters it across the dividing range between the head waters of Spey and Spean or Pattack. We have studied this subject locally—at many points personally—especially in spring, and notes we have taken, dating back for many years, all tend to strengthen the statement.

In the same way it appears almost equally certain, that while few birds fly across over the cliff-edges of Berwickshire, but pour in vast streams up the open and wide Firth of Forth, still Berwickshire, and the interior of the south of Scotland, are well supplied with migrants; and the "return" is equally apparent. A study of our previous remarks by our readers cannot, we

think, fail to give them the idea of the process of the population of these interior portions of the country in Scotland.

England is differently circumstanced to a great extent, owing principally to its low-lying sea-board. There is no occasion there to have the great migration waves compressed into grooves and firths and depressions.

The further question naturally may be asked, "But why should they not fly in over the cliff tops?" We think there are already many reasons stated in our previous remarks why such is less likely to happen, during normal migration, whether by day or by night, and that they should avoid obstacles, and choose an easier if not a shorter route.

The population of these interior parts, which are bounded by precipitous coast-lines, appears to us almost certainly to arrive by the innumerable veins—if I may so call them—which run into and join the main arteries,—and thus a circular migration is evinced.

Birds in normal migration against a beam wind fly low, and on reaching low-lying sea-board pass on inland without resting. But on approaching high land, say 200 or 300 feet in height, while at night the greatest darkness is ahead of them, and the greatest light to the north or south of their course; during the day-time, if the wind is off-shore—a beam wind,—on approaching the lee shore, they enter upon a calm belt of sheltered air and water, and choose the easier path *along* shore. According to whether the off-shore wind is strong or light, will they approach nearer or keep further out; and, skirting the coast-line, so enter upon one of the great open highways of normal migration. This, which appears almost undoubted, will in great measure account for the invariably slender returns sent in by nearly all the rock-bound stations of the more precipitous portions of the Scottish Coast.

Regarding the migration of Woodcock generally, the following notes may prove of some interest. These I culled from the note-books and game register of a naval friend stationed at Corfu and the Albanian coast in 1879.

The first flight of Woodcock occurs about the first ten days of November, and it remains a very short time before passing on, unless abnormal "south winds keep them in cover." The second and heavy flight occurs about the middle of December,

and may remain a month, and odd birds are shot even in February in the lower covers. Thomas Wood, Esq., British Consul at Patras,—an authority for the locality,—says that Woodcock come in November with a N.W. wind most freely, but in December with a N.E. wind.

By a study of the area over which the Woodcock breeds, of the time they take in flight, and of a comparison of the dates of arrivals at Heligoland and East British Coasts with the above,—it seems pretty clear, I think, that the early flight, which extends along the whole Albanian coast is composed entirely of birds bred amongst the higher levels of their southern range, coming probably from the Carpathians and as far south as the Balkans, as well as from high localities even nearer to the Albanian coast and coverts. It seems to us also equally clear that the December flight, preferring the beam wind from the N.E., comes from the western parts of North Europe, having originally started from the breeding areas of the extreme north. On starting, we will say, from the N. of Scandinavia, or Scandinavia, and other parts of the breeding range, they arrive on our coasts about October (*our* first flight). This corresponds with the first flight on the Albanian coast a month later. Birds reaching us congregate upon our islands under the genial influence of the Gulf Stream, but may finally be drawn off by December, and constitute a portion at least of the great flight at Corfu, where one ship's sportsmen have been known to kill something like 300 cock in a day or two (I have not the figures, but they are accessible, if necessary).

Regarding the subject of the arrival of young birds in advance of the adults in autumn, the Committee, we think, should look at the movements exhibited by, and distinctly observable in, certain species. Those, perhaps, most easily observed are the larger *Natatores*, such as Geese and Swans and Gannets, whose distinct movements can be watched year after year, and recorded with almost absolute certainty. We do not intend to dilate upon the importance of this method at present, but in the connection will merely quote a significant passage from Mr Robert Gray's "Birds of the West of Scotland,"¹ and to supplement it by saying that there can be no doubt as to the accuracy of the observations made, as they are well known to the inhabitants.

¹ *Op. cit.*, pp. 349, 350.

Mr Gray says: "Previous to leaving, the Barnacle Geese assemble in immense flocks on the open sands, at low tide, in the Sounds of Benbecula and S. Uist; and as soon as one detachment is on the wing, it is seen to be guided by a leader, who points the way with strong flight northwards, maintaining a noisy bearing until he gets the flock into the right course. After an hour's interval, he is seen returning with noisy gabble *alone*, southwards to the main body, and taking off another detachment as before, until the whole are gone. A notice of this singular habit was first communicated to me by Mr Alex. Carmichael, and has since been corroborated by Mr Norman M'Donald, who informs me that the inhabitants of the Long Island have been long familiar with it."

EAST COAST OF SCOTLAND.

THE usual schedules were sent to twenty-seven stations. Thirteen stations on the East Coast of Scotland have returned forty-eight schedules. Isle of May gives heaviest returns with nineteen schedules. Pentland Skerries follows with eleven. Bell Rock again is next in importance.

In the List of Stations we follow the same plan as in that of 1884, but we add in several cases the names of the assistant light-keepers whose names have been returned as taking interest in the proceedings. The present year's returns will be indicated by asterisks.

We do not repeat the explanation of *migration values* of the the stations here for the Scotch Coast, that being done in our last Report (*q.v.* p. 10).

EAST OF SCOTLAND.

| Returns in 6 years. | 1885. | | VALUES. | FEET. |
|---------------------------|-------|------------------------------------|---------|-------|
| SHETLAND. | | | | |
| 4 | * | 4. N. Unst, | IV. | 230 |
| 3 | | 5. Whalsey Skerries, | II. | 143 |
| 1 | | 6. Bressay, | III. | 105 |
| 4 | * | 7. Sumburgh Head, | I. | 303 |
| ORKNEY. | | | | |
| 5 | * | 8. N. Ronaldshay, .. | IV. | 180 |
| | * | 9. Start Point, .. | V. | 80 |
| 6 | * | 10. Auskerry, | I. | 110 |
| | | 11. Hoy Sound (Low), | V. | 55 |
| | | 12. Hoy Sound (High), | V. | 115 |
| | | 13. Cantick Head, | III. | 115 |
| 6 | * | 14. Pentland Skerries, | I. | 170 |
| MAINLAND. | | | | |
| 6 | * | 15. Dunnet Head, Caithness, | V. | 346 |
| | | 16. Holborn Head, Caithness, | V. | 75 |

The names of the Reporters are given under
"Diary from the Stations."

Returns
in 6 1885.
years.MAINLAND—*Continued.*

| | | Values. | Feet. |
|-----|---|---------|-------|
| | 17. Noss Head, Caithness, | V. | 175 |
| | 18. Tarbat Head, East Ross, | V. | 175 |
| 4 | * 19. Cromarty, East Cromarty, | V. | 60 |
| 3 | * 20. Chanonry Point, Elgin, | V. | 40 |
| | 21. Covesea Skerries, Elgin, | V. | 160 |
| | 22. Kinnaird Head, Aberdeen, | V. | 120 |
| | 23. Buchan Ness, Aberdeen, | V. | 130 |
| | 24. Girdleness, Aberdeen, | V. | 185 |
| | 25. Montroseness, Forfar, | V. | 124 |
| 6 | * 26. Bell Rock, Fife Coast, | I. | 93 |
| | 26B. <i>Carr Rock Lightship</i> , Fife Coast, † | ? | |
| 6 | * 27. Isle of May, Firth of Forth, ... | I. | 240 |
| 1st | * 27B. <i>Fidra</i> , Firth of Forth, † | | |
| 5 | * 28. Inchkeith, Firth of Forth, | IV. | 220 |
| | 29. St Abb's Head, Berwick, | V. | 224 |

The names of the Reporters are given
under "Diary from the Stations."*Diary from the Stations.*

N. Unst.—John Nichol (principal), J. J. Morrison, Robert Agnew, and John Down (assistants), send in three well-filled schedules. J. N. in a note says: "Wood's Natural History, second edition, would be very useful to us here." Amongst rarities, a Wryneck, obtained on 9th September (see under species). "About 5th September all Puffins, Marrots, Kittiwakes, and Guillemots disappeared. Puffins and Mosscheepers (probably Rock Pipits, J. A. H. B.) breed on the rock, and a Gull or two. Falcon Hawk on the island ashore, and visits the rock in search of small birds. No Swans seen as in former years in November and December. I was told a great flock was seen at Lerwick going north early in November. Since my arrival at this station in July last from Dhuheartach, not a single Eider Duck was seen. Only birds we see now are from the shore (December 26, 1885), viz., Starlings, Sparrow Hawks, Crows; a few Gulls flying about; Solan Geese all away."—Signed J. N.

Sumburgh Head.—James Youngclause (principal), Robert Gifford (assistant). During the summer a great number of

† New Stations, 1885-86.

Gulls breed in the cliffs. Also large numbers of Guillemots, Razorbills, which arrive first and second week of August. Also lots of Starlings and Grey Linnets, but these and the Gulls remain the whole year. Under date of 16th January 1886, Mr Y. writes: "Birds have been very scarce; not one stranger since the 27th November." Two schedules.

North Ronaldshay.—John Tulloch (principal). Two schedules. Gannets began flying north about the 18th April.

Auskerry.—John M'Donald (principal). Three well-filled schedules.

Pentland Skerries.—Signed by John Gilmour (assistant). Eleven very full schedules. Mr Gibson (principal), Mr Frazer, and Mr M'Gee are all much interested in the subject. They have been supplied with a copy of C. A. Johns' "British Birds in their Haunts," published by the Society for Promoting Christian Knowledge. Harvie-Brown visited Pentland Skerries in July 1885. "Skerries" is a misnomer for the larger island. It is a lovely island, richly grassed, feeds twenty sheep on 114 acres; very level, fine turf, rich in daisies and buttercups, producing lovely milk, and admirably situated to intercept migration. Elsewhere an account of the birds seen there in summer will be incorporated.¹ Pentland Skerries, along with Isle of May, as usual, shared the heaviest rushes and returns, and Bell Rock very fully participated. The rush seemed to be about the middle of October, continuing, but not so heavily, through that month, and increasing again up to the middle of November. On the 11th November our reporters say: "Never saw so many Fieldfares flying round the light" as to-night.

Dunnet Head.—David Laidlaw (principal) sent one schedule. Visited by H.-B. in 1885. It is easily understood why it is not a good station, notwithstanding the favourable description of light. The light is 346 feet above the sea, and does not face clear to eastward except upon the horizon, a great cliff top intercepting the downward rays at a distance of at least 100 yards from the tower.

¹ Vertebrate Fauna of Shetland, Caithness, and West Cromarty, by T. E. Buckley and J. A. Harvie-Brown, *in press*. There can scarcely be a doubt that this station would quickly rival the "Isle of May" in rarities, if the men had equal facilities of obtaining specimens. If they had guns, also, they might add largely to their stock of wholesome fresh food.

Holborn Head.—No return. Visited by H.-B. in 1885. The position is decidedly bad, being quite too land-locked both to east and west. I had a long chat with Mr Charles Christian, the second light-keeper, but did not see Mr Charleston, the principal. Mr Christian told me that not a bird has appeared at the lights since he came last year in May. He was at Cantick Head, another station utterly unfrequented by birds.—(Extract from H.-B.'s Journal.)

Noss Head.—No return. Visited by H.-B. in 1885. Mr Greig (principal) has been here eleven years, and reported that scarcely a land-bird has ever been known to strike the dome or light, or "been observed on migration day or night" (*sic*). Noss Head Light lies open to the N.N.E., E.S.E., and S.S.E., and is only 175 feet above the sea (Pentland Skerries Light is 170 feet, and Isle of May 240 feet); and no land interruptions occur. Nevertheless, it utterly fails to attract birds, as, indeed, do most stations with an abrupt and precipitous coast, for reasons which we think are almost self-evident.—(See General Remarks.)

Cromarty.—Robt. S. Ritson (principal) sends one schedule. He says: "No birds struck lantern during the year. Rather more birds observed than in 1884. Prevailing winds were again westerly from January to April, but between May and October easterly; but the change of wind brought no accessions of birds. Land-locked station.

Chanonry.—John M'Gill (principal) and Wm. Irvine (assistant) send one light schedule, and the remarks: "There is no difference from the remarks of other years. The migration this year seems to be for the purposes of feeding. No certain migration observable." Mr M'Gill, however, goes on to say: "The Sand Martins, when congregated on Major M'Kenzie's yacht-rigging from the bowsprit up to the mast, and down to the end of the jib-boom, made a curious sight, when lying at anchor." This was on the 24th August 1885.

Bell Rock.—James Jack (principal) sends as usual carefully and well-filled schedules, quite among the best received. Under date of 16th October, at the time of a rush, Mr Jack has the following general remarks: "Birds began to arrive at 7.30 P.M., striking lightly and flying off again; unable to tell of what species. Numbers went on increasing till midnight, when it

seemed that a vast flock had arrived, as they now swarmed in the rays of light, and, striking hard, fell dead on balcony, or rebounded off and went over the rail, falling into the sea. At 3 A.M. another flock seemed to have arrived, as the numbers now increased in density; at the same time, all kinds crowded on to the lantern windows, trying to force their way to the light. The noise they made shrieking and battering the windows, etc., baffles description. The birds were now apparently in thousands. Nothing ever seen here like it by us keepers. Wherever there was a light visible in the building, they tried to force their way to it. The bedroom windows being open as usual for air all night, they got in there and put the bedroom light out. All birds went off at 6 A.M., going W.S.W. Redwings were most in numbers; Starlings came next, Blackbirds, Fieldfares, and Larks." The later rush in November seems to have taken place entirely at night also: "No birds were seen throughout the daylight of the 11th and 12th November, and the movement ceased at midnight of the 12th," when the wind became strong from S.W. All birds visiting here between October 18 till December 12 were composed of both old and young, also male and female; but young birds most in number. Many hundreds lost their lives.

Inchkeith.—Robt. Grierson sends a schedule with the following diary: "During the night of the 5th September a small flock of birds was observed hovering around the lantern at 11 P.M., wind W., light breeze and haze, and two young Stonechats were caught." At midnight, also, two more; and other small movements are given.

Fidra.—William Ross. Arrival of the Solan Geese noted on March 27; also Eider Ducks. Mr Ross sends two well-filled schedules, but is disappointed with the results. He need not we think, as Fidra lies somewhat landlocked and out of the stream. We are much obliged to him for the first Schedules from the new Firth of Forth Station. Mr Ross writes under date of July 24: "Solan Geese, Gulls, and all sea birds have deserted our island entirely. About a dozen sparrows are now our only feathered visitors;" and on Aug. 4th—"Having been on the mainland, I was quite surprised to see the numerous and varied flocks of many kinds of birds, not one of which came near our island."

Isle of May.—J. Agnew (principal), Messrs Young and Anderson (assistants), send twenty full schedules, indicating a very heavy migration, past this favoured isle. At present a staff of men are busy putting in electric light machinery here. It will be curious to watch the result next season.

New occurrences continually turn up at Isle of May, and this year we have to record amongst rarities and acquisitions the Common Dotterel (*Endromias morinellus*, L.), the Red Backed Shrike (*Lanius collurio*), and Ortolan Bunting (*Emberiza hortulana*)—two specimens obtained. Also Turtle Dove (*Columba turtur*, L.)—one shot; and the Dipper was obtained for the first time, though it had been seen before, as stated in previous reports. It proved to be the British form. Specimens of these are added to the collection at Isle of May. We gave earlier notice of the first three above enumerated, in the *Proceedings of the Royal Physical Society, Edinburgh*, as we belong to that class of naturalists who do not believe in withholding facts until they become rusty. To do so may be useful for selfish motives and personal *kudos*, but is not calculated to promote further study, and is, indeed, calculated to delay it.

Continuous E. winds at the beginning of May caused a vast rush on 2d to 4th May of many species. Mr Agnew writes: "The long tact of S.E. wind has brought an extraordinary 'rush' of birds to the island yesterday (on the 3d) and to-day; the night of the 2d, and all day of the 3d, was constant rain and fog. For a day or two previous to the 3d, we had a few birds, and some strangers; but they were only the heralds of the great army. I have seen something like it in the 'fall,' but never in the spring. These last two days we have 'birds; birds everywhere.' I think I have identified them all, except the three mentioned inside. If you had been here to-day, what a bag you would have made."—Signed J. A., 4th May 1885.

In the schedule Mr Agnew says:—

"3d May.—An extraordinary rush of migrants to-day; never seen anything like it in spring. To attempt to give numbers is simply useless. I will just give you the names in succession. I can't spare a line for each.—Fieldfares, Redwings, Ring Ouzels, Blackbirds, Lapwings, Dotterels, Rock Pigeons, Hawk, Meadow Pipits, Redstarts, Whinchats, Tree Sparrows, Yellow Wagtails,

Ortolan Bunting (obtained), Robins, Chiff-Chaffs, Wood Warbler, Black Cap Warbler, Marsh Tit, Whitethroats, and Pied Flycatchers." And on 4th still increased in numbers, but wind shifted this morning to E. from S.E.

Mr Agnew mentions also "a bird" he has "often reported," a "grey bird with a white feather each side of the tail, and larger than a pipit, kind of slate colour, light streak through eye, black hood over its head." And another; "colour of Tree Sparrow, but smaller grey white belly, slate-coloured head; never seen the latter before."

In autumn Mr Agnew says: "Up to 14th October migration was very meagre,—something like last year, and from the same cause; gales of wind from the W. and N.E. That we have any at all shows how determined the birds are to keep their usual time of migration, even when under great difficulties."

Under date of Oct. 17th—"A great rush of migrants at Isle of May"—Mr Agnew has the remarks: "The Woodcock was killed on the S.E. side, and the other birds on the N.W. side. Thus the migrants have been exactly meeting one another; and this is just as I would have expected,—the Woodcocks *coming* to us, and the others *leaving* us. It would appear as if they were all waiting a favourable opportunity to go. Seventeen Woodcocks were shot during the day on the 17th Oct. on Isle of May."—J. A. The birds striking the N.W. side consisted of Redwings, Larks, Starlings, Blackbirds, Chaffinches, Whinchats, Chiff-Chaffs, Willow Warblers, Golden Crests, one Crow, and the rush continued over the 18th. These birds, striking the N.W. side, no doubt reached our shores further north, and were "coasting," or, as we have remarked in previous reports (as in the case of Woodpigeons and Larks), were crossing the Firth of Forth from north-westerly directions to south-easterly ones. The wind at the time of this migration was light E. The Woodcock would thus travel at fair advantage, and strike the S.E. side; and the other birds which struck the N.W. would have a still more favourable flight, with the wind *beam on the left shoulders*.

We consider these remarks by Mr Agnew most valuable, as bearing out previous experience in a remarkable manner.

Again, under date of 10th Nov., Mr Agnew writes: "Thou-

sands of Fieldfares, etc., etc. The vast rush to-day were flying exactly in the same direction as the great rush of the 17th Oct., and had it been at night, the lantern would have been swarming, and they would have struck it exactly on the N.W. side as before; wind S., but very nearly calm. The birds were flying high in the air; a few lighted, but immediately went on again direct S.E. I never saw anything like it in daylight before. There were also blackbirds, male and female, on the island to-day, but the males predominating."

Again, on the 26th Nov., Mr Agnew writes: "10 A.M., S.E. gale. Two Woodcocks shot. This gale came on at 9 A.M. on the 23d, and is still increasing, and the glass falling. It is now 4 P.M., and the glass 29.05. There has been nothing like this from the S.E. for years. The barometer fell to 28.65 on the night of the 26th."

SEPARATE REPORT UNDER GENERA AND SPECIES.

TURDIDÆ.—*Spring.*—In February indication of Fieldfares on 23d and 26th, and with S.W. gale at Isle of May on 22d, 23d, and 27th, an unusual experience here to appear so frequently as they have done. A few also appeared 2d, 3d, 4th, and a good many on 9th, with N.W. winds. Again a few March 15th, 18th, and 24th at Isle of May. In April, only one record, Isle of May; but in May, flocks and stragglers for first three weeks at Pentland Skerries; prevailing winds, N.E.; no very strongly defined "rush," only on one day, flocks at Isle of May. A few unimportant movements of other *Turdidæ*, viz., Song Thrush, Redwing at Stations VII., VIII., XIV., and XXVII. The Ring Ouzel is noted at Pentland Skerries, but marked as "very rare here" (20th April), and again May 2d and onwards for several days.

In Autumn.—An early movement of Song Thrushes, July 4th and 17th, at Pentland Skerries; wind variable on 4th, and light N.W. on 17th, and one bird at Isle of May on 27th. Unimportant again at Isle of May in Aug. 13th and 18th, and ditto in September at same station. *First* Fieldfares on 29th, with light W. wind; but in October real migration set in of *Turdidæ*, earliest as usual at Isle of May; on 8th a Fieldfare (wind shifting from N. to S.W.) followed by a single bird. First

record of Redwing again at Pentland Skerries, with light N.N.E. airs, an apparent rush of which at same place between 26th and 31st. Flocks and intermittent movements all the month from 8th to end, of all three species. November, however, bulks largest from Stations IV., VII., VIII., IX., X., XIV., XV., and XXVII., during the whole month, Fieldfares predominating far beyond the numbers of other *Turdidæ*. Whilst many "flocks" are recorded all through the schedules south of VIII. (N. Ronaldshay) to XIV. (Pentland Skerries), and even appearances at XV. (Dunnet Head), fewer records are given north of VIII., and none occur between XV. and XXVII. (Isle of May). A rush is only very decidedly shown at Isle of May on 10th, when thousands of Fieldfares and other Thrushes round station at 9.30 A.M., with a S. wind, and flew on southwards. On the 17th there is a "rush" recorded of Redwings at XXVII. at 1 A.M., light E. haze—six killed. Immense numbers of the several species of *Turdidæ*,—viz., Fieldfares, Song Thrushes, Redwings, but curiously we do not find a single entry of Blackbirds anywhere during the whole Autumn Migration, which extended all through December and January, though in smaller numbers as compared with November. Prevailing wind all October, northerly and easterly; south-easterly and easterly in November, but the rush came with due S. wind. When westerly winds occurred, as usual fewer records. In December, winds various, but more westerly than November, but in January again back to E.¹

SAXICOLINÆ.—*Spring*, confined to April and May. Records from VIII. (North Ronaldshay), XIV. (Pentland Skerries), and XXVII. (Isle of May) of Wheatears, Whinchats, and Redstarts. The "Stonechats" of the N. Ronaldshay Schedule are probably Wheatears, a rush of which took place there on April 4th—the earliest record—at twelve noon; wind light south. Wheatears arrived pretty numerously at XXVII., to breed there, on 20th April. Earliest Redstart at XIV., with strong S.S.E. wind and fog, marked "rare," on 29th April; but earliest at XXVII. on the 18th, one ♂, light west, and haze. Towards the end of

¹ *Addition to List of Birds of the Isle of May.*—Dipper (*Cinclus aquaticus*, L.), the British form—shot April 22d, 10 A.M., light west haze—now in Collection at Isle of May, under curatorship of Mr J. Agnew.

May Redstarts appeared in very small numbers; again at XIV., and two Whinchats.

In Autumn.—Early departure of the old Wheatears from XXVII. (Isle of May), before 22d July. This is noted as earlier than usual by Mr Agnew. One bird noted at XIV. (Pentland Skerries) on 23d August, with N.N.E. and driving rain.

Earliest southward movement of Redstart at XIV. on 14th August—a single bird—wind N.W.; seen on island. At IV. (N. Unst) a “rush” of Redstarts and Wheatears at night, wind light S.W., on 9th September. At XXVII. a few old males on 18th September, followed by mixed old and young on following day. Redstarts at IV. on 3d October, and a rush of Whinchats at Isle of May at 1 A.M.—wind S.E., haze. Single record of Whinchat in November at XXVII., and “Stonechats” at XXVIII. B. The new station of Fidra, in the Firth of Forth, a single bird. On 22d July most of the old Wheatears had left Isle of May—“an early date for them to leave.”—J. A.

SILVIINÆ.—In *Spring*, earliest Robin record on 13th and 17th February at XXVII. (Isle of May)—“the first for a long time.” Latest spring record, also at XXVII., on 15th May. Most seen on 13th April, at XXVII., N.N.E.; and several all day on XIV. (Pentland Skerries), strong S.E., on 8th April. Cromarty sends one return of Robin on 2d May. *Willow Warbler*—earliest, 29th April, at Isle of May; and *Wood Warbler* at same place on 2d May, with strong S.E., fog and rain. *White-throat* at Isle of May, with light S. and S.E., between 13th and 24th—an indication of a rush lighting on S.E. side of lantern, with light N.W., and rain on 24th.

Autumn.—Species observed were Robin and Whitethroat; Robin most prevalent, Whitethroat next. Earliest Robin at N. Unst, 26th July; latest, 28th November, at I. of Fidra (but as this might only be local, take latest at Dunnet on 14th, or Isle of May on 12th). If any rush noticeable, about the 17th September.

PHYLLOSCOPINÆ.—Gold Crests are recorded in April 12th and 13th, and 20th and 23d at XXVII.; few on the two first dates, rush on the last, with W.S.W., and fog and drizzling rain. No other records from any part of E. Coast in any spring month. *Wood Warblers*, 8th to 24th May; a “great

rush" all night on the 9th, with snow and hail showers, and wind N.W. to N.E.; and again all night on 18th, with rain, hail, and snow from N.E. [We can remember, on the 10th May, snow lay on the banks of Spey two inches deep at Aberlour.—J. A. H. B.] Two Chiff-Chaffs are also noted on 20th. All the above at XXVII. (Isle of May), and no other spring records of Phylloscopinæ.

In Autumn.—Earliest Chiff-Chaff, 27th July, at XXVII., 11 A.M., E., light fog; and again between the 12th and 24th August. Numbers on 13th, and number of males on 24th. On 13th, N.W. wind, strong, clear. Also, on 15th, a *Willow Warbler*—light haze, struck S.E. side, light W. wind; and a *Wood Warbler* on the 24th—a fine male. In September, a single *Willow Warbler* from N. Unst, light N.W., on 15th; and a few *Gold Crests* at XXVII. on 1st, and again on 17th and 19th—the latter amongst the rocks on the E. side—light S.W. A rush of Chiff-Chaffs on 17th October at XXVII., light E., haze and rain—and *Willow Warbler*; and then, on 18th and 19th, *Gold Crests* all night. Latest date of autumn migration of Phylloscopinæ is of Chiff-Chaffs, on November 4th, at XXVII.

ACCENTORINÆ.—The only records are in October 1885, at XXVII., on 7th and 19th. Two or three pairs are breeding there this summer, and of late years it has become resident, "a good few having been here all the winter."—J. A.

ACROCEPHALINÆ.—In September, on the 5th, between 8 and 10 P.M., there was a rush of many species over the island of XXVII., amongst which were Reed and Sedge Warblers striking, also Whitethroats. [What were named with a query "Immature Blue-Throated Warblers" turned out to be immature Redstarts—J. A. H. B.] Of the Reed Warblers recorded, when asked, Mr Agnew, distinguishing from the Sedge Warbler, says: "I have your card about the Reed Warblers, and should they appear again, I will try and procure specimens; but there seems no doubt as to their presence here during the rush of Warblers reported in the last Schedule."

TROGLODYDITÆ.—Autumn of 1884, a few still seen on Isle of May in beginning of January 1885. Spring of 1885, one at XXVII. (Isle of May) on 10th, and at XIV. (Pentland Skerries)

reported as being about the rocks there all winter.¹ At VII. (Sumburgh Head), one all day going about dykes—no doubt, a resident of the adjoining mainland. (A “Yellow Wren,” also at same place, may be either Willow *Wren* or *Willow Warbler*, or a Gold Crest?) This was on 31st March.

In Autumn.—Earliest record at Pentland Skerries, September 20th, seen in garden. In October, records from N. Unst, 27th—S.W., light breeze (!), clear—flying round rocks. [*N.B.*—This record seems to us to make it very desirable that specimens of the Common Wrens, or their feet and wings, but better the whole birds, be sent us for examination from this Station. We would like to see specimens, shot or otherwise, obtained in summer, and also specimens obtained in October or during the Autumn Migration. It might settle a very interesting question. A little carbolic acid would preserve them quite well, if dried after in the sun, or in the oven, or gradually in the kitchen.] A good few records run through October, but no large numbers—at Unst (XIV.) and XXVII.; and the same remark applies in November. The last noted is in January 1886 at XXVII.—“a few”—and the one before, at XIV., on 27th December, “seen on island.” It is always remarkable to observe the near proximities of dates between occurrences at Isle of May and Pentland Skerries.

MOTACILLIDÆ.—The only month in the year, from January to December, in which no return is made by Wagtails, is July 1885. All the entries are under “Wagtail.” [*N.B.*—We would like to receive a good many Wagtails from all Stations in every month if possible. A little carbolic acid would preserve them.]

The *first* spring Wagtail is recorded at XXVII. (Isle of May) on 24th February, S.W. The *last* at same place on May 23d, but the species breeds there. April is the busiest month in Wagtails. A “rush” at N. Ronaldshay on April 4th. Next last date is at Fidra (XXVIII. B.), flying about feeding. A record from Dunnet Head says: “1st May.—Wagtails seen daily till end of July; breed about the cliffs,” etc. The *Yellow Wagtail* is recorded from XXVII. on 8th May. If it had a black breast and very long tail, its right name is “Grey Wagtail,” though yellow. If short tail, and very bright yellow, it is the true

¹ It does not appear whether the Wren is resident in Pentland Skerries every winter, but it was certainly so in 1884-5. (See above.)

Yellow Wagtail, or *Rays'*, a much rarer bird in Scotland. Was it the same as one Mr G. E. P. and H.-B. shot on Isle of May in October 1884?

In Autumn.—"Wagtails" begin to be observed on 17th July at XIV., and in about equal numbers in August (three dates in each month). Increase a little in September, and show indication of movement at XXVII. on 26th and 29th (old and young on 26th, and mostly old on 29th), only four dates at XIV. and XXVII., two at each. Two dates in October at XXVIII.; 1st and 8th unimportant; and three in December at same place—24th, 25th, and 26th. Noted, "These are extraordinary occurrences;" and the one on 25th, "had very little white upon it."—J. Agnew.

MOTACILLIDÆ 2.—*Pipits*.—First Spring Meadow Pipits at XXVII.—a single bird; light N.E., clear on 10th March, and "a number" on 18th; gale from W. for two days. Wind changed to N.E. at 5 A.M. In April, at XXVI. (Bell Rock), on 17th and 18th; wind S.E., fog. *Rock Pipits*.—At XXVII. (Isle of May), an increase over residents observed on 4th April, and more arrived to breed on 20th. Further increase on 2d May.

In Autumn.—Meadow Pipit ("Mosscheeper") at N. Unst, 7 P.M.; fresh N.W. breeze and showers; and at XXVII. "mostly left" by 14th. A rush on 9th September of "Mosscheepers" at IV. (N. Unst) at night; wind S.W., light haze. Also at N. Ronaldshay "a number" of Rock Pipits arrived on 4th September, "and remain all winter." At XXVII., old and young mixed on 19th September. Last record of Meadow Pipits at IV., 1st November, and of Rock Pipits at XXVI. (Bell Rock), on 22d November.

LANIADÆ.—One Red-Backed Shrike at XXVII. on 5th May, 1:9 A.M.; light N.E., clear, *obtained*;—*in mus.*, Isle of May.

MUSCICAPIDÆ.—*Spring*.—Earliest at XXVII. On May 1st and 2d, three *Pied Flycatchers* arrived at 4 P.M. on 1st, stayed 2d, and others seen till 6th or 7th—a good number; wind S.E., haze and rain. Also on 2d, several all day resting on XIV. (Pentland Skerries). Numbers again on 20th and 21st at same place, and numbers, also including one old male, on 23d, and up to 24th. No other records in spring.

In Autumn.—One female *Pied Flycatcher*, at XIV.; light E., and thick haze. On 3d, numbers all day. At XXVII., some

on 24th October ; strong E., clear. *Spotted Flycatcher* at XXVII. One seen 11 A.M. ; strong S.W., clear.

Addition to Isle of May, as above.—Red-Backed Shrike (*L. collurio*, L.), May 5th, 9 A.M. ; light N.E., clear. Shot ;—*in mus.*, Isle of May. Curator, J. Agnew.

HIRUNDINIDÆ.—*Spring.*—Very heavy returns of Swallows, commencing lightly on 10th April ; a few seen at N. Ronaldshay ; E.N.E., light clear ; and on the 19th, at XXVII., one with the remark, “ this is early.” First seen at XXVIII. B. (Fidra) on 24th. At X. (Auskerry) “ flocks remain till 14th June ; ” came with S.E.S. and N.E. winds. Records numerous from X., XIV., XV., XIX., XXVII., and XXVIII. B. First seen at XIV. on 14th May. No great appearance of a “ rush.” Seen more or less all June at Pentland Skerries and Isle of May, but no June records from other stations.

In Autumn.—5th July at XIV., and of Martins 6th to 12th and 16th. One Swallow at Isle of May on 14th. All August Martins and Swallows, and a “ rush ” of latter at XXVII. on 24th ; light W., clear. *Latest.*—One Swallow and one Martin at XXVII. on 7th October.

FRINGILLIDÆ.—Every month in the year, more or less of different species, as follows, in order of greatest numbers : Grey and Green Linnets in February, March, April, and again in June ; and House and Tree Sparrows in May, and odd ones of the former during the other spring months. Chaffinches scarce, and single records in February, March, April, May ; one each month, all at XXVII. (Isle of May). Twenty Tree Sparrows in a flock, at XXVII., on 29th May ; and daily large flock of Sparrows at Fidra on 16th and 23d. Sparrow “ rare ” on XIV., seen April 23d.

In Autumn.—Large flock of Heather Linties (Twites) at Start Point all the month of July. Grey Linnets (or perhaps these are Twites ?) at XIV. (Pentland Skerries), 27th July. In August, Sparrows at N. Unst ; N.N.W., fog. Grey Linnets (or Twites ?) at XIV., end of August ; N.E. Only one record in September at XIV. ; none elsewhere, but October bulks larger. Only stations sending any returns are XIV. and XXVII. in October. Movement slack in first week, bulking largest 16th and 17th. Rush of *Chaffinches*, *Linnets*, a few *Redpoles* on 14th, and a few *Siskins* on 30th October.

In November, up to 23d.—Chaffinches at N. Unst on 3d—light N.W., rain—and on 4th at XXVII. Green Linnets at N. Unst on 19th November, and at VII. (Sumburgh Head) on 12th. Numbers on 5th at XIV. all day, fresh W., clear; and also on XXVII., same day, a few; light W., clear. Latest record of Green Linnets, December 18th; but Grey Linnets on 18th January 1886, and Redpoles (three) on 23d, at XXVII.

We have overlooked also a few stray records of “Bramblings” on 6th and 7th April, at XXVII.; strong E. winds.

EMBERIZIDÆ.—*In Spring*, Snow Buntings. One seen on February 7th at XXVII., and five on 27th; a number on 20th March at N. Ronaldshay on the island. Gale; sleet—twenty-three struck and seven killed. In April two flying about the rocks at Sumburgh Head on 6th—the latest record of the species in spring.

One *Reed Bunting* at Pentland Skerries on February 27th; S. gale and haze on island. Few records of Yellow Bunting in February and March, and at XXVII. equally scarce. Only occasional also in April anywhere, and same to June. *Common Bunting*, first single bird at XIV. on 18th; odd records till June on six dates till that time. Winds prevailing from N.E. through E. to S.E. (very likely local movements).

In Autumn.—Snow Buntings returned only from XIV. and XXVII. in October, but in November at IV., VII., VIII., X., XIV., XV., XXVII. all through the month, but not heavily as compared with other years. Rush at VIII. (N. Ronaldshay), with S.E. gale; “flocks” frequent at XIV., XV., not abundant at XXVII. during November. In September, a few odd records only at VII. (Sumburgh Head) and XXVII. (Isle of May). No records later than November 28th. One record of Common Bunting at XIV. on 13th November. No records in autumn of any other species.

Addition to Isle of May List.—Ortolan Buntings: Two specimens—one shot 12.30 P.M.; light S.E., clear, thick fog and heavy rain all night. Named by Mr Agnew correctly.—J. A. H. B. Mr Agnew adds under 29th May: “There are two Ortolan Buntings, three Tree Sparrows, and one female Redstart on the island since the 23d April.

ALAUDIDÆ.—*Spring Migration.*—In February records from XIV. and XXVII. only; one single bird from the former on

14th, but a rush at the latter on 17th, at 1 A.M. Light E., rain and haze; three killed. Continuing in numbers on 18th, four killed and many wounded. Curiously no records from Bell Rock on these dates or in this month. Likely the wind too much due E. Fewer on 26th, but an increase again on 27th. At Bell Rock, however, one bird on 15th, and three on 19th only. Stragglers only from the direct wave. We are more than ever convinced of the influence of the wave from Heligoland *not* extending much beyond Isle of May and Bell Rock. A new light will soon be on the light vessel of the Carr Rock, off the East Neuk of Fife; and we are in hopes that a good observer will be stationed there, who has had personal experience and knowledge of birds before. On 13th March only one record at Bell Rock; on 11th only two at XXVII. and one at Pentland Skerries.

In April "Crested Larks" are entered, and a previous entry of the same is given on March 11th, both from XXVII. (Isle of May. [We would like to have examined these, and added the *real* Crested Lark to the Isle of May Museum.] Not many records in April.

In Autumn.—A few flying round the light on 24th August at N. Unst. Desultory movements at N. Unst in September.

In October about the 15th, 16th, 18th, an appearance of a "rush," or an actual "rush" on 18th at VIII. (N. Ronaldshay), and on 14th at XXVII. (Isle of May). At former 40 struck. E.S.E. wind. At latter "large numbers," with a S.W. gale, sleet. These no doubt are blown *off the land*. Latest date 18th. But reports in newspapers of immense gatherings of Larks near Dundee, St Andrews, and Midlothian and elsewhere, in January and again in March, being only, no doubt, local congregations caused by frost and snow in Scotland.

STURNINÆ.—All returns for spring light. Earliest, February 9th at XXVII., and 11th at XIV. From 16th to 20th light returns, flock on 18th. By the 11th March breeding birds had arrived and taken up their haunts on XXVII., and about the same time an odd bird or two were seen resting on rocks of XXVI. (Bell Rock). Wind light westerly. As no records occur at Bell Rock at any other time in spring this year, even these odd birds occurring just at the time of arrivals elsewhere are significant perhaps of the general movement, these birds no

doubt having overshot the land. Odd records in April at Fidra; a pair breeding there in May.

In Autumn.—Earliest movement noticed at XXVII. “Large flocks of young birds, strangers.” No records anywhere in September. In October movements noted at IV. (N. Unst) between 11th and 25th. On 11th flocks flying east, with light S.E. wind and haze. Only one record at XXVI. (Bell Rock) on 8th October. Rush decided at XXVII. on 17th, with strong E., rain and haze; two killed. Small movements at IV., VII. (Sumburgh Head), and XXVII. in November, and a few up to end of January 1886.

CORVIDÆ.—Earliest spring record of Rooks at XIV. (Pentland Skerries). Strong N.W. wind on 28th February. Rooks are recorded from the following stations:—VIII. (N. Ronaldshay), XIV., XXVII. (Isle of May); but all returns are very light indeed. In the first week in March a slight rush apparent at Sumburgh Head of Black and Hooded Crows—on 1st 50, on 6th 18, light N. to N.E.; and a few almost every day at XXVII. at same time. Records of Carrion and Hooded Crows are from VII. (Sumburgh Head), VIII., XIV., and XXVII. Earliest 1st March; latest 29th April. From three or four to eight or ten daily; long straggling migration.

Jackdaws at XIV. on 25th, and 26th two, light W.N.W., clear; and at same place seven on 8th June and one on 13th, no doubt visitors from either the Caithness coast or from Orkney.

Autumn.—Similar movements of *Black Crows* at IV. on 30th July, and at XIV. on 20th, 26th, two or three each time. Carrion Crows and Hooded Crows reported in autumn from IV., VIII., XIV., XXVII., XXVIII. B. (Fidra) in a pretty continuous and steady, though never heavy, stream, massing largest at IV. and at XIV., two, three, four, to once twelve (on 11th September at IV.) being the daily number observed. Dating from 1st record, 26th July, at XIV., to latest record, January 26th, 1886, one bird at XXVII., with easterly and northerly gale. *Rooks*—Infinitesimal movement; only two records, one in June and one in December, both at IV. *Ravens*—Small number. Two at IV. on 22d August, eight at IV. on 5th September, strong E., haze, feeding on rock; and two on 20th October at same place. Four *Jackdaws* stopped a few days at N. Ronaldshay from the 6th November.

CYPSELIDÆ.—At X. (Auskerry) flocks of Swifts seen on 1st May, with the note “rarely seen till the middle of June, wind N. and N.E., showers.” Again seen at XXVII. on June 5th and 17th. We ourselves witnessed a party of Swifts migrating close along the cliff-edge of Holborn Head, on the N. coast of Caithness—“seven seen flying E., swiftly careering above the cliff-edge of Holborn, and crossing in a direct line the Bay of Thurso” (extract from Journal, 28th June 1885). We witnessed also eight evidently still bent on migration, “flying in a bee-line down Strathspey, high in air, at 11 A.M., near Black Boats station. Clouds, heavy rains, showers, and N.W. wind” (*loc. cit.*, May 16th, 1885). There is undoubtedly a great highway of migration up and down the valley of the Spey. We have abundant evidence of it.

In Autumn.—One record at IV. Two seen on 11th September, light S., clear.

JYNGINÆ.—Mr Agnew very ably describes the Wryneck as follows, and it was afterwards identified and added to collection, and the tail, which had been shot away, was recovered afterwards by chance by Mr Wm. Evans, and restored to the specimen. Mr Agnew writes, and we give it as showing how accurately to describe a bird for purposes of identification:

“One bird, total stranger; very like a Partridge in markings; size of a Lark; 4 toes on feet, 2 before and 2 behind; fore toes largest; one of the hind toes not so large as the other; bill about the size of a Pipit’s; tongue protruding more than an inch, thickly covered with fine hairs; $\frac{1}{4}$ -inch of the tip horn, sharp as a needle. Don’t know what it is unless Ant-eater. Very sorry tail shot away. Sent to Small for the Collection.”—J. Agnew.

CUCULIDÆ.—April 26th, an early date of arrival, flew low from Dirleton woods towards XXVIII. B. (Fidra); light S. breeze. In May, on 10th, at Cromarty, fresh N.E., showers; on 16th at XXVII., fresh W.N.W.; and on 28th at same station, moderate S.W., clear. No autumn records.

STRIGIDÆ.—No spring returns. *In Autumn.*—Short-Eared Owls recorded from XXVII. (Isle of May), one of 9th October, 6 P.M., N.W.; one 14th, N.E. gale; and one *shot* on 31st. The only other record is at IX. (Start Point), when “an Owl made its first appearance on the 6th November.”

FALCONIDÆ.—Hawks, Sparrow Hawks, large Hawks, and

Kestrel bulk pretty regularly, mostly, however, single birds at XIV. and XXVII. in spring. Many daily records no doubt refer to the same bird seen over and over again, especially when such relate to Sparrow Hawks and Kestrels. Such visits are no doubt only of local origin. "Large Hawks" at XXVII. are *not* Peregrine Falcons, as such are well known to Mr Agnew, but probably Buzzards or Harriers. One shot on 11th April unfortunately fell into the sea and was not recovered. A "Dark-Brown Hawk" also noted on 11th March at Isle of May.

In Autumn.—In August many local visits paid to flights of small birds at most insular stations sending returns, especially at IV., X., XIV., and XXVII. Falcons, Hawks, "large and small," few in September, none in October recorded, and a few in November. In former years three Eagles used to be seen regularly; are now believed to have been killed out at IV., and we know that orders and rewards have been given to the gamekeeper there for their destruction, as well as all "vermin."

PELECANIDÆ.—Solan Geese.—Commencing in spring on 26th March, three seen flying east at XIV., strong N. wind. We may state here that winds seem to affect their passage very little at all times. Began to appear flying N. past VIII. (N. Ronaldshay) on April 18th, and flying east past XIV. 14th, 15th, and 20th—winds S.W. to S.S.E., and back to S.W., on the three dates respectively. An April "flock," and "flocks all day," by the 26th. Before that, usually in afternoons, and not in forenoons. In June "the number of Gannets flying, usually N. past VIII., increasing;" 10th, 19th, 20th, 25th, "flock," "flocks," "several flocks," "three." July to September, constant in "flights" of two to twelve. On September 4th, in haze and fog, flying N. past XIV., and always N. past VIII. Going E. still in October, few in November, and two records in December "seen fishing."

ARDEIDÆ.—At XIX. (Cromarty) seen on shore, 8 P.M., calm, haze. Two records in April at Cromarty and Fidra (XXVIII. B.); one in May at XXVII. (Isle of May); two in July—12th and 22d—flying N.E. at XIV.; three to six records in September at XIX. (Cromarty) and XIV.; one in October at XXVII.; and two records at XIV. and XXVII.

ANATIDÆ.—*In Spring.*—Between 2d and 19th February, a flock

of Barnacle Geese" seen almost daily flying E. at different hours of forenoon and afternoon; and on 6th and 25th two flocks. Wind usually N. and E., except on 8th, 9th, and 10th, when it was westerly. The above at XIX. (Cromarty). I heard from other sources of the unusual quantities of *Brent Geese* in the Cromarty Firth and elsewhere on the East Coast this season—*i.e.*, 1884-85—and also in 1885-86. The Geese at XIX. continued to be observed on April 10th and 14th, 1885, but not later.

Of *Swans*, only one record at VIII. (N. Ronaldshay), when six seen.

Of *Eider Ducks*, two flocks at XXVII.—light S.E., clear—on 2d March; and by 16th April most of the Eiders left. On 4th April flock of fifty males and females, about equal in number, at XXVII. This lot left on 6th; numerous again on 20th; but breeding birds and a few about XXVIII. B. (Fidra) on 26th April. In May, on 7th, 10th, and 16th, three males and three females all day about island, and continued till 21st—breeding, no doubt. *Long-Tailed Duck*, 3, 2♂ and 1♀, at XXVII. on 26th February 1885 (only record). A few Wild Ducks at XXVIII. B. on 28th April. "Stock Ducks."—Two at XIV. on 2d May, where they breed. Three "King Ducks" are noted at Isle of May, and the note "different from Eider" added on 31st May 1885, and "had a white spot on the black wings." (?)

In Autumn.—We have records of Swans, *Teal Duck*, Stock Ducks, Ducks, Eider Ducks (or Dunters), Wild-drake, Barnacle Geese, and Widgeon. Stations returning are—VIII. (North Ronaldshay), returning "number of Ducks of different kinds, as Widgeons, Teal," and Eider Ducks "made appearance in great numbers" on 10th and 15th September respectively. At XIV., by far the largest returns of Ducks of sorts greatest in September. XIX.—"Barnacle" (?) Geese on 18th October. At XXVII., record of Eiders, "all young birds except one old male," on 2d December; and latest record at XIV. of a flock near the rocks on 27th.

COLUMBIDÆ.—At XXVII. (Isle of May), a Turtle Dove shot on the 29th May—wind W., light, clear. "This bird had been severely wounded before."—J. A. A vast rush of Wood Pigeons is noted at XXVII. on November 29th, flying S.W. in

countless thousands, making a rushing noise like a railway train. The wind after the great S.E. gale.¹

RALLIDÆ.—Spring records are :—

Heard at 4 A.M. at XIX. (Cromarty) on 19th May—light E., clear.

Heard by Keeper at XIV. (Pentland Skerries) when over in South Ronaldshay on 15th May. Heard on XIV. (Pentland Skerries), one pair, on 21st—wind S.E. They breed there.

One at XXVII. (Isle of May) on 14th, and again on 20th May.

No autumn records.

CHARADRIADÆ.—A flock in February; probably belonged to last year's migration, and can hardly be admitted as spring movement at XIV. Oyster-Catcher—two entries in March and April; the former at XIV., where two arrived; and the latter at XXVII., where three were seen on the 13th April.

In Autumn.—Golden Plover arrived 5th August, and usually remain all winter. Odd birds at XIV., also in August. On 6th September, single record of a Golden Plover; single ditto in October at XIV. Straggling records of little real use in tracing facts in November, when, however, they do *bulk* largest. Odd notices in December and January 1886.

Other species noted are Green Plover (very few records), Ring Plover (November, only one entry), Oyster-Catchers (only taken notice of at XIV.—a flock in September), and “a number all day” at 28th November at XIV.

Addition to Isle of May List and Collection.—Dotterel—One obtained, 3d May 1885 (See remarks under Diary of Stations), *in mus.*, Isle of May.—Curator, Jos. Agnew.

SCOLOPACIDÆ.—*In Spring.*—Snipe, Curlew, Woodcock, Jacksnipe are the species noted. Stations are XIV. and XXVII. only. Earliest Snipe record at XIV. on 16th February (may belong to last season's movements); “a number,” and on 19th “a large number all day on island;” variable, clear. No March records, and only one of Snipe in April at XXVII.; S.E., light, clear on 18th. Jacksnipe—one at XXVII. on 5th April, and one at same place on 1st May; S.E., light clear on former date. *Curlew* on XIV., rose off rocks; snow on ground on 19th February. Several records flying over island at XIV., in April,

¹ Shifted to W., and on the 29th inclined to N.W., but shifted back at night to N.E.

with various winds, and ditto in May, and "passing XXVII. at night on 22d May." Woodcock—Two records, one at XXVII. on 5th April—E.N.E., haze—rose off island; and one at XIV. on 11th—E.N.E., haze—rose off island.

Autumn.—There are many entries in each month, as follows:—

| | | | | | | | | |
|----|---|-------------|------|-------|------|------|------|------------|
| 1. | { | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. 1886. |
| | | 11 entries. | 8 | 10 | 15 | 17 | 9 | 2 |

These are composed principally of the following species, in order of their abundance:—

| | | | | | | | | | | |
|----|---|------------|-------------|------|-------|------|------|------|------------|---------|
| 2. | { | Curlew— | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. 1886. | In all. |
| | | | 10 entries. | 7 | 9 | 3 | 3 | 1 | 0 | 33 |
| 3. | { | Woodcock— | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. 1886. | In all. |
| | | | ... | ... | ... | 4 | 6 | 5 | 1 | 16 |
| 4. | { | Snipe— | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. 1886. | In all. |
| | | | ... | 1 | 1 | ... | 2 | 1 | 1 | 6 |
| 5. | { | Jacksnipe— | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. 1886. | In all. |
| | | | ... | ... | ... | 1 | 2 | 2 | ... | 5 |

The stations returning in order of heaviest schedules and number of entries, as follows:—

| | | | | | | | | | |
|----|---|--------|------|-------|------|------------------|------|------|-----|
| 6. | { | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. | |
| | | XIV. | 6 | 6 | 8 | 6 | 9 | 2 | ... |
| | | XXVII. | 3 | ... | 2 | 6 | 5 | 6 | 2 |
| | | VIII. | ... | ... | ... | 1 | 2 | ... | ... |
| | | X. | ... | ... | ... | 5 (some wo'dc'k) | ... | ... | ... |
| | | XV. | ... | ... | ... | ... | 1 | ... | 3 |
| | | XXVI. | ... | ... | ... | ... | 2 | 1 | ... |
| | | | | | | | | | 37 |
| | | | | | | | | | 24 |
| | | | | | | | | | 3 |
| | | | | | | | | | 5 |
| | | | | | | | | | 3 |
| | | | | | | | | | 3 |

The records of VIII., X., and XV. refer entirely to Woodcock. The above tables we use in this place, as possibly affording a guide for future work in reducing our past seven reports to system. Under Table I. gives the time of year and comparative abundance of birds in each month. Table II. to V., comparative numbers of each species in each month. Table VI. gives relative faunal value of each station in each month. When decided "rushes" are noted, the word can be written in under the number of entries. Earliest and latest records may be given in footnotes to Table VI., or thus:—

| | | | | | |
|-----------|-----------|---------------|----------------------|----------------------|----------------------|
| Curlew . | Earliest, | 3d July, at | XIV. | Latest, Dec. 6th, at | XIV. |
| Woodcock | ,, | 15th Oct., at | VIII. | ,, | Jan. 21st, at XXVII. |
| Snipe . | ,, | 1st Aug., at | XIV. | ,, | Jan. 13th, at XXVII. |
| Jacksnipe | ,, | 31st Oct., at | XXVII. | ,, | Dec. 11th, at XXVII. |
| Whimbrel | ,, | 8th July, at | VIII. (Only record). | | |

Rush.

The winds in autumn prevailed as follows:—

| July. | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. |
|--------------------|--------------|----------|--------------|-----------|------|------|
| N. E. to S. S. E., | N. N. E. to | N. W. to | N. W., | N. to W. | N., | ... |
| occasionally | S. S. E., | S. W., | north of | at | with | ... |
| westerly | occasionally | once | XIV.; | XIV.; | snow | ... |
| and | N. | S. S. E. | E. and N. E. | S. E. at | over | ... |
| southerly. | | | and S. E. | XXVII.; | all. | ... |
| | | | gale, | and | | |
| | | | south of | S. S. E. | | |
| | | | XXVII. | and S. at | | |
| | | | | VIII. | | |

Added to the List of Isle of May.—*A Ruff* (*Machetes pugnax*) sent for identification and for the collection, 5th May; light N.E. wind, clear. Most of this huge migratory flight of all sorts left by the afternoon of the 5th.

Sandpipers, Redshanks.—*Spring*, only two records of “Sandpipers,” six on 7th Feb. 1885, at XXVII.; light S.W., clear; and one “Yellow Shanked Sandpiper” *found dead* on 1st May at XXVII. [We would be glad of wings and feet, or skin, of as many different Sandpipers as Mr Agnew can send us. Parcels once a month, or with each schedule. The true “Yellow Shanked Sandpiper” is a N. American species, but numbers of other *species* have yellow feet or legs.]

In Autumn.—All records are crowded into September and November. Species are Redshanks, “Grey Sandpiper,” Common Sandpiper, Purple Sandpiper. The “Common Sandpiper” is recorded from N. Unst, but the species is uncertain. [Please send wings or skin.]

Turnstones are recorded, 18th Sept., at XXVII.; W.S.W., light, clear.

LARIDÆ.—Every month in the year contains returns. Species noted are Herring Gulls, “Dirty Allens” (or Skuas), “Gulls,” “Black-Backed Gulls,” “Kittiwakes,” “Grey Megs” (or Com-

mon Gull), Black-Headed Gulls, "Skua Gulls," Richardson's Skuas.

Spring and Autumn.—Every day plentiful in February, at XXVII. and XXVIII. B. Gulls arrived at XV. (Dunnet Head)—and left in August last—on 13th March 1885. Kittiwakes appeared first on 12th March, at XXVII., "earlier than usual," and very numerous by 13th; "came from S.;" N.W., light, clear. At XIV. seen all day flying around on 11th April; E.N.E., haze; two Black B. Gulls sitting on rocks on 30th; S.S.E., haze. By April 20th, Kittiwakes had settled down in summer quarters on XXVII., and were in "multitudes" by 27th May. At XIV. a pair of Herring Gulls bred in 1884, and again in the present year, on same place; not before. In May, hundreds Black H. Gulls on the lochs near VIII. to breed.

Records unimportant in June and July, except that "Dirty Allens" are recorded at IV. on 2d July, and "Skua Gulls" at XIV. on 7th. In August, movement of Kittiwakes and other Gulls, and records continue numerous through the remaining months.

G. Terns,—a number arrived to hatch, "as usual," at VIII. on 14th May, and Lesser Terns at XIX. on 24th May. The latter disappeared again on 26th Aug.

PROCELLARIIDÆ.—*Autumn*, July 3d, flying about the rocks at X. (Auskerry). In August, occasionally striking lantern at IV., VII., IX. (Start Point), and XV. (Dunnet Head). They breed at IX. among ruins of house, and under stones on shore.

September,—odd birds striking at IV. and at XIV. on five dates; three on 2d Sept. at IV., and two at same place on 6th. One record at IV. in October, and one at same place in November, usually in foggy or rainy weather.

ALCIDÆ.—More or less records every month. Arrivals. First spring visit of Guillemots and Razorbills at XXVII. on 8th March; remained in thousands to 15th; fewer up to 24th; disappeared and returned in multitudes to breed by 13th April; Puffins, Razorbills, and Guillemots. Also at VIII. "Rock Birds seen flying N. daily till 8th May." N.B.—*Black Guillemots* recorded at XXVII. on 5th May.

In Autumn.—Puffins last seen at XIV. on 7th Aug., and all other Rock Birds left except Kittiwakes, on the same day, at XXVII.

Flock of Guillemots hung about XIV. for a time, and a few more seen on 24th. Large numbers of Guillemots and Razor-bills, from 16th to 18th, at XXVII., when all left, and after a W. gale large numbers on 2d Dec. and again on 31st Dec. and seen occasionally till end of January. N.B.—Black Guillemots, one seen at XXVII. on 27th Jan. 1886. We think it quite possible *Black Guillemots* still breed on Isle of May, perhaps one pair.

EAST COAST OF ENGLAND.

SCHEDULES were sent to forty-five stations, lighthouses, and light-vessels, and returns have been received from forty-two. The total number of schedules sent in is eighty-four, and the greatest number from any single station, nine from Mr Thomas H. Cutting, of the Farn Lighthouse; and six from Mr Thomas O. Hall, of the Longstone Lighthouse.

The East Coast stations included in this report are:—

| | | | |
|----------------------|---|---|----------------------------------|
| Longstone L.H. | . | . | Thomas O. Hall. |
| Farn, Inner, L.H. | . | . | Thomas H. Cutting. |
| Coquet Island L.H. | . | . | William Evans. |
| Tees, 5 Buoy L.V. | . | . | Henry Harbord. |
| Tees Breakwater L.H. | . | . | M. Grant. |
| Whitby High L.H. | . | . | John Odgers. |
| Flamborough L.H. | . | . | Charles Hood. |
| Spurn L.H. | . | . | James B. Smith. |
| Spurn L.V. | . | . | <i>Nil.</i> |
| Outer Dowsing L.V. | . | . | William Stock. |
| Inner Dowsing L.V. | . | . | William King. |
| Llyn Wells L.V. | . | . | George Rees. |
| Dudgeon L.V. | . | . | J. F. Warder and J. H. Harrison. |
| Hasbro' L.V. | . | . | J. Nicholas and B. V. Darnell. |
| Hasbro' L.H. | . | . | <i>Nil.</i> |
| Hunstanton L.H. | . | . | Wm. Westmoreland. |
| Cromer L.H. | . | . | C. H. Overton. |
| Winterton L.H. | . | . | John Watson and John Leggett. |
| Leman and Ower L.V. | . | . | J. Artis and John Bowen. |
| Newarp L.V. | . | . | C. Campbell and W. Rees. |
| Cockle L.V. | . | . | Charles Perfrement and E. Cole. |
| Orfordness L.H. | . | . | J. Garrett. |
| Corton L.V. | . | . | I. H. Johnson and W. Bowen. |
| Languard Point L.H. | . | . | Owen Boyle. |
| Shipwash L.V. | . | . | David Dale. |
| Galloper L.V. | . | . | P. Frost. |
| Kentish Knock L.V. | . | . | W. R. Carter and W. Dorney. |

| | | | |
|----------------------|---|---|------------------------------------|
| Swin Middle L.V. | . | . | Samuel Pender. |
| Tongue L.V. | . | . | John Webber. |
| Nore L.V. | . | . | <i>Nil.</i> |
| Goodwin L.V. | . | . | David Johns. |
| Gull L.V. | . | . | Francis Harvey and J. Jenkins. |
| South Sand Head L.V. | . | . | F. G. Foreman. |
| East Side L.V. | . | . | Edward le Gallais and W. Nicholls. |
| Varne L.V. | . | . | <i>Nil.</i> |
| Hanois L.H. | . | . | Charles Williams. |

Reports and notes have also been received from :—

| | | | |
|---------------------|---|---|-----------------------------------|
| Roker, Sunderland | . | . | Alfred Crawhall Chapman. |
| S. S. "Aycliffe" | . | . | John Osborn Morgan (2d engineer). |
| Seaton-Carew | . | . | C. Donald Thompson. |
| Redcar | . | . | T. H. Nelson. |
| Flamborough | . | . | Matthew Bailey. |
| Spurn | . | . | Wm. Eagle Clarke. |
| Spurn | . | . | Philip Lawton. |
| Spurn | . | . | J. Fisher. |
| East Lincolnshire | . | . | John Cordeaux. |
| Northrepps and Cley | . | . | J. H. Gurney, Jun. |
| Yarmouth | . | . | Arthur Patterson. |
| Yarmouth | . | . | Benjamin Dye. |
| Yarmouth | . | . | G. Smith. |
| Thanet | . | . | Lord Clifton. |
| Malmö, Sweden | . | . | Frank R. Newton. |

Notes also bearing on the migration of birds on the east coast of England have been utilised from the *Zoologist*, *Naturalist*, and *Field* newspapers; also from MS. notes made at Cley, Norfolk, in the autumn of 1885 by Messrs G. E. and F. D. Power.

SEPARATE NOTES ON EACH SPECIES.

TURDINE.—MISSEL-THRUSH, *Turdus viscivorus*.—Spring migration, March 25th, 1885: Farn L.H., two. Autumn: Roker, Sunderland, August 9th, 7 P.M., "for about an hour a continual stream kept flying over the lawn at Silksworth; they were about one hundred yards high, going from N.E. to S.W., in parties of two or three, then twenty or thirty at once." Teesmouth, October 11th, great rush, "thousands in one particular field."

North-East Lincolnshire, October 20th, great many. COMMON THRUSH, *T. musicus*.—Spring, 1885: Longstone L.H., March 13th, night, N. hazy, several round lantern. Northrepps, middle of March, many moving north.¹ Autumn: An enormous immigration, first indicated at Farn L.H., July 3d to 11th, a few; none in August, sparingly in September, and an enormous rush from October 12th to 18th, covering the east coast, and, more or less, continuous night and day on 15th and 16th, wind E.N.E. A second rush November 8th to 12th, and less at intervals to end of month; a few Farn L.H. throughout January to February 10th, 1886. REDWING, *T. iliacus*.—Spring, 1885: Thanet, April 19, last seen. Autumn: Farn L.H., September 15th, first. An enormous immigration in October, much the largest recorded. The bulk arriving in two great rushes, covering the east coast, from October 15th to 17th, night and day; and again November 9th to 17th, but in less numbers. Hasbro' L.V. on 22d and 23d, all day; a few at Farn L.H. to December 3d, when the migration of this species ceased. FIELDFARE, *T. pilaris*.—Spring, 1885: North-East Lincolnshire, March 26th, large flocks in coast marshes. Thanet, April 19th, last seen. Farn L.H., May 4th, fifteen. Autumn: Dudgeon L.V., July 7th, one young bird caught on board; October 15th to 26th, first arrivals on east coast—a great rush on 15th and 16th at various stations, and a second very large immigration, old birds, November 8th to 12th. Longstone L.H., November 8th, S. to S.W., one on gallery at midnight; 9th, 10th, and 11th, great rush night and day, and up to 10.30 P.M. on 12th, and in less numbers at intervals on east coast to end of first week in January 1886. Shipwash L.V., January 23d, many till midnight, one killed. In North-East Lincolnshire, large numbers of old birds arrived at intervals from the last week in November to middle of January 1886, either direct from the Continent, or from more northern localities in Great Britain. BLACKBIRD, *T. merula*.—Spring, 1885: Migration observed at Longstone L.H. April 4th and 12th to W. Farn L.H. March 13th to May 4th. Whitby, March 13th and 14th, E. to W. during night. Autumn: October 15th to 18th, very large arrivals both by night and day, and again from November 8th to 12th, in both cases covering the east coast. Corton L.V., November 21st, noon, twenty to W.N.W.; and Dud-

¹ Malmö, Sweden, May 6th, flock of thrushes to N.E.

geon L.V., November 24th, last recorded. RING-OUSEL, *T. torquatus*.—Spring, 1885 : Spurn L.H., April 9th, male and female. Farn L.H., April 12th to May 4th. Longstone L.H., 23d, S., one. Thanet, 22d, two old males ; 23d and 25th, younger males ; 30th, females. Autumn : Spurn, August 25th ; Flamborough, October 6th, many. Cromer L.H., 16th, all night, seven killed. Thanet, 16th, N.E. gale, several ; 22d, E., old males and old females.

CINCLINÆ.—BLACK-BELLIED DIPPER, *Cinclus melanogaster*.—October 23d, E. and N.E. gale, one shot on morning of 24th. Humber Bank, in Stallinborough parish, great flight of Woodcock at the same date.

SAXICOLINÆ.—COMMON WHEATEAR, *Saxicola œnanthe*.—Spring, 1885 : Yarmouth, February 24, one shot on denes. Hunstanton L.H., March 15th, one. Farn L.H., April 5th, S.S.E., two ; 7th, E. all day, and the same on 10th and 11th, E.N.E. and E. Great Cotes, 11th, first. Hanois L.H., Guernsey, 10th, many at night at north light. Tees L.V., 22d, six, and many to May 28th, and eight on June 7th, general direction of flight S.E. to N.W. ; rushes on May 10th and 20th. Longstone L.H., April 23d, N.E., 4 A.M., several. Flamborough, May 3d to 6th, E. (4), many with Redstarts and Pied Flycatchers.¹ Autumn : Migration first indicated at Tees L.V. August 3d, and Farn L.H. on 7th and 9th. On the 15th a flock of twenty alighted on board the s.s. "Aycliffe" in the English Channel, remaining for two hours, and then left ; were observed in considerable numbers at several stations throughout September to middle of October. Is last recorded at the Hasborough L.V. October 16th, one. DESERT-CHAT, *S. deserti*.—Spurn, October 17th, one, a female, shot ; has been previously obtained once in Scotland, and twice in Heligoland. WHINCHAT AND STONECHAT, *Pratincola rubetra* and *rubicola*.—Spring : Farn L.H., May 4th E.N.E., many of both all day. Whitby L.H., April 22d, one Stonechat. Autumn : Whitby L.H., September 19th, one struck. Hasbro' L.V., November 10th, 2.30 A.M., two killed. The Whin-

¹ In the spring of 1886 I received by post one adult male Wheatear, in summer plumage, caught in a rabbit trap on March 26th in North Northumberland. In a late schedule from the Farn L.H. two are recorded on *February 22d*, at 5 P.M., on the island, and again two on March 25th. The earliest record for East Lincolnshire this spring is a pair on the Humber Embankment on March 29th.

chat does not appear to be observed or distinguished on migration by our recorders. REDSTART, *Ruticilla phœnicurus*.—Thanet, April 16th, males; 23d, females. Longstone L.H., May 1st, E., rain, one adult male. Flamborough, 3d, N.E., large number of males, with Pied Flycatchers. Farn L.H., 4th, E.N.E. all day. Malmo, Sweden, April 26th, two. Autumn: Are first recorded at Thanet July 19th, females and young. At several stations from August 17th to end of September; last at Spurn October 4th, W.S.W., with Wheatears. BLACK REDSTART, *R. titys*.—Yarmouth, March 15th, adult male; November 3d, adult female. Longstone L.H., October 17th, one female Redstart. This entry probably refers to this species, which, as a rule, is observed on the east coast about a fortnight after the migration of the common Redstart has ceased.¹

SYLVIINÆ.—RED-SPOTTED BLUETHROAT, *Cyanecula suecica*.—Spurn, October 7th, two. REDBREAST, *Erithacus rubecula*.—Spring, 1885: Longstone L.H., April 7th, S.E., one. Farn L.H., 10th, 11th, and 12th, E.N.E., several. Hasbro' L.V., May 22d, one to W.S.W. Autumn: Considerable immigration between the Farn Islands and Guernsey, from September 8th to November 12th; rush on October 16th, observed at Spurn, Lincolnshire coast (very large numbers), Hasbro' L.V., Tongue L.V., and Thanet; and again from November 10th to 12th at Inner Dowsing L.V., Kentish Knock L.V., South Sand Head L.V. The greatest number seen at any one time, Hasbro' L.V., October 2d, one hundred to one hundred and fifty, at 6 P.M., from S.E. to N.W., and Kentish Knock L.V. on November 10th, fifty to sixty, with tits from 2 A.M. to daybreak, and then going north. WHITETHROAT, *Sylvia rufa*.—Hanois L.H., April 10. Malmo, Sweden, May 4th. Hunstanton L.H., 20th, S. (5), 1 A.M., nine killed. Autumn: July 19th, Thanet, the first, and are last recorded Hanois L.H. September 17th, N.E. (4), midnight, along with Blackcaps. LESSER WHITETHROAT, *S. curruca*.—Spring: Great Cotes, April 23d. Autumn: The first at Thanet August 24th to 27th, and last at Longstone L.H. September 30th. BLACKCAP, *S. atricapilla*.—Spring: Thanet, May 5th, males; 6th, females. Return September 17th, 19th, and 25th at Hanois L.H., Thanet, and

¹ The occurrences, so far recorded by the committee, of the Black Redstart on the east coast of Great Britain in the autumn, range between October 23d and November 3d.

Languard L.H. GARDEN WARBLER, *S. salicaria*.—Return August 22d at Spurn, and September 20th at Thanet.

PHYLLOSCOPINÆ.—GOLDEN - CRESTED WREN, *Regulus cristatus*.—Spring: At Great Cotes and Thanet on March 8th; Longstone L.H. May 1st, 2 P.M., one. Autumn: A very considerable immigration first observed at Languard L.H. August 21st, 5.15 A.M., one. The next at Hanois L.H. September 17th, E., O.R. about lantern at midnight; are last recorded on November 11th. Rushes indicated at Flamborough on October 6th, and at Farn L.H., Hasbro' L.V. (twenty), Lincolnshire coast, Cockle L.V., and Thanet on October 16th and 17th; Teesmouth October 23d and 24th; Inner Dowsing L.V., Leman and Ower L.V., Kentish Knock L.V., and South Sand Head L.V. on November 10th and 11th. CHIFF-CHAFF, *Phylloscopus collybita*.—Spring: First in North Wales and Norfolk April 2d; return Thanet August 21st to September 24th. WILLOW-WREN, *P. trochilus*.—Return Thanet July 19th and August 5th. Spurn, August 18th to S. Cley, Norfolk coast, September 7th, E., great numbers in scrub, and increasing; 17th, second rush. WOOD-WREN, *P. sibilatrix*.—Spurn, August 14th; Thanet, 22d and 27th.

ACROCEPHALINÆ.—SEDFE WARBLER, *A. schænobænus*.—Spurn L.H., September 8th, one killed.

ACCENTORIDÆ.—HEDGE SPARROW, *Accentor modularis*.—Cley, Norfolk coast, September 18th, many. Newarp L.V., October 17th, rush with others. Godwin, east side L.V., 23d, a few on board. BEARDED REEDLING, *Panurus biarmicus*.—Yarmouth, February, last week, bearded tits, several flocks, numbers shot.

PARIDÆ.—Spring: Hanois L.H., April 10. BLUE-TITMOUSE.—Autumn: Great Cotes, October 11th. BLUE and COAL TITMOUSE, several. Whitby L.H., 15th, several Titmice about lighthouse garden. Kentish Knock L.V., November 10th, fifty to sixty Robins and Tits from midnight to daybreak, and then to N. Inner Dowsing L.V., 10th, one. South Sand Head L.V., 11th, Robin and Tits. COMMON CREEPER, *Certhia familiaris*.—Spurn, August 14th. COMMON WREN, *Troglodytes parvulus*.—Winterton L.H., September 6th, one at 2 A.M. on lantern; 8th, one at 4 A.M., and November 3d, one. Orfordness L.H., September 13th, 7 A.M., three with Robin. Farn L.H., October 23d, two. South Sand Head L.V., November 12th and 13th, Wrens on deck;

and Kentish Knock L.V., 13th, two at 4 P.M., went to roost on board.

MOTACILLIDÆ.—PIED WAGTAIL, *M. lugubris*.—Spring, 1885: Tees L.V., February 4th, N.W., four to N.W.; 27th, with Titlarks to N.W. Hanois L.H., February 12th, a few. Great Cotes, 25th, many, with Titlarks. Whitby L.H., March 8th, one. Thanet, 11th to 19th. Farn L.H., 11th, two; and Longstone L.H., May 9th, two to W. Autumn: Return Thanet August 2d, young; 26th, old. Hanois L.H., November 20th, twelve to S.E. **BLUE-HEADED WAGTAIL**, *M. flava*.—Thanet, April 22d, male; May 4th, old female and young bird in second plumage. **YELLOW WAGTAIL**, *M. raii*.—Spring, 1885: Great Cotes, April 18th; and Thanet, 26th, first. Autumn: Spurn, August 14th, a few immature Yellow Wagtails; 23d, thousands, "the whole district ablaze with them;" 24th, less numbers. Thanet, 20th and 21st. Cley, September 18th, in parties; 23d, three or four. **GREY WAGTAIL**, *M. melanope*.—Autumn: Great Cotes, September, first and second weeks, young birds swarming in beanfields; October 15th, first, old. Cley, September 9th, first. Thanet, 28th and 30th, two each day. In the spring of 1885 were first seen at Malmo, Sweden, on April 7th, two, "a sure sign to begin to plough." **MEADOW PIPIT**, *Anthus pratensis*.—Spring: Great Cotes, February 25th, many, with Pied Wagtails; Tees L.V., 27th, some with Wagtails to N.W. Autumn: Cley, September 16th, great many. Roker (Sunderland), October 3d and 7th. Farn L.H., 23d, E.S.E. (4), great many. **ROCK PIPIT**, *A. obscurus*.—Cley, September 22d, three or four; 23d, several. **GOLDEN ORIOLE**, *Oriolus galbula*.—Thanet, June 9th and 23d (see remarks under "General Notes").

LANIIDÆ.—RED - BACKED SHRIKE, *Lanius collurio*.—Spring: Thanet, May 23d, female. Autumn: Thanet, August 5th, female. Spurn, 24th and September 1st, young, one each day; 3d and 4th, one each day. **WOODCHAT SHRIKE**, *L. auriculatus*.—Yarmouth, May, second week, a female, and several others reported further north on east coast (*Zoologist*, 1886, pp. 27, 28).

MUSCICAPIDÆ.—SPOTTED FLYCATCHER, *Muscicapa grisola*.—Thanet, May 1st, first; October 14th, last (very late). **PIED FLYCATCHER**, *M. atricapilla*.—Spring: Flamborough, May 3d, N.E., great rush with Redstarts, and forward to 6th, "the largest arrival ever known." Spurn, same date, great many, "more

numerous than ever known before." Malmo (Sweden), April 29th, two. Autumn: Spurn, August 24th, young; 29th, same. Thanet, 30th, N.E., five or six; again on 31st, and from September 1st to 29th. Cley, September 8th.

HIRUNDINIDÆ.—SWALLOW, *Hirundo rustica*.—Spring: Hanois L.H., March 30th, a flight, and from April 15th to May 10th, daily. Flamborough, April 8th, N.N.E. (8), 11.30 A.M., first; Great Cotes 14th, Thanet 20th, Orfordness 20th, Yarmouth 17th, Hunstanton 16th, Spurn 17th, Whitby 19th, Tees L.V. 19th, one from E.S.E. to N.W.; 21st, 8 A.M. to 2 P.M., great many to N.W. from E.S.E., and some Martins, and many at intervals to May 29th in same direction. Languard L.H., May 30th to June 5th. Malmo, Sweden, April 22d. Autumn: Tees L.V., September 15th and 16th, great many to S.W. Spurn, September 2d and 5th, all day in small numbers to S. Hunstanton, 15th and 16th, hundreds all day to S., and throughout September at several stations; were last observed at Languard L.H. October 18th. Flamborough, 18th, several. Great Cotes, 19th. Leman and Ower L.V., 24th. In November, three at Flamborough on 1st. Hunstanton, 14th, one to S.W. Thanet, 15th, one. MARTIN, *Chelidon urbica*.—Spring: Tees L.V., April 21st, first; some, with Swallows N.W. to E.S.E.; July 7th, 8th, 11th, great many to N.W., and at several stations in April, May, and June. Autumn: Last at Thanet, November 1st. SAND-MARTIN, *Cotile riparia*.—Great Cotes, April 22d. Last at Thanet, November 1st.

FRINGILLIDÆ.—GOLDFINCH, *Carduelis elegans*.—Hanois L.H., November 1st, fifty to N.W. SISKIN, *Chrysomitris spinus*.—Yarmouth, abundant in December. SERIN FINCH, *Serinus hortulanus*.—Yarmouth, June 14th (*Zoologist*, 1886, p. 28), probably a male. GREENFINCH, *Ligurinus chloris*.—Curiously only one entry in the schedules. Shipwash L.V., January 24th, 1886, one died on board. COMMON SPARROW, *Passer domesticus*.—First at Shipwash L.V., September 22d, 2.30 P.M., great flight of Common Sparrows to N.N.W. Kentish Knock L.V., 27th, forty to W., and on 28th. Newarp L.V., October 8th, noon, thirty. Goodwin East L.V., October 20th, a few House Sparrows during day, and on November 10th to 13th. Corton L.V., October 1st, 11th, 12th, 15th, 19th, 21st, 22d, and November 11th, large numbers, several on vessel. TREE SPARROW, *P. montanus*.—Longstone L.H.,

October 16th, one. Cockle and Kentish Knock L.V.'s, October 4th and 30th, at latter in large numbers. Goodwin and Gull L.V.'s, September 28th, 29th, and October 28th, 30th, great rush. South Sand Head, October 12th, 7 A.M., some to N.W., and on December 2d one. Very few, as a rule, came in north of the Humber. CHAFFINCH, *Fringilla cœlebs*.—First at Outer Dowsing L.V. September 18th, one. Arrived mainly in two great flights, October 12th to 16th, and November 10th to 13th, as observed at several stations. BRAMBLING, *F. montifringilla*.—Spring: Thanet, April 19th, last seen. Autumn: October 14th to 17th, and a second flight November 11th to 12th, practically at the same periods as the former.¹ LINNET, *Linota cannabina*.—Comparatively few notices, and no Twites. MEALY AND LESSER REDPOLES, *L. linaria* and *rufescens*.—Cockle L.V., October 14th, one. Outer Dowsing L.V., 16th, two. Leman and Ower L.V., 18th, one caught (Mealy Redpoles), flying from E.N.E. to S.W. Spurn, about November 11th, one Mealy Redpole. Hasbro' L.V., November 23d, one Redpole caught. Yarmouth, in December, abundant. It is probable all the notices refer to *L. linaria*.

EMBERIZINÆ.—YELLOW BUNTING, *Emberiza citrinella*.—Whitby, March 16th, great number during week commencing on the 16th. SNOW BUNTING, *Plectrophanes nivalis*.—Spring: Tees L.V., March 1st, flocks. Farn L.H., 4th, two. Yarmouth, 22d, four, 3 P.M., on north light. Farn L.H., April 11th, one. Autumn: Cley, September 26th, one, and at several stations in October and November; rushes October 16th and 24th, N.E., half-gale, and November 18th and 25th.

ALAUDIDÆ.—SKY-LARK, *Alauda arvensis*.—The occurrences are far too numerous to record separately; in some cases the entries fill a considerable portion of the schedules. They are noted at thirty stations on the east coast, sixteen of which are light-vessels. Spring, 1885: Longstone L.H., April 7th, and Cockle L.V., May 6th; some to W. at intervals during the day. Autumn: First at Cockle L.V. September 7th, and sparingly at other stations during the month to the 28th and 29th, when the

¹ Bramblings are reported as having been more plentiful in Lincolnshire and Norfolk than has been the case for very many years. In the Migration Report for 1883, the Hawfinch is recorded at the Inner Dowsing L.V. on November 2d, and at the same station in the previous year on October 20th. I have recently ascertained from Mr William King that he was mistaken in his identification, and that the birds were Bramblings.

numbers greatly increased. A very heavy immigration in October, and from the 12th to 20th an almost continuous rush night and day, covering the whole of the east coast; in less numbers in November to the 20th, when the migration appears to have almost ceased. The great bulk appear to have arrived in two enormous and almost continuous flights on October 15th, 16th, 17th, and November 10th and 11th—in the latter case in less numbers; very sparingly in December and up to January 25th, 1886. A strong return migration to the Continent is indicated at the Shipwash L.V. on February 14th and 15th N.E. at night, also during the day on the 15th from W. to E., and at the Newarp L.V. March 19th to 21st, likewise to E. At the same station, from January 25th, 1886, to February 14th, Larks passing to the W. SHORE-LARK, *Otocorys alpestris*.—Yarmouth, November 26th, one found dead; several seen in February. Flamborough, January 4th, 1886, one shot.

STURNIDÆ.—STARLING, *Sturnus vulgaris*.—At twenty-one stations. Dudgeon L.V., July 10th, three young alighted on vessel, and then to W.N.W. None are recorded in August and September till the 28th at Shipwash L.V., some flights; enormous numbers in October, especially from the 12th to 19th, frequently associated with Larks, and large numbers of both killed at the light-vessels; proportionately less in November, with heavy rushes from the 12th to 23d. A very considerable spring migration indicated at Shipwash L.V. both to the E. and W. from February 10th to March 21st, 1886.

CORVIDÆ.—DAW, *Corvus monedula*.—Longstone L.H., March 12th, N., several to W.; April 3d to W. at dawn. Autumn: At several stations, generally in company with Rooks. CARRION CROW, *C. corone*.—Tees L.V., October 19th, five; 24th, twelve. Dudgeon L.V., October 5th to November 11th, many with Rooks. Tongue L.V., December 11th, one on deck; great numbers of "Black Crows" are recorded at various stations, which may refer either to this or the Rook. HOODED CROW, *C. cornix*.—Spring, 1885: Outer Dowsing L.V., March 1st, large flights from W.N.W. to E.S.E. 10 A.M. Hunstanton, April 7th, many near lighthouse. Thanet, 19th, last. Autumn: First at Hasbro' L.V. October 2d, small flocks all day S.E. to N.W. Great numbers in October at various stations, chiefly between the Humber and Thames, and an almost continuous rush be-

tween 15th and 17th. A very considerable immigration in November, specially from 9th to 12th. Rook, *C. frugilegus*.—Longstone L.H., March 11th and 14th, 1885, many to E.; April 4th, 15th, 17th, and 20th, several to W. Cockle L.V., May 2d, continuous flocks during day to N.W., S.W., and N. Northrepps, March 22d and 23d, 1886, Rooks and Crows to E.S.E. Autumn: Immense numbers at various stations in October and November, with continuous rushes corresponding with those of the Grey Crow.¹ RAVEN, *C. corax*.—Outer Dowsing L.V., March 6th, 3 A.M., two ravens, one caught. Malmo, Sweden, February 7th, one passing overhead N.E. to S.W.—exactly the same line as observed for nine successive years.

CYPSELIDÆ.—SWIFT, *Cypselus apus*.—Spurn, April 20th, eight on window-sill of tower; 22d, several; June 29th, 11 A.M., fifty round lantern. At Yarmouth May 7th, and Thanet and Hunstanton on 8th, Malmo 10th. Autumn: Many to S. along coast first week in September. WRYNECK, *Jynx torquilla*.—Thanet, April 19th, 25th; May 10th, 18th; June 14th, three distinct arrivals. Farn L.H., May 15th, one picked up dead. COMMON ROLLER, *Coracias garrulus*.—Felthorpe, near Norwich, October 24th, adult female. CUCKOO, *Cuculus canorus*.—Whitby, April 8th; Hanois L.H., Guernsey, 10th, two; Flambrø' 17th, Spurn 18th, Farn L.H. 29th. Malmo May 13th, Tongue L.V. 19th, 10.30 P.M., one struck and killed. Autumn: Hunstanton L.H., July 16th, 2 A.M., N.W., one killed. Roker, August 6th, one young. Spurn, 7th, midnight O.M., one killed; 17th, two young on sandhills. Thanet, 8th, and September 3d and 4th. Farn L.H., August 9th, 6 P.M.

¹ Mr J. H. Gurney, Sen., writes:—"Lord Lilford sends me word that on 20th of March 1886, Mr G. Hunt saw an extraordinary flight of Rooks at Somerton, which he observed from 10.30 A.M. till 6 P.M., when he left, but the flight was still going on. He wrote to Lord Lilford:—"I observed them flying just above the sandhills, going due south, and as far as the eye could see both before and behind there was nothing but Rooks. There would never for one moment of the day be less than a thousand in sight at one time; they kept in a thin wavering line. The coast line here runs due north and south.'" Mr J. H. Gurney, Jun., writes:—"I saw the same Rooks and Grey Crows on the same day in much smaller numbers as were seen at Somerton (Norfolk coast), which is fifteen miles further south. I again saw them on the 21st, 22d, 25th, 26th, 29th, but none after that date. Mr Hunt says they were all Rooks, but with me Grey Crows preponderated; direction to S.E." In connection with this read Mr Gätke's notes of migration as observed at Heligoland and Hanover between March 19th and 25th, 1886, on the last page of his journal.

STRIGES.—BARN OWL, *Strix flammea*.—Tongue L.V., October 20th, 8 A.M., “White Owl” to W. Tees L.V., December 2d, W.S.W., “one Barn Owl.” LONG-EARED OWL, *Asio otus*.—Longstone L.H., October 10th, 2 P.M., N.N.E., fresh gale, one (“with wind N. of E., very few migrants are seen”). Farn L.H., October 10th, 6.30 P.M., “Owl” round lantern. Spurn, October 23d, E. and N.E. gale, some, one also shot at Spurn on August 25th. SHORT-EARED OWL, *A. accipitrinus*.—Spring: Farn L.H., April 22d, one on rocks. Autumn: In two rushes—October 20th to 23d, November 12th to 14th.

FALCONIDÆ.—Very few notices. SEA-EAGLE, *Haliaëtus albicilla*.—Immature male and female shot in Kent early in November, and another seen. The SPOTTED EAGLE, *Aquila naevia*, was shot at Cresswell on the Northumberland coast on October 31st. KITE, *Milvus iclinus*.—Thanet, April 9th, 3.30 P.M., N.W., one flying to W. During the last week in September and early in October (the usual period for the passage of the Falconidæ); a few PEREGRINES, KESTRELS, MERLINS, and Sparrow Hawks were observed on migration at various parts of the east coast. Northrepps, March 20th, 1886, two BUZZARDS, with Rooks to E.S.E.

PELECANIDÆ.—CORMORANT, *Phalacrocorax carbo*.—Spring: Tees L.V., March 1st to 10th, many to north. Whitby L.H., 11th, to north; September 17th, old and young, to S. Leman and Ower L.V., October 4th, forty to fifty, fishing for herring. GANNET, *Sula bassana*.—Farn L.H., August 22d, 26th, 27th, hundreds fishing off island. HERON, *Ardea cinerea*.—Coquet L.H., more Herons seen in September to October 12th than had been seen for many years. Outer Dowsing L.V., October 2d, one from E. to W.N.W. Tees L.V., February 28th, two, E. to W. WHITE STORK, *Ciconia alba*.—Malmo, April 19th, flight, eighteen or twenty, to N.E. SPOONBILL, *Platalea leucorodia*.—Yarmouth, June 4th, one shot at Breydon Water.

ANATIDÆ.—WILD GEESE.—Whitby L.H., May 23d, nine dark-coloured Geese to S.; July 1st, twelve to N.; 12th, five to N. Autumn: Cley, September 7th, nineteen in flock. Llyn Wells L.V., 20th, twelve Geese, from E. by E. Languard L.H., October 6th, flock, low to S.W. South Sand Head and East Side L.V.’s (Goodwins), December 6th and 7th, great numbers, too many to number. Unusually large numbers of Geese seen in North-East

Lincolnshire from the first week in October to the end of the year. SWANS.—Remarkably scarce. Five were seen on September 27th flying from S. to N. above the Town's Moor at Newcastle, and at Corton L.V. November 29th, 11 A.M., two to W. DUCKS, COMMON SHIELDRAKE, *Tadorna cornuta*.—Tees L.V., January 1st, 1885, fifty-four and one Coot. Farn L.H., June 20th, two broods off. GARGANEY TEAL, *Querquedula ciria*.—April 3d, one, a male, shot at Breydon, Yarmouth. KING EIDER, *Somateria spectabilis*.—Longstone L.H., April 23d, several times seen, was shot on the 25th. Immense numbers of various Ducks are reported at sea during the autumn and winter, flying in various directions. The POCHARD, *Fuligula ferina*, has been unusually plentiful both in Lincolnshire and Norfolk.

COLUMBIDÆ.—RINGDOVE, *Columba palumbus*.—Tetney, Lincolnshire coast, October 23d, first flight of Wood Pigeons. Outer Dowsing L.V., November 12th, "seven pigeons" W. to E. Roker, near Sunderland, December 12th, flocks arriving all day from the E. to the woods two miles inland. Mr H. F. Tomalin reports from Northampton, "a great rush of Wood Pigeons crossed this part of the country on October 16th; they were passing continuously, in companies of four to five hundred, in a south-westerly direction." The STOCKDOVE, *C. œnas*, is reported as exceedingly abundant in Norfolk during the winter of 1885-1886. TURTLE DOVE, *Turtur communis*.—Thanet, May 13th, first.

RALLIDÆ.—WATER-RAIL, *Rallus aquaticus*.—Farn L.H., October 15th, one; 31st, E.S.E. (4), one. Leman and Ower L.V., 19th, 11 A.M., one killed. SPOTTED CRAKE, *Porzana maru-etta*.—Spurn, October 23d, one. STONE CURLEW, *Ædicnemus scolopax*.—Spurn, August 22d, one seen on mud flats.

CHARADRIIDÆ.—GOLDEN PLOVER, *Charadrius pluvialis*.—Besides the usual autumn arrivals there was a distinct immigration in December. Tongue L.V., December 14th, 5 A.M., one struck rigging and killed. Thanet, 16th, 3.20 P.M., S.W., flocks of thirty to forty from E. GREY PLOVER, *Squatarola helvetica*.—Spurn, August 26th, small flock in summer plumage. Longstone L.H., September 5th, N.W., three killed. Cley, 22d, W.S.W., calm, flock. KENTISH PLOVER, *Ægialitis cantiana*.—Yarmouth, May 3d, three at Breydon. Languard L.H., June 30th, 6.30 A.M., two. DOTTEREL, *Eudromias morinellus*.—Spring: Great Cotes,

May 14th, seven; 16th, five. LAPWING, *Vanellus vulgaris*.—First at Whitby, September 12th, large flock, old and young, to S. Yarmouth, October 2d, S.W., strong, flocks coming in. Orfordness, 8th, rush, and on 11th the same during night. Whitby, 16th, very large flock. Llyn Wells L.V., 21st and 22d, rush all day to N., and on November 1st, 2d, 3d. Dudgeon L.V., November 10th and 11th, great rush. Hasbro' L.V., 11th to 12th, night, and 22d to 23d, night, great rush to W. and W.N.W. Leman and Ower L.V., 12th and 15th, flights to N.W. and W.

SCOLOPACIDÆ.—WOODCOCK, *Scolopax rusticula*.—Spring: Farn L.H., April 11th, 10.30 P.M., one struck, not killed. Autumn: "First flight," October 16th, 17th, E. and N.E., cold, rain and stormy, covering the whole of the coast from Farn to Thanet, "Great flight" on night of 22d and 23d, and 23d and 24th October, E. and N.E. gale, large numbers striking the east coast at Longstone L.H., Coquet L.H., Teesmouth, Whitby, Flamborough (swarmed), Spurn (seventy-nine shot by one party morning of 24th). Lincolnshire coast, great numbers. Yarmouth, less. This flight was composed of the small, dark, reddish Scandinavian bird, and the same applies also to the later flights on the east coast. Other arrivals were Farn L.H., October 31st, seven. Longstone L.H., November 4th, eleven. Farn L.H., same date, W.N.W. (4), seven. Leman and Ower L.V., November 13th, one killed. Thanet, November 11th and 12th. Yarmouth, November 20th, many, and a few at various stations to end of month, and also in December. A flight is recorded during the last week in January 1886, at Northrepps and Thanet. DOUBLE SNIPE, *Gallinago major*.—Longstone L.H., September 15th, one. COMMON SNIPE, *G. caelestis*.—Spring: Longstone L.H., April 3d, S.W., two, to E. Autumn: Yarmouth, September 12th, W., strong, many. Farn L.H., October 31st. Dudgeon L.V., November 11th, rush; and North-East Lincolnshire, on 24th, very large numbers. JACK-SNIPE, *G. gallinula*.—Lincolnshire coast, September 23d. Farn L.H., October 12th, N.N.E., and again on 31st. Longstone L.H., 17th, and November 11th; and East Lincolnshire, November 24th, great rush with Common Snipe. DUNLIN, *Tringa alpina*.—Spring: Yarmouth, May 10th, large flocks in summer plumage. Autumn: Languard L.H., August 1st, very large flock, the first. Redcar, September 27th, in flocks all day to W. LITTLE STINT, *T. minuta*.—Cley, September 7th to 10th, several. Yar-

mouth, 8th, a few. TEMMINCK'S STINT, *T. temmincki*.—Yarmouth, September 8th, one. PYGMY CURLEW, *T. subarquata*.—Roker, August 6th, 3 P.M., W., two. KNOT, *T. canutus*.—Longstone L.H., August 14th, shot in summer plumage. Spurn, 20th, a few in summer plumage. Yarmouth, September 6th, large flight. Redcar, 10th, W. half gale, flock; 12th, two flocks, young birds. Cley, 22d, large flock. RUFF, *Machetes pugnax*.—Spring: Yarmouth, June 4th, four shot in summer plumage. Autumn: Redcar, August 31st, one young Ruff. Cley, September 12th, several Reeves seen, one shot. Lincolnshire coast, October 3d, one Reeve shot. SANDERLING, *Calidris arenaria*.—Spring: Yarmouth, April 6th, many in company with Ringed Plover. Return, Spurn August 12th. COMMON SANDPIPER, *Totanus hypoleucus*.—Spurn, August 27th. Cley, September 10th, many. GREEN SANDPIPER, *T. ochropus*.—Spurn, August 22d to 26th. Yarmouth, same date, many. WOOD SANDPIPER, *T. glareola*.—Yarmouth, August 22d. COMMON REDSHANK, *T. calidris*.—Tees L.V., August 2d, many. SPOTTED REDSHANK, *T. fuscus*.—Yarmouth, August 22d, one shot. GREENSHANK, *T. canescens*.—Spring: Yarmouth, April 26th, at Breydon. Autumn: Spurn, August 24th, young female. BARTAILED GODWIT, *Limosa lapponica*.—Spurn, August 20th, in summer plumage. Yarmouth, September 8th, several Godwits on coast. Cley, September 12th to 25th, a constant succession. BLACK-TAILED GODWIT, *L. aegecephala*.—Cley, September 15th, old bird shot. WHIMBREL, *Numenius phaeopus*.—Spring: Great Cotes, May 16th, many. Autumn: Tees L.V., August 2d and 15th. Redcar, 12th, last on September 11th. Yarmouth, August 19th, many. Roker, near Sunderland, August 31st and September 1st, very high. Longstone L.H., September 20th, two. Cley, September 23d, last. CURLEW, *N. arquata*.—Spring: Whitby, April 9th, 11.30 P.M., great flock round light. Autumn: Tees L.V., August 15th. Whitby, September 12th, to south. Orfordness L.H., October 8th, night, large numbers, one killed. Dudgeon L.V., October 21st, 3 A.M., about lantern; and November 25th, ten, S.E. to N.W. Leman and Ower L.V., October 29th, to S.; November 12th, to S.W., rush; 13th, one killed. East Goodwin L.V., November 12th, one killed.

LARIDÆ.—ARCTIC TERN, *Sterna macrura*.—Longstone L.H. May 15th, first heard. August 9th, most left breeding haunts.

September 2d, a few about. LITTLE TERN, *S. minuta*.—Spring : Spurn, April 15th, first. May 5th, many. Yarmouth, April 25th and 26th, on Breydon. Languard L.H., May 9th, two. SANDWICH TERN, *S. cantiaca*.—Farn L.H., April 12th, first heard. August 9th, "most have left breeding places." September 1st to 30th, great flocks all round islands. TERNS.—Redcar, August 12th, all day passing; 13th, less. September 4th, great many common Terns at sea; 11th, the same. Yarmouth, September 14th, flocks of young Terns to S. 22d May, at sea, going S.

LARINÆ.—GULLS.—Whitby, February 10th, HERRING GULLS first came to cliffs early morning; July 9th, first young on wing; August 29th, young and old left for sea. Farn L.H., April 12th, LESSER BLACK-BACKED GULLS first returned to nesting quarters. LITTLE GULL, *Larus minutus*.—Redcar, September 9th, one young shot. Flamborough, October 3d, three shot. Languard L.H., September 3d, two "Cream-Coloured Gulls," the first seen here.

STERCORARIINÆ.—SKUAS.—Farn L.H., August 11th, several chasing Terns. September 10th, two BUFFON'S SKUA. Redcar, August 13th, one RICHARDSON'S SKUA; 31st, two or three; September 7th and 10th, very plentiful at sea. Longstone L.H., September 2d, many Skua along shore. Cley, 25th, some Skua seen. Llyn Wells L.V., October 10th, 7 A.M. to 9.30 P.M., flock of 130 "Boatswain Skua;" 13th, flocks of Gulls and Skua. February 8th, 1886, great numbers of Skua Gulls.

PROCELLARIIDÆ.—STORM PETREL, *Procellaria pelagica*.—Languard L.H., October 25th, 2.15 A.M., one caught. Farn L.H., October 31st, S.S.E., one struck, not killed; November 10th, S., one at daylight on gallery. Kentish Knock L.V., November 11th, night, several. South Sand Head L.V., 11th, two on board. Hasbro' L.V., 12th, twenty all night, four killed. Coquet L.H., November 14th, N.W. (six), one caught on lantern. SHEARWATER.—Longstone L.H., September 2d, one, all black, seen. FULMAR PETREL, *Fulmarus glacialis*.—Yarmouth, October 31st, caught at sea. Redcar, three shot early in November.

ALCIDÆ.—COMMON GUILLEMOT, *Lomvia troile*.—Flambro', February 5th, 1885, great number off breeding quarters. Longstone L.H., March 7th, many on the rocks, "are seven days earlier than in 1884." Farn L.H., February 25th, "thousands flying near nesting haunts." April 12th, "have taken to rocks."

November 28th several BLACK GUILLEMOT off island. LITTLE AUK, *Mergulus alle*.—Longstone, October 14th, two. PUFFIN, *Fratercula arctica*.—Farn L.H., April 12th, returned to nesting quarters. Longstone, 14th, first seen, "four days earlier than last year."

COLYMBIDÆ.—Farn L.H., September 18th, two GREAT NORTHERN DIVERS to N. December 13th, several RED-THROATED DIVERS and two GREAT NORTHERN DIVERS off island. PODICIPITIDÆ, Farn L.H., September 15th, Red-Necked Grebe seen off island.

GENERAL NOTES.

With reference to the rush of birds on October 16th and 17th, Mr Thomas O. Hall of the LONGSTONE L.H. writes:—"October 16th. Starlings and Redwings commenced to come at 1.30 A.M., and continued to daylight; after that they continued to come all day, but not in large numbers. One Tree Sparrow. Wind easterly. October 17th. An enormous rush of Redwing and Starling; not many of the other kinds, only a few Blackbirds and Larks. One Woodcock was injured against the lantern, one Jacksnipe killed, also one Brambling. One female Redstart seen. Several Woodcock were shot on the adjacent islands by a boat from shore, so that there was a large flight. The rush of birds was continuous from 1.45 A.M. to 5.30 A.M. The greater part of the Starlings caught were young birds. There were also some Knot flying round the lantern, but none struck. The wind was east, with drizzling rain." Again, with regard to the November rush which was continuous on the 10th and 11th:—"November 8th. A few Redwings and Larks heard after dark, and one Fieldfare on the gallery at midnight. Wind S. to S.W., moderate. 9th. A few Fieldfare heard through the morning, and two Skylarks seen at 10.30 A.M. Several Fieldfare and Knot flying round from 6 P.M. till midnight; one Skylark and one Fieldfare caught. Wind from S.W. to S.S.E., and at midnight S.S.E. 10th. Fieldfares flying more plentifully than in fore part of the night, but not striking. No other birds seen. The flight of Fieldfares continued all day, one flock of fifty and another of two hundred passed in afternoon, also five Blackbirds and one Corby Crow in the afternoon. The Fieldfare continued up to 10.38 P.M., when the weather became

clearer. One of the large Snipe struck S.E. side of lantern at 9.45 P.M., and was almost smashed to pieces; one Dunlin also killed; wind S. by E. to S.E. by S. 11th. Fieldfares, Redwings, and Blackbirds coming all day and all through the night, also Skylarks. One Jacksnipe killed. Wind from S. round by E. to N.E., light, with passing showers of drizzle. 12th. The same birds as yesterday still coming all day, and continuing up to 11 P.M.; wind from S.W. to W. by N., moderate. At 1 P.M. one Snow Bunting and a Brambling."

FARN L.H.—Mr Thomas H. Cutting:—January 1st, 1886. "Very large flocks of Golden Plover to and from land, a good many Mallard and several Snipe on island; westerly gales, hail and snow, with severe frosts. I was shown a bird picked up on the main shore about three weeks previously, which I identified as a Fulmar Petrel. I remember one being captured about nine years ago."

COQUET ISLAND L.H.—Mr William Evans:—"October 17th. Hundreds of Blackbirds, Thrushes, Starlings, Larks, three Woodcock, one Snipe flying round lantern; one Woodcock killed, and one hundred Blackbirds, Thrushes; Starlings, and Larks."

DUDGEON L.V.—Mr J. F. Warder:—"Seagulls and Puffins are very thin at the Dudgeon Station. Skua Gulls are seldom seen here summer or winter."

LEMAN AND OWER L.V.—Mr John Bowen (Mate):—"November 13th. Large numbers of birds at midnight round the ship and lantern. West (3), o. m. One Curlew, one Woodcock, one Blackbird, three Starlings, four Thrushes, fourteen Redwings, twelve Larks, and one Finch killed; the rest went away at daylight to N.W.

HASBRO' L.V.—Mr B. V. Darnell and J. Nicholas:—"June 7th, 4 P.M., S.S.E. (2), o. m., one Deaths-head Moth caught alive; several small White Moths and Black Flies rested."

LANGUARD POINT L.H.—Mr Owen Boyle:—"July 4th, at 9.35 P.M., millions of very small brown-coloured Flies pitched on lantern glass, and to keep the glass clear they had to be washed off. They sting like a musquito. Wind S. (1), B. C. M."

HANOIS L.H., Guernsey.—Mr Charles Williams:—"April 10th, 1885, Cuckoo, two seen on the island, and several Swallows, Whitethroats, and Blue Titmouse, Yellow Wagtails, Yellow Buntings, and Wheatears. The west end of the island was all

alive with birds of passage. The morning fine; wind N., light." "September 13th. S.E., cloudy. Silver-gamma Moth all the evening flying about lantern." "September 17th. N.E. (4), O. R. Golden-crested Wrens, Redstarts, Wheatears, Wagtails, Whitethroats, Blackcaps, and Swallows after midnight; a great many killed, and fell into the water." "22d. Winged Ants flying past lighthouses, some settled. S.E., B. C. V., 2 P.M."

In the great rush, October 15th, 16th, E.N.E. (4 to 5), O. M., the species actually shown by the schedules as on migration over the North Sea, were Redwing, Starling, Tree-sparrow, Blackbird, Lark, Thrush, Fieldfare, Water-rail, Hawk, Redbreast, Woodcock, Goldcrest, Snipe, Gray Crow, Snow-Bunting, Ring-Ousel, Chaffinch, Carrion Crow, Wheatear, Rook, Linnet, Hedge-Sparrow, Common Sparrow, Brambling, Short-eared Owl, Knot, Wild Geese, and Jacksnipe; and on November 10th, 11th, S. by E. to N.E., drizzly, Missel Thrush, Blackbird, Grey Crow, Thrush, Redwing, Snipe, Dunlin, Fieldfare, Stormy Petrel, Lark, Lapwing, Goldcrest, Starling, Curlew, Stonechat, Rook, Daw, Ducks, Sparrow, Redbreast, Titmice, Short-eared Owl, Tree Pipit, Snow-bunting, and Brambling, with doubtless many others not distinguished at the time.

From MALMO, Sweden.—Mr Frank R. Newton sends a cutting from a Gotland newspaper, of which the following is a translation:—"A curious circumstance happened at the Färö Lighthouse on the 20th October. About 8.30 in the evening a sharp report was heard by the man on watch. He immediately went up to the lantern to ascertain the cause, when he found two of the panes of glass broken into small pieces, as well as three "Alföglar" (Long-Tailed Ducks, *Harelda glacialis*) lying dead inside. There were also three lamp glasses broken, and a third pane of glass cracked in many places. On the ground below lay nine more birds of the same sort. The Ducks had come from a northerly direction. The flight must have been at a remarkable speed, as the quarter-inch thick glass was smashed into many small pieces."

Schedules have been sent in since the writing of the report from INNER FARN L.H.—Mr Thomas H. Cutting—ranging from February 11th to March 30th, 1886, and recording a large migration of Skylarks during the forenoon on February 19th to the W.; also the movements of Blackbirds, Thrushes, Common

Wrens, Lapwing, Snipe, Starlings, Golden Plover, Daws, and "Black Crows." A pair of Wheatears on February 22d, at 5 P.M., and again a pair on March 25th. A small flock of Snow-Bunting on March 13th, and three Fieldfare on the 30th.

GALLOPER L.V.—Mr P. Frost:—From January 21st to April 12th, 1886, is specially interesting as recording the enormous migration of Larks and Starlings, and in less numbers of Chaffinches, Sparrows, Linnets, and Plover. On the nights of January 21st to 23d, two hundred and twenty-six were killed. Unfortunately Mr Frost fails to state the directions of flights, but, judging from the entries in the schedules sent in by other light-vessels on the south-east coast, they refer to birds on passage both to the Continent and our own shores.

NEWARP L.V.—Messrs C. Campbell and W. Rees:—From October 21st to March 21st, 1886, up to February 14th. Crows, Starlings, Larks, Chaffinches, Blackbirds, Thrushes, Fieldfares, Bramblings, and Linnets in greater or less numbers to the W., ceasing on December 11th, and again recommencing on January 23d to February 14th, and then from March 5th to 21st, Starlings, Larks, and Crows passing to the E.

SWIN MIDDLE L.V.—Messrs Pender and J. Barrett:—From January 21st to April 3d, 1886; between January 21st to February 15th. Immense flights of Larks, generally during the night, and large numbers killed; also Starlings, Sparrows, and some Chaffinches. On January 24th, five flocks of small birds travelling from N.W. to S.E. On the night of February 14th to 15th, Larks still in great numbers, ninety on deck, and a great many falling into the water, "for two hours the Larks were like a shower of snow." March 28th and 29th, and April 1st, 2d, 3d, Chaffinches at intervals during the morning three or four together, all were male birds, only one female seen. "Ducks" (probably Scoters) "can be seen from this vessel eight or nine months in the year, but on February 10th, 11th, 12th, we had calms and fogs, and the Ducks sat on the water, covering about a mile, the water being black with them."

Lord Clifton writes:—"About twenty Swallows were picked up dead after the northerly gales and rain of October 13th and 14th. Seven were found huddled together alive in a duck's nesting-box in a stable, and one was found dead in a slipper in a bedroom, so desperate were the efforts of the poor birds to find

warmth and shelter. House Martins were similarly overtaken." "Golden Oriole."—"On June 9th a bricklayer thought he saw one, and on the 23d a woodcutter said he both saw one and heard it whistle; our people about here are familiar with the general appearance of the bird from its having bred in this park in 1874 and 1875."

GENERAL REMARKS.

A special point of interest in the report for the East Coast of England was the large arrival of Pied Flycatchers at Spurn and Flamborough in the first week in May 1885, with a north-east wind. This immigration extended northward as far as the Pentland Skerries (see Report from the East Coast of Scotland). At Flamborough the Flycatchers were accompanied by male Redstarts.

There was an enormous arrival of Redwings, commencing at the Farn Islands on September 15th, and continued throughout October and November to the first week in December, and covering the whole east coast of England. There was also an immense immigration of Fieldfares, which was specially observed at the Longstone L.H. from November 8th to 11 P.M. on the 12th.

Scarcely second to these in importance was the immense flight of Bramblings, the bulk of which arrived in two great rushes between October 14th and 17th and on November 11th and 12th; this species being reported as more plentiful in the eastern counties than ever previously recorded.

The main body of Woodcocks arrived in two great rushes, the "first flight" on the night of October 16th to 17th, covering the east coast from the Farn Islands to Thanet, and the "great flight" on October 22d to 23d and 23d to 24th between the same islands and Yarmouth. After this, Woodcocks kept dropping in at intervals up to the end of January 1886.

It has been remarked in previous reports that the migration of a species extends over many weeks, and in some cases is extended for months. Yet it is observable that, at least on the east coast of England, year by year, the bulk or main body of the birds which strike the coast come in two enormous and almost continuous rushes during the second and third weeks in October and the corresponding weeks in November. Continued

observation also proves that the earlier arrivals, as a rule, refer to the young of the year, and the later to old birds, but with many exceptions.

Birds also continue persistently, year by year, to follow the same lines of flight both in the spring and autumn, and at least nine-tenths of the arrivals at the latter season come directly from the east or from points south of east, moving to the west and north-west. In the spring, when leaving the east coast, they travel in the reverse direction, but still following the old lines. The occurrences of migrants coming from points north of east is quite exceptional.

The fact of a double migration or passage of birds of the same species across the North Sea in the spring and autumn, both to the E. and S.E. and W. and N.W., is very clearly established (see General Remarks, 1884 Report, East Coast of England, pp. 69 and 70). This phenomenon is regularly recorded on the whole of the east coast, but specially observable at those light-vessels which are stationed in the south-east district included in this report; at the same time, it is invariably persistent and regular year by year.

An examination of the reports, seven in number, already issued by the Committee, will show the extreme regularity and precision in time during which the migration of each species is carried on. This applies both to the vernal and autumnal passage; in the vast majority of cases the commencement of the migration occurring on the same day, or within a few days, of a fixed period, so that it would not be difficult to tabulate in advance with almost certainty the normal movement or migration of each species.

The arrivals of rare and occasional visitants have been unusually few; perhaps those of chief interest are the occurrences of the Arctic Bluethroat and Desert Chat at Spurn, the Black-Bellied Dipper in Lincolnshire, the Woodchat Shrike, Serin Finch, and Spoonbill in Norfolk, and the Spotted Eagle in Northumberland.

In the spring the earliest occurrence of our summer visitants is as frequently recorded at the northern as at the southern stations; instance the arrival in 1885 of the Swallow at Spurn on April 8th; the Swift, several, on April 20th; and the Cuckoo at Whitby on April 8th; and in 1886 the arrival of

Wheatears at the Farn Islands on February 22d. The line of migration of the latter, as yearly observed at the Tees L.V., is from S.E. to N.W.

Addenda to "General Notes," East Coast of England.

LEMAN AND OWER L.V.—Mr T. Artis :—March 19th to 28th, 1886. On March 19th and 25th "Black Crows" N.W. to S.E.; and between March 19th to 28th, Skylarks, Starlings, Chaffinches, and others to W. March 28th, at 9 P.M., S.S.E., fog. One Fieldfare, three Starlings, three Chaffinches, one Woodcock, and three Bramblings killed. Mr Artis also remarks, under date of April 13th, 1886, 5 P.M. and 7 P.M. :—"I have to inform you that this afternoon, being a calm at the time, I saw close to my vessel, about three ship length off, a very large creature which I believe was some sort of a whale. I never saw such a fish near the Leman and Ower banks (18 fathoms) before. It appeared to be larger than the ship, and came from the N.W., going S.E., and at 7 P.M. he was surrounded by spring herrings—some thousands—leaping out of the water from three to four feet. It was a beautiful sight."

There is a very interesting schedule, which is carried forward to the next report (1886), from the LONGSTONE L.H., Mr Thomas O. Hall. A Woodcock was flushed on the 3d of April on the rock, which flew E. On April 7th, at 9.30 A.M., two flocks of Hooded Crows passed to mainland, wind W., strong; and on the 13th a small flock of Rooks passed to mainland at 7.30 A.M., wind S.E. and E. There was a great flight of Fieldfares, Redstarts, and Wheatears, and other kinds, round the lantern between 12 and 1 A.M. on the 28th April. As soon as the wind shifted to the N.E. all the birds left.

HELIGOLAND.

ORNITHOLOGICAL ALMANACK FOR 1885.¹

January.

1st and 2d.—

3d.—*Fringilla chloris*, very many. *Alauda arvensis* and *Turdus pilaris*, numerous.

4th to 8th.—Guillemots on hatching ridges in rocks by thousands.

9th and 10th.—

11th, evening, N.E.—Extensive migration during the night: *Numenius*, *Char. auratus*, *Tringa*.

12th, N.E., light wind, 1 deg. frost, a little snow.—*Fring. chloris*, very many; *cannabina* and *montium*, fewer; *Turdus pilaris*, *iliacus*, *merula*, and *viscivorus*, numerous, the latter individually. *Anth. pratensis*, pretty many; *Num. arquata* and *Char. auratus*, all numerous, migrating overhead.

13th, S.E., fine.—*Fring. chloris*, again very many, twenty at one shot; *cannabina* and *montium*, also very many; *Turdus pilaris* and *Alauda arvensis*, also very many; *Sturnus*, fifty to sixty.

14th, N.E., heavy, thick, overcast.—Nothing.

Up to 27th, frost 3-5 deg., fine weather.—During the whole time only stray birds: *Sturnus merula*, *Al. arvensis*, *Emb. miliaria*.

28th, 29th, 30th, S.W., overcast, mild.—*Fr. chloris*, very many. *Merula*, *pilaris*, *Sturnus*, *Al. arvensis*, many passing on.

February.

1st and 2d.—Nothing.

3d.—*Al. arvensis*, extraordinary many. *Fr. chloris* and *cannabina*, also many. *T. merula*, *musicus*, *iliacus*, also pretty many. *Char. auratus*, *Num. arquata*, many passing on.

4th, southerly.—All the above, but considerably fewer. *Corv. frugilegus*, a swarm of at least one hundred.

Till 9th westerly wind, often fog.—Nothing. 9th, Guillemots in rocks.

¹ Contributed by Mr Gätke.

10th, 11th, 12th, S.E. and S. — Nothing. Stray *merula*. Many *Fr. chloris*.

13th to 17th, S.W., fog.—*Turd. viscivorus*, ten or twelve on 17th. *C. frugilegus*, a great flight.

Up to 23d.—Nothing passing.

24th, S.S.W., still, fine weather.—*Mot. lugubris*, one ♂. *Sax. rubicola*, several ♂. *Anth. rupestris* and *pratensis*. *Alauda arvensis*, few. *Arborea*, a couple.

25th, S.W., clear, fine; in evening south.—*Corvus monedula*, a tolerably great flight. *Turd. merula* and *iliacus*, pretty many. *Viscivorus*, ten to fifteen. *Sax. rubicola*, ♂. *Anth. pratensis* and *rupestris*, pretty many. *Al. arvensis*, a great many. *Arborea*, a few. *Fring. chloris* and *cannabina*, numerous. *Scol. rusticula*, one.

26th, S.W., early fog; P.M. clear, fine.—*Corv. frugilegus*, ten thousands. *Cornix*, few. *Sturnus*, many. *Merula*, few. *Alauda* passing on overhead. *S. rubicola*, several. *Fr. chloris*, *cannabina*, *cælebs*, many, particularly the first. *F. domesticus*, a great flight passing high overhead eastward. *Anth. pratensis* and *rupestris*, many. *Mot. lugubris*, a fine ♂. *Char. auratus*, *vanellus*, and *hiaticula*. *Fr. alpina* and *Num. arquata* all migrating in great numbers.

27th, S., S.S.E. forenoon, fog; P.M. clear, fine.—All the above, but less in number. *Mot. lugubris*, fine ♂.

28th, S.W., still, dense fog.—*Corv. frugilegus*, flights overhead passing. *Sax. rubicola*, two in the garden. *Mot. lugubris*, fine old ♂. *Emb. schænielus*, a few. *Anser cinereus*, seventeen passing low overhead.

March.

1st, early, 8 to 9, fog, still; later, N., light, clear; P.M., N.W., fresh.—*Merula*, early a couple hundreds.

2d.—*F. peregrinus*, one old bird. *Accentor*, several in the garden.

3d, S.S.W. to S.E.—*F. tinnunculus*. *Corv. frugilegus*, many. *Cornix*, few. *Alauda arvensis*, *Anth. pratensis* and *rupestris*, few. *Fr. cannabina*, many. *Chloris*, fewer. *Char. vanellus*, ten to fifteen. *Auratus*, a couple.

4th.—Almost nothing: A few *Al. arvensis* and *alpestris*. *Emb. schænielus* and *nivalis*.

5th, N.W., light, overcast.—*F. œsalon*, one old ♂. *Corv. fri-*

gilegus and *Sturnus*, not many. *Merula*, several. *Al. arvensis*, very many, numerous flights overhead passing. *Mot. lugubris*, a few females and young male. *Emb. schœniclus*, several. *Char. vanellus*, thousands. *Auratus*, hundreds. *Hiaticula*, twenty to fifty. *Num. arquata* and *Fring. alpina*, many. *Scol. rusticula*, one.

6th, N.E., fresh, little wet snow.—*Milvus*, one. *Sturnus*, *merula*, and *scolopax*, several. *Al. arvensis*, several large flights. *Ans. albifrons*, one, one year old.

7th, N.W. to W., clear, cold 1 deg.—*F. œsalon*, one ♂. *Sturnus* and *Alauda*, stray birds. *Anth. pratensis* and *rupestris*, somewhat more.

8th, W., S.W.; in evening fog.—Nothing. A few *Mot. lugubris*. Few *Sturnus*. One Woodcock.

9th, N.N.W., windy, cold, now and then fine snow, and clear.—*Corv. cornix*, little flights. *Mot. lugubris*, a couple. Two Woodcocks.

10th, N.W., fresh, loose scattered clouds, cold.—Nothing.

11th, N.N.W., fresh; P.M., N.E., clear, cold.—*Merula* and *Sturnus*, a few.

12th, W.N.W., slight wind, thick, almost fog.—*Merula*, *Anth. pratensis* and *rupestris*, a few.

13th, N.W., fresh, misty.—Almost not a bird. A few miserable Pewits.

14th, N.N.W. to N., fresh, cold.—Nothing. A few *Mot. alba*.

15th, N.N.W., windy, cold, overcast; in evening fog till 1.30 A.M.—*T. merula*, tolerable, ten caught in bush, 8 old ♂, 2 ♀. *Sturnus*, flights. *Mot. alba*, singly. *Vanellus*, early, some flights. Four to five Woodcocks. Several Snipes and Plover.

16th, W., violent, cold, overcast; in evening clear.—*Corv. cornix*, six to ten. *Sturnus*, till nine in morning; flights of hundreds and thousands. *Merula*, a few hundred. *Iliacus*, fewer. *Mot. alba*, few. *Anth. rupestris*, some. *Pratensis*, none. *Al. arvensis*, many. *Fr. cœlebs* and *cannabina*, few. *Char. vanellus* and *auratus* passing on overhead. Woodcocks, three shot. *Tr. alpina*, early, great flights.

From two o'clock till daylight at Lighthouse.—*Sturnus vulgaris*, extraordinary many, 300 to 400 being caught. *Merula*, very many. *Alauda*, *Char. vanellus* and *auratus*, also very many. Also ducks.

17th, W., fresh, overcast, cold; P.M. wind heavy.—Nothing.

18th and 19th, W. and N.W., windy, very cold.—Nothing.

20th, W.S.W., very heavy, thick.—Nothing.

21st, N.W. to N., stormy, hail showers.—Nothing.

22d and 23d, N.E., hail, snow.—Nothing.

24th, E. by N., light, clear; in evening frost.—Nothing.

25th, E. by S., light, overcast.—Nothing.

26th, calm, overcast; in evening clear and cold, S.E., light.—

F. peregrinus, one. *Corv. cornix*, very many. *T. merula*, less, nearly all old ♂. *Scol. rusticula*, thirty to forty shot. *Ral. aquaticus*, a couple. *Sax. œnanthe*, some ♂. *Alauda alpestris*, great flights. *Fr. cœlebs*, *cannabina*, and *chloris*, pretty many. *Anth. pratensis* and *rupestris*, do. *Vanellus* and *Tr. alpina* passing on overhead early.

27th, S.S.W. violent, overcast, cold; in evening ten o'clock fog.—*F. œsalon* ♂. *Lanius major*, one. *Corv. cornix*, early, a few great flights, very high, 1000 feet, passing on. *Turdus*, *Fringilla*, *Anthus*, stray birds. *Sax. œnanthe*, a couple old ♂. *Fr. montana*, some (the first). *Col. palumbus*, pretty many. *Vanellus*, early, pretty many. *Scolopax*, twenty to thirty been shot.

28th, N.N.W., slight; early overcast, later clear, fine.—*Corv. cornix*, single flights. *Sturnus*, some flights. *Merula*, pretty many, only half of them black. *Musicus*, some. *Alauda*, *Fringilla*, *Anthus*, few. *Alauda alpestris*, some flights. Woodcocks, 140 to 150 being shot. *Sy. rufa*, two in garden.

29th, northerly, light, clear, early hoar-frost.—*Corv. cornix*, not many. *Monedula* and *frugilegus*, pretty numerous. *Sturnus*, small flights. *Merula*, early, pretty many. *Iliacus*, scattered. *Sy. rubecula*, a couple. *Regulus flavicapillus*, two. *Mot. alba*, several small flights and single birds. *Anth. pratensis* and *rupestris*, pretty many. *Emb. schœniclus* and *citrinella*, *Fr. cœlebs*, all very single. *Scolopax*, about twenty shot.

30th, E., S.S.E., slight, clear, fine, early, very sharp hoar-frost, in evening E.N.E., cool.—All the above, but in little numbers.

T. viscivorus, daily a few; never coming numerous. *Char. auratus* and *vanellus*, as *Tot. calidris* only singly. Ought to have been *merula* and *scolopax*, but if hoar-frost turns up early, there is never much visible migration.

31st, S.E., quite light, clear, strong hoar-frost, during daytime

warm.—Early, nothing, and during daytime almost nothing, in spite of fine weather. *C. cornix* and *monedula*, very single small flights. No *Sturnus*, no *merula*, no Woodcocks shot. *S. titys*, one. *F. cælebs*, *cannabina*, *chloris*, as *Anthus* all very single.

Strange, that in forenoon, after all hoar-frost had disappeared, and it became quite warm and sunny, not a *merula* or *scolopax* arrived, and no Crows passed, the few flights of the latter passing surprisingly high, certainly several thousand feet, which is very uncommon, as the usual normal boundary is 500 to 600 feet. Can this give rise to the conclusion that other species whose normal route of migration lays always very high, should under the influence of hoar-frost migrate so high that they can neither be seen nor heard, which would be in the case of Crows about 10,000 feet?

In rare cases I have seen Rooks and Daws pass so high, that my attention being roused by their call, they were only visible in the shape of very fine dust.

The same also happens that under favourable atmospheric circumstances, the calls sound down clear from a height to which the sense of sight is unable to penetrate.

April.

1st, westerly, slight sunny; warmer. Highest cirri, N.O.—Only very little visible migration. The few flights of *Corv. cornix* and *monedula* extraordinary high, 3000 to 4000 feet. *Merula*, not many; more than half old ♀. *Musculus* and *iliacus*, some. *Rubecula*, *Accentor*, *Regulus fl.*, *Sax. œnanthe* and *rubicola*, all only few. *Mot. alba*, *Anth. pratensis* and *rupestris*, pretty many. Larks, few. *Fr. cælebs*, *montifringilla*, *cannabina*, and *montium*, all pretty many. *Scolopax rusticula*, a couple. *Anas nigra* ♂, very many on the sea.

2d, N.N.W., light; early fog, flying clouds, W.S.W.; P.M. North overcast, cold.—Nothing during daytime. Early, from three to four o'clock, Woodcocks and Thrushes. Five to seven fog; in evening cold, clouds very slow from North. *Sy. titys*, a couple. *Merula*, very few.

3d, N.E., fresh, cold, clear; early, hasty cloud-flocks.—Nothing. *F. œsalon* and *tinnunculus*, of each a couple. *Merula*, passing the whole day singly. *Al. alpestris*, pretty many. *Scolopax*, singly.

4th, N.E., slight, cool, clear; in evening, E. by S., cloudy.—Nothing. *Merula*, passing singly the whole day. *F. œsalon* and *tinnunculus*, a couple. *Al. alpestris*, pretty many, flights of twenty to thirty. *Scolopax*, forty to fifty being shot.

5th, S.E., fresh, thick, cloudy; hasty clouds, low, loose; cold.—Early not a bird; during day few Starlings, Thrushes, Hedge Sparrows, and Shore Larks. Guillemots arrived by thousands in hatching places.

6th, S.E., pretty sharp, later, stiller, clear, not cold.—*F. peregrinus*, *œsalon*, and *tinnunculus*, pretty many. *Corv. cornix*, pretty many. *Monedula*, few. *T. merula*, few. *Musicus*, more. *Pilaris*, some. *Rubecula* and *accantor*, several. *Sax. œnanthe*, ♂, and *Mot. alba*, pretty many. *Al. alpestris*, very many, passing on. *Fringilla* and *Anthus*, only few. *Col. palumbus* and *Scolopax*, not many.

7th, E., windy, overcast, cool; in evening, E. by N., rain.—*F. peregrinus*, *œsalon*, and *tinnunculus*, several. *T. musicus*, few; *torquatus*, a couple. *Anth. pratensis*, many; *rupestris*, few. *Al. arvensis*, *alpestris*, and *arborea*, small flights. *Emb. miliaria*, some. *Fr. cœlebs*, many on the move. *Col. palumbus* and *Scolopax*, some. *Totanus glareola*, one.

8th, E. by S., fresh, overcast, clouds moving from S.E. and S.S.E. past; night cold, from 11 to 2 fog; early, at 5 o'clock, again fog.—*F. œsalon* and *tinnunculus*, very many, passing on over the sea. *Mot. alba* and *Emb. citrinella*, pretty many. *Miliaria*, less; almost nothing besides.

9th, E. by N., slight, weather good, clouds from S.S.E.; in evening, east wind, dark; during night rain.—*F. œsalon* and *tinnunculus*, several. *C. cornix* and *monedula*, pretty many early. *Turdus*, almost none. *Al. arvensis*, pretty many; *alpestris*, very many. *Sy. trochilus*, two to three. *Rubecula*, many. *Accantor*, tolerable. *Mot. alba*, many. *Anth. pratensis* and *rupestris*, fewer. *Emb. citrinella*, many; *schœniclus*, fewer. *Fr. cœlebs*, *montifringilla*, and *cannabina*, many. *Par. major*, many. *Reg. flavicapillus* and *Sax. œnanthe*, also pretty many. *Scolopax*, only a few. *Sy. leucocyanea*, two fine old ♂, one of them nearly uniform blue.

10th, easterly, light, thick, fine rain; in evening W. and W. by N., light.—During the past night, from 2 o'clock, very many *Turdus* and *Saxicola* migrating. During the day extremely many of all the above species passing over the sea.

F. peregrinus, *œsalon*, and *tinnunculus*, many; *haliaëtos*, one. *Corv. cornix* and *monedula*, pretty many. *Sturnus*, fewer. *T. musicus*, many; *merula*, fewer; *pilaris*, very many, great flights. *Sy. rubecula*, extraordinary many; not a single *Sylvia* besides. *Accentor*, pretty many. *Sax. œnanthe*, in astonishing numbers. *Mot. alba*, *Anth. pratensis* and *rupestris*, very many. *Al. arvensis*, very many; *alpestris*, in flights of hundreds. *Emb. citrinella*, *miliaria*, and *schœniclus*, singly. *F. cœlebs*, *montifringilla*, and *cannabina* passing in uncountable numbers the whole day till evening. *Col. palumbus*, about ten. *Scolopax*, none. *Char. auratus*, *vanellus*, and *hiaticula*, as *Tringa* and *Totanus*, very many migrating.

11th, easterly, light, dull, very fine drizzly rain.—During the past night, from 2 o'clock, extensive migration of Thrushes, Wheatears, and all sorts of Longshanks; particularly uncountable numbers of Pewits. *F. tinnunculus*, several. *Strix otus*, one in the garden. *Turd. merula*, pretty many, almost all ♀; *musicus* and *pilaris*, also many. *Rubecula*, very many; not a warbler. *Accentor*, few. *Mot. alba*, many; *lugubris*, one. *Anth. pratensis* and *rupestris*, many. *Emb. citrinella* and *miliaria*, many; *schœniclus*, fewer. *Scol. rusticula*, only a few. *Gallinago*, early, extraordinary many. Early in the morning Pewits, Plover, and *hiaticula*, extraordinarily numerous.

12th, S.E., light, dull, overcast.—*F. tinnunculus*, *C. cornix*, *Mot. alba*, only singly. *Al. alpestris*, pretty many. Altogether little migration.

13th, N. by E., slight, clear; P.M., wind somewhat fresher, cool.—*F. œsalon*, *tinnunculus*, and *nisus*, as *C. cornix*, all pretty many. *Turdus*, stray birds. *Sylvia* and Wheatears, almost none. *Sy. titys*, one ♂. *Motacilla*, *Anthus*, and *Accentor*, only few. *Al. alpestris*, many great flights. *Fringilla*, pretty many, especially *cannabina*. *Columba* and *Scolopax*, a few. *Lar. glacialis*, one young bird in summer plumage shot.

14th, northerly, quite light, clear, air cool; in evening overcast.—Very slight migration. Several little Falcons, *œsalon*, now, females and young. *Corv. cornix* and *monedula*, early some. *Turdus*, almost none. *Sylvia*, none at all. *Fringilla*, very few; one *linaria*. *Mot. flava*, some, the first. *Anth. pratensis* and *rupestris*, pretty many. *Alauda alpestris*, pretty many. *Char. auratus*, one fine old bird, in summer plumage. No Pigeons; no Woodcocks.

15th, S.E., almost calm during night and early morning; very fine rain, cool.—Very little migration; a few little Falcon; early a few flights of Crows. *T. torquatus*, *merula*, *musicus*, *pilaris*, all singly. *Sy. rubecula*, *rufa*, and *Accentor*, only very singly. *Al. alpestris*, very many. *Fringilla*, singly. *Col. palumbus*, some. Woodcocks, three shot.

16th, E., early slight; in evening, fresh, clear, wind cool.—Very little migration, as previous day. *Sylvia trochilus*, some. *Mot. flava*, several. *Anth. arborea*, one. *Hir. rustica*, one. *Fr. coccothraustes*, a couple.

17th, E. and N.E., very fresh, clear, wind cool.—Extremely little migration. *F. peregrinus*, one fine old bird. Little Falcons and *F. nisus*, pretty many; *æsalon*, only females and young males. *T. musicus*, few; *merula*, old ♂, but only with half a tail. *Sy. leucocyanea*, one ♂; *trochilus* and *rubecula*, a few. *Accentor*, few. *Fringilla*, very few; *coccothraustes*, one.

18th, E. by N., fresh, clear, a little warmer.—Very little migration. *Mot. flava*, *Hir. rustica*, *Anth. arborea*, some. *F. coccothraustes*, one in garden; everything besides very singly. Still too cold.

19th, E. by S., S.S.E., slight, quite clear, warm.—*F. æsalon* and *tinnunculus*, pretty many, all ♀. *Corv. cornix*, extraordinary many; even late in afternoon passing on overhead till 6 o'clock, which is the greatest exception, as the normal migration ceases by 2 o'clock in the afternoon. *T. musicus*, pretty many; *merula*, still pretty many, females; *pilaris*, many; *viscivorus*, singly. *Sylvia*, stray birds. *Regulus*, *Accentor*, ditto. *Saxicola*, tolerable, females. *Al. arvensis*, some; *alpestris*, pretty many. *Hir. rustica*, a few. *Cic. alba*, one. *Scolopax*, five to six being shot. *Rallus*, some. *Numenius* and *Totanus*, a few.

20th, S.W., little wind, clear, bank to northward, W. and N.W., freshing up; in evening, light.—*F. æsalon* and *tinnunculus*, females, a few; *Buteo*, one; *Corvus*, stray birds. *T. musicus*, early, pretty many; *torquatus* and *merula*, females, singly. *Sylvia*, almost none; a few *trochilus* and *rubecula*. *Anth. pratensis*, few; *arborea*, a couple. *Fringilla*, few; two *coccothraustes*; just before evening, a large flight of *montifringilla*, about 100 to 150. *Al. alpestris*, few small flights. *Hir. rustica*, ten to twenty. *Col. palumbus*, early many. *Scolopax*, few. *Char. auratus*, one fine old bird.

21st, W.N.W. and N.W.—During past night extensive migration of all Longshanks; as small birds, commencing already at 10 P.M. on 20th.

During the day all those of yesterday, but only very singly.

22d, S.W., light, slightly cloudy, the first warm day.—Again little migration; everything there, but singly. No Bluethroats; no *Sylvia*, *curruca*, *phœnicurus*. One *Mot. flava* and one *Ravi*, *Anth. arborea*, *Hir. rustica*, of each a small party of about fifteen to twenty. *Al. alpestris* still up to 100 during the day.

23d, S.W., light, overcast; in night, very fine rain.—*F. œsalon* and *tinnunculus*, females, some. *C. cornix*, a small flight. *Sturnus*, still only few. *Sy. luscinia*, one; *trochilus*, some; *phœnicurus*, ditto. *Mot. flava*, few. *Ravi*, one. *Anth. arborea*, some. *Sax. œnanthe*, stray birds; *rubetra*, one; altogether very little. A few small *Totanus*.

24th, W., S., E.S.E., quite light, warm, slightly cloudy.—Early not a bird; later in day the above, but very singly. Sixty to eighty *pilaris*.

25th, early, S.S.E.; A.M., S.S.W., fresh, overcast; P.M. and evening, quite light, S.E., warm.—*Emb. hortulana*, *Jynx torquilla*, and *Up. epops*, the first ones. *F. œsalon*, *tinnunculus*, and *nisus*, few females. *T. musicus*, *torquatus*, and *pilaris*, not many. *Anth. arborea*, some; *pratensis*, more, but not many. *Sax. rubetra*, pretty many. *Sy. rubecula* and *trochilus*, pretty many; no *suecica* nor *curruca*. *Mot. flava*, tolerable. *Al. alpestris*, few, small flights. *F. cœlebs*, *montifringilla*, and *cannabina*, scattered. *Tot. ochropus*, some. *Num. arquata*, still a few flights. *Ard. cinerea*, a couple.

26th, S.S.W., slight, thick, overcast, but will not rain; in evening, E.S.E.—*Mus. luctuosa*, a fine old male in garden. *Sy. cinerea*, *curruca*, *phragmitis*, and *locustella*, the first ones.

F. œsalon, *tinnunculus*, and *nisus*, females, scattered. *T. musicus* and *torquatus*, pretty many. *Sy. rubecula* and *trochilus*, tolerable; *phœnicurus*, less; no *suecica*. *Anth. arborea*, *Sax. œnanthe* and *rubetra*, not many. *Mot. flava*, tolerable; *alba*, still some. *Al. arvensis*, a small flight; *alpestris*, few. *Fringilla*, scattered. *Up. epops*, *I. torquilla*, some. *Crex pratensis*, several. *Scol. gallinula*, some. *Char. auratus*, fine old birds. *Morinellus*, some.

27th, S.E., fresh, thick, overcast, clouds moving from S.S.W.;

in evening, E. and E. by N.; fog and rain all night.—Early, at 5 o'clock, many *T. musicus*; at 8 o'clock everything gone. *Hir. urbana*, *riparia*, *cypselus*, some of each, the first ones. *Trochilus*, *rubecula*, *cinerea*, *flava*, *rubetra*—*M. luctuosa*, *Fringilla*, all very single in course of day; no *suecica*.

28th, N.N.W., slight, fog, above sunny.—Nothing. *Caprimulgus*, one, the first. *Hortulana*, some.

29th, E., slight, early at 5 o'clock fog, later clear.—Almost nothing. Seasonable birds scattered.

30th, E. by N. and E., fresh, thick, overcast, cold.—Very little. *Torquatus* and *musicus*, some. *Pilaris*, several great flights. *Sy. curruca*, several; other *Sylvia*, few. *Suecica*, still not yet. *Mot. flava*, tolerable. *Lugubris*, one. *M. luctuosa*, some ♂. *Anth. arborea* and *Emb. hortulana*, of each about twenty to thirty. *Fringilla montana*, scattered since middle of month.

May.

1st, S.E., very fresh, cloudy, hasty loose clouds, cold; noon clear, warm; in evening, fine, damp.—Early, almost nothing. Noon and later, strong migration. *F. tinnunculus* and *æsalon*, female. *Turdus*, few. *Sy. curruca* and *cinerea*, many. *Trochilus*, few. *Phœnicurus*, fine old male. *Suecica*, none at all. *M. luctuosa*, pretty many, fine old males. *Sax. ænanthe*, female; and *rubetra*, many. *Mot. flava*, in afternoon extremely many. *Anth. arborea* and *Emb. hortulana*, many. *Fringilla*, stray birds, *Tot. ochropus* and *glareola*, several. *Glottis*, one. No Swallows.

2d, S.E., light, warm, thick fine rain; in evening, E., fresh, cooler.—*F. æsalon*, *tinnunculus*, and *nisus*, *Buteo*, and *haliaëtos*; *Strix brachyotus*, pretty many. *Lan. collurio*, some ♂. *T. torquatus*, extremely many. *Musicus*, also many. *Pilaris*, very great flights. *Sy. cinerea*, *curruca*, *atricapilla*, *phœnicurus*, ♂, all pretty many. *Trochilus*, only few. *Sibilatrix*, one. *Suecica*, some males. *M. luctuosa*, *Sax. ænanthe* and *rubetra*, many. *Mot. flava*, many. *Anth. arborea*, extremely many; *pratensis*, fewer. *Campestris*, one. *Emb. hortulana*, extremely many. *Schœniclus*, some. *Fringilla*, but few. *Scol. gallinago*, few. *Gallinula*, many. *Char. morinellus*, several. *Auratus*, just ten. *Tot. glottis*, *glareola*, and *ochropus*, great contingent. *Tr. pugnax*, several. *Cic. alba*, one.

3d, E., violent, rain, cold.—*F. cesalon* and *tinnunculus*, many. *Peregrinus*, one. *Haliaëtos*, one. *Strix brachyotus*, some. *Turd. torquatus* and *musicus*, tolerable. *Sylvia*, few. *Anthus*, few. *Campestris*, one. *Emb. hortulana* and *Alauda alpestris*, some. *Totanus*, *Charadrius*, *Numenius*, singly. Altogether slight migration, too cold and too windy.

4th, S.E., E., middling, dull, overcast; P.M., sun visible.—*F. peregrinus* and *subbuteo*, males; *cesalon* and *tinnunculus*, few. *Haliaëtos*, one. *T. torquatus*, early, very many. *Musicus*, fewer. *Sy. rubecula*, *curruca*, *cinerea*, *atricapilla*, *trochilus*, all, not many. *Succica*, some males. *Mot. flava* and *Anthus*, few. *Hirundo* and *I. torquilla*, some. *Sterna cantiaica*, high overhead, with plenty noise, chasing by couples.

5th, N.W., fresh, thick, cold, in night, N., fog; noon, sunny; in evening, W., clear.—*F. peregrinus*, *subbuteo*, *cesalon*, *tinnunculus*, the latter few. *T. torquatus* and *musicus*, few. *Pilaris*, more. *Sylvia*, altogether few. *Rubecula*, still many during the season. *Curruca*, *cinerea*, *atricapilla*, and *trochilus*, few. *Nisoria*, some fine males. *Phenicurus*, still pretty many. *M. luctuosa*, many old males. *Sax. cenanthe*, still many. *Rubetra*, very many. *Mot. flava*, pretty many. *Anth. arborea* and *pratensis*, many. *Al. alpestris*, a flight of fifty and one of seven. *Emb. hortulana*, many. *Fringilla*, few. *Coccothraustes*, one, female. *I. torquilla*, some. *Cuc. canorus*, a fine male. *Char. morinellus* and *auratus*, some. SY. PHILOMELA, one caught at lighthouse, the first since about fifty years.

6th, W., fresh, cirri, and low light clouds, W., sunny.—*F. cesalon*, *tinnunculus*, and *nisus*, the latter few. *C. cornix* and *monedula*, a flight. *Sylvia*, *Anthus*, *Motacilla*, all but singly. *Al. alpestris*, a flight of twenty. *Fringillæ*, scattered.

7th, early, and forenoon calm, sunny; P.M., thick, suddenly fresh, N.W. rain.—Very slight migration of season suiting species. *Mot. flava* and *Anth. pratensis*, pretty many; both species very often turn up with much wind, especially in autumn. *Al. alpestris*, still in flights of ten to fifteen.

8th, N.W., fresh, cold, early hail.—Nothing. *Num. phaeopus*, the first ones.

9th, S.W., moderate, early rain, hail, thunder, later on clear.—Nothing.

10th, W., windy ; in evening, very violent, thunder, lightning, very cold.—Nothing.

11th, N.W. and N.N.W., stormy, early rain and hail squalls.—Nothing.

12th, N.W. and N.N.W., somewhat less wind, hail showers in great intervals.—Nothing.

13th, N.N.W., clouds from N., better, but yet cold.—Nothing. Stray *torquatus* and *musicus* ; some *Sylvia*. *Mot. flava*, a couple of hundred. *A. pratensis*, pretty many.

14th, N. light, warmer, clear.—*F. tinnunculus* and *nisus*, a few. *T. torquatus* and *musicus*, very single. *Sy. phœnicurus* and *trochilus*, very singly. *Nisoria*, one. *Mus. luctuosa*, some. *Mot. flava* and *Anth. pratensis*, pretty many. *Al. alpestris*, ten to twenty. *Hir. rustica*, some. *Urbica*, few.

15th, N., light, early light rain showers, cold.—Nothing at all.

16th, S.S.W., fresh, clear ; P.M., a rain shower with hail ; evening, clear, light.—A few little Falcons. Early some *torquatus* and *musicus*. *Sy. phœnicurus*, half of them female. *Succica* and *curruca*, some. *Cinerea*, many. *Trochilus*, pretty many. *Phragmitis*, several. *Mus. luctuosa*, pretty many, half female. *Sax. rubetra*, ditto. *Mot. flava*, many. *Anth. arborea*, and *Emb. hortulana*, fewer. *Hir. rustica* and *urbica*. *Ch. morinellus*, some. Starlings commenced building nest in hatch-box early to-day.

17th, W., fresh, cloudy ; P.M., S.W.—Little migration. *Sy. phœnicurus*, *trochilus*, and *cinerea*, as *Mus. luctuosa* and *Sax. rubetra*, some. Swallows, but few.

18th, S.W., slight, light cloudy, fine in evening, easterly light, warmer.—Very little migration early. *Turdus*, very single. *Sy. succica*, a couple. *Phœnicurus*, *trochilus*, *cinerea*, *atricapilla*, tolerable. *Hortensis* appears. *Mot. flava*, many. *Melanocephala*, some. *Sax. cenanthe*, tolerable. *Rubetra*, many. *Char. squatarola*, a very fine male. *Morinellus*, a few.

F. tinnunculus and *nisus*, a few shabby females. *Subbuteo*, a fine male.

19th, S.S.W., slight, light cloudy.—All the above, but altogether only slight migration.

20th, S.S.W., light, light clouds ; P.M. and evening, S.S.E. to S.E. fresh, cool.—In trifling numbers. *T. musicus* and *torquatus*, *Sy. trochilus*, *phœnicurus*, *cinerea*, *hortensis*, *atricapilla*, and *phragmitis*. *Sax. cenanthe* and *rubetra*, *Mot. flava*, and some

melanocephala; *Anth. pratensis*, and few *arborea*. *Hir. riparia*, some. *Col. turtur*, two to three. *Char. squatarola*, three. *Tot. glottis*, one.

21st, S.E., violent, overcast; A.M., stiller, S. rain; in evening, light.—*T. torquatus*, few. *Sy. cinerea*, *hortensis*, and *atricapilla*, tolerable. *Nisoria*, two to three. *Mus. luctuosa*, few males, the most females. *Grisola*, one in the garden. *Sax. cenanthe*, yet pretty many. *Rubetra*, many. *Mot. flava*, many females. *Melanocephala*, some. *Anth. arborea* and *Emb. hortulana*, few. *Cypselus apus*, pretty many, passing on overhead. *Riparia*, pretty many. *Char. morinellus*, ten to fifteen. *Tot. glottis* and smaller *Totani*, pretty many.

22d, S.E. and S. fresh, sunny, fine; in evening, violent, rain.—All the above, but not numerous. Some *Sy. suecica* and *Sy. hypolais*.

23d, S.W., very violent, rain; P.M., clear, lighter; in evening cool.—The above, but very singly. *Lan. collurio*, five to six, one female. *Char. morinellus*, a few females. The females of the latter known as being finest black, white, and rust-red coloured.

24th, westerly, slight, early thunderstorm, rain.—Almost nothing. Thunderstorm, as fog and hoar frost, put a stop on almost all migration.

25th, W. and N.W., light, rain, during day fine, but thunderstorm clouds.—Everything, but quite scattered. A few *Sylvia*. etc. *Col. turtur*, a couple.

26th, southerly, still; in night, rain, early clear; P.M., violent, highest cirri, and lower light clouds from N.W.; in evening, cloudy from S.W.—Early, much singing of Warblers, *trochilus*, *curruca*, *cinerea*, etc., in the gardens. In course of the day, but only scattered. *Sylvia* and *Mus. luctuosa*, and a couple of *grisola*. During the night at about 2 and later, temporary fog.

27th, light, W. and S.W., cirri N.W.; early light fog, later thick; evening, clear.—*Curruca*, Redstarts, and Warblers as Chats, all tolerable, but not many; also *Mus. luctuosa*, young male and female. *Mot. flava*, *Anth. arborea*, and *Emb. hortulana*, pretty many. *Col. turtur* and *Crex pratensis*, some.

28th, southerly, light, fine, clear, highest little clouds, and cirri from W. and W. by N., warm; P.M. and in evening S.S.E., clouds from W.—Early, very many *curruca*, *cinerea*, *hortensis*,

atricapilla, and *trochilus* singing by hundreds in the gardens. Later on *Lanius major*, one male. *Mus. grisola*, many. *Luctuosa*, the same, the latter mostly females. *Mot. flava*, few females. *Anth. arborea*, many. *Emb. hortulana*, but single. *Cypselus*, pretty many. *Hir. rustica* and *urbica*, the same. *Caprimulgus*, a couple. *Col. turtur*, strikingly many, ten to fifteen being shot.

29th, S.S.E. and S., light, clouds from W. ; noon, wind suddenly N.W., violent, clear, thunderstorm clouds from S. by W. —All those as yesterday, but much fewer. *Falco subbuteo*, male. *Tinnunculus*, female. *M. grisola*, many. *Luctuosa*, fewer, most female. *Hir. rustica*, *urbica*, and *riparia*, as *Cypselus*, pretty many. *Cuc. canorus*, one. *Col. turtur*, very many ; these latter do not mind violent wind.

30th, S.W. fresh, clear, cirri W. and W. by N.—Early, nothing at all. The whole day nothing.

31st, S.W., violent, thick low speedy rain clouds ; in evening, N.W., cold.—Of course not a single bird.

June.

1st and 2d, N.W., fresh, very cold.—Nothing.

3d and 4th, S.S.W., lighter ; in evening, 4° calm, very warm, clear.—Few. *Sy. hypoleis*, one. *Mus. grisola*, pretty many. *Col. turtur*, very many, up to forty.

5th, S.S.W., light, clear, hot, every day outermost cirri, N.W., 26° C.—Seen, a great Grey Shrike, uniform coloured ash grey, band through eye scarcely marked. *Mus. grisola*, *Hir. rustica* and *riparia*, scattered. *Col. turtur*, many. *Pyrrhula rosea*? yellowish-green, white band on wings, larger than *P. erythrinus*, not obtained.

6th, S.S.W., clear, fine ; P.M., N. and N. by E., overcast ; in evening, cool.—*Mus. grisola*, singly ; *Hirundo*, some. *Col. turtur*, several.

7th, E. by N. slight, early overcast ; P.M., thunderstorm, rain, W. ; in night fog.—Nothing. *Sy. cinerea* and *Mus. grisola*, quite few.

8th, fog, calm.—Nothing.

9th and 10th, N.W., violent, cold.—Nothing.

11th, N., less wind, a little warmer.—Nothing.

12th, W. slight, overcast ; later on, clear from north. Cirri

from N. and N. by E.—*Hir. rustica*, some. *Ch. auratus*, one in fine summer plumage.

13th, early, quite calm, clear, later S.W. and S.S.W., warm, fine; in evening, N.W. slight.—*Mus. grisola*, some. *Hir. rustica*, *urbica*, and *Cypselus*, ditto. *Caprimulgus*, one. *Col. turtur*, some.

14th, E., light, clear, warm, clouds from N.E.; in evening, fresh.—*Lan. minor*, two, very rare appearance here. *Hir. urbica*, some. *Cypselus*, many hundreds.

15th, E. by N., slight, clear, warm; P.M., N.E., fresh.—Early, many *Cypselus*, almost nothing besides. *Mus. grisola*, *Sax. rubetra*, and *Fr. montifringilla*, very single.

16th, N., fresh, clear, very cold, high clouds from W., low loose ditto from East.—Nothing.

17th, E.N.E., fresh; cirri from S.W.; low loose clouds from N.E., cold; about dusk, thick with rain from S.W., but wind E. by N.—Nothing.

18th, E. by N., slight; in evening N., windy, cold, clouds moving from N.W.—Nothing.

19th, N.W. to S.W., overcast, cool; P.M., thick with rain.—Nothing.

20th, 21st, and 22d, N.W., windy, cold.—*F. linaria*, one. *Hir. urbica*, four to five.

24th and 25th, S.E., clear, hot.—During the last days *Num. phaeopus* returning.

26th, N., early cold.—Also *Hir. urbica* and *Cypselus* overhead, but

27th, N. by W., warmer.—Can scarcely be birds that have done hatching. Young Starlings in hatch-box flew out on 26th.

28th, S.E., slight, cloudy; in evening, E.—*Fr. rufescens*, one young male, very faded, a slight rosy hue.

29th, E.S.E., clear, hot.—*Hirundo* and *Cypselus*, many. *Num. phaeopus*, returning.

July.

1st and 2d, E. by N., and N.E. and N., clear, fine, wind very cool, cirri from S.—*Hir. rustica*, several.

Until 6th, northerly to E.N.E., clear, during day hot, great dryness.—*Cypselus*, daily, pretty many, returning ones (?). *Numenius* and *Char. hiaticula*, returning.

Until 9th, N.E. and E.N.E., clear, dry.—*Sturnus*, young birds, daily flights of twenty to fifty.

10th, easterly, clear, hot, dry.—*Sax. ænanthe*, one young, quite motley bird. *Sax. rubetra*, ten to twenty young birds. *Numenius*, *Char. hiaticula*, *Tot. glottis*, young birds.

11th, southerly, clear, hot, dry; in evening, thunderstorm clouds, slight fine rain.—*Sturnus*, flights of twenty to fifty young birds.

12th, N., clouds from S.W., cold, dry.—Nothing.

13th, E.N.E., clouds from S.W., cirri W., cool.—Nothing.

14th, E.N.E., clear, hot; in evening, cool, clouds and cirri from S.W.—*Sy. trochilus* and *titys*, some young birds. *Sax. ænanthe*, some young birds. *Vanellus*, *Numenius*, *Tot. calidris*, *glottis*, *Ch. hiaticula*, numerous, all young birds.

Up to 20th, westerly, changeable, very trifling rain.—Nothing.

21st, N., fresh.—*Vanellus*, young ones, hundreds.

Until end of the month, northerly winds, almost always violent and cold, with low loose hasty clouds. Migration trifling, almost only Longshanks. The last week *Tot. hypoleucus*, *Hæ. ostralegus*, *vanellus*, pretty many. *Sax. ænanthe*, scattered; all the named being young birds. No *Sylvia*.

August.

1st, N., in evening N.W. and W.N.W., thick, cloudy.—*Sax. ænanthe*, ten to twenty young. *Vanellus*, *Tot. hypoleucus*, *calidris*, and *glottis*; *Numenius*, all but stray birds and young ones.

Up to 5th, N.E. and N.; in evening, light, S.E., quite calm, fine rain.—On the 5th, from 10 o'clock in the evening, very strong migration of *Tringa* and *Totanus* of all species, as *Ch. hiaticula* and *Num. phæopus* during the day. *Sax. ænanthe* and *Sy. trochilus*, young ones.

6th, easterly, light, clouds from south; in evening, N.E.—*Trochilus*, as all the above Longshanks. *Char. auratus*, young ones appear.

7th, W., light, clouds south; night and early morning, heavy rain; P.M., clear, warm, fine.—*Mus. grisola*, *Sy. trochilus*, and *phragmitis*, few. *Sax. ænanthe*, young, pretty many; *rubetra*, fewer. *Upupa*, one. *Cuculus*, some young ones. *Charadrius*, *Totanus*, *Tringa*, etc., etc.

8th, westerly, light, rain; later on, clear; in evening, slight E.—Single *cenanthe*, *trochilus*, and *Ch. auratus*, jr.

9th, N.W., windy; P.M., stiller, fine.—Nothing besides few Wheatears.

10th, south, fresh, clear, warm, fine.—Several *trochilus* and *phragmitis*; *cenanthe*, jr., not many. Longshanks, pretty many.

11th, 12th, 13th, W.N.W. and N.N.W., stormy, with rain squalls. 14th, somewhat better—All the time no birds.

Up to 18th, W.N.W. and N.N.W., violent to stormy.—Almost no migration at all. *Sy. trochilus* and *Sax. cenanthe*, very few.

19th, N. by E., at intervals still, and rain squalls; in evening, N.E., clear, cold.—*F. nisus*, jr., several. *Sy. phoenicurus* and *trochilus*, several; *cinerea*, many; *hypolais*, several, appears always, but singly. *Mus. luctuosa*, pretty many, jr. *Sax. cenanthe* and *rubetra*, many. *Mot. flava*, scattered. *Anth. arboreus*, several. *Emb. hortulana*, one. *Cuc. canorus*, several young. *Char. auratus* and *hiaticula*, *Tr. alpina* and *minuta*, *Tot. glottis*, three shot, all young birds.

20th, early, E., fresh; noon, S.E., clouds and cirri the same, cold.—All the above, but only few. *Cypselus*, jr., several.

21st.—Nothing considerable.

22d, early, E., light; later, westerly to north, slight.—*F. peregrinus*, *nisus*, jr., several; *milvus*, one. *Mus. grisola*, many; *luctuosa*, very many; all young birds. *Sy. phoenicurus*, *cinerea*, and *trochilus*, many; *hortensis* and *curruca*, fewer; *hypolais*, some—all young. *Sax. cenanthe* and *rubetra*, very many. *Mot. flava*, many. *Anth. arboreus* and *Emb. hortulana*, pretty many. *I. torquilla*, very many. *Cuculus*, several. *Alcedo ispida*, two shot. *Crex porzana*, some. *Ch. auratus*, *morinellus*, and *hiaticula*, many. *Numenius*, *Totanus*, *Tringa*, and relative species, all very numerous. All the named, without an exception, young birds.

Freshly pulled out tail-feathers of *Musc. parva* been found.

23d, N.E. and E.N.E., fresh.—All those mentioned on previous days again in great numbers. *Sax. cenanthe*, jr., very particularly numerous.

24th, N., fresh,—*Sax. cenanthe*, jr., again very many; but besides those, less migration.

25th, N.W., fresh.—Ditto, ditto, ditto.

26th, N.N.W., light, overcast, cool; noon, warmer; in evening,

calm, E. (?).—The above, but only scattered during the early hours. At noon, pretty many *Sylvia*, *Anth. arboreus*, and *Emb. hortulana*. *Caprimulgus*, some. *Picus major*, a couple. *F. haliaëtos*, two been shot. All young birds.

27th, early, calm, then light E.N.E.; in evening, cold.—*Turd. musicus*, scattered. *Al. arvensis*, some. *Mus. grisola* and *luctuosa*, pretty many. *Sylvia*, less. *Saxicola*, pretty many. *Anth. arboreus* and *Emb. hortulana*, some. All young.

28th, N. by E., fresh, clouds from N.W.—*Sylvia* and *musicapa*, but very scattered. *Saxicola*, pretty many. *Anth. arborea* and *Emb. hortulana*, singly. *Ch. auratus*, few.

29th, S.E. and E., light, clear, warm.—*Mus. grisola*, pretty many; *luctuosa*, fewer. *Sylvia*, few. *Saxicola*, pretty many. *Mot. flava*, some. *Par. caeruleus*, some. *Ard. cinerea*, a couple. *Char. auratus*, *hiaticula*, *Tringæ*, *Tot. glottis* and *calidris*; *Tringæ*, daily more or less. *Num. phaeopus* passing. *F. nisus*, daily some.

30th, early, E.N.E., clear, fine, thick clouds northerly; noon, N., clear, cold.—Very slight migration of *Sylvia*, *Mus. grisola*, *Saxicola*, and *Emb. hortulana*. Early a few flights of *Num. arquata* passing.

31st, N.W. and W., fresh, cloudy, cold; in evening, rain.—Almost nothing at all.

Note.—Until end of the month all the mentioned species, almost without an exception, young autumnal birds.

September.

1st, N. by W., fresh, cool.—Very little migration. *Sax. cenanthe*, jr., pretty many. *M. grisola*, many in the gardens; *luctuosa*, few. *Sylvia*, single. *E. hortulana*, scattered. *Anth. pratensis*, some, the first.

2nd, westerly, light, clear, warm, in evening, east.—*Mus. grisola* and *luctuosa*, many in the garden. *Sy. phaenicurus*, and *trochilus*, pretty many. *Sy. suecica*, some, the first. *Sax. cenanthe* and *rubetra*, many, young. *Anth. arboreus*, few. *Emb. hortulana*, pretty many. *Hir. rustica*, *urbica*, and *riparia*, tolerable.

3d, S.E. and S.S.E., violent, clouds from W.; in evening, rain, light.—The above, but fewer than previous day. *F. nisus*, some. *Char. auratus*, several.

4th, S.S.W., light, early, dull, then fog; in evening, E.N.E., rain torrents, violent N.E.—*Pyrrhula erythrurus*, one young bird. *Anth. campestris*, one. *Sy. suecica*, *phaenicurus*, and *trochilus*, *Mus. grisola* and *luctuosa*, *Sax. cenanthe* and *rubetra*—of all but few. *Emb. hortulana*, single. *Mot. flava*, a flight of at least 100. *M. alba*.

5th, S.W. and W., rain squalls, windy; in evening and night, lightning.—Nothing.

6th, S.W., fresh, clouds westerly; in evening, clear, light.—Nothing.

7th, light, clear, S.S.W., high clouds west, lower clouds south; P.M., S.E.; in evening, rain.—Very few *Sylvia*. Wheatears and Chats, as *M. flava*; also some *suecica*; and about evening, some *F. nisus*.

At Cuxhaven and Bremen, fog.

8th, S.E. and S., light; early, rain; noon, clear, S.S.W.—*F. nisus*, jr., some. *Mus. luctuosa*, many. *Sy. phaenicurus*, *suecica*, *hortensis*, and *trochilus*, many. *Sax. cenanthe* and *rubetra*, pretty many. *Mot. flava*, very many; *alba*, some. *Anth. arboreus*, tolerable; *Richardi*, one. *Emb. hortulana*, many, all young. *I. torquilla*, some. *Up. epops*, one; appears scarcely ever in autumn here. *Hir. rustica* and *urbica*, as *Cypselus*, many. *Picus major*, one.

9th, S.W., windy, rain, low clouds, W. high clouds; in evening, N.W., violent squalls.—*Mus. luctuosa*, *Sy. phaenicurus* and *trochilus*, pretty many, in spite of the south-west wind and rain. In night, stormy—thunder, lightning, rain, and hail.

10th, W. by N. and N.W., stormy, rain squalls; in evening, light.—*Luctuosa*, *phaenicurus*, *trochilus*, pretty many in garden, under shelter of shrubs.

11th, S., lighter, overcast; noon, S.E.; P.M., rain.—The above, but not many. *Sy. suecica*, pretty many. *Emb. hortulana*, the first old birds. *I. torquilla*; *Hir. rustica*, *urbica*, and *Cypselus*; *Mot. flava*; *Scol. gallinula*.

12th, early, N. by E., fine, clouds N.W.; noon, wind W., clear; in evening, S.W., violent, rain; midnight, storm, No. 9.—The above, but few. *Char. auratus* and *Tot. calidris*, some.

13th, W., stormy, clear.—Nothing.

14th, W., moderate, clouds S.W., cirri N.W.—*Num. arquata*, almost nothing besides; *Anth. rupestris*, the first.

15th, S.W., rain; noon, sunny; in evening, lightning, with

clear sky.—Forenoon, nothing. Afternoon, *Sax. cenanthe* and *Sy. trochilus*, single.

16th, S.W., fresh; early, rain; noon, sun visible.—Nothing during day. In evening, from 10 o'clock, migration of *Charadrius*, *Numenius*, and *Tot. calidris*; also many *Saxicola*, two score being caught at lighthouse.

17th, early, calm, clouds, S.W., thick rain; 8.30, easterly; 11 o'clock, thunderstorm, with torrents of rain; P.M., E.N.E., violent.—*Sylvia*, but many scattered. *M. luctuosa*, tolerable. *M. flava*, many. *Emb. hortulana*, very many. *Sy. rubecula*, some. *Al. arvensis*, some. The first old Starlings and first old Wheatears. *Crex pratensis*, *Char. auratus* and *vanellus*, several.

18th, E. by N., moderate, overcast; in evening, N., fine, cold.—During the past night, much migration. All Longshanks suiting the season numerous. *Turdus torquatus*, *Sy. phœnicurus*, *Mus. luctuosa*, and *Sax. cenanthe*, many at lighthouse. Early, very many. *Char. auratus* and *Col. palumbus*. *Turd. torquatus*, many; *musicus*, fewer. *Sy. phœnicurus*, *suecica*, *cinerea*, *trochilus*, *rubecula*; very many. *Mus. luctuosa*, ditto. *Anth. rupestris*, very many; *pratensis*, fewer. *Emb. hortulana*, very many. *Crex pratensis*; *Scol. major*, *gallinago*, and *gallinula*, both the latter numerous; the first appears here always, but very single. *F. œsalon* and *nisus*, some young. Altogether, very strong migration.

19th, early calm, clear, light clouds W., vapour S.S.W.; in evening wind S.W., fresh, thick, overcast.—*F. peregrinus*, one; *nisus*, some. *Sturnus*, some flights of fifteen to twenty. *Turd. musicus* and *torquatus*, *Num. luctuosa*, *Sy. phœnicurus*, *suecica*, *rubecula*, *cinerea*, and *trochilus*, all pretty many. *Anth. arboreus*, some; *rupestris* and *pratensis*, many. *Sax. cenanthe*, many; *rubetra*, fewer. *Emb. hortulana*, not many. *C. pratensis*, *Scol. gallinago*, *gallinula*, and *Col. palumbus*, scattered.

20th, early, light W. clouds, W. cirri; N. and N. by E. in evening, wind fresh. Nothing.—*Sax. cenanthe*, early, from 8th to 9th very many arrived, but besides these, all the species suiting the season, but singly.

21st, S.W., violent, thick, rain; noon clear, N.W.; in evening N.N.W., cold.—Nothing. Very few *cenanthe*.

22d, N.W., fresh, cloudy; P.M., W., clear.—Nothing.

23d, W. to N.W., fresh, overcast.—Nothing. *Char. auratus*, pretty many. One Bat.

24th, northerly, light, cirri violent from W.; P.M., N.W.—Early not a bird; later on some. *M. luctuosa* and *Char. auratus*. Winter Sparrows arrived.

25th, westerly, light, heavy cumuli, showers of rain with hail; in evening light northerly.—*F. œsalon* and *nisus*, some. *Sturnus*, many. *T. musicus*, pretty many. *Sy. rubecula*, very numerous; *phœnicurus*, many; *cinerea* and *curruca*, fewer; *trochilus*, many; *rufa*, fewer. *Anth. arboreus*, few; *pratensis* and *rupestris*, many. *Sax. œnanthe* and *rubetra*, many. *Mot. flava*, many; *alba*, fewer. *Al. arvensis*, some; *arborea*, a couple. *Emb. schœniclus*, very many; *hortulana*, fewer; *nivalis*, some. *Fr. cœlebs* and *montifringilla*, some. *Col. palumbus*, several. *Scol. gallinula* and *gallinago*, scattered. In afternoon a flight of *Corv. cornix* of several hundreds.

Note.—It is striking that with such monstrous heavy cumuli, that have the appearance of storm-clouds, so much migration takes place. There must be better weather at hand.

26th, early calm, draught of air southerly, still so heavy threatening cumuli at W. and N., but in spite thereof much migration; in evening south-easterly, light, clear, clouds disappear, therefore more favourable weather for migration.—Very numerous migration. *F. peregrinus*, one; *œsalon* and *nisus*, several. *C. corax*, a little flight, about fifteen. *T. musicus* and *torquatus*, many. All *Sylviæ*, especially *rubecula*, very many. *Sax. œnanthe*, many; *rubetra*, fewer. *Trog. parvulus*, pretty many. *Anthus* and *Motacilla*, fewer. *Al. alpestris*, pretty many. *Emberiza*, fewer; several *nivalis*; *cœlebs*, many; *montifringilla*, fewer. *Col. palumbus*, pretty many. First Woodcock shot; two or three more. *Gallinula* and *gallinago*, pretty many. *Tr. alpina*, many; *subarquata* and *maritima*, of each a young bird. *Sy. superciliosa*, one. *Anth. richardi* and *cervinus*, of each one.

27th, S.E., slight, overcast.—*F. peregrinus* and *œsalon*, young. *Strix brachyotus*, about fifteen. *C. cornix*, 400 to 500. *Sturnus*, many flights. *T. torquatus* and *musicus*, pretty many. *Sy. suecica*, *cinerea*, *atricapilla*, *trochilus*, and *rufa*, many. *Mot. flava*, few; *alba*, pretty many. *Sax. œnanthe*, many; *rubetra*, fewer; *Anthus*, few; *richardi*, a couple. *Fringillæ*, few. *Emb. hortulana*, some. *Certh. familiaris*, several. *Hir. rustica*, pretty many; *Cypselus*, some late. *Col. palumbus*, *Scol. gallinula* and

gallinago, tolerable. *Fr. cœlebs*, very many arrived about evening.

28th, E.N.E., slight, light clouds, sunny.—*F. peregrinus*, old and young; *cesalon*, young; *nisus* arrived about evening. It is strange that *nisus* mostly and suddenly arrives late in the afternoon in great numbers. *C. cornix*, not many. *Sturnus*, numerous flights. *T. musicus*, pretty many; *torquatus*, fewer; *pilaris*, some. *Mus. luctuosa*, few. *Sax. œnanthe*, many; *rubetra* ceases. *Sy. rubecula*, *phœnicurus*, *cinerea*, *atricapilla*, and *trochilus*, numerous; *rufa*, fewer; of *trochilus*, now mostly old faded birds. *Sy. superciliosus*, two very fine specimens been shot. Another warbler with light bands on wings, the size of *rufa*, wounded, but not obtained. *Mot. flava*, few; *alba*, more. *Anth. pratensis* and *rupestris*, many; *arborea* ceases. *Emb. schœniclus*, many; *nivalis*, very many; *hortulana* ceases. *F. cœlebs*, many; *montifringilla*, do.; *spinus*, some. *Al. alpestris*, a few. *Regulus flavicapillus*, pretty many. *Hir. rustica*, many. *Col. palumbus*, tolerable. *Scolopax*, pretty many; *rusticula*, five been shot. *Ch. auratus*, many. *Tringæ*, many, all young birds. *Procellaria glacialis*, a fine old bird with white head obtained.

29th, S. by E., light, later fresh, S.E. clouds, S. by W. to W.; P.M., wind S.W.; about evening rain. Storm notified from America between 28th and 30th.—*F. cesalon*, *tinnunculus*, and *nisus*; *St. brachyotus*—all, but singly. *C. cornix*, several flights of hundreds; *frugilegus*, about eighty. *Sturnus*, some flights of a hundred and above. *T. musicus* and *torquatus*, early, many. *Sylvia*, few. *Muscicapa*, over. *Reg. flavicapillus*, many. *Hir. rustica*, tolerable. *Al. arvensis*, pretty many early in forenoon. *Emb. schœniclus*, many. *Fringillæ*, few. *Anthus*, do. *Scol. rusticula*, some.

30th, early, light, N.N.W., clear; P.M., S. by W., thick, windy.—Almost nothing at all. Only very scattered *C. cornix*, *Turdus*, *Sturnus*, and *Sylvia*. *Trochilus*, *Anth. arborea*, and *hortulana*, over.

October.

1st, S.W.; violent in night, N.W., stormy, No. 7, heavy rain, squalls strong, lightning.—Nothing. *Parus major* and *cœruleus*, some.

2d, N.W. to W., stormy, squalls, No. 7; in night, No. 8 to 9.—Nothing.

3d, S.W., thick, very stormy, No. 8.—Nothing. A great flight of Snow Buntings. *Par. major* and *cæruleus*, a few.

4th, S.W., fresh, overcast; in evening, S.W., clear to northward.—Nothing. At noon pretty many young *Hir. rustica*. Several *Sax. ænanthe* and *rubicola*. *Char. auratus*, ten to fifteen.

5th, S.W., stormy, early, No. 9; in evening and night, thunder, lightning, and hail.—Nothing. A couple of *Par. major*.

6th, W. by S., W. to N., violent; early, thunder, lightning, and hail squalls; in evening stiller, W.—Nothing. *Hir. rustica*, pretty many young birds; *urbica*, fewer. Some *M. flava* and *alba* and *Anth. pratensis*.

7th, N. and N.N.W., better, clear; later, violent, with rain squalls.—*C. cornix*, flights of hundreds. *Sturnus*, great flights. *T. musicus*, scattered. *Mot. alba*, some. *Sax. ænanthe* and *rubicola*, both stray old birds. *Al. arvensis*, tolerable flights; *alpestris*, scattered. *Fr. cælebs* and *montifringilla*, not many. *Par. major* and *cæruleus*, a little party. *Col. palumbus*, some. *Char. auratus*, several. *Lar. minutus*, many at sea off the island.

8th, W.N.W., fresh, cloudy; p.m., violent, overcast; in evening, S.W., stormy. Scotland, low minimum.—*F. æsalon*, ♂; *nisus*, jr., some. *C. cornix*, many flights. *Sturnus*, pretty many. *T. musicus*, tolerable; *merula*, some jr.; *iliacus*, a couple. No *Sylvia*. *Sax. ænanthe* and *rubicola*, some. *M. alba*, few. *Anthus*, pretty many. *Al. arvensis*, tolerable; *alpestris*, flights of twenty to thirty; *arborea*, some. *Troglodytes*, many. *Fr. cælebs* and *montifringilla*, pretty many; *cannabina*, fewer. *Par. cæruleus*, scattered. *Scol. rusticula*, six to eight been shot; *gallinago*, some.

9th, S.W. by S., fresh, cloudy, rain; in evening, light, clear, stars, on mainland S., slight.—*F. nisus*, some. *T. musicus*, pretty many; *merula*, jr., fewer; *torquatus*, some. No *Sylvia*. *Sax. ænanthe*, tolerable. *Mot. alba* and *Anthus*, do. *Troglodytes*, many. *Al. arvensis*, many, especially passing on over the sea numerously; *alpestris*, little flights; *arborea*, a couple. *Fr. cælebs*, *montifringilla*, and *cannabina*, many. *Par. major* and *cæruleus*, some. *Hir. rustica* and *urbica*, tolerable. Few Woodcocks. Altogether but slight migration.

10th, S.W., violent, chasing loose clouds; in evening light, southerly, misty; later clear.—Almost nothing. *T. musicus*

torquatus, and *iliacus*, passing on overhead; *pilaris*, some. *Fr. caelebs* and *montifringilla*, many; *cannabina*, fewer.

11th, E.S.E., moderate; A.M., rain; P.M., clear; in evening E.N.E., light, clear.—*F. nisus*, some. *C. cornix*, innumerable flights; *monedula*, very many. *Sturnus*, flights like clouds in many thousands. *T. musicus*, tolerable; *torquatus*, scattered. No *Sylvia*. *Accentor*, a couple. *Troglodytes*, tolerable. *Mot. alba*, some. *Anthus*, many. *Al. arvensis*, many, extremely many passing over the sea; *alpestris*, pretty many; *arborea*, single. *F. caelebs*, *montifringilla*, *cannabina*, *spinus*, not very many. *Hir. rustica* and *urbica*, scattered. *Col. palumbus*, *Scolopax*, and *Char. auratus*, all not many.

12th, N.N.E., light; in evening S.W., slight; rain showers during day.—All the above, but in considerably smaller numbers. *F. peregrinus*, one old bird shot. *Sy. rubicula*, very many; *rufa*, also pretty many. *Accentor*, also many. *Reg. flavicapillus*, pretty many. *Fr. linaria*, some.

13th, S.W., violent, overcast, rain shower.—Nothing. *T. iliacus*, flights; *musicus* and *torquatus*, few.

14th, S. by E., very violent, thick clouds, overcast.—Nothing. *Fr. caelebs*, *montifringilla*, and *cannabina*, some flights passing. Thrushes, almost none. *Regulus*, some.

15th, S.E., slight clear, middle high clouds from W. by S.; noon, light, cloudy. Wind, E. by N., clouds from S. In evening, E. by N., violent, clouds from S. by E. In night, east, very violent, thick clouds from S.E.—*F. peregrinus*, old; *cesalon*, *tinnunculus*, *nisus*, of the latter three several. *Corv. cornix*, extraordinary many, hundred thousands. *Monedula*, flights of hundred and above. *T. musicus*, *torquatus*, *iliacus*, few. *Viscivorus*, a couple. *Sylvia*, very strayed. *Regulus*, do. *Accentor*, none. *Anth. pratensis*, few. *Richardi*, one. *Al. arvensis*, very many; *alpestris*, hundreds. *Emb. citrinella*, some. *Fr. caelebs*, numerous, passing on overhead, but so high that the call of thousands over thousands could only be heard from aloft without the birds being visible. *Scol. gallinago*, some. *Rusticula*, none.

Note.—According to the weather in the morning, there ought to have been considerable migration—Thrushes and Woodcocks—but prominent westerly currents in higher regions acted adverse.

During the night to 16th, extraordinary strong migration of

Larks, Thrushes, Starlings, *Numenius* and *Charadrius*; also *Strix otus* (?) was present, and robbed on the wing at light fire, especially *T. musicus*.

16th, E. and E. by S., violent, thick, low clouds S.E.; in evening, light, E., uniform thick, damp.—Early, six to seven, yet extremely strong migration of Thrushes, Larks, Finches, and Starlings. *F. peregrinus*, *cesalon*, *tinnunculus*, and *nisus*, strayed. *Str. otus*, some. *Lan. excubitor*, a couple. *T. musicus*, many during forenoon; *iliacus* and *pilaris*, many during day. *Sturnus*, very many. *Sy. rubecula*, pretty many, besides no *Sylvia* and *accentor*. *Regulus flavicapillus*, pretty many. *Anth. pratensis*, many. *Richardi*, some. *Emb. schœnielus*, early, many. *Pusilla*, one. *Al. arvensis*, very many; *alpestris*, the same. *Fr. cœlebs* and *montifringilla*, many; *cannabina*, fewer. *Par. major*, pretty many. *Scolopax*, none. In the afternoon, from 5 to 6, a bat flew about in the garden, chasing.

17th, northerly, light, quite thick, with rain, low loose clouds, slowly from N.W. and N.; after midnight, dead calm.—During the early hours until 9 o'clock, extremely large flights of Thrushes, flying about high, just as if bad weather was approaching. *F. tinnunculus* and *nisus*, some. *Corvus* and *Sturnus*, few. *T. musicus* and *torquatus*, extraordinary many during the whole of the day; *merula*, *iliacus*, and *viscivorus*, fewer. *Sy. rufa*, many; *rubecula*, extremely many. *Accentor*, none. *Regulus*, many. *Anthus pratensis*, many. *Alauda*, very few. *Emb. citrinella* and *schœnielus*, some. *Fr. cœlebs* and *montifringilla*, many, the latter very many. *Linaria*, some. *Spinus*, many. *Par. major*, pretty many. *Scol. rusticula*, twenty to thirty shot. *Gallinago*, pretty many. *Rallus aquaticus*, some.

18th, N.N.W., slight, overcast, easterly, horizon clear; P.M., high cirri from E. by N., light, sunny, low clouds lazy from N.N.W.—*F. cesalon*, scattered; *nisus*, some. *Str. brachyotus*, few. *Corvus*, very single. *Sturnus*, some flights. *Lan. excubitor*, one. *Turd. musicus* and *torquatus*, many. *Merula*, *iliacus*, *viscivorus*, and *pilaris*, tolerable. *Sy. rubecula* and *rufa*, as *Regulus*, pretty many. *Accentor*, some. *Anth. pratensis* and *rupestris*, pretty many. *Al. arvensis* and *alpestris*, fewer. *Emb. schœnielus*, tolerable; *nivalis*, some. *Par. major*, pretty many. *Fringilla*, not many. *Linaria*, twenty to thirty; some *spinus*. *Col. palumbus*, some. *Scol. rusticula*, about thirty shot. *Gallinula* and *gallin-*

ago, several. About eve a bat flying about in the garden, besides two observed.

19th, N.W., slight, light rain squalls.—Early, nothing. *F. nisus*, some. *C. cornix*, some flights; *monedula*, fewer. *Sturnus*, but few. *Sy. rubecula* and *rufa*, scattered. *Par. major*, few. About eve Blackbirds and Finches arrived. *Linaria*, the same. *Al. brachydactyla*, one male shot.

During the latter days plenty *Lar. tridactyla* on the sea, also *minutus*. *Anas molissima*, one old male shot.

20th, N. by E., slight, quite cloudy, rain showers; later, N.E., almost clear; in evening, clear, light.—Very little, more migration across the sea. *Corvus*, few. *Sturnus*, many. *Turdus*, very few. *Sy. rubecula* and *rufa*, few. *Al. arvensis*, pretty many; *alpestris*, very many, in flights of thirty to fifty. Woodcocks, but a few.

21st, westerly, light, and rain showers.—Very slight migration. *Sturnus*, pretty large flights. *Lan. excubitor*, one. *Turdus*, very few. Woodcocks, early, very many, 150 to 200 captured.

22d, E. and E. by N., light, clear, scattered clouds; in evening, highest clouds from N., middle W., low, loose, hasty clouds from E. by S.—*F. peregrinus*, a couple. *Corv. cornix* and *monedula*, not many. *Sturnus*, early flights of 2000 to 3000. *Turdus*, but few. *Anthus*, not many. *Al. arvensis*, few; *alpestris*, many. *Emb. citrinella*, some. *Fringillæ*, the same. Some *Col. palumbus* and Woodcocks.

The westerly currents in middle stratum of air may have acted unfavourably on migration.

23d, E. by S., fresh, light clouds from S.E.; in evening, E.S.E., very fresh; clouds hasty from S.E., at 9 o'clock, thick, overcast.—*F. peregrinus* and *æsalon*, some. *C. cornix*, very many; *frugilegus*, in afternoon, flights of several hundreds. *Sturnus*, single flights. *Sy. rubecula* and *rufa*, but strayed. *Reg. flavicapillus*, pretty many, but yet no *pyrocephalus*. *Anth. pratensis* and *rupestris*, pretty many. *Al. arvensis*, few; *alpestris*, many; *brachydactyla*, one shot. No Thrushes and but a few Woodcocks.

24th, early, S.S.E., violent, thick rain; 10 A.M., S.; P.M., S.S.W., rain, clear to northward.—Early and forenoon, nothing; afternoon, during calm, *T. merula*, *Sturnus*, *Fr. cælebs*, and a few Woodcocks.

25th, S.W. and W.S.W., fresh, light, rain showers; in evening, lighter.—Nothing.

26th, S.W. to S. by W., violent, thick rain; P.M., very stormy, No. 8; in night, W. and W.N.W., No. 8.—Minimum, west, Scotland; stormy westerly winds in Nordsea. Almost nothing; very strayed single seasonable birds. *Al. alpestris* and *Emb. nivalis*, the most.

27th, W., lighter; during day, rain and hail squalls; P.M., W.N.W. and N.W., lighter betwixt squalls.—Nothing; two to three Woodcocks.

28th, early, N.W., No. 7, rain and hail squalls; noon, S.W., clear, high cirri and little clouds from E. by S.; in evening, W., lighter.—Nothing; early, few *merula*, young birds. Pretty many *Al. alpestris*, and one flight *Emb. nivalis*.

29th, light, overcast; noon, clouds slowly from N.E.; 3 o'clock in afternoon, E., fresh, wind and moving clouds.—*C. cornix*, many great flights, thousands. *Sturnus*, a flight of 500 to 600. *T. musicus*, few; *pilaris*, great flights; no *merula*. *Sy. rubecula*, numerous. *Reg. flavicapillus* and *Par. major*, pretty many. *Anthus*, few. *Al. arvensis*, pretty many passing on overhead; *alpestris*, flights of hundreds; *arborea*, twenty to thirty. Woodcocks, ten to fifteen obtained.

30th, E. by N., fresh, overcast, cold, clouds from E.—During the night many *Tringæ* passed. *F. œsalon*, several. *C. cornix*, very many passed. *Sturnus*, extremely many. *Turdus*, altogether few; *merula*, some; *torquatus*, few; *pilaris*, many. *Sy. rubecula*, scattered. *Anthus*, pretty many. *Richardi*, one. *Al. arvensis*, pretty many; *alpestris*, very numerous; *arborea*, some. *Emb. citrinella* and *schœniclus*, pretty many. *Fr. linaria* and *montium*, some flights; *cœlebs* and *montifringilla*, fewer. Woodcocks, twenty to thirty shot. Very many Geese and Ducks passed. *Cinc. melanogaster*, one fine male shot.

Late in evening, many *Ch. squatarola* overhead passing; the air full of call tones.

31st, E. to S.E., very fresh, cloudy, cold; in evening, wind again more easterly.—*F. nisus* and *buteo*, some. *C. cornix*, very many; *monedula*, some flights. *Sturnus*, few. *T. merula*, few; *viscivorus*, some; *pilaris*, many. *Lan. major*, one fine male. *Sy. rubecula*, scattered. *Anth. pratensis* and *rupestris*, tolerable. *Accentor*, the same. *Al. arvensis*, pretty many; *alpestris*, in

masses. *Emb. citrinella* and *nivalis*, pretty many; *miliaria*, some. *Par. major*, many. *F. cœlebs*, extraordinary many passing on overhead; *linaria*, a few flights; *cannabina* and *montium*, some. *Col. palumbus* and *Scol. rusticula*, several.

Note.—In course of the month, almost no *curruca* at all; no *Reg. pyrocephalus*; very few *Accentor*; *Lar. trydactyla*, already early very numerous on the sea; *Sula alba*, the same; almost no *Strix brachyotus* at all.

November.

1st, E. by N., fresh, clear, cold; P.M., light clouds from N. by W.; in evening, cloudy, light easterly.—Not particularly much migration. *C. cornix*, few flights. *Sturnus*, the same. *Turdus*, none at all. *Rubecula* and *Accentor*, pretty many. *Al. arvensis*, few; *alpestris*, very many passing on overhead. *Emb. nivalis* and *Fr. montium*, pretty many. *Par. major* and *cœruleus*, some. Woodcocks, few.

2nd, S.W., pretty violent, overcast; P.M., fine rain.—Nothing.

3rd, S.W., pretty violent, overcast; P.M., clear, little high clouds N.—Nothing; at Cuxhaven, fog.

4th, S.S.W., fresh, quite clear; in night, thick.—Nothing. *T. pilaris*, a little flight. *Emb. nivalis* and *F. montium*, several small flights. *Par. major*, ten to fifteen in the garden.

5th, S.W., fresh, thick, with rain; afternoon, sun through.—Nothing; a few *merula*, *Par. major*, *Regulus*, *E. nivalis*, and *F. montium*.

6th, southerly, still, clear; evening, S.S.W., nearly calm.—Early, heavy dew; Bremen, fog; scarcely any passage. *T. pilaris*, some. *Al. alpestris*, pretty numerous; *arvensis*, few; *E. nivalis*, *F. montium*, and *Par. major*, some. *Lestris catarrhactes*, a very fine specimen obtained; waited thirty years for it!

7th, southerly, still, clear; 9 A.M., fog whole day and night.—Nothing: one Firecrest. 10 P.M., when for a short time clear, great many *Num. arquata* passing overhead.

8th, E., early, morning, fog; A.M., S.E., thick, with clouds; evening clear.—Nothing. Early in the morning, *T. torquatus* passing overhead. Towards evening, great many *F. cœlebs* and *cannabina*, alighting from great height.

9th, E.S.S., fresh, hazy clouds, cold.—*T. pilaris*; *Al. arvensis*, pretty numerous; *arborea*, a few.

Fr. cœlebs, *chloris*, *spinus*, *linaria*, *cannabina*, *montium*, all great many. *E. citrinella* and *nivalis*, also great many.

10th, S.E., fresh, hazy clouds drifting along; evening clear, still.—During night some Woodcocks and Ring Ouzels at lighthouse.

T. torquatus and *pilaris*, pretty numerous. *Al. arvensis* and *alpestris*, less. *F. montium*, many; *linaria*, some. A few Woodcocks.

11th, S.E., moderate, clear, fine; evening, fog.—*St. otus*, one in thrushbush. *C. cornix*, pretty numerous early in the morning. *Sturnus*, less so. *Al. arvensis*, not many; *alpestris*, great many; *arborea*, ten to fifteen. *Emb. miliaria* and *citrinella*, pretty numerous. *F. cœlebs*, great many; *cannabina*, *chloris*, *montium*, *linaria*, many. *Col. palumbus*, some.

12th, southerly, fresh; night and all day, fog.—Nothing. During night, *T. torquatus* and *pilaris*, *Ch. auratus*, and *Num. arquata*, heard at lighthouse.

13th, S.W., moderate, thick.—Nothing. Some *T. torquatus* and *pilaris*. *E. miliaria*, a few.

14th, W., windy, rain.—Nothing. *T. pilaris*, rather numerous; perhaps east wind approaching.

15th, N.E., fresh; early, rain and hail squalls; from noon, clear.—*C. cornix*, a few small flights; *merula* and *pilaris*, rather numerous, particularly the latter; *musicus* also. *A. arvensis*, flights; also during night at lighthouse. *A. alpestris*, small flights. *F. montium*, a party of from eighty to a hundred; *E. nivalis*, less.

16th, N. still, clear; during night some frost; evening calm, clouds from E.N.E., clear.—*C. cornix*, small flights. *Sturnus*, forty to fifty. *T. pilaris*, some flights. *Al. arvensis*, some; *alpestris*, great many; *arborea*, a few. *E. nivalis*, scattered; *F. montium*, twenty to forty. Woodcocks, about ten. *Col. palumbus*, some.

17th, S., faint, clear, somewhat below zero; evening, S.E., fresh.—Nothing; not a bird.

18th, S.S.E., still, clear, some frost.—Nothing. A few *C. cornix*, early passing overhead. *P. major*, a few flitting about.

19th, N., faint, scattered clouds, about zero; evening, E.N.E.

—Nothing. Very few *C. cornix*, *Al. arvensis*, and *E. nivalis*. *F. linaria*, ten; *carduelis*, one. *Par. major*, some.

20th and 21st, S.E., windy, cloudy, below zero.—Nothing. *C. cornix*, about ten. *F. linaria* and *E. nivalis*, a few.

22d, S.E., little wind, thick.—Nothing. *F. cannabina*, eight to ten. *Strix otus*, one.

23d, E. still, very thick; noon, N.E.; evening, E. by S., faint.—*T. pilaris*, several large flights, from 300 to 500. *C. cornix*, also many. *E. nivalis*, considerable numbers. *Ch. vanellus*, great many.

24th, E., windy, overcast; during night, S.E., very hard.—*C. cornix* and *T. pilaris*, some flights. *Accentor*, some. *Cinc. aquaticus* (*melanogaster*), one. *Anser* and *Anas*, great many passing on.

25th, S.E., very hard, thick, some snow, a degree below zero.—Nothing. *T. pilaris*, a few. Some *Scol. gallinago*. *Anser* and *Anas*, great many passing on over the sea.

26th, S.E., blowing hard, cloudy; night, stormy.—Early and forenoon, hundreds of *C. cornix* passing overhead westward; otherwise, nothing.

27th, S.S.E., blowing hard, rain and snow; afternoon, S.W.—Nothing. Storm warning. Magnificent fall of stars, uninterrupted.

28th, S.S.W., windy, thick; night, stormy.—Nothing.

29th, N.W., somewhat better, windy, cloudy; evening, still, rain.—Nothing.

30th, W., fresh, clear.—Guillemots in the cliffs; rather early for these occasional visits.

December.

1st and 2d, W., violent, open clouds N.W., cirri N.—*T. pilaris*, a few hundreds on 2d. *Larus marinus* and *argentatus*, astounding numbers in lee of island.

3d, night, S.W. gale, Nos. 8 and 9, moving W., bitter; evening, S.W., moderate, cirri, N. by W.—Nothing. Storm warning.

4th, S.W., Nos. 8 and 9, rain and hail squalls.—Nothing.

5th, W. and W. by N., No. 8, hail and rain squalls; afternoon, a little better.—*Uria*, thousands in the cliffs at breeding places.

6th, Northerly, nearly calm.

7th, Northerly, nearly calm.—During night to 8th, larks pretty numerous at lighthouse.

* 8th, N.W., very faint, snow showers; evening, squally, with snow.—*T. pilaris* and *merula*, some. *Fr. linaria*, several; *montium*, small flight, thirty to fifty. *Char. vanellus*, several. *Ch. auratus* passing on at night during snow squalls.

9th, N. by W., violent, with snow squalls, between squalls still.—During night *Ch. auratus* and *Num. arquata*, numerous passing over.

10th, N. and N.E., fresh, early snow squalls.—*C. cornix*, several. *T. pilaris*, small flights; *merula*, single birds. *F. linaria*, some.

11th, N.E. and N.N.E., moderate, clear; evening, calm.—*C. cornix*, pretty numerous.

12th, S.W., fresh, overcast.—*Alca alle*, thousands flying about on sea.

13th, W.S.W., faint, overcast, upper clouds N.N.W.—Nothing.

14th, W. and N.W., calm, overcast.—Nothing. Some *Lar. glaucus*, jr., between *argentatus* and *marinus*.

15th, W., overcast, no wind.—Nothing.

16th, S.W., fresh; evening, very strong, W., rain.—Nothing.

17th, N.N.W., faint, overcast; evening, thick fine rain; night, fog.—Nothing.

18th, calm, fog; evening, faint, east.—*Larus minutus*, pretty numerous on sea.

19th, S.E. and S., faint, thick fog.—*Al. arvensis*, great many passing on, some alighting. Some *Al. alpestris*.

20th, 21st, 22d, S.W. and W., almost uninterrupted thick fog.

23d, N.E., very weak, cloudy.—*T. pilaris*, a flight of from 100 to 150. *F. montium* and *Emb. nivalis*, some.

24th and 25th, W., fresh, overcast; during night foggy.

26th, north, still, fine.—*T. merula*, eight to ten, mounting after sunset from my garden on migration.

27th, W., fresh, clear; evening and night, stormy, No. 8, S.W.—Nothing. Great many *Lar. minutus*.

28th, S.W., stormy, No. 8, storm warning.—Nothing. Great many *Lar. minutus*.

29th, W., violent, hail and snow squalls.—Nothing. Great many *Lar. minutus*.

30th, northerly, fresh to violent; evening, N.W., little wind.

—*Al. alpestris*, pretty numerous, flights of twenty and thereabout passing on the whole day.

31st, S.S.W., violent, thick; afternoon and all night, thick fog.—Nothing.

Heligoland—Spring, 1886.

March 19th, S.E., 4 deg. below zero.—*Corvus frugilegus*, pretty numerous; *cornix*, a few. *Sturnus*, do. *Al. arvensis*, great many, enormous passage over sea.

Mem.—At Hanover astounding numbers of “Crows,” and great flights of *Ch. vanellus*.

20th, S.S.E., little wind, overcast; afternoon, thawing; evening, fog.—*F. vesalon* and *tinnunculus*, some. *C. frugilegus*, thousands; *cornix*, less. *Sturnus*, *merula*, *musicus*, *iliacus*, all passing on. *Al. arvensis*, hundreds of thousands; *alpestris* and *arboreus*, a few. *Anth. pratensis*, great many; *rupestris*, less. *F. cannabina*, some flights. *Ch. auratus*, *vanellus*, *hiaticula*, all great many. *Fr. alpina*, less. *Scol. gallinago*, several. *Col. palumbus*, some. *Enormous masses passing on across the sea.*

Hanover.—Crows, Larks, Wood Pigeons, *Ch. vanellus*, all in enormous numbers. *Ch. auratus*, less.

21st, fog.—Larks and Plover passing on above fog, their voices heard in great profusion.

22d, 23d, 24th.—All like 20th, passing over in enormous masses, particularly during night.

25th.—Crows, Rooks, Daws, passing on in millions. *Sturnus*, astounding numbers. All the above also in full swing passing on, joined by *rubecula*, Wagtails, *accentor*, *Sax. cenanthe*, *F. cœlebs*, *montium*, *Emb. citrinella*, *Syl. titys*, and a few Goldcrests, etc., etc.

In previous years the Heligoland notes have been incorporated with the returns from the East Coast of England, and they are now printed separately for the first time. The special thanks of the Committee are due to Mr Gätke for his interesting and valuable contributions to their report.

WEST COAST OF SCOTLAND.

SCHEDULES, etc., were sent to thirty-four stations, not including the Isle of Man (five more), the schedules of which are passed on to Mr Eagle Clarke for incorporation with the West Coast of England. Of the thirty-four we have received returns from seventeen.

Additional interest and more painstaking schedule-work is evident at the more productive stations. From Monach Islands three schedules have been sent, but they are written straight across the columns, making it extremely difficult for the committee to tabulate the contents. As far as possible, the columns should be used for the purposes given in the headings, as otherwise the labours of members of committee is very largely increased. All the scheduled items must be passed first into a ledger for the purpose, under species in each month, in the season, and then only can the report be written out. We give prominence to this explanation, as we are very desirous that our reporters adhere to the columnar arrangement.

Here follows the list of stations:—

| Returns in 6 years. | In 1885. | LIST OF STATIONS. | Values. | Feet. |
|---------------------------|-------------|-------------------------------|-----------|-----------|
| SUTHERLAND. | | | | |
| 4 | | 81. Cape Wrath,..... | III. | 400 |
| 4 | | 82. Rhu Stoir,..... | II. | 195 |
| OUTER HEBRIDES. | | | | |
| 5 | * | 83. Butt of Lewis, | I. | 170 |
| 3 | | 84. Stornoway, 2 lights,..... | II. I. | } 56 |
| 3 | | 85. Island Ghlais..... | I. | |
| 5 | * | 86. Monach Isles, | I. II. | 150 62 |
| 2 | | 87. Ushenish, N. Uist, | VI. | 176 |
| 2 | * | 88. Barra Head, | II. | 683 |
| 0 | * | 89. Rona, Skye, | IV. | 222 |

The names of the Reporters are given under "Diary from the Stations."

| Returns in 6 years. | In 1885. | OUTER HEBRIDES— <i>continued.</i> | Value. | Feet. |
|---------------------------|-------------|---|--------|-------|
| 5 | * 90. | Kyleakin, W. Ross, | IV. | 53 |
| 2 | 91. | Isle Oronsay..... | I. | 58 |
| 2 | 92. | Ardnamurchan,..... | I. | |
| 6 | * 93. | Skerryvore and Hynish Signal Tower, Tiree, ... | II. | 150 |
| 6 | * 94. | Dhuheartach,..... | I. | 146 |
| 5 | 95. | Sound of Mull,..... | V. | 55 |
| 0 | 96. | Corran Ferry, | IV. | 38 |
| 4 | 97. | Lismore, Oban,..... | I. | 103 |
| 2 | 98. | Fladda, Easdale, | VI. | 42 |
| 4 | * 99. | Rhuvaal, | IV. | 147 |
| 6 | *100. | M'Arthur's Head, | IV. | 128 |
| 6 | *101. | Skervuile,..... | II. | 73 |
| 6 | *102. | Rhinns of Islay, | IV. | 159 |
| 2 | 103. | Lochindaul, | IV. | 05 |
| 0 | 104. | Mull of Kintyre,..... | VI. | 297 |
| 0 | 105. | Sanda, | | |
| 0 | 106. | Devaar,..... | II. | 120 |
| 0 | 107. | Pladda, Arran,..... | II. | 130 |
| 3 | *108. | Lamlash, | IV. | 46 |
| 2 | *109. | Turnberry, | IV. | 96 |
| | 109B. | Ailsa Craig, 1885, | | |
| 5 | *110. | Corsewall,..... | IV. | 112 |
| 5 | 111. | Loch Ryan, | I. | 46 |
| 5 | *112. | Portpatrick, | I. | 37 |
| 5 | *113. | Mull of Galloway, | II. | 325 |
| 2 | *114. | Little Ross, | IV. | 175 |

The names of the Reporters are given under
"Diary from the Stations."

DIARY FROM THE STATIONS.

Butt of Lewis.—Alexander Thompson and Gilbert Mackinnon, one schedule from March 24th to November 17th, carefully filled. On the 15th and 16th, large whales seen close to light-house, going S.E. on the flood tide. Starlings, Rock Doves, remain all the year round, and "Sandlarks" arrive in May, and stay till end of August. During July, "great flocks of Gannets continually going to and fro in search of fish." An amusing incident was witnessed by Mr Mackinnon. On the evening of the 10th August, a Gull got hold of a large "saith" fish¹; was

¹ *Gadus virens*, *Lin.*

unable to rise with it, so it towed it to the rocks, and allowed the sea to wash it up on the rocks. Some boys went after it, when it took to the water again, and pulled the fish to another rock, and again allowed the sea to wash it up, where it eat its supper in peace.

Monach Isles.—Donald Georgeson—Three quarterly schedules. Mr Georgeson's schedules are able and masterly; and if we could have *all* our schedules returned in a similar epitomised condition, no doubt much time might be saved; *but* in the meantime, schedules coming from a few stations out of so many stations, so epitomised, whilst the rest adhere rigidly to the columnar arrangement, makes it more troublesome to arrange details. Uniform attention to the columnar arrangement is simplest for the ledger work.

The following is an abstract of Mr Georgeson's three quarterly schedules, and may be referred to under *species* in the next portion of the report:—

Mr Georgeson writes—“This is an island little frequented by either land or sea birds. The only birds that struck the lantern were a few Snow Buntings and the Common Tern [Arctic Tern *vera* ?.—J. A. H. B.] Towards the end of January we had a severe gale from the S.W.” Mr G. found several *Terns* and *Snow Buntings* “dead from exposure.” “*The S.W. is the prevailing wind here.*” (Explaining, perhaps, the above stated scarcity of birds, as pressing them more easterly on their S.E. course after doubling Butt of Lewis.—J. A. H. B.) A single Snipe appeared among the “marshy pools” of the islands. “In January and February I observed a large flock of Wild Geese, coming from the N.E., and after resting on the outlying rocks here, they rose and flew west in the direction of St Kilda.” Shieldrakes—Two males and one female, in February, seen feeding on the island, and three Common Gulls and two Black-Backed Gulls. 1st March. Fifty Linnets (Twites?) paid a visit,—wind south—stayed only a short time. A few Sandpipers remained a week, but departed when the weather broke. Rock Doves visited the island, but soon left. Sea birds observed from January 1st to March 31st are—Common Duck, Eider Duck, Northern Diver, and a few Scarts, but these also disappeared with a gale on the 20th March from quarters between S. and N.W.

In Mr Georgeson's next six months' bulletin, he reports:—

April 3d, wind S.W. Three Ravens and two Hooded Crows, and one *Golden Plover*—local migration. He also mentions Sand Larks arriving to breed about the 5th April. "The only land birds that remained the winter are a few Rock and Meadow Pipits, which breed here in large numbers; also about a dozen pairs of Wheatears and a few "Linnets" (*i.e.*, Twites.—J.A.H. B.) Two nests of the Eider Duck on the island in May. Early in May the wind was light and variable. The only birds I saw were three Black-Backed Gulls and five Herring Gulls, and a few Eider Ducks, but as the breeding season advanced they left the island. Two pairs of Shielducks came to the island *from the direction of St Kilda*—wind light, N.E.—and were seen flying away in spring with their young in a N.E. direction. There are no Scarts here in the breeding season. They and other rock birds leave for more suitable rocks as the season advances. Large flocks of Pictarnies arrive here in June, and breed in great numbers, the island being covered with their nests.

In the last quarterly schedule Mr Georgeson tells us:—By the 24th August the land birds had all left, except a few "Linnets" (*i.e.*, Twites—J. A. H. B.), a few Rock and Marsh (*i.e.*, "Meadow") Pipits. A *Cornerake*, a very unusual bird here, came to our garden on 11th August, but left on the corn being cut. September 7th, a few *Scarts* returned, and fifty to sixty Kittiwakes. Many *Solan Geese*. Two Herons seen feeding on rocks on September 8th flew off on the 10th seaward. October 5th, large flock of Snow Buntings part of the day, and then flew off in a N.E. direction. On the 20th October a large flock of Wild Geese came from N.E. with a N.E. wind, lighted to rest, and then flew off *west* (*i.e.*, out to sea). Snipe usually remain over the winter at Monach, but leave in the breeding season. On night of November 10th to 11th a Woodcock—a rare bird here—struck, along with Terns, Mavis, and Blackbirds. Another rare bird was found dead same morning, the name of which I do not know. "Exact colour of a Kittiwake, the size of a Stormy Petrel." (No doubt the Grey Phalarope, young bird of the year.—J. A. H. B.) A large flock of "Pictarnies" (*i.e.*, Terns) came from E., rested, and then flew away west, wind N.E. at the time, on same day.

Barra Head Lighthouse.—William Irvine. One short schedule from February to June. Mr Irvine writes:—"Bernacle Geese

last seen on the 24th April on this island." There is some little confusion about Bernacle and Brent Geese. Could Mr Irvine send us a head of the so-called "Bernacle Geese?"—
J. A. H. B.

Marten Swallows (*Hirundo urbica*) were seen on June 10th hawking over the surface of the ground. Major H. W. Feilden and Harvie-Brown visited Barra Head in 1871, and it is easily understood why it should *not* be a favourable observatory of land birds. (See "Barra Head and Its Bird Life," and previous Reports.)

Rona, Skye.—Messrs Dunnet and M'Gaw send a short schedule—March 20th to November 17th. The contents appear under Species. Northern Divers seem to be often seen about this district of coast, and also at Kyleakin Ferry (*q.v.*).

Skerryvore.—Mr Thomas Dawson sends three carefully-filled schedules. Rush of Thrushes, &c., on 12th March, continuing on 15th to 16th. Several birds have been named from the wings sent by Mr Dawson; and from description and drawing the *Pomatorhine Skua must* have been observed on the 25th May. Later Mr Dawson writes:—"Not one land bird seen here since 28th November till to-day." Date of last schedule, January 19th, 1886. Even the Eider Ducks have deserted us for months past. Yesterday, continuous flocks of either Marrots or Razor-bills passing south. Fresh, variable.

Kyleakin.—Messrs D. M'Culloch and John Clyne write, with two well-filled schedules.

This is an exceptional year here. On the 16th November, at 2.30 A.M., with fresh (?) breeze and haze, two "Mavises" and six Starlings struck—the *first birds known to strike the glass for the last eight years*—and others seen in the rays of light. More birds have been observed this season in a few minutes than have been noticed for years. On the 27th November, wind S.W., fresh, gale with snow all night, and two hours after the gale took off, great flocks of Starlings passed from 10 A.M. till dark, only a few inches from the ground. These birds had either been driven out of their course with the gale and snowstorm, or had taken a new course of their own accord.

Dhuheartach, S.W. of Iona.—Mr William Davidson sends two schedules carefully filled under correct columns—a practice which cannot be too highly commended.

Skervuile. — Mr John Ewing also sends us four capital schedules, strictly adhering to the columnar arrangement.

Rhinns of Islay.—Messrs Peter Anderson and James Ducat send eight excellent schedules, clearly proving, as has been done before, the superiority of this observation station; and I think in our first Report we give prominence to the situation as intercepting the S.E. flow of returning migrants from the Outer Hebrides.

Messrs Anderson and Ducat are much interested in the work, and many birds have been sent us by them for identification. They write:—"The last date on which we saw Solan Geese last year was on the last day of November, and the first day this year was on 29th February. Birds resident in the vicinity are, amongst others, Starling, Curlew, Snipe, Jack Snipe (?),¹ Twites or 'Rock Linnets,' Sparrows, and Larks. Later in summer Gannets or Solan Geese are seen daily 'flying east and west,' and 'circling about fishing, from an odd pair to 100 in all weathers.' A vast congregation of Marrots and Puffins fishing around the island on 19th August, and some hundreds of Gannets, old and young, 'floating along with the tide, so full they cannot rise.' All disappeared on 21st."

N.B.—We would be obliged if Mr Anderson and Mr Ducat would adhere to the columnar arrangement, and not write across the red lines, or as little as they can help.

Hundreds of MOTHS also are reported "of various sizes flying about the lantern on 7th September." A great Skua?—"Dirty Allan of the largest size"—seen on 7th September. Also on the night of the 3d September Messrs A. and D. write:—"We have had enormous numbers of what is locally called 'Jenny Long-legs' about the station for the past three or four weeks, and in the mornings there are great numbers of their legs and wings lying on the pavement. This morning, after putting out the light, I watched, when I saw about twenty Mosscheepers (*i.e.*, Pipits) working hard to make their breakfast off them. *I never before* saw so many Long-legs in the fall. There is a usual *run in April!*"

From Mr Peter Anderson we have the following earnest appeal to other stations:—

¹ Does not breed in Britain: probably the Dunlin?—J. A. H. B.

RHINNS OF ISLAY LIGHTHOUSE,
23d December 1885.

SIR,—I beg to return you the concluding schedule for this year, and most likely I have put a lot of remarks into it and previous ones that are of little account, and some of the wings I sent to you were most likely very common ones to you, although they were strange to me, or I had some doubts about them ; but as I have now got the names of some of the odd ones in this locality, I will not likely trouble you with so many again. If my suggestion of including assistants as well as principals in filling up the schedules has been of any advantage this year, I would further suggest for 1886 that you should make a strong appeal to all stations to try for one year to give you all the information (and especially those who have not as yet sent in any or meagre returns) they can. First, what birds—or as many as they can ascertain—breed in their near locality. Second, when do Stonechicks (which I believe are all over Scotland), Snow Buntings, Robins, Wrens, and several other small birds arrive which make their appearance only at certain seasons. In looking over the Report for 1884, the point that annoyed me most was, that I could not make out the names and terms of all the different species ; but at John o' Groat's School thirty-five years ago there was no word of Latin. In '84's Report I expected to have seen better reports from some stations that I know, such as North Unst, Start Point, and Noss Head. At North Unst there are several migrants which build on the rock, and I wondered to see no account of Mother Carey's Chickens, as they breed on the rock, and at the end of August they annoyed us a good deal by striking the lantern and emitting an oily substance on the glass. At Start Point the Shel-drake breeds, and I have seen the Stock Duck breed on it also ; and I was told there were thirteen species of Ducks frequented that locality, and I have seen Teal and Widgeon there in hundreds. Also at Noss Head there are various classes of birds which visit it in the breeding season. I once knew of a Grebe got in a small pond there. Trusting you won't feel annoyed at the above remarks, I am,
etc.,

PETER ANDERSON.

Lamlash.—Messrs David Scott and Robert Brown send us one schedule. The remark occurs that “the Thrush is becoming very scarce here.”

Turnberry.—A carefully-filled schedule—dating March 11 to November 10—sent by Messrs Andrew Nisbet (principal) and Wm. Beggs (assistant). Species well distinguished.

Corsewall.—A good schedule also from Mr Robert Laidlaw, and all the species apparently well distinguished.

Portpatrick.—Mr James Begg sends a short but good schedule, with the remark: "Migration of birds this season has been very slight, and we think the cause is owing to so much prevailing winds from the west occurring on this coast [*i.e.*, taking the birds further west at further north points.—J. A. H. B.]. Flights of Black Crows [Rooks.—J. A. H. B.] come and go to this vicinity all the winter through. [*Note*.—Ravens are known to congregate on this coast at certain points.—J. A. H. B.] Great flights of Gannets in July, August, and September, and then cease till early spring. Fly both ways—north and south."

On November 10, *Red-legged Kaw* seen flying south at 3.40 P.M., close to lighthouse. (Is this still of the native breed, or a migrant from further north?—J. A. H. B.)

Mull of Galloway.—Two well-filled schedules from Messrs Alex. Murray and John M'Quarrie. "A large Grey Owl picked up one of the small birds on the grating on the 17th October, plucked it, and swallowed it whole. I tried to catch it, but it flew off."

Little Ross.—Mr James Ferrier I have to thank for two excellently-prepared schedules; and we feel sure that this station, though it may not yield large numerical returns, will give returns of considerable interest, whether negative or positive.

SEPARATE REPORT UNDER GENERA AND SPECIES.

TURDIDÆ.—*In Spring*, a few odd birds—Blackbirds and Thrushes—passed 93 (Skerryvore) and 114 (Little Ross). In March, these increased in numbers at both these stations on 7th, 11th, 12th, and 15th, and odd birds were also noticed at 109 (Turnberry) on 11th and 13th. Apparently almost a rush noticed at 93, with wind light N.W. on 12th, but S.W. and haze on 15th. Fieldfares also noted at Little Ross on 24th, with strong S.E.; one killed. On April 14th, a rush of Thrushes at 94 (Dhuheartach) all night, light variable wind and haze; also Redwings and Blackbirds at Rhinns of Islay on 12th, and two Ring Ouzels all night at Little Ross. Blackbirds seen flying S.W. at 94, on 17th June, complete the spring records.

In Autumn.—Scarcely any movement in September, but in

October, considerable numbers of *Turdidæ*. Earliest record in autumn, one Thrush on 1st September at 109, and one Ring Ouzel on 15th at 102 (Rhinns of Islay); and latest record November 16th [if we except two records on 22d and 23d January 1886, which really belong either to local influence, or is a beginning of the spring migration of 1886]. Thus the migration of *Turdidæ* in 1885 is almost unique amongst our records for the shortness, suddenness, and rapidity with which it was accomplished, occupying limits strongly defined in time by the above dates, viz., in all—leaving out the two solitary September records—only from 9th October to 16th November, or 38 days. The stations participating in the rush are 93 (Skerryvore), 94 (Dhuheartach), 101 (Skervuile), 102 (Rhinns of Islay), 108 (Lamlash), 109 (Turnberry), 113 (Mull of Galloway), and 114 (Little Ross). More specialised rushes were:—On 17th, of *Thrushes* and *Missel Thrushes* at 94, and of *Redwings* at Rhinns of Islay; on 10th and 11th November, of *Missel Thrushes* and *Fieldfares*, with few *Mavises*, at 93, 94, and of the same species in small numbers, with large numbers of *Thrushes*, *Blackbirds*, and *Redwings*, on 9th, 10th, 11th, up to 16th, at all stations. Most at 93 and 94, but movement extensive and general at all, and suddenly over by the 16th, if we except one solitary record of five *Mavises* on the 21st at (Kyleakin) 90, the only record from that station of *Turdidæ*. Prevailing wind strong S.S.E. to S.E., and back to S., all these two months; sometimes northerly in October, but never for long.

SAXICOLINÆ.—*In Spring*, an extensive migration of *Wheatears* and (or) “*Stonechats*.” [The name *Stonechat* is the one almost universally used at 93, 94, 101, 102, and 113, but “*Wheatear*”—the more correct name for the species intended—is used at 88 (Fladda) and 114 (Little Ross). The true *Stonechat* has a black head, and is about the same size as a *Whinchat*, *i.e.*, much smaller than the *Wheatear*. But the name “*Stonechat*” is of almost universal use in Scotland for the *Wheatear*—indeed, a generally accepted local name.] Earliest record in spring, April 4th, at 102 (Rhinns of Islay); latest, 2d June, at 93 (Skerryvore). The general rush took place between the 11th and 20th, and appears to have been unusually heavy, such terms being used, at all stations, as “numbers all night,” “fifty,” “forty,” “great numbers,” “rush all night,” “hundreds all night,” etc.

Perhaps 12th and 13th had the greatest share, but it would be difficult to say which station participated most largely. 109 (Turnberry), however, has only one record of odd birds on 14th April. The May records are all at 93 and 94, and are all light. There are also two records of Whinchats at 114, on 21st and 22d of April. The prevailing wind was easterly in April, and oftener S. of E. than N. of E. In May the wind was westerly at 93 and 94, and again S.E. at 93 on June 2d, the latest record.

In Autumn, a partial rush took place at 101 (Skervuile), where "numbers at midnight" were seen on the 6th. Records come from the following stations, principally 93 and 94, a few from 101 and 102. All records in September are from 93 and 94, and all are very light indeed, except at 94 upon the 6th September, when a rush of Stonechats, Wagtails, and Titlarks took place, with light S.E. breeze and haze, at 1 A.M. Prevailing wind S.E., August and September.

SILVIINÆ.—In March, two records of Robin at 93 (on 15th), and (Turnberry) 109 on 14th, S.S.E. at latter station, and light S.W. haze at former. Three other light records at 94 (Dhuheartach), 101 (Skervuile), and 102 (Rhinns of Islay) on 12th and 13th April, and one record of *Whitethroats* on 5th May at 114 (Little Ross).

In Autumn, no great movement observed, and only single records in August at 89 (Rona) on 1st, and at 90 (Kyleakin) on 25th, at 108 (Lamlash) on 23d, and Turnberry on 24th—the latter returned as a "Garden Warbler," the others of Robins.

PHYLLOSCOPINÆ.—Gold-Crest—Mere indications only of a spring movement, and that only at 114 (Little Ross), single records on 12th, 15th, and 18th April. Wind easterly on first two dates, but light W. on the last, with haze, when five Gold-Crests rested on the lantern glass all night. In May, Wood Warblers are returned at 114 on 20th and 21st, light S.E. and S., one killed.

The autumn migration also extremely faintly marked. One single record on 23d September, wind N.N.W., overcast, 9.35 P.M.; and two on 10th and 17th at 101 (Skervuile) and 114 respectively; wind on 10th N.N.E., clear, and on 17th at 114 variable and hazy. All relate to Gold-Crests.

ACROCEPHALINÆ.—No records.

PARIDÆ.—Tits—One Titmouse at 113 (Mull of Galloway) on 14th April; wind light, S.E.

In Autumn.—Single record on 17th August at 113, wind light, N.W., clear; one on 1st September at 109 (Turnberry), and two at 113 on October 9th and 19th.

TROGLODYTIDÆ.—Common Wren—A few single records in April and May, about seven in all, at 93, 94, 109, and 114.

In Autumn.—One record in August 1st at 89 (Rona), one record in September at 110 (Corsewall), and half a dozen or so in October at five stations—102, 108, 109, 110, 113. Six seen at noon on 23d; strong N. breeze and haze.

MOTACILLIDÆ.—Wagtails—On 12th May two, at 9 A.M., at 93 (Skerryvore), and five at 11 A.M. at 88 (Barra Head); wind S.W. at 93, and fresh W. at 88. The above the only spring records.

In Autumn.—Two light records on 24th and 28th, both at 94 (Dhuheartach); north on first date, light S.S.E. on second date. Two light records on 3d September at 113 (Mull of Galloway), and on 4th at 93. Indication of general movement on 14th and 16th at 89 (Rona), 93, 94, 102, and 113. Two light records in October 11th and 29th at 90 (Kyleakin), and 112 (Portpatrick).

Of Pipits, one record at 93 on 13th April; light, S.E., haze. In autumn, two records only at 94 and 101, quite faint; wind, light, east.

MUSCICAPIDÆ.—No records of Flycatchers.

HIRUNDINIDÆ.—*In Spring*, between 17th and 28th, five records at 102 (six seen, light, S.W.), at 109 (two seen on 20th, light, S., rain), at 113, two on 21st, S., and fog, and two on 28th; and at 114, four, the first observed on the 17th April. In May, one at 93 on 26th, four at 108 (Lamlash) on the 9th, and six on the 11th.

In Autumn.—A few records in August—a flock on 17th at 110 (Corsewall), all day, and flocks on 31st at 113 (Mull of Galloway), flying S.E. against E. breeze. Martins were also seen at Barra Head. In September Swallows and Swifts (see *Cypselidæ*) at 90 (Kyleakin) on 15th, and Swallows at 94 on 1st, and at 102 on 12th, 14th, and 16th—an appearance of a rush. Wind, S. gale on 12th, S.W., and birds flying in a southerly direction. In October, considerable evidence between 6th and 11th at 114. The 11th the latest date of record.

FRINGILLIDÆ.—*In Spring: Sparrows and Finches* noted at 86 (Monach Isles, 9, v. under Diary) on April 17th. In

May, Sparrows at 93, 94. On 23d and 24th, "Linties" at 93 on 25th; and Tree Sparrows, two, at 93 on 26th—light S.E.—"resting on rocks."

In Autumn.—On 17th September, Sparrows at 113 in flocks, and fifty "Rock Linnets" at 102 (Rhinn of Islay). (Probably Twites, or possibly Redpoles.—J. A. H. B.). In October, a flock of 200 "Rock Linnets" at 102 on 6th and 7th, and thousands of "Grey Linnets" at 90 (Kyleakin); on 9th, Rock Linnets? Grey Linnets? Evident rush of Linnets, accompanied at 101 by a number of Tree Sparrows on 9th November. Rush lasted 7th, 8th, and 9th October, and another rush appears to have taken place 4th at 102; 8th, at 90. Chaffinches, two only on 13th at 114. A few Grey Linnets at 90 on 25th December.

EMBERIZIDÆ.—Scarcely any indication at all. One record of Snow Buntings on 6th October; two birds at 102, one in November at 94 on 14th, and of Yellow Buntings at 114 on 10th. The Snow Buntings are returned as "old birds resting on the rocks" of 102. Wind in October at date of record, fresh S.W., and in November strong N., at 94, and strong E., haze, at 114.

ALAUDIDÆ.—Larks—A considerable spring migration, but February records are possibly really belonging to past winter movements. We give them here, however:—

15th, Larks at 90, 500 flying south, 9.40 A.M.; snow, calm.

13th, Larks at 93, two on lantern, 2 A.M.; fresh, S.E.

In March, on 7th, four Larks at 114, N. to S.W., clear. On 12th, a number at 93, and 12 at 94; and up to 15th, also at 109. In April, a rush took place on 14th, and leading up to it from the 12th at 93, 94, and 102; wind, light easterly. Again, large numbers on 18th May at 86, and many remain till end of August.

In Autumn.—A rush, but not very large, at 102 on 16th; fewer on 17th September. A rush again on 17th October at 94, and indications at 90, 94, 102, 109, 113 throughout October, and up to 17th of November. Another rush at 94 on 11th November, and small rush at 102 all forenoon on 16th. Stations 101, 109, 110, and 114 participated, but in a very small degree.

STURNINÆ.—Starlings—*In Spring*: Four days in February, a few only at 101, 110 (Corsewall), 114, between 12th and 23d. Also a few light returns on five days in March, at 93, 109, 114, between 8th and 24th. *Rush* from 9th to 20th April, princi-

pally 8th, 9th, 10th, 11th, at 113 (Mull of Galloway)—wind S.E. and S.S.E. and haze—but also rush at 94 (Dhuheartach) on 14th, and on 11th and 20th at 110 (Corsewall). No more records till June 27th, when thirty to forty at 113 (Mull of Galloway), “mixed old and young.”

In Autumn.—Earliest on 15th August at 102; hundreds old and young flying about all day—wind S., clear—and on 19th at 89 (Rona). “Starlings” on 19th August. In September, flocks on four dates—7th, 16th, 18th, and 25th—at 90 (Kyleakin), 112 (Portpatrick), and 113 (Mull of Galloway), almost a rush—“flights,” “flock,” etc., being itemed. In October, all the month, from 10th to 30th, rush at 94 on 17th (strong E.); rush at 102 on 21st; “great numbers,” “flying about from daylight till 10 A.M.,” light, east. “Great numbers” on 30th at 109 (Turnberry). In November, 4th to 20th, almost continuous. Such records as “rush all night” on 10th at 94. “Thousands from 10 A.M. till dark” on 16th at 90 (Kyleakin), flying south. “Numbers all morning,” 10th (all day), 13th, and 14th, at 102 (Rhinn of Islay). “Numbers” at 110 (Corsewall) on 10th and 11th; and indications at following stations throughout the autumn—89, 90, 102, 93, 94, 101, 102, 108, 109, 110, 112, 113, 114. A most general and abnormally extensive migration. In December, latest 31st to January 1886—20th January, “some” at 102 and 114.

CORVIDÆ.—In order of abundance in *Spring*: February (one), March (one), April (four records), May (two). 1. *Ravens*—Seven on three days in April, 4th, 17th, and 20th; two days in May, 1st and 13th—light S.E., or variable. 2. *Grey Crows* and *Black Crows*, one day in February; six birds on March 16th; two on one day in April at 94. Wind easterly.

In Autumn.—In order of abundance in autumn: Nine months: August (three dates), September (two), October (eleven), November (six). Of *Ravens*, two on 20th and 22d February; seven on 9th September, W. gale. *Grey* and *Black Crows* or “*Crows*,” one record on 7th August, “seen flying S.W. at 102; wind E., light clear:” 500 on 17th at 102 of “*Crows*” flying S.W. to sea, then turned and went N.W. (These large flights are no doubt *Rooks*, not “*Crows*,” not “*Carrion Crows*,” not “*Grey Crows*.”) “*Black Crows* and *Carrion Crows*” (*i.e.*, I suppose, “*Rooks* and *Carrion Crows*.”—J. A. H. B.) are also given

at 102 in October; wind always easterly. All November, indications, but no great rush. No records in December, but one in January 1886. "A flock of sixty on 25th at 102." Rooks and Jackdaws, few. Stations returning *Corvidæ* are in order of largest returns—102, far beyond all other stations; 86, 94 (Jackdaws one), 101 (Rooks), 113. Species are in order of numbers—Carrion Crows, Ravens, Rooks, Jackdaw.

CYPSELIDÆ.—29th April, one at 90 noted, and others at 90 again on 15th September, the only records of Swifts.

CUCULIDÆ.—Cuckoo, first heard 30th April at 90 (Kyleakin) and at 113 (Mull of Galloway). First heard at 101 (Skerveuile) on 6th May, at 110 (Corsewall) on 8th May, and on 11th at 108 (Lamlash). No autumn records.

STRIGIDÆ.—Grey Owl.—One large Grey Owl, 17th October, at ? (omitted in Ledger).

FALCONIDÆ.—April and June. Mostly, no doubt, local visits of "Hawks," "Falcon Hawks," "Sparrow Hawks," at 86, 93, 94 (daily in April). Also in autumn, of the same and Kestrel, and a "Large Hawk" at 102 on 11th November, flying east, wind S.W., haze; and at 98, 102, and 108, in addition to the above stations in spring.

PELICANIDÆ.—Spring records less numerous than usual. February, one at 101 on 8th; one at 101 on 27th March; two at 108 on 1st and 4th April, and two at 94 on 14th April; May, three records at 101—14th, 19th, and 29th; and June, four records, all light, at 94, 101, and 114. Curiously, records of Gannets or Solan Geese—as they are called—are seldom numerous returned on this coast. [*N.B.*—We would be obliged to our reporters at all the stations if, for next year, they would give up *one schedule* entirely to Gannets or Solan Geese, and enter *daily* observations of the species, including their numbers seen, occupation, direction of flights and of wind, hours of appearance and disappearance, etc.] In July a few itemed under three dates—1st, 12th, and 16th to 20th. None in August, September, October, or November, nor January 1886, except one of hundreds at 102, fishing close to rocks, on 16th September, and the record of "Extra Nos." at 102 on 2d October, showing their daily appearance, though not recorded.

ARDEIDÆ.—Hérons: Few records, and none of any significance:

one in March on 1st at 114; one in October at 102, on 7th; and one at 102 on 6th December.

ANATIDÆ.—Grey Geese [I wish I had heads of all the Geese sent me] at 102 on 28th February; belongs, no doubt, to last season. No more records of Geese till autumn: "Large Geese" ? September 17th, at 102; "Grey Geese," 10th October, at 102; one "Goose." at 102 on November 11th. Odd records of Barnacle Geese. *Eider Ducks*.—April 17th and 21st, at 94 and 102 respectively; also same place, 17th May, "3 ♂, 3 ♀, flying west." Then in autumn, 25th and 26th September, at 94 and 102.

[After this the dates of arrival and departure will be desired, whether they breed at the station or not, and if any unusual *numbers* appear. Odd records occur, also, of Teal, Widgeon, and Wild Duck, of little interest, but should, of course, always be returned in schedules. "Swans" are noted at 86 (Monach Isles) on 24th March 1885.]

COLUMBIDÆ.—Doves: May records at 90 (Rona) of Wood Pigeons on 21st, and Rock Doves on 28th. *In Autumn*.—Only two records in September and December, of twenty-five and twenty respectively, in S.W. wind.

GALLINÆ.—One pair Pheasants at 102 on 16th April, lighted on the island at 3 P.M.—an unusual occurrence. *In Autumn*.—On 20th October, a Hen Pheasant at 102 again, shot, "rare;" and again two Pheasants at 102, male and female, fresh E. breeze, haze on island. (This looks like determined endeavour to extend range.—J. A. H. B.)

RALLINÆ.—21st May, at 88 (Barra Head), fresh N.E., cloudy; 23d May, at 102, "first heard," and one shot, light N. breeze, clear; 24th, at 90 (Kyleakin), "first heard," 8 P.M., rain. *In Autumn*.—One at 108 (Lamlash) on 24th October, fresh N.W., clear. One Water Rail on 13th November at 114; killed on dome.

CHARADRIADÆ.—August, one at 109 on 17th—Golden Plover. *Grey Plover* (identified by wings, J. A. H. B.), at Dhuheartach on 8th September. Very few records of G. Plovers, Oyster Catchers, and most about September 17th at 94, 102, 109.

But Lapwings bulk largely in October and November. Earliest, August 10th; latest, December 15th; rush if discernible: 100 on 20th October; "numbers" about 9th to 11th November at 93, 94, 102, 113, 114.

SCOLOPACIDÆ.—January 1885, one at 90 (Kyleakin), belongs to 1884; one at 90 again on 17th February (?); none in March (!?); April, one on 15th at 94, light S.E. *In Autumn*.—October 18th, one at 86, and one at 90; and one at 101 and one at 102 on 9th November. *Curlews*: Many records as usual, but we fear of little value as regards tracing migrations; and a few records of Snipe and Jack Snipe. *Sandpipers*: Two records in June and October at 101, and one in February, same place.

LARIDÆ.—Terns: "Terns" at 101 on 22d, 23d, and 24th May, light S.W., clear, and variable. First seen at 114 on June 22d, S.W. breeze (see also under Monach Isles "Diary"). In August, four records at 101 (Skervuile), between 16th and 22d, light N. and N.E. *Gulls*: April, at 101 and 102, feeding on herring-fry—Kittiwakes, "Gulls," etc. May, Skuas, "Boatswain Birds," Black Headed Gull, on six dates at 93 and 101. Kittiwakes, "Dirty Allans," and Herring Gulls, at 86, 94, and 101 respectively, on 17th, 21st, and 26th June respectively. In July, at 101 and 108, Boatswain Birds, 1st to 14th; at 101, and other scattered records. Ditto, at 101, in August 1st, 4th, and 6th, and 16th, 17th, and 19th and 21st, and a few other Gulls. September, Kittiwakes at 101. In November, "Iceland Gulls" at 94 on 6th and 16th; Boatswain Birds and others at 101. Odd records in December.

PROCELLARIIDÆ.—One record—one caught at 86 (Monach Isles) on 5th September. One, "rare here," at 114 on 13th November.

COLYMBIDÆ.—G. N. Divers occur every month except October and December; at 101 in February, March, April, May, and November; at 90 in March, August; at 86 on 5th September; and in November at 89, 93, 94, 101, 102, 114. The above are nearly all single records, or at most a pair.

ALCIDÆ.—"Tysties" at 101, 12th April, and Scarts; and the former on 11th May at 101. Thousands at 102 of Puffins, October 15th, 1885. Other records very light.

WEST COAST OF ENGLAND AND WALES, AND THE ISLE OF MAN.

SCHEDULES were sent to the forty-eight lighthouses and light-vessels on the West Coast of England and Wales, and the Isle of Man, and returns have been received from twenty-nine.

The following is an enumeration of the stations included in this section of the Report, those making returns being marked by an asterisk :—

| | No. on Map. | | | | |
|----------------|----------------|--------------|------|----------------------------|--|
| Isle of Man. | { | 115. | L.H. | Point of Ayre. | |
| | | 116. | L.H. | Douglas Head. | |
| | | *117. | L.H. | Langness, | Robt. Clyne. |
| | | *118. | L.H. | Chickens Rock, | James Black. |
| | | 119. | L.V. | Bahama Bank. | |
| N.-W. England. | { | *120. | L.H. | St Bees, | Henry Nott. |
| | | *121. | L.V. | Selker,..... | Geo. Cumming. |
| | | 122. | L.V. | Morecambe Bay. | |
| | | *123. | L.V. | Dee, | Messrs Workand Clague. |
| North Wales. | { | 124. | L.H. | Air. | |
| | | *125. | L.H. | Menai, | Joseph Steer. |
| | | *126. | L.H. | Skerries, | Wm. Jno. Rees. |
| | | *127. | L.H. | Holyhead Breakwater, | Messrs Pritchard, Owen, and Hughes. |
| | | *128. | L.H. | South Stack, | W. R. Burgess. |
| | | *129. | L.V. | Carnarvon Bay, | Messrs Thomas and Hughes. |
| | | *130. | L.H. | St Tudwal's, | W. Davies. |
| | | *131. | L.H. | Bardsey Island, | Thomas Bowen. |
| | | 132. | L.V. | Cardigan Bay. | |
| | | South Wales. | { | *133. | L.H. |
| *134. | L.H. | | | Smalls, | Geo. Baker. |
| 135. | L.H. | | | Great Castle Head. | |
| 136. | L.H. | | | Milford. | |
| *137. | L.H. | | | Caldy,..... | Wm. Ebben. |
| 138. | L.V. | | | Helwick. | |

| | No. on Map. | | | |
|------------------|------------------------|-------------------------------|-----------------------------------|------------------------------------|
| Bristol Channel. | 139. | L.V. | Scarweather. | |
| | *140. | L.H. | Nash (E.), Henry Nicholas. | |
| | *141. | L.H. | Breaksea, Thomas Walters. | |
| | *142. | L.H. | Flatholm, W. Dale. | |
| | 143. | L.V. | English and Welsh Grounds. | |
| | *144. | L.H. | Usk, Amos Russell. | |
| | 145. | L.H. | Avon. | |
| | *146. | L.H. | Burnham, Wm. Lewis. | |
| | South-Western England. | *147. | L.H. | Bull Point, George Knott. |
| | | 148. | L.H. | Bideford Bar, Thomas Gilpin. |
| 149. | | L.H. | Lundy. | |
| 150. | | L.H. | Hartland Point. | |
| 151. | | L.H. | Trevoze Head. | |
| *152. | | L.H. | Godrevy, Richard Trahair. | |
| *153. | | L.H. | Longships, Jno. W. Watson. | |
| *154. | | L.V. | Sevenstones, D. Norton. | |
| *155. | | L.H. | Wolf Rock, J. J. Channer. | |
| 156. | | L.H. | Scilly. | |
| *157. | | L.H. | Bishop's Rock, J. W. Troth. | |
| 158. | | L.H. | Lizard. | |
| 159. | L.H. | Falmouth Harbour. | | |
| *160. | L.H. | Eddystone, Wm. Ainger. | | |
| 161. | L.H. | Plymouth Breakwater. | | |
| *162. | L.H. | Start Point, Wm. Jones. | | |

The best thanks of the Committee are due to the above-named observers for their invaluable assistance, and for the faithful manner in which they have filled in their schedules. To Mr Henry Nicholas, Mr Robert Clyne, and Messrs Work and Clague, we are in addition indebted for their kindness in sending wings, etc., of the, to them, unknown species killed or captured at their respective stations, by which means we have been able to add not a little to the value and interest of the returns. We trust their good example may be followed by others. The trifling expenses incurred will be only too gladly refunded in all cases. Our thanks are also due to Messrs Macpherson and Duckworth, Messrs F. Reynolds, G. H. Caton-Haigh, R. P. Harper, and H. Harbord, for their kind co-operation in furnishing valuable independent observations.

DIARY OF THE PRINCIPAL MOVEMENTS.

The order of the stations is from north to south. The wind and weather are given in parenthesis. For the weather the symbols of the Beaufort Scale have been adopted;¹ and the force of the wind ranges from 0 to 12.

April 13th.

Langness L.H.—Wheatears very numerous; great numbers all night. Nine killed. (E.S.E., light, haze.)

Bahama Bank L.V.—Fifty-two "Stonechatters" (? Wheatears), at 11.30 P.M.; twelve killed, forty captured alive, also two Blackbirds and six Daws killed at same time. (S. by E., 5, misty.)

Bull Point L.H.—A Goldcrest at lantern at 9.30 P.M.

April 18th.

Rockcliffe, Cumberland.—Great numbers of birds passing in parties every fifteen minutes, at 8.45 P.M. until 11.30 P.M., and perhaps later. They were passing in a N.E. direction at great speed, and calling. Mr Smith distinguished Geese, Goldeneyes, and Widgeon. (N.W., fine, clear, moonlight.)

April 22d.

Langness L.H.—Ten Sedge Warblers and three Wheatears on lantern, from 1 to 4 A.M. A good many Swallows flying north between 1 and 3 P.M. One Grasshopper Warbler at 3 P.M.

Bahama Bank L.V.—"About five dozen White and Blue Throats and Stonechats at 3 A.M., eight killed." (S.W., 4; o. R.)

Flatholm L.H.—Small flocks of Chiff-Chaff all night.

October 8th to 12th.

Chickens Rock L.H.—"From the 8th to the 12th of October large flocks of migrants were to be seen in the southern parts of the Isle of Man, and were principally composed of Thrushes, Starlings, Linnets, Redbreasts, Blackbirds, and Wrens."

¹ *Beaufort Scale.*—B. blue sky; c. detached clouds; d. drizzling rain; f. fog; g. dark, gloomy; h. hail; l. lightning; m. misty; o. overcast; p. passing showers; q. squally; r. rain; s. snow; t. thunder; u. ugly, threatening; v. visibility, unusual transparency; w. dew.

October 10th.

South Stack L.H.—Several Larks, Blackbirds, and Goldcrests, between 12 P.M. and 4 A.M.

Carnarvon Bay L.V.—Large flocks of Larks to-day.

Nash (E.) L.H.—A large flock of Fieldfares at 4 P.M.

October 16th.*

Langness L.H.—One Wild Goose at 5 P.M.

Chickens Rock L.H.—Large numbers of Thrushes, Starlings, and other birds all night.

Dee L.V.—Blackbirds, Thrushes, Redwings, Titlarks, and Linnets about the vessel all night. (S.S.E., 3; fog.)

Skerries Rock L.H.—Blackbirds, Larks, Thrushes, Starlings, Snipes, and Woodcocks flying around the lantern; some killed. (E., 4; misty.)

South Stack L.H.—Starlings from 8 A.M. till 1 P.M.

Carnarvon Bay L.V.—Fifty Starlings at 4 P.M.; a large flock of Larks at 9 A.M.

South Bishop L.H.—Thirty Starlings, twenty Thrushes, fourteen Blackbirds, and four Larks killed between 12.30 and 2.30 A.M. Several Mistletoe Thrushes at 9 A.M. (E.N.E., 9; B. C. M.)

Nash (E.) L.H.—Seventy to eighty Starlings, twenty-one killed; twenty to thirty Thrushes, two killed; eight to ten Blackbirds, six killed. (E., 3; O. M.)

Bull Point L.H.—Four Starlings, two Thrushes, and one Blackbird killed.

Godrevy L.H.—Great numbers of Thrushes, Redwings, and Starlings, and a few Blackbirds. (E., 3; M. R.) Two dozen killed between 12 P.M. and 5 A.M.

Longships L.H.—A good many Starlings and Fieldfares between 2 A.M. and daylight; a few killed.

Bishop Rock L.H.—A few Blackbirds, Thrushes, Larks, and Starlings between 1 A.M. and daylight. (E.N.E., 7; squally, rain, and mist.)

Eddystone L.H.—Several Thrushes, Redwings, Starlings, and Larks, from 12 P.M. to 3 A.M. Several struck. Sixteen caught. (N.E., 8; O. R. M.)

* For the prevailing meteorological conditions from October 16th to 20th, see observations under the "General Remarks" on this section of the Report.

October 17th.

Langness L.H.—Four or five Common Wrens; large flock of Grey Linnets; large flocks of Skylarks; and a few Song Thrushes at 11 A.M. (E., light; haze.)

Chickens Rock L.H.—Large numbers of Thrushes, Starlings, "and other birds not made out," throughout the night. (E. to S.E., strong breeze; showers and haze.)

St Bees L.H.—Three Grey Geese and large numbers of Field-fares at noon.

Dee L.V.—Redwings, Thrushes, and Titlarks from midnight to sunrise. (S.S.E., 3; fog.) Some killed. Titlarks, Blackbirds, Chaffinches, and Linnets flying in company around the vessel during the morning.

Carnarvon Bay L.V.—Three small "Pinks" on deck at 1 P.M.

St Tudwal's L.H.—One Blackbird at 7 A.M.

South Bishop L.H.—Several Starlings and flocks of Linnets in the forenoon; two Goldcrests on the rock all day.

Smalls L.H.—One Ring Ouzel passing at noon. "White Buntings" about the rocks.

Flatholm L.H.—Enormous flocks of Martins and Swallows all day.

Bideford Bar L.H.—Four Grey Geese at 9 A.M.

October 18th.

Langness L.H.—Flock of thirty Lapwings at 11 A.M. One Swallow at 3 P.M.

Chickens Rock L.H.—Large numbers of Thrushes, Starlings, and other birds throughout the night. (E. and S.E., 6; P. M.)

Dee L.V.—Large flocks of Titlarks and Blackbirds in company flying south all day.

South Stack L.H.—Six Blackbirds, one Thrush, and one Titlark killed between 4 and 6 A.M. (Calm; C. M.) Small flocks of Larks and Finches going N.W. from 8 A.M. to noon.

South Bishop L.H.—Seven Martins appeared.

Nash (E.) L.H.—Two Thrushes and two Blackbirds killed at 3 A.M. (E., 3; O. M.)

Godrevy L.H.—Two Swallows at 1 P.M.

Eddystone L.H.—Three Redwings and several Titlarks struck at 5 A.M.

October 19th.

Langness L.H.—Numbers of Starlings at lantern between 1 and 3 A.M.

Dee L.V.—Large quantity of small birds about the vessel from midnight to sunrise. Lapwings, Sand-Larks, Redwings, Skylarks, and Blackbirds killed; many others falling overboard. A Yellow-Hammer and Stonechat alive on deck. (E. by S., 1; fog.)

Holyhead Breakwater L.H.—One Northern Diver at noon going west.

South Stack L.H.—Blackbirds, Thrushes, Ring Ouzels, and Larks from 1 to 6 A.M. Thirty killed. (E., 3; C. M.)

Flatholm L.H.—"Crested Wrens first seen."

Bull Point L.H.—One Blackbird and one Thrush struck at 3 A.M.

October 20th.

Langness L.H.—A flock of Lapwings at 11 A.M.; one Swallow 3 P.M.

Carnarvon Bay L.V.—About a dozen small birds at 3 A.M.; three Crows at 11.40 P.M.

South Bishop L.H.—Two Larks and four Blackbirds at 3 A.M.; three Starlings at 4.30 A.M.; several Wrens at 10.30 A.M.; one Hawk at 3 P.M. (N. to N.N.W., 4; B. C. V.)

Flatholm L.H.—A large flock of Swallows at noon.

Godrevy L.H.—Several Starlings, Thrushes, and Blackbirds at light from 2 to 5 A.M.

Longships L.H.—A great many Starlings from 3 A.M. to daylight.

Bishop Rock L.H.—Several Blackbirds, Thrushes, Larks, two or three Titlarks, Chaffinches, and Starlings from midnight to daylight.

Eddystone L.H.—"Hundreds of birds here this morning. Missel Thrushes, Blackbirds, Ring Ouzels, Fieldfares, Thrushes, Redwings, Starlings, Larks, Wheatears, Flycatcher species, Robins, and Wagtails," from 2 to 5 A.M. (N.N.E., 3; C. M.) A great number striking and falling over. Twenty-three caught. "No Fieldfares striking."

Start L.H.—Twelve Starlings, two Skylarks, one Thrush, and one Dishwasher [Wagtail] fluttering against the lantern at 3 A.M.

October 30th.

Langness L.H.—A few Blackbirds at 4 P.M.

Chickens Rock L.H.—Numbers of Starlings, Thrushes, Blackbirds, and Fieldfares from 9 P.M. Numbers struck and fell over into the sea. (S.E., 6 ; D.)

St Bees L.H.—Two Woodcock at 3 P.M.

Selker L.V.—Flocks of Crows, Blackbirds, Titlarks, and Larks going south during the day.

Dee L.V.—Do. do. do.

South Stack L.H.—Ten Starlings killed.

Carnarvon Bay L.V.—A few Starlings at 3 A.M. Large flocks of Larks all day.

Smalls L.H.—A few Starlings at 8 P.M.

Bideford Bar L.H.—One Sparrow struck at 9.30 P.M.

Godrevy L.H.—Four Starlings struck between 6 and 8 P.M.

Eddystone L.H.—Flock of Golden Plovers ; a large quantity of Starlings and Larks, Grasshopper Warbler [?] and Goldcrests between 7.30 and 10 P.M. Twenty-eight killed. (S.E., 1 ; C. D. M.)

*November 8th.*¹

Langness L.H.—Blackbirds, Thrushes, and Redwings between 8 P.M. to 6 A.M. (S.E., 2 ; M.)

Chickens Rock L.H.—Large numbers of Thrushes, Blackbirds, Larks, and Starlings throughout the night. (S., 2 ; M.)

Selker L.V.—A great many Larks flying about the lantern all night ; a few killed. (S.S.E., 4 ; O. M.)

Carnarvon Bay L.V.—Starlings, Larks, Thrushes, and "Pinks" around the lantern all night.

South Bishop L.H.—Several Wheatears at 8 P.M.

Smalls L.H.—Starlings, Thrushes, Blackbirds, and Larks in large numbers at 5 P.M. and throughout the night. (E.S.E., 3 ; O. C. M. D.)

Nash (E.) L.H.—Many Blackbirds and Thrushes between 1 and 3 A.M. Eighteen killed. (E.N.E., 3 ; O. M.)

Breaksea L.V.—Blackbirds and Starlings all night. Eleven killed. (E., 4 ; M.)

¹ For the prevailing meteorological conditions for November 8th to 13th, see observations under General Remarks section of this Report.

Bishop Rock L.H.—Thrushes and Starlings all night. (S.S.E., 3; M.)

Eddystone L.H.—Redwings, Starlings, Thrushes, and Blackbirds from 1 to 5 A.M.; twenty-two caught; many striking and falling into the sea. (S.E. by S., 3; c. v.) Redwings, Starlings, Larks, Thrushes, and Fieldfares from 9 P.M. to 5 A.M. (9th); thirty caught, numbers flying around the lantern. (E.N.E., 3; O. D. M.)

November 9th.

Chickens Rock L.H.—A flock of Fieldfares at 3 A.M. A large rush of birds appears to have taken place at this station during the night, when numbers struck the lantern, principally on the east side, and were most likely killed, for they left marks of blood on the windows. Flocks of Thrushes, Fieldfares, Blackbirds, and Larks all night. Large numbers striking and falling into the sea. (S.E., strong breeze; haze.)

Dee L.V.—Several Blackbirds at 3 A.M.; a few killed and falling overboard.

Skerries L.H.—“Blackbirds and Chaffinches.”

South Stack L.H.—A Blackbird caught at lantern at 10 P.M.

South Bishop L.H.—Sixty Blackbirds, forty Thrushes, six Larks, and six Starlings killed between 1 and 5 A.M. (S.E., 4; C. M.)

Nash (E.) L.H.—Six Blackbirds killed between 4 and 4.30 A.M. Four Snipe killed at 4.30 A.M. (E.N.E., 3; O. M.)

Bull Point L.H.—One Thrush struck at 1.30 A.M.

Godrevy L.H.—A few Thrushes, Blackbirds, and Starlings struck, but not killed, from 1 to 5 A.M. One Robin struck at 8 P.M.

Wolf Rock L.H.—“Grey Birds” and Starlings flying around the lantern at 1 A.M.

Eddystone L.H.—Larks, Thrushes, and Fieldfares around the lantern in the early morning. Thrushes, Blackbirds, Starlings, Larks, one Storm Petrel, and “I think one Marsh Tit,” at light between 9 P.M. and midnight. Seven caught. (E.N.E., 3; O. M.)

November 10th.

Langness L.H.—“Blackbirds and Thrushes all night.”

Chickens Rock L.H.—Flocks of Thrushes and Blackbirds all night. One Snipe killed. (S.E., strong breeze; haze.)

Dee L.V.—One Thrush and one Blackbird killed during the night. One Storm Petrel struck.

South Stack L.H.—Blackbirds and Starlings from 9 P.M. to midnight.

Carnarvon Bay L.V.—A great number of birds around the lantern all night; one Lark and one Thrush killed.

South Bishop L.H.—Six Blackbirds, two Larks, and four Thrushes killed. Numbers at lantern all night. (S.E., 4; c. m.)

Smalls L.H.—Starlings, Sparrows, Blackbirds, and Chaffinches at 3 A.M.

Nash (E.) L.H.—Numbers of Blackbirds and Thrushes struck between 8 P.M. and midnight. Nine of the former and forty-two of the latter killed. (E.N.E., 4; c. m.)

Bull Point L.H.—One Blackbird struck at 5 A.M.

Bishop Rock L.H.—One Jack Snipe killed at 8 P.M.

Eddystone L.H.—Several Redwings and Starlings killed. One Jack Snipe and Storm Petrel between 7 P.M. and midnight. (E.N.E., 3; o. d. m.)

Start L.H.—One Snipe killed at 6 P.M.

November 11th.

Langness L.H.—Four Blackbirds at light at 9 P.M. One Snipe killed at 11.30 P.M.

Chickens Rock L.H.—Flocks of Thrushes, Starlings, Blackbirds, and other species arrived at 11 P.M. (S.E., strong breeze; haze.)

Dee L.V.—Many Thrushes during night.

South Stack L.H.—Blackbirds and Starlings at lantern in early morning, and, along with Thrushes, again at night, when several were killed.

South Bishop L.H.—Blackbirds, Larks, Starlings, and Thrushes during the night; several of each species killed. (S.E., 3; c. m.)

Eddystone L.H.—Blackbirds, Thrushes, Redwings, Starlings, Larks from 8 P.M. to 5 A.M. (12th). Seventy-six caught, two hundred lost over. (S.E., 5; o. m.)

Start L.H.—A few Starlings and Larks.

SEPARATE NOTES ON EACH SPECIES.

Turdus viscivorus, Missel Thrush. — October 16th, South Bishop L.H., several flying around the rock at 9 A.M. October 20th, Eddystone L.H., “hundreds of birds around lantern between 2 and 5 A.M., one Missel Thrush caught.”

Turdus musicus, Song Thrush.—SPRING: Continuous movements throughout February reported along the entire coast; the chief between the 11th and 17th, when Thrushes were observed or killed nightly. At the South Bishop L.H., a most important station, ninety-seven Thrushes, Blackbirds, and Starlings were captured at 3 A.M. on the 15th. On the 20th of April another important movement was observed at the Chickens Rock L.H. at 11 P.M., when flocks of Thrushes and Fieldfares, along with Goldcrests and Larks, were careering round the lantern, some being killed.

AUTUMN: The initiatory movement was observed at the Chickens Rock on the 2d of September, where at 9 P.M. four were fluttering around the light. On the 25th of September, at the same station, a few were observed at 10.30 P.M., along with Blackbirds. From the 8th to the 19th of October the movements appear to have been continuous; on the 16th migrants were noted in numbers at most stations between the Isle of Man and the Eddystone, many being killed (S.E. and E.). During November there were regular movements up to the 16th, the chief being on the 8th, and covering the entire coast (S.E., moderate, cloudy); on the 9th forty were killed at the South Bishop L.H.; on the 10th from eighty to one hundred struck the Nash (E.), forty-two being killed.

Turdus iliacus, Redwing.—AUTUMN: First noted at Carlisle on September 20th. At Godrevy L.H., at 11 P.M., on October 15th; on the 16th October at the Dee L.V. and the Eddystone L.H. in considerable numbers; on the 17th, 19th, and 30th several were killed at the Dee L.V. November—from the 1st to the 12th they occurred almost daily at Langness and Eddystone; on the 25th twelve were killed at the Nash. Finally, on December 13th one struck the Breaksea light. This species is recorded as perishing at the lanterns in much larger numbers than its congeners; thirty-five were killed at the Eddystone on the 11th of November.

Turdus pilaris, Fieldfare.—SPRING: April 20th, Chickens Rock, flocks, along with Thrushes, Larks, and Goldcrests, at 11 P.M. (S.W., light, haze).

AUTUMN: First noted on October 3d at Carlisle; on October 8th, 9th, and 10th at the Chickens Rock, and on the last-named date a large flock appeared at 4 P.M. at the Nash; on the 16th numbers at the Longships from 2 A.M. till daylight; on 17th Fieldfares appeared at St Bees in the afternoon. During November immigrants were observed on the 5th and 6th at Burnham, 8th at Eddystone, 9th at Chickens Rock, and 12th at Burnham. Very few Fieldfares appear to perish at the lanterns.

Turdus merula, Blackbird.—SPRING: General movements from 12th to 17th of February, when they were observed during the night at eight stations, ranging between Langness and the Eddystone. On April 13th, two were killed on the Bahama Bank L.V. at 11.30 P.M.

AUTUMN.—First noted at the Eddystone on 13th of August, when several were killed at 11.30 P.M. Reported on many occasions from most stations during October and November. The most general movement occurred on the 16th October, when it is recorded from nine stations between the Calf of Man and Land's-End. Another general movement on November 9th, on which occasion sixty Blackbirds and forty Thrushes were killed at the South Bishop. Only reported during the night and early morning.

Turdus torquatus, Ring Ouzel.—AUTUMN: October 17th, Smalls, one passing south at noon. October 19th, South Stack, Ring Ouzels from 1 to 6 A.M., along with Blackbirds, Thrushes, and Larks. October 20th, Eddystone, along with other species between 2 and 5 A.M.; one killed.

Saxicola oenanthe, Wheatear.—SPRING: March 26th, Cumberland, arrived at Ravenglass; 29th, Langness, a male. April 2d, six or eight at Langness at 11 A.M. The main body arrived on the 13th, when they were very numerous at Langness at 4.30 P.M., and numbers were at the lantern all night, four males and three females being picked up dead; at the Bahama Bank L.V. the same night, fifty-two were killed or captured. (E.S.E., fresh, haze.) On the early morning of April 22d, they again occurred in some numbers at both of these stations.

AUTUMN.—First noted at Langness on the 3d of August, more

on the 9th and 18th ; several at the Eddystone on the 23d ; large numbers at Langness on the 30th. October 30th, many at the Eddystone from 2 to 5 A.M., along with Missel Thrushes, Blackbirds, Thrushes, Redwings, Fieldfares, etc. November 8th, Langness, several at light at 8 P.M.

Pratincola rubetra, Whinchat.—April 22d, Carlisle.

Ruticilla phœnicurus, Redstart.—April 26th, Carlisle.

Ruticilla titys, Black Redstart.—I received from Mr Henry Nicholas the wings, tail, and feet of a female which had been killed against the Nash (E.) lantern at midnight on the 8th of November.

Erithacus rubecula, Redbreast.—August 12th, one appeared at Langness. September 7th, South Stack, one at the lantern at 4 A.M. ; 27th, a few at Langness at 11 A.M. October 9th, numbers, along with Thrushes and Fieldfares, at the Chickens Rock ; on the 20th, many, along with several species of *Turdinæ*, etc., at the Eddystone between 2 and 5 A.M. November 13th, at 3 A.M. at the Start.

Sylvia cinerea, Whitethroat.—SPRING : April 23d, Carlisle. April 27th, Merionethshire.

AUTUMN.—August 14th, Godrevy, one killed at 2 A.M. September 5th, St Bees, one struck lantern at 2 A.M.

Sylvia atricapilla, Blackcap.—April 15th, Merionethshire.

Phylloscopus collybita, Chiff-Chaff.—SPRING : March 25th, Merionethshire, one at Penrhyndendraeth ; no more till 28th, when they became abundant. Cumberland, April 2d, Carlisle.

AUTUMN.—September 19th, Cumberland, one at Ravenglass.

Phylloscopus trochilus, Willow Wren.—April 15th, Merionethshire, first observed. April 19th, Carlisle.

Acrocephalus phragmitis, Sedge-Warbler.—April 22d, Langness, ten at lantern from midnight to 4 A.M. ; 29th, Cumberland, observed at Ravenglass.

Locustella naevia, Grasshopper Warbler.—SPRING : April 22d, Langness, one at 3 P.M. ; 30th, Carlisle.

AUTUMN.—October 30th, Eddystone, one killed, between 7 and 10 P.M., along with Larks and Goldcrests [?].

Accentor modularis, Hedge Sparrow.—SPRING : March 20th, Langness, one at 6 P.M.

AUTUMN.—October 18th, Langness, one at 1.30 P.M.

Parus —, Titmouse.—September 2d, Chickens Rock, three

"Titmice" at lantern at 7 P.M.; 6th, two at 11.30 P.M. A small bird with a black head, and supposed to be a Marsh Titmouse, was killed at the Eddystone on the night of November 9th.

Troglodytes parvulus, Wren.—SPRING: Langness, March 10th, one at 11.30 A.M.; 29th, one, and a Wheatear, at 11 A.M.; April 25th, one at 9 A.M.

AUTUMN.—August 23d, Dee L.V., one caught at lantern at 2 A.M. October 8th to 12th, Wrens and other migrants numerous at the Chickens Rock; 20th, South Bishop, several at 10.30 P.M. November 9th, Langness, a few at 4 P.M.

Motacilla —, Wagtail.—SPRING: March 4th, Langness, one at 10 A.M.; Merionethshire, *M. lugubris* in some numbers at Penrhyndendraeth.

AUTUMN.—September 8th, Chickens Rock, two at 11 A.M. October 10th, Langness, a large flock of Pied Wagtails (*M. lugubris*) at 2.30 P.M.; 20th, Eddystone, hundreds of birds here this morning between 2 and 5 A.M., Wagtails, Thrushes, etc.; Start, one killed at 3 A.M.; 25th, Dee L.V., one Pied Wagtail on deck at 9 A.M.; 30th, Dee L.V., Wagtails, Titlarks, etc., passing S.W. all day.

Motacilla alba, White Wagtail.—May 2d, Merionethshire, one at Penrhyndendraeth.

Motacilla rayi, Yellow Wagtail.—May 3d, Carlisle.

Anthus pratensis, Pipit, "Titlark."—SPRING: March 29th, a very large flock appeared at the Selker L.V. at noon.

AUTUMN: First noted at the Dee L.V. on the 15th of August, at 2 P.M. During September, observed at the Dee L.V. (6th), Langness (15th and 24th), Bishop Rock (17th). From the 15th to 30th of October, observed almost daily at the Dee L.V., often in very considerable numbers, and notably on the 18th, 21st, and 25th, when continuous streams passed, flying S. or S.W.; on the 18th they occurred in some numbers, along with other species, at the Eddystone and the Start. From the 1st to 9th of November they passed the Dee vessel almost daily. On December 29th, six were observed at the Dee L.V. On comparatively few instances noted as migrating at night.

Anthus trivialis, Tree Pipit.—April 19th, Merionethshire, arrived; Carlisle, same date.

Anthus obscurus, Rock Pipit.—SPRING: March 29th, Langness, several appeared at 11 A.M.

AUTUMN: November 3d, Chickens Rock, several at lantern, along with Thrushes, at 3 A.M.

Lanius excubitor, Great Grey Shrike.—March 9th, Cumberland, one at Floriston. April 27th, one at Grimsdale.

Lanius collurio, Red-backed Shrike.—August 12th, Cumberland, one, immature, at Lazonby.

Hirundo rustica, Swallow.—SPRING: First observed at the Carnarvon Bay L.V. on the 23d of March; next on the 31st, when two were seen at Bull Point. At Langness, a few were seen on the 18th and 19th of April; on the 22d, a good many, and arrivals up to the 30th. On the 15th of May, "very many" appeared at Langness between 4 and 7 P.M.

AUTUMN: Three observed at the Dee L.V. on the 31st of July, and seven on the 9th of August. On the 17th of October an enormous flock was observed at Flatholm; and on the 25th, four or five at Langness.

Chelidon urbica, Martin.—SPRING: April 23d, Carlisle.

AUTUMN: September 21st and 22d, large flocks at Flatholm. October 7th, South Bishop, two at 4 P.M.; 8th, seven.

Carduelis elegans, Goldfinch.—January 19th, one on Caldy Island.

Ligurinus chloris, Greenfinch.—November 9th, Selker L.V., one on deck along with a Lark, both "too weak to leave the ship."

Passer domesticus, House Sparrow.—October 30th, Bideford Bar, one struck the lantern, and caught. November 8th, Smalls, Sparrows, along with Thrushes, etc., at 3 A.M.; 26th, Menai, "Sparrows" in the morning.

Fringilla cœlebs, Chaffinch.—SPRING: February 14th, Langness, one at 8 A.M.; 28th, another at 9 A.M. March 8th and 12th, one each day; 15th, two, male and female; April 9th, one,—all at Langness.

AUTUMN: August 25th and 28th, single birds on the deck of the Dee vessel. Noted singly on several dates during October at Langness and the Selker L.V. On the 20th October at South Bishop, during the night, along with other species. Two on deck of the Dee L.V. on the 9th November, along with Blackbirds; and at the Skerries on the same date. On the 10th November, several at 3 A.M. at the Smalls. December 1st, several at the Skerries at 2 A.M., along with Thrushes, Blackbirds, etc.

Linota cannabina, Linnet.—SPRING: February 26th, Chickens Rock, flocks along with Blackbirds, Thrushes, and Larks at 8 P.M. March 5th and 19th, small flocks at Langness in the forenoon.

AUTUMN: First noted at Chickens Rock on September 2d at 9 P.M., along with Thrushes, etc. Observed in flocks at intervals during September, October, and November, migrating chiefly during the day. Noted at several stations on the morning of October 17th.

Pyrrhula europæa, Bullfinch.—October 21st, Carnarvon Bay L.V., seventeen Bullfinches, passing to S.S.E. at 10 A.M.

Emberiza citrinella, Yellow Hammer.—October 19th, Dee L.V., one on deck at 8 A.M. December 26th, Langness, two at 11 A.M.

Plectrophanes nivalis, Snow Bunting.—October 5th, Cumberland, one at Silloth. October 17th, Smalls, several "White Buntings" about the rocks.

Sturnus vulgaris, Starling.—The enormous numbers, and the frequency with which this species occurs at almost all the stations, are again marked features in the returns. Noted for every month save May and June, and would appear to "flock" early, since numbers appeared at Langness on the 7th of July. Most numerous and frequent during September, October, and November.

Corvus corone, Carrion Crow.—SPRING: March 1st, Carnarvon Bay L.V., four at 10 A.M.; 21st, two at 11 A.M.; and 28th, several at noon,—all flying E.

AUTUMN: October 20th, Carnarvon Bay L.V., three at noon, flying N.E.; 30th, Selker L.V., a flock flying S.W. at 7 A.M. November 8th, Holyhead, six going E. at 9 A.M.

Corvus frugilegus, Rook.—March 4th, Chickens Rock, twenty-five flying W. at 9 A.M.; 5th, about fifty passing to W. at 10 A.M. Bahama Bank, L.V., March 16th, one flying W. at 8 A.M.

Alauda arvensis, Skylark.—Next to the Starling, "Larks" and Skylarks form the most numerous entries in the schedules. In the earlier portion of the year, they are noted as occurring between February 13th at the Eddystone, to April 20th at the Chickens Rock. In the autumn, the entries are extremely numerous, commencing at St Bees on September 9th. During October and November, continuous streams passed the majority

of the stations; this was particularly the case between the 8th and 13th of October, and 4th and 9th of November. The migration lasted until the 21st of December. Always noted in flocks.

Alauda arborea, Woodlark.—November 9th, Eddystone, one killed between 8 P.M. and 5 A.M. (10th), along with Thrushes, Redwings, and Larks.

Cypselus apus, Swift.—SPRING: April 26th, Cumberland, five at Rockliffe; 29th, more. May 4th, Langness, two at 6 P.M.

AUTUMN.—First autumn movement observed on August 2d at Langness; general movement on the 3d, when fourteen struck the Nash lantern between 10.30 and 11.30 P.M., four being killed (a Cuckoo and a Willow-Wren killed at same time); on the 12th (August) one was caught roosting at Langness; and on the 19th the last was seen at Rockliffe, Cumberland.

Caprimulgus europæus, Nightjar.—April 27th, Merionethshire, arrived at Penrhyndendraeth.

Cuculus canorus, Cuckoo.—SPRING: April 18th and 25th, Cumberland; 27th, Merionethshire. May 4th, Langness, one caught at 11.30 P.M.

AUTUMN.—July 25th, one at Langness. August 3d, a bird of the year killed at 10.30 P.M. at the Nash. This was migrating along with Swifts and Willow-Wrens, which were killed at the same time, and sent for identification.

Accipiter nisus, Sparrow-Hawk.—September 23d, Seven Stones L.V., one resting at 7 A.M.; 25th, Chickens Rock, one at lantern at 11 P.M.

Falco cesalon, Merlin.—SPRING: February 14th, Langness, two passing to N.E. at noon. March 29th, Langness, two going N. at 2 P.M.

AUTUMN.—August 16th, Langness, one at 3 P.M. September 26th, another at Langness.

Tinnunculus alaudarius, Kestrel.—August 13th, Langness, two at 1.30 P.M.

“Hawks”—August 22d, Bideford, two: September 30th, two. October 20th, South Bishop, one: November 2d, one; 11th, a large one.

“Falcon.”—October 29th, Eddystone, “one alighted on the rock with a Dotterel in its claws.”

Sula bassana, Gannet.—August 12th, Langness, more than

usual observed. September 14th, ditto. From the beginning of September to November 2d, observed passing the Bishop Rock. On the 1st of October, scores going W. all day (Bishop Rock).

Ardea cinerea, Heron.—SPRING: March 20th, Langness, the Herons which wintered in the neighbourhood departed.

AUTUMN.—August 2d, Langness, five appeared at 10 A.M. August 21st, one at St Tudwal's Island.

"Geese."—October 3d, Cumberland, the first "Grey Geese" heard at Rockliffe. October 16th, one "Wild Goose" at Langness; 17th, St Bees and Bideford, "Grey Geese" observed. After this date, "Geese" became abundant, and the dates are not of any significance.

Bernicla leucopais, Bernacle Goose.—SPRING: April 2d, Cumberland, a flock flew over Stanwix in a N.W. direction.

AUTUMN.—October 1st, Cumberland, Allonby; October 6th, heard at Rockliffe; October 16th, arrived in great numbers on the Solway.

Bernicla brenta, Brent Goose.—November 14th, Cumberland, one shot at Rockliffe.

Mareca penelope, Widgeon.—March 31st, Cumberland, about one hundred at Ravenglass. September 5th, five on the Solway. October 6th, a great many, along with Teal, at Rockliffe.

Chaulelasmus streperus, Gadwall.—January 3d, Cumberland, a female, inland at Hethergill.

Querquedula crecca, Teal.—September 25th, St Bees, two. October 6th, Cumberland, many, along with Widgeon at Rockliffe. November 16th, Godrevy, a flock.

Clangula glaucion, Golden-Eye.—SPRING: Cumberland, many passing Rockliffe along with Widgeon and Geese on night of April 17th; six at Monkhill, April 29th.

AUTUMN.—October 22d, Cumberland, five on the Eden.

"Black Duck" [*Eidemia nigra*].—August 31st, Dee L.V., appeared, and were observed in numbers throughout the winter.

Mergus serrator, Red-Breasted Merganser.—Merionethshire, stayed at Penrhyndendraeth until May 9th, on which date a flock was seen.

Perdix cinerea, Partridge.—March 14th, St Tudwal's, one on the island at 3 P.M.

Coturnix communis, Quail.—October 2d, Bideford, a female killed at lantern at 11 P.M.

Crex pretensis, Landrail.—SPRING: April 29th, Cumberland.

AUTUMN.—August 7th, Nash, two struck at 2 A.M., one killed. November 4th, Godrevy, one killed.

Gallinula chloropus, Moorhen.—October 9th, South Bishop, one at lantern at 1 A.M.

Charadrius pluvialis, Golden Plover.—September 16th, Langness, six at 7 P.M. October 12th, Menai, a flock. October 30th, Eddystone, a flock at 7.30 P.M. November 11th, Nash, flocks, along with Lapwings all day and night, twelve killed at lantern.

Squatarola helvetica, Grey Plover.—September 26th, Cumberland, observed at Maryport.

Vanellus vulgaris, Lapwing.—SPRING: February 15th, Langness, a flock at 2 P.M. March 4th, three at Langness; 28th, seven at Seven Stones L.V.; 31st, twenty at Langness.

AUTUMN.—October 3d, Langness, a flock. November 11th, Nash, along with Golden Plover, nine killed. November 15th, Nash, a thousand at noon. December 17th, Eddystone, several hundreds all night, many struck, twenty-one caught. Appeared at Caldy Island on November 20th.

Hæmatopus ostralegus, Oyster-Catcher.—SPRING: March 19th, Langness, one. April 11th, four.

AUTUMN.—July 4th, Menai, "Sea-Pies and Puffins," at 5 P.M. August 30th, three at Langness.

Phalaropus fulicarius, Grey Phalarope.—Cumberland, one on Derwentwater at end of September. October 8th, one at Silloth.

Phalaropus hyperboreus, Red-Necked Phalarope.—October 20th, Cumberland, one at Kirkbride.

Scolopax rusticula, Woodcock.—September 30th, St Bees, two at 3 P.M. October 16th, Skerries, "Woodcocks" between 12 P.M. and 4 A.M. November 1st, Eddystone, two at 11 P.M.; 2d, one at 1.45 A.M. Nov. 30th, St Bees, one passed lantern at 4 A.M. December 25th, Nash, one passing N.W. at 11 A.M.

Gallinago caelestis, Common Snipe.—SPRING: March 13th, Langness, one.

AUTUMN: August 4th, South Stack, one killed at 11.30 P.M.; 5th, Holyhead, one killed at 10 P.M. October 16th, Skerries, Snipes between 12 P.M. and 4 A.M. November 10th, observed at four stations between the Isle of Man and South Devon, namely:—Langness, one killed; Bishop Rock, one killed at 8 P.M.; Eddystone, one killed at 8 P.M.; Start Point, one at 6 P.M. November

12th, Langness, "some Snipe," along with Lapwings and Curlews, at 11 P.M. December 25th, Nash, one at noon.

Lymnocytes gallinula, Jack Snipe.—October 5th, Cumberland, at Allonby.

Tringa canutus, Knot.—October 20th, Dee L.V., one killed. November 8th, Nash, one killed.

Machetes pugnax, Ruff.—September 5th, Cumberland; one shot out of a small flock at Burgh. October 16th, another.

Tringoides hypoleucos, Common Sandpiper.—April 19th, Cumberland, Gretna; April 22d, Carlisle. May 5th, two, Langness. November 9th, "one Common Sandpiper killed" at Langness.

Helodromas ochropus, Green Sandpiper.—August 11th, Cumberland, first seen this season.

Tringa striata, Purple Sandpiper.—October, on the Cumberland coast.

Totanus calidris, Redshank.—March 18th, four at Langness; and one on the 27th.

Totanus canescens, Greenshank.—March 12th, Cumberland, several at Ravenglass; 14th, one. August 10th, Cumberland, several at Rockcliffe.

Limosa lapponica, Bar-tailed Godwit.—September 26th, Cumberland coast, very abundant.

Numenius phaeopus, Whimbrel.—SPRING: Rockcliffe Marsh, Cumberland, April 25th, heard. May 15th, heard on the wing at 10 P.M. May 19th, heard.

Numenius arquata, Curlew.—SPRING: March 18th, Langness, a large flock, but none seen after this date.

AUTUMN: July 24th, St Tudwal's, one hundred at 11 A.M. August 7th, observed at the Dee L.V. At Menai on the 15th.

Hydrochelidon nigra, Black Tern.—April 26th, Cumberland, one at Allonby.

Sterna cantiaca, Sandwich Tern.—April 4th, Cumberland, a pair at Ravenglass.

Rissa tridactyla, Kittiwake.—July 10th, Chickens Rock, flocks of Kittiwakes.

Larus glaucus, Glaucus Gull.—October 19th, Cumberland, one at Millom.

Larus ridibundus, Blackheaded Gull.—July 22d, Langness, flock at 7 P.M.

Stercorarius ———, Skua.—September 4th, Cumberland, two

on the Eden. October 5th and 15th, one at the Bishop Rock, "very rarely seen here."

Procellaria pelagica, Storm Petrel.—October 9th, South Bishop, several at 1.30 A.M., flying round the lantern. November 9th, Eddystone, one killed, along with Thrushes, Blackbirds, etc., between 9 and 12 P.M.; 10th, Eddystone, one killed, along with a Snipe and Redwing, between 7 and 12 P.M.; Dee L.V., one struck; 13th, South Bishop, one killed at 5 A.M.; 15th, Carlisle, one.

Procellaria leucorrhœa, Leach's Petrel.—October 3d, Cumberland, one at Bowness.

Puffinus anglorum, Manx Shearwater.—August 9th, Langness, "a large number of Manx Petrels" at 3 P.M.

Colymbus septentrionalis, Redthroated Diver.—November 20th, Cumberland, one at Silloth.

Alca torda, Razorbill.—April 14th, St Tudwal's, hundreds of Puffins, Guillemots, and Razorbills arrived at sunrise. They left the island on August 14th. Longships, numerous from August 20th to October 28th.

Lomvia troile, Guillemot.—March 12th, St Tudwal's, 200 arrived at sunrise. Another arrival on April 14th. They left St Tudwal's on the 14th of August. Longships, observed from September 25th to October 29th.

Fratercula arctica, Puffin.—April 14th, St Tudwal's, hundreds arrived at sunrise along with Guillemots and Razorbills, leaving on August 14th. July 4th, Menai, Puffins at 5 A.M. Longships, observed going S.W. between August 14th and October 26th.

GENERAL REMARKS.

The Report for the West Coast of England and Wales, and the Isle of Man, refers to the movements during the spring and autumn migrations of about one hundred species.

The spring immigration commenced on the 25th of March with the advent of the Swallow at the Bahama Bank light-vessel, and continued until the 15th of May, when "very many" Swallows appeared between 4 P.M. and 7 P.M. at Langness. A noteworthy incident of the vernal immigration was the great rush of Wheatears observed at the Bahama Bank vessel and at Langness on the night of the 13th of April, when many perished or were captured.

The spring emigration did not escape attention, for on the night of the 20th of April the returning Fieldfares, Goldcrests, etc., were observed at 11 P.M. at the Chickens Rock. Perhaps the continuous movements of Thrushes and Blackbirds observed throughout February, and especially between the 11th and 17th, are referable to this class of migrants.

The autumn emigration, so far as our summer visitants are concerned, may be said to have been initiated with the appearance of the Cuckoo at Langness on the 25th of July, and was prolonged until the 25th of October, when the last Swallow was noted.

The first immigrant winter visitant from Northern Europe was the Redwing, whose appearance at Carlisle was noted on the 20th of September. The chief general movements which usually characterise the southward autumnal passage were two in number, and affected the stations along the entire coast from the Isle of Man and the Eddystone. The first commenced on the 16th of October, and continued until the 20th. The second extended from the 8th to the 12th of November.

In connection with these general movements, which are so often—indeed, we might say usually—participated in by a great variety of species of very different orders seemingly seized by a simultaneous migratory impulse, it would be, perhaps, well to consult the meteorological record for an explanation of the phenomenon. Mr J. A. Allen tells us that “birds discern approaching meteorological changes,” and that in the monthly weather reports of the United States Signal Service Bureau reference is often made to the movements of birds. “From these reports it appears that the southward migration of Geese and other Waterfowl usually precedes, often only by a few hours, the approach of heavy storms, and a sudden and very great reduction of temperature, which they often wholly avoid by keeping in advance of the change.” It would seem probable, too, that birds await the approach of favourable meteorological conditions, and then, having been detained by unfavourable conditions, migrate *en masse*. Deeming that it would be interesting in connection with the great movements during the autumn of 1885, an examination of the weather reports issued by the Meteorological Office has been made. The first of these, as we have seen, commenced on the night of the 16th of October, and continued

until the night of the 20th. "The [weekly] Summary of Changes in the Weather over the British Islands and their Neighbourhood¹ from the 11th to the 17th of October" informs us that throughout this week the pressure over our islands and their neighbourhood has been mainly cyclonic; from the 11th to the 14th the type of gradient was northerly, but on the 15th and 16th it was easterly. Two well-marked depressions appeared in addition to the one which was passing away from us on the morning of the 11th. The second of these depressions, which had become a shallow subsidiary disturbance on the 15th over the south of France, moved westward from our area during the 16th; and as this system passed away, an anti-cyclonic "col" was formed over our islands, uniting an anti-cyclone over France with another off our extreme western coasts. With this anti-cyclone the cold northerly winds which had prevailed changed, and on the 16th the weather became very fine over England, the temperature rose, and the wind became a south-easterly breeze. The summary for the 18th to the 24th of October informs us that "the distribution of pressure over our islands and France was anti-cyclonic, with light or moderate south-easterly and easterly winds, till the 20th, then cyclonic and complex, with northerly winds."

The second movement extended from the 8th to the 12th of November. Regarding the meteorological conditions, the summaries tell us that previous to the 8th the weather had been changeable and unsettled generally, and the distribution of pressure mainly cyclonic, with westerly, north-westerly, and southerly winds. From the 8th to 13th the pressure system over North-Western Europe was anti-cyclonic, with light (easterly in south, south-easterly in west, and southerly in the north) breezes. On the 13th, however, a large and somewhat deep depression advanced from the Atlantic, and spread quickly over all North-Western Europe, with gradients for south-westerly and westerly winds.

Thus we had the two chief movements of the autumn ushered in by and concurrent with anti-cyclonic conditions, preceded by

¹These reports and summaries refer not only to the British Islands, but to North-Western Europe, from Bodo and Haparanda to Corunna and Toulon. They are based upon numerous Continental returns from the area indicated, as well as from all parts of our own islands.

and ceasing with cyclonic depressions. These great barometric changes are also frequently accompanied by equally great changes in temperature, and this may be the cause of the mists which so commonly prevail on "a migration night."

It would be well if a summary of all the sections of the reports could be submitted to a competent meteorologist. This, it is thought, would result in a few years in establishing a better understanding of the relationship which exists between the weather and the great movements of birds.

It cannot be said that the southerly flow of autumn migrants is evenly distributed along the entire west coast of England, though such appears to be commonly the case on the east coast. On the contrary, the schedules again afford unmistakable evidence that the great majority of these migrants are observed at stations south of Anglesey. But while the north-west section of the coast is thus less favoured than the rest, such is not the case with the Isle of Man, which comes in for an important share of the west coast migratory movements. Now, since it is a well-established fact that large masses of migrants from Northern Europe, along with others from the Faröes, Iceland, and Greenland, pass down the west coast of Scotland, whence many cross to Ireland, it seems probable, from the evidence borne by the English West Coast returns, that the majority of the remainder leave Scotland at some point on the Wigtown coast, and pass to the west coast of Wales by way of the Isle of Man, and thus avoid the English shores of the Irish Sea.¹ Whether this is a reasonable and likely explanation, or not, the fact remains that the schedules for the years 1884 and 1885² received from the coasts of Flint, Cheshire, Lancashire, and Cumberland—and they are among the most faithfully kept—make it evident that during those seasons comparatively few of the ordinary migrants were observed there, and that the great general movements did not affect them in any considerable degree.

The migratory movements of such partially resident species

¹ The remarks do not apply to migrants among the *Limicolæ* and *Anseres*, which, as a rule, religiously follow coast lines, and which are abundantly represented on the Solway and coasts of Cumberland and Lancashire.

² The scarcity or entire absence of migratory birds at St Bees is remarked upon in the Reports for 1880 and 1881.

as the Redbreast, Hedge Sparrow, Wren, Greenfinch, Sparrow, Bullfinch, Yellow Hammer, and others are recorded.

Of the rarer and more interesting species included in the Report, the Black Redstart, White Wagtail, Gadwall, Red-Necked and Grey Phalaropes, Ruff, Black Tern, Glaucus Gull, and Leach's Petrel may be mentioned.

As an unusual species to observe at the lantern, we may allude to the occurrence of the Moorhen (*Gallinula chloropus*) at the South Bishop, a locality indicating that the bird must have been migrating.

The scarcity of the Woodcock, Goldcrest, and Short-Eared Owl is worthy of note. This is the more remarkable in the case of the Woodcock, since it occurred in almost unprecedented numbers on the east coast of England.

W. EAGLE CLARKE.

IRISH COAST.

THE number of light stations returning schedules was only one less than in 1885, although four schedules less were sent out.

There was no light shown at the Tuskar Rock—the best Irish station—between from June 1st to November 20th, but since that date a more powerful light has been exhibited.

The great importance of forwarding a leg and wing of at least one specimen of each species killed, cannot be too strongly impressed upon on the light-keepers. Unless the birds are correctly identified, the value of this inquiry is materially diminished, and ornithologists may refuse to accept the statements of the observers.

In the schedules sent out in the spring of 1886, the request to forward the legs and wings of birds was conspicuously printed on the top of each schedule. Mr Edward M'Carron, who had already proved himself a most intelligent observer at the Teagracht Rock (removed to Mine Head in the autumn), has been the largest contributor of specimens, and his careful notes prove the interest taken in this inquiry.

Anticipatory of the report for the spring of 1886, it may be mentioned that several rare species have occurred, which would probably have passed under another name, were it not for the distribution of six copies of "Morris's British Birds," with coloured plates, and the production of specimens. We trust the Commissioners of Irish Lights will distribute six additional copies of Morris in the present year. We believe these volumes are greatly appreciated, and that in placing them in their annual list of books to be purchased for the light-keepers, a wise selection has been made.

No specimen of the Greenland Falcon or Snowy Owl was observed in 1885. The former species cannot, therefore, be regarded as a more than an accidental winter visitor to the West Coast; and only one specimen of the Snowy Owl was recorded since these observations were commenced. Thrushes, including probably Redwings, were noted in considerable numbers about the lights, over a range of sixty miles on the Wexford and

Wicklow coasts, between the 11th and 15th February. There was no hard frost at the time. These lights are all seven to ten miles from shore. During the second week in April, at several stations, Thrushes are recorded. The great autumn rush took place between the 6th and 10th November, and a smaller one between the 17th and 20th October. Blackbirds accompanied the Thrushes, but in smaller numbers.

“A Blackbird with a white breast” was observed at Mine Head from the 8th to the 10th December. A further description given of this bird shows it may have been a Ring Ouzel. The Hedge Sparrow seems to be resident in small numbers during the winter on the Tearaght Rock, nine miles off the Kerry coast, and possibly it breeds there. No clear indication of the migration of the Robin has yet been shown on the Irish Coast. The records of its occurrence are few and scattered. The Black Redstart was recorded at several stations in the southern half of Ireland; specimens were forwarded from Mine Head, the Skelligs, and Rockabill. It is apparently a regular winter visitor to the Skelligs and Tearaght, generally appearing in October and November. With one exception (in February) there is no record of its occurrence during any other month. The autumn migration of the Goldcrest was the smallest yet recorded, but on the 12th and 13th April a spring movement was apparent. As usual, the Starling is the best marked migrant, occurring at almost every station. There is no record yet of the Chough having been seen on the east coast by the light-keepers. The Magpie is apparently not a migratory bird in Ireland. The observations on the Cuckoo and Corncrake are few, when it is remembered they are well-known and regular visitors. There is, so far, no record of the Cuckoo having struck the lanterns, and but one instance of the Corncrake so doing. It has been stated as an “undoubted fact” (Yarrell, 4th ed., vol. iii., p. 324), by Mr Howard Saunders, that the Woodcock often makes its appearance on the south and west coasts of Ireland before it is noticed in the north and east. The light-keepers’ schedules do not contradict this statement; but their observations are not yet sufficiently numerous to confirm it beyond a doubt. The northward movement of the Whimbrel (May Bird or young Curlew) has been well marked every year. On the return journey they are either confounded with the Curlew, or if they take the same

route, they may travel at a higher level without whistling, and thus escape the notice of the light-keepers. The schedules from the Skelligs and Tearaght have always a special interest, these rocks being the greatest breeding-places of sea birds on the Irish Coast. Mr M'Carron estimates the number of Stormy Petrels on the Tearaght in July at six or seven thousand. The changes of plumage in the Razorbill has been the source of much comment by Mr M'Carron. The sudden and almost complete disappearance of the so-called "Black-billed Auk," and the reappearance of the Razorbill in breeding plumage in a short interval, show that when the old birds arrive to breed, the young birds of the previous year leave the neighbourhood of the Tearaght, and probably go out to sea.

A young bird, 8 inches long, and still carrying a few whitish downy feathers at the back of the neck, sent up by Mr M'Carron, and obtained on August 1st, has the chin and throat *black*. An older bird, killed on January 13th, has the chin and throat white. In Yarrell, vol. iv., p. 60, the chin and throat of a bird a week old is said to be *white*; and Seebohm says the young in down have the underparts *greyish white*.

In the report for 1884, it is stated that no Gannets perched on the Little Skellig after October 20th, and in the present report February 28th is given as the date of their reappearance on this well-known Irish breeding station.

The most interesting stations are those on small islands or rocks, or light-vessels at a considerable distance from shore; and the regular occurrence of so many land birds of apparently weak powers of flight around these lanterns is a matter of surprise to those unacquainted with the facts of migration.

We believe this inquiry has contributed not a little to enlighten the general public as to the movements of birds, some of which were partially known to ornithologists, and others suspected; but the accumulated data of the observers (making all reasonable allowances for errors in identification), are sufficient to satisfy the most sceptical of the powers of flight and endurance possessed by many small birds, and the wide range of the migratory impulse.

An effort has been made this year to shorten the Irish report, but the number of birds which strike the lights is comparatively small, compared with the large numbers arriving on the coasts of

Great Britain. It is therefore all the more necessary to give the records in detail, in order to arrive at any general and trustworthy conclusion.

To the Commissioners of Irish Lights, to the secretary, Mr Owen Armstrong; and to Captain Boxer, R.N., we continue to be under many obligations. It is, however, to the light-keepers themselves we are most indebted, since they have gratuitously placed at our disposal much of their leisure, and evinced an interest in this inquiry which could scarcely have been anticipated. Some of their names must be specially mentioned in connection with the occurrence of rare birds in the report for 1886, which promises to be an interesting one.

ALEXANDER G. MORE.

RICHARD M. BARRINGTON.

| LIST OF LIGHT-STATIONS. | Spring. | Autumn. | Miles from Shore. | Names of Observers. |
|------------------------------------|---------|---------|-------------------|--|
| | | | | |
| 1. Fastnet, Co. Cork, | x | x | 8 | James Walsh. |
| 2. Galley Head, Cork, | o | x | — | John Kelly. |
| 3. Old Head, Kinsale, Cork, | o | o | — | <i>No reply.</i> |
| 4. Mine Head, Waterford, | o | x | — | { Hugh J. Dugan and Edward M'Carron. |
| 5. Dungarvan, Waterford, | x | x | — | Wm. Higginbotham. |
| 5.*Coningbeg Lt.-ship, Wexford, | x | x | 10 | { Patrick Cullen and William Clydesdale. |
| 6. Barrels Rock Lt.-ship, do., ... | x | x | 4 | { Michael Doyle and Charles H. M'Cabe. |
| 7. Tuskar Rock, do., ... | x | x | 7 | { Richard Hamilton and Patrick D'Arcy. |
| 8. Arklow Sth. Lt.-ship, Wicklow, | x | x | 7 | { Patrick Clancy and Alfred B. Wall. |
| 8.*Arklow North Lt.-ship, do.,... | x | x | 8 | William Daly. |
| 10. Kish Bank Lt.-ship, Dublin,... | x | x | 7 | { John Pinston and Thomas Cooney. |
| 11. Howth Baily, Dublin, | o | o | — | <i>No reply.</i> |
| 12. Rockabill, Dublin, | x | x | 5 | Joseph Hammond. |
| 13. Copeland (Mew) Island, Down, | x | x | 3 | John O'Donnell. |
| 14. Maidens, Antrim, | x | o | 5 | Michael Barry. |
| 15. Rathlin, Antrim, | x | x | 6 | John A. Murray. |
| 16. Innishtrahull, Donegal, | x | o | 6 | R. Phelan. |
| 17. Dunree Head, Donegal, | x | o | — | John Stapleton. |
| 18. Lough Swilly, Donegal, | — | x | — | James Keenan. |
| 19. Tory Island, Donegal, | x | o | 9 | Henry Stocker. |
| 20. Arranmore, Donegal, | x | x | 5 | Henry Williams. |
| 21. Rathlin O'Birne, Donegal, ... | o | x | 2 | John Scallan. |
| 22. Killybegs, Donegal, | x | x | — | Joseph Hill. |
| 23. Oyster Island, N. Sligo, | o | — | 1 | <i>No reply.</i> |
| 24. Broadhaven, Mayo, | x | x | — | Patrick Keenan. |
| 25. Eagle Island, E., Mayo, | o | x | 2 | Daniel Hawkins. |
| 26. Eagle Island, W., Mayo, | — | — | 2 | No schedule sent. |
| 27. Blackrock, Mayo, | x | x | 9 | { John Redmond, J. Young, R. Lyons, and Edward Rohu. |
| 28. Blacksod Point, Mayo, | x | o | — | Robt. W. Redmond. |
| 29. Clare Island, Mayo, | x | o | 4 | G. H. Brownell. |
| 30. Slyne Head, N., Galway, ... | x | o | 3 | Robert Tyrell. |
| 31. Slyne Head, S., Galway, | — | — | 3 | No schedule sent. |
| 32. Arran Island, N., Galway, ... | x | x | 9 | Thomas Fortune. |
| 33. Straw Island, Galway, | x | x | 9 | Charles Boyle. |
| 34. Arran Island, S., Galway, ... | — | — | 6 | No schedule sent. |
| 37. Tearaght, Kerry, | x | x | 9 | { Edward M'Carron and Francis Ryan. |
| 38. Valentia, Kerry, | x | x | — | Joseph Williams. |
| 39. Skelligs, Kerry, | x | x | 9 | Thomas Kerley. |
| 40. Dursey Island, Cork, | — | — | $\frac{1}{2}$ | No schedule sent. |

o = No reply.

x = Schedule returned partly or wholly filled.

Spring, 34 schedules sent out; replies received, 27. Autumn, 34 schedules sent out; replies received, 25.

LEGS, WINGS, ETC., RECEIVED.

| | |
|----------------------------|--|
| <i>Mine Head,</i> | Wing of Starling, shot 11th December. |
| „ | Wing and Leg of Widgeon, found killed 13th December. |
| „ | Black Redstart, in flesh, shot 18th November. |
| <i>Coningbeg Lt.-ship,</i> | Leg and wing of Titlark, found on deck, 6th October. |
| <i>Tuskar,</i> | Two Corncrakes, received in flesh ; shot on rock May 13th. |
| <i>Rockabill,</i> | Black Redstart (old male), in flesh ; shot November 21st. |
| <i>Killybegs,</i> | Wing of Woodcock, killed striking, 2 A.M., 18th November. |
| <i>Eagle Island,</i> | Leg and wing, Redwing, killed striking 16th October. |
| „ | „ Blackbird, „ „ |
| <i>Tearaght,</i> | Leg and wing of Wheatear, August 27th. |
| „ | „ Stormy Petrel (young), struck August 5th. |
| „ | „ Swallow found dead, May 22d. |
| „ | Skin of Thrush, 28th January. |
| „ | Leg and wing, Rock Pipit, 10th August. |
| „ | Wing of Curlew, 20th March. |
| „ | Skin of young Razorbill of year, 1st August. |
| <i>Skelligs,</i> | Black Redstart, in flesh, shot 18th November. |

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GENERAL REMARKS OF LIGHT-KEEPERS.

Galley Head.—AUTUMN: No birds were killed striking the lantern during the two years I have been at this station.—John Kelly.

Mine Head.—AUTUMN: A pair of Ravens and Peregrine Falcons, and several pairs of Choughs, breed in the cliffs close to the lighthouse. A large number of Cormorants also build here, and Gulls on several islets close to the shore.—Hugh J. Dugan.

Tuskar Rock.—AUTUMN: There was no light shown in lighthouse from June 1st to November 20th, which accounts for the apparent scarcity of some migrants at this station.—Richard Hamilton.

Arklow South Light-ship.—On the night of November 9th, several birds of various kinds about lantern; many killed; some fell on deck, and a large number overboard.—Patrick Clancy.

Arklow North Light-ship.—May 3d, large flocks of land-birds about lantern at night.—William Daly.

South Maidens.—In January and February few birds seen, except Seapies, Gulls, and Shearwaters. From June 21st to 16th July no birds save Gannets, Gulls, and Seapies.—M. Barry.

Innishtrahull.—I have only observed birds about the lantern on dark nights, and in thick misty weather.—R. Phelan.

Lough Swilly.—Birds are scarce here—not a single one has struck lantern since I came.—James Keenan.

Killybegs.—Seagulls and Curlews are here all the year. Lapwing's nest close by. Cormorants and Pigeons breed in cliffs.—J. Hill.

Eagle Island, E.—Gulls were scarce, and Gannets, "Sea Parrots, and Puffins" were only to be seen in flight, which was invariably to the west—the Gannets in a long extended line, singly or in pairs, and the Sea Parrots in flocks of twenty to fifty, flying low. There are two Titlarks, two Wrens, and about ten Sandlarks on island at present (1st January 1886). A few of the last-named breed here, also the Titlarks, and possibly the Wrens, as there are some old walls into which I have seen them hop for shelter; but I have never noticed them in spring or summer.—Daniel Hawkins.

Clare Island.—The sea-birds (Gulls, Puffins, Guillemots, and

Cormorants) continued to arrive from 1st of April to 1st of June to breed. They were not as numerous as last year. All left before August 15th, except the Cormorants and a few Royal Gulls. Eagles always remain on island.—G. H. Brownell.

Slyne Head, North.—The number of sea-birds is chiefly regulated by the feeding. There is a greater number for the past two months (June and July) than has been the case for the past five years.—Robert Tyrell.

Arran Island, N.—Puffins, Gulls, Gannets, Curlew, Seapie, Cormorants, and Sandlarks come and go according to the state of the sea—if wild, none, and *vice versa*.—Thomas Fortune.

Straw Island.—SPRING: The number of birds were few during the spring. The Lark, Hedge Sparrow, Robin, Wagtail, and Linnet are remarkable for their total absence this year, though numerous in the springs of 1883 and 1884. AUTUMN: A great scarcity of sea-birds of all kinds, especially the Gannet. Land-birds—*i.e.*, “Crows,” Rooks, Larks, Starlings, Thrushes—plentiful, especially young Starlings, Thrushes, and Blackbirds. From 13th November to 17th November they came in rushes during severe weather.—Charles Boyle.

Tearaght.—Birds remaining September 1st, Choughs, Hooded Crows, Wheatear, Wrens, Rock Pipit, Peregrine, Kittiwake (old and young), Royal Gulls, Herring Gulls (old and young), Cormorants, and Oyster-Catcher.—Edward M'Carron.

Skelligs.—In February, Gannets, Cormorants, Kittiwakes (mostly young), Herring Gulls, a few Black-Backed do., and flocks of the Black-Billed Auk (young Razorbill—R. M. B.) fishing round rock.—Thomas Kerley.

HAWKS.

Fastnet.—October 16th, one at 5 A.M.; October 20th, one; November 9th, two; 10th, one; 13th, one.

Mine Head.—October 5th, a Light-brown Hawk, and on several other occasions. 11th December, a small Blue Hawk. 8th January 1886, saw one capture a Redwing; it was a small Hawk, and unable to carry it away.

Dungarvan.—March 15th, one Falcon Hawk; Nov. 18th, one.

Coningbeg Light-ship.—April 19th, one Sparrowhawk; 28th, two Hawks. September 26th and October 9th, one Sparrowhawk seen.

Barrels Rock Light-ship.—September 11th, two Hawks ; October 28th, one.

Tuskar Rock.—May 27th, one Hawk.

Rockabill.—Hawks noted April 1st, April 13th, and May 23d.

Copeland (Mew) Island.—May 9th, one.

Rathlin Island.—April 18th, two Falcon Hawks all day.

Aranmore.—May 5th, two going S.E. ; September 29th, three.

Rathlin O' Birne.—August 9th, two Hawks. Have been here two years.

Eagle Island, E.—September 24th, a small Brown Hawk ; saw him seize small bird. October 17th and December 21st, one and two seen.

Blackrock, Mayo.—Falcon noted June 1st and August 11th. Sparrowhawk alighted on Rock August 15th. October 23d and December 28th, one Falcon.

Arran Island, N.—One or two Brown Hawks at intervals during June.

Tearaght.—March 12th, Grey Hawk (white predominating). April 3d, one large Brown Hawk (I don't think it was the Peregrine). March 22d, Sparrowhawk several times this month and occasionally throughout the year. On March 6th a Peregrine pounced on a Royal Gull while flying, and knocked it into the sea, from which it could not rise.

Skelligs.—Two Kestrels on rock all September ; they appeared about 15th August. A pair of Peregrines build here. Kestrels during October and November.

OWL.

Fastnet.—November 11th, one Dark-brown Owl (golden colour on breast and wings) killing small birds during night. Rush of Larks, Thrushes, and Starlings.

Mine Head.—October 13th, one in twilight, appeared white. November 15th, one seen in daytime.

Rockabill.—April 13th, an Owl seen.

Copeland (Mew) Island.—May 10th, an Owl.

“FLYCATCHERS.”

Rockabill.—April 15th and 16th, Flycatchers ; 21st, a large number ; May 9th, some.

MISSEL THRUSH.

Mine Head.—December 10th, several during this month.

Coningbeg Light-ship.—April 13th, one "Jay."

THRUSH (PROBABLY REDWING ALSO).

Fastnet.—March 15th, two around light at midnight; gloomy, wind E.; 16th, one. April 12th, two "Mountain Thrushes" at noon; wind E.N.E., light. October 13th, one at midnight killed striking; clear, wind light. 20th, a great number of Thrushes and "Mountain" Thrushes (probably Redwings—R. M. B.) all night; nine killed striking; hazy, wind light, N.E. November 7th, 8th, and 9th, great numbers of Thrushes at night; several killed striking; wind light S., overcast. 11th, Thrushes all night; five killed; overcast, wind S.E., light. 12th, five all day on rock.

Coningbeg Light-ship.—October 5th, two about light 11 P.M.

Tuskar Rock.—February 13th and 14th, Thrushes constantly striking from 1 A.M. to 7 A.M.; a great number killed; wind fresh S.W., fog. April 15th, one Thrush struck; rain.

Arklow South Light-ship.—February 11th, three killed striking at midnight; foggy; found dead on deck. 14th, from 6 P.M. until midnight Thrushes about lantern; clear. October 20th, flock at 3 A.M. about lantern; some struck, fell on deck; cloudy, wind fresh N.W. November 6th and 8th, Thrushes at midnight about lantern; many struck, some fell on deck, others overboard; hazy.

Arklow North Light-ship.—January 25th, Thrushes about lantern. February 10th, three killed striking; 15th, two do.; March 4th, six do. November 16th, several all night; 22d, 23d, and 24th, about lantern; four killed on 24th.

Kish Light-ship.—October 8th, one killed striking; stormy, clear. Noted also on October 9th, 26th, and 31st. On November 6th, flocks from 6 to 11.30 A.M. going N.W.; wind S.W. 8th, several flocks; 10th, two killed striking; clear.

Rockabill.—January 19th, Thrushes at night about lantern; several struck also on February 24th. April 16th and July 1st, about lantern. October 18th, 21st, 23d, November 6th and 8th to 10th, large numbers passed; many struck, several killed.

Copeland (Mew) Island.—April 8th, Thrushes about lantern. November 3d, one disabled; rain. 9th, six killed striking.

Innishtrahull.—January 16th, 23d, 24th, and 27th, small flocks of Blackbirds and Mountain Thrushes around lantern; about eighteen killed.

Tory Island.—April 14th, three killed striking 4 A.M.

Aranmore.—October 15th, one seen.

Rathlin O' Birne.—August 26th, four killed 8 P.M. These birds often strike. Always on island in autumn.

Killybegs.—October 19th, 11 P.M., one killed striking; misty. November 1st, 1 A.M., another; two seen in morning.

Broadhaven.—October 13th, one killed striking. No birds were ever known to strike this light before, as it is dark towards the land.

Eagle Island, E.—October 17th, 2 to 3 A.M., three killed striking; 19th, one seen.

Blackrock, Mayo.—November 6th and 7th, Thrushes about all day.

Arran Island, N.—November 11th, six Thrushes killed striking 11.30 P.M.; misty.

Straw Island.—November 19th, forty going N.W.

Tearaght.—October 19th, several arrived on rock.

Skelligs.—October 16th, a few Thrushes on rock; wind N.E., gale, rainy. 17th, several on rock to-day; wind S.E., fresh. 23d, several Common Thrushes and another species having the back of a slatish colour, with a yellow hue on the back near the tail. 31st, Thrushes on rock. Several during November frequented the rock. December 8th, "Thrushes, Common Fieldfare, and Redwings since the 7th."

" REDWING."

Mine Head.—November 11th, Redwing caught on glass. Small birds flying through rays all night. Redwing plentiful all winter.

Tearaght.—January 28th, one found near lighthouse. March 15th, two or three observed up to middle of this month.

Skelligs.—December 8th, one struck 11.30 P.M.; died in night.

FIELDFARE.

Mine Head.—December 8th, observed here.

Rockabill.—November 26th, Fieldfares all night; several killed striking.

Eagle Island, E.—October 17th, one killed striking.

Tearaght.—December 15th, about fifty remained for three weeks.

BLACKBIRD.

Fastnet.—October 16th, one.

Mine Head.—October 30th, one caught (male); previous night stormy. November 10th, one caught on glass; misty, wind E., fresh.

Dungarvan.—November 9th, one (female) struck 2 A.M., not killed; misty.

Coningbeg Light-ship.—April 18th, one seen.

Tuskar Rock.—February 13th and 14th, Blackbirds constantly striking from 1 A.M. to 7 A.M.; a great number killed; wind fresh S.W., fog.

Arklow South Light-ship.—February 11th, two killed striking at midnight; fog; found dead on deck. 12th, two killed striking; gloomy. 13th, four about light; 15th, one killed striking; 16th, Blackbirds from 6 P.M. until midnight about lantern; clear. November 6th and 8th, many about lantern at night, some killed; hazy.

Arklow North Light-ship.—February 15th, four killed striking. March 4th, four do. November 15th, two killed striking; 22d and 23d, some about lantern all night.

Kish Light-ship.—November 7th, one killed striking; clear.

Rockabill.—October 18th, 21st, November 8th, 9th, and 10th, numbers passed on these nights; many killed.

Copeland (Mew) Island.—March 8th, two killed striking. April 18th, about forty near station. November 7th, three killed striking 10 P.M.; clear. December 31st, one hundred Blackbirds about island.

Aranmore.—September 11th, November 3d, and December 9th, one to three noted.

Killybegs.—October 31st, two seen; wind strong N.W. November 3d and 29th, another.

Eagle Island, E.—October 19th, one seen.

Straw Island.—November 13th, numbers of Blackbirds going N.W.

Tearaght.—March 15th, one, and up to April 1st. October 19th, several arrived on rock.

Skelligs.—March 17th, two Blackbirds on rock. October 16th, several arrived ; a gale from N.E. 17th, several ; 31st, Blackbirds seen. Several during November.

RING OUZEL.

Mine Head.—December 8th, “A Blackbird with a white breast,” and also on the 9th and 10th—probably the same bird on each occasion. Not seen afterwards. “I was quite close to to this bird ; it was very black, except the white breast, which was very distinct. It did not extend round back of neck.”

Skelligs.—April 9th, one on rock ; wind S.E., strong.

HEDGE SPARROW.

Tuskar Rock.—May 25th, five “Dunnocks” on the rock. August 31st and September 3d and 12th, one or two “Dunnocks” seen.

Tearaght.—March 1st, a few remained all the spring. I am not sure if they remained during the summer.

ROBIN.

Arklow North Light-ship.—November 29th, one Robin flew on deck ; wind fresh, S.

Rockabill.—March 3d, Robins remaining.

Rathlin Island.—December 3d, three Redbreasts all day.

Killybegs.—October 4th and 14th, one seen.

Valentia.—Noted in May, September, October, November, and December.

Skelligs.—November 9th, one Robin. The first seen since my arrival in April 1883 ; wind S., strong.

BLACK REDSTART.

Mine Head.—November 9th, one ; 13th, one shot ; 18th, one shot. [Received in flesh.—R. M. B.] December 23d, one.

Dungarvan.—November 7th, one Redstart. Remained three days. Rare.

Rockabill.—Nov. 21st, one shot. [Received in flesh.—R. M. B.]

Tearaght.—February 1st, two remained about a fortnight.

November 17th, one Redstart on rock ; 24th, another ; 28th, five remained a fortnight.

Skelligs.—October 17th, four Black Redstarts on rock ; 19th, twenty—wind N.E., fresh, misty—"observed one with a white breast and belly ;" 31st, a few seen ; November 18th, Black Redstart shot ; specimen sent. [Received.—R. M. B.]

"BLACKCAP" (PROBABLY STONECHAT).

Mine Head.—January 10th, 1886, I have seen this little bird frequently all the winter.

Tuskar Rock.—May 25th, one "Whinchat."

Killybegs.—May 11th, two "Blackcaps" seen.

"STONECHAT" (WHEATEAR).

Fastnet.—March 15th, several about light at midnight—gloomy, wind E.—three killed. April 10th, several about rock all day ; wind N. May 12th, a flock at 8 A.M. going N.E. ; wind W. October 20th, several about light, two killed striking ; hazy, wind light. November 13th, eleven seen, all died on rock.

Dungarvan.—March 19th, two seen.

Coningbeg Light-ship.—April 13th, one Wheatear killed striking ; light haze. April 21st, two killed striking. March 16th, one "Stonechat." April 8th, one Wheatear killed, 4 A.M., clear.

Barrels Rock Light-ship.—May 12th, one rested on ship, and died shortly afterwards.

Tuskar Rock.—March 16th, "Blackcap and Wheatear" alighted on rock—first this spring ; wind light, N.W. April 11th, 12th, 13th, 14th, and 16th, one to two Wheatears noticed. August 8th, 28th, and 30th, one to three Wheatears.

South Maidens.—About middle of April, a considerable number of "Wheatears and Stonechatters" alighted on rock for some time, and then flew N.W.

Rathlin Island.—March 8th, three "Stonechats." April 13th, seven Wheatears struck at midnight—three killed. April 14th, three at midnight, caught one. April 30th, "Stonechats" breed here. May 1st, three Wheatears.

Innishtrahull.—April 13th, nine "Stonechats" on island.

Arranmore.—April 2d, Four "Stonechats;" 12th, eight. May 30th, nine. September 8th, four at 10 P.M.—wind strong, W.—one killed striking.

Rathlin O' Birne.—August 12th, "Stonechatters" all day. September 14th, caught one under a stone.

Killybegs.—May 4th, five or six Stonechats.

Eagle Island, E.—September 6th, two on island.

Tearaght.—March 14th, first observed. About a dozen on island all the summer. I saw a nest with five young ones three feet in, under a rock.

Skelligs.—March 11th, two Wheatears, first appearance; wind S.E., strong; 14th, several; wind S.E.

"GRASSHOPPER WARBLER" (PROBABLY SEDGE WARBLER).

Coningbeg Light-ship.—May 13th, twenty "Grasshopper Warblers," 4 A.M.—wind light, N.W.—one killed striking, clear.

WHITETHROAT.

Tuskar Rock.—May 12th, Whitethroats constantly striking, midnight to 3 A.M.; misty. Thirty-five killed. August 31st, one seen.

CHIFF-CHAFF (PROBABLY WILLOW WREN ALSO).

Coningbeg Light-ship.—April 17th, one died on deck, tired out; 19th, one; 20th, one killed, fog; 30th, one.

Tuskar Rock.—April 12th, one killed striking. The first this year; 13th, 14th, 15th, and 17th, Chiff-Chaffs noted; 22d, constantly striking all night, scores killed; wind strong, squally, cloudy. May 12th, constantly striking, midnight to 3 A.M., twenty-three killed; misty, wind light, N.E. August 30th and September 3d, one or two seen.

GOLDEN-CRESTED WREN.

Dungarvan.—November 4th, one struck 2 A.M., not killed; gloomy.

Coningbeg Light-ship.—May 7th, two "Fire-Crests" on ship.

Tuskar Rock.—April 13th, the first Goldcrest this season.

Rockabill.—April 7th, Golden-Crested Wren seen.

South Maidens.—April 12th, one "Robin (Golden-Crested)" struck lantern 11 P.M., not killed.

Rathlin Island.—April 13th, thirteen at midnight. Five killed striking; 14th, five struck, caught two at midnight. The Goldcrest did not put in an appearance in the winter season this year.

Killybegs.—November 11th, 5 A.M., one caught at glass; gloomy; wind fresh, S.E.

Blackrock, Mayo.—November 7th, 7 P.M., two Golden-Crested Wrens, one killed striking; fog and rain.

WREN.

Fastnet.—October 20th, two about light; hazy. November 13th, one seen, died on rock.

Coningbeg Light-ship.—April 12th, two.

Barrels Rock Light-ship.—April 2d, one Wren seen.

Tuskar Rock.—April 13th, one Common Wren struck.

Arklow South Light-ship.—April 13th, a Wren flying about ship.

Rockabill.—April 13th, Wrens. September 21st, ditto. October 21st, ditto.

Innishtrahull.—March 16th and 19th, Common Wrens about lantern, two killed striking.

Eagle Island, E.—October 27th, two Wrens; still on island 26th December 1885.

Skelligs.—Wrens are resident. December—The Wren is more plentiful the last four months.

"TITS."

Mine Head.—December 9th, one Blue Tit shot. Several seen about.

Tuskar Rock.—March 16th, "Tits and other small birds" passing in threes and fours.

Killybegs.—December 5th, two "Blackcaps" seen. "The Blackcaps are either *Parus major* or *Parus palustris*; I am aware they are not the Blackcap Warbler.—Joseph Hill."

WAGTAIL.

Mine Head.—December 8th, one shot.

Dungarvan.—November 27th, five very dark Wagtails.

Coningbeg Light-ship.—March 15th, two Pied Wagtails going N.

Tuskar Rock.—March 16th, one Grey Wagtail alighted. September 28th, one.

Arklow North Light-ship.—April 28th, some Wagtails passed N.W.

Rockabill.—April 1st, Wagtail noted. October 5th, some.

South Maidens.—April 14th, two Wagtails.

Rathlin Island.—September 17th, Pied Wagtail.

Arranmore.—June 29th, six Wagtails all day. September 3d, three. January 2d, one.

Killybegs.—December 5th, a Pied Wagtail.

Eagle Island, E.—September 6th, one seen; 21st, one.

Arran Island, N.—July 1st, one. October 14th, two.

Straw Island.—July 24th, one Grey Wagtail.

Skelligs.—March 15th, one stayed five days; wind S.E., strong. August 19th, two Grey Wagtails. September 4th, four on rock; remained until 10th. A gale from S.W.

TITLARKS.

Fastnet.—November 7th and 8th, numbers about light; overcast.

Tuskar Rock.—March 7th, Titlarks passing W., first this spring. April 17th, a number about rock. September 28th, Rock Pipits.

Arklow South Light-ship.—February 16th, five killed striking; 23d, passing N.W. all day. March 15th, a flock going N.W. April 17th, Titlarks going N.W.

Kish Light-ship.—April 9th, several flocks going N.W.; 24th, a flock. May 1st, three about deck all day.

Rockabill.—March 3d, seen all day; breed on rock.

Copeland (Mew) Island.—April 14th, six Titlarks struck; four killed.

Eagle Island, E.—September 6th, two seen.

Straw Island.—March 23d, eight Field-Larks (small) remain here. September 7th, two.

Skelligs.—Titlarks are resident.

LARKS.

Fastnet.—October 12th, two at midnight, one killed; clear, wind light, N.E. 20th, great number all night, seven killed striking; hazy, wind light, N.E. November 7th and 8th, great numbers all night, eleven killed striking; overcast, wind light, S. 9th, numbers at night; overcast. 11th, Larks too numerous to count all night, twelve killed striking; overcast, wind S.E.

Coningbeg Light-ship.—April 12th, several Larks during night about ship. 14th and 17th, one. March 13th and 14th, four

to twelve going N.W.; wind E. and N.E. 23d, one. September 18th, four going W. September 26th, a "Ground Lark." October 6th, "Ground Lark" got dead on deck; wind fresh, N.W. [Leg and wing of Titlark received.—R. M. B.] 7th, twelve going N.W.; wind N., fresh.

Barrels Rock Light-ship.—December 18th, odd Larks passed N. January 19th and 20th, eighty-six Larks passed.

Tuskar Rock.—February 15th, ten killed striking; overcast, gloomy. March 5th, Larks going W.

Arklow South Light-ship.—October 15th and 18th, flocks going N.W. November 8th, Skylarks about lantern at night; hazy.

Arklow North Light-ship.—January 25th, some Larks about lantern—midnight. February 4th, a flock going N.W. February 10th, four killed striking. 15th, two killed striking. 16th, three killed striking. 23d, flocks going N.W. all day; wind strong, S.W. March 5th, Larks passed. April 17th, three Skylarks killed striking. November 1st, 2d, and 29th, Larks noted.

Kish Light-ship.—April 4th, flock going N.W. 14th, several Skylarks about lantern, one killed striking. 15th, passing S.W. during day, two killed striking at night; clear. Oct. 22d, two about ship. 30th, a flock going N.W. Nov. 9th, two about ship.

Rockabill.—February 24th and April 14th, Larks about light, several struck. October 5th, Larks. 21st, all day and night. November 6th, all night, numbers killed.

Copeland (Mew) Island.—March 14th, about twenty struck, six killed, 11 P.M.; wind S., overcast. May 19th, about twelve around light, 10 P.M.; misty.

South Maidens.—April 14th, twelve Common Larks seen.

Rathlin Island.—April 13th, four Skylarks, two killed striking at midnight.

Innishtrahull.—March 16th and 19th, Larks about lantern, fourteen killed.

Rathlin O' Birne.—Always on island in autumn.

Killybegs.—Skylarks and Titlarks are here all the year. November 11th, 4 A.M., one killed striking, and another caught at glass; wind fresh, S.E., gloomy.

Blackrock, Mayo.—November 6th and 7th, Larks all day, one killed striking; fog and rain.

Skelligs.—October 31st, a few Larks seen.

SNOW BUNTING.

Dungarvan.—December 1st, one seen; rare here.

Arklow North Light-ship.—February 17th, one caught on deck.

Rockabill.—December 22d, Snow Buntings.

Rathlin Island.—March 10th, one seen. September 6th, five going S. November 4th, two; very few seen this season.

Innishtrahull.—February 20th, three shot.

Arranmore.—February 3d and March 12th, Snow Buntings noted. September 19th, one; 21st, eighteen; also noticed October 30th.

Eagle Island, E.—October 1st, one on Island, and a few October 6th.

Blackrock, Mayo.—September 8th, one about rock; wind S., fresh. October 5th, eight. December 8th, forty all day. January 20th, 1886, twenty on rock. "For the last nine days the spray has been flying over rock, and the Snow Buntings never left, and how they manage to exist I cannot imagine."

Blacksod.—February 20th, Snow-Birds.

Arran Island, N.—October 8th, five Snow Buntings.

Tearaght.—October 14th, several arrived; remained three weeks.

Skelligs.—September 11th, one on rock; gale from S. October 1st, one (being first since 11th ult.), which remained here ever since. 6th, six seen. 31st, a few.

YELLOWHAMMER.

Mine Head.—November 1st, plentiful, and up to date January 15th, 1886.

Coningbeg Light-ship.—May 27th, one rested on ship; wind strong S., fog.

Rockabill.—March 3d, Yellowhammers remaining July 5th, do.

Killybegs.—May 18th, two seen. October 16th, one.

CHAFFINCH.

Mine Head.—November 12th, one caught near lighthouse in morning exhausted. Small birds flying in lantern rays all night, and striking.

Tuskar Rock.—March 21st, one seen.

Arklow South Light-ship.—April 12th, one Finch on deck.

October 11th, two on deck all day. A flock went N.W. 16th, two all day on ship. November 2d, 9th, 12th, and 19th, one or two Chaffinches seen about the deck.

Arklow North Light-ship.—February 6th, six passed W. November 12th, eight alighted on deck. 13th, a flock passed E.

Kish Light-ship.—May 7th, two about deck all day. November 7th, two all day about the ship.

Rockabill.—October 18th, Chaffinches noticed. November 6th, do.

Tearaght.—March 20th, Chaffinches left about this date. December 19th, a large flock of hen Chaffinches arrived on rock.

“MOUNTAIN FINCH.”

Skelligs.—November 8th, one struck 10 P.M.; not injured. 9th, four, but not seen after this date.

SPARROW.

Mine Head.—January 10th, 1886, Common Sparrow always plentiful here.

Arklow South Light-ship.—September 19th, flock passed.

Killybegs.—March 18th, two seen.

Eagle Island, E.—September 16th, fifty to sixty remained on island a short time; very lively, went W. 23d and 29th, thirty chirruping and very lively; also on October 7th and 17th pecking about rubbish. On last date they flew S.E. inland.

Straw Island.—April 15th, three House Sparrows.

Valentia.—June 30th, Sparrows about.

GREENFINCH.

Fastnet.—March 2d, several all day about rock, seven died; overcast, gloomy, wind fresh, S.E. September 28th, two, wind N.E. October 16th, three; wind E. light, going N.W. November 12th, seventeen all day on rock; wind light S.

Coningbeg Light-ship.—March 16th, one. April 18th, one seen.

Kish Light-ship.—May 9th, two about masts all day.

Rockabill.—November 6th, Green Linnets.

Tearaght.—March 20th, Greenfinches all left about this date.

REDPOLE.

Rockabill.—July 5th, Redpoles.

LINNETS.

Fastnet.—May 4th, eight about rock; wind E.N.E. October 20th, a great number all night about light; hazy, wind N.E., light. November 7th, 8th, and 9th, a great number about light during nights; wind light S., overcast. 13th, several Linnets seen.

Covingbeg Light-ship.—March 8th, 26th, and April 13th, one to three. Noted also 16th, 17th, and 21st September.

Barrels Rock Light-ship.—One to three noted March 12th, 17th, 28th, 31st, April 13th, May 5th. September 18th, 21st, 28th, 29th, small flocks going S.E. to N.E. October 25th and 30th, large flocks going N. January 6th, 1886, small flock going N.

Arklow South Light-ship.—February 24th to 27th, one or two about ship. March 24th, flock of "Grey Linnets" going N.W.; wind light S.W. April 19th, flock going N.W. October 11th, flock going N.W.; wind N.E. 25th, flocks going N.W.; wind W.

Rockabill.—October 18th, some passed. November 8th, 9th, and 10th do.

South Maidens.—March 11th, one "Moss Linnet" seen on balcony at night.

Rathlin Island.—April 13th, three about light, one killed striking at midnight. 14th, three killed midnight.

Dunree Head.—March 3d, 6th, 10th, and 20th, flocks all day.

Arranmore.—November 11th, eight Linnets.

Rathlin O' Birne.—August 24th, Linnets in flocks feeding.

Killybegs.—March 9th, five Grey Linnets; also April 26th and June 8th. September 15th to 25th, forty to fifty noticed flying about. October 8th and 28th, do.

Eagle Island, E.—September 6th, four seen; also on 16th, 27th, and October 6th.

Blackrock, Mayo.—December 27th, some Grey Linnets about rock.

Straw Island.—March 21st, thirty remain on island. July 28th, forty going S. October 10th, thirty going W.

TWITE.

Mine Head.—September 20th, plentiful from this date to 15th January 1886. On October 29th, flying through rays of lantern at night; wind and rain.

Tearaght.—March 20th, Twite left about this date.

STARLING.

Fastnet.—October 20th, several about light all night, eight killed or wounded; hazy, wind light N.E. November 7th, 8th, 9th, and 11th, numbers about light at night; wind S., light, overcast—twenty-three Stares killed striking; 13th, five killed striking.

Mine Head.—October 29th, about hundred in field, two caught at lantern 11 P.M., several struck glass; wind S., strong, rain. November 5th, striking from 10 P.M. until midnight. A few captured; foggy. Flocks flying about to date January 15th, 1886. November 11th, Stares striking.

Dungarvan.—October 20th, large flock going N. November 8th, one killed striking, 11 P.M.; overcast, misty. November 19th, a great flock feeding near. Very plenty this season. November 30th, large flocks, going N.W. December 4th, two killed striking 9 P.M.; cloudy.

Coningbeg Light-ship.—March 24th to 26th, one about ship.

Barrels Rock Light-ship.—October 25th and November 2d, large flocks noted going N. and N.W.

Tuskar Rock.—February 14th, two struck; fog. 15th, constantly striking 8 P.M. to 4 A.M.; wind fresh, N.E., overcast, gloomy. A great number killed. March 15th, constantly striking, 9 to 11 P.M.; wind light S.E., cloudy. 20th, one struck, overcast. April 16th, ditto.

Arklow South Light-ship.—March 5th, several about lantern at midnight. March 15th, "Stairs" about lantern 8 P.M. until midnight, two killed striking; overcast, wind light W. April 12th and 16th, a few about lantern at night. October 21st, two about lantern. Flocks passed 29th, 30th, and November 1st to N.W. in daytime; and on nights of 3d, 6th, and 8th November, numbers struck the lantern. Many killed; some fell on deck, others overboard. Weather hazy and rainy; wind moderate, W.

Arklow North Light-ship.—March 4th, four caught on deck. May 26th, a flock passed N.W. October 16th, large flocks going S.; wind E.S.E., strong. Some noted on 22d, 23d, four killed striking. 30th and November 1st, flocks passed going S.W. and N.W. On November 2d, great quantities all day and night; wind S.W., misty, rain. A few on 4th and 5th, in day time; and on 10th, 19th, 20th, about lantern at night.

Kish Light-ship.—October 28th, several flocks going N.W.; wind N.W. 31st, one caught on deck 10 P.M., others flying about light. November 2d and 5th, several flocks in the mornings passed N.W.; wind N.W. December 17th, a flock about light.

Rockabill.—January 19th, about light. June 26th and July 1st, some passed. October 11th, large flocks passing west; wind N.E. October 21st, 23d, November 6th to 10th, 19th, and 26th, numbers passed, many struck, and were killed.

Copeland (Mew) Island.—March 14th, ten struck lantern, four killed; 24th, three struck. April 14th, thirty struck 3 A.M., six killed; clear, wind light. October 9th, fourteen struck, six killed, 9 P.M.; very dark, wind N.W., fresh. November 4th, four struck, two killed; rain.

South Maidens.—July 16th, about eighty going N.E. August 1st, a flock going S.W.

Rathlin Island.—December 1st, hundreds all day. Numerous this season. 16th, hundreds.

Innishtrahull.—March 16th and 19th, Starlings about lantern, three killed striking.

Rathlin O'Birne.—August 26th, twelve, one killed. They often strike.

Killybegs.—November 4th, three struck 8 P.M.; caught alive. A continuous flight passed from 7.30 A.M. to 10 P.M., appeared to come from E. or S.E., and go W. or N.W. Four killed striking; gloomy, misty, wind strong N.W. 14th, about thirty, at 10 A.M.

Eagle Island, E.—November 19th, small flock came from land, and flew back. I only saw the one flock in the autumn; whilst in the autumn of 1884 they came in thousands.

Blackrock, Mayo.—November 2d, six about lantern during night, fog; 6th and 7th, Starling all day about rock.

Blacksod, January 16th and 22d, Starlings in flocks.

Arran Island, N.—October 10th, a flock on island. November 7th, two killed striking; 11th, four killed striking; overcast. December 7th, large flock going S.

Tearaght.—March 5th, one caught at lantern glass; 17th, one. April 17th, one. November 28th, several flocks on rock.

Skelligs.—March 17th, two on rock; gale from N.W., with misty rain. October 17th, a flock on rock; wind S.E., fresh. 31st, Starlings on rock. A few during November.

CHOUGH.

Mine Head.—October 29th, Choughs and Daws observed almost daily to January.

Rathlin Island.—May 7th, five remain.

Broadhaven.—August 11th, two Choughs, rarely seen.

Tearaght.—April 1st, Choughs all gone, except those which remained to breed.

Skelligs.—May 1st, a pair building on rock.

RAVENS.

Mine Head.—October 29th, two daily to date January 15th, 1886.

Rockabill.—June 13th, Ravens seen.

Rathlin Island.—March 12th, Ravens breed here. May 9th, two.

Arranmore.—September 26th, two Ravens. January 4th, 1886, two ; they remain here.

Broadhaven.—August 4th, one seen.

Blackrock, Mayo.—September 17th, three “small-sized Ravens.”

Straw Island.—October 13th, three.

Skelligs.—A pair frequently visit, but do not breed here.

HOODED CROW.

Dungarvan.—November 20th, two seen; rare here.

Rathlin O' Birne.—September 12th, Grey Crows, always. They build here in clefts of rocks.

Broadhaven.—June 22d, twenty-two “Grey-Backed Crows.”

Arran Island, N.—May 10th, two seen on island. June 10th, four. October 26th, four.

Straw Island.—March 29th, two Grey-Backed Crows.

Tearaght.—The Grey Crows and Choughs leave the island with their young for about three weeks or a month, and a few return afterwards.

Valentia.—A few noted in April, May, June, and December (Hooded and “Black-Hooded” Crows).

Skelligs.—A pair breed here.

ROOK.

Fastnet.—March 21st, two "Crows," 1 P.M.; wind N.E., going N.W. May 6th, two at noon about rock.

Mine Head.—Rooks constantly about.

Coningbeg Light-ship.—April 15th, two "Crows" going N.E.

Barrels Rock Light-ship.—December 21st, one "Crow" going N.W.

Tuskar Rock.—March 16th, one "Crow" going W. April 19th, five going N.W.

Arklow South Light-ship.—April 15th, one "Crow" going S.E.

Arklow North Light-ship.—March 27th and April 6th, two to four passed N. May 6th, three. November 7th, one alighted on deck.

Rockabill.—April 21st, "Crows." September 21st, "Crows."

Copeland (Mew) Island.—March 10th, two.

South Maidens.—March 11th, three "Crows" going E.; 28th, twelve ditto. August 1st, three.

Innishtrahull.—September 4th, "Black Crows" came from shore and flew back.

Broadhaven.—May 29th, one hundred.

Eagle Island, E.—October 10th, five seen; 23d, two. November 18th, fifty to sixty came from shore, and returned. December 23d, two. "I think these must be Crows from their harsh croak, very different from the caw of the rook."

Arran Island, N.—July 14th, four on island.

JACKDAW.

Arklow South Light-ship.—October 18th, flock going N.W.

Eagle Island, E.—November 19th, one; remained all day.

Blackrock, Mayo.—April 13th, nine flying S.

Valentia.—A few noted in June, September, October, November, and December.

MAGPIE.

Dungarvan.—April 30th, two seen.

Copeland (Mew) Island.—April 12th, one Magpie. May 12th, one.

Arranmore.—September 18th, one seen.

SWALLOW.

Fastnet.—April 16th, one all day; wind N.E. May 28th, four, for some days; two died on rock; wind S.E. June 1st, two; foggy. November 12th, two.

Mine Head.—Swallows from 21st September to 20th October.

Dungarvan.—April 23d, stragglings Swallows going N.W.; wind S.W.

Coningbeg Light-ship.—April 13th, one, and a few on 17th, 20th, 21st, 22d, 27th, May 7th and 10th. On May 27th, seven about ship. September, one to four seen. October 1st and 5th, flocks going S.; wind N.W., strong.

Barrels Rock Light-ship.—April 17th, Swallows (first seen) going N.; 22d, do. Also noted May 9th, 10th, 11th, 19th, 21st, 22d, and 25th, in every case going W.; wind variable. October 12th, two going S.

Tuskar Rock.—April 15th, one seen; 17th, in great numbers, 10 to 12 A.M., going N.W.; wind light S.E. They continued passing almost daily until June 1st, and generally in the forenoon. Direction of flight nearly always N.W. On May 27th a great number of Swallows and Martins arrived about 6 P.M.; seemed tired, one died on rock; stormy, with fog. September 4th, 23d, and 28th, Swallows in small numbers going N.W.

Arklow South Light-ship.—April 13th, one seen, and almost daily afterwards until date of sending schedule on May 12th. Largest flights, 20th and 21st April. In every case direction of flight was N.W., and apparently independent of wind. One found dead on deck, April 20th, and another on May 11th. September 20th, several flying S. October 25th, two seen.

Arklow North Light-ship.—April 12th, two about ship, and passing at intervals until May 16th, especially on 20th and 24th April. Direction of flight in every case N.W. September 29th, five going N.W.; wind W.

Kish Light-ship.—April 19th, seven going N. June 26th, two going S.

Rockabill.—April 15th and 16th, Swallows noted. May 24th, a large number arrived; wind light S., gloomy. October 6th, great quantities collected, and all left at noon.

Copeland (Mew) Island.—May 3d, three; 12th, fifty.

South Maidens.—April 26th, four. May 13th and 14th,

Swallows from this date to end of May continually on rock; then flying S.E. towards Mull of Galloway.

Rathlin Island.—April 18th, one about all day; 23d, two.

Dunree Head.—April 10th, Swallows arrived.

Arranmore.—July 3d and 4th, first seen about this station.

Killybegs.—April 10th and 14th, Swallows, six to ten flying about.

Broadhaven.—May 20th to 25th, Swallows going N.W.

Arran Island, N.—May 20th, two Swallows; 24th, one disabled. June 15th, two disabled; fog.

Tearaght.—May 12th, one; 17th, two; 22d, one found dead at N.E. of Island.

Skelligs.—April 17th, first seen to-day. May 13th, four; stayed three days. October 17th, a Swallow; "tail slightly, if at all, forked."

MARTIN.

Dungarvan.—May 23d, four.

Tuskar Rock.—May 27th, two Martins.

SWIFT.

Dungarvan.—June 29th, one seen.

Rathlin Island.—June 6th, three at station.

CUCKOO.

Dungarvan.—May 9th, one; first seen this season.

Copeland (Mew) Island.—April 22d, one seen.

Rathlin Island.—April 20th, one. May 2d, two seen.

Dunree Head.—May 2d, Cuckoo first heard.

Arranmore.—April 20th, one Cuckoo.

Blacksod.—May 15th, Cuckoo heard.

Straw Island.—May 8th, a Cuckoo heard, being ten days earlier than the inhabitants remember hearing it.

PIGEONS.

Mine Head.—October 26th to November 16th, one to six Rock Pigeons at intervals. December 9th and 11th, twelve to forty. January 6th, 1886, eight.

Arklow South Light-ship.—January 20th, one caught.

Rockabill.—February 2d, Pigeon seen. May 7th and 9th, some remaining. July 5th, a Carrier Pigeon, branded on the wings; is alive. September 20th, two white ones caught. October 7th, one caught.

Dunree Head.—June 12th, flocks of Pigeons about the cliffs.

Lough Swilly.—November 18th, large flock going W.

Rathlin O' Birne.—August 9th, two rested on eave of dwelling-house; one remained, and became quite tame.

Broadhaven.—April 29th, a large flock of Pigeons.

Blackrock, Mayo.—June 26th, ten "Sea Pigeons" about rock. November 8th, eight Rock Pigeons on rock.

Arran Island, N.—November 23d, seven Pigeons; first seen since I came to this station.

Straw Island.—May 23d, four Pigeons on island. July 29th, four. September 7th, do.

Tearaght.—February 20th, last of the Rock Pigeons left about this date.

Skelligs.—March 6th, one about rock.

PARTRIDGE.

Rockabill.—November 12th, a Partridge.

CORNCRAKE.

Mine Head.—October 1st, one seen.

Tuskar Rock.—April 17th, two on rock after the night. May 13th, two on rock, killed [Received.—R. M. B.].

Rockabill.—November 19th, a Corncrake.

Copeland (Mew) Island.—May 14th, a Corncrake, going S.W.

Rathlin Island.—May 12th, one "Spotted Crake." June 30th, another seen.

WATER RAIL.

Rockabill.—November 21st, a Water Rail.

WATERHEN.

Arran Island, N.—November 6th, one on island; must have come from the big island of Arran.

GOLDEN PLOVER.

Fastnet.—November 9th, two Plover; wind S., fresh.

Mine Head.—October 11th, December 11th, and January 7th, a few.

Rathlin Island.—December 7th, flocks remain here.

Tory Island.—"Grey Plover" noted March 22d and April 7th.

Arranmore.—October 22d, twenty-eight Golden Plover.

Rathlin O' Birne.—November 27th, four to twelve came from shore. Never seen here except in frosty weather.

Killybegs.—March 12th, forty seen.

GREEN PLOVER.

Fastnet.—March 15th, two on rock, and one drowned; wind E.N.E., fresh.

Mine Head.—November 16th, December 8th and 9th, seen. Always in frosty weather.

Dungarvan.—Flocks on October 23d, November 12th, 24th, and 30th.

Rockabill.—February 11th, Lapwing in flocks, going W. Some noted November 9th, 18th, and 26th.

Copeland (Mew) Island.—December 15th, seven flying N.

Arranmore.—October 16th, 28th, and December 29th, one or two Lapwing noted.

Rathlin O' Birne.—September 14th, Green Plover; seldom seen here.

Blackrock, Mayo.—April 17th, one Green Plover alighted.

Arran Island, N.—March 14th, forty Lapwing going N.

SEAPIE.

Dungarvan.—May 12th, large flock going N.W. June 2d, large flock on rocks.

Copeland (Mew) Island.—May 6th, two in vicinity. December 22d, fifty about island.

South Maidens.—May 3d, three on rock. 13th, two.

Rathlin Island.—Oyster Catchers are to be seen at all times.

Innishtrahull.—April 13th, six on island.

Broadhaven.—August 24th, large flock of Seapies. September 12th, a flock.

Eagle Island, E.—September 6th, two on rocks.

Arran Island, N.—April 14th, a flock of Seapie. July 16th, Seapies. August 10th, sixty. December 26th, thirty.

Tearaght.—March 7th, a pair observed; about island all summer.

Skelligs.—March 8th, one perched on rock. June 15th, a pair breed here. They laid three clutches, three eggs each, their first being taken.

WOODCOCK.

Copeland (Mew) Island.—December 15th, two killed striking.

South Maidens.—April 14th, one found dead after striking at midnight.

Arranmore.—November 8th, 15th, and December 21st, Woodcock noted. They are more numerous this year than for the past four years.

Rathlin O' Birne.—Noted December 1st and 9th. Seldom seen, as they have no cover on island.

Killybegs.—October 30th, 3 A.M., one killed striking; gale from S.E. November 18th, 2 A.M., another; wind strong, S.E.

Eagle Island, E.—November 9th, one killed striking, 11 P.M.

Tearaght.—December 8th, one on rock. 10th, one seen.

Valentia.—November 20th, one killed striking.

Skelligs.—October 10th, one on rock.

SNIPE.

Fastnet.—November 8th, two Jacksnipe killed striking; overcast, wind S., light.

Mine Head.—November 18th, four seen, and observed frequently.

Copeland (Mew) Island.—April 14th, six about island. November 5th, six remain. December 31st, eight.

Rathlin Island.—November 10th, three Jacksnipe. December 20th, twenty Common Snipe.

Arranmore.—October 25th, November 14th, and December 1st, Snipe noted. They are more numerous this year than for past four years.

Rathlin O' Birne.—September 18th, 30th, October 24th, and December 11th, Snipe noted, with the remark that they resort the island all the winter.

Killybegs.—October 20th, 2 A.M., one killed striking; misty.

Broadhaven.—April 16th, "a flock of Snipe" going N.

Eagle Island, E.—October 19th, one seen. November 9th, one killed striking.

Arran Island, N.—November 9th, two killed striking at midnight; misty.

Tearaght.—March 8th, one "large Snipe," and on other occasions during month.

"SEA LARKS," ETC.

Rockabill.—March 18th, "Sand Larks" flying about.

Copeland (Mew) Island.—April 14th, fifteen "Sand Larks" struck, 4 A.M., seven killed, night very dark. October 10th, twenty "Sand Larks" struck, ten killed, very dark; wind N., strong. November 3d, three struck, one killed.

South Maidens.—Towards middle of April "Sand Larks" visited us daily, and then flew to a rock near. May 13th, seven.

Rathlin Island.—"Sandpipers" at all times.

Innishtrahull.—April 13th, "Sand Larks" on island.

Arranmore.—June 8th, three "Sand Larks." They must have nest about station.

Rathlin O' Birne.—August 24th, they are always about island.

Broadhaven.—April 21st, twelve "Sea Larks" seen. September 2d, several. They breed near.

Eagle Island, E.—September 18th, five "Sand Larks." November 8th, seven.

Arran Island, N.—April 24th, eighteen "Sand Larks."

Straw Island.—May 26th, thirty on island.

REDSHANK.

Arran Island, N.—April 20th, twelve Redshank. July 21st, two. December 26th, twenty on island.

GREENSHANK.

Dungarvan.—November 17th and 23d, flock going N.E.

CURLEW.

Fastnet.—September 24th, one for several days on rock.

Mine Head.—July 29th, twelve Curlew going E. October 11th, four do. -

Dungarvan.—March 3d and 17th, large flocks going S.E.

Coningbeg Light-ship.—March 16th, flock passed over ship to N. May 2d, three; 3d, several going N.E. September 10th and 11th, a few going N.E.

Tuskar Rock.—April 18th, Curlew going N.W.

Arklow South Light-ship.—July 24th, one Curlew on deck. August 6th, a flock.

Arklow North Light-ship.—March 4th and 5th, two to four about lantern at night.

Rockabill.—April 14th, 15th, and 16th, Curlew.

Copeland (Mew) Island.—October 11th, fifty about.

South Maidens.—April 14th, Curlews in night over light-house. These birds are extremely cautious, rarely striking lantern. June 21st, a large flock going S.E.; wind N.W. Some noted July 18th, 28th, and August 8th.

Rathlin Island.—April 14th, a flock of Curlew at midnight.

Innishtrahull.—April 13th, fourteen Curlew on island.

Lough Swilly.—September 15th, four; 28th, large flock going N.W.

Arranmore.—September 12th, three.

Rathlin O' Birne.—November 21st, about twenty on rocks. They are always on island.

Killybegs.—November 19th, about twenty seen.

Broadhaven.—September 22d, several flocks alighted, twelve to twenty in each.

Eagle Island, E.—September 4th, four seen.

Blackrock, Mayo.—June 20th, flock of Curlew.

Blacksod.—January 16th, large flocks. May 2d, flocks.

Arran Island, N.—April 10th, ten Curlew going S. May 20th, forty; 30th, twenty. June 12th, thirty. August 10th, twenty. December 20th, forty.

Tearaght.—March 20th, one, and for a few days after.

WHIMBREL.

Dungarvan.—April 25th and 26th, large flocks flying high to N.W.; wind S.W. May 16th, small flocks going N.W.

Coningbeg Light-ship.—May 12th, flock of Whimbrel passed N.

Rockabill.—April 21st, May birds. June 26th, do.

South Maidens.—May 8th, "May fowl" going N.W.; 13th, large flock flying W.

Broadhaven.—May 16th, large flocks of "May birds" going N.W.

Straw Island.—May 17th, thirty "young Curlew" going N.E.

TERNs.

Tuskar Rock.—May 24th, Common Terns alighted on rock; 27th, passing S.W. in small numbers since 24th.

Copeland (Mew) Island.—May 26th, thirty "Pirrs or Sea Mews." Remain here until middle of September. September 17th, the "Sea Mews" left to-day.

Slyne Head, North.—May 8th, Terns arrived to build.

Arran Island, N.—May 19th and 20th, twenty to forty. September 10th, a flock.

GULLS.

Mine Head.—September 21st, Herring Gulls, young and old, and Kittiwake in vicinity to date 15th January 1886.

Dungarvan.—June 5th, one Skua Gull chasing birds in bay. November 4th, immense flocks in bay. December 3d, great numbers of Black-Headed Gulls in fields.

Coningbeg Light-ship.—May, Gulls of various kinds passed. March 14th, first Skua Gull this year.

Kish Light-ship.—June 10th, many flocks of Grey Gulls.

Rathlin Island.—March 4th and 6th, a few Black-Backed Gulls and flocks of Kittiwakes and Herring Gulls noted. June 12th, thousands of Herring Gulls. November 7th, thousands of Herring Gulls.

Arranmore.—February 6th, one Skua Gull remained two days.

Rathlin O' Birne.—August 9th, Royal Gulls breed on island.

Killybegs.—May 26th, a number of Gulls flying about.

Eagle Island, E.—September 27th, several Grey Gulls all day.

Blackrock, Mayo.—March 31st, "small Gulls visited rock to look at place to build." January 3d, 1886, some small Gulls after fry near rock.

Arran Island, N.—July 14th, large flocks all day.

Straw Island.—Numbers of Grey-Backed Gulls remain throughout the winter. September 19th and 21st, flock of young gulls going S.W.

Tearaght.—The Kittiwake remains long after the Puffin, Razorbill, and Guillemot are gone, but leaves before the Stormy Petrel. Only a few Herring Gulls breed on the island. They prey on the eggs of other birds, and carry them off in their bill without breaking them—Guillemots' eggs, some of which weigh eight ounces. They also carry off the young birds and devour them on a rock close by. On May 17th I saw one seize an old Razorbill, which was on a ledge with others, and carry it about 100 yards, when it fell into the sea. The "Mottled Gull," which I suppose is the young Herring Gull, was not seen since the 1st of May. They were seen again on August 5th, and will remain during winter.

Valentia.—September 29th, Skua Gulls seen. October 5th, twenty Skua Gulls.

Skelligs.—March 15th, adult Kittiwakes first appeared; 16th, first alighted on the rock, and took possession of old nests and building places. 23d, flock on water; came on rock again to-day. June 1st, one lesser Black-Backed Gull. "The only one seen for past two years." (? R. M. B.) 6th, Kittiwakes commenced laying. Great Black-Backed Gulls breed on Lesser Skelligs.

MANX SHEARWATER.

Mine Head.—December 27th, a few fishing.

Dungarvan.—March 23d, fishing in bay.

Coningbeg Light-ship.—March 14th, four about ship; first this year. April 16th and May 6th, several seen.

Barrels Rock Light-ship.—March 21st, first seen this year; going W.

Arklow North Light-ship.—April 26th, "Mackerel-cocks" about ship.

Rathlin Island.—March 17th, Shearwater seen.

Blackrock, Mayo.—September 22d and October 3d, thousands of "Manx Shearwater" going in one continuous stream to N.W. and N.; wind N.

Straw Island.—July 12th, eight "Mackerel-cock."

Tearaght.—March 7th, Shearwater first heard. May 11th, three on water, and were heard occasionally on dark nights up to September 1st. The Manx Shearwater breeds on Innishvicillane, an island three miles distant.

Skelligs.—March 2d, one struck 9.30 P.M., fell, but not killed; first appearance this year. May 1st, great numbers came on rock about 10 P.M.; weather thick. 8th, first egg seen to-day. August 27th, one young one caught after striking at 10 P.M. Shearwater often strike, but I never saw one killed; the same remark applies to Stormy Petrel. They generally strike during drizzling rain, seldom in a fog. 29th, heard at night for last time this year.

STORMY PETREL.

Fastnet.—October 20th, three about light; hazy, wind light, N.E.

Coningbeg Light-ship.—April 26th, one about ship, and at intervals to May 1st. May 9th, one; also on May 20th and 24th. September 15th, ten about ship; wind strong, W.S.W.

Barrels Rock Light-ship.—May 27th, one hovering about; wind S., stormy. September 12th, three going S.W.; wind strong. November 16th, one at noon about ship; wind strong, S.E.

South Maidens.—July 16th, one found alive on balcony.

Tearaght.—March 5th, one flew against glass. April 4th, one against glass. Observed as early as March 1st, but not plentiful until July. "If I said there were six or seven thousand here, it would be giving an idea of how plentiful they are." The eggs are laid about 15th June, and the first I observed hatched was on 10th August. They vomit a half-digested white matter as well as the oil; perhaps it is this they feed the young with.

Valentia.—May 8th, one caught at night. October 2d, one captured in yard. September 20th, one seen.

Skelligs.—April 21st, first appearance on rock in holes. May 13th, numbers about lantern at 10 P.M. June 15th, first egg seen to-day. A fortnight later than last year.

RAZORBILL.

Mine Head.—October 4th, young Razorbill diving, and on December 12th, 23d, and 27th, flocks flying towards S.W.; on latter date fishing in great numbers. January 15th, 1886, the young Razorbill is as plentiful here now as I ever saw them at the Tearaght.

Dungarvan.—May 13th, great number all day.

Arranmore.—Feb. 10th, Razorbills seen; wind strong, S.W.

Blackrock, Mayo.—Mayo 2d, flock around rock. 11th, alighted on rock.

Tearaght.—March 12th, first came on cliffs, young birds leaving about July 13th, old and young all gone August 20th. They were about as plentiful as on other years. They were observed taking the young on their backs in the same way as last year by Mrs M'Carron. The young birds leave in the evenings and at night. When they get to the water, the object of the old bird seems to be to get the young ones out to sea.

Skelligs.—March 13th, a few perched on rock for first time this year. March 16th, two "Blackbilled Auks" fishing around rock. First seen since 2d inst., when I thought they had all left. (These are young Razorbills.—R. M. B.) 23d, great numbers alighted on rock at 6 A.M.; wind S., strong. May 9th, first Razorbill's egg seen. July 20th, some leaving rock, young being fully grown. August 10th, all gone but a few.

GUILLEMOT.

Mine Head.—December 27th, one seen.

Barrels Rock Light-ship.—March 31st, large flock of "Murs" going E. December 31st, flocks of "Murs." January 9th, 1886, small flocks of "Murs" going E.

Rathlin Island.—March 28th, Guillemots and Razorbills.

Arranmore.—February 12th, Guillemots first observed.

Tearaght.—January 28th, about twenty observed at their breeding places. February 18th, a good many on the cliffs. Old and young gone on 17th August. About as numerous as previous year. The young leave in the night time.

Skelligs.—February 10th, first appearance 7 A.M.—They continued to increase up to end of month, alighting at daybreak, and leaving about 10 P.M. or noon, when they leave again, and reappear next morning. May 9th, first Guillemots eggs seen. July 20th, some leaving rock, young ones being fully grown. August 10th, all gone but a few.

PUFFIN.

Coningbeg Light-ship.—April and May, great flocks passed during these months.

Barrels Rock Light-ship.—March 26th, two "Sea Parrots." First seen this year. April 2d, "Sea Parrots" drifting with tide.

Rockabill.—October 4th, "Puffins."

Rathlin Island.—March 30th, Puffins.

Eagle Island, E.—September 28th, one "Sea Parrot" (young bird) swimming. "Did not notice any of these birds up to the present. October 1st, fifty to sixty; also seen on 8th, and from November 28th to December 1st, "continuous flights" are noted as going W. all day, skimming the surface of the water.

Blackrock, Mayo.—Flocks of "Puffins" noted March 4th, 7th, and April 6th. On 29th, "Sea Parrots alighted to look at building ground." On June 9th, "Puffins of all kinds on rock hatching." July 20th, "Sea Parrots leaving rock."

Clare Island.—April 11th, Guillemots and Puffins arrived to build.

Arran Island, N.—January 7th, flocks of "Puffins." Also on May 20th, all day; and on July 16th.

Straw Island.—April 7th, twenty-two "Puffins." "Sea Parrots" noted April 11th and May 1st, going E. July 10th, thirty "Sea Parrots." September 4th, ten "Puffins," looked very young.

Tearaght.—March 23d, Puffin in great numbers on water. 31st, observed on water at south side of island at 7 A.M., rose on island at 9 A.M. Again they disappeared until April 3d, and on the 4th they became permanent. The young birds were leaving on July 16th. This they never do in the day-time. They left August 15th. A white-headed Puffin was captured on June 2d. [Head received, greyish white.—R. M. B.]

Valentia.—October 1st, one taken in yard.

Skelligs.—March 26th, first appearance of Puffins flying; 31st, alighted on rock first time to-day; wind strong, S.W. April 24th, first Puffin's eggs seen. August 10th, Puffins left to-day *en masse*, except a few whose young are not matured.

GREAT NORTHERN DIVER.

Dungarvan.—April 8th, two swimming about. November 25th, two. December 1st, four.

Rathlin Island.—June 16th, two seen.

Straw Island.—April 23d, two Great Northern Divers. November 7th, two.

CORMORANT.

Mine Head.—January 15th, 1886, plentiful along the cliffs.

Dungarvan.—November 5th, numbers feeding.

Coningbeg Light-ship.—A few at end of April.

Rockabill.—October 4th, Cormorants.

Rathlin Island.—March 6th, Green Cormorants.

Dunree Head.—Cormorants never leave all the year round.

Arranmore.—February 5th and March 27th, Cormorants noted.

Rathlin O' Birne.—August 4th, twelve Cormorants. These birds are always in vicinity. The "Black Diver" came here in spring, and continued while fish were plenty.

Broadhaven.—June 30th, large numbers remain here this time of year. November 14th, they are here all the year.

Eagle Island, E.—September 26th, October 15th and 22d, seen.

Blackrock, Mayo.—May 25th and 29th, Cormorants alighted on rock near us. "When they flap their wings, it is a sure sign of storm."

Straw Island.—May 19th, four seen. July 31st, three.

Valentia.—A few Cormorants noted in April, June, October, November, and December.

Tearaght.—March 22d, two Green Cormorants, and several times after. On March 20th, "I observed a very strange specimen of the Cormorant. The crown of the head seemed flat, the whole length of the bill being in a line with it. The under part of the bill, at a short distance from the head, terminated abruptly; white in front of eyes, large black curved streak round eyes behind, grey round back of neck, crown of head a little tufted behind."

GANNET.

Dungarvan.—Entries on March 8th, May 20th, and June 20th. Direction of flight variable.

Coningbeg Light-ship.—March 13th, ten; 31st, five going E. During September Gannets at intervals passing ship, generally E.

Barrels Rock Light-ship.—March 24th, small flocks going S.W. September 22d, flocks going east. December 27th, 28th, 31st, and January 9th, 1886, Gannets noticed going in various directions.

Arklow South Light-ship.—Gannets noted February 14th,

19th, 20th, March 2d, 4th, 23d, and May 12th, in every case flying low to the N.E. August 16th and September 23d, flocks of Gannet.

Arklow North Light-ship.—February 24th, flocks going N. and S. March 23d, four passed N. During the month of April flocks of Gannets constantly passed, going N. May 19th, several flocks passed, going N.E. and S.W. October 27th, six going N.

Kish Light-ship.—A few Gannets going N. April 16th, 17th, and May 4th, and going S. on 29th May and June 17th.

Rockabill.—March 18th, April 21st, May 9th, Gannets seen. September 21st, October 8th, 12th, 22d, noted.

Copeland (Mew) Island.—March 25th, two—the first seen since last September. May 8th, eight seen.

South Maidens.—April, Gannets fishing.

Rathlin Island.—March 2d, 14th, April 3d and 6th, flocks going W. May 5th, small flock going W. all day; also on June 3d and 21st, going W. September 14th, a flock going W., and more or less every day this month.

Arranmore.—February 7th, Gannets going S.W. March 20th and May 23d, going E. and N.E.

Rathlin O' Birne.—Saw plenty in September.

Killybegs.—March 22d to 28th, a few going N. Noted in June fishing.

Eagle Island, E.—September 26th, and on frequent dates up to October 17th, Gannets in twos and threes and flocks, all going W.

Blackrock, Mayo.—Flocks noted March 22d, 25th, and May 19th. On July 2d, a few fishing. October 18th, 19th, and 20th, great numbers of Gannets going N. January 17th and 19th, 1886, two or three, the first seen since October 20th.

Slyne Head, North.—May 17th and 20th, large flocks of Gannets.

Arran Island, N.—January 8th, Gannets observed. July 14th, numbers of Gannets about.

Straw Island.—March 7th and April 3d, a few noticed.

Skelligs.—February 28th, Gannets first perched on Lesser Skelligs, their breeding station. June 15th, an unusual number this year. They must have come from the Bull Rock, owing to the erection of a lighthouse on it, which is now building.

HERONS.

Dungarvan.—March 27th, two flying inland; wind N.W.
October 26th, two.

Tuskar Rock.—March 14th, two going N.

Copeland (Mew) Island.—September 21st, two "Cranes."

Rathlin Island.—May 24th, two going W.

Eagle Island, E.—September 27th, one seen.

Blackrock, Mayo.—April 20th, two Cranes seen. July 12th, one.

Tearaght.—July 22d, "four Herons (?) flying about island, and for a few days. Was quite close to them. Never saw anything like them before. Tips of wings were black, which continued along inner side, forming a black fringe. There was a white spot at the angle of the wings in front."

Skelligs.—March 22d, a Heron seen; wind N., strong. July 22d, two Herons perched on rock; flew E. 26th, two seen.

GEESE.

Copeland (Mew) Island.—March 11th, twenty going E.

South Maidens.—March 19th, three Barnacle. August 25th, a flock of Barnacle going S.

Innishtrahull.—January, small flocks of Barnacle passing S.; also on February 10th, 15th, and 18th, one shot on 20th.

Lough Swilly.—October 8th, eighteen; 12th, large flocks passing N.

Tory Island.—March 23d and 28th, Barnacle passed.

Arranmore.—February 13th, Barnacle remain on island all winter. April 1st, some going N.W. October 3d, twenty-four going S.; wind W., strong. Barnacle also passed on 6th, 8th, 10th, and 18th to 22d.

Rathlin O'Birne.—October 4th, twenty-two alighted on island; shot two. November 7th, 16th, and 20th, Barnacle noted, "one being a gander, the first seen for last two years."

Broadhaven.—April 1st, a large flock of Wild Geese going S.W. December 22d, Wild Geese remain here until March.

Eagle Island, E.—October 19th, seven Barnacle going S.W. November 8th, about one hundred going S.W.

Blacksod.—January 17th, February 10th, and April 30th, noted.

Arran Island, N.—February 14th, twelve Wild Geese. May 18th, flock of Barnacle going N. July 19th, four “Wild Geese” going S.; 23d, five going N. October 10th, large flock of Barnacle going S.

Straw Island.—November 9th, eight Wild Geese going N.

Tearaght.—May 2d, thirty going N.; 17th, twenty ditto.

DUCKS.

Mine Head.—December 13th, one found dead near lighthouse.

Dungarvan.—April 14th, large flock of Teal going to sea. June 27th, thirteen Wild Duck on a rock near station. October 25th, flock of Teal. November 1st, large flock of Duck; 11th, a flock; 13th, large flock of Widgeon; 29th, numbers of Duck and Teal on water.

Tuskar Rock.—January 22d, one alighted on rock.

Arklow North Light-ship.—March 16th, 23d, and 24th, flocks of Ducks going N.

Copeland (Mew) Island.—April 12th, three; 16th, eight, May 6th, two Shelldrake. November 4th, four Wild Ducks. December 26th, twelve about island.

Rathlin Island.—December 9th, one Shelldrake. November 8th, one Pochard shot.

Dunree Head.—February 6th, 20th, 25th, and 27th, flocks passing station.

Lough Swilly.—October 30th, four seen.

Tory Island.—Ducks noted February 14th and March 17th.

Arranmore.—Ducks on island all winter.

Killybegs.—April 20th, two. About six pair nest in a bog near.

Broadhaven.—March 4th, flock of Shelldrake going N.W. 29th, five Wild Duck.

Straw Island.—March 5th, eight Wild Duck; 13th, six. October 17th, fifteen Wild Duck; 18th, two Shelldrake. November 5th, thirty Wild Duck.

MERGANSER.

Dungarvan.—April 5th, eleven going S.

BIRDS NOT IDENTIFIED.

Barrels Rock Light-ship.—May 21st, “observed a curious bird hovering around the ship. It was larger than a Thrush, and of a brown mottled colour, with a streak of white across each wing. It flew N.”

South Maidens.—May 13th, “a strange bird seen on rock, not as large as a Thrush, with a portion of the back yellow, white near the tail, which was dotted with yellow spots. I have not seen a bird resembling this one since I came to station.”

Tearaght.—On 12th April, a bird like the Great Shrike was observed.

Skelligs.—October 16th, “a small bird about the size of a Wren with a white spot on its forehead, flitting about amongst the lichen on the face of the rocks. It uttered a note like tzit, tzit, tzit, or tzee, a little sibilant in tone.”

Skelligs.—October 23d, a Starling? feeding on rock. A gale from N.E., with mist. This bird was spotted with white spots, the same as Morris's Nutcracker.”



