PSBC

PENICHE SEABIRD COUNT

Volunteer manual

Methods

2015

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Study period

From 15 August to 15 November 2015 on a daily count basis

Duration of counts on a daily basis

The daily standard is a morning count and an afternoon count. Morning counts start at sunrise and last three hours, whereas afternoon counts start three hours before sunset and end at sunset. The exact timings are evident from the daily timetable that is attached and can be found in the project apartment.

Every 7th day, counts will be made throughout the day regardless of seabird passage strength. On these days the morning and afternoon counts are carried out as already described, and in the intervening period counts are made at least 30 minutes every full hour. This allows for meals, bathroom visits and some rest.

Which birds to count

All species should be counted, even land migrants. The only exception is Yellow-legged gulls that do not need to be counted, as it is difficult to separate true migration and local movements of this abundant species.

As the project is focused on passing/migrating birds, it is important to separate these from resident or non-migrating birds, the latter which should not be included. For the purpose of this project, we record all birds with a determined, consistent flight direction that do not follow boats, swim, congregate in rafts or land on water/land.

On the record sheet use the first letter of the genus and the four initial letters of the species name (example: Puffinus mauretanicus = Pmaur). The exception is Arctic Skua (Sparas) and Arctic Tern (Sparad) where a fifth letter has to be included to distinguish between them.

How to count migrating birds

During counting one volunteer will be in charge of writing down the birds and scanning the nearby sea with binoculars and the other volunteer(s) shall focus on finding and counting more distant birds with the spotting scope. As much as possible, the scope should be kept still, with around 20% of the image above the horizon, and let the birds move “through” the field of view. Make sure there are no duplicate counts between the binoculars and spotting scope.

How to register count data

Counts should start and end as described above with respect to sunrise/sunset. However, data should be broken down into 30 min blocks starting from full or half hour just before sunrise or after sunset. In other words, if your count starts 7:15 AM, use the first 15 minutes as the first period and subsequently group data by even half hours (00/30 hours).

Always fill in the start time and end time at every 30 min block, or if a break is necessary.

Weather data should be recorded at the beginning of every 30 min. period. An anemometer is provided for this. If unchanged, just write “weather unchanged”. Please find the codes in the bottom of every field sheet.

What data should be collected?

Apart from time and weather data already mentioned, the following should be noted as the standard procedure:

-species

- flight direction if different from the “normal” S-SW sector

- flock size when possible (see also under Gannets below). To mark a flock, use “(x)”, where x is the number of birds in the flock.
- age and sex of all individuals when possible and time permits (again, can be difficult for Gannets).

- For the three species of Skua (Arctic, Pomarine and Long-tailed) the morph colour should be noted.

Codes for age, sex, flight direction, and colour morphs can be found attached to this document and on the bottom of every field sheet.

Gannets

When Gannet migration is really intense it may not be possible to register flock size, age and behavior of this species. If so, note in the field protocol that this was the case. If seabird passage is so strong that it becomes impossible to keep up the record-making, count Gannets only for a 5 min. peŕiod at the beginning **and** the end of each 30 min. “block”, and make a note of this. This method of time restriction can only be used for Gannets. All other seabirds should be counted for the full 30 min. If other species than Gannet pass in overwhelming numbers, give priority to recording numbers and direction, without recording flock size, age, sex, and behavior. If so, write in the protocol that this was the case.

Examples
Here are examples of how count data should be recorded in the field sheet:

<u>Example 1</u>

A flock of 9 Common scoters moving north, where we can pick out 7 females and 2 males.

Enter: **Mnigr (7F, 2M)N**

Example 2

A flock of 5 Arctic skuas fly by, and we can separate 3 (pale) adults and 2 (dark) juveniles moving south. (Since the main flight direction is south there is no need to write the “S” after the flock.

Enter: **Spara (3AP, 2JD)**

Example 3

A sequence of 7 Balearic Shearwaters (not in a flock), followed by a flock of 3 Balearic Shearwaters, followed by another 2 single birds. Note that we can sum several birds and write the number, it is only considered a flock if we use “()”.

Enter: **Pmaur 7, (3), 2**

Example 4

A Gannet flock with several age classes, with 4 adults (A), 3 immatures (Im) and 5 Juveniles, all moving north in a flock.

Enter: **Mbass (4A, 3Im, 5J)N**

Example 5

On a busy day when it was not possible to record age and flock size of Gannets, the entry by the end of a 30 min. períod may look something like this for 107 Gannets moving south and 23 moving north:

Enter: **Mbass 107, 23N**

Field sheet Codes:

Age classes

Adult= A

Immature= Im (includes all plumages after 1st. winter and adult)

Juvenile= J (includes juvenile and 1st winter plumages)

Sex

Male = M

Female = F

Flight direction

North= N

South= S

East=E

West=W

Skua morphs

Pale= P

Intermediate= IN

Dark=D

Weather

Wind speed

measure with the anemometer. Raise the anemometer for five seconds faced to the wind and record the high value.

Wind direction

Use cardinal directions (N, NE, E, SE, S, SW, W, NW)

Clouds

0% – 0

0-50% – 1

51-100% - 2

Rain

No rain – 0

Drizzle – 1

Moderate – 2

Heavy – 3

Visibility

Very poor – 0 < 1 km

Poor – 1 - 1-3 km

Regular – 2 - 3-10 km

Good – 3 - >10 km

Temperature

Measure with the anemometer.

Waves/sea

Rippled – 1 (0.10-0.50 m)

Small waves – 2 (0.50- 1.50)

Moderate waves – 3 (1.50-2.50 m)

High waves – 4 (2.50-4.00 m)

Storm waves – 5 (>4m)

Additional information recording

Since we will count on a daily basis this is a great opportunity to gather more information about enigmatic species. We have two additional challenges that we would like to investigate:

1. The status of Scopoli´s shearwater off Peniche

The *Calonectris* shearwaters breeding in Berlenga and in the other Atlantic islands seem to be Cory´s Shearwaters (*Calonectris borealis*), but the birds breeding in the Mediterranean are classified as Scopoli´s Shearwater (*Calonectris diomedea*). According to (Rob et al, 2008) there is evidence of breeding Scopoli´s at the Bay of Biscay, so it can be suspected that some Scopoli ´s do move along the Portuguese coast. The main problem is the similarity between Cory´s and Scopoli´s, and the often difficult observation conditions from land.

We have prepared identification material, taken from *Petrels night and day (Robb, M, 2008),* and illustrated by Killian Mullarney, that can be useful to separate Cory´s from Scopoli´s.

During counting, and on calm days, we should be aware of any putative Scopoli´s and make notes of it in the field sheet.

2. The status of *"Puffinus yelkouan type"* off Peniche

This is another identification problem, and another challenge of lack of information: the status of *Puffinus yelkouan* off Peniche. Among the thousands of Balearic Shearwaters (*Puffinus mauretanicus*) that move up and down the Portuguese coast every year, we have noticed some birds that we can classify as having "yelkouan features", being more grey, pale and slightly slimmer birds, a bit different even from the palest Balearic individuals.

The correct field identification is difficult to make as some hybrids occur on Mediterranean islands.

We have prepared some additional identification information, taken from *Petrels night and day (Robb, M, 2008)*. As with Scopoli´s, putative Yelkouan Shearwaters should be recorded and described, if this does not interfere with the other counts.

Please note that all the scanned articles are only for using as a work base for the project, not for public distribution.

Available material

For the counts the following material is available:

- 2 Leica spotting scopes and tripods (volunteers must bring their own binoculars)

- 1 digital anemometer

- 1 Stopwatch

- 4 Camping chairs

- 3 tally counters

- field sheets and writing material

- 1 Collins Bird guide

- Additional Cory´s vs Scopoli´s and Baleartic vs Yelkouan printed plates to help identification.

English name	Scientific name	Code
Common Scoter	Melanitta nigra	Mnigr
Red-throated diver	Gavia stellata	Gstel
Great northern diver	Gavia immer	Gimm
Cory´s shearwater	Calonectris borealis	Cbore
Scopoli´s shearwater	Calonectris diomedea	Cdiom
Great shearwater	Puffinus gravis	Pgrav
Macaronesian shearwater	Puffinus baroli	Pbaro
Manx shearwater	Puffinus puffinus	Ppuff
Balearic shearwater	Puffinus mauretanicus	Pmaur
Yelkouan shearwater	Puffinus yelkouan	Pyelk
Sooty shearwater	Puffinus griseus	Pgrise
European Storm petrel	Hydrobates pelagicus	Hpela
Wilson´s Storm petrel	Ocenites oceanicus	Oocen
Leach´s Storm petrel	Oceanodroma leucorhoa	Oleuc
Madeiran Storm petrel	Oceanodroma castro	Ocast
Gannet	Morus bassanus	Mbass
Cormorant	Phalacrocorax carbo	Pcarb
Shag	Phalacrocorax aristotelis	Paris
Grey phalarope	Phalaropus fulicarius	Pfuli
Great skua	Stercorarius skua	Sskua
Pomarine skua	Stercorarius pomarinus	Spoma
Arctic skua	Stercorarius parasiticus	Sparas
Long-tailed skua	Stercorarius longicaudus	Slong
Black-headed gull	Chroiocephalus ridibundus	Cridi
Mediterranean gull	Larus melanocephalus	Lmela
Lesser black-backed gull	Larus fuscus	Lfusc
Little gull	Hydrocoloeus minutus	Hminu
Kittiwake	Rissa tridactyla	Rtrid
Sabine´s gull	Xema sabini	Xsabi
Little tern	Sternula albifrons	Salbi
Sandwich tern	Sterna sandvicensis	Ssand
Common tern	Sterna hirundo	Shiru
Arctic tern	Sterna paradisaea	Sparad
Roseate tern	Sterna dougalli	Sdoug

Black tern	Chlidonias niger	Cnige
Whiskered tern	Chlidonias hybrida	Chybr
Puffin	Fratecula arctica	Farct
Guillemot	Uria aalge	Uaalg
Razorbill	Alca torda	Atord