

SEABIRD & MARINE MAMMAL SURVEY
R.V. CEFAS ENDEAVOUR
11-22 AUGUST 2008



Lesser black-backed Gulls © Ciarán Cronin

For
Cork Ecology

Survey Conducted by Ciarán Cronin



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INTRODUCTION

This survey was carried out onboard the fisheries research vessel 'Cefas Endeavour', while she was engaged in the sampling of benthic fish stocks in the central and southern North Sea. Cefas Endeavour operated a series of bottom trawls, at pre-determined, long running, sampling stations. Her area of operation was approximately south of 58° 15' north, and including all sectors south of this.

Seabird and cetacean observations were carried out only while steaming between fishing stations, when weather conditions permitted.

The primary purpose of the bird and cetacean survey was to update the existing ESAS (European Seabirds At Sea) data on seabird distributions in this general area.

While concentrating on seabird observations, basic details of marine mammal observations were also recorded, as well as other sightings of interest.

METHODS

Standard ESAS methods were used (*Webb & Durinck 1992, Camphuysen & Garthe 2004*), using a single observer on board. This standard method involves the simultaneous operation of three separate, but linked, methodologies (Fig. 1):

- 1) Surveying a 90° scan area, from bow to beam, on one side of the vessel (side chosen is flexible, depending on observation conditions). All birds seen at any time within this area are recorded. This data can be used to give indications of abundance and distribution, and allows for the recording of scarce and unusual species which are unlikely to appear in transect.
- 2) Surveying a band transect. A 300 metre wide transect, ahead of the vessel within the 90° survey area is operated. This strip is further divided into four sub-bands (A-D, band E>300m). Birds recorded on the water (or making contact with the water, eg feeding), at any point within this 300m area are recorded as being 'in transect'.
- 3) A 'snapshot' method is operated for flying birds. The area ahead of the ship, within the band transect, is surveyed instantaneously at set intervals (depending on vessels speed) for flying birds. For example if the vessel travels 300m per minute, the snapshot area will be 300m ahead, and an instantaneous count of flying birds will be made every minute. Birds recorded within the snapshot are recorded as being 'in transect'.

Counts of birds 'in transect' (methods 2 & 3) allow for the determination of densities and distributions of seabirds.

There was no surveying during the stationary periods, while fishing, or when weather conditions were too bad. Weather limitation is usually taken to be Beaufort Force 6 or over, although on this survey some counts were made with wind speed above Force 6 in order to make full use of time on board. The environmental data will show this however, and these counts may be removed from analyses if appropriate.

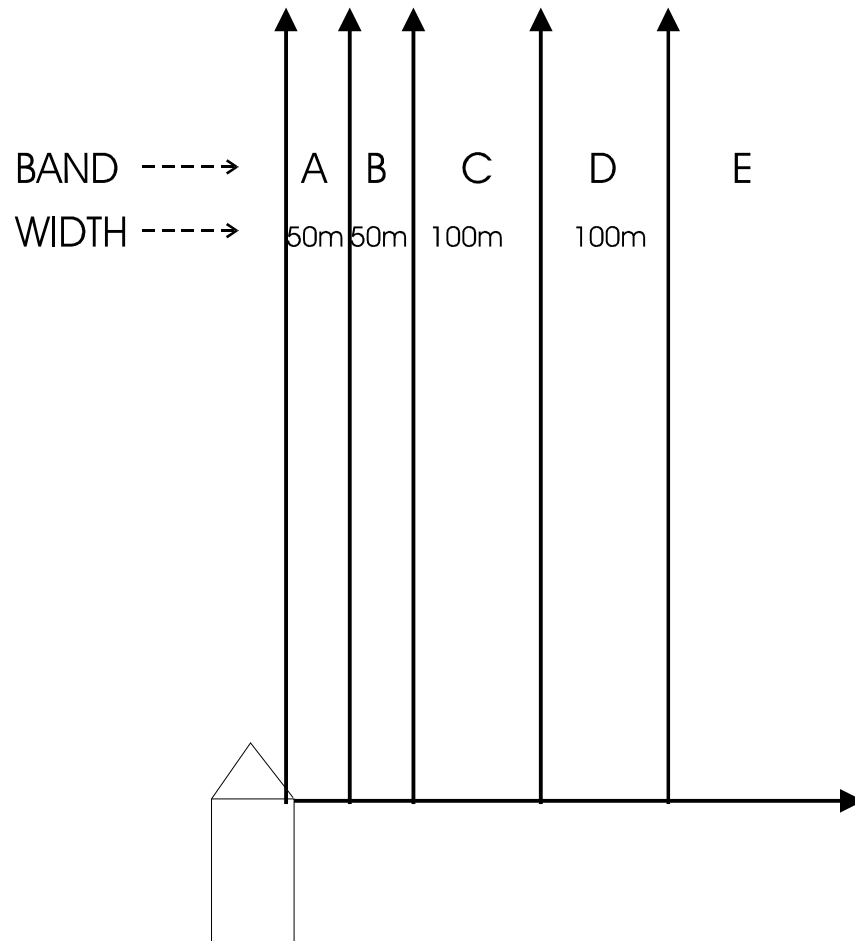


Figure 1 : The 90° scan (recording) area with band transect subdivisions

Modifications to Methods

Surveying is usually performed using the naked eye, with binoculars used to check identifications or other details. Binoculars are also occasionally used to scan ahead of the vessel as an observers 'self-check' on observational efficiency during the survey. Binoculars were used regularly in this survey to check for species such as storm petrels and phalaropes, but none were noted. Other birds detected with binoculars were not recorded unless they were subsequently detected with the naked eye.

RESULTS

General Details

Height of eye was 12.2 metres, standing on the bridge wings.

Count periods were 1 minute intervals throughout the survey.

Vessel speed averaged about 11.9 knots (c. 22 km/hr) while steaming.

A total of 72.8 hours of survey (4,369 minutes) were performed.

Little survey time was lost to weather, just a half day on the second day out from Lowestoft, and the 22nd on the approach to Aberdeen.

A total of 1,601 kilometres were travelled on survey, i.e. 480.5 km² of transect.

Figure 1. Areas surveyed for seabirds and marine mammals in August 2008



Daily Summary

Monday 11 August

Joined R.V. Cefas Endeavour 1600
Safety Familiarisation with 2nd Mate
Sailed c 1900

Tuesday 12 August

No survey after 1300 hrs due to gale force winds, and increasing.
2 green sandpipers migrating south in morning. Two harbour porpoises seen. Good numbers of terns and a couple of skuas on approach to dutch coast.
Virtually no ship associates.

Wednesday 13 August

Gales all day. Surveyed for few hours with wind behind us. Black headed gull noted.

Thursday 14 August

Surveyed most of day. Had arrived off Norfolk coast in morning, steamed north, finished off Flamborough Head.

Pomarine skua and Mediterranean shearwater off north Norfolk. South of Flamborough Head had two adult Sabine's gulls, and a lot of feeding seabirds including lots of little gulls and terns, and many groups of auks, inc. many with chicks. Two harbour porpoises noted.

Friday 15 August

Two minke whales together in morning. Otherwise very quiet. Meadow pipit on board in evening.

Saturday 16 August

Very few birds all day. None of note, apart from a sooty shearwater.

Sunday 17 August

Small numbers guillemots noted through day, increasing slightly at days end when a few juveniles also seen with adults.
Not much else of note, but golden plover, turnstone and swift of interest.

Monday 18 August

Very few birds noted today, off Dutch coast. The only seabirds apart from gulls, gannets and fulmars were a Mediterranean shearwater seen passing (probably the same bird later seen associating), and an unusual offshore record of cormorant. Feeding groups of gannets noted just before last fishing station (lots of sprat caught at that station).
Interest provided by a couple of land birds – a few swifts, and a juvenile willow warbler.

Tuesday 19 August

Again, very poor today. Long periods with no birds at all seen. Probable ruff seen migrating.

Wednesday 20 August

Very quiet for most of the day, but some moderately high densities of fulmar, a sooty shearwater and a couple of guillemots towards the end. Three small groups of white-beaked dolphins seen within half an hour in the afternoon.

A pied wagtail also noted.

Thursday 21 August

A single minke whale, and a pod of white-beaked dolphins.

Two wood sandpipers, a turnstone, and a meadow pipit also noted.

Friday 22 August

No survey due to weather and lack of steaming periods. Arrived Aberdeen c. 1300.

Species Accounts

Birds

Manx Shearwater

Puffinus puffinus

A total of only 11 birds were seen, all on 14th, with 8 of those in the evening, to the south of Flamborough Head.

Balearic Shearwater

Puffinus mauretanicus

One seen off the coast of north Norfolk on 14th, the other off the Dutch coast on the 18th (passed by, presume same bird later seen associating with vessel).

Sooty Shearwater

Puffinus griseus

Only 2 birds noted, both in the north-central section, on 16th and 20th. Birds were noted associating with the vessel and feeding on discards on two other occasions.

Fulmar

Fulmarus glacialis

Noted on all dates except 13th, with a total of 313 seen, but only 97 in transect. 179 were noted on 20th, in the north-eastern sector with 50 on 18th off the Dutch coast. Many fewer than expected, and even relatively scarce as a ship associate in almost all areas. All birds noted were pale phase birds (LL), although a single 'L' phase and a single 'DD' phase were noted as associates on 13th.

Gannet

Morus bassanus

A total of 487 seen, with 144 in transect. Noted on all dates, with highest concentrations 234 on 18th, and 71 on 14th. 438 birds (90%) were aged, and of these, 128 were adults, 297 immatures, and 13 juveniles.

Cormorant

Phalacrocorax carbo

A single adult cormorant was noted on 18th off the Dutch coast.

Guillemot

Uria aalge

The commonest bird noted, in terms of numbers, with 928 seen, and 786 in transect. Of this total however, 766 (83 %) were seen on 14th, with most on the approach to Flamborough Head. Noted every day, apart from 19th, but 3 days (14th, 16th and 17th) accounted for 96 % of sightings.

Interestingly 48 juvenile birds were recorded, almost all with accompanying adults. 44 of these were on 14th, 3 on 17th and one very far out to sea on 21st.

Moult status was recorded for 150 adult type birds, and of these, 105 (70 %) were in transitional moult, 44 (29 %) were in winter plumage, and 1 (1 %) in summer plumage.

Razorbill

Alca torda

319 birds noted on 14th, almost all on the approach to Flamborough Head, with 239 birds in transect. 23 birds were aged as juveniles, many with adults in attendance.

Puffin

Fratercula arctica

Two adults and one juvenile bird were seen on 14th.

Common Tern

Sterna hirundo

A total of 157 birds seen, in most areas, with peak movements 89 on 14th and 42 on 12th.

93 birds were aged (59 %), and of these, 71 were adults, and 22 juveniles.

Arctic Tern

Sterna paradisaea

64 birds were recorded, with 50 of those on 14th, including a single feeding flock of 37 birds. Birds were also recorded on 12th (6), 16th (5), and 17th (3). Ten adults and 9 juveniles were aged.

Unidentified Common/Arctic Tern

Sterna hirundo/paradisaea

19 birds were noted which could not be identified to species level.

Sandwich Tern

Sterna sandvicensis

58 birds seen in total, 47 on 12th, 10 on 13th, and one on 18th. 35 were adults, and 3 juveniles.

Great Skua

Stercorarius skua

21 birds were seen in total, on a scattering of days over widespread areas, with a peak of 7 on 18th, off the Dutch coast. In addition, single birds were in attendance on most days as ship associates.

One bird was photographed off Flamborough Head, and had a white colour ring, numbered N5. This record has been submitted to the relevant authority, and details are awaited.

Arctic Skua

Stercorarius parasiticus

A total of 8 birds were seen, all in the southern and eastern sections, 5 of which were adults (2 pale phase, 2 dark, and 1 intermediate).

Pomarine Skua

Stercorarius pomarinus

A juvenile bird was seen on 14th off the north Norfolk coast.

Common Gull

Larus canus

Single adults were noted on 14th and 21st.

Black-headed Gull

Larus ridibundus

A single juvenile bird was noted on 13th. In addition, a juvenile was associating with the vessel on the morning of 17th.

Little Gull

Larus minutus

93 birds were noted on 14th, all but one near Flamborough Head. 55 were noted in one feeding flock, with 28 in another.

Herring Gull

Larus argentatus 'argenteus'

A single adult noted on 14th.

Great Black Backed Gull

Larus marinus

Eight birds noted, including four adults and one juvenile, but only two in transect.

Lesser Black Backed Gull

Larus fuscus 'graellsii'

39 birds seen in total, but only 12 in transect. 21 were adults, 2 immatures, and four juveniles. Regularly seen associating with the vessel.

Large Gull sp.

Larus sp.

70 distant birds were seen on 18th off the Dutch coast, associating with a fishing vessel.

Kittiwake

Rissa tridactyla

36 birds seen in total, 27 of which were adults, and four juveniles. Not seen every day, but a wide spread of records, with a peak of 24 on 14th.

A regular ship associate in small numbers.

Of interest, both adults and well grown young were noted in nests on the piers at Lowestoft while leaving port on 11th.

Sabine's Gull

Larus sabini

Two adult Sabine's gulls were noted within a few minutes of each other on 14th, to the south-east of Flamborough Head.

Other Bird Species

Turnstone

Arenaria interpres

One circled the vessel on 17th, and another was noted flying to the north-west on 21st.

Ruff (?)

Philomachus pugnax

A bird, probably of this species, was seen flying south-west on 19th.

Golden Plover

Pluvialis apricaria

Five summer plumaged birds noted flying south on the afternoon of 17th.

Green Sandpiper

Tringa ochropus

Two were seen flying south-east on the morning of 12th.

Wood Sandpiper

Tringa glareola

Two seen flying south-west on the morning of 21st.

Pied Wagtail

Motacilla alba 'yarrellii'

One was heard circling the vessel briefly, on 20th.

Willow Warbler

Phylloscopus trochilus

A juvenile bird remained on board for a few hours on the afternoon of 18th.



Willow Warbler © Ciarán Cronin

Swift

Apus apus

One circled the vessel for a few hours on the 17th. On the 18th, one circled the vessel, another flew south-east, and 3 more circled the vessel in the afternoon.

Meadow Pipit

Anthus pratensis

Single birds were seen on board on the 15th and the 21st.

Marine Mammals

Cetacea (Whales/Dolphins/Porpoises)

White-beaked Dolphin

Lagenorhynchus albirostris

23 noted in total. On the 20th, in the north-eastern sector, 3 groups noted (6 adult, 4 adult, & 6 adult with 3 juvenile). On the 21st a single pod of 4 adults noted. A couple of these groups approached the vessel, briefly.



White-beaked Dolphin © Ciarán Cronin

Harbour Porpoise

Phocoena phocoena

Two noted on the 12th, and another two on the 14th.

'Northern' Minke Whale

Balaenoptera acutorostrata

Two animals together on the morning of the 15th, and another individual on the 21st.

Lepidoptera

Of interest, a butterfly, a small white (*Pieris rapae*), was seen flying over the sea and landing on board on the morning of the 18th.

DISCUSSION

General

What was most striking about this survey was the paucity of birds in most areas. August is generally the peak month for seabird migration, but in virtually all areas visited there was little evidence of birds either being present, or moving through. Indeed very few birds were even noted associating with the vessel most of the time, unusual for a fishing vessel.

The area to the south-east of Flamborough Head contained a lot of feeding birds, of a wide variety of species (many more were also seen in this region, but were outwith the survey area).

No particularly unexpected species were encountered, but the two Sabine's gulls and the two Balearic Shearwaters were both scarce migrants in the North Sea.

Ship Associates & Discarding Fish

Due to the nature of the vessels work (fishing), it was expected that some difficulties would be encountered with seabirds associating with the vessel. In this particular cruise however, ship associates did not cause any significant problems. In most areas numbers of associates were very low, and in areas where there were higher numbers, even these could be tracked quite well.

Observation Platform

Cefas Endeavour provided a good survey platform. The bridge wings are spacious and reasonably sheltered from all wind directions, although head-winds, as usual, can be uncomfortable. Bridge wing height of c. 12 metres is excellent for surveying. While not a problem on this particular survey, it is likely however, that the vessels fishing activity would attract a lot of associating birds in other areas, or at other times of year.

ACKNOWLEDGEMENTS

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