

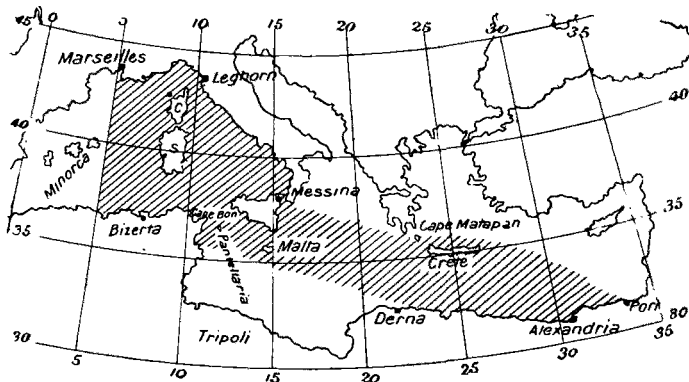
NOTES ON THE MIGRATION OF BIRDS OVER THE MEDITERRANEAN SEA.

BY

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THE following notes were made at different times over a period of one and a half years in the Mediterranean. Unfortunately, when I first got out there the spring migration of 1916 was just over; the only movement of "land"-birds seen at sea was that of thirteen Swifts flying southwards north of Cape Bon, on July 17th.

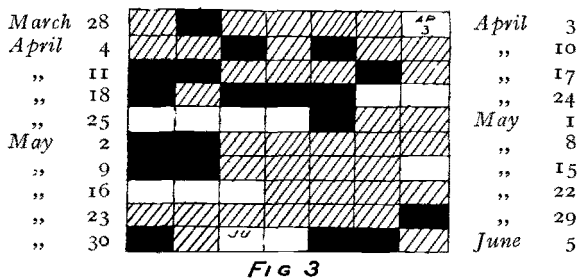
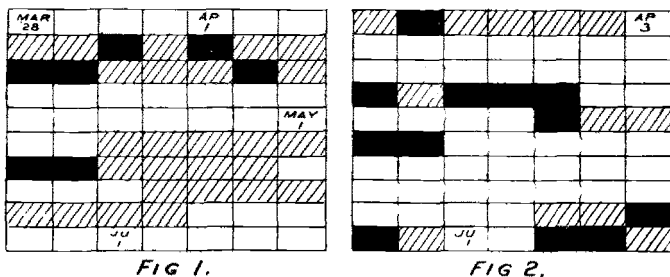
I had spent the previous year in the North Sea, and on my coming to the Mediterranean the scarcity of sea-birds



was in striking contrast to the hundreds of birds seen up north. Gulls were few and far between when we were at sea. There were a few at Malta, and we could always count on meeting a good number as we approached Port Said. On the other hand, Petrels were almost always with us from the moment we put to sea until our return to harbour. They first began to follow in our wake on May 27th off Portugal on our way out from Falmouth to Gibraltar. To return to the subject of this article, the first sign of autumn migration in 1916 was a Turtle-Dove (*Streptopelia t. turtur*), which came on board near Linosa on September 7th. By September 18th migration had set in properly, and I made observations until October 4th. For the rest of the month, unfortunately, I was either in hospital or on sick leave, and

did not go to sea again until November 9th. Thus I missed what appears from my notes for 1917 to be the busiest period of the autumn migration. From November 9th we had very rough weather for ten days and no birds were seen on migration west of Malta. Then we returned to Malta and went into dry dock until well after the cessation of the autumn migration.

The spring migration of 1917 began about the last week of March and lasted till the first week of June. The autumn



SPRING MIGRATION 1917.

Fig. 1. WESTERN AREA. Fig. 2. EASTERN AREA. Fig. 3. COMBINED.

migration of 1917 began about the end of September and lasted till the end of November. For the purpose of charting these seasons I have prepared figures consisting of a number of squares (see Figs. 1, 2, 3). Each horizontal line represents a week, each small square a day. Those dates on which we were not at sea I have left blank; those dates on which we were at sea I have shaded; those dates on which migrating birds were seen I have blacked in. I have further roughly divided the Mediterranean into western and eastern areas

meeting in the longitude of Malta. Fig. 1 represents spring migration in 1917 in the western area ; fig. 2 shows it in the eastern area ; fig. 3 is a combination of the other two figs. The western area of fig. 1 has as boundaries roughly a line from Malta to Bizerta, from Bizerta to Marseilles passing seventy-five miles east of Minorca, from Marseilles to Leghorn, down the west coast of Italy, through the Straits of Messina to Malta. The eastern area of fig. 2 is bounded by a line from Malta to Messina, from Messina to Cape Matapan, from Cape Matapan to Suda Bay near Khania in Crete, thence to the African coast and then to Malta. Fig. 3 shows us that there was a fairly steady stream of migrants from the end of March to May 10th. Then for a fortnight or more no migrants

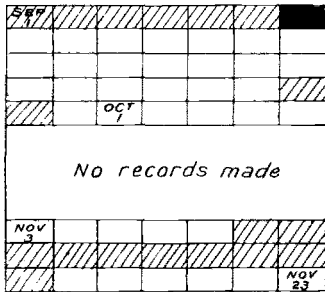


FIG 4.

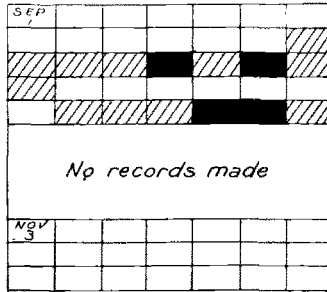


FIG 5.

AUTUMN MIGRATION 1916.

Fig. 4. WESTERN AREA.

Fig. 5. EASTERN AREA.

were seen, but at the end of May and beginning of June there was another small migration in the eastern area if not in the western. Fig. 1 shows us that the gap occurred in the western area and suggests that migration northwards finished in the western area before that in the eastern. Unlike what occurred in the migration of the autumn of 1916, due to bad weather, there was no bad weather to account for the gap in May.

Figs. 4 and 5 are charts of the autumn migration of 1916 ; fig. 4 represents the western area, bounded by the longitude of Marseilles, the longitude twenty miles east of Corsica, and the European and African shores between them. Fig. 5 represents the eastern area, a strip about thirty miles wide between Malta and Crete. These charts show us scanty migration in September and the beginning of October ; after

that is an unfortunate hiatus already explained, followed by a period of rough weather in November in the western area in which not a single migrant was seen. It is possible that, as suggested for the spring migration, so the southward migration is over sooner in the western area than in the eastern. Perhaps rough weather alone cannot be made responsible for the gap, because migrants were met with in far rougher weather in April 1917.

Figs. 6 and 7 are charts of the autumn migration of 1917. Fig. 6 represents the western area, a narrow strip of sea from Malta to Cape Bon, and up the west coast of Sardinia to Marseilles. Fig. 7 represents the eastern area, bounded by a line from Malta to Port Said, from Port Said round the

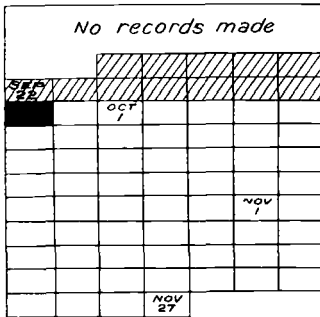


Fig. 6.

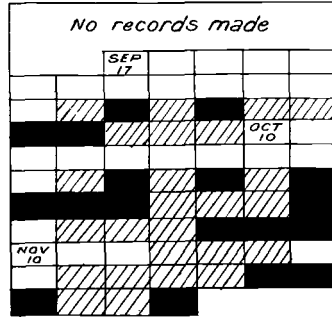


Fig. 7.

AUTUMN MIGRATION 1917.

Fig. 6. WESTERN AREA.

Fig. 7. EASTERN AREA.

east and north of Crete back to Malta. The gap in the middle of November is not due to rough weather: it is curious that as in the spring migration of the same year the main tide of migrants is followed by a gap, and then another small stream.

The division of the Mediterranean in this article into western and eastern areas is not entirely arbitrary, because there seem to be at least three main routes of migration apart from the Gibraltar line. There is certainly one from Cape Bon to Sardinia, Corsica and the Riviera, and another from Egypt to Crete and Greece; while very probably there is another from Africa to Malta, Sicily and Italy. (The Mediterranean west of a longitude seventy-five miles east of Minorca is beyond the scope of this article.)

The Cape Bon to Riviera line is evidenced by the following records :—

- One Swallow S. of Sardinia, April 6th.
- Two Redbreasts E. of C. Bon, driven by S. wind, April 8th.
- One Swallow and another bird W. of Sardinia, April 11th.
- One Swallow and a few Finches S. of Riviera, April 12th.
- One Swallow 70 miles N. of Bizerta, April 16th.
- One Turtle-Dove S. of Sardinia, May 9th.
- One Serin Finch W. of Sardinia, May 10th.
- One Turtle-Dove near Linosa : September 7th.

The Italian route is borne out by the following records :—

- One Wheatear 36 miles N.E. of Malta, March 23rd.
- One Nightjar E. of Malta, April 22nd.
- Swallows, Swifts and Martins S.W. of Malta, April 25th.
- Pied Flycatchers, Quails and Turtle-Doves, Malta, April 28th.
- Turtle-Doves and Wagtails E. of Malta, May 3rd.
- Whinchat 15 miles S.W. of Malta, May 27th.
- Grey Wagtails W. of Malta, September 29th.
- Redstart Malta, October 17th.
- Several passerine birds E. of Malta, October 22nd.
- Goldcrest S.W. of Malta, November 2nd.
- Pied Wagtail S.E. of Malta, November 3rd.
- Starling 90 miles E. of Malta, November 27th.

The Cretan route was very much used :—

- Small flock of passerine birds met at sea, one House-Martin, one Sparrow-Hawk, Willow-Warblers, Roller, Pipit, three Swallows, one Blue-headed Wagtail, S.W. off Greece, March 29th.
- Turtle-Doves W. of Crete, April 18th.
- Turtle-Dove between Derna and Crete, April 20th.
- Quail between Derna and Crete, April 21st.
- Turtle-Doves between Derna and Crete, April 30th.
- Turtle-Doves W. of Crete, May 2nd.
- Swallow W. of Crete, May 29th.
- Swallow W. of Crete, May 30th.
- Swallows and Martin W. of Crete, June 3rd.
- Swallow W. of Crete, June 4th.
- Turtle-Doves, Warblers, Finches, W. of Crete, September 18th.
- Swallows, Sparrow-Hawks, W. of Crete, September 20th.
- Warbler W. of Crete, October 3rd.
- Swallow, Wheatear, W. of Crete, October 4th.
- Turtle-Doves, Quail N. of Derna, October 1st.
- Swallow, Woodchat, Redstart, W. of Port Said, October 3rd.
- Quail, Rough-legged Buzzard, two Sparrows, between Port Said and Crete : October 6th.
- Swallows N. of Alexandria, October 7th.
- Kestrel, Whinchat N. of Derna, October 24th.
- Kestrel, Pied Wagtails, N. of Alexandria, October 26th.
- Swallows N. of Port Said, October 27th.
- Other birds reported by Officer of the watch as " Quail and Snipe " between Port Said and Crete, October 28th.
- Several small birds and one Redstart S. of Crete, October 29th.
- Wheatear N. of Port Said, November 7th.
- Many Swallows and Wagtails Port Said, November 8th.
- Wagtail and other small birds between Port Said and Crete, November 9th.

Willow-Warbler Port Said, November 22nd.

Pipits and Warblers between Port Said and Alexandria,
November 23rd.

Warblers N.W. of Alexandria, November 24th.

STARLING (*Sturnus vulgaris*).

Many were seen in Valletta market in autumn, but only one, immature, met at sea, ninety miles east of Malta, on November 27th, 1917.

FINCHES.

These were hard to identify on account of the light background.—September 18th, 1916: some settled on ship west of Crete; March 29th, 1917: a small flock met at sea, south-west of Greece; April 12th, 1917: a few south of Marseilles; October 22nd, 1917: several east of Malta.

SERIN (*Serinus canarius serinus*).

May 10th, 1917: one caught on board west of Sardinia in latitude 39° N.

HOUSE-SPARROW (*Passer domesticus*).

October 6th, 1917: a pair (♂ + ♀) came on board between Port Said and Crete, and after trying several perches finally took shelter in the mouth of the steam siren. Later on the hen was caught by my servant, who wished to give it to the cat, but I released it.

PIPIT (*Anthus*).

March 29th, 1917: one south-west of Greece; November 23rd, 1917: Several between Port Said and Alexandria.

WAGTAILS (*Motacilla*).

The majority of Wagtails were seen against a bright sky and could only be recognised as Wagtails, without further specification. In addition to those recorded below, I saw several east of Malta on May 3rd, 1917, many off Port Said on November 8th, and one between Port Said and Crete on November 9th, 1917.

WHITE WAGTAIL (*Motacilla alba*).

October 26th, 1917: two off Alexandria; November 3rd, 1917: one on board all day, north of Tripoli.

GREY WAGTAIL (*Motacilla c. cinerea*).

September 29th, 1917: several west of Malta chasing small moths, which had been blown to sea from land in sight.

BLUE-HEADED WAGTAIL (*Motacilla flava*).

March 29th, 1917: one came on board south-west of Greece.

GOLDEN-CRESTED WREN (*Regulus regulus*).

November 2nd, 1917: one blown on board and off to sea again in sight of Malta; wind S.W., very strong and blowing towards Malta. This wind had been blowing for two or three days, and two days previously had caused a Petrel to seek

refuge in the wardroom, when the ship was tied up in harbour at Malta, as already related.

WOODCHAT SHRIKE (*Lanius senator*).

October 3rd, 1917: one off Port Said.

WARBLERS.

Not only Wagtails but other small birds could not be properly identified for the reason already given. Thus I made the following records:—September 18th, 1916: Warblers settled on ship west of Crete; October 3rd, 1916: one Warbler perched on depth charge west of Crete; November 23rd, 1917: Several seen between Port Said and Alexandria; November 24th, 1917: one west of Alexandria.

WILLOW-WARBLE (*Phylloscopus trochilus*).

March 29th, 1917: One settled on my canary's cage on the quarterdeck, south-west of Greece; November 22nd, 1917: one off Port Said. On another occasion which I cannot find recorded in my diary a Willow-Warbler spent a night at sea near Crete, by roosting in the stern of the starboard whaler.

WHEATEAR (*Ænanthe cenanthe*).

October 4th, 1916: one west of Crete; March 23rd, 1917: one rested on board 36 miles north-east of Malta; November 7th, 1917: one off Port Said.

WHINCHAT (*Saxicola rubetra*).

May 26th, 1917: one came on board fifteen miles south-west of Malta; October 26th, 1917: one off Alexandria.

REDSTART (*Phœnicurus ph. phœnicurus*).

October 3rd, 1917: one off Port Said; October 17th, 1917: one at Valletta; October 29th, 1917: one fifty miles south of Crete.

REDBREAST (*Erithacus rubecula*).

April 8th, 1917: two off Cape Bon; fine weather, wind S. One of them was caught in an exhausted state by the Captain, and spent the night in my cabin, making repeated swoops at the canary's cage. It was released next forenoon at Malta and flew ashore.

SWALLOW (*Hirundo rustica*).

The spring migration lasted from March 29th to June 4th. As regards the autumn migration the earliest date in 1916 was September 20th, and the latest date in 1917 was November 8th. The spring migration gave me the following records:—March 29th: three caught between Sicily and Crete; April 6th: one flew into the engine room in a west wind south of Sardinia; April 11th: one west of Sardinia wind N.W. after blowing S.E. all morning; April 12th: one south of Marseilles; April 16th: one seventy miles north of Bizerta,

wind W. ; April 25th : several at Malta ; May 29th : one came on board west of Crete, no wind, sea like glass ; May 30th : one came on board east of Malta ; June 3rd : two flying against north wind east of Malta ; June 4th : one west of Crete.

The autumn migrations gave me the following records :—
September 20th, 1916 : two between Malta and Crete ; October 4th, 1916 : one between Malta and Crete ; October 3rd, 1917 : one west of Port Said, fine weather, light wind N. There were very many Swallows at Port Said at this time. October 7th, 1917 : two caught north of Alexandria in the Captain's cap, and spent the night in my cabin ; one died of exhaustion next morning, and the other was liberated between Crete and Malta, and flew away vigorously to the south without hesitating to choose its direction. October 27th, 1917 : several off Port Said ; November 8th, 1917 : very few now at Port Said.

HOUSE-MARTIN (*Delichon urbica*).

March 29th, 1917 : one south-west of Greece ; April 26th, 1917 : several at Malta ; June 3rd, 1917 : one flying against north wind west of Crete.

SWIFT (*Apus apus*).

July 17th, 1916 : thirteen flying south, north of Cape Bon ; April 25th, 1917 : several at Malta.

NIGHTJAR (*Caprimulgus europæus*).

April 22nd, 1917 : one flew by in northerly direction against gale from west, east of Malta.

ROLLER (*Coracias g. garrulus*).

March 29th, 1917 : one south-west of Greece.

KESTREL (*Falco tinnunculus*).

April 25th, 1917 : several at Malta ; October 24th, 1917 : one north of Derna ; October 26th, 1917 : one north of Alexandria.

ROUGH-LEGGED BUZZARD (*Buteo lagopus*).

On October 6th, 1917, between Port Said and Crete one spent a whole forenoon flying from ship to ship of our convoy. Finally it settled on our mainmast and was shot from the bridge, but, unfortunately, fell into the sea, and we dared not stop to pick it up on account of submarines.

SPARROW-HAWK (*Accipiter nisus*).

September 20th, 1916 : four perched together on yard-arm west of Crete ; March 29th, 1917 : one south-west of Greece.

CORMORANT (*Phalacrocorax carbo*).

A few spend the winter at Malta : my earliest date being November 19th, 1916, and my latest April 25th, 1917. On May 13th, 1917, we met several west of Sardinia.

TURTLE-DOVE (*Streptopelia t. turtur*).

One Turtle-Dove came on board near Linosa on September 7th, 1916, and on September 18th several settled on the ship west of Crete. Several were seen north of Derna on October 1st, 1917. The spring migration gave me the following records:—April 18th: Turtle-Doves migrating north in strong westerly breeze west of Crete. One roosted at night in the winch on the quarterdeck and was caught, killed and eaten by a rat. April 20th: one Turtle-Dove caught and caged between Derna and Crete in bad storm with westerly gale (*v. sub* Quail). April 28th: several in Valletta market; April 30th: more going north against very slight north breeze between Derna and Crete; May 2nd: more met with west of Crete in slight north breeze, fine and calm weather with blue sky; May 3rd: several east of Malta; May 9th: one south of Ustica.

WHITE-WINGED BLACK TERN (*Hydrochelidon leucoptera*).

May 26th, 1917: one came on board very exhausted and was captured and caged by one of the searchlight operators near Pantellaria; weather normal.

COMMON PARTRIDGE (*Perdix perdix*).

One in Valletta market, September 29th, 1917.

QUAIL (*Coturnix c. coturnix*).

Before coming out to the Mediterranean I had heard and read of what a wonderful sight was the migration of Quails, and was very disappointed to see so little of them. The first I saw was one migrating on April 21st, 1917, between Derna and Crete in the roughest weather I have ever experienced at sea. The wind had been blowing from the north-west for six days and increasing in strength gradually, so that there is not much likelihood of that Quail having been overtaken at sea by rough weather. It must have migrated deliberately or blindly in spite of the storm. Nor was it the only migrant, the previous day a Turtle-Dove was caught and caged, and the following day a Nightjar flew by towards the north. The latter was flying only a few feet (about ten) above the waves. On April 28th a stroll to the Valletta market showed that the birdcatchers had made a good haul of live Quails. I did not see another on the spring migration. On October 1st, 1917, one flew by north of Derna, and on October 6th one was caught on board and eaten between Port Said and Crete. On October 28th the officer of the watch reported "Quail and Snipe" between Port Said and Crete. At Port Said the Arabs were said to be catching Quail by hitting them with sticks.