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REPORT

ON THE

MIGRATION OF BIRDS

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IN THE

SPRING AND AUTUMN OF 1881.

BY

MR. JOHN A. HARVIE BROWN, MR. JOHN CORDEAUX,

MR. PHILIP M. C. KERMODE, MR. R. M. BARRINGTON,

AND

MR. A. G. MORE.

---

“It is much to be wished that some of the light-keepers of our lighthouses would make notes of their observations concerning seals, whales, birds, fishes, and other animals. Such records would be valuable; and might not some of them occupy their leisure hours in the study of Natural History? . . . Interesting observations would then certainly be made, and new facts added to our stores of knowledge.”—  
‘CHAMBERS’S JOURNAL,’ p. 831; Dec. 23, 1876.

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1882.

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LONDON:

PRINTED BY WEST, NEWMAN AND CO.

HATTON GARDEN, E.C.

## P R E F A C E.

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THE following Report contains a summary of investigations of a Committee, appointed by the British Association for the Advancement of Science, at York, in 1881, to consist of Professor Newton, Mr. J. A. Harvie Brown, Mr. John Cordeaux, Mr. Philip M. C. Kermode, Mr. J. Hardy, 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 Migration of Birds at lighthouses and lightships, and of reporting upon the same at Southampton in 1882. Mr. Cordeaux to be the Secretary.

An abstract of the Report was read by Mr. Philip M. C. Kermode at the meeting of the Association, held at Southampton, in August, 1882.

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

PLATE I

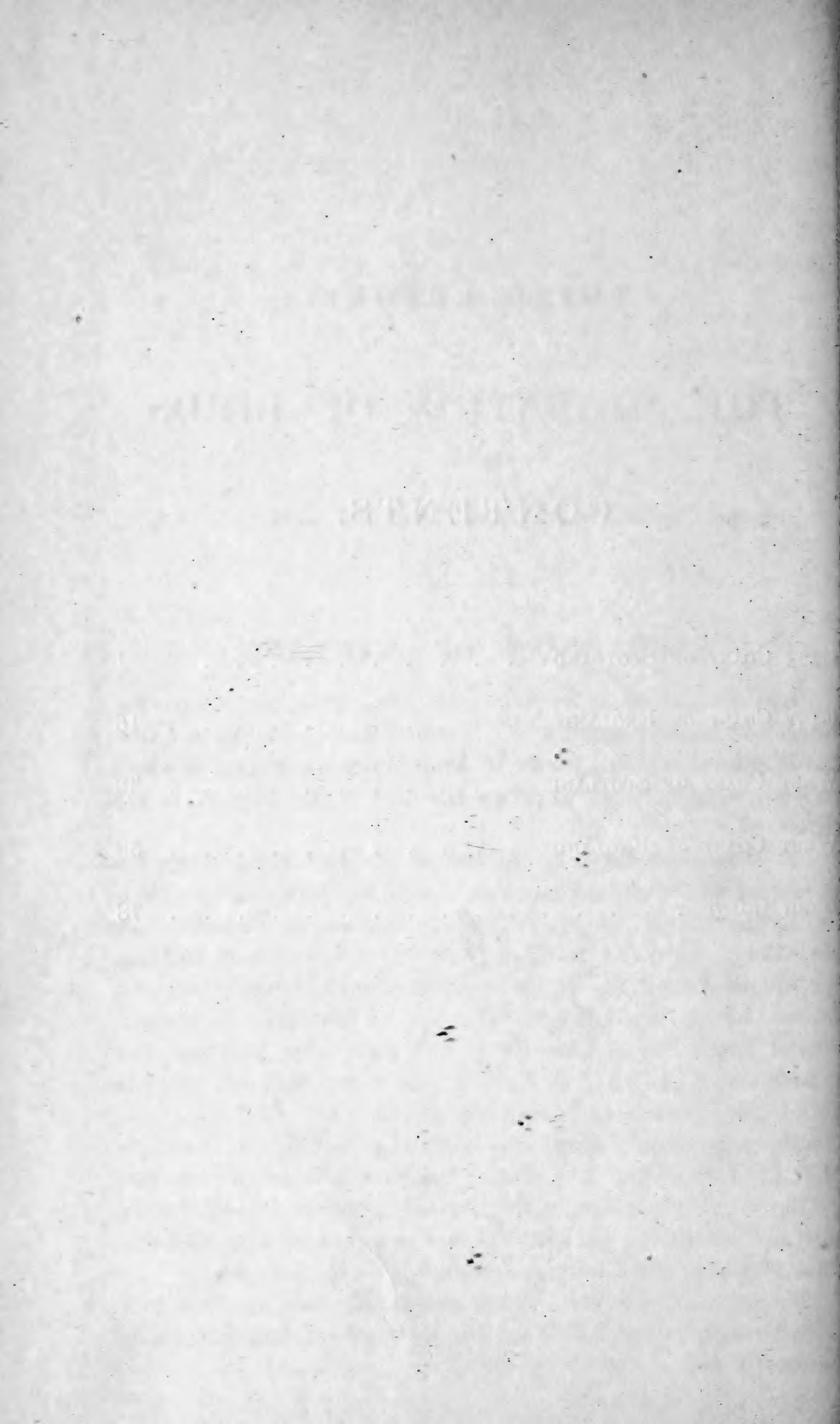
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THIRD REPORT:  
ON  
THE MIGRATION OF BIRDS  
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EAST COAST OF SCOTLAND.

ICELAND AND FAROE.—Schedules, &c., were, as before, forwarded to Iceland and Faroe. Returns have come from Faroe, the results of which I prefer to keep under a separate heading, as they usually come in when the rest of the Report is well advanced.

Of *Saxicolinæ* there is one record on May 13th, when one Wheatear was seen on board the 'Arcturus,' thirty miles east of the Orkney Isles. Of *Hirundinidæ*, one seen at Thorshavn on May 22nd. Of *Otidæ*, one Long-eared Owl was seen at Vivalvig, Strómó, on June 27th. Of *Ardeidæ*, one Night Heron, *Nycticorax griseus* (Linn.), was killed at Videreijde on May 4th. In autumn several Turtle Doves, *Columba Turtur*, were seen, and one shot at Nólso on Sept. 7th. Of *Rallidæ*, one Water Rail was killed in the hospital garden, at Thorshavn, on Oct. 31st. Of *Laridæ*, one Pomatorhine Skua (young), was killed near Kirkebó on Oct. 26th. Of *Rallidæ*, one Coot, *Fulica atra*, was shot at Nólso on Nov. 8th.

The winds prevailing at the time of the above records for the most part southerly and easterly in Faroe, but on May 13th and 22nd southerly and westerly, and also S.W. on Nov. 8th.

The usual papers were sent to twenty-six stations, as before. With Iceland, Faroe and Fair Isle we have on this line thirty stations in all.

Twelve stations on the East Coast of Scotland returned filled-in schedules, against eight last year—1880—out of the twenty-six. Many of these returns are very light, but those from Isle of May, Bell Rock and Pentland Skerries are unusually full, showing great highways of migration, and also that from Sumburgh Head. We shall have more to say on this in our general remarks at the end of the Report.

The stations are as follows, commencing in the north. The dates upon which the various stations have sent in returns are shown in the list by the positions of the asterisks preceding the consecutive numbers. The work done compares favourably with that of 1880, but we receive as yet only twelve returns from twenty-six stations; however short, others will be acceptable, even if only negative information.

Those sending no returns have not in all cases given reasons. Attention to this is earnestly requested (*vide* 2nd Report, p. 2).

The numbers are the same as in the 2nd Report, 1880, but another for Fair Isle has been inserted as "7 B."

#### EAST COAST OF SCOTLAND.

1879, '80, '81.

- |   |   |      |                             |         |                 |
|---|---|------|-----------------------------|---------|-----------------|
| * | * | 4.   | North Uist, Shetland ...    | 230 ft. | Robert Burnett. |
| * | * | 5.   | Whalsey Skerries, Shetland. | 145 ,,  | Neven Kerr.     |
|   |   | 6.   | Bressay, Shetland ...       | 105 ,,  |                 |
| * | * | 7.   | Sumburgh Head, Shetland     | 300 ,,  | John Wilson.    |
|   |   | 7 B. | Fair Isle ...               | ? ,,    | — Lawrence.     |

#### ORKNEY.

- |   |   |   |     |                       |        |                 |
|---|---|---|-----|-----------------------|--------|-----------------|
| * | * | * | 8.  | North Ranaldshay ...  | 140 ,, | John Tullock.   |
|   |   |   | 9.  | Start Point ...       | 80 ,,  |                 |
| * | * | * | 10. | Auskerry ...          | 110 ,, | John MacDonald. |
|   |   | * | 11. | Hoy Sound (Low) ...   | 55 ,,  | Alexander Harp. |
|   |   |   | 12. | Hoy Sound (High) ...  | 115 ,, |                 |
|   |   |   | 13. | Cantick Head ...      | 115 ,, |                 |
| * | * | * | 14. | Pentland Skerries ... | 170 ,, | D. MacDonald.   |

#### MAINLAND.

- |   |   |     |                            |                          |                        |
|---|---|-----|----------------------------|--------------------------|------------------------|
| * | * | 15. | Dunnet Head, Caithness...  | 346 ,,                   | David Laidlaw.         |
|   |   | *   | 16.                        | Holborn Head, Caithness  | 75 ,, David Charleson. |
|   |   | *   | 17.                        | Noss Head, Caithness ... | 175 ,,                 |
| * | * | 18. | Tarbat Ness, East Ross ... | 175 ,,                   | W. Davidson.           |
|   |   | *   | 19.                        | Cromarty, East Cromarty  | 60 ,, Robt. S. Ritson. |

1879, '80, '81.

- |       |       |                             |        |              |
|-------|-------|-----------------------------|--------|--------------|
|       | 20.   | Chanonry Point, Elgin ...   | 40 ft. |              |
|       | 21.   | Covesea Skerries, Elgin ... | 160 ,, |              |
|       | 22.   | Kinnaird Head, Aberdeen     | 120 ,, |              |
|       | 23.   | Buchan Ness, Aberdeen ...   | 130 ,, |              |
|       | * 24. | Girdleness, Aberdeen ...    | 185 ,, | John McGill. |
|       | 25.   | Montroseness, Aberdeen...   | 124 ,, |              |
| * * * | 26.   | Bell Rock, off Fife Coast   | 93 ,,  | James Jack.  |
| * * * | 27.   | Isle of May, Firth of Forth | 240 ,, | J. Agnew.    |
| * * * | 28.   | Inch Keith, Firth of Forth  | 220 ,, | R. Grierson. |
|       | 29.   | St. Abbs Head, Berwicks.    | 224 ;, |              |

Notes received from other sources will appear, as before, after the paragraphs on each species, as it is desirable to keep the two sets of observations distinct. I would also refer here to my "Third Report on Scottish Ornithology," already referred to in 'Migration Report, 1880,' p. 4, as having been read, but not yet printed (Feb. 1882).

Notes have been kept upon about 25 species of waterfowl and about 50 species of land birds by our reporters on the east coast.

Spring migration I have not kept distinct in this Report.

Obituary at each station, inappreciable at Scottish stations, will be noticed where necessary under General Remarks.

Owing to Mr. T. Anderson having been almost entirely sailing to and fro in the Mediterranean, I regret that I can show no returns this year from mid-Atlantic, which is to be regretted, as it would be instructive to learn what are the results of a contrary prevailing wind to that of 1880. Possibly, however, Mr. R. Gray may yet be able to give us some returns of interest culled from the Mediterranean log, which may raise other points of interest.

The following short notes on weather are compiled from the 'Times' Register for 1881, and checked by my own schedules:— A sudden change of temperature at the beginning of August, colder by about two degrees than July. Rainfall excessive over all Scotland, except northern half where it was less than average; cold and wet all August, about six degrees colder than corresponding period of 1880. Prevailing wind W., seldom veering to E., until Aug. 23rd; thereafter in Scotland prevailing E. and N.E.; on Aug. 31st N. winds prevailed, N.E., and continued till about Sept. 6th; thereafter W. and N.W. till 16th; then S. and S.E. till 21st; from 22nd to 24th E.; 24th to 30th S. to W.;

Oct. 1st to 10th S. ; 10th to 13th strong W. ; 14th gale from E., and continued E. and S.E. to end of month. S.E. to S. strong winds and gales, or light from Nov. 1st to 11th ; S.W. strong and a gale 15th and 16th ; frost on 17th ; 22nd S. to S.W. and W., heavy gales in N. and W. Unsettled, with frequent changes of wind and weather, many W. gales till end of month, and till Dec. 8th. N. and E. on both coasts from Dec. 9th to 12th, S. on 13th, and S. and W. on 14th ; S. and W. till 20th, when E. ; and W.N.W. on 21st. Prevailing W. and S.W. till end of month.

*Notes.*—Prevailing winds at the time of the rush of *Falconidæ* were W., veering from S.W. to N.W. in Aug. ; after 23rd E. ; on and after Aug. 31st till Sept. 6th N. At XIV., on Aug. 19th, a Sparrowhawk was seen sitting on the ground, and almost daily for some time after. The nearest breeding-place I know of is at Tongue, N. Sutherland ; wind at the time was light S., and weather clear. No doubt it is difficult to discriminate often between local and general migrations of Hawks by our data ; thus at XIV. also, on Aug. 23rd and 24th, a Sparrowhawk was seen flying south on the former date, and N.E. on the latter ; on the former date the wind was light S., on the latter N.E. ; this would therefore appear like a local migration.

The only addition to the list of stations is Fair Isle, No. 7 B.

In all spring records the numbers of stations begin at the most southerly, or with the higher numbers. In all autumn records the numbers of stations begin at the most northerly, or with the lower numbers. The maximum station, or station sending most returns of the species, is indicated when thought necessary.

**TURDIDÆ.**—Autumn : Records at Sumburgh Head, Pentland Skerries, Girdleness, Bell Rock, and Isle of May (maximum). Earliest at Isle of May, Sept. 22nd ; latest at Sumburgh Head, Dec. 8th. Rushes at Isle of May, Sept. 22nd to 30th (see notes *infra*) ; also Oct. 20th. Redwings and female Blackbirds migrating between 14th and 24th. Great S.E. gale on 14th. At Pentland Skerries, Fieldfares, Thrushes, and Blackbirds, Nov. 5th and 6th, flying N.E. all day ; -also smaller rushes at Sumburgh Head, Dec. 1st to 8th. Time of day : Mostly daytime, but night of 13th to 14th at Bell Rock. " Storm burst at 10.10 a.m. on 14th." Notes : A great rush of migrants took place at the

date of 22nd to 23rd Sept. at Isle of May (station 27), but no corresponding rush is recorded at Bell Rock (station 26). At Isle of May it continued all day. The weather was thick haze, approaching to fog, with a continuous downpour of rain; wind S.E. "All the birds seen to-day appeared perfectly bewildered." The following species occurred on 22nd alone: Thrushes, Redstarts, one Robin, one Blue-throated Warbler (*C. Wolfi*), Swallows, Chaffinches, one Nightjar (the first ever captured or seen here, and sent to me along with the Blue-throated Warbler and others), one Corn Crake (seldom seen here), Golden Plovers (large flock), Ringed Plovers, Lapwings, "rush" of Curlews, two Snipe, Sandpipers and Waders, and Dunlins. This great migration continued more or less all the latter part of September at this locality, during which time there appeared Yellow Buntings, Bramblings, Wheatears (or Stonechats), Pipits, and Wagtails; numbers of Robins on 23rd. N.B. Later in the report under these species I<sub>2</sub> will refer back to this note.

SAXICOLINÆ.—Spring: Bell Rock, and Whalsey Skerries. Wheatears. Earliest at Bell Rock, April 14th; latest at Bell Rock, May 2nd. Rush on May 2nd, at Bell Rock. General Notes:—Accompanied by many other species not recognised; on that day also a large bird struck, rebounded, and fell into sea.—Autumn: Whalsey Skerries, Sumburgh Head, Pentland Skerries, Bell Rock, Isle of May, and Inch Keith. Wheatears. Earliest at Sumburgh Head, Aug. 14th; latest at Pentland Skerries, Sept. 30th. Rushes scarcely appreciable, Aug. 22nd and 28th, at Whalsey Skerries, Sumburgh Head, and Pentland Skerries; and Sept. 24th and 30th, at Pentland Skerries, Isle of May, and Inch Keith. Rushes at Pentland Skerries on several dates. Besides Wheatears, Redstarts. Earliest at Isle of May, Aug. 22nd; latest at Isle of May, Sept. 22nd. Whinchats (or Blue Janets), also at Isle of May, Sept. 21st. Prevailing winds E. and S.E. General Notes (see under TURDIDÆ).

SYLVIINÆ.—Spring: Robins at Cromarty and Montroseness; only two records. Earlier at Cromarty, March 20th, but left same date; later at Montroseness, April 14th, flying about rock.—Autumn: Tarbat Ness, Cromarty, and Isle of May. Robins. Earliest at Cromarty, Sept. 16th, and were the first seen since March 6th (see Spring); latest seen Dec. 15th. At Tarbat Ness first seen Oct. 10th. Rush Sept. 22nd and 23rd, at Isle of

May (see Notes under TURDIDÆ); also Oct. 21st, at Isle of May ("appear to be very small specimens.") Mr. Agnew preserved one for me in spirits on Dec. 15th, but whether one of these small specimens I cannot as yet say. N.B. Spanish examples are known to be very much smaller than British (*vide* Howard Saunders and H. E. Dresser).

PHYLLISCOPINÆ.—Autumn: Gold Crests at Sumburgh Head, Tarbat Ness, and Isle of May. Earliest at Tarbat Ness, Sept. 10th (two seen); latest at Isle of May, Sept. 27th. Rush, a small one, Oct. 24th, 25th, and 27th, at Isle of May. General Remarks:—Mr. Agnew says, "I expect more," but no more appeared in his later schedules. A general movement of this species appreciable also about Sept. 10th to 13th.

PARIDÆ.—Spring: Tit. One record at Isle of May, April 23rd. General Remark:—One alighted on lantern at 11 p.m.—Autumn: Tits at Pentland Skerries and Inch Keith. Earliest at Inch Keith, Aug. 5th (a number at night); latest at Pentland Skerries, Oct. 6th (one all day). Another struck N.W. side of lantern of Inch Keith on night of 5th to 6th. General Remarks:—Aug. 5th, at Inch Keith (as above), "earlier than usual."

TROGLODYTIDÆ.—Spring: Common Wren. One record from Isle of May, March 19th.—Autumn: Sumburgh Head, Pentland Skerries, and Isle of May. Earliest at Sumburgh Head, Aug. 3rd (left); latest at Pentland Skerries, Nov. 16th. Others Oct. 6th and 8th. Rush (inappreciable) on these later dates.

MOTACILLIDÆ.—Spring: Bell Rock and Isle of May (only two). Wagtails. Earliest at Isle of May, March 12th; latest at Bell Rock, April 13th. General Remarks:—The latter "running over the rocks, but leaving at high tide, as all birds do that land upon these rocks" (J. Agnew).—Autumn: Pentland Skerries and Isle of May (three records). Wagtails. Earliest at Pentland Skerries (three all day), when a gale from N., Aug. 27th; latest at Isle of May, Sept. 24th, "when a few new-comers, having more white upon them than the few residents, appeared." Also occurred at Pentland Skerries, Sept. 10th. Pipits at Whalsey Skerries, Pentland Skerries, and Isle of May (few records). Earliest at Whalsey Skerries, Aug. 28th (following Sparrowhawk), but all left next day; latest at Pentland Skerries, Oct. 25th (six struck at night). Rush (on small scale) at Isle of May, Sept. 24th, 25th, and 26th. General Notes:—Mr. Agnew speaks of

some being always here, but additions on Sept. 24th. Possibly Mr. Agnew alludes, however, to Rock Pipits as the residents. The Meadow Pipit is probably the species first seen as additions on Sept. 24th. N.B. The Rock Pipit is a larger bird than the Meadow Pipit; please shoot one of the "resident birds" and then one of the "additions," and if carefully compared, I think Mr. Agnew will detect the difference.

HIRUNDINIDÆ. — Spring: Cromarty, Auskerry, Sumburgh Head, and Whalsey Skerries. First arrivals at Auskerry, May 1st (Martins and Swallows remained three days and then left); latest at Whalsey Skerries, June 27th (a few flying about). Rush hardly perceptible. General Notes:—At Sumburgh Head four pairs all summer; all disappeared on night of July 20th. That night one pair slept on the staircase-window.—Autumn: Whalsey Skerries, Sumburgh Head, Auskerry, Pentland Skerries, Cromarty, and Isle of May (a number). Earliest (see remarks under Spring Migration, *supra*, July 20th); latest at Sumburgh Head, Oct. 1st (one seen). No great rush appreciable, but flocks of Swallows and Martins seen at Auskerry Aug. 1st and 4th, and on 1st at Isle of May (one found dead previous night after heavy gales); (see Notes under TURDIDÆ, *supra*) part of a general rush of migrants.

FRINGILLIDÆ.—Spring: Isle of May, Bell Rock, Sumburgh Head (considerable movement). Linnets. Earliest at Isle of May, March 4th (asleep all night on doorway): two green Linnets. Latest at Isle of May, April 14th (seen). General Notes:—Two days previous "considerable number of Chaffinches, which are very unusual at this season; also one Bullfinch." From a remark of Mr. Agnew, that some of the latter breed on Isle of May, I suspect these "Linnets" will prove to be Twites or Mountain Linnets, *Linota flavirostris*? These Linnets are also noted at Bell Rock on April 10th, and at Sumburgh Head on March 7th.—Autumn: Sumburgh Head, Isle of May, and Inch Keith (large movement). Earliest (Grey Linnets) at Isle of May, Aug. 18th (mostly young, apparently in broods, in large numbers); latest at Sumburgh Head, Jan. 14th, 1882 (three seen). Rushes (Chaffinches) at Isle of May, Sept. 22nd to 26th (see Notes under TURDIDÆ). Brambling also on 24th (one sent me for identification). Siskin at Inch Keith, Sept. 25th. [General Notes:—A desultory migration, kept up of Linnets and Siskins

(which are rare on the Isle of May), occurred Oct. 4th and 5th. A Redpole on 8th, at Sumburgh Head.] A rush between Oct. 20th and 27th at Isle of May, during which time Redpoles (20th and 24th), Chaffinches (22nd), Bramblings (21st), one Siskin (27th), and Grey Linnets or Twites (24th), at Sumburgh Head; about fifty, along with ten Larks (see ALAUDIDÆ). Occasional birds seen at Isle of May:—Nov. 12th, one Siskin; 28th, one hen Linnet; and on Nov. 21st, at Inch Keith, one Siskin. On Dec. 3rd, at Isle of May, one Redpole, preserved in spirits (*vide infra*), and one Brambling, same time and place. On the 4th, Green Linnets at Sumburgh Head, and in Jan., 1882 (latest), three Green Linnets on 14th. In Shetland prevailing winds during the winter were from S.W., “and consequently no strange birds visited us.” A flock of Mealy Redpoles arrived at Lerwick, and took up their abode for a time in Mr. P. T. Garrick’s garden, at Prospect House. This movement doubtless belongs to the Spring Migration of 1882. In August unusually large flocks of Greenfinches were observed by Mr. Service near Dumfries; left after two weeks, and reappeared in January, 1882.

EMBERIZIDÆ.—Spring: Isle of May and Bell Rock. Earliest at Bell Rock, March 17th (one “Snowflake” flying from N.W. to S.E.); latest (and only other spring record) at Isle of May, April 9th (three “Mountain Sparrows” identified as Snow Buntings).—Autumn: Whalsey Skerries, Sumburgh Head, Pentland Skerries, Dunnet Head, Tarbet Ness, Isle of May, and Inch Keith, Snow Buntings, numerous records, and reported as unusually plentiful at many stations. Earliest at Isle of May, Sept. 24th, where, Mr. Agnew writes, “they are never plentiful”; latest, Dec. 10th to Jan. 28th, at Isle of May. Rushes at Whalsey Skerries, Sumburgh Head, Pentland Skerries, and Dunnet Head, Sept. 20th to 25th (note migration of other species at Isle of May, Sept. 22nd—see notes under TURDIDÆ). Rushes spasmodical, at different places, on different dates. Rush Dec. 3rd to 21st; after, stragglers (*i. e.*, flocks of forty or fifty).—Weather: In October winds S. and N.W., at Sumburgh Head, to fresh E. and N., cloudy, clear, or showery. In November S. gale on 4th at Pentland Skerries. Calm or N. on 9th, S.S.W. or S. on 14th, and on 17th S. or N. December variable from light S.W. at Isle of May to fresh N.E. and S.E., light W. and light



S.W. Besides Snow Buntings, a flock of about 250 Common Buntings are reported from Sumburgh Head on Nov. 6th ("a compact flock"), at 10 a.m.

ALAUDIDÆ.—Spring: A spring rush is reported at Bell Rock between Feb. 5th and 25th; or possibly this may only belong to migration of 1880. Great numbers of Larks (mixed with Rose Linnets, Starlings, and other species, from 2 to 5 a.m.; great numbers struck; wind on arrival light S.W., on departure fresh N.E., fog and rain. Feb. 18th, great numbers, all Larks, greatly exhausted, seen asleep, and others struck, but none found dead; wind light E.S.E., haze. On 19th, "small birds, not recognised, flew about for an hour, and left at dawn"; and on 25th great numbers, all Larks, much exhausted, at 1.30 a.m.; left after an hour's rest at dawn, flying N.W.—Autumn: Sumburgh Head, Pentland Skerries, Bell Rock, and Isle of May (numerous). Earliest at Sumburgh Head, Sept. 15th (breeds here, but left to-day); latest at Isle of May, Dec. 1st (two seen). Rushes at Isle of May, Sept. 24th; numbers on 25th and 26th, increased up to 27th; also at Pentland Skerries (accompanying Wheatears); also fewer on Sept. 15th, 16th, and 18th. Rush at Pentland Skerries, striking all night, Oct. 26th; stragglers on 1st and 8th.—Weather: Fresh S. wind Sept. 1st to 8th, to fresh S.E. and clear on 26th. Nov. 24th, at Sumburgh Head (along with Grey Linnets), fresh S., cloudy; and Dec. 1st, at Isle of May, two seen, as above recorded.

STURNINÆ.—Autumn: Auskerry, Pentland Skerries, Dunnet Head, and Isle of May. Unusually few, but all about same time. Earliest at Pentland Skerries and Isle of May, Oct. 20th and 21st; latest at Dunnet Head, Jan. 15th, 1882 (date of return of schedule). General Notes:—Resident all winter at many localities as at Auskerry ("all winter"). The scarcity of the Starling on migration this autumn is noteworthy (*vide* conditions of wind and weather as compared with other years).

CORVIDÆ.—Spring: Bell Rock and Isle of May. Earliest at Bell Rock, March 10th (seen on balcony-rail); latest, "five Rooks," at Bell Rock, flying about, May 1st. Rush (apparently, April 12th and 13th) at Bell Rock (Black Crows and a good many "Grey Crows" with them). On 16th, three Rooks flying N.—Autumn: Sumburgh Head, Pentland Skerries, and Isle of May. Earliest July 15th, at Pentland Skerries (mixed with Jackdaws);

remained till middle of August, and then disappeared; latest Nov. 10th, two Ravens at Pentland Skerries, flying W., but no Rooks after Aug. 15th. Ravens also at Pentland Skerries, July 29th. Hooded Crows. Earliest Sept. 14th, at Pentland Skerries; latest on Nov. 5th, at Pentland Skerries. Rush on Oct. 2nd, at Isle of May (large numbers).

CYPSELIDÆ.—Autumn: Only records at Sumburgh Head. Earliest Sept. 13th, five seen at 6 p.m., light N.W. airs, clear; next record Sept. 16th, one seen, light W., clear; latest Sept. 27th, one, light S.W., haze.

CAPRIMULGIDÆ.—Autumn: Only one record at Isle of May, where the first was observed, Sept. 26th, along with a great Rush of other migrants (see Notes under TURDIDÆ, *antea*).

STRIGIDÆ.—Autumn: Records at Aukerry and Isle of May. Earliest Aug. 25th, when one "Grey Owl" seen at Isle of May, fresh E., heavy rain, and haze; latest Dec. 19th, one reddish brown Owl, at 1 p.m., S.W., clear, at same station. Other dates, Oct. 15th to 11th, two Owls stayed three days, arriving at 4 p.m. on 15th, leaving at 4 p.m. on 18th, at Aukerry, N.W. gale, showers, and haze. Also Oct. 24th, one "light brown" Owl at Isle of May, S.S.E., showery; also Nov. 28rd, one seen at Isle of May, 3 p.m., S.W., clear.

FALCONIDÆ.—Autumn: Whalsey Skerries, Sumburgh Head, Pentland Skerries, and Bell Rock (all insular). Earliest July 28th, at Whalsey Skerries, one Hawk flying N.; latest Dec. 14th, at Isle of May, two "large Hawks." Rush in August and September, at Bell Rock, from which I have twenty-two returns in that time; never so many seen here before. Kestrels, principally at Isle of May, till Aug. 18th; latest Sept. 25th. Sparrowhawk. A rush at Pentland Skerries between Aug. 19th and 28th, or the same birds reappearing: all seen during the daytime, along with all other Hawks. Merlin, one on Sept. 22nd, at Sumburgh Head; another on Oct. 11th, feeding on Snow Buntings, shot; other two seen. Falcon, one seen flying S.W., at Pentland Skerries, on Oct. 10th. Buzzards one (by description) flying S. at Isle of May, Sept. 27th. "Large Brown Hawks," or simply "Hawks," occurring principally at Isle of May. A rush between Sept. 6th and 19th, with E. winds (see General Notes on weather). A great rush of Hawks, Eagles, &c., took place all over the country at the latter end of September. Amongst others the

following are recorded :—Ospreys, Harriers, Common and Honey Buzzards. Especially Fifeshire is noted (*vide* 'Field,' Oct. 8th, 1881, p. 514). Rough-legged Buzzards are recorded from localities in Forfar, Perth, and Stirlingshire, at similar stations as they usually appear at when their migration takes place, *i. e.*, along almost precisely the same lines.

PELICANIDÆ. — Autumn: Records from Sumburgh Head, Pentland Skerries, and Isle of May. Earliest July 1st, Gannets pass Pentland Skerries daily in flocks of twelve to forty, or singly, and continue till middle of September, which is the latest record I have. Rush past Pentland Skerries appears to have been on Aug. 19th, when 2300 were counted between daylight and dark, flying chiefly E., and very few going W. On Aug. 4th large numbers at 2 p.m., at Sumburgh Head, fresh breeze, cloudy. At this station Gannets are noted as very scarce all summer, owing, it is believed, to scarcity of herrings.

ARDEIDÆ.—Spring: Only one Heron recorded at Whalsey Skerries, on May 29th, 8 p.m., S.E. light airs, clear; fog from N.W. after 11 p.m.—Autumn: Records at Sumburgh Head, Pentland Skerries, and Isle of May. Earliest Aug. 16th, at Sumburgh Head, flying N., chased by Gulls, light E. airs; latest Nov. 24th, at Isle of May, one seen, strong S.W., showers: Rush Sept. 3rd to 6th, at Isle of May, during which time eight were seen, all flying S., and four on the 5th, came from N., alighted and remained; wind on 3rd fresh E., and haze; on 5th fresh N.E., clear; and on 6th light W., and haze (see Note, *infra*). Rush also on Oct. 12th, 13th, and 14th, previous to gale of 14th, but statistics scanty. All Herons seen at Isle of May almost invariably fly S. Prevailing winds at Isle of May, W., till gale on 14th from N.N.E.

ANATIDÆ. — Wild Geese. Spring: Records at Whalsey Skerries, Aukerry, and Isle of May. Earliest March 6th, at Whalsey Skerries, eight resting on island for several days, E. gale, and haze; latest April 21st, at Isle of May, large flock flying E., accompanied by Curlews.—Autumn: Records at Whalsey Skerries, Sumburgh Head, Aukerry, Pentland Skerries, Isle of May, and Inch Keith. Earliest "Wild Geese," Oct. 2nd, at Isle of May, thirteen flying W. in line. Earliest "Barnacle," only record, Aug. 12th, at Inch Keith, one flying due N.; latest "Wild Geese," Dec. 23rd, at Isle of May. Immense flock flying

N.E., 11.30 a.m., S.W., haze, approaching to fog; and another flock same day, at 12.30 p.m. Besides the above, one "Brent" Goose (?) is noted on Nov. 25th, flying N., with S.W. gale, and showers. Swans.—Spring: Records at Sumburgh Head, Pentland Skerries, and Bell Rock. Earliest Feb. 27th, at Sumburgh Head, two "Wild Swans," apparently much fatigued, flying S.; latest May 6th, a flock flying N.E. Autumn: Records at Sumburgh Head. Earliest Nov. 12th, at Sumburgh Head, eight flying S.E.; latest Dec. 25th, at Sumburgh Head, two resting on a lock near the lighthouse, where they frequently rest on their way south every year. Note:—If these are the same birds each year, it is interesting as proving the undeviating lines of autumn flight of waterfowl. Eider Ducks.—Spring: Whalsey Skerries only; noted as arriving at breeding haunts on March 9th. Autumn: Records at Whalsey Skerries, Auskerry, Pentland Skerries, and Isle of May. Earliest July 5th, when Eiders left the island at Whalsey Skerries. "The Drakes had left previously," light S., haze, and fog; latest Oct. 20th, at Auskerry, ten Eiders remained all day; they also remain at Auskerry all winter. Rush, largest number recorded at Pentland Skerries on Oct. 8th, when a flock of 100, mostly males, were seen swimming past the island, light S. breeze, and fog; and forty took shelter on Oct. 12th, at 9 a.m., at Whalsey Skerries, S.W. gale and rain; and all left next day. Sheldrake. — Autumn: Having remained here (Auskerry) all summer since end of June, leave in September or October. Records from Auskerry and Pentland Skerries. Earliest Aug. 27th, at Pentland Skerries, one found dead; latest Oct. 5th, at Pentland Skerries, flock flying S.E. Other dates, Aug. 31st, at Pentland Skerries, flying S.; Sept. 3rd, flying about light, not striking. Teal.—One on Sept. 21st, at Isle of May, another at Pentland Skerries, on Oct. 8th. Wild Duck at Isle of May, Sept. 24th, Oct. 4th, and Nov. 21st. Long-tailed Duck at Sumburgh Head, Nov. 12th (about twenty). On Sept. 12th Tufted Ducks were abundant on Loch Leven,—the most abundant species there,—and the young were not able to fly, "some being not larger than a Water Rat." Other species seen were Scaup, Golden-eye, Pochard, Teal, and Mallard (P. D. Maloch (*in lit.*)).

RALLIDÆ. — Corn Crake. Spring: One arrival noted at Cromarty on May 19th. Autumn: One in Isle of May, Sept.

22nd (seldom seen here; *vide* Notes under TURDIDÆ); also Oct. 22nd, at Isle of May, and one at Pentland Skerries; the two dates are both dates of rushes of other migrants. The Spotted Crake has been recorded at several land stations, and found to recur at several where it occurred before. Thus one at Aberuthven Wood this season, and one at the same place three years ago (P. D. Maloch, *in lit.*).

CHARADRIADÆ.—Golden Plover. Autumn: Whalsey Skerries, Auskerry, Pentland Skerries, Dunnet Head, and Isle of May. Earliest Aug. 3rd, at Pentland Skerries; latest Dec. 23rd. Rushes Sept. 21st and 22nd, at Pentland Skerries and Isle of May; also on Oct. 17th and 18th, at Sumburgh Head and Auskerry. Oystercatcher. — Spring: Arrived Feb. 24th at breeding haunts on Whalsey Skerries; two recorded at Isle of May, on April 12th. Autumn: Records mostly in August, at Whalsey Skerries; left Whalsey Skerries on Aug. 26th; scattered birds seen at Isle of May between 8th and 25th; three records. Lapwing.—Spring: Arrivals in April 1st to 15th, at Whalsey Skerries and Isle of May. Rushes about 1st and 11th, scarcely perceptible. Autumn: Pentland Skerries and Isle of May. Earliest Aug. 27th, at Isle of May; latest Nov. 22nd. Rush past Isle of May, Sept. 22nd; "large numbers," by description, flying high (see TURDIDÆ). Ringed Plover.—Only date given is Sept. 22nd, at Isle of May, by description (see TURDIDÆ).

SCOLOPACIDÆ.—Curlew. Spring: One record at Isle of May, March 4th, four flying N.E. Autumn: Sumburgh Head, Pentland Skerries, and Isle of May. Earliest July 20th to 30th, at Isle of May; latest Dec. 31st, also at Isle of May. Rushes Sept. 22nd, at Isle of May, numbers; and at Pentland Skerries, a few. Maximum of records at Isle of May, but in all not many. Woodcock.—Autumn: Sumburgh Head, Pentland Skerries, and Isle of May. Earliest at Isle of May, Sept. 22nd; latest, beginning of December. Rush Oct. 20th, and for some days previous; also arrival same day of many Redwings (see TURDIDÆ). Snipe.—Autumn: Pentland Skerries and Isle of May. Earliest Aug. 31st, at Isle of May, one rose off island and flew away S.; latest Dec. 21st, at Isle of May, one seen. Rush scarcely appreciable, but appeared also on Sept. 22nd, at Isle of May. Records mostly of single birds; these two species exceedingly scarce this autumn; severe winter of 1880-81 killed many, and

severe spring interfered with breeding. "Sandpipers."—Autumn: Pentland Skerries and Isle of May. Earliest Sept. 22nd, at Isle of May, a number (see under TURDIDÆ); latest Dec. 17th, also at Isle of May, large numbers. Rushes on these dates at Isle of May. Stragglers: species recognised and named: Dunlins, Redshanks (probably), Common Sandpiper.

LARIDÆ.—Terns. Spring: Arrived at Whalsey Skerries, Pentland Skerries, and Cromarty (Lesser Tern). Earliest May 28th, at Whalsey Skerries; and at Pentland Skerries, "arrived after hatching!" May 12th, and remained till August; belongs to an autumn movement (?); also at Cromarty, arrived on June 15th, left Aug. 20th. Terns appear irregular in hatching and dates of leaving various stations; but most left all stations in August, and recorded at Isle of May, passing S. Sept. 12th, 22nd, and 28th. Kittiwakes arrived in spring, at Isle of May, March 12th; only other record, in autumn, Sept. 22nd, at Isle of May (see TURDIDÆ); remained all August there, left end of month. Other species noted—Great Black-backed Gulls, flying S., Aug. 13th; large white Gulls, wheeling round Isle of May, Aug. 25th; Skuas (well described), Sept. 15th; and Oct. 19th and 29th, at Pentland Skerries, where they are "very rare." Note:—Skuas, Pomatorhine Skuas frequented the Hebrides most of the summer; I (J. A. H. B.) saw several west of Lewes, and one near Island of Rum in end of June. Iceland Gull.—A flight in December. Earliest Dec. 1st, at Sumburgh Head; latest 28th, at same place; and on 25th, same place, two, accompanying Swans. Storm Petrels.—At Whalsey Skerries two records, March 29th and June 22nd, in foggy weather, flying about lights. Autumn: Only one record of Fork-tailed Petrel at Isle of May, Aug. 15th, which struck, and was killed and sent to me, of which I now have the skin. Two pairs Common Petrel bred at Auskerry.

ALCIDÆ.—Razorbills. Spring: Whalsey Skerries and Isle of May, along with Guillemots. First arrivals at Isle of May, Feb. 25th. "Invariably arrive at Isle of May, remain a day or two, and leave again." Second visit March 16th, at Isle of May; arrived on third visit to breed, April 15th, but at Whalsey Skerries not till 30th. N.B. Dates of arrival, and of preliminary visits from all rock bird stations in Scotland, much desired by committee. Autumn: All left Sumburgh Head on Aug. 6th; all left Whalsey Skerries on Aug. 15th. Unusually large rush,

flying S., passed Pentland Skerries on Nov. 12th ; at this station they pass almost daily, but this is date of general stampede. Hundreds swimming round Isle of May on Dec. 15th, the latest noted record here this year ; and Mr. Agnew considers their numbers at this late date quite unusual. Besides the 75 identified species, or thereby, I have innumerable records of species which cannot be recognised by description ; and especially numerous are the records from Isle of May, Mr. Agnew being very desirous of learning more about them. He sent me numerous birds for identification ; amongst those not sent or recognised, two birds, "never before seen," resemble a Cuckoo in every respect, but smaller ; others, called "Redtails" (? Redstarts), came in a flock on June 3rd, and stayed till July 2nd. A great many entries are simply "small birds" from Aug. 16th and 17th, and Sept. 14th to 30th. On Oct. 25th "a few more pretty birds, with red breasts, forked tails, and two black stripes on head." On Oct. 27th, one "pure white down belly and round back, black spot a little above tail, wings on top side a dun black, head and neck same, red legs, bill like a Starling, size of a Plover." Again on Nov. 2nd, two, "the general colour that of a Lark, same size, three dark or black stripes down back, and one white feather each side of tail." It is worthy of remark that these unknown species struck most during easterly breezes (J. A. H. B.) I trust another season to be better prepared to have some of these identified. I have only mentioned them here to draw attention to the fact that probably rare things, like the Blue-throated Warbler (*C. Wolfi*), may turn up. I might easily offer suggestions as to what these unnamed are, but I do not think any practical use would come by doing so.

#### GENERAL REMARKS.

I have embodied all remarks on both coasts at the end of the Report on the West Coast of Scotland, to which I refer my readers.

## EAST COAST OF ENGLAND.

PRINTED forms of enquiry and letters of instruction were sent to thirty-four lighthouses and light-vessels on the east coast of England, and two stations on the Channel Islands, thirty-six altogether against thirty-seven in 1880, and returns have been received from twenty-five.

Independent reports have also been sent in from Heligoland, Seaton-carew and Redcar, Flamborough, Spurn, North-east Lincolnshire, and Northrepps, making a total of thirty-two reporting stations against thirty-eight in 1880.

My best thanks are due to H. Gätke, T. H. Nelson, C. Donald Thompson, Matthew Bailey, William Eagle Clarke, H. Bendelack Hewetson, M.D., J. H. Gurney, jun., Colonel Russell, and G. P. Hope, for many interesting notes sent in, and for general kind co-operation and assistance in the enquiry.

Special thanks is also given to the various observers on the lighthouses and light-vessels whose names are given in the Report; and it is to be regretted that no less than eleven stations, from causes unknown to the writer, have failed to make returns, more especially as some of these were amongst the best returning stations in 1880. It is much to be hoped that this year the returns will be more numerous and complete.

The east coast stations are as follows, those making returns being marked with a star (\*):—

Longstone L.H.†			
*Inner Farne L.H.	...	...	Thomas H. Cutting.
*Coquet Island L.H.	...	...	William Evans.
*No. 5 Buoy, Teesmouth L.V.	...	...	Henry Harbord.
*Whitby, High, L.H.	...	...	John Odgers.
*Flamborough Head L.H.	...	...	Charles Hood.
*Spurn Point L.H.	...	...	James B. Smith.
Spurn (Newsand) L.V.	...	...	

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† For nature of light, and position and description of station, see previous Reports.



*Outer Dowsing L.V.	...	...	...	Samuel Sheet.
*Inner Dowsing L.V.	...	...	...	William King.
*Dudgeon L.V.	...	...	...	Thomas Dale.
*Lynn Well L.V.	...	...	...	George Rees.
*Hunstanton L.H.	...	...	...	William Westmoreland.
*Cromer L.H.	...	...	...	Richard Comben.
*Leman and Ower L.V.	...	...	...	Charles Perfremont.
*Hasbrough L.V.	...	...	...	John Nicholas.
Hasbrough L.H.	...	...	...	
Newarp L.V.	...	...	...	
Winterton L.H.	...	...	...	
*Cockle L.V.	...	...	...	Samuel Pender.
Orfordness L.H.	...	...	...	
*Corton L.V.	...	...	...	W. T. Cotton.
*Shipwash L.V.	...	...	...	Thomas Randule.
*Galloper L.V.	...	...	...	John Qusted.
Kentish Knock L.V.	...	...	...	
*Swin Middle L.V.	...	...	...	Thomas Barrett.
*Tongue L.V.	...	...	...	Robert Crancher.
*Nore L.V....	...	...	...	George Ladd.
North Foreland L.H.	...	...	...	
Goodwin L.V.	...	...	...	
*Gull L.V....	...	...	...	{ Francis Harvey and Anthony Collins.
*Southsand Head L.V.	...	...	...	{ J. C. Leggett and J. G. Fornman.
*Eastside L.V.	...	...	...	Thomas Rees.
South Foreland L.H.	...	...	...	
Casquets (Alderney) L.H.	...	...	...	
*Hanois (Guernsey) L.H....	...	...	...	Charles Williams.

## SEPARATE REPORT ON EACH SPECIES.

Song Thrush, *Turdus musicus*, Linn.—Spring migration observed at one station only on the east coast. May 2nd, some seen at Inner Farne L.H., with Blackbirds and one Ring Ouzel, E.N.E., mist and rain. In the autumn occurred at the majority of stations from Inner Farne L.H. to Hanois L.H., off Guernsey: earliest date Nov. 2nd, at Flamborough L.H., several round lanterns during night with Larks and Starlings; latest, Nov. 30th, Heligoland, passing all day with Fieldfares. Greatest number occurred between Oct. 18th and 23rd at Inner Farne L.H.,

Flamborough Head L.H., and Dudgeon L.V., wind E.S.E., S. Migration extended over about two months, line of flight generally E. to W.

Redwing, *Turdus iliacus*, Linn.—First at Cromer L.H. on August 1st, 3 a.m., five killed; last at Inner Farne, Nov. 1st, all day with Thrushes. Great rush, Oct. 18th to 22nd. Migration extending over three months.

Fieldfare, *Turdus pilaris*, Linn.—First, Cromer L.H., Sept. 14th, 1 p.m., fog and rain, two killed; last, Heligoland, Nov. 30th, great many passing; also same date at Inner Farne L.H., two flocks to W.N.W. Oct. 19th, at Teesmouth, before day-break, several were heard “chuckling” high overhead by fishermen going out to sea, flying S.W. to W., wind E., strong rain. The Fieldfare has been most exceptionally scarce on the English coast during the autumn and winter.

White's Thrush, *Turdus varius*, Pall.—One early in January, 1882, at Waplington Manor, near Pocklington, Yorkshire. (Zool., 1882, p. 74.)

Blackbird, *Turdus merula*, Linn.—Spring migration observed at Cromer on Jan. 29th (1881), 4 a.m., fog, two at lantern; and also, Feb. 5th, six at midnight, three killed. At Inner Farne L.H. they were seen in some numbers at 8 a.m., on May 22nd, with Thrushes. No Blackbirds crossed Heligoland in the autumn. On English east coast they were noted at several stations from Inner Farne L.H. on Oct. 2nd to the 28th at Hanois, several striking there at 10 p.m. A great rush at several stations from Oct. 21st to 25th inclusive, wind E.S.E., strong. During the first week in November large numbers were observed in North-east Lincolnshire, direction of flight E. to W. and S.W., and E.S.E. to N.W.

Ring Ouzel, *Turdus torquatus*, Linn.—Inner Farne L.H., one, May 2nd. In the autumn, at the same station, Oct. 3rd, one; and at several stations from Oct. 23rd to 25th, when there was a rush. None are recorded after this date, except one at Inner Farne on Nov. 30th. Migrate like the rest of the *Turdinæ*, both by day and night, and in the same direction.

Common Wheatear, *Saxicola ænanthe* (Linn.).—In spring of 1881, first at Hunstanton L.H., March 25th, several all day, and four days later at Inner Farne, 9 a.m., N.N.E. (four), snow, several; many, same station, first week in May. In the autumn,

first at 5th Buoy, Tees L.V., on Aug. 18th, great many, and subsequently, up to end of first week in September, large numbers at several stations observed passing along east coast southward. At Spurn, on Sept. 14th, passed in thousands, and still far from scarce on 17th. From Heligoland Mr. Gätke reports, under date Sept. 3rd:—"Numbers of small birds at the lighthouse from 3 a.m., at which hour the weather moderated with a change from N.E. to E. by S.; all day multitudes of *phœnicurus*, *trochilus*, *luctuosa*, *E. hortulana*, *A. arboreus* and *pratensis*, *S. œnanthe*. Night, from 3rd to 4th, great numbers of above caught at lighthouse: among forty-nine *œnanthe*, but three old; amongst forty-seven *phœnicurus*, eleven old."—"MEM. *Trochilus* turned up after midnight; *phœnicurus* and *œnanthe*, multitudes of young males, early in the night (later also); but the few old birds appeared later after midnight."—Spring migration, 1882, March 19th, Spurn, several seen.

Whinchat, *Pratincola rubetra* (Linn.).—First week in September, many, with Wheatears in the North-east Lincolnshire marshes.

Stonechat, *Pratincola rubicola* (Linn.).—Great numbers at Whitby L.H. on April 3rd. In the autumn, first on Northumberland and Durham coast, Sept. 8th and 9th, and Spurn, Sept. 15th; last, at Inner Farne on Oct. 26th, E.S.E. (three), two seen.

Redstart, *Ruticilla phœnicurus* (Linn.).—The migration of the Redstart seems so inseparably connected with that of the Wheatear that it is difficult to disconnect the two. On May 1st one killed at Hunstanton L.H., 11 p.m., S.W., o.m. In the autumn, in August, September and October, at many stations, the main body passing south in early part of September with the Wheatears. On the 4th they were observed in great numbers along the line of sandhills, near the entrance of the Humber, generally young of the year, only four old males being seen. At Heligoland, in August and first half of September, a great many passed, and on 17th immense numbers; on 10th with *M. luctuosa*. At Teesmouth (Redcar) a considerable flight came in on Sept. 22nd, during night or early morning, wind E., gales and very stormy; all were young birds, males and females; last observed at Inner Farne on Oct. 23rd, E.S.E. (seven). The latest immigrations were associated with Redbreasts.

White-spotted Bluethroat, *Cyanecula leucocyana* (Brehm.)—On Sept. 3rd an immature bird was shot by Mr. Power at Cley, Norfolk. Another, also immature, is recorded by Mr. J. A. Harvie Brown, in the Report from the east coast of Scotland, captured at the Isle of May lighthouse on the night of Sept. 22nd.

Redbreast, *Erithacus rubecula* (Linn.).—March 5th, day-break, at Whitby L.H., many Redbreasts. The first occurrence in the autumn, September 5th, at the 5th Buoy, Tees L.V., when one came on board. At the Leman and Ower L.V. large numbers passed to W. with Wrens on Sept. 22nd. Same date, and to the 25th, many at the Inner Farne L.H. Whitby on 20th. Also occurring at several stations through October in considerable numbers, as far south as the Inner Dowsing L.V. Very large numbers at Spurn, from October 2nd to 8th; on the 3rd so worn out with a N.E. gale they might be caught by hand. Some crossed Heligoland on Oct. 24th. Migration extending over two months.

Whitethroat, *Sylvia rufa* (Bodd.); Lesser Whitethroat, *S. curruca* (Linn.); Blackcap, *S. atricapilla* (Linn.); Garden Warbler, *S. salicaria* (Linn.).—One common Whitethroat killed, Cromer L.H., Feb. 21st, 1881, N.E. (4), o.m. Spurn, Sept. 3rd, Warblers of all kinds abounded. Greater and Lesser Whitethroats, Blackcaps, and Garden Warblers:—At Teesmouth (Redcar), Sept. 22nd, several, E. gale and rain. Spurn, one male Blackcap on Oct. 8th. Some Whitethroats passed Heligoland on Oct. 24th. On the English coast the migration of the *Sylvianæ* is carried on during August and September; the main body passing south with great regularity in the first week in the latter month.

Gold-crested Wren, *Regulus cristatus*, Koch.—Spring migration on March 19th. Cromer L.H., two killed against lanterns, 3 a.m., W. (four), b.c.m.; and at Hunstanton, April 14th, 2 a.m., one, with a Flycatcher, killed. In the autumn Goldcrests first observed at Hanois L.H., Sept. 1st, midnight, o.m., along with Whitethroats; several killed. Subsequently throughout October, both by day and night, at stations from the Inner Farne L.H. to the Tongue L.V., off the Thames. A great many Goldcrests crossed Heligoland from Oct. 18th to 24th, E., clear, fine, but fresh. The arrival of Goldcrests at Spurn as early as Sept. 5th,

associated as usual with Woodcocks and Short-eared Owls (three widely separated species, which are, however, inseparably connected in their migrations), is remarkable, as being one month in advance of their average time. On the Suffolk coast, in great numbers from Oct. 12th to 17th.

Willow Wren, *Phylloscopus trochilus* (Linn.).—At Spurn, last week in August, immense numbers of Willow Wrens passed on migration along sandhills.

Long-tailed Titmouse, *Acredula caudata* (Linn.).—Heligoland, Oct. 22nd, S.E. gale, some; *Parus ater*, Linn., a few; *Parus borealis*, De Selys, Nov. 10th, one seen, but not obtained.

Great Titmouse, *Parus major*, Linn.—Oct. 7th to 17th, many in N.E. Lincolnshire.

Blue Titmouse, *Parus cæruleus*, Linn.—Inner Farne L.H., Oct. 20th, E.S.E. (five), many.

Common Creeper, *Certhia familiaris*, Linn.—Inner Farne, Oct. 5th, squally, one shot; was running rapidly up a stone wall near lighthouse at time.

Common Wren, *Troglodytes parvulus*, Koch.—At Cromer, night, April 9th, one killed against lantern. First at Flamborough in the autumn; July 17th, several round lantern all night, o.m.; the next notice is Aug. 12th. Shipwash L.v., from noon to 2 p.m., large numbers with Redbreasts to W.N.W. Aug. 21st, again at Flamborough, many round lantern all night. Spurn L.H., 10 p.m., three killed, in company with other small birds. Flamborough, Sept. 7th, again during the night, many with Wheatears around lantern. At the Leman and Ower L.v., Sept. 22nd, large numbers during day, with Redbreasts, to W. Last occurrence was Inner Farne L.H., Oct. 4th, many. Migration extending over eighty days.

Wagtails, *Motacillidæ*.—March 8th, at Whitby, many Pied Wagtails, 9 a.m. Oct. 20th, Hanois L.H.; 9 p.m., E.S.E. (six), o.m., many, with Thrushes, striking glass.

Meadow Pipit, *Anthus pratensis* (Linn.).—April 15th, at the Dudgeon L.v., one, with a common Sparrow, came on board, leaving again for W. In September large flocks continued to arrive at intervals in North-east Lincolnshire, and pass on; and again on the 13th, at Spurn, there was an extraordinary migration going on all day from N. to S.

Tawny Pipit, *Anthus campestris* (Linn.).—Considerable num-

bers at Heligoland in September, much more than have been seen for years.

Richard's Pipit, *Anthus richardi*, Vieill.—Up to Oct. 18th, at Heligoland, several seen, and about half a score of young birds shot; Oct. 24th, two; 26th, one. E., fresh, cold.

Great Grey Shrike, *Lanius excubitor*, Linn.—Several, Spurn, in October; one seen by me there, Oct. 24th, and another with a Redbreast in its beak. One occurrence, first week in same month, on the Lincolnshire coast. Six together were noticed by Miss M. M. Smith, near the lighthouse, at Spurn, on Feb. 17th, probably on the spring migration to the Continent.

Waxwing, *Ampelis garrulus*, Linn.—Small flock on Westwood Common, near Beverley, on Nov. 3rd. Several at Heligoland, from Dec. 12th to end of month.

Flycatcher, *Muscicapa*?—Dudgeon L.V., April 12th, twenty-five Flycatchers to W., wind S. Hunstanton, April 29th, seven or eight about lanterns during night; and same station, May 6th, several at night, wind S., stormy. At the Swin Middle L.V., Aug. 20th to 21st, 9 a.m. to noon, several to W. At Spurn, on Sept. 4th, two or three females, or young of *M. atricapilla*, Linn., Pied Flycatcher, and others up to 10th. Through August and to Sept. 17th immense numbers of *M. atricapilla* and Redstarts crossed Heligoland.

Swallow, *Hirundo rustica*, Linn.—In the spring, first at No. 5 Buoy, Tees L.V., on April 23rd, going S.E. to N.W.; and after this at several stations up to May 27th, the most southerly the Leman and Ower L.V., forty-eight miles N.E., Cromer; general line of flight E. to W., or S.E. to N.W. In the autumn Swallows were observed going south, first, at Inner Farne L.H., on July 15th; the main body passed south, as noticed at Teesmouth L.V. and Whitby, in immense numbers between Aug. 28th and Sept. 8th. Stragglers seen at Spurn up to Oct. 29th. Were seen almost daily near Brighton during the first fortnight in November moving eastward towards Newhaven, from near which place, at Seaford Head, they cross to the Continent. At the Gull L.V. (Godwin Sands), on July 29th, 5 to 7 a.m., continuous flocks were observed to N.W., and subsequently up to Sept. 26th at intervals, all passing westward.

Martin, *Chelidon urbica* (Linn.)—First, Whitby, May 10th, passing N. On August 18th, Tees L.V., vast numbers to S. At

Hampton Court Palace Gardens stragglers noticed as late as Nov. 27th.

Goldfinch, *Carduelis elegans*, Steph.—On Oct. 19th, Hanois L.H., 10 a.m., some flocks; blue sky and cloudy. A few at Spurn, Oct. 27th. Mouth of Deben (Suffolk), Oct. 10th, very great numbers.

Siskin, *Chrysomitris spinus* (Linn.).—First at Spurn, Oct. 3rd, subsequently during the month very numerous; flocks up to twenty; more generally two or three together clinging to tops of ragwort and *Aster Tripolium*; a few old males, the bulk females and young of the year. They crossed Heligoland in considerable numbers: first on Oct. 18th; last, Nov. 30th.

Greenfinch, *Ligurinus chloris* (Linn.).—On Sept. 12th, 10 a.m., N.N.W. (7), o.m., at Hunstanton L.H., large flocks came in. At Spurn, Oct. 25, 26th and 27th, small flocks, female and immature. Heligoland, Oct. 18th, some. Immense numbers congregated in the marsh district of North-east Lincolnshire, late in October and early in November; females and young of the year, old males about one in a thousand. The aggregated flocks, numbering many thousands, frequenting the stubble fields for some weeks, where they found an inexhaustible supply of food in the corn threshed out by the great gale in harvest time, on Aug. 22nd.

Sparrow, *Passer domesticus* (Linn.).—At the Outer Dowsing L.v., fifty-three miles S.S.E. of Spurn, on April 15th, ten common Sparrows on board, travelling from S.E. to W. In the autumn occurred at several stations from the East Godwin L.v., on Sept. 9th and 10th; to Corton L.v., Dec. 19th, none occurring at stations north of the Outer Dowsing; line of flight E. to W., or S.E. to N.W. Sometimes remaining all day on board the light-vessels, or spending the night there.

Tree Sparrow, *Passer montanus* (Linn.).—None north of Spurn, but south of this at several stations, as far as the Godwin L.v.'s, in October and early in November. In North-east Lincolnshire large flocks of both species came in with the Greenfinches, feeding with them in the same localities.

Chaffinch, *Fringilla cælebs*, Linn.—First at Spurn, Oct. 9th, females and young; last at Gull L.v., Nov. 13th, 8 a.m. to noon; continuous to W. with Linnets. None recorded north of Spurn. Large numbers crossed Heligoland, Oct. 18th or 24th, with Bramblings.

Brambling, *Fringilla montifringilla*, Linn.—Spurn, Oct. 3rd, single old males; 26th, one or two; 27th, flock of about two hundred males: examples obtained had their stomachs filled with the husked seed of the common charlock. Bramblings passed Heligoland on the 24th with *F. cœlebs* and *L. cannabina*. E., very strong; and again some Nov. 30th.

Linnet, *Linota cannabina* (Linn.).—Gull L.V., Nov. 13th, 8 a.m. to noon, with Chaffinches, continuous to W.

Mealy Redpole, *Linota linaria* (Linn.).—Spurn, considerable flight night of Oct. 24th; subsequently observed in small flocks, twenty to thirty, more generally three or four together, on stalks of ragwort or *Aster Tripolium*; a few old males, very light coloured and mealy looking, having the breast and rump washed with crimson-rose, which colour some kept in captivity retained throughout the winter. Out of twenty-four obtained during the last week in October twenty-two were males, either old or young. Examples shot from the same flock showed great disparity both in the length and depth of the bill, indicating probably an immigration from widely separated districts in Scandinavia. These Redpoles were feeding on seeds of *Scirpus maritimus* and *Daucus Carota*, rejecting the husks. Very large numbers crossed Heligoland in October, and again on Nov. 30th, and almost daily in December to 20th. At the Inner Farne L.H., on Oct. 6th, many were noticed.

Lesser Redpole, *Linota rufescens* (Vieill.).—Oct. 26th, three at Inner Farne L.H.; and under date of Oct. 24th, Redcar, Mr. T. H. Nelson writes, five came and alighted in front of my window, evidently very tired; they came from seaward, 10 a.m.; two or three were in the garden, and I saw several on the South Gore; E.S.E., snow and rain. Oct. 25th a large flock in an adjoining field. As the range of *L. rufescens* is confined to the British Isles these occurrences are probably referable to a closely-allied species, the *Linota exilipes* of Coues, the Common European Redpole, which, so far, has not been recognised as occurring in Great Britain.

Twite, *Linota flavirostris* (Linn.).—Spurn, Oct. 25th to 27th, numerous; examples obtained had the rump rosy pink.

Common Bunting, *Emberiza miliaria*, Linn.—Spurn, Oct. 25th to 27th, large arrival.

Yellow Bunting, *Emberiza citrinella*, Linn.—Whitby L.H.,



March 8th, many, 9 a.m. Same station, Oct. 17th, great numbers at same hour. At Teesmouth (Redcar) some on South Gare on morning of Oct. 25th, with other immigrants.

Rustic Bunting, *E. rustica*, Pall.—Spurn, Sept. 17th, one, presumed to be a female, shot on the beach near Easington by Mr. Townend, schoolmaster. On the same date a fine young bird was obtained on Heligoland. Light variable easterly winds over North Sea at time.

Little Bunting, *E. pusilla*, Pall.—Sept. 17th, Heligoland, seen but not obtained. Oct. 19th, one.

Reed Bunting, *E. schœniclus*, Linn.—Teesmouth (Redcar), Sept. 22nd, a flock in conjunction with Chiffchaffs and Lesser Whitethroats.

Lapland Bunting, *Plectrophanes lapponicus* (Linn.).—One shot at Tetney, near Great Grimsby, Dec. 27th, by Mr. G. E. Power.

Snow Bunting, *P. nivalis* (Linn.).—First at Spurn, Sept. 10th, an old bird on beach; then, at Inner Farne, on Oct. 6th, four; wind E.N.E. (3). At Heligoland, on Oct. 26th, 28th, 29th, 30th, 31st, easterly winds to N.W. and S.W.; 26th, 9 p.m. to midnight, great many passing overhead; 28th and 29th, rain and hail, both days very great numbers; 30th, great many; 31st, flights of thousands high overhead—one old to about one hundred young. Enormous and unusual flocks occurred from the Farne Islands to N.E. Lincolnshire, from Nov. 14th to end of the year. In the latter district, also near Redcar, many thousands together remaining for weeks on stubble-land feeding on shaken corn. At the South Tees L.V. the great rush was on the 23rd, 24th, and 25th Nov., and again 6th and 10th of Dec., flying S.W. At Inner Farne L.H., Dec. 4th, 11 a.m. to 3 p.m., immense numbers to W. and W.N.W.; very few old birds observed. On Nov. 8th and 9th, at Heligoland, thousands upon thousands passed night and day along with Shore Larks, *Otocorys alpestris*. In spring of 1882, March 28th, Spurn, a few; 29th, one on beach.

Sky Lark, *Alauda arvensis*, Linn.—On the night of July 25th, 1881, large numbers occurred at the Dudgeon and the Leman and Ower L.V.'s, round the lanterns, in the former case associated with Starlings and Snipes; fifty fell on deck, and sixty at Leman and Ower. Again, at these same light-vessels, on March 6th and 7th, great numbers occurred during night. In the autumn Sky Larks occurred at all stations from the Inner Farne to Hanois.

Earliest, Sept. 12th, Lynn Well L.V. ; latest, Galloper L.V., July 8th, 1882. Great rush Sept. 20th, and again Oct. 17th, 18th, 19th, being then continuous all day at many stations between Flamborough and Nore L.V., less each day to 25th ; frequently associated with Starlings. At the most northerly stations the direction of flight was south, from Spurn to the English Channel E. to W. or S.E. to N.W. Many occurred round the lantern of the Galloper L.V. on night of July 4th and 8th (seventy caught alive on latter night) ; line of flight to S.W.

Shore Lark, *Otocorys alpestris* (Linn.).—Oct. 17th to 26th, great many almost daily, and Nov. 8th and 9th (see Snow Bunting). The only occurrence on the English coast is Oct. 26th, Yarmouth, two on North Denes.

Starling, *Sturnus vulgaris*, Linn.—Spring migration in 1881 observed at Dudgeon L.V. and Cromer L.H. from Feb. 25th to April 14th. In the autumn at nearly all our mid and south-east stations from August 30th to Dec. 11th. Heligoland, great rush Oct. 18th and 19th. On the English coast, during last fortnight in month, both night and day ; often associated with other migrants. Line of migration to W., S.W., N.W., W.N.W. At Teesmouth (Redcar), on Nov. 4th, an immense flock, estimated to contain a million, “making a noise like thunder and darkening the air,” came from E. at 7 a.m. ; S.W. light, rainy to fair. Mr. John Odgers (Whitby L.H.) writes:—“We have had immense numbers of Starlings nesting in the cliffs up to this year ; none, however, nested in 1881.”

Daw, *Corvus monedula*, Linn.—Oct. 25th to Nov. 14th, occasionally with rooks at east-central stations.

Hooded Crow, *Corvus cornix*, Linn.—In the spring of 1881, at the Outer Dowsing on March 28th, 11 a.m., about one hundred from W.N.W. to S.E. ; and at the Dudgeon L.V., on April 8th, 7 a.m., about sixty to east. Twenty were seen at Spurn on June 26th, at 3 p.m., S.S.E., clear. In the autumn are recorded at nearly all our stations from the Inner Farne to the Godwin's. First at Teesmouth, Sept. 23rd, fourteen ; Sept. 30th, Suffolk coast, and for some days after. Last at South Sand Head L.V. (Godwin), Dec. 12th. The great flight crossed Heligoland on the 17th and 18th of October, E. clear, fine but fresh. Mr. Gätke remarks this migration “differed very markedly from usual habits in passing overhead, E. to W., at least twice as high as usual ;

further, by continuing *passing on late in the afternoon*, which accounts for your arrivals 'during night or early morn,' which, however, I do not think has been later than soon after nightfall. As a general rule *C. cornix*, coming here later than 2 p.m., do not proceed on their migration, but remain on cliffs and island all night." There was a great arrival also on the English coast on the nights or early morning of Oct. 18th and 19th, at north, middle and south-east stations. There was again a considerable flight across Heligoland on Nov. 8th and 9th, and again Dec. 10th and 11th. Thirteen Carrion Crows were observed at the Inner Farne L.H. on Oct. 26th, and a large Raven at Whitby L.H., 10 a.m. on Aug. 26th.

Rook, *Corvus frugilegus*, Linn.—In spring of 1881, at Dudgeon L.V., March 7th, 10 a.m., flocks to E.S.E. At the Leman and Ower L.V., on April 12th, 13th, 14th, and 15th, continuous to S.E. In the autumn, at some mid and south-east stations, first at East Godwin L.V., Sept. 9th, all day W. to E.; last on Dec. 23rd, Lynn Wells, all day S.E. to N.W. Great rush Oct. 17th and 18th; also 25th to 27th same month.

Common Swift, *Cypselus apus* (Linn.).—May 1st, Hunstanton L.H., one; many on 7th. Were migrating south in large flocks last week in August and first in September. Seen last Sept. 22nd, Spurn, 7 p.m., o.m. flocks round lantern.

Nightjar, *Caprimulgus europæus*, Linn.—Spurn, May 25th, one; are scarce in vernal migration at this station, common in the autumn. This last year from Sept. 3rd to Oct. 3rd. The few that turned up in Heligoland, Mr. Gätke says, during all this bad weather (Sept.), "were minus the conspicuous white patches on primaries and remiges."

Green Woodpecker, *Gecinus viridis* (Linn.).—Cromer L.H., Sept. 25th, a bird, answering in every respect to this species, was seen for some hours near the lighthouse.

Hoopoe, *Upupa epops*, Linn.—Near Durham, Lincolnshire coast, and Spurn on Sept. 24th, 26th, and 29th. One, Nov. 10th, seen perched on telegraph wire near Whittlesea Station, Great Northern Railway.

Cuckoo, *Cuculus canorus*, Linn.—Cromer L.H., April 29th, noon, several seen. Many (young birds) passed Spurn last fortnight in September.

Barn Owl, *Strix flammea*, Linn.—Oct. 16th, one captured at

sea on board one of the Grimsby fishing-smacks and brought in. See Zool. 1882, p. 86.

Long-eared Owl, *Asio otus* (Linn.).—Spurn, two, last week in August. Redcar, one, Oct. 2nd, E.

Short-eared Owl, *Asio accipitrinus* (Pall.).—April 12th and 15th, one each day, past Dudgeon L.v. to W.S.W. One, Spurn, May 25th. In the autumn, at several stations from Teesmouth (Redcar) to Hasborough L.v., from Sept. 5th to Nov. 9th, line of flight from E. to W. or S.E. to N.W. At Redcar numerous occurrences between Sept. 15th and Oct. 26th, with E. and N.E. winds.

Snowy Owl, *Nyctea scandiaca* (Linn.).—Mr. T. H. Nelson writes :—“ A great White Owl flew up the sands in front of Redcar, 10.30 a.m., Oct. 25th, past a group of fishermen and over the town, going S.W., wind E.N.E. strong.”

Tengmalm's Owl, *Nyctala tengmalmi*, (Gmel.).—Cromer L.H., Oct. 30th, 2 a.m., one caught against lantern; Nov. 18th, one near Dartford, Kent. ('Field,' Nov. 26th).

Common Buzzard, *Buteo vulgaris*, Leach.—Heligoland, Sept. 22nd, an immense flight, thousands passing on, and as many resting on the cliffs, E. storm (No. 9); 23rd and 24th, still great many. Numerous from Sept. 24th to Oct. 18th between the Farne Islands and coast of Norfolk, the bulk coming in during the last week in September. On Sept. 27th, coast of Suffolk, and passing at a great height to the south.

Sparrowhawk, *Accipiter nisus* (Linn.).—Heligoland, Sept. 22nd, Sparrowhawks and Kites. At the Coquet L.H., Outer Dowsing, Corton and Cockle L.v.'s, the same day. A very considerable arrival was also noted at Northrepps, near Cromer, between the 13th and 23rd of August.

Kite, *Milvus iclinus*, Savigny.—Yarmouth, one last week in September.

Honey Buzzard, *Pernis apivorus* (Linn.).—Norfolk, Oct. 6th, nineteen Honey Buzzards, Mr. Gurney writes, up to this date.

Peregrine Falcon, *Falco peregrinus*, Tunstall.—Heligoland, Sept. 22nd, Peregrines, Hobbies, and Kestrels many. Spurn, some of each in October.

Common Kestrel, *Falco tinnunculus*, Linn.—Many observed in coast districts of N.E. Lincolnshire in July, August, and September.

Osprey, *Pandion haliaëtus* (Linn.).—There were no less than ten occurrences of this noble bird between the Tyne and Thames from the last week in September through October, namely, Durham, one; Yorkshire, one; Lincolnshire, three; Norfolk, two; Suffolk, one; and near London, two; several others being recorded from inland places in various parts of the kingdom. Of the Lincolnshire examples, two were birds of the year; the other, shot Oct. 15th near some artificial trout ponds at Laceby, near Grimsby, was a magnificent adult female. One adult was obtained near Chester on Nov. 17th. It is very clearly shown in the returns that the great movement southward of the raptorial birds began on or about Sept. 21st, and was continued during the next fortnight.

Cormorant, *Phalacrocorax carbo* (Linn.).—Coquet L.H., Nov. 26th, 2 p.m., twelve to north.

Gannet, *Sula bassana* (Linn.).—May 2nd and 3rd, Inner Farne L.H., large flocks all day to N. During September large numbers passed Flamborough to the south. On Dec. 2nd, at the Gull L.V., twenty were seen going west into the Channel; and on the 4th ten to the south. A great many were observed by fishermen at sea during the latter half of September and early part of October, fishing and "striking" near the boats amongst the herring shoals.

Heron, *Ardea cinerca*, Linn.—August 31st, Inner Farne L.H., 6 p.m., N.N.E., two coming in from sea. At Teesmouth (Redcar) on August 3rd, nine at 11 a.m. to W., moderate west wind; others in September.

Little Bittern, *Ardea minuta* (Linn.).—One, a male, Sept. 23rd, was shot near Goole, Yorkshire.

Glossy Ibis, *Plegadis falcinellus* (Linn.).—Four occurrences in September, namely, one killed near Lynn, and another seen; one at Skegness, Lincolnshire, Sept. 9th, and another in Hampshire, Dogmerfield, Sept. 15th. One also was shot in Hertfordshire, Oct. 10th ('Field,' Nov. 26th), and another on 27th of the same month at Skegness.

Wild Goose, *Anser*?—At Flamborough, on July 8th, 7.30 p.m., about one hundred Grey Geese to N. At the South Sand Head L.V., Aug. 23rd, 6 to 8 a.m., continuous flocks to S.W., and again on Sept. 23rd, 10 a.m. to 2 p.m., continuous to S. Grey Geese were also noted in considerable numbers at several stations from

the Tees to the South Foreland L.v., from the beginning of September to the 8th of December, flying in various directions.

Brent Goose, *Bernicla brenta* (Pall.).—In March, 1881, many were observed off the 5 Buoy Tees L.v. At Corton L.v., on June 14th, fifty from W. to N.E., “passed close to vessel; am quite certain they were black geese.” At the South Sand Head, on Sept. 5th, 6 to 8 a.m., flocks continuous to W. At Coquet L.H., Oct. 15th, one Egyptian Goose, 3 p.m., to N.

Swan, *Cygnus*?—At Heligoland, on Oct. 23rd, S.E. blowing hard and very cold, Swans with Geese and Ducks passing. On Lynn Wells L.v., on Dec. 19th, two at noon, E.N.E., to S.W.; and on 21st, at Inner Dowsing L.v., 3 p.m., fifteen flying low from E. to W.

Sheldrake, *Tadorna cornuta* (Gmel.).—At 5 Buoy Tees L.v., Nov. 20th, twenty off light; and on 29th, forty.

Mallard, *Anas boschas*, Linn.—5 Buoy Tees L.v., March 26th, 1881, Mallard with Wigeon and two Teal. In Sept. and Oct., large flocks at several stations. At the Teesmouth (Redcar), on Aug. 17th, “a rush” of Ducks occurred between 6 a.m. and noon; also on previous night, continuous to N.W., with Whimbrel and Curlew; the Ducks were in flocks of about 100 together. Again on Oct. 14th, the great storm from N.W., continuous flocks of Ducks passed from 7 a.m. to 9 p.m., going W. At the Swin Middle L.v., Aug. 22nd to 27th inclusive, Ducks all day to W.; and again both Ducks and Wild Geese from Sept. 1st to 12th, in large numbers each day, and all day to N.W.

Blue-winged Teal, *Querquedula discors*, Steph.—One, a young bird, shot on Sept. 3rd near Redcar by Mr. W. Chilton.

Wigeon, *Mareca penelope* (Linn.).—Large flocks off Teesmouth in November and December.

Scaup, *Fuligula marila* (Linn.).—5 Buoy Tees L.v., Jan. 23rd, 1881, “Bell Wigeon” [Scaup], great number to W.N.W.

Long-tailed Duck, *Harelda glacialis*, (Linn.).—Inner Farne L.H., Oct. 20th and 22nd, several off island.

Eider Duck, *Somateria mollissima* (Linn.).—On Sept. 24th, at Coquet Island L.v., twenty Eider Drakes and one female off island; and at Inner Farne L.v., in Oct., hundreds, both males and females, swimming under lee of islands. The King Eider, *S. spectabilis* (Linn.), was again seen during the latter part of April, and remained in neighbourhood for two months; last seen on June 19th.

Common Scoter, *Edemia nigra* (Linn.).—At Coquet L.H., 3rd, 9th, and 17th, all day to N. Corton L.V., Dec. 7th, 12th, and 13th, great numbers E. to W. during greater part of day. Large numbers seen at several stations off the coast in November.

Goosander, *Mergus merganser*, Linn.—On Oct. 22nd, Teesmouth (Redcar), stormy E.S.E. gale, twelve were seen flying over East Scar, nine going W. and three E.

Red-breasted Merganser, *Mergus serrator*, Linn. — During November and December several seen off the Farne Islands and Teesmouth.

Ring Dove, *Columba palumbus*, Linn.—One at Spurn L.H., against lantern, on Sep. 15th, 10 p.m. Immense flocks came into N.E. Lincolnshire in November. At Lynn Wells L.V., on Oct. 22nd, large flocks, 10 a.m., S.E. to N.W.; and at Caistor Denes, Yarmouth, on Nov. 26th, very large flocks; they are reported, on 28th, from Beccles (Norfolk) in such numbers as “to make the sky quite dark.”

Turtle Dove, *Turtur communis*, Selby.—One at Great Cotes, Sept. 15th, near rifle-butts on Humber Bank.

Water Rail, *Rallus aquaticus*, Linn.—On Oct. 3rd, Inner Farne L.H.; and another at Spurn, caught alive in yard of light-house on morning of Oct. 27th.

Landrail, *Crex pratensis*, Bechst.—At Great Cotes, near Grimsby, Sept. 1st, N., half-a-gale; and at Heligoland, on 9th, Mr. Gätke writes, “very reddest I have ever had.” At Yarmouth, Oct. 5th.

Spotted Crane, *Porzana maruetta* (Leach).—Heligoland, Sept., one young bird.

Golden Plover, *Charadrius pluvialis*, Linn.—First week in Sept., small flights in N.E. Lincolnshire. On the 6th, Mr. Wm. Eagle Clarke, writing from Spurn, says, “a long waved line extending at least three or four miles passed over, extending far over the Humber towards Lincolnshire coast, 5.15 p.m., wind changing from N. to S., direction of flight N.” At the Farne Islands, during the month, hundreds of Golden Plovers and Lapwings coming off to the islands in morning, and leaving for the land at night. At the same station, Nov. 5th, great numbers to W.S.W.

Grey Plover, *Squatarola helvetica* (Linn.).—Humber foreshore, June 1st, one old male in summer plumage, and five less advanced; another, in the same flock, in winter plumage. At

Spurn, on June 13th, 4 p.m., N.E., clear, Grey Plovers were seen passing S. to N. In the autumn, in the first week in August, three old birds in breeding plumage on Humber muds; also several old black-breasted birds seen at Spurn on 24th. The young of the year arrived in large numbers last of August and first week of September. Seven shot near Spurn, on Sept. 12th, were two males and four females, and one lost; all were in fine summer plumage; were very numerous on Humber flats during September and October; with the above exceptions, birds of the year or old having completed the autumn moult.

Kentish Plover, *Ægialitis cantiana* (Lath.).—One, an immature example, was shot on the shore at Friskney, near Boston, on Oct. 8th; subsequently came into the hands of Mr. A. S. Hutchinson, of Derby.

Ringed Plover, *Ægialitis hiaticula* (Linn.).—May 27th, a flock numbering about twenty of the small race, *Ægialitis intermedius* (Ménétriés), on Humber muds.

Dotterel, *Eudromias morinellus* (Linn.).—May 14th to 21st, some "trips" in N.E. Lincolnshire marshes, also at localities in Holderness; twenty seen in one flock, thirty in another.

Lapwing, *Vanellus vulgaris*, Bechst.—At the north-eastern stations, noticeably at Inner Farne L.H., Hunstanton L.H., Inner Dowsing L.V., and Lynn Wells L.V., where very large numbers passed from Oct. 6th to Nov. 12th, general direction S.E. to N.W. At Teesmouth (Redcar), Nov. 4th, an immense immigration between 8 a.m. and 3 p.m., passing westward, flocks numbering from 50 up to 500 birds, a flock coming in from seaward every ten minutes or thereabouts; S.W., light, fine, and mild.

Turnstone, *Streptilas interpres* (Linn.).—May 25th, many both mature and immature on coasts of N.E. Lincolnshire and Holderness. Teesmouth, in the autumn, not so plentiful as usual; common in other localities.

Oystercatcher, *Hæmatopus ostralegus*, Linn.—At Teesmouth (Redcar), Aug. 18th, 6 a.m., three or four hundred, N.N.E., light, dull and showery. Hunstanton L.H., flocks S.W. at ebb, and E. at flood, throughout August.

Red-necked Phalarope, *Phalaropus hyperboreus* (Linn.).—One near Grimsby, Sept. 26th; one Spurn and one Withernsea, Oct. 9th; two on Suffolk coast, same month ('Field,' Oct. 29th, 1881).



Grey Phalarope, *Phalaropus fulicarius*, Linn.—Teesmouth (Redcar), Oct. 15th, two, in adult plumage, only a few grey feathers on back, N.N.W. gale; one seen near Redcar same day.

Woodcock, *Scolopax rusticola*, Linn.—May 24th, Outer Dowsing L.V., one, 10.30 a.m., E.S.E. (4), passing from W. by N. to E.S.E. At numerous stations in the autumn [principally in the north and mid-east], from Inner Farne L.H. to East Godwin L.V. First at Spurn, on Sept. 4th; last at Heligoland, Nov. 30th, "a few Woodcocks and Snipe" (first and only occurrence there in 1881). Greatest flight on English coast night of Oct. 28th, N.E., snow and sleet. Woodcocks have dropped in very irregularly throughout the autumn, by two's and three's during October, and not in those great rushes which usually characterise their immigration. Migrate generally during the night; frequent exceptions to this rule. Casualties against the lanterns of lighthouses and light-vessels from midnight till daybreak.

Double Snipe, *Gallinago major* (Gmel.).—One, Sept. 15th, was shot in a clover field about fifteen miles from Redcar. One, Sept. 4th, at Spurn, killed against the telegraph-wire; another, same locality, 16th; one, Seaton Carew, Durham, 27th same month.

Common Snipe, *Gallinago cælestis* (Frenzel).—Some few last week in July, main body last week of October to first week in November, rapidly passing on. Nov. 23rd, Gull L.V., 10.30 a.m., about 100 to W. Spring migration, 1882, second week in March.

Jack Snipe, *Gallinago gallinula* (Linn.).—The only occurrences recorded at Inner Farne L.H., from Sept. 23rd to Nov. 4th. Mouth of Deben, Suffolk, both this and the former are recorded from Sept. 30th to Oct. 1st, at full moon, with E. wind, in large quantities, continuing to arrive for some time; remarkable by its entire absence from its ordinary winter quarters.

Dunlin, *Tringa alpina*, Linn.—Spurn, May 25th, very large flocks, composed of birds some in summer plumage, others having no appearance of changing from ordinary winter garb. Enormous flocks were seen at some north-eastern stations in October. Great number at Teesmouth (Redcar), from Sept. 15th to Oct. 12th, all going W.N.W., towards the Tees.

Little Stint, *Tringa minuta*, Leisl.—In small flocks on Humber foreshores, from Sept. 2nd to as late as Oct. 8th.

Fresh arrivals easily recognisable by their extreme tameness. Comparatively plentiful on coasts of Holderness, Lincolnshire, and Norfolk during the same period.

Temminck's Stint, *Tringa Temmincki*, Leisl.—One early in September, near Yarmouth; a few regularly occur at this season on the east coast, although rarely obtained, and probably also frequently overlooked.

Pigmy Curlew, *Tringa subarquata* (Güld.).—First at Spurn, July 21st, two in summer plumage. Flocks of young, thirty to fifty, numerous through September and October in the same districts as the Little Stint.

Knot, *Tringa canutus*, Linn.—Spurn, June 7th, 6 p.m., "Plover-Knot" from N. to S. Some, birds of the previous year, and which do not acquire the summer dress, remain on the east coast during the summer. The first arrivals of young Knot occurred during the first week in August; great rush (young birds) first week in September, the old coming during the last week in October. Mr. Winson, the captain of the Spurn life-boat, picked up a Knot on Nov. 7th, which was killed by flying against the telegraph-wire; this bird was in faded summer plumage, the upper parts nearly black, with edgings of buff on the margins of the feathers.

Ruff and Reeve, *Machetes pugnax* (Linn.).—On Sept. 3rd, two shot from a flock of nine on Cowpen Marsh, near Redcar, N.E., stormy. One Ruff and two Reeves were also obtained at Spurn early in September.

Sanderling, *Calidris arenaria* (Linn.).—May 25th, some at Spurn, young of previous year, and in immature plumage. Aug. 1st, flock of nine; and henceforward in large numbers during August and September, many remaining on the coast till end of the year, and into 1882. At Teesmouth (Redcar) they are reported scarcer this season than they have been for many years.

Common Sandpiper, *Totanus hypoleucus* (Linn.).—May 14th to 20th, North-east Lincolnshire, flocks passing along the coast northward, returning first week in September.

Green Sandpiper, *Totanus ochropus* (Linn.).—July 30th, returning.

Wood Sandpiper, *Totanus glareola* (Linn.).—Aug. 6th, one shot near Redcar; small flock seen.

Common Redshank, *Totanus calidris* (Linn.).—Scarce near Teesmouth in the autumn. At Spurn, July 31st, many.

Spotted Redshank, *Totanus fuscus* (Linn.). — Teesmouth, about Sept. 15th; one, a fully-matured bird, obtained.

Greenshank, *Totanus canescens* (Gmel.). — Comparatively numerous in Humber district in September and October, more than have been seen for many years.

Bar-tailed Godwit, *Limosa lapponica* (Linn.). — Passed the Tees in considerable numbers first week in September. Very common in Humber district in September and October. At Redcar (Teesmouth), between July 4th and 7th, about thirty passed each morning to W. On Sept. 22nd, a slight "rush"; several large flocks with Knots, both in morning and afternoon, going W.; E. gale, stormy, with heavy rain.

Whimbrel, *Numenius phæopus* (Linn.).—At Spurn, May 25th, three seen. Teesmouth (Redcar), July 4th to 7th, each day a few seen in morning, S.W., fine. Aug. 17th, continuous flocks with Curlews and Godwits from 6 to 9 a.m., and also the preceding night, W., calm; and at intervals to Sept. 23rd, all flying W. or N.W. Last occurrence Oct. 22nd. 5 Buoy Tees L.V., at 11 a.m., twenty to S.W.

Curlew, *Numenius arquata* (Linn.).—On May 1st and 18th, at Inner Farne and Flamborough, round lanterns during night. At various localities in the autumn, from July 17th to end of September. Great rush, with Whimbrels and Godwits, on Aug. 17th.

Terns, STERNINÆ.—At the Farne Islands, in 1881, the Sandwich Terns returned on May 6th, the Arctic Terns on the 9th; they left again in a body, both old and young, on Aug. 21st. From Sept. 2nd to 5th, hundreds of both species revisited and settled upon their breeding grounds. After this, from Sept. 16th to the end of the month, two to three hundred Arctic Terns, both old and young, were observed daily fishing near island (Inner Farne L.H.), leaving again at night. Three Arctic Terns, two old and one young, were seen fishing off island on Oct. 27th, and on 29th a single young bird. A flock of about thirty Common Terns were to be seen in front of Redcar daily up to Oct. 14th, when the great storm evidently drove them south. Both at Redcar and Flamborough, throughout September, great numbers of Terns were noticed passing south. At Spurn, in

May, 1881, small parties of Black Terns were passing north, a few returning southward by the same route in August. The Lesser Terns returned to their nesting quarters at Spurn in the third week in May. At Coquet Island L.H., on the night of Aug. 22nd, fog, Terns with Curlews were all night beating about the lantern. In 1882, March 29th, Spurn, two Terns [sp. ?] seen passing north.

Gulls, LARINÆ.—The Herring Gulls returned to their breeding stations at Whitby on Feb. 14th; they left the cliffs with their young on Aug. 26th. Lesser Black-backed Gulls were observed congregating at their nesting quarters, on the Farne Islands, on April 13th. At Flamborough, on July 4th, great numbers of Kittiwakes were passing to the south all day. Unusual numbers of Herring Gulls and Little Gulls (*L. minutus*, Pall.) were seen off Flamborough in September. At Spurn, on Oct. 26th, two Little Gulls were seen; and about the 22nd two immature Sabine's Gull, *Xema Sabinii*, procured on the Norfolk coast, some Little Gulls being seen at the same time. At Teesmouth (Redcar), on Sept. 22nd, continuous flocks of Herring and Lesser Black-backed Gulls, young birds, passed from daylight to dusk, all going N.W., strong E. gale, rain. On Oct. 23rd, and for several days previous, Great Black-backed Gulls had been passing to N.W., forty to one hundred in the course of a day, E.S.E. winds, all mature birds. It is many years since so large a number of Great Black-backs had been seen passing. At the Cockle L.v., on Nov. 11th, continuous flocks of Gulls were passing westward all day; and on Dec. 29th, at Lynn Wells L.v., flocks all day from E. to W.

Skuas, STERCORARIINÆ.—On July 12th, a flock of one hundred (probably *S. crepidatus*) passed at 8.30 p.m. to N.W., high over Redcar, wind W. On Sept. 16th a great many Skuas were seen on the fishing grounds, five to six miles out, Richardson's, Pomatorhine, and Buffon's busily engaged chasing the Gulls and Terns; and again on Sept. 29th, a great many Richardson's, Pomatorhine, and a few Buffon's Skuas seen from four to twelve miles at sea by fishermen similarly employed. On Oct. 14th, during the gale from N.N.W., great numbers of Pomatorhine came down from north, passing Redcar and going off inland, mostly flying high. The same day a large mixed flock of Pomatorhine and Buffon's Skua was seen near the Breakwater,

crouching on the ground to get shelter from the tempest of wind and rain. Great numbers of Skuas passed Flamborough in September; on Oct. 4th, four Richardson's Skuas were seen off Yarmouth; and on Nov. 23rd, at Southsand Head l.v., great numbers ("Bonxie's and chasers") with Gannets.

Petrels, PROCELLARIIDÆ.—During the gale on Oct. 14th, several Storm Petrels seen coming past Redcar from the north; they also occurred from Aug. 10th to Nov. 20th at several stations, not unfrequently striking the lanterns of lighthouses and light-vessels on clear as well as on foggy nights. The Fork-tailed Petrel (*P. leucorroha*) occurred at various stations, both on the coast and inland, between Oct. 24th and Nov. 28th, one at Heligoland, in December, being only the second obtained during Mr. Gätke's long residence in the island. It is probable that this, being a west coast species, is driven in the autumn by heavy gales right across the island on to our east coast—that is, from N.W. to S.E.; its rarity at Heligoland in the autumn supports this view of the line taken by stragglers occurring inland, and on our east coast after heavy N. and S.W. gales. *Puffinus anglorum* and *P. major* passed Flamborough, in September, in considerable numbers.

ALCIDÆ.—At Flamborough, on April 28th, great numbers of Guillemots arrived during the day; and on the 29th the Puffins returned for the season. At the Farne Islands a white Guillemot was seen in June and July. The Guillemots and Puffins left their breeding stations between Aug. 20th and 28th. At Whitby, on Aug. 17th and 21st, very large flocks of Guillemots were seen passing north.

COLYMBIDÆ.—From Aug. 13th to Nov. 8th, at intervals, many Great Northern and Red-throated Divers seen off Redcar. At the Inner Farne l.h., from Oct. 5th to 17th, both species common; two of the former, shot Dec. 8th and 10th, off the Inner Farne Island, weighed 12 and 12½ pounds.

PODICIPITIDÆ.—At the Inner Farne l.h., in February, 1881, an unusual number of Grebes and small Divers were observed.

#### GENERAL REMARKS.

The results of the observations taken along the East Coast of England in the spring and autumn of 1881 have been satisfactory; it is true that, as already mentioned, the returns sent in

have been less than in the previous year, yet what has been lost in quantity has more than been made up in the quality of the work. The observers have become trained by experience, and have learnt not only how to observe, but what to observe.

As in previous years, the main line of migration has been a broad stream from E. to W. or from S.E. to N.W. this year, covering the whole of our east coast in comparatively equal proportions; the occurrences of migrants coming from northerly directions, or from points anything north of east, are few and far between, and in these cases are consequent on birds striking the coast in more northern latitudes and following it to the south. Thus, north of Flamborough, Larks pass up the coast from north to south; at Spurn and south of Spurn they come in directly from the sea. The closeness with which both migrants and immigrants follow the coast line has also been verified in a remarkable degree,—an observer taking up his position at a short distance from the coast would see or know nothing of migration, yet within half-a-mile or less there might be a constant stream of birds, hour by hour and day by day passing to the south.

In the spring birds also return on the same lines they travelled in the autumn, from W. and N.W. to E. and S.E. A reference to the spring notes in the report on each separate species observed will show this. Our spring immigrants also arrive from the sea, and are first seen on or near the coast, gradually moving inland. Migration has been earlier than in 1880, in many cases birds arriving considerably in advance of recent years; this has been notably the case with some of the *Limicolæ*, such as have the widest ranges and where nesting grounds are circumpolar—that is, confined to lands surrounding the North Pole. Also in the case of the *Anatidæ*, which arrived fully a month before their average period.

It may be said the general features of migration, having reference to lines of flight, time, height of travelling, favourable winds or otherwise, circumstances of greatest casualties at lanterns of lighthouses and light-vessels, are the same as set forth in previous reports; yet in 1881 we find several important variations from the normal phenomenon, consequent on the directions of the wind and general character of the season. From the commencement of August to the end of October the prevailing winds have been from northerly and easterly directions, blowing more or less

directly on to the coast, and therefore, as also shown in previous reports, unfavourable passage winds—for it may be laid down as an axiom that, with southerly or westerly winds, not amounting to gales, normal migration is the rule, but with winds in the opposite direction, the results are very opposite; such winds, more especially if strong, weary out the immigrants and compel them to drop on the first coast they make, often completely exhausted by the passage. The consequence has been that, on our east coast, with the prevailing winds, it has been a most favourable season for the observer; and generally the number of birds recorded is considerably in excess of any previous records.

The winter of 1881-82 has been remarkable for its high temperature, no such uniformly mild season having occurred for many years in England. The same has been the case over the whole of Northern Europe north of latitude 50° N. As might be expected, so exceptional a season has not been without its effect upon our immigrants. Fieldfares have crossed in very limited numbers, and have everywhere been remarkably scarce in localities along our east coast. Large numbers of birds which regularly arrive in the autumn, as the Greenfinch, Chaffinch, Tree Sparrow, Snow Bunting, and others, and which remain for a few days only and then pass on, have this winter continued for many weeks, and even months, resorting in immense flocks to the stubble-fields near the coast, where, with no severe weather to drive them away, they found an inexhaustible supply of food in the large quantity of grain dashed out in harvest-time by the great gale from S.W. to W. on August 26th. Snow Buntings have been considerably in excess of anything known for many years, the proportion of old birds not more than one in a hundred.

Another consequence of the mildness of the winter is the desultory fashion in which birds have migrated; there have been less of those great "rushes," when for days together one species after another rush helter-skelter on to our coast. Migration has also been greatly prolonged, and the latest returns received show Rooks, Starlings, and Larks still crossing the North Sea in February. The last week in August and first in September Wheatears and Redstarts passed as usual up the coast from N. to S., the line of migration being confined to the chain of sandhills. Also during the first week of September, and again about the 20th, there was

an immense migration of the *Sylvinae* in the same direction. Migration appears to have reached its climax on or about Sept. 22nd, an enormous number of various immigrants coming in from this time to the end of the month. Not the least remarkable was the influx of the larger raptorial birds crossing Heligoland on Sept. 22nd and two following days, and were about the same period seen along the entire range of our eastern coast. From this date to the end of October ten Ospreys were procured from localities contiguous to the east coast of England, between the Tyne and the Thames. Again, the third week of October there was another large immigration of birds of various species. On the night of Oct. 24th great numbers of Mealy Redpoles came in on the Holderness coast; the same flight was also traceable as far north as the Farne Islands; the Mealy Redpoles appear to have been accompanied or closely followed by a flight of Siskins. Hooded Crows came with their usual regularity, almost to a day; this autumn the great flight crossed Heligoland on the afternoon of Oct. 17th, and on the 18th. There was a corresponding arrival along the whole of our east coast on the night of 17th or early morning of 18th, and on the 19th.

Short-eared Owls, Golden Crested Wrens, and Woodcocks arrive with great punctuality during the first fortnight in October, and are invariably associated in their migration—that is, coming at the same time; it is a curious fact that, in the last autumn, all three arrived in conjunction five weeks in advance of their average period; this perhaps may have been a local and coast movement from North Britain, and not across the North Sea.

In August and early in September, Knots, Grey Plovers, Sanderlings, Curlew Sandpipers, and Little Stints—all circumpolar in their nesting—had returned in large number, being unusually abundant and early in their movements up the coast.

The *Anatidæ* have been remarkably scarce in shore and within our river estuaries, and it has been an almost blank season for the wildfowl-shooter; yet we find, in the returns from some light-vessels, they have occurred in extraordinary numbers out at sea, the weather having never been sufficiently severe to drive them inland or near the coast.

With a dry hot summer in Northern Europe migration is



always earlier than in years of rain and low temperature, birds breeding sooner in the former, and the nestlings, like all other young things, with dry weather and sunshine, developing more rapidly.

Nothing is more remarkable in the phenomenon of migration than the punctuality with which certain species return in the autumn; one species regularly taking precedence of another; also in respect to the date of the arrival year after year. In the *Limicolæ* and *Anatidæ* the date of autumn migration varies—often considerably—from year to year. In some species, as the Wheatear, Redstart, Fieldfare, Redwing, Hooded Crow, Goldcrest and Woodcock, and others, we may almost predict to a day the time of their first appearance.

The period of the migratory flight in the autumn of any particular genus or species is most probably referable to two causes: the first one of temperature, affecting the time of nesting; the second is the period at which the young arrive at maturity, or rather that period when they throw off paternal control or are thrown off themselves. When able to act independently and procure food on their own account, they flock together and migrate in a body. We know that, with rare exceptions, the young of the year migrate some weeks in advance of the parent birds; thus we can readily conceive the whole of the large raptorial birds nesting about the same time over widely extending districts in Northern Europe; when the many young arrive at a self-dependent stage there would be a simultaneous movement, ending in a universal migratory rush. This period of self-dependence is arrived at much more quickly in some birds than in others, for species like the Knot, Grey Plover, Godwit, and Sanderling, nesting in very high latitudes, leave our shores the last in the spring of any of the migrants, and their young are amongst the first to return in autumn. The order of migration, more especially in connection with the shore birds, is the occurrence very early in autumn—July or August—of a few *old* birds in summer plumage, either barren or such perhaps as have been prevented nesting, then the young in large flocks, and some weeks subsequently old birds.

The season of 1881-82 will long be remembered by east coast ornithologists for the number of rare visitants which have appeared from time to time, driven to westward of their ordinary

migration lines by the prevailing winds from N. and N.E. to E. and S.E., generally strong and frequently increasing to a severe gale. The fact of ten Ospreys having been seen or procured has already been mentioned; there were two occurrences of Tengmalm's Owl; the Rustic Bunting at Spurn; Lapp Bunting at Tetney, on Lincolnshire coast; White-spotted Blue-throat at Cley, in Norfolk; Glossy Ibis, five occurrences; Sabine's Gull, two on Norfolk coast; Kentish Plover, Lincolnshire; Blue-winged Teal, Teesmouth; and numerous other occurrences of scarcely secondary interest. These, as well as the rarer occurrences in Heligoland, have been separately treated in the notes on each species observed.

## WEST COAST OF SCOTLAND.

SCHEDULES, &c., were sent to thirty-eight stations, the same number as in 1880. We have received filled-in schedules from twenty-six stations, being same as last year.

Generally the returns are light, and the scarcity of birds is accounted for by the reporters, and borne out by comparison of statistics, by the prevalence of westerly gales and winds (see General Remarks). The schedules show the same careful work as in former years.

The dates upon which the various stations have sent us returns are shown in the following list of the stations by the positions of the asterisks preceding the consecutive numbers. Stations added have the dates preceding the names. As will be seen, the work done will compare favourably with the East Coast returns, and also with that of previous seasons.

## WEST COAST OF SCOTLAND.

## MAINLAND.

1879, '80, '81.

- |   |   |   |                               |         |              |
|---|---|---|-------------------------------|---------|--------------|
| * | * | * | 81. Cape Wrath, Sutherland    | 400 ft. | D. Sinclair. |
| * | * | * | 82. Rhu Stoir, W. Cromarty... | 195 ,,  | W. Wither.   |

## OUTER HEBRIDES.

- |   |   |   |                          |                     |                                   |
|---|---|---|--------------------------|---------------------|-----------------------------------|
| * | * | * | 83. Butt of Lewis ... .. | 170 ,,              | { G. Edgar and<br>Alex. Thompson. |
| * | * | * | 84. Stornoway ... ..     | 56 ,,               | John Grierson.                    |
| * | * | * | 85. Island Glass ... ..  | 130 ,,              | W. Innes.                         |
| * | * | * | 86. Monach Island... ..  | { 150 ,,<br>62 ,, } | J. Youngclause.                   |
| * | * | * | 87. Ushenish ... ..      | 176 ,,              | Peter Carrie.                     |
|   |   | * | 88. Barra Head ... ..    | 683 ,,              |                                   |

## MAINLAND, SKYE, AND INNER HEBRIDES.

- |   |   |   |                               |        |                |
|---|---|---|-------------------------------|--------|----------------|
|   |   | * | 89. Rona, Skye ... ..         | 222 ,, |                |
| * | * | * | 90. Kyleakin, Rosshire ... .. | 53 ,,  | D. MacCulloch. |
| * | * | * | 91. Isle Ornsay, Skye ... ..  | 58 ,,  | J. Loughton.   |

1879, '80, '81.

* *	92.	Ardnamurchan, Pt. Argyle	180 ft.	
* * *	{ 93.	Hynish Signal Tower, Tiree	} 150 ,,	W. Crow.
	{ 94.	Skerryvore, off Tiree ...		
* * *	95.	Dhuheartach, S.W. of Ross of Mull ... ..	145 ,,	J. Ewing.
* * *	96.	Sound of Mull... ..	55 ,,	W. Maclellan.
		97. Conan Ferry, Loch Eil ...	38 ,,	
* *	98.	Lismore Island, Oban ...	103 ,,	Alex. Murray.
* *	99.	Fladda, Easdale ... ..	42 ,,	
* * *	100.	Rhuvaal, Islay ... ..	147 ,,	David Spink.
* *	101.	Mac Arthur's Head, Islay	128 ,,	W. Maill.
* * *	102.	Skervuile, Jura ... ..	73 ,,	John Ewing.
* * *	103.	Rhinns of Islay ... ..	159 ,,	Andrew Lyall.
* *	104.	Lochindaul, Islay ... ..	50 ,,	
		105. Mull of Kintyre ... ..	297 ,,	
		106. Sanda, Kintyre Sound ...	165 ,,	
		107. Devaar, Kintyre ... ..	120 ,,	
		108. Pladda, Arran ... ..	130 ,,	
	* 109.	Lamlash, Arran ... ..	46 ,,	David Waters.
	* 110.	Turnberry, Ayrshire ... ..	96 ,,	Andrew Nisbet.
* * *	111.	Corsewall, Wigtown ... ..	112 ,,	Robert Laidlaw.
* * *	112.	Loch Ryan, Wigtown ... ..	46 ,,	Ralph Ewing.
* * *	113.	Portpatrick, Wigtown ... ..	37 ,,	James Beggs.
* * *	114.	Mull of Galloway, Wigtown	325 ,,	N. Morrison.
	* 115.	Little Ross, Kirkeudbright	175 ,,	W. A. Mackay.
* * *	116.	Point of Ayre, I. of Man	106 ,,	James Blythe.
	* 117.	Douglas Head, I. of Man	104 ,,	A. Irvine Grant.
		118. Chickens Rock, I. of Man	122 ,,	
	* 119.	1880, Bahama Bank, Isle of Man (L.V.) .. .. .		Charles Johns.
	120.	1880, Langness do.		

It will be seen upon comparing this last with the previous years of 1879 and 1880 that steady interest in the work is being kept up by our West Coast reporters.

TURDIDÆ.—Song Thrush. Spring: Only one record at Stornoway, where a pair arrived on March 3rd and stayed till 18th.—Autumn: Records at Kyleakin, Dhuheartach, Lismore, and Bahama L.V. Earliest Oct. 5th, at Lismore (a flock all night); latest on Dec. 13th, at Lismore also (mixed with Blackbirds), and a single bird on Jan. 16th at Bahama L.V. Participated to a

small extent in a rush of migrants generally Sept. 21st to 23rd, which appeared on both coasts of Scotland. Indications of a small rush Oct. 25th to 27th also. Other records scattered through September, October, November, and December. Black-bird. No spring records. Autumn: At Monach, Sound of Mull, Lismore, Skervuile, Turnberry, Mull of Galloway, Little Ross, Douglas Head. Earliest Sept. 21st, at Mull of Galloway (date of rush also on East Coast q.v.); latest Dec. 20th, at Turnberry (one struck). Rushes: None very apparent, but, taking dates of other species, appear to have mingled with them on September 21st to 23rd at Sound of Mull and Mull of Galloway (which is also date of general rush on the east coast). Also faint indications of rushes at Lismore on Oct. 5th, mingled with Thrushes; and on Dec. 13th to 19th at several stations, as Lismore, Skervuile, and Turnberry. A good many scattered records also at other dates and several stations. Exceptionally numerous were Song Thrushes and Missel Thrushes near Dumfries in October and November, whilst Redwings and Fieldfares were very seldom seen.

**SAXICOLINÆ.** — Wheatear. Spring records only from Butt of Lewis, Rhuvaal, and Skerryvore; March 9th (a flock), April 1st (at Rhuvaal), and May 6th (at Skerryvore). Autumn: At Skerryvore, Dhuheartach, Lamblash, Turnberry, Corsewall. Earliest Aug. 14th at Skerryvore (two seen); latest Oct. 27th, when one seen along with Sparrows and Wrens in garden. Rushes on Aug. 7th at Skerryvore and Dhuheartach (150 at former and numbers at latter). Another appears also at Skerryvore on Sept. 7th during the night. Desultory migration going on between these dates and till Oct. 27th.

**SYLVINÆ.**—Robin. Only one spring record, April 9th, at Skerryvore. Autumn: At Rhu Stoir,\* Kyleakin, Isle Ornsay, Lismore, Skervuile, Lamblash, Corsewall, Portpatrick, Little Ross. Earliest Aug. 17th, at Skervuile; next earliest Aug. 21st, when a pair, male and female, arrived at Little Ross; latest on Dec. 18th, at Kyleakin. Participated slightly in rush of migrants on Sept. 22nd. No other distinctly perceptible, but scattered occurrences only recorded. One accompanied Hedgesparrows and

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\* Where one bird comes every winter and becomes so tame as to eat out of the hand. It arrived this year on Nov. 30th.

Wrens. One Chat and one Wagtail in Garden of Lamblash on Oct. 27th. Mr. Service notes the "quick and simultaneous departure of the *Silviidæ*" towards the end of September in the S.W. of Scotland. It is curious to find that about the same time that birds were pouring into Scotland and England others were starting on their departure. In ordinary seasons the departure of the *Sylviinæ* is gradual all through September.

PHYLLOSCOPINÆ.—Gold Crest. No Spring records. Autumn: At Skervuile, Lamblash, Turnberry, Corsewall, Mull of Galloway, Little Ross, and Douglas Head; in other words, mostly in southwest of Scotland. Earliest on Aug. 21st, at Douglas Head, the southernmost on this list (see W.C. of England stations); latest Oct. 27th, at Corsewall. No great rush, unless at Mull of Galloway on Oct. 24th, when "numbers flew about lantern all night," and at Little Ross "for a few nights" between Sept. 12th and 14th or 15th. Desultory at other dates between times. Mostly observed at lanterns in easterly breezes. Exception at Mull of Galloway on September 21st in S.W. wind, but after twenty-four hours E.S.E. (see Isle of May, East Coast of Scotland).

ACCENTORIDÆ. — Hedgesparrow. In spring none, but in autumn, at Rhuvaal, Lamblash, and Point of Ayre, numbers are reported as seen on migration. Earliest Sept. 5th, when a hundred were seen at Point of Ayre; latest Oct. 27th, when a number were seen at Lamblash. A still later date is Jan. 1st, 1882, when one was seen at Rhuvaal. Rushes appear to have occurred at Point of Ayre on Sept. 5th and 22nd, and a few on Oct. 7th mingled with Linnets, and at Lamblash on Oct. 27th.

PARIDÆ.—"Titmice." One record in spring at Mull of Galloway on April 14th in E.S.E. wind. Autumn: Twice recorded only at Corsewall, and at Little Ross. Earliest July 29th (three), and latest Aug. 2nd, at Little Ross and Corsewall respectively, being slight indication perhaps of a rush on these dates.

TROGLODYTIDÆ.—Common Wren. No spring records. Autumn: Pretty general at Skerryvore, Dhuheartach, Lismore, Lamblash, Turnberry, and Little Ross. Earliest Sept. 16th (one, resting); latest Oct. 27th, at Lamblash. Rushes on Oct. 5th; a large flock "seen along with Blackbirds and Thrushes all night," and on Oct. 27th a number at Lamblash along with Hedgesparrows, a Robin, a Wagtail, and a Wheatear.

**MOTACILLIDÆ.**—Wagtail. In spring, several in March, and two on April 20th at Butt of Lewis. Autumn: At Butt of Lewis, Monach, Kyleakin, Skerryvore, Dhuheartach, Lamlash, Portpatrick, and Point of Ayre. Earliest Aug. 16th, at Skerryvore (one seen); latest Oct. 27th, at Lamlash (see Wren under date and station). Rushes beginning of September, at Lamlash, and other isolated records; same date at Monach, &c. Also “a number” on Oct. 7th at Portpatrick.

**ANTHIDÆ.**—Pipits. At Dhuheartach and Little Ross in autumn. Single record on Oct. 28th, at Dhuheartach. A rush of “hundreds” at Little Ross on Sept. 6th. Remained about two hours.

**HIRUNDINIDÆ.**—Swallow. Spring: At Butt of Lewis, Monach, Ushenish, Kyleakin, Skerryvore, Lismore, Rhuvaal, Skervuile, McArthur’s Head, Rhinns of Islay, Loch Ryan, Little Ross, Point of Ayr, Douglas Head. Earliest April 24th, at Douglas Head (southernmost station in this list); latest June 15th, at Skerryvore. Rushes May 5th, at McArthur’s Head (great numbers), and on May 2nd fifty seen at Loch Ryan (possibly the same birds?—J. A. H. B.) A number seen also at Little Ross on May 2nd. At other dates and stations small parties reported, all during May, and to June 15th often mixed with Martins. Autumn: At Skervuile, Lamlash, Turnberry, Loch Ryan, Mull of Galloway, Little Ross, Point of Ayr, Douglas Head, and Bahama Bank. Earliest at Bahama Bank (L.V.) July 5th; and next at Loch Ryan Aug. 5th and 6th; latest Oct. 6th, at Little Ross. An almost continuous rush going on from Aug. 15th at several stations in S.W. of Scotland, and culminating on Sept. 8th in great rush at Little Ross, and less so at Loch Ryan and Point of Ayr. No more records after Oct. 6th. Martin. Generally mixed with the last on migration both in spring and autumn. Stations at Ushenish and Loch Ryan in spring, on May 8th and 2nd respectively, and in autumn at Mull of Galloway on Sept. 28th.

**FRINGILLIDÆ.**—“Linnets,” One on May 2nd at Skerryvore. Autumn: At Rhu Stoir, Monach, Skerryvore, Sound of Mull, Lismore, Point of Ayr. Earliest Aug. 23rd (a flock) at Lismore; latest Dec. 22nd. Other dates, Oct. 26th (a flock), at Lismore. Rushes on Sept. 14th at Little Ross, and a smaller number on 19th at Sound of Mull. It is difficult to say if “Linnets” are

always real Grey Linnets, or Twites, or Mountain Linnets, our reporters not distinguishing them. House Sparrows. About two hundred, "supposed to be of this species," rested all night at Point of Ayr on Sept. 16th. Bramblings are reported in considerable numbers from land stations in S.W. of Scotland in beginning of November.

EMBERIZIDÆ. — SNOW Bunting. Autumn: At Rhu Stoir, Monach; also Kyleakin, Dhuheartach, and Point of Ayr. Earliest at Rhu Stoir, on Oct. 1st, "arrive and stay all winter"; latest on Nov. 15th, at Monach (a few). No rush perceptible. Yellow Bunting. Autumn: One record at Rhu Stoir on Nov. 30th. Snow Buntings reported abundant by middle of October in S.W. of Scotland.

ALAUDIDÆ. — Lark. Autumn at Skerryvore, Dhuheartach, Lismore, Rhuvaal, Skervuile, Turnberry, Little Ross. Earliest on Aug. 23rd (a few with Linnets) on Lismore; latest on Feb. 16th, 1882, on Skervuile. Rushes: Sept. 6th, five hundred at Dhuheartach.\* A straggling migration during October, sometimes with Thrushes, Blackbirds, as on 26th at Skervuile, or Starlings, as at same place and at Lismore. Few in December, January, and February, except "a large flock" on Jan. 16th at Lismore.

STURNINÆ.—Starling. Two records in spring at Rhu Stoir and Stornoway, one March 3rd, and the other May 10th. Autumn: At Rhu Stoir, Stornoway, Ushenish, Kyleakin, Dhuheartach, Lismore, Rhuvaal, Skervuile, Lamlash, Corsewall, Portpatrick. Earliest Aug. 23rd, at Corsewall; latest on Jan. 6th, 1882. Rushes inappreciable, but records numerous; if any, perhaps one on Nov. 10th at Mull of Galloway. Occasionally mixing with Blackbirds and Larks (as on Oct. 2nd at Lismore); also with Thrushes.

CORVIDÆ. — Rook. Spring migration: Uncertain records applied to "Crows," "All kinds," &c., which notes are not exact enough. Autumn: At Rhu Stoir, Dhuheartach, Skervuile, and Portpatrick. Earliest Sept. 9th; latest Nov. 25th, at Skervuile. Flocks seen, but no perceptible rush.

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\* Called in schedules "Shore Larks"? In what respect do "Shore Larks" differ from common Larks? (Query to Mr. James Ewing at Dhuheartach).



Hooded Crow. Spring: March 4th, at Rhuvaal; Dhuheartach, June 7th. Autumn: Sept. 12th, at Rhu Stoir (two males and two females). Latest Dec. 22nd, at Monach. A rush of "Black Crows" (which may be Carrion or only Rooks) at Lamblash on Oct. 26th and 27th. Raven. One record at Monach, flying N.W. on Sept. 13th.

CUCULIDÆ.—Cuckoo. Spring: General at stations. At Loch Ryan, May 3rd (two heard); Rhinns of Islay, 15th; Skervuile, 4th; McArthur's Head, 23rd; Lismore, 10th; Isle Ornsay, Skye, 8th; Kyleakin, 3rd; Island Glass, 24th (seen); Stornoway, 9th. In autumn, heard in July often at Stornoway; left about Aug. 1st at Isle Ornsay.

STRIGIDÆ.—"Owl." Only one autumn record at Kyleakin, when one was seen flying south on Nov. 4th, wind S.E. clear.

FALCONIDÆ.—"Hawks." At Skerryvore, and Rhuvaal two "large Hawks" on Feb. 8th (this may belong to latest autumn record). One at Skerryvore on May 15th. Autumn: At Monach, Skerryvore, Dhuheartach, and Little Ross.\* Earliest Sept. 17th ("Hawk"), at Dhuheartach; latest Oct. 29th, at Skerryvore ("Small Brown Hawk.") Rush daily about Sept. 17th at Dhuheartach, but likely the same birds. "Daily call" at Dhuheartach about Oct. 5th. No really appreciable rush as on the east coast.

PÉLICANIDÆ.—Gannet. N.B. As we have indications of directions of flight in most cases, and as records occur in every month, except October, November, and December, I take spring and autumn together, and trace out the movements of Gannets with extra care. Stations reported from: Cape Wrath, Rhu Stoir, Butt of Lewis, Island Glass, Monach, Skerryvore, Lismore, Rhuvaal, Skervuile, Portpatrick, Mull of Galloway, Little Ross, Douglas Head. Earliest, Jan. 2nd; flying south (autumn?), at Skervuile; one same day, flying north (?); latest, October; leave Cape Wrath in first week. Last minute record, Sept. 30th, at Lismore, flying south. The greatest movements or rushes as

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\* The names given are "Hawk," "Game Hawk" at Little Ross, Aug. 21st; "Merlin" at Monach, Oct. 3rd; "Small Hawk" at Skerryvore, Aug. 5th; "Small Brown Hawk" at Skerryvore on Oct. 29th. I include them all here.

follows:—The first week in March they arrive in all weathers, all day, flying west till midday at Cape Wrath, and return after that till dusk. They are not seen after first week in October. “Great numbers” on April 12th at Mull of Galloway. Intermittent in May, except 5th, at Island Glass, when they were seen all day—about thirty-five in all—wind S.S.E. Between 20th and 30th, at Skervuile, flying in all directions, along with Gulls and sea-birds. In July flocks flying north, on 26th, at Cape Wrath, and continued to do so till end of August. Daily average about forty. Flying past all August; flying north on 13th at Portpatrick all day. Great rush flying north in thousands on 3rd, 4th, and 5th at Rhu Stoir. Small parties or flocks flying south on 5th at Skerryvore, and S.W. at Douglas on Aug. 26th. “Numbers” and “flocks” in September, flying south at Lismore, Skervuile, and Douglas. N.B.—I have been particular here in noting records, as I believe interest attaches especially in the connection of the migration of birds with that of fish.—J. A. H. B.\*

ARDEIDÆ.—Heron. Note.—“Large Black Cranes” are recorded as passing Rhuvaal on Feb. 12th and 16th, wind N. to S. clear; and mod. S.E. clear. I cannot learn what these are.—Autumn: At Monach, Rhuvaal, Douglas. Earliest Aug. 24th, at Rhuvaal; latest Nov. 18th, at Monach, when eighteen were seen—a rush?

ANATIDÆ.—Bernicle Goose (sp.?). Spring: Large flock at Monach April 28th, flying N.W. Ditto? at Stornoway, Ushenish, Lismore (three struck at latter station, two killed, one wounded), flying south. Latest May 3rd, at Ushenish (ten flying north). Autumn: Bernicle Goose (only record here) at Monach, Oct. 20th. “Wild Geese” at Cape Wrath, Rhu Stoir, Butt of Lewis, Ushenish, Kyleakin, Lamdash, Corsewall. Earliest Oct. 6th, at Rhu Stoir (seven ad. and one jūv.); latest Dec. 4th, at Kyleakin (four flying east). Rushes inappreciable, equally distributed in small flocks during October (especially latter half) and November. Eider Duck. Spring: Butt of Lewis and Rhu Stoir on April 28th and June 23rd respectively. Autumn: At Butt of Lewis, Skerryvore, Dhuheartach. Earliest Sept. 11th, at Skerryvore;

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\* For an essay on which subject I offered a prize at the late International Fisheries Exhibition in Edinburgh, which was not competed for.

latest Nov. 12th, at Dhuheartach. Others on Oct. 10th at Butt of Lewis, &c. No rush apparent. Wild Duck. Spring: Lismore (in pairs), May 20th. Autumn: "Ducks" Nov. 2nd, at Rhuvaal (three dozen), and at Rhuvaal Dec. 7th (probably the same lot as on Nov. 2nd, q.v.) Shel Drake. Autumn: Only records at Douglas Head in August, flying S. on 21st, and flying S. on 27th. Wigeon. Autumn: At Monach only on Oct. 30th; remained till Nov. 7th, during which time unusual numbers occurred. Date of Nov. 7th strong S.S.E. to W.S.W. winds, gales, and heavy rain. Wild Swans. At Skervuile one Swan remained three days, arriving Feb. 6th, 1881.

COLUMBIDÆ.—Rock Dove. Only record: One sighted at Monach, and flew away again about midnight. Fresh east breeze and rain.

RALLIDÆ.—Corn Crake. Occurred first as follows:—Mull of Galloway, May 5th; Loch Ryan, 4th; Skervuile, 22nd; Kyleakin, 24th; Butt of Lewis, 28th; Rhu Stoir, June 20th.

CHARADRIADÆ.—Golden Plover. Spring (or autumn?), June 20th, at Rhu Stoir. Autumn: At Butt of Lewis, Rhuvaal, Rhinns of Islay, Turnberry, Corsewall. Earliest Aug. 16th; latest Dec. 30th, at Rhinns of Islay. Rush: Generally large migration at Corsewall on Sept. 17th. Green Plover. Spring: Only record May 10th (two seen) at Rhu Stoir. Autumn: At Butt of Lewis, Dhuheartach, Rhinns of Islay, Corsewall, and Portpatrick. Earliest Aug. 24th, at Dhuheartach; latest at Portpatrick on Dec. 4th (a flock flying N.W.). No appreciable rush.

SCOLOPACIDÆ.—Curlew. Spring: At Rhu Stoir, Stornoway, Island Glass, Rhuvaal, Little Ross. Earliest Feb. 5th, at Rhuvaal; latest June 19th, at Rhu Stoir and Little Ross (widely separated. No rush appreciable. Autumn: At Monach, Ushenish, Isle Ornsay, Sound of Mull, Lismore, McArthur's Head, Turnberry, Portpatrick, and Point of Ayr. Earliest at Portpatrick, Aug. 2nd: latest on Dec. 16th, at Point of Ayr. Rushes inappreciable, unless at Sound of Mull, sixteen tying S.E. (but hardly a rush). Snipe. Spring: May 18th, three seen at Island Glass. Autumn: At Island Glass and Loch Ryan. Earliest at Loch Ryan, Aug. 3rd; latest at Island Glass on Oct. 10th. Woodcock. Autumn: (Scarce); at Butt of Lewis, Skerryvore, Lismore. Earliest Oct. 28th, at Butt of Lewis. Whimbrel? At Skerryvore six "small Curlew" resting on rock. Note.—

Whimbrels unusually scarce this year at Monach. Redshank. Spring: At Butt of Lewis, Skerryvore, and Rhuvaal. Earliest Feb. 5th (in a flock, so perhaps belong to autumn); March 6th, at Butt of Lewis. Autumn: At Rhuvaal, Sept. 12th and 17th. Sandpiper. Spring: June 27th, at Skerryvore. Autumn: At Skerryvore, Lismore, and Little Ross. Earliest Sept. 10th, at Skerryvore; latest Dec. 26th, at Little Ross. (This can hardly be Common Sandpiper so late.—J. A. H. B.).

STERNINÆ.—Common and Arctic Terns. Spring: At Rhu Stoir, Stornoway, Monach, McArthur's Head, Skervuile, Rhinns of Islay, Little Ross. Earliest May 10th, at Rhinns of Islay; latest at Stornoway, June 8th (hereafter breeds). Autumn: At Monach (unusual numbers this year), Skervuile, Little Ross, and Douglas Head. Earliest July 8th, at Skervuile; latest at Little Ross on Sept. 2nd.

LARINÆ.—Gulls: Black-backed, Herring, and Kittiwake. Spring: At numerous stations, Stornoway, Island Glass, Skervuile. Earliest May 24th, at Skervuile; latest at Stornoway, June 8th. N.B.—The movements of Gulls are most erratic and difficult to tabulate, and I prefer to hold them over at present. Skua. Occurred all summer on west coast of Lewis, as seen by reporter himself in June, frequented harbour of Carloway\* in Lewis, and was seen inside of Rum. Uncommonly abundant at Island Glass, eight being seen in sight one day. Autumn: August, October; at Skervuile, Aug. 12th, 13th, and 14th; and at Sound of Mull on Oct. 12th and 13th, when some forty were seen; N.W. gale. Iceland Gull. Autumn: At Kyleakin on Nov. 29th and Dec. 20th, both flying S.W.

PROCELLARIIDÆ.—Petrel. Autumn: Only at Lismore, Sept. 17th, S.S.E., haze and rain. Noted as rare at Lismore by Mr. Murray; indeed the first he has seen here in several years.

PELECANIDÆ.—Scarts; Cormorants. Spring: Arrived at Cape Wrath to breed in March. Autumn: Flying N.W. on Oct. 18th past Stornoway; at Dhuheartach Nov. 10th; and Skervuile on Nov. 14th.

ALCIDÆ.—Records in every month, except February and

\* (*i. e.*, Cairlobhaidh.)

December. Spring: Great numbers. Razorbills flying north on Jan. 7th, at Skervuile. Puffins seen at Butt of Lewis March 3rd. "Rock Birds" in April, all day, flying south at Ushenish, and arrive last week in April; breed first week in May. Hundreds of Puffins flying south on May 10th and 11th at Ushenish. "Auks" flying south at Skervuile. "Puffins" at Dhuheartach on 2nd and on 20th. Auks, Puffins, &c., at Ushenish, Skervuile. Earliest July 31st; latest Oct. 18th, 19th, and 20th, at Ushenish. Rush: Thousands at Ushenish, along with Gannets and Kittiwakes, feeding and flying south all day.

Great Northern Divers.—Spring: At Skerryvore, two seen in June. Autumn: At Sound of Mull two seen feeding, male and feeding; at same place, two on 10th.

#### GENERAL REMARKS.

In 1879 there was scarcity of birds at many important stations, such as Butt of Lewis and Monach Island, Skerryvore and Dhuheartach. In that year westerly and N.W. winds prevailed. In 1880 larger numbers were noted. In that year easterly gales and winds prevailed all through the migratory season. In 1879 migrants were scarce at the more northerly stations, being compressed by the westerly winds more towards the south, but in 1880 they reached much further north, being expanded by the following easterly gales and winds, as we have seen in treating of the east coast of Scotland this year.

The stations visited by the largest numbers of birds are the Bell Rock and Isle of May, both being stations pretty far southward, and Pentland Skerries, a more northern station. We now find also that on the west coast the stations sending fullest numerical returns are also southerly stations, and for the most part are situated south of the Firth of Clyde. Both on east and west coasts all returns coming in from north of Firth of Clyde in west, and north of Firth of Tay in east, except Pentland Skerries, report scarcity of birds as compared with last season (1880), and after November birds were unusually scarce. Writing from North Ronaldshay Mr. Tulloch tells us that birds seldom come so far north during migration, but usually trend more towards the mainland. On the west coast, at Rhu Stoir, very few birds

are reported after November in most seasons, and similar reports come from Island Glass and others of the more northerly stations. The great gales from W. and S.W. during November and December made all birds scarce at Monach Island, even Eider Ducks being unusually scarce. At Skerryvore birds never struck lanterns in flocks this year, but only in scattered instances. It will thus be seen that the migratory seasons of 1879 and 1881 most closely resemble each other, as regards our Scottish coasts, whilst that of 1880 was more abnormal, owing to the easterly winds prevailing.

It would almost appear that the great rush of migrants in September on the Bell Rock, and more noticeably on Isle of May, would also account for the collection of birds at stations on the west coast south of the Firth of Clyde, as the dates tally with each other on both coasts, to see which it is only necessary to compare between them under several of the species. I have also independent reports upon the large crowds of birds seen passing south over the Solway Firth at these dates, few of which appear to have been seen north of the Firth of Clyde.\* Rushes have not been so large, yet they are indicated with tolerable precision by the returns. The extremely regular and open winter has no doubt much to do with this, the temperature in Great Britain having been higher than for many years previous. But these throbs or rushes being distinctly traceable is owing, on the other hand, I believe, to the prevailing wind fully as much as to the severity or non-severity of the weather. Rushes are normal phenomena in the West of Europe, because westerly or north-westerly or south-westerly winds usually prevail there. Regular or more dispersed movements of birds in the West of Europe are abnormal, because easterly winds are abnormal there. In 1880 we had a *spread-*

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\* Mr. R. Service contributes the following:—"The severe gales retarded the migration of the shore birds during October to a great extent, causing them to "accumulate" in our district for several weeks. On October 12th I saw a twenty-acre field completely covered with Lapwings. At the same time, and for about a fortnight afterwards, the number of birds on the Solway banks was most extraordinary. The great majority of these were Bar-tailed Godwits, Oystercatchers, and Knots. Just outside the line of breakers opposite the rocks at Southernness Point, Scaups and Scoters were especially numerous, diving above the mussel beds. As they rose and fell on the crests of the heaving waves these birds formed many an interesting and beautiful group."

*fan* of migration, if I may so express it. In 1879 and 1881, in Scotland, we had a *closed-fan* of migration. The natural result of the wide-spread fan is continuous streams of migration and no rushes; that of the closed-fan great throbs and rushes, for birds prefer to travel with a beam wind and wait for favourable winds, and do not often voluntarily start on their flight with a following wind. The occurrence of the white-spotted form of Blue-throated Warbler after a succession of tremendous S.E. gales, culminating in the dreadful hurricane of Oct. 14th, clearly shows, I think, that acts of voluntary migration do not take place in following winds. This Bluethroat was caught up and borne away, *nolens volens*, and our Mid-Atlantic notes in 1880 show similar abnormal results from prevalence of easterly gales. It is to be regretted that we have no returns this season from Mid-Atlantic, owing to Mr. Anderson's engagements in the Mediterranean. Even total absence or perfectly negative evidence of birds in Mid-Atlantic would have given us a valuable standpoint as compared with the great mortality of 1880.\*

The lines of migration indicated in my Report of Scotland for 1879 and 1880, and conclusions drawn from statistics of these two years, appear to me to be borne out by those of 1881, as regards the semicircular form of the migration, an account of which I have already given in our last report (*op. cit.*, pp. 18, 19).

The subject of heights of lanterns and their colours as attractions for birds has not developed as yet any fresh facts, but, with the conviction that they will yet do so, I still retain the table of heights given. Actual experiment, however, would very likely very soon set this part of the subject at rest (*vide* General Remarks, East Coast of Scotland Report, 1880, pp. 19, 20). A light-vessel or two placed in an equally favourable position with, let us say, the Isle of May or the Bell Rock on the east coast, or

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\* I may mention here that I have made an endeavour to enlist the whaling captains of Dundee in our service, but have not yet learned whether it has been successful or not. I had copies of the British Association Abstract reprinted in a cheap form, and I sent a bundle to Dundee for distribution amongst the captains. Should Mr. Anderson yet give us any Mediterranean statistics, they can appear as an Appendix to our Report for 1882.

at some point north of Tweed, would, I believe, soon show us whether the preponderance of records south of the Tweed is entirely due to old-established lines of migration, or to the number of light-vessels on the English coast, or partly to both. It would, I think, assist in proving or disproving theories of land-communications which have been advanced and disputed by previous writers. At present we cannot positively state from our present data whether an actual or only an apparent preponderance of birds pass south of the Tweed in autumn. It appears a little curious to find, however, a highway of migration by the Pentland Firth so much further north than the stations mentioned. Writing from North Ronaldshay Mr. Tulloch remarks upon the usual scarcity of birds there, and says "they keep more direct for the mainland"; and he remarks also upon the abundance of birds seen in September and November at Pentland Skerries, where he was lighthouse-keeper for four years. He remarks on the abundance of Mountain Thrushes, Blackbirds, Owls, Woodcocks, Wrens, Robins, and Titmice which occur there when the wind is from the east, and from which station I have a large numerical return this year. This at first sight appears to be a contradiction of what I have said about the bulk of the birds passing south of Bell Rock, but, be it noted, the prevailing winds at Pentland Skerries from August 23rd to September 12th were from points between north and south by east, but never by west, and thereafter, between September 14th and October 10th, they were prevailing south to south-west, but never west or north-west. From October 14th they backed to north-east, and easterly winds again prevailed here on till late in November. The isolated position of the lights at Pentland Skerries, combined with the local prevalence of easterly winds, is perhaps sufficient to account for the large mass of the records. At all events I think the Pentland Skerries returns are deserving, both now and in future, of special attention and study, and I look upon it as a particularly interesting station.

Isle of May stands this year at the head of the list for numerical returns, I having received seven full schedules from Mr. Agnew, principally referring to autumn migration. Next comes Bell Rock, but two out of three schedules refer to spring migration, of which more anon. Then Sumburgh Head and



and Pentland Skerries, about equal, but the latter rather the larger, both returning three filled schedules, principally autumn migration.\*

Regarding the spring migration, the Bell Rock and the Isle of May have hitherto held their place as yielding the largest returns, and very considerable numerical returns are given for 1881. Now, Sandwich Terns pass every spring up north along the coast of Forfarshire, but shoot off from the land again, and do not breed upon much of the suitable lands they pass over. An occasional pair of birds do remain and breed, as is shown by the nesting of this species on Inch Mickery, in the Firth of Forth, this past season, and on a previous occasion at the same place. In the same way we know that Grey Plover, Knot, and Bartailed Godwit shoot off the land at Spurn Point, as they are obtained there in full breeding dress, but nowhere to the north of it in breeding plumage, except in isolated cases. The routes of spring migrants, while they are usually more direct than those of autumn migrants, are perhaps more difficult to trace, and our statistics as yet are far from perfect. Since the above remarks were penned I have a well-filled schedule from Isle of May relating to the spring migration of 1882, which, however, will be included in our next Report.

The extraordinarily large migration of raptorial birds is worth a remark here, and it is interesting to find with what regularity and precision such foreign species as the Rough-legged Buzzard recur year after year along certain very clearly defined lines, records of captures constantly indicating this.

It will be seen that the results of our statistics on the Scottish coasts show a "closed-fan" of migration, owing to prevalence of westerly winds, except at Pentland Skerries, where local easterly winds blew at the times of migration in September and November, and on the Scottish coast, from Bell Rock and southward, we had the greatest rushes, whilst further south, on the English coasts, there was an "open-fan" of migration, owing to a prevalence of east winds.

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\* Besides several more relating to 1882.

## WEST COAST OF ENGLAND.

SCHEDULES, &c., were forwarded to forty lighthouses and light-vessels on the west coast of England; from twenty-four returns have been received. The absence of returns is in some cases due to accident, *e. g.*, at Caernarvon L.V., Mr. Bowen, the keeper, had been disabled with a broken rib, the result of a fall on board in a gale of wind, and there had been several changes of mates within a short period. In part, absence of reports is accounted for by the situation of the station—*e. g.*, at Nash are two lighthouses, and from the western one, Mr. Richards, who last year supplied us with a well-filled schedule, having retired from the service, his successor objected to continue the work on the ground that it is so near to Nash E. On Lundy Island also are two stations close to each other, and last year the two reports therefrom were almost identical in every particular instance. Menai is reported as being out of the track of birds migrating, as also St. Bees. Still we should be glad to hear from these and the other stations that have not reported, and hope that next year all will send in returns, however slight, as “every little helps.” Special thanks are due to those who have reported; they have given themselves considerable trouble, which will, however, not be thrown away; and the novelty and interesting nature of the work may in some degree perhaps compensate them for their pains. Mr. Baker writes, from Milford, “It would be a great help if a book could be supplied to different reporters, with a print of the different birds in it.” If funds can be raised, we hope in time to be able to supply this want.

To Mr. Thompson we are indebted for a report from a new station, Allonby, on Solway Firth, which promises to be a good one, and which—being the northernmost on this coast—now heads our list.

The numbers of the stations differ from those of last year's report, beginning at 121 instead of 110 (the last included in Report of West Coast of Scotland being 120). The following is the list, those from which returns have been received being marked with an asterisk (\*):—

121. \*Allonby, L.H. C. Donald Thompson.
122. \*St. Bees, L.H.; the tower 55 feet high, on cliffs estimated at 300 to 350 feet. R. E. Pizey.
123. \*Morecambe Bay, L.V.; centre of light above sea-level, 36 feet. Henry Clavell, P. K.; Dl. Kneale, mate.
124. \*Air, L.H. C. H. Aveston.
125. \*Menai, L.H. Joseph Steer, P. K.
126. \*Skerries, L.H. J. Garrett, P. K.; H. Knott.
127. \*Holyhead Breakwater, L.H. R. Prichard.
128. North Stack, Fog Horn Station. John Harvey, gunner.
129. \*South Stack, L.H. W. R. Burgess.
130. Caernarvon Bay, L.V.; centre of light above sea-level, 37 feet. W. Bowen.
131. \*St. Tudwal's, L.H. W. Davies.
132. \*Bardsey, L.H. Thomas Bowen.
133. Cardigan Bay, L.V.
134. \*Bull Point, L.H.; centre of light above high water level, 154 feet. George Knott.
135. South Bishop, L.H. John White.
136. Smalls, L.H. W. Boulton.
137. \*Great Castle Head, L.H. W. S. Spicer.
138. \*Milford (Low), L.H. Fixed, white; centre of light from ground, 26 feet; Headland 150 feet from sea-level. (Syren fog horn 5 seconds every 3 minutes during fog, snow, or thick weather, about equidistant from each light). G. Baker.
139. Milford (High), L.H. Fixed, white, showing red at entrance to harbour. G. Baker.  
(These two are looked upon as one station).
140. Caldy, L.H. Centre of light above sea-level, about 250 feet. W. Ebben, P. K.
141. Helwick, L.V. Thomas Cornell, mate.
142. Scarweather, L.V. Henry Jenkins.
143. Nash (Low or W.), L.H. — Wilson.
144. \*Nash (High or E.), L.H. Three lights: 1, upper, white, fixed, visible 19 miles; 2, fixed, red, shown from a window below lantern, shown N. of N.W.  $\frac{1}{4}$  W., which bearing will lead  $\frac{1}{4}$  mile S. of Breaksea Buoy; 3, a ray of red shown from a window below Breaksea light, extending over an arc between S.S.E.  $\frac{3}{4}$  E. and S.E.  $\frac{3}{4}$  S., about  $2\frac{1}{2}$  cables southward of Tusker Buoy. H. T. Nicholas.
145. Breaksea, L.V.

146. \*Flatholm, L.H. W. Dale, P. K.  
 147. \*Usk, L.H. Centre of light above sea-level, about 50 feet. Amos Russell.  
 148. Avon, L.H. William Taylor.  
 149. \*Burnham, L.H. About 100 feet above sea-level. William Lewis.  
 150. \*Bideford, L.H. Low light, white, centre above sea-level 48 feet; Upper light white, centre above sea-level 96 feet. Edwd. Roberts.  
 151. Lundy Fog Gun Station. John Morgan.  
 152. \*Lundy, L.H. Upper light revolving, powerful white, about 540 feet above sea-level. James Parsons.  
 153. \*Hartland Point, L.H. John Griffiths.  
 154. Trevoise Head, L.H. Fixed, white; upper 180 feet and lower 120 feet above sea-level. W. Bowen.  
 155. \*Godrevy, L.H. Richard Trahair.  
 156. \*Longships, L.H. Red towards shore; lantern 110 feet above high-water mark. William Jones, P. K.  
 157. Sevenstones, L.V. Daniel Norton.  
 158. Wolfrock, L.H. W. D. Crask.  
 159. \*Scilly, L.H. White, 150 feet above sea-level. E. L. Davis.  
 160. Bishop Rock, L.H.

In the above list particulars of colour and height of lights, &c., are given where omitted from list of last year or where there have been alterations. Notes on the spring migration, being but few, have not been drawn up in a distinct report. Next year it is hoped that these may be much fuller and more general.

Altogether about sixty-two species have been noticed on this coast-line, including about fourteen species of Gulls and Water-birds.

To the various observers, and to the Trinity Superintendents, Mr. Davison, Mr. Evans, and Mr. Tregarthen, our thanks are given for their continued interest and kind assistance.

#### SEPARATE REPORT ON EACH SPECIES.

Song Thrush, *Turdus musicus*, Linn.; Fieldfare, *Turdus pilaris*, Linn.—Spring: At Scilly, from Jan. 13th to 25th, large flocks of Thrushes, Fieldfares, Larks, and Starlings remained during the snow. At Godrevy, on 14th, a great number of Thrushes, Starlings, and Lapwings from noon to 4 p.m., fresh E.S.E. breeze, frost and snow. At Air (River Dee), on March

30th, a Common Thrush was seen, at 9 a.m., light N.W. breeze, mist.—Autumn: Earliest date recorded Oct. 24th, when one killed at Godrevy, 1.30 a.m., mod. S.S.E. breeze, mist and rain; latest notice Dec. 24th, at Skerries, one killed, 3 a.m., strong S.S.W. breeze, misty.

Redwing, *Turdus iliacus*, Linn.—Separately noticed at Godrevy only, namely, Nov. 4th, at 3.30 a.m., one killed, fresh S.W. by S. breeze, mist and rain. On Nov. 13th, one killed, 6.10 p.m., fresh S.S.W. breeze, fog. On 22nd, at 2 p.m., one struck, fresh W.S.W. gale, squally and misty.

Blackbird, *Turdus merula*, Linn.—Autumn: First notice Sept. 28th, at Morecambe Bay, “one cock Blackbird in the vicinity.” Through October the notices are more frequent and general. At Skerries, South Stack, and at Bull Point, on 25th and 26th, several struck and some were killed. At Bull Point, Oct. 31st, “a female” struck against the W. side of the lantern, 1.40 a.m., light S.E. breeze, cloudy, misty. The only stations reporting occurrences in November are Allonby, where through the month “a good many were about the hedgerows”; and one instance at Morecambe Bay (where none were seen in October), viz. on 4th, “a young female in vicinity.” The next and last notice is Godrevy, where on Dec. 25th, at 6 a.m., one struck, gentle S.W. breeze, clear.

Wheatear, *Saxicola oenanthe*, Linn.—On Sept. 23rd, at South Stack, between 12 and 2 a.m., several struck and one was killed, light S.E. gloomy, misty. This is the only instance given.

Redbreast, *Erithacus rubecula*, Linn.—Spring: At Great Castle Head, on Jan. 20th, also on Feb. 1st, 4th, and 24th, “two or three Robins and Sparrows” were noticed about 7 a.m., mod. S.S.E., E.S.E., S.W., and N. breezes respectively. On March 1st, at 9 a.m., two Robins and two Magpies, fresh N.W. breeze, gloomy and showery, with snow. Autumn: On Oct. 28th, at Morecambe Bay, “a female Redbreast” in vicinity, 10 a.m., mod. N.N.E. breeze.

Nightingale, *Daulias luscinia*, Linn.—Spring: On April 22nd, at Burnham, “heard at 5 a.m. for first time, being one day later than last year, and in the very same spot.”—W. Lewis, P. K.

Goldcrest, *Regulus cristatus*, Koch; Chiffchaff, *Phylloscopus collybita*, Vieill.—Spring: On May 2nd, at Nash E., 200

Chiffchaffs were counted from 1 a.m. to sunrise, light E. air, haze; 196 were killed. Autumn: On Oct. 26th, at South Stack, a few Goldcrests from 12 to 4 a.m., one killed, gentle E. breeze. The same day, at Morecambe Bay, one (cock) Goldcrest flew on board, struck the deck-house and fell on deck, but was not killed; and at Nash, the same day, 12 to 18 Chiffchaffs passed at 4 a.m., and 6 were killed, light E.N.E. breeze, rain. On Dec. 31st, at 3 a.m., one Goldcrest struck at South Stack, light S.W. breeze, cloudy. From Flatholm, Mr. Dale reports "Gold crested Wrens and Chiffchaffs not so numerous as usual in the autumn." Taking the whole family of the TURDIDÆ, the chief movement as observed on the west coast occurred the latter end of October: this, we find, agrees with a general movement of the family noticed on both coasts of Scotland, and also a rush from E. to W. observed on the English east coast. On Oct. 14th was "a whole gale" from the E., after which the winds continued E. and S.E. to the end of the month—the force when noted ranging from 2 to 7. With the exception of the Redwing, and excepting the note of Blackbirds and of Robins seen at Allonby, there has scarcely been an instance recorded of any of the family seen throughout November. There is an absolute absence of Fieldfares, and the scarcity of the family generally is remarked on from many stations. Thus, from Allonby, Mr. Thompson writes (Nov., 1881), "No Fieldfares seen in this part, which is very unusual." At Skerries, of Blackbirds, Thrushes, Fieldfares, &c., "very few are now seen." At Lundy, "till January, Mr. Parsons writes, "we had no birds on the islands, only now and then a Blackbird or Thrush." At Usk, Blackbird and Thrush seen occasionally. And from Nash E., Mr. Nicholas, P.K., writes in October, "Blackbirds and Thrushes have been very scarce since the gale and snowstorm of Jan. 18th last," and "not one Thrush has been seen here since January." Note:—At Bardsey, however, Mr. Bowen says of Blackbirds, Grey-birds (?), Jackdaws, House and *Common* (?) Sparrows, and Starlings, that they are resident. Does this mean that they are seen all the year round; even so, is there no increase and decrease in the number noticeable, and if so, when? Are *Grey-birds* the Grey-backed Crows? What is the difference between "House" and "Common" Sparrow? Does the latter mean the Hedgesparrow, or is one the Tree Sparrow? If there be any doubt, a specimen,

or the skin, head, or wings sent through the post would serve to identify the species.

Wren, *Troglodytes parvulus*, Koch.—Autumn: First notice Sept. 4th, at Skerries, at 2 a.m., several struck the glass and remained till daybreak, light S.S.W. breeze, hazy. On 24th, at South Stack, a few struck between 9 and 10 p.m., W.N.W., fog. And on Sept. 30th, at Bull Point, one struck N.E. side of the lantern, with a mod. S.S.E. breeze, hazy (*not* a following wind). On Oct. 23rd, at Skerries, Wrens with Linnets were flying about all day; and—the latest notice—on 26th, one passed Morecambe Bay l.v. at sunrise, flying N.

Wagtail, *Motacilla* (?).—Spring: On Feb. 10th, at Great Castle Head, four Dishwashers at 5 a.m., strong S.S.W. breeze, showery and foggy.—Autumn: The first notice at Nash E., on Aug. 21st, “thirty to forty Wagtails passed S.W.,” 6 a.m., mod. S.S.E. breeze, very clear. They are not again noticed till Sept. 8th, at Bull Point, when about two dozen “Dishwashers and Linnets” passed inland, 6 a.m., S.S.W., calm, clear. On the 19th, at Morecambe Bay, three Wagtails flying S.W., 7.30 a.m., gentle N.W. breeze; and on the 25th, “one” flying about the ship in the forenoon. On Oct. 5th, one flying S. by E., mod. N.E. by N. breeze; and on 7th, one flying N.W., light S.S.W. breeze. This is the last recorded, except at Allonby, where, Mr. Thompson writes on 20th, “Wagtails are common in these parts.”

Meadow Pipit, *Anthus pratensis*, Linn.—Autumn: First notice Aug. 25th, at Nash, “eight Titlarks passed S.,” strong S.W. breeze, rain. At Morecambe Bay, Sept. 25th, light N.W. breeze, some passed S.S.E. On 27th, “one or two at a time going N.N.W., W., and S.W., a gentle N.W. by N. breeze; and on 28th, going S.W., light S. by E. breeze. Till Oct. 25th are constant notices of small flocks passing, their general direction being S.W. and S.: wind ranging from calm to mod. gale, but generally (when instances noted) not strong; till 8th easterly, then till 16th W. prevailing; after which E., with more or less of N. Time of records for the most part, the forenoon. At Longships, on Oct. 28th, one fluttered about the lantern at midnight, fresh N. to N.W. breeze, drizzly. This is the last notice till Nov. 29th, when at Morecambe Bay l.v. Titlarks were seen at 7.40 a.m., flying N.E., mod. N.W. by W. breeze.

Rock Pipit, *Anthus obscurus*, Lath.—At St. Tudwal's, in Jan., 1882, "two pairs of Sea Larks" are reported, with the note, "they remain here for the winter" (Is the Rock Pipit meant by Sea Lark? If a specimen were procured and sent by post it might easily be identified; or is it the Ringed Dotterel?).

Swallow, *Hirundo rustica*, Linn.—Autumn: First notice at Skerries, Aug. 14th, "two land-swallows flying about the island this morning." Next notice Sept. 3rd and 4th, at Milford, "a considerable quantity"; and on 10th Sept., at Bideford, "hundreds flying round and lighting on lantern," 5 p.m., calm E., fine, misty. On 18th and 25th several were seen from Skerries and from Morecambe Bay, flying S. and S.S.E.: and on Oct. 2nd and 3rd some passed Morecambe Bay, flying S.E. by S., and S. On 7th, five were seen at Godrevy, 12.15 p.m.; and on 19th, at Bull Point, "a large flock passed, flying E.," strong E.S.E. breeze, this being the latest instance recorded.

Martin, *Chelidon urbica*, Linn.—Autumn: Sept. 24th, at Skerries, several were seen flying about the island with Swallows during the afternoon. From Flatholm Mr. Dale writes, "about the middle of September there was an unusually large quantity of Martins for a few days."

Greenfinch, *Ligurinus chloris*, Linn.; Yellowhammer, *Emberiza citrinella*, Linn.—Noticed only at Allonby, where, Oct. 20th, Green Linnets and Yellowhammers were seen in mixed flocks.

Sparrow, *Passer domesticus*, Linn.; *P. montanus*, Linn.—Spring: On Jan. 12th, at North Stack, "a flock of Mountain Sparrows" flying S.W., strong N.E. breeze, snow. At Great Castle Head, on 30th, "Sparrows with Robins"; and the notices are continuous throughout February (on 14th with "Ravens"). In March, 4th and 10th, "Sparrows with Robins." On 31st, "a flight of Sparrows." The time of the observations mostly between 6 and 8 a.m.; the weather invariably gloomy or foggy; breeze gentle to strong, and southerly, except on 24th N., and on 31st E.N.E.; the direction of flight not noted. Autumn: Sept. 11th, at Nash, "large flocks of Common Sparrows passed S.W., light N.E. breeze. On 12th, "twenty" in same direction, light N., misty. At Bardsey, House and Common Sparrow (?) reported "resident all the year round."

Chaffinch, *Fringilla cœlebs*, Linn.—Autumn: Sept. 6th, at



Nash, "fifteen to twenty Chaffinches struck at midnight, four killed," mod. E. breeze, rain. On Oct. 17th, at Morecambe Bay, one, flying W.N.W., mod. S. breeze; and on 19th, one, flying S.E., mod. S.E. gale.

Linnet, *Linota cannabina*, Linn.—Autumn: First notice at Nash, Sept. 7th, "a large flock of Linnets passed W. at 9 p.m.," fresh E.S.E. breeze, mist. On 8th, at Bull Point, "about two dozen Linnets and Dishwashers," 6 a.m., passing inland, S.S.W., calm, clear. On 25th, at Skerries, "many Linnets and Wrens all night striking the light," only a few killed, mod. W.S.W. breeze, misty. On 27th, at South Stack, "about fifty Linnets" passed W.N.W. at 7 a.m., gentle N.N.W. breeze, fine and clear. From this station flocks were observed till Oct. 16th passing N.W. or W.N.W., with light S.E. wind. At Skerries they were again noticed between Oct. 17th and 27th, generally with Larks, once with Blackbirds also, and once "Linnets and Wrens"; wind on every occasion S.E. or E.S.E., light breeze to fresh gale. On 24th and 25th, fresh E.S.E. gale, "Linnets, Larks, and Blackbirds passed all night, many striking, and a few being killed." On Oct. 16th, at Milford, "a considerable number passed." At Godrevy, Nov. 7th, one struck, light S.S.W. breeze, clear. The latest is reported from Milford, Nov. 23rd, "a considerable number with Larks have been about the land here the last few days," fresh breeze to mod. gale S.S.W. to W., "which prevented their going farther."

Bullfinch, *Pyrrhula europæa* (Vieill.).—Oct. 28th at Morecambe Bay, a female noticed at 2 p.m., mod. N.N.E. breeze.

Sky Lark, *Alauda arvensis*, Linn.—Spring: From Jan. 13th to 25th, "Sky Larks seen at Lundy and at Scilly." On 11th, "a quantity" arrived with Plovers and Starlings at Milford, and remained all day. On 12th and 13th, at South Stack, "continuous flocks of Larks and Starlings passed," fresh N.E. breeze, snow. Autumn: Sept. 24th, "a flock of Sky Larks" passed S.E., 3 p.m., mod. S.E. breeze, mist. On 25th, at Morecambe Bay, "three," and on 27th, at same hour, 10 a.m., "two passed" N.E., gentle N.W. by N. breeze. On 29th, at Nash, "a few Larks with Starlings" passed at noon, gentle E.N.E. breeze, mist. At Morecambe, Oct. 5th, one passed S., mod. E. by S. breeze. On 16th, three passed W.S.W., light N.N.E. breeze. At Skerries, throughout October, notices of passing

chiefly at night, striking, and some killed; wind mod. S.E. to E.S.E. On 16th, at South Stack, "a flock of Larks accompanying a flock of Linnets" passed W.N.W., light S.E. air. On 21st, at Milford, a flight passed inland, 1 p.m., E.S.E. clear (the following night there was a fresh gale). In November, at Morecambe, on 4th, "a female"; and at Milford, 23rd, "a considerable number with Linnets been about the last few days," S.S.W. to W. fresh breeze to mod. gale. On Dec. 2nd, at Morecambe, "a male Sky Lark came on board and was caught, 7.45 a.m., mod. S.W. breeze, gloomy, misty. At Skerries, on 22nd, "a few Larks" struck from 10 to 11 p.m., one being killed, gentle E.N.E. breeze.

Starling, *Sturnus vulgaris*, Linn.—Spring: At South Stack, Jan. 12th and 13th, Starlings and Larks. On 14th, at Godrevy, "a great number with Thrushes and Lapwings" from noon to 4 p.m., fresh E.S.E. breeze, frost and snow. At Scilly, 13th to 25th, "large flocks with Larks and Fieldfares." On 7th several at Nash, and on 16th "flocks" passing N.W., light air, misty. On Feb. 16th, at Great Castle Head, "six were seen with Ravens," 4 p.m., mod. S.S.E. breeze, rain; and at Scilly, on 22nd, with Lapwings, Plovers, and Curlews, 9 a.m., strong E.N.E. breeze. Autumn: First notice at Nash, Aug. 13th, "a small flock" passed S.W., 9 a.m., gentle W. breeze, fog; so also on 19th, mod. E. breeze, mist. On Sept. 24th "a small flock" passed S.E., mod. S.E. breeze, mist, rain. On 29th, "twenty-four Starlings and a few Larks" passed S.W. at noon, gentle E.N.E. breeze, mist. At Morecambe, Sept. 27th, at 11.50 p.m., "two going W. and chirping loud," light W. air. On Oct. 1st, at Scilly, "flocks flying about in the morning," mod. S.E. breeze. On 13th, at South Stack, 7.30 a.m., "a very large flock rushed on the island," fresh N.N.W. breeze; they passed to E.; on 17th a few passed, two struck, but were not killed. On 19th, at Morecambe, one going S.S.E. at 8 a.m., and at 3.23 p.m. three going S.E., mod. S.E. gale. On 25th, one going E., mod. E. breeze. At Nash, on 21st, fifty to sixty passed, 4 a.m., fresh E.S.E. breeze, mist, rain (11 killed); and on 27th, at about the same hour, 100 to 150 passed to S.W., 10 to 20 struck, 4 killed, mod. E.N.E. breeze. At Bideford, throughout October, hundreds seen often in the morning, flying past from N.W. to E., to feed on Branston Burrows. In November, at South Stack, on 12th,

flocks passed S., about fifty rested on the island, 8 a.m., mod. S.W. breeze, fine, clear. On 15th, at Morecambe, a flock at 10.55 a.m. passed, flying E.S.E., fresh S. breeze, mist, rain. At Nash, the same day and hour, 200 to 300 passed S.W., fresh S. breeze, mist (one white Starling among them); on 24th, twelve to eighteen passed at 8 a.m., strong S.W. breeze, clear. On Dec. 14th, 300 passed S.W. at noon, mod. S.W. breeze, mist, rain; and constant occurrences are noted at this station up to Feb. 7th, 1882. On Dec. 23rd a large flock passed to E., 8.30 a.m., calm; and on 31st, at same hour, a large flock passed to S.E., gentle S.S.E. breeze, fine and clear. On Jan. 16th, 1882, at 7.50 p.m., some struck the lantern, strong S. breeze, misty. At Skerries, on 17th, a great many passed all night, fifteen killed, strong S.W. breeze, mist; and at sunrise large flocks flying towards the land. On 20th, at Hartland Point, one struck, 9 p.m., calm. From Flatholm they are reported to have been very scarce.

Magpie, *Pica rustica*, Scop.—On March 1st, Great Castle Head, two Magpies and three Robins seen, 9 a.m., mod. N.W. breeze, gloomy, showery.

Jackdaw, *Corvus monedula*, Linn.—Autumn: In October it is reported from Allonby that a number of Jackdaws frequent these parts. On Oct. 25th, at Morecambe l.v., one seen at noon going S. by W., lighted on mizen-mast a moment, and then flew away very tired, strong E. breeze, clear.

Crow, *Corvus cornix*, Linn.; Chough, *Pyrrhocorax graculus*, Linn.—Spring: Feb. 18th, at Great Castle Head, "four Muscle Crows," 5 a.m., mod. to fresh E. breeze. On 22nd, at 7 a.m., six, E.N.E. On March 22nd, at 8 a.m., four Crows with two Ravens, strong breeze W.S.W. to mod. gale; and on 26th, four Crows. Autumn: Sept. 13th, at Nash, a small flock of Choughs passed S.W. at 3 p.m., gentle N.N.W. breeze, clear. At Morecambe, Sept. 28th, one Crow in vicinity, 11.20 a.m., gentle S. breeze, slight fog. On Oct. 13th, at Nash, a very large flock of Crows and Gulls seen inland from 8 a.m. to 4 p.m., mod. W. breeze, very clear; and on Dec. 14th, 40 Crows (with 300 Starlings) at noon, mod. S.W. breeze. On Jan. 20th, 100 with Gulls passed S.W., 11 a.m. (Would some of these notices refer to Rooks?)

Rook, *Corvus frugilegus*, Linn.—Nov. 6th, at Allonby, a great many Rooks coming from N., flying S., strong S.W. breeze.

Raven, *Corvus corax*, Linn.—Spring: At Great Castle Head, Feb. 14th, two with Sparrows, 4 p.m., strong S. breeze, showers. On 15th, two with Starlings at same hour, mod. S.S.E. breeze. On March 22nd, two, and four Crows, 8 a.m., strong W.S.W. breeze, showers.

Cuckoo, *Cuculus canorus*, Linn.—Spring: At Air (River Dee), on April 10th, a male and female seen, 4.30 p.m., mod. S.S.E. breeze, clear. On 19th, at Burnham, Cuckoo heard, weather very cold. At Nash, on 15th, eleven Cuckoos passed N.W. from 1 to 3 p.m., calm, mist. On 16th, five passed N.W. from 8 to 9 a.m., light E.S.E. air, mist. On May 4th, four passed S.W. at 9 a.m., gentle E.S.E. breeze, mist, rain.

Falcon, *Falco peregrinus* (Tunstall).—At Morecambe L.V., Nov. 21st, 3.30 p.m., a Falcon Hawk fell in the water close to the L.V., very tired, was drowned. At Hartland Point, Jan. 24th, 1882, a very large Hawk seen at a distance, 3.30 p.m., calm and clear.

Cormorant, *Phalacrocorax carbo*, Linn.—At Skerries, from May to September, Cormorants and Curlews seen occasionally. At Bideford, in September, a few Shags. At Morecambe, Oct. 9th, one Cormorant going W., 2.15 p.m., strong N.W. breeze, about through the day.

Gannet, *Sula bassana*, Linn.—Spring: At Holyhead, April 29th, four crossed, 1 p.m., flying from E. to W., mod. S.W. gale. Autumn: At Skerries, Sept. 11th, several at sunrise flying W. at a great height, mod. N.E., clear. At Morecambe, Oct. 7th, 7 a.m., one going S.; and on 8th, one going E. On 9th a good many, and on 10th a few were seen. At Hartland Point, Nov. 20th, several flying to and fro (and during the whole of the month).

Heron, *Ardea cinerea*, Linn.—At Skerries, Sept. 8th, one alighted close to the lighthouse, 6 p.m., calm and fine. At Allonby, Oct. 20th, several observed at 11 a.m. coming from the north, flying S., fresh N.E. breeze, clear.

Goose, *Anser* (?)—Spring: At Nash E., passing W. in January. At Sevenstones, on 11th, several flocks passed, flying W.; and at Scilly, on 25th, three were seen. On Dec. 13th, at Hartland Point, Geese in flights going E., and on 23rd several birds going in same direction. On Jan. 17th, 1882, several (single birds, not in flights) during the morning flying W. These are all the instances noted.

Sheldrake, *Tadorna cornuta*, Gmel. — March 29th, at Air (River Dee), forty-one pairs at sunrise, gentle W.N.W. breeze. Oct. 17th, at Allonby, two flying S., 8 p.m., mod. S.E. breeze.

Duck, *Anas boschas*, Linn.; *Mareca penelope*, L.; *Ædemia* (?); *Querquedula crecca*, Linn.—Spring: At Godrevy, on Jan. 6th, a flock of Ducks and a Mallard flying W. On 13th and 14th, at Nash, flocks of Wild Ducks flying W. On 26th, at St. Tudwal's, "Ducks." On March 18th, Bardsey, three Ducks and one Drake Wigeon, at 1.30 a.m., mod. S.S.W. breeze, sleet. Autumn: First notice Sept. 1st, at Holyhead, large flocks of Wild Ducks in bay, 11.30 a.m., fresh N.E. breeze, clear. At Godrevy, on 15th, four "Black Ducks" (? Scoters), 1.30 p.m., mod. N. by E. breeze, clear. At Morecambe, on 14th and 15th, at 7 a.m., Wild Ducks flying S.S.W., light W. breeze, clear. During the first two weeks of October Wild Ducks are reported as passing towards the S.W., S.E., and S., the greatest number on the 9th; and on 19th and 24th, Black Ducks going S.E. or S.S.W. At Scilly, on 18th, three Wild Ducks, strong S.E. breeze. At Nash, on 21st, four Wild Ducks (Black Ducks) at 3.30 a.m. struck, one killed, strong E.S.E. breeze. On 26th, at Allonby, five Grey Ducks at 1.30 p.m., strong E. breeze, clear. In November Black Ducks and Wild Ducks were noticed from Morecambe Bay, Godrevy, and Air, passing to S. or E. At Godrevy, Dec. 14th, at 8.30 p.m., one Wild Duck was killed, fresh N. breeze, clear; and at Air, to Dec. 9th, flocks of Wild Ducks passed inland about sunset. At Morecambe, on Dec. 2nd, some were seen flying S.W.; and from Dec. 2nd to 11th Wild Ducks in numbers—from one and two to thirteen—passed, flying N.W., N.N.W. (and once W.N.W., with strong W.N.W. breeze), wind S.S.W. or mod. S.S.E., generally mist or rain. Time of observation varying from 8.30 a.m. to 3.30 p.m. On 27th one passed, flying S., gentle N.W. breeze. At Nash, on 20th, fifteen Ducks passed at midnight, two struck (not killed). On 29th, forty to fifty passed S. at 3.20 p.m., light S.W. breeze, fog; on same day, at 3.30 a.m., 100 to 150 Teal passed S.W. On 31st, four Ducks passed S.W. at 4 a.m., strong S.W. breeze, clear. On Jan. 24th about 200 seen close to the cliffs all day.

Wood Pigeon, *Columba palumbus*, Linn.—On June 22nd, at Nash, two Wood Pigeons struck (one killed), 2 a.m., mod. W. breeze. At Skerries, Aug. , two Pigeons seen in the afternoon,

remained some time. On Oct. 21st, at Nash, at 4 p.m., one killed, fresh E.S.E. breeze. On Nov. 30th, at Allonby, flocks of Wood Pigeons coming from E., flying W., strong S.W. breeze, cloudy.

Landrail, *Crex pratensis*, Bechst.—At Nash, June 19th, one killed at 1 a.m., light N. air, fog; again on Oct. 29th, one killed, 3.50 a.m., light E.N.E. breeze, mist.

Golden Plover, *Charadrius pluvialis*, Linn. — Spring: At Nash, between Jan. 3rd and 11th, flocks of Plovers, Peewits, and Starlings passed W. or N.W. At Bardsey, Feb. 11th, flocks of four and five Golden Plovers were flying about the island in the daytime, mod. N.E. gale, sleet. Autumn: Sept. 19th, at Skerries, two remained till evening. At Allonby, Oct. 20th, Golden Plovers in flocks. At Nash, Dec. 10th, fifty to sixty Plovers passed W. at 2 p.m., light N.E. breeze, mist. In January, 1882, at St. Tudwal's, two alighted on the island to rest, one flew away with difficulty to W., mod. W. gale. On 7th, at Nash, three Plovers killed, 4 a.m., strong N. breeze, showers of hail.

Grey Plover, *Squatarola helvetica*, Linn.—At Allonby, Nov. 7th, three Grey Plovers seen, one shot, strong S.W. breeze.

Ring Plover, *Ægialitis hiaticula*, Linn.—At Air, March 29th, forty Ring Plovers at noon, gentle W.N.W. breeze, clear.

Dotterel.—At Bideford, in September, hundreds. (Would this be the Ringed Dotterel?).

Lapwing, *Vanellus vulgaris*, Bechst.—Spring: At Nash, Jan. 3rd, large flocks passed W., and on 6th N.W., mod. E. breeze. On 10th, Plovers and Peewits passed S.W., gentle N.E. breeze; and on 11th, flocks (with Starlings) passed N.W., light breeze, mist. At Scilly, Jan. 10th, 13th, and 25th, large flocks of Lapwings and Plovers, mod. E. and N.N.E. breezes. At Sevenstones, on 11th, large flocks flying W., gentle W.N.W. breeze, hazy. At Godrevy, on 14th, Lapwings, Starlings, and Thrushes at 4 p.m., fresh E.S.E. breeze, clear. On 15th, at Skerries, several were seen flying round the lantern at midnight, strong S.S.W. breeze, gloomy. At Scilly, Feb. 22nd, 9 a.m., Lapwings with Plovers, Starlings, and Curlews, strong E.N.E. breeze, mist. Autumn: Aug. 30th, at Air, a flock hovering about in the morning. This is the only notice from any station till Oct. 1st, when, at Allonby, large flocks. On 16th, at Nash, two Peewits

and a few Starlings passed S.W., gentle E. breeze, mist. At Allonby, Nov. 14th, several flocks coming from the north, flying S., strong S.W. breeze, rain. So on 18th, with gentle E. breeze, frost. At Morecambe, on Nov. 10th, at 11.30, a flock passed, flying S.E., fresh W. breeze. On Dec. 12th, at Milford, a considerable number (probably over 200) seen near, evidently on flight, were following a leader from the way they flew, light N. breeze, fine sharp frost. On Dec. 16th, at Nash, 1000 or more Lapwings passed W. at 1 p.m., light N.E. breeze, mist. At Menai, Peewits all the year round (but is no increase and decrease of their numbers observable?).

Turnstone, *Streptilas interpres*, Linn.—At Allonby, Nov. 28th, small flocks of about a dozen Turnstones noticed on the shore, gentle S.W. breeze, clear.

Oystercatcher, *Hæmatopus ostralegus*, Linn.—On June 7th and 8th, at Nash, twenty Curlews and Sea-pies passed N., mod. N. to N.W. breeze. At Bideford, Sept. 17th, hundreds of Sea-pies visit the mussel-beds all the year with Curlews, Gulls, and Stints. On Oct. 6th, at Air, several flocks passed E. at different times of the day, mod. N.N.E. breeze. On 20th, at Allonby, flocks. At Skerries they are said to remain all the year. (But do *all* remain all the year? What about the young? Is there *no* movement noticeable at any time of the year?)

Woodcock, *Scolopax rusticula*, Linn.; Snipe, *Gallinago cælestis*, Frenzel.—At Bardsey, Jan. 14th, two passed W. at noon, fresh E. breeze, mist; on 20th one struck the lantern. At Nash, Jan. 5th, four Snipe passed S.W. at 3 p.m., fresh E.N.E. breeze, mist. On Oct. 27th, at Skerries, a Woodcock killed soon after midnight, fresh S.S.E. breeze. At Nash, Nov. 2nd, two Snipe passed E., mod. E. breeze, rain. On Dec. 21st, at Skerries, a Woodcock killed at midnight, mod. W.N.W. gale; and on Dec. 29th, at Nash, four Snipe passed S.W., light S.W. breeze, mist.

Stint, *Tringa* (?); Godwit, *Limosa* (?).—Sept. 17th, at Bideford, hundreds of Stints with Sea-pies, &c., between half-ebb and half-flood. At Allonby, Nov. 8th, a large flock of Stints and Godwits wheeling about.

Sanderling, *Calidris arenaria*, Linn.—At Godrevy, Dec. 20th, and 21st, about 11 a.m., mod. S. and W. by S. breezes, a flock passed W.; and on 25th, at 12.30 a.m., two Sanderlings struck and one was killed, fresh S.W. breeze, mist.

Curlew, *Numenius arquata*, Linn.—Spring: At Scilly, from Jan. 13th to 25th, large flocks, with Lapwings, &c. On 16th, at Skerries, an unusual number seen all day, mod. breeze, mist. On 22nd Feb. at Scilly, Starlings and Curlews, E.N.E., strong breeze; and from May to September they are reported as occasionally seen. At Nash, June 7th and 8th, twenty Curlews and Seapies passed N. from 6 a.m. to 3 p.m., mod. N. and N.W. breeze, rain. On 24th to 28th large numbers of Curlews and Seapies passed S.W. from sunrise to 1 p.m., mod. N.W. to S. breeze, rain. On July 11th twelve to fifteen Curlews passed S. 9 a.m., fresh W. breeze, fine. At Air, July 18th, 9.15 p.m., large quantities passed E., light W.N.W. breeze, rain. Autumn: At Morecambe, first instance, Sept. 18th, one flying about the ship, followed by a Skua; and on 25th, two flying S.S.E., gentle N.W. breeze. At Menai they are mentioned as being more plentiful in August and September; and at Bideford, in September, hundreds at the mussel-beds with Oystercatchers, &c. At Nash, Oct. 6th, eight passed N.W. at 1.30 p.m., light E. breeze. At Morecambe, on 19th, three passed S.W., strong S.E. gale. And at Skerries, on 18th, Curlews flying about the island all day, mod. S.E. breeze; on 23rd they were seen all day, light E.S.E. breeze, clear. At Usk, throughout the winter, large flocks seen on the sands when tide in, and these remained about till March, 1882.

Arctic Tern, *Sterna macrura*, Naum.; Lesser Tern, *S. minuta*, Linn.—At Nash, June 24th to 28th, a large number of Sea Swallows (with Curlews) passed S.W. from sunrise to 1 p.m., mod. N.W. to S. breeze, rain. At Skerries, May 1st to September, innumerable quantities of Arctic Terns or Sea Swallows (come to breed, leaving when young able to fly). At Bideford, Sept. 17th, a Sea Swallow, 10 p.m., struck the lantern, and was taken alive, fresh S. breeze, mist. On Sept. 27th, at Morecambe, three Lesser Terns passed with two Titlarks, flying N.N.W., gentle N.W. by N. breeze.

Gull, *Larus*.—Spring: At Great Castle Head, in January up to 20th, Gulls flew by. At Bull Point, from 11th to 26th, Sea Gulls (grey), flying rather high, S.W., with mod. breeze from N.W. At Nash, on 9th, a small flock of Gulls passed N., 11 a.m., light E.N.E. breeze. At Great Castle Head, March 14th and 18th, four and six Gulls flying S.S.E. and S.W.



Autumn : At Nash, on Aug. 30th, a large flock of Gulls passed N.W. at 7 a.m., gentle E.N.E. breeze. At South Stack Gulls are reported as remaining till Aug. 29th. At Bideford hundreds of Common Gulls seen in September. At Bull Point, on Sept. 16th, a Black-backed Gull passed W.S.W., 10.15 a.m.; on 17th, at Morecambe, continuous flocks of Gulls, Black-headed, Grey, and different species. Thence to Oct. 19th. Flocks of Common Gulls and different species are constantly recorded; winds from N.N.E. to S.E. by S. (never directly E. or N., nor indeed N. of E.); greatest number Sept. 19th to 22nd inclusive. At Nash, Oct. 13th, a very large flock of Gulls and Crows seen inland from 8 a.m. to 4 p.m., mod. W. breeze, very clear. The same on 27th, gentle E.N.E. breeze, mist. A great number passed up and down the Channel from August to October, about sunrise flying N. and at sunset S. At Allonby, Nov. 14th, it is "noted for some time past a great quantity of Kittiwakes been on the coast." At Skerries also an unusual number of Kittiwakes this year; a few Gulls all the year. At Usk large flocks of Gulls seen occasionally through the window. At Bardsey Gulls resident; and at Menai always seen.

Skua, *Stercorarius catarrhactes*, Linn.—The only records from Morecambe on Sept. 18th, one following a flock of Gulls, and again on 19th and 20th; several on 22nd, in vicinity all day; 23rd, a dozen going W., 1.30 p.m., gloomy and misty; on 25th, 29th, and 30th a good many seen. In October, one seen on 23rd chasing Gulls; on 8th, one going S., gentle E.N.E. breeze; the latest notice on 11th, a few chasing Gulls.

Petrel, *Procellaria pelagica*, Linn.—On Sept. 23rd, at Godrevy, one struck, 9.30 p.m. (not killed), mod. S.S.E. breeze, clear. At Morecambe, Nov. 22nd, a Stormy Petrel flying W., 2.30 p.m., mod. W. gale. At St. Tudwal's, Jan. 8th, 1882, four Stormy Petrels rested under lee of rocks, 3.30 p.m., mod. W. gale.

Razorbill, *Alca torda*, Linn.—From South Stack we hear Razorbills left after breeding in the beginning of August. At St. Bees the beginning of this year (1882), a bird was picked up dead on the shore, which, from the description and a sketch made by Mr. Pizey, P.K., I identified as a Razorbill.

Guillemot, *Lomvia troile*, Linn.—At South Stack they are mentioned in same note as Razorbills as leaving in beginning of August. At Holyhead, Sept. 1st, large flocks of Guillemots and

Puffins, fresh N.E. breeze, clear. At Milford, on same date, it is noted that "several during the past week struck the lantern windows at night; they annually do so at this time and no other." At Morecambe, Sept. 20th, a great number of Divers (? Guillemots), with Gulls and Skuas, and so to 26th, when a few Divers throughout the day. At Hartland Point diving birds were observed near the shore in January, 1882. At Skerries Guillemots and Puffins are reported as remaining nearly the year round. (But if not all the year, when do they leave and when return? Could this be noticed for next year's report?)

Puffin, *Fratercula arctica*, Linn.—At Holyhead, Sept. 1st, large flocks with Guillemots. At Morecambe, Sept. 28th, small flocks of Gulls and Puffins continuous, and, on Oct. 1st to 23rd, flocks with Gulls seen in vicinity.

Birds unknown.—At Hartland Point, Oct. 27th, grey bird at midnight struck the lantern, fresh E. breeze. At Bardsey Mr. Bowen says grey birds, &c., are resident. Are Grey Crows meant? At Air, Oct. 29th, flocks of birds unknown passed before daylight, mod. N.E. breeze. At Scilly, Oct. 18th, a few migrants later part of the month. At Morecambe, Oct. 20th, small flocks of small birds going E.S.E., 8.30 a.m., strong S.E. by E. breeze, clear, a little misty.

#### ADDITIONAL REMARKS.

Holyhead, Menai, and St. Bees are reported as unfavourable stations for observation. From Bull Point Mr. Knott writes:—"Very few birds to be seen. It is a north aspect; more to be seen with a south aspect." And from Great Castle Head Mr. Spicer writes:—"This being an inland lighthouse there is scarcely a bird to be seen for days, and then by chance you might see some away in the fields."

Most of the stations report scarcity in comparison with other years, as South Stack, Lundy, Caldy, Usk, Burnham, and Trevoise Head; the decrease appears to be ascribed to the mildness of the season. Whether this be the real or the main cause of a like scarcity or not from the following stations may be an open question; but I give the opinion of the observers, and they do not speak of it as the record of this year's observations alone, *viz.*, Longships, from which Mr. Jones writes:—"Very few cases of birds coming against our lantern since (of late years) the

light is red towards the shore." From Burnham it is reported "Birds very rarely strike, the lantern glass being only eight feet by four feet." And from Skerries report I extract the following:—"There is a small quantity of birds in comparison with years prior to introduction of fog-horn (see also Rep. 1880, p. 119). In thick and foggy weather during November and February great quantities were always seen, chiefly Starlings, with Blackbirds, Thrushes, Wheatears, Larks, &c. On one occasion I saw our lantern gallery full, and at the base of the tower the quantity killed necessitated the use next morning of the wheelbarrow to remove them to the garden for manure. On one occasion a monster pie, made by workmen employed here, contained two hundred Larks, besides other smaller birds. But since the fog-horn has been sounded in thick weather birds coming to the light have been few, though many seen and heard in the air."—H. Knott.

From the same station Mr. Garret, P.K., writes:—"These birds (Sea Swallows, which breed on the island) seem to take no notice of the fog-horn, while others, such as Starlings, Blackbirds, Thrushes, Larks, &c., keep off while the horn is sounding, so that very few are seen round the lantern now, while formerly, in thick or misty weather during February and November, the lantern-gallery would be full of birds; each on striking would drop into the gallery and remain till daylight, when, if not too much injured, they would fly; but with strong winds a great number, chiefly Starlings, would be killed."

It is easy to believe that the hideous sound of a fog-horn, till the birds get used to it, will keep them at a distance. That birds recognise landmarks cannot, I think, be doubted, and possibly a complete change in colour of a light they have grown accustomed to may for a time make them suspicious of it. I think that if a light be placed in a new, and not altogether unfavourable, situation, birds will be attracted to it, because, though not yet accustomed to see it in that spot, they will recognise it as a resting-place and sign of land. From some light-keepers I have heard that years ago (the lighthouse then not long erected) the slaughter among birds was much greater than now. Of course the nature of the season would partly account for this, but I think also that the unaccustomed light might attract many a weary wanderer to an untimely death. That birds profit by experience cannot, I

think, be doubted, and I expect that the unrestrained destruction of them along a particular route will gradually effect a change in their ways. I believe that the scarcity now for some years generally noticed may be due in a measure to the ruthless destruction met with at certain points on the Continent in their line of annual flight.

Fresh instances are constantly occurring which show the relation between the movements of birds and the state of the weather. In connection with this point I quote the words of Mr. Nicholas, keeper at Nash E., who writes:—"I've noticed whenever there is a lot of Gulls and Crows inland, it indicates a gale. I first noticed this Oct. 13th; on 14th there was a whole gale. I have since that date observed the same thing before every gale."

The prevailing winds on this coast were:—From August to Sept. 17th, easterly; thence, to Sept. 29th, gentle to mod. W.; thence, to Oct. 8th, E., viz., mod. S.E. and E. to 5th, then with more or less of N. On and after 9th, W. till 14th, with touch of N. and strong; on 16th a whole gale, E., thence, to 24th, S.E., strong breezes; after which, to the end of the month, E. and N.E.

Birds have not been noticed in such large flocks as last year, and there have been but faint traces of rushes. No rare birds are reported.

The most decided and general movement took place between Oct. 16th and 27th; after October, except among the *Anatidæ*, the occurrences being very scarce. The chief occurrences in September were Wrens, Wagtails, Swallows, and Finches; and in October Starlings, Sky Larks, and the *Turdidæ*.

In the autumnal migration the difference in date of arrival, as compared with last year, may be worth marking. So far as our records show the Redwing was first noticed a month later, the Blackbird six weeks, and Thrush three weeks, the Sky Lark a month, Goldcrest twelve days, Wheatear and Greenfinch five days, the Golden Plover fourteen days. The following are recorded earlier: the Meadow Pipit by two weeks, Swallow seventeen days, Starling nineteen days, Wagtail, Chaffinch, and Linnet a few days. Of the *Anatidæ*, Ducks are noticed a few days earlier, Geese considerably later.

It is difficult to say anything positive as to direction of flight,

which is too seldom noted ; in case of the *Turdidæ* scarcely at all. This in part is owing to many of the instances occurring at night in the dark. So far as I can make out all birds here follow the coast line very clearly. The main direction, to judge from the scant records in September, was southerly ; in October one or two directly E. ; the rest E., with more or less of N. With a few marked exceptions the movement has in almost every species been noticed at the southerly stations first, and appears gradually to have extended N. Whether this be accidental or a rule can only be decided by continued and careful observations from all the stations. Of the *Anatidæ* and water-birds the most frequent records are in October, and the direction S.W. and S., sometimes S.E. ; but between Dec. 2nd to 11th, at Morecambe Bay, they passed N.W. After 11th to end of December S.W.

The best filled returns have this year been received from Morecambe Bay, Skerries, and Nash E. These observers have also given the fullest information ; Nash especially in showing the direction of flight, a matter concerning which information is very desirable.

As to the circumstances under which the movement takes place, as affecting the flight or the striking of birds, &c., the reports bear out the conclusions previously expressed. Last year Mr. Bowen (Bardsey) referred to flight of birds before the wind (Rep., p. 119) ; Mr. Knott now writes from Skerries, " Many birds are killed in strong winds, as they then fly with greater force, and almost invariably in the same direction as the wind." Still the evidence shows that birds, as a rule, migrate with the wind on the shoulder, and not strong. When they do fly with the wind, and the wind strong, it is probably because they have been taken by surprise, and are unable to save themselves.

## IRISH COAST: AUTUMN.

PRINTED schedules were forwarded to forty light-stations around the coast. Thirty stations replied by returning the schedules wholly or partially filled with daily entries, or by sending letters remarking on the absence of migratory birds or on their general movements.

To the Commissioners of Irish Lights we are indebted for the facilities afforded us in conducting this enquiry. We have to thank Captain Boxer, R.N., Inspector of Irish Lights, for his friendly co-operation—his knowledge of the coast and intimate acquaintance with the light stations rendered his advice and assistance especially valuable.

On the whole the returns have been as satisfactory as was anticipated; some of the schedules have been carefully filled, and although others contain very few entries, this is to be accounted for rather by the absence of migratory birds than by any unwillingness on the part of the light-keepers to assist us. When we remember their many and various duties, and that the observations are entirely voluntary, there is reason to be well contented with the first attempt of this kind to collect information on the Irish coast; and we return our sincere thanks to all the lighthouse-keepers who have given their time and attention to the subject.

The entries in all the schedules have been collected under each day of the month as they occur; this method of arrangement shows the movements of all birds as entered on each day, and the number of observations on that day. The effect of the weather on the migratory movement can thus be studied, and the general direction of flight of the various species compared.

The daily weather-charts show last winter to have been exceptional in the number and violence of the cyclonic disturbances, which moved generally in a north-easterly direction along our west coasts; but the entries in the schedules

are too few to generalise or draw any conclusions regarding the influence of the successive storms on the migratory movement.

A table showing the days on which entries were made in the schedules has been drawn up in, the hope that, if the extent of the migratory movement on any particular day varied with the number of entries, some inference could be drawn ; but here also generalisation is premature.

In a few returns names are given to birds from which it is not easy to identify the species, and occasionally there is reason to fear one species has been mistaken for another. *In all cases, however, the name entered in the schedule has been allowed to stand without comment.*

The general remarks of the light-keepers are given consecutively, and as contributions to the Ornithology of the light-houses they are interesting.

A table showing the number of birds striking each lantern, the number of daily entries in each return, the number of species of birds mentioned in each schedule in the *daily* entries, the height of each lantern above high-water mark, and its approximate distance from the mainland is given.

Whatever results are obtained from this investigation, they will only be arrived at by patiently collecting observations for some years. If the light-keepers continue to assist us, this can readily be done—without their co-operation annually we are helpless.

ALEXANDER G. MORE.

RICHARD M. BARRINGTON.

NAMES OF STATIONS TO WHICH SCHEDULES WERE SENT IN THE  
AUTUMN OF 1881.

No. and name of light-station, and situation on coast.	Birds striking lantern.	No. of daily entries.	No. of species in entries.	Height of lantern above sea-level.	Miles from shore.
1. Fastnet, Co. Cork.....	9	10	5	148 ft.	8
2. Galley Head, do. ....	—	6	4	174	—
3. Old Head, Kinsale, do. ....	5	2	2	236	—
4. Mine Head, Waterford.....	—	3	4	285	—
5. Coningbeg Lt.-ship, Wexford	2	3	2	38	10
6. Barrels Rock, do. ....	1	26	11	?	4
7. Tuskar, do. ....	large numbers	12	18	101	7
8. Arklow Sth. Lt.-ship, Wicklow	—	17	4	39	7
9. Wicklow Head, do. ....	No reply.				
10. Kish Bank Lt.-ship, Dublin..	—	18	5	36	7
11. Howth Baily, do. ....	—	12	6	134	—
12. Rockabill, do. ....	13	8	10	148	5
13. Copeland Island, Down ....	—	18	24	131	3
14. Maidens, Antrim ....	No reply.				
15. Rathlin, do. ....	—	35	11	243	6
16. Innishtrahull, Donegal ....	3	7	12	181	6
17. Dunree Head, do. ....	—	—	—	150	—
18. Lough Swilly, do. ....	No reply.				
19. Tory Island, do. ....	—	1	1	130	9
20. Arranmore, do. ....	—	16	2	233	5
21. Rathlin O'Birne, do. ....	1	17	6	116	2
22. Killybegs, do. ....	No reply.				
23. Oyster Island, N., Sligo ....	—	15	5	40	1
24. Broadhaven, Mayo ....	—	18	3	87	—
25. Eagle Island E., do. ....	—	—	—	220	2
26. Eagle Island W., do. ....	—	—	—	220	2
27. Blackrock, do. ....	Numbers	—	—	283	9
28. Blacksod Point, do. ....	No reply.				
29. Clare Island, do. ....	—	17	7	341	4
30. Slyne Head N., Galway ....	12	12	9	115	3
31. Slyne Head S., do. ....	4	5	5	104	3
32. Arran Island N., do. ....	—	17	4	115	9
33. Straw Island, do. ....	No reply.				
34. Arran Island S., do. ....	6	7	6	110	6
35. Loop Head, Clare.....	No reply.				
36. Samphire Island, Kerry ....	Do.				
37. Tearaght, do. ....	Do.				
38. Valentia, do. ....	—	—	—	54	—
39. Skelligs, do. ....	—	—	—	175	9
40. Calf Rock, Cork ....	Destroyed in storm, Nov. 1881.				



TABLE SHOWING DAYS ON WHICH ENTRIES WERE MADE IN SCHEDULES, WITH No. OF STATION MAKING SAME.

Nos. and Names of Stations.	Day of Month.	September.	October.	November.	December.	January.
1. Fastnet.....	1st	15	6, 8	12, 21	15, 21, 24, 30	10
2. Galley Head.....	2nd	15, 31, 32	1, 10, 11, 13, 15, 23, 32	12, 15, 24, 34	24	1
3. Old Head, Kinsale	3rd	2, 8, 15, 29, 32	8, 10		2, 4	1, 13, 24
4. Mine Head.....	4th	8, 15		12, 15, 23, 24	6, 21, 29	1
5. Coningbeg Lt.-ship	5th	29, 30	6, 8, 15, 31	7, 10		1
6. Barrels Rock, do....	6th		1, 29	6, 10, 24	21	21
7. Tuskar.....	7th	8, 11, 15, 32	30	6, 15, 32	15	1
8. Arklow S. Lt.-ship.	8th	6, 8, 32	6, 13, 23	10, 16	24	1, 10, 24
10. Kirk Bank, do. ...	9th	6, 8	6	11		24
11. Howth Baily .....	10th	10, 13, 15, 29, 34	11, 12, 13, 15, 19, 23	15, 29, 30	10, 15, 24, 29, 31	
12. Rockabill .....	11th	6, 10	1, 16	23	4, 23, 30	
13. Copeland Island ...	12th	7, 29, 30, 32	6, 10, 11, 16, 21, 23, 32	15, 30	3, 4, 15, 24	21, 24
15. Rathlin.....	13th	8, 32	6, 32	10	23	
16. Innishtrahull .....	14th	2, 8, 3	21, 32			11
17. Dunree Head .....	15th	8, 11, 13, 21	20, 24	13, 29	15	
19. Tory Island.....	16th	6, 8, 13	15, 21, 32	11, 15		7
20. Arranmore .....	17th	13, 23	15	15	2, 13	
21. Rathlin O'Birne ...	18th	6, 7, 16, 8	6, 12, 20	5, 10, 13, 23	15, 24	
23. Oyster Island N. ...	19th	7, 8	6, 31, 32	21		
24. Broadhaven.....	20th	23, 29, 30	6, 11, 15, 29, 32			
25. Eagle Island E. ...	21st	6, 7, 13, 21	6, 13, 21, 34	2, 5, 17, 30		
26. Eagle Island W. ...	22nd	8, 13, 31	31	5	15	
27. Black Rock (Mayo)	23rd	8, 11, 21	7, 16, 23	34		
29. Clare Island.....	24th	21	3, 6, 7, 21	6, 15		
30. Slyne Head N. ...	25th	1, 8	6, 7, 23, 29, 30, 32, 34		13, 15, 24	
31. Slyne Head S. ...	26th	6, 29, 34	1, 7, 15, 21, 29	7, 29	24	
32. Arran Island N. ...	27th	8	6, 7, 12, 15, 32	6, 16		
34. Arran Island S. ...	28th	8, 13	6, 7, 10, 12, 32	15, 16, 29	10, 29	
38. Valentia .....	29th	1, 15		21, 23	13, 15	
39. Skelligs .....	30th	7, 11, 13	11, 30	2	24	
.....	31st		34	30	24	

## GENERAL REMARKS OF LIGHT-KEEPERS.

1. *Fastnet*.—"Very few birds came on or passed the rock this winter. It must be in consequence of bad weather on this coast. No sea birds build nests near this station."—John Tottenham.

2. *Galley Head*.—"This is one of the worst stations I have been at for birds; in fact we think it rare to see any only those that are natives of the place. This year they are very scarce. The Starling has not come down to us from the mountains yet."—John Whelan.

3. *Old Head, Kinsale*.—"No birds, only the above (*i. e.*, five Golden-crested Wrens on Oct. 24th, and several flocks of Lapwings on Dec. 12th) have appeared in the vicinity this season. The Gannet usually proceeds to the eastward in August and September, and flies westward from January to March. The Guillemots, Razorbills, Cormorants, Kittiwake, and Herring Gulls all arrive here to breed in March, and depart in August and September."—John Dunleary.

4. *Mine Head*.—"Birds of all descriptions were not so scarce at this station for the last seven years as during the year 1881."—Joseph Hammond.

5. *Coningbeg Light-ship*.—"There were no birds about the station in the month of December, or up to the 20th of January, with the exception of a few Sea Gulls each day."—Patrick Cullen.

6. *Barrels Rock Light-ship*.—General remarks none, but a full schedule of daily entries.—Joseph Oxford.

7. *Tuskar*.—General remarks, none. A full schedule.—Richard Hamilton.

8. *Arklow, South, Light-ship*.—General remarks, none. A full schedule.—William Shea.

9. *Wicklów Head*.—No reply.

10. *Kish Bank Light-ship*.—"Less birds passed the station this winter than ever. No birds have been killed by striking our lantern for some years."—William Daly.

11. *Howth Baily*.—General remarks, none.—Joseph Brownell.

12. *Rockabill*.—"Sept. 1st. Received schedule; a great number of different species of Gulls in vicinity of Rock, and on

smaller rock called the Bill, from about the second week in August to the third week in September, when they almost entirely disappeared. Cannot name the species; there were also Puffins, and occasionally two or three Gannets. This is an annual occurrence, but not always at the same time. Birds have been unusually scarce this season. Since stormy weather set in early in November no birds have been about the Rock, except a few Sand Larks, and a few Gulls, Puffins, and Cormorants flying about this and the smaller rock during a storm."—William Dunne.

13. *Copeland Island*.—"There were no birds struck the light this winter owing to the strong gales which prevailed."—Henry Williams.

14. *The Maidens*.—No reply.

15. *Rathlin Island*.—A second schedule partly filled. Remark:—"The Sea Parrot begins to arrive for the purpose of cleaning out its nest on March 17th, and then goes away until the 1st of April, when the different species of sea birds commence to arrive for the season. They begin to go away about 1st of August, and finally disappear by the end of the month."—John A. Murray.

16. *Innishtrahull*.—"September, Gannet daily, 8 a.m. to 4 p.m. Curlew daily. The 'Grey' Gull, 'Little' Gull, Black-backed or Royal Gull, Common Gull, and Grey Crow remain on the island all the year. Gulls nidify on the rock called Torr near the island; Grey Crows nidify on the island. In November flocks of twelve to twenty Starlings daily. Owing to this winter being very stormy little birds of any sort visited the island. During the months of January and February, 1881, a great number of Woodcock and Snipe were killed here."—W. H. James.

17. *Dunree Head*.—Daily entry, none. Remark:—"I beg to state there are no migrations of birds to be seen at this station, except Cormorants; they remain the year round, also a small number of Sea Gulls. No other birds resort or pass this station."—John Stapleton.

18. *Lough Swilly*.—No reply.

19. *Tory Island*.—"The Petrel, Raven, Common Sandpiper, Common Guillemot, Black Guillemot, Razorbill, Diver, Puffin, Cormorant, Kittiwake, Common Gull, Herring Gull breed on the

east end of the island, and are annually decreasing. Breed in larger numbers on Horn Head. Have not observed birds migrating. No birds struck the lantern this winter. Have not observed the Gannet or other sea birds taking a continuous flight."—Thomas Sweeney.

20. *Arranmore*.—"Barnacle Geese generally commence to come from the north on the 15th or 16th of October in flocks averaging four to eighty, that being the most counted in one flock. They pass at intervals of from two to twelve hours both day and night until the end of the month, when they cease. They commence to appear again on the 10th or 12th of April, coming from south, but in larger flocks and shorter intervals. No other species but Gannet and Barnacle resort this locality."—John Walsh.

21. *Rathlin O' Birne*.—"Sky Larks, Titlarks, and Stonechats continued arriving in numbers of two, four, and six until about the 10th of May. At that time there were about twenty of each species on the island. They nidicated on the island. By the 10th of September the Sky Larks had departed; by the 20th of October the Titlarks had departed; by the 16th of November the Stonechats had departed. None of these species were observed after that date until Dec. 22nd, when five or six Titlarks returned, and are here still. On June the 3rd twelve to fourteen Common Terns alighted on a small island outside lighthouse, nidicated, and left about Aug. 1st. Sea Gulls nidicated on small island above referred to, and one pair of 'sepoys' on this island. In July several pairs of Skua Gulls passed, and some remained in vicinity. Curlew frequent this island from 1st of May until 1st of October. They come at night time, and leave the following day generally. Unless with frosty and snowy weather, Starlings, Snipes, Woodcocks, Blackbirds, or Thrushes do not visit. Sandpipers and Jack Curlew are about the shores all the year round. No Gannets seen since Nov. 8th. Sea Gulls in vicinity all the year. Barnacle continue coming and departing until about Feb. 15th. No Starling or Snipe visited since last winter."—Joseph Hill.

22. *Killibegs*.—No reply.

23. *Oyster Island, North*.—"From the middle of October to the last week in November several large flocks of Gulls were to be seen in the bay after herrings, principally of the Kittiwake

species, with a few large Grey Gulls and an occasional Royal or Black-backed Gull; also large flocks of Puffins, which all left when the herrings disappeared. Large flocks of Barnacle and Wigeon arrive in this locality early in October, and remain until latter end of March, passing to and fro to feeding-ground according to tide, besides those going further south."—John Young.

24. *Broadhaven*.—"The above (*i. e.*, Barnacle; Wild Geese, Wild Duck, and Solan Geese) are the only description of birds seen in the locality; they are generally passing inland, and at times alight near the lighthouse to feed on the swampy land. No Sea Gulls build near this station, but a few come into the harbour in the summer months after the fry of fish."—Joseph Williams.

25. *Eagle Island, East*.—No entry in schedule. Remark:—"Up to the present no birds are visible, only on occasions when fish are seen on the surface of the water, and these are Gannets and large-sized Gulls. I have not noticed any kind of birds pass or rest at this station in their flight of migration."—Robert Redmond.

26. *Eagle Island, West*.—No entry in schedule. Remark:—"This island is very small, and the adjacent shores being all bog for miles inland very few birds alight on island. The Stone-chatter is to be seen here all the year round. In May the sea-fowl come round the island in great numbers; as a rule they go gradually to the south, following shoals of fish, and very few are to be seen during the winter months. To-day (Jan. 15th, 1882) I have seen a few Gannets and Sea Gulls flying about. No birds have struck the lantern since my arrival at this station eighteen months since."—Mathew Healy.

27. *Black Rock (Mayo)*.—No daily entry, but schedule filled by following general remarks:—"Gannets seen passing south all the year round, most seen in calm weather, ten to twenty in each flight. Puffins from April 15th to Aug. 15th; build on the Rock. Cormorants here all the year round; build on the Rock. Kittiwake Gulls build on an island three miles away; also Royal Gulls. Small Gulls, commonly called 'Wheelons,' build on the Rock. Barnacles here from October to March. Two 'Falcon Hawks' build on an island three miles away; here all the year round. Two 'Sparrowhawks' seen in the mornings. Rooks, in

flocks of 100 to 500, mostly seen in snow and frosty weather. Starlings from September to March, morning and evening, 1000 to 5000 in a flock, seen with all winds, mostly in frosty weather; hundreds killed against lantern. 'Missel Thrushes' from November to March, 50 to 100 in each flock, most in frosty weather; seen at all hours; a large number killed. Snipe from November to March in flocks of two to four, in frost and snow; some killed. Woodcocks from November to March in frost and snow; some killed. Curlews, twenty to thirty in a flock, from daylight till dark; seen all the year round. Wrens seen very seldom in the spring. Blackbirds only seen in frosty weather; some killed by striking lantern. 'Titmouses' seen in all weathers; build on the Rock. Stormy Petrels from March to September, at all hours of the night; build on the Rock. Larks in flocks of 100 to 300, only seen in frosty weather; a large number killed by striking glass. I have seen some strange birds rest here on their passage to the mainland, but do not know their names. I have seen a Hoopoe on one occasion rest here. There has been a species of Sea Gull of a deep cream-colour on the coast last August, supposed to be a North American bird. I have seen large flights of Rooks rest here after coming in from the sea in a S.W. direction, which seemed so much fatigued that they would fall over after resting, and remain to be caught." — Martin Kennedy.

28. *Blacksod Point*.—No reply.

29. *Clare Island*.—"The following varieties of birds build their nests round the cliffs here; they come on the 1st of April and leave about the 20th of August:—Guillemots, Razorbills, Puffins, Kittiwakes."—James Reilly.

30. *Slyne Head (North)*.—"The 'Purr' is the only sea-bird that breeds near this station. They arrive in April and depart in August. The arrival of birds to this island during the past autumn and winter was very few in comparison with other years, and the only reason I can assign for it is that we had very little snow. During the snow of 1880 we had large flocks of Starlings, Thrushes, and Blackbirds arriving daily from the east."—John Gillan.

31. *Slyne Head (South)*.—No general remarks. Schedule partly filled.—William Callaghan.

32. *Arran Island, North*.—"The only birds seen in the

vicinity of this station since July are the Gannet, the Royal or Black-backed Gull, and the Common Gull. They do not breed on this island, as it is low and flat. The Gulls breed on the cliffs of the large island of Arran and cliffs of the Co. Clare. Do not know dates of arrival or departure. The Gannets and Gulls that visit this station come from the direction of the Co. Clare, remain during the day, and return in the evening. No flocks seen after Nov. 7th."—John Kelly.

33. *Straw Island*.—No reply.

34. *Arran Island, South*.—"Have never known less birds strike the lantern."—Francis Ryan.

35. *Loop Head*.—No reply.

36. *Samphire Island*.—No reply.

37. *Tearaght*.—No reply.

38. *Valentia*.—"I have been at this station  $4\frac{1}{2}$  years, and have never seen any birds migrating or resorting this locality except sea-birds, such as Gannet, Puffin, Cormorants, &c. They are not very numerous, and seldom visit except from August to the end of October. Very few land-birds visit here, except in severe frosts and snow in winter; then the Starling, Thrush, Blackbird, Lark, &c., come down from the mountains. Hundreds of Starlings, Thrushes, and Curlews died last January in this locality by severe frost and snow. There are not any birds strike this lantern. Very few strike land-lights, but on the South Maiden lighthouse I have seen hundreds of Starlings, Thrushes, and Blackbirds strike and kill themselves in one night, and frequently Snipe and Woodcock. On the Tuskar Rock lighthouse I have counted twelve hundred killed in one night, and hundreds more fell into the sea that we did not get. At Rockabill lighthouse also I have got great numbers killed, and frequently four and six Teal or small duck, and Snipe and Woodcock. I have not seen since I came to this station one Wild Duck or Goose, nor any flock of migrating birds. I have kept a good look-out for the last two months, and have not seen any birds except a few Gannets and Sea Gulls."—Thomas McKenna.

39. *Skelligs*.—No entry in schedule. Remark:—"The only birds observed at present in this locality are a few Gannets and Sea Gulls occasionally."—Henry Gardiner.

40. *Calf Rock*. No reply. Destroyed by storm in Nov., 1881.

## DAILY ENTRIES IN SCHEDULES, SEPT., 1881, TO JAN., 1882.

## SEPTEMBER.

1st.—Rathlin Island, eighty Swallows, 10 a.m., wind light S.E., clear; hovered about. Twenty-six Gannets, 11.30 a.m., going E.

2nd.—Rathlin Island, eight Gannets, 5.30 a.m., wind light E., clear, going E. Slyne Head South, continuous flocks of Gannets, 5 a.m. to 6 p.m., wind light S.E., clear, came from S.W.; remained for three months. Arran Island North, about 200 Gulls, 5 a.m. to 6 p.m., wind N.E., calm, clear.

3rd.—Galley Head, Teal Duck, number not known, 1 a.m., flying N.E., wind N.E. fresh breeze, clear. Arklow South Lt.-ship, nine Gannets, 8.15 a.m., wind light E.N.E., gloomy, passing N.E. Rathlin Island, 200 Starlings, 10.25 a.m., wind light S.E., cloudy, old birds remained on island. Clare Island, large flock of Grey Linnets, 6 a.m., wind light E., clear, going S.E. Arran Island North, 200 Gulls different species all day, wind light S.E.

4th.—Arklow South Lt.-ship, two Gannets, 1.10 p.m., wind light E.N.E., cloudy, passing N.E. Rathlin Island, seven Gannets, 12 noon, wind strong N.E., misty, going E.

5th.—Clare Island, large flock of Grey Linnets, 7 a.m., wind fresh E.N.E., blue sky, going S. Slyne Head North, fifty Starlings, 10 p.m., wind fresh E., misty, three killed.

6th.—No entry.

7th.—Arklow South Lt.-ship, four Starlings, 10.15 a.m., wind light W., cloudy, passing inland N.W. Howth Baily, six Cormorants flying N., 11 a.m., wind light W., clear. Rathlin Island, forty Linnets, 11 a.m., wind light N.E., cloudy, going N. Arran Island North, twenty to thirty Gannets, 5 p.m., wind light N.W.

8th.—Barrels Rock Lt.-ship, five Gannets, 5.10 a.m., wind light N.N.W., clear, going W.; four Gannets at 3 p.m., going W. Arklow South Lt.-ship, four Gannets, 7 a.m., wind very light N.W., clear, passing N.E.; three Gannets, 9.50 a.m., going same direction. Arran Island North, thirty to forty Gannets all day, wind light N.W.

9th.—Barrels Rock Lt.-ship, flocks of Linnets and Gulls,



12.50 p.m. to 3.50 p.m., wind light N.N.E., showery; Linnets going N.E., Gulls W. Arklow South Lt.-ship, five Gannets, 5.15 a.m., wind fresh N.N.E., cloudy, going N.; four Gannets, 11.45 a.m., going N.E.

10th.—Kish Bank Lt.-ship, two Chaffinches, 7 a.m., wind mod. N.E., gloomy. Copeland Island, four Herons, 10 a.m., wind N.E., clear, coming S.; Starlings all day, breed here; Terns breed on Mew Island, come in May. Rathlin Island, one Curlew, 9.30 a.m., wind light S.E., rain. Clare Island, small flocks of Rooks, 2 p.m., wind light N., fine, going N.W. Arran Island South, thirty Starlings, 3.30 p.m., wind light N.E., clear, old birds going E.

11th.—Barrels Rock Lt.-ship, flock of "grey" Gulls, 5.25 a.m., wind light E.N.E., clear, going E. Kish Bank Lt.-ship, one Chaffinch alighted on ship, 11.15 a.m., wind light N., hazy.

12th.—Tuskar, thirty Wrens, Titmice, and Goldcrests, 6 a.m., wind light N.E., overcast, gloomy. Clare Island, flock of Grey Linnets, 7 a.m., wind fresh E., cloudy, going S.E. Slyne Head North, ten Swallows, 9 a.m., wind light N., clear; a large number of Gannets, 1 p.m. Arran Island North, large flocks of Gulls, wind fresh N.E., clear; also on Sept. 13th.

13th.—Arklow South Lt.-ship, four Gannets, 7.45 a.m., wind very light N.W., gloomy, going N.E.

14th.—Galley Head, Duck, number not known, 3 a.m., wind W. strong breeze, clear, flying W. Arklow South Lt.-ship, two Gannets, 6 a.m., wind light N.E., cloudy, going N.E.; five Gannets, 8.25 a.m., going in same direction; three Titlarks, 8.40 a.m., passing inland N.W. Copeland Island, thirteen Herring Gulls, 4 p.m., wind light N., clear; also six Gannets; both after fry and fish.

15th.—Arklow South Lt.-ship, one flock of Titlarks, 7.40 a.m., wind light N.N.E., clear, passing N.W.; five Gannets, 8 a.m., passing N.E. Howth Baily, continuous flocks of Gulls and Puffins flying N. and S., 8 a.m. to 6 p.m., wind light N.W., clear. Copeland Island, fifteen Lapwings, remained all day between Mew and Copeland Islands. Rathlin Island, forty Black Crows, 2 p.m., wind very strong S.W., cloudy, going S.

16th.—Barrels Rock Lt.-ship, about thirty Swallows, 11 a.m., wind very light E.N.E., clear, going N.E. Arklow South Lt.-ship, six Gannets, 7.30 a.m., wind light N.E., cloudy,

passing N.E. Copeland Island, twenty-three Gannets, 4 p.m., wind light S.E., clear, coming from Ailsa Craig.

17th.—Copeland Island, fourteen Grey Linnets, 3 p.m., wind light S.S.W., rain, remained some time. Oyster Island North, twenty Wigeon going S.E., 11 a.m., wind mod. S.E., clear.

18th.—Barrels Rock Lt.-ship, flock of Grey Gulls, 5.10 p.m., wind very light N.N.E., clear, going W. Tuskar, one Owl, 8 a.m., wind light N., cloudy. Arklow South Lt.-ship, one flock of Swallows, 6.20 a.m., wind fresh N.E., gloomy, passing N.N.W. Innishtrahull, four Lapwings, 12 noon, wind light N., clear.

19th.—Tuskar, about 1000 Gulls alighted 6 a.m., left 7 a.m., wind light S.W., cloudy, gloomy, appeared young; 12.30 p.m., a large flock of Gulls going S. Arklow South Lt.-ship, five Gannets, 8 a.m., wind light W.S.W., cloudy, passing N.E.; four Swallows, 9.20 a.m., passing N.W.

20th.—Oyster Island North, about 100 Barnacles, 9.30 a.m., wind strong S., clear, going S. Clare Island, large flock of Wild Ducks, 2 p.m., wind strong W., overcast, rain, going E. Slyne Head North, one Snipe, 3 a.m., wind fresh S., showers, killed.

21st.—Barrels Rock Lt.-ship, flock of "grey" Gulls, 9.30 a.m., wind light W.N.W., showery, going N. Tuskar, a large flock of Skua Gulls alighted 5 a.m., wind light N., overcast, rain, appeared old birds. Copeland Island, one young Corn Crake, wind strong E.S.E., "reared on Copeland Island." Rathlin O'Birne, about fifteen Gannets, 10 a.m., wind strong N., rain, remained in vicinity until Oct. 14th.

22nd.—Arklow South Lt.-ship, one flock of Swallows, 7.15 a.m., wind very light N.W., clear, passing S.W. Copeland Island, Sept. 22nd to 26th, between these dates Terns which come to breed on Mew Island all left. Slyne Head South, nine Curlews flew to N.E., wind fresh W.S.W., gloomy.

23rd.—Arklow South Lt.-ship, one flock of Swallows, 6 a.m., wind very light E., gloomy, passing N.W. Howth Baily, eight Gannets flying S., 12.30 p.m., wind fresh S., clear. Rathlin O'Birne, continuous flocks of Puffins, 10 a.m., wind light S.E., overcast, went southwards, continued passing until Oct. 1st.

24th.—Rathlin O'Birne, continuous flocks of Sea Gulls arrived 10 a.m., wind light S.E., overcast, came from N., remained in vicinity.

25th.—Fastnet, small flocks of Starlings flying N.E. to land, 2 p.m., wind light W., passing showers, two young ones struck lantern. Arklow South Lt.-ship, nine Gannets, 7 to 7.30 a.m., wind light W., clear, passing N.E.; six Swallows, 9.15 a.m., passing N.W.

26th.—Barrels Rock Lt.-ship, flocks of Grey Gulls, 3.10 p.m., wind light W.N.W., clear, going S. Clare Island, large flock of Puffins, 3 p.m., wind fresh S.S.W., cloudy, going W. Arran Island South, fifty Starlings, 8.15 a.m., wind fresh W.N.W., clear.

27th.—Arklow South Lt.-ship, four Gannets, 8 a.m., wind light W.S.W., cloudy, passing S.W.

28th.—Arklow South Lt.-ship, ten Gannets, 6.45 a.m., wind very light S.W., cloudy, passing N.E. Copeland Island, thirteen Black Crows, 10 a.m., wind light S.W., fine, going W.

29th.—Fastnet, two "Stone Chatters," 4 p.m., wind light S., misty, on rock all night, left in morning. Rathlin Island, thirty Gannets, 3 p.m., wind light S.E., clear, going N.

30th.—Tuskar, four Blackbirds, 10 a.m., wind fresh S., misty. Howth Baily, ten Cormorants flying W., 1.20 p.m., wind fresh S.W., gloomy. Oyster Island North, about eighty Barnacles, 4.30 p.m., wind mod. E.S.E., clear, going S.

## OCTOBER.

1st.—Barrels Rock Lt.-ship, flock of twenty-six Swallows, 9.15 a.m., wind light S.S.W., clear, going S. Arklow South Lt.-ship, six Gannets, 7.20 a.m., wind light S., gloomy, passing S.W.

2nd.—Fastnet, one "Stone Chatter," 3 p.m., wind light S. Kish Bank Lt.-ship, three Gannets, 10 a.m., wind mod. S., clear. Howth Baily, continuous flocks of Gulls and Puffins flying S., 9 a.m. to 4 p.m., wind light S.W., clear. Copeland Island, twenty-nine Ducks on Mew Island all day, remained all the winter. Rathlin Island, sixty Black Crows, 5 p.m., wind strong S.E., misty, coming from N., seemed tired. Oyster Island North, about 150 Barnacles, 2 p.m., wind fresh S.E., clear, going S. Arran Island North, large flocks of Gannets and Gulls all day, wind fresh S.S.E., clear.

3rd.—Arklow South Lt.-ship, nineteen Gannets, 4.30 p.m., wind very light S.S.E., cloudy, passing S.W. Kish Bank Lt.-ship, five Wild Ducks, 10.30 a.m., flying W., clear.

4th.—No entry.

5th.—Barrels Rock Lt.-ship, flock of White Gulls, 5 p.m., wind light W.N.W., clear, going S.E. Arklow South Lt.-ship, three Gannets, 10.15 a.m., wind light E., cloudy, passing S.W. Rathlin Island, forty Gannets, 3 p.m., wind light S.E., clear, going E. Slyne Head South, many flocks of Gannets from sunrise to sunset, wind very strong S.E., gloomy.

6th.—Fastnet, one "Stone Chatter," 3.30 p.m., wind light S.E., gloomy. Clare Island, small flock of Pigeons, 1 p.m., wind fresh W., cloudy, going N.

7th.—Slyne Head North, a large number of Gulls going S., 4 p.m., wind light W., misty.

8th.—Barrels Rock Lt.-ship, flock of nine Gannets, 8 a.m., wind light N.N.W., clear, going W.; flock of about seventeen Swallows, 2.30 p.m., wind light E., rain, going S. Copeland Island, five Black-backed Gulls all day, remained during winter. Oyster Island North, seventy Barnacles, 11 a.m., wind strong N.W., overcast, showery, going S.; fifty Rooks, 2 p.m., wind same, going S.E.

9th.—Barrels Rock Lt.-ship, eight Gannets, 3.30 p.m., wind fresh N.N.W., showery, going E.

10th.—Howth Baily, ten Grey Crows flying inland, 11.15 a.m., wind strong W., clear. Rockabill, one Blackbird, 9 a.m., wind fresh S.W., clear, showery, male seen on the rock. Copeland Island, one Swallow, 10.30 a.m., wind light S.E., fog; twelve Greenfinches, 11 a.m., remained until fog cleared. Rathlin Island, sixty Linnets, 11 a.m., wind strong N.W., misty, going N. Tory Island, Barnacle, 10 a.m., wind mod. S.W., cloudy, coming from the east, flew round the island; they frequent other islands near, but seldom alight on this island. Oyster Island North, several flocks of Barnacles, 9 a.m. to 2 p.m., wind strong N.W. to W., showery, going S.

11th.—Fastnet, small flocks of land-birds, 8 a.m., wind fresh N.W., showers; two Titmice killed, flying S. on rock; four Chaffinches, 11 a.m., two killed, male birds. Innishtrahull, flocks of Barnacles, 8 a.m. to 6 p.m., wind strong N.W., hail-showers.

12th.—Barrels Rock Lt.-ship, two Stormy Petrels, 12.30 p.m., wind strong W.N.W., cloudy; seldom seen at this station; remained about the ship all evening. Kish Bank Lt.-ship, two

flocks of Ducks, 10.30 a.m., strong S.W. breeze, clear. Howth Baily, three Gannets flying N.E., 10.45 a.m., wind fresh W., clear. Innishtrahull, one Teal, 9 p.m., wind N.W., a hurricane, struck lantern. Rathlin O'Birne, four Barnacles, 11 p.m., wind very strong N.W., showery. Oyster Island North, 100 Barnacles, 2.30 p.m., wind N.W., wild and showery. Arran Island North, large flocks of Gannets and Gulls all day, wind very strong N.W., rain.

13th.—Barrels Rock Lt.-ship, two Sparrowhawks, 9.30 a.m., wind light N.N.E., clear, going N.; seldom seen at this station. Arran Island North, large flocks of Gulls all day, wind very strong N.N.W., rain.

14th.—Rathlin O'Birne, one Martin killed against lantern, wind very strong N. Arran Island North, large flocks of different species of Gulls all day, wind very strong N.W., rain; flock of Wild Geese, 8 p.m., came from S.W., going N.

15th.—Arranmore, continuous flocks of Barnacles, 6 a.m. to 6 p.m., each flock numbering four to eighty, commenced to come from the north on this date, wind strong N. Broadhaven, ten Wild Ducks, 8.30 a.m., wind strong S.W., rain.

16th.—Rathlin Island, sixty Gannets, 3 p.m., wind fresh N.W., cloudy, going W. Rathlin O'Birne, twenty Barnacles, 3 p.m., wind strong S., overcast. Arran Island North, flock of Gannets and Gulls, 4 p.m., wind fresh S., clear.

17th.—Rathlin Island, 100 Skua Gulls, 2 p.m., wind fresh S.W., cloudy.

18th.—Barrels Rock Lt.-ship, large numbers of Gulls, 10 a.m. to 5 p.m., wind strong S.S.E., clear, apparently feeding about the ship. Rockabill, Oct. 18th to 26th, twelve Red-breasts, seven Common Wrens, and about fifteen young Starlings seen on the rock. Arranmore, flocks of Gannets from two to twenty began to come from the south, going north, on this date, and continue to the end of the month at intervals of fifteen to twenty minutes during daytime; cannot be seen or heard during night.

19th.—Barrels Rock Lt.-ship, small flocks of Starlings, 9.30 a.m. to noon, wind high S.E., cloudy, trying to get to S.E., driven towards shore by the force of the wind; two Stormy Petrels, 11 a.m. to dusk, wind high S.E., remained at ship all day. Slyne Head South, one Snipe, 3 a.m., very stormy,

showery, killed. Arran Island North, large flock of Gulls all day, very stormy wind S.E.

20th.—Barrels Rock Lt.-ship, large flocks of Larks, 10 a.m., wind very strong E.S.E., clear, going N. Howth Baily, flocks of Gulls flying in all directions during the day, wind strong S.E., gloomy. Rathlin Island, fifty Plovers, 1 p.m., wind high, stormy, remained on island; forty White-backed Crows, always on island. Clare Island, large flock of Gannets, 9 a.m., wind strong E., going N.W. Arran Island North, large flock of Gulls all day, wind very strong S.E., gloomy.

21st.—Barrels Rock Lt.-ship, continuous flocks of Larks and Linnets, 10 to 11.30 a.m., wind strong E.S.E., overcast, going to E.N.E. Copeland Island, flock of Teal on Mew Island, 11 a.m., wind E., stormy, rain; stay here for winter. Rathlin O'Birne, four Barnacles, 3.30 p.m., wind strong E.S.E., overcast; thirty Gannets, 8.30 a.m. Arran Island South, six Golden-crested Wrens struck lantern, wind E., hazy, not killed; flew away at daylight.

22nd.—Slyne Head South, one Woodcock, 1 a.m., wind very stormy S.S.E., killed, the only one got for three years; two Thrushes also killed.

23rd.—Tuskar, one flock of Starlings, 5 p.m., wind strong E.S.E., cloudy; another 11 p.m., very stormy E.S.E. wind, overcast, striking about one hour, forty killed. Innishtrahull, one Blackbird, 10 p.m., wind S.E., a hurricane, struck lantern; one Thrush, 10.30 p.m., struck lantern. Oyster Island North, several flocks of Barnacles, 10 a.m. to 1 p.m., wind fresh E.S.E., cloudy, twenty to fifty in each flock.

24th.—Old Head, Kinsale, five Golden-crested Wrens, 9.30 p.m., wind light S.W., hazy, struck lantern, none killed; the only ones seen this season. Barrels Rock Lt.-ship, flock of Linnets, 5 p.m., wind strong S.E., cloudy, going N.E. Tuskar, Blackbirds, Thrushes, and Larks, 10.30 p.m., wind E., stormy, overcast, striking until 3 a.m., many of each killed. Rathlin O'Birne, seven Barnacles, 4 p.m., wind strong E.

25th.—Barrels Rock Lt.-ship, continuous flocks of Starlings, 9.30 to 11.30 p.m., wind fresh S.E., one killed (young bird); too dark to notice direction of flight. Tuskar, Starlings and Larks, 11 p.m., wind strong E.N.E., overcast, striking for one hour, fifteen Larks and twelve Starlings killed. Oyster Island North,

thirty Rooks, 2 p.m., wind mod. E., cloudy. Clare Island, large flock of Rooks, 10 a.m., wind fresh E., fine, going N.E. Slyne Head North, two Thrushes, 2 a.m., wind mod. E., gloomy, killed. Arran Island North, large flock of Gulls all day, wind fresh E.S.E., gloomy. Arran Island South, two Ducks, 3.15 p.m., wind fresh E., clear, going E.

26th.—Fastnet, small flocks land-birds, 8 a.m., wind fresh E., gloomy; three Titmice killed, flying S. Tuskar, Starlings, 8 p.m., wind strong E.N.E., overcast, twelve struck, four killed (young birds); Thrushes at midnight, wind same, five struck, one killed (young bird). Rathlin Island, continuous flocks of Gannets, 6 a.m. to 5 p.m., wind fresh E., overcast, going E. Rathlin O'Birne, continuous flocks of Sea Gulls, 9 a.m., wind light E.S.E., overcast. Clare Island, continuous flocks of Puffins all day, wind fresh E.N.E., blue sky, cloudy, going N.W.

27th.—Barrels Rock Lt.-ship, continuous flocks of Linnets, 9 to 10.30 a.m., wind fresh E., gloomy, going N.E. Tuskar, "Grey-breasted Blackbird," 7 p.m., wind strong E.N.E., overcast, struck and killed; Starlings from 9 p.m. to 3 a.m., wind fresh E. to N.E., overcast, striking constantly, five killed; Blackbirds and "Fieldfares or Mountain Thrushes" striking occasionally between same hours, seven Blackbirds and fifteen Fieldfares killed; many of these birds will die on rock, being too exhausted to leave, particularly Starlings. Rockabill, six Larks, three young Starlings, and one female Blackbird killed in night, wind E., stormy, very dark, Starlings much wasted. Rathlin Island, thirty Linnets, 12 noon, wind fresh S.E., overcast, remained on island. Arran Island North, thirty Gulls different species all day, wind light S.E., gloomy.

28th.—Barrels Rock Lt.-ship, continuous flocks of Starlings, 8.30 to 11 p.m., wind fresh N., cloudy, apparently going E. Tuskar, one Golden-crested Wren, 8 p.m., wind fresh N., overcast, gloomy, killed; Fieldfares, 10.30 p.m., three killed; also one Green Linnet. Kish Bank Lt.-ship, a flock of Ducks, 1.30 p.m., wind mod. N.W., clear. Rockabill, one Golden-crested Wren and two young female Blackbirds, killed in night, clear, showery; the first Goldcrest I ever saw at this station. Arran Island North, twenty Gannets, 2 to 4 p.m., wind light N.E., gloomy.

29th.—No entry.

30th.—Howth Baily, six Pigeons flying inland, 2.15 p.m., wind light N.E., clear. Slyne Head North, continuous flocks of Gulls and Gannets going S., 10 a.m. to 3 p.m., wind light S.E., clear.

31st.—Arran Island South, seventeen Barnacles, 11.30 a.m., wind very strong S.E., rain, going E.

#### NOVEMBER.

1st.—Rockabill, one Hawk and one Common Wren, 4 p.m., wind light S., clear; Hawk hovering about rock. Rathlin O'Birne, four Plover, 7.30 a.m., wind strong S.W., overcast, remained until Nov. 7th; continuous flocks of Gannets and Sea Gulls.

2nd.—Rockabill, one Common Wren, four Titmice, 8 a.m., wind strong S.E., clear. Rathlin Island, seventy Starlings, 7 a.m., wind strong S.E., overcast, young birds coming from E. Broadhaven, thirty Barnacles, 10 a.m., wind fresh N.W., clear. Arran Island South, two Woodcocks, 3.15 p.m., wind strong S.S.E., overcast, going E.

3rd.—No entry.

4th.—Rockabill, thirteen large birds like Ducks or Wigeon two miles off, 10 a.m., wind light S.S.W., clear, flying S. Rathlin Island, thirty-seven Starlings, 11 a.m., wind fresh S.E., clear, coming from E. Oyster Island North, small flocks of Wigeon and Barnacle, 10 to 12 a.m., wind fresh S.S.W., gloomy. Broadhaven, five Solan Geese, 11.10 a.m., wind strong S., clear.

5th.—Tuskar, five Swallows going S., 2.30 p.m., wind fresh S.W., blue sky; continuous flocks of Puffins, 2 to 4 p.m., going westward. Kish Bank Lt.-ship, several flocks of Barnacle, wind W. and S.W., clear.

6th.—Barrels Rock Lt.-ship, flocks of Starlings, 9 to 11.30 p.m., wind light S.S.W., overcast, apparently going N.E. Kish Bank Lt.-ship, several flocks of Barnacle, wind S.W., clear. Broadhaven, twelve Wild Geese, 8.10 a.m., wind very strong S., foggy.

7th.—Barrels Rock Lt.-ship, small flock of Linnets, 10.30 a.m., wind fresh S.S.E., heavy rain, hazy, going N.E. Rathlin Island, forty Black Crows, 3 p.m., wind fresh S.W., clear, going S. Arran Island North, ten Gannets, wind fresh S.W., gloomy: also a large flock of Gulls.



8th.—Kish Bank Lt.-ship, several flocks of Wild Ducks, wind S.W., gloomy. Innishtrahull, one small Hawk, 10 a.m., wind fresh S.E., hazy.

9th.—Howth Baily, twenty-nine Crows flying to the south, 12.10 p.m., wind light S.W., gloomy.

10th.—Rathlin Island, 600 Gulls, 8 a.m. to 4 p.m., wind fresh S.E., gloomy, on the water. Clare Island, flocks of Grey Linnets, 7.30 a.m., wind strong S.S.W., cloudy, going S. Slyne Head North, continuous flocks of Barnacle going S. from 9 a.m. to 2 p.m., wind fresh S.W., rain.

11th.—Oyster Island North, flock of Starlings and Lapwings, 11.30 a.m., wind light S.E., gloomy, Starlings apparently old birds.

12th.—Rathlin Island, 400 Gulls, 7 a.m. to 2 p.m., wind very strong N.W., gloomy, on the water. Slyne Head North, one Blackbird, 4 a.m., wind light S.W., misty, killed.

13th.—Kish Bank Lt.-ship, a flock of Chaffinches going from E. to W., clear.

14th.—No entry.

15th.—Copeland Island, eleven Snow Buntings, 3 p.m., wind strong W., went to mainland. Clare Island, small flock of Wild Ducks, 4 p.m., wind very strong W., cloudy, ugly, going S.E.

16th.—Howth Baily, seven Cormorants flying N., 11.15 a.m., wind fresh S.W., cloudy. Rathlin Island, seven Gannets, 4 p.m., wind very strong N.W., gloomy, going E.

17th.—Rathlin Island, thirty Linnets, 11 a.m., wind strong N.W., showers, going S.

18th.—Coningbeg Lt.-ship, four Gannets, 10 a.m., wind fresh S., rain, flying E. Two Larks killed. Kish Bank Lt.-ship, a large flock of Starlings going from E. to W., hazy. Copeland Island, six Magpies, 10.30 a.m., wind fresh S.E., went to mainland. Oyster Island North, fifty Barnacle, 10.20 a.m., wind light S.E., rain, going S.E.

19th.—Rathlin O'Birne, eight "Sepoys," 8 a.m., wind strong S., overcast.

20th.—Galley Head, fifty Golden Plovers, 1 p.m., wind fresh E.N.E., clear, frosty, flying N. Coningbeg Lt.-ship, Gannets from 9 a.m. to 4 p.m., passing E. and W. in two's and four's, wind strong S.W., clear. Rathlin Island, seventeen Golden Plover, 10 a.m., wind very strong W., clear, came from north,

stopped on island. Slyne Head North, flock of Rooks going N., 12 noon, wind light S., rain.

21st.—Coningbeg Lt.-ship, Gannets from 9 a.m. to 4 p.m., passing E. and W., wind strong W.

22nd.—Arran Island South, large numbers of Skua Gulls passing, wind W., stormy, rain, thunder, going S.

23rd.—Barrels Rock Lt.-ship, flock of ten Gannets, 3 p.m., wind strong N.W., clear, going W. Rathlin Island, thirty-six Starlings, 3 p.m., wind very strong S.W., clear, young birds coming from N.

24th.—No entry.

25th.—Tuskar, one Golden Eagle, 8 a.m., wind strong S.W., overcast, going N.W. Clare Island, large flock of Pigeons, 1 p.m., wind very strong S., gloomy, rain, going W.

26th.—Barrels Rock Lt.-ship, one Stormy Petrel, 2 p.m., wind very strong S.S.W., rain; remained at ship all the evening. Innishtrahull, Rooks, 2 p.m., stormy.

27th.—Rathlin Island, fifty Black Crows, 10 a.m., wind very strong S.W., rain, squally, overcast, coming from S. Innishtrahull, Rooks, 12 noon, stormy. Clare Island, large flock of Grey Linnets, 8 a.m., wind very strong W.N.W., cloudy, going S.

28th.—Rathlin O'Birne, nine Barnacle, 4 p.m., wind strong W.N.W., rainy. Oyster Island North, small flocks of Barnacle and Wigeon, 10.30 a.m. to 2 p.m., wind strong N.W., showery, going N.W.

29th.—Galley Head, eleven Gannets going E., 5.30 p.m., wind strong W.S.W.

30th.—Slyne Head North, two Starlings and three Thrushes, 5 a.m., wind light S.W., rain, all killed.

#### DECEMBER.

1st.—Rathlin Island, six Gannets, 9 a.m., wind strong S., clear, going E. Rathlin O'Birne, five Barnacle, 3.40 p.m., wind strong S., overcast. Broadhaven, twenty Barnacle, 1.10 p.m., wind fresh S.W., rain. Slyne Head North, flock of Barnacle going S., 11 a.m., wind fresh S.W., showers.

2nd.—Broadhaven, eighteen Barnacle, 2.10 p.m., wind fresh S.W., clear.

3rd.—Mine Head, "Grey" and Green Plovers from sunrise

to sunset, wind light N., frosty, above fifty in a flock. Galley Head, five Gannets going W., 10 a.m., wind strong W., rain.

4th.—Barrels Rock Lt.-ship, large flock of Plover, 11 a.m., wind light S.W., clear, going S.E. Rathlin O'Birne, thirteen Barnacle, 8 p.m., wind fresh S., overcast. Clare Island, large flock of Wild Ducks, 3 p.m., wind strong S.W., fog, rain, going S.E.

5th.—No entry.

6th.—Rathlin O'Birne, fourteen Barnacle, 4 p.m., wind stormy S., rain.

7th.—Rathlin Island, thirty-seven Starlings, 10 a.m., wind stormy S.W., clear, coming from N.

8th.—Broadhaven, fourteen Wild Geese, 1.10 p.m., wind fresh W., rain.

9th.—No entry.

10th.—Kish Bank Lt.-ship, a flock of Ducks, 1.30 p.m., wind mod. W.N.W., hazy. Rathlin Island, fifteen Linnets, 9 a.m., wind light S.W., overcast, going S. Rathlin O'Birne, five Barnacle, 3 p.m., wind fresh N.E., overcast. Broadhaven, one Solan Goose, 10.10 a.m., wind strong S.W., clear. Clare Island, small flock of Pigeons, 11 a.m., wind light E.S.E., blue sky, going W.

11th.—Mine Head, large flocks of "Grey" and Green Plovers from sunrise to sunset, wind light N., frosty. Oyster Island North, large flock of Barnacle, 1 p.m., wind light S.E., thick, going S.E. Slyne Head North, continuous flocks of Gulls and Gannets going N., 8 a.m. to 2 p.m., wind light S.E., clear.

12th.—Old Head, Kinsale, continuous flocks of Lapwing from 10 a.m. to 3.45 p.m., wind light N.E., clear, flying south; the first and only ones seen this season. Mine Head, seven "Wild Geese," 2 p.m., wind light N., frosty, going south; five "Wild Ducks," noon, wind N. Rathlin Island, 200 Gulls, 7 a.m., wind strong S.W., gloomy, on the water. Broadhaven, twelve Barnacle, 11.10 a.m., wind strong S., clear.

13th.—Oyster Island North, several flocks of Barnacle and Wigeon, 10 a.m. to 12.30 p.m., wind fresh S.S.E., gloomy, going S.E.

14th.—No entry.

15th.—Rathlin Island, 300 Gulls, 2 p.m., wind stormy N.W., showery, flying about.

