



Skogsøy – Seabird Monitoring off SW Norway

Introduction

Every year significant numbers of water- and seabirds pass Skogsøy (SW Norway) on their way north during the spring migration. For some of these species it is a very significant part of the population and some are all but impossible to count satisfactorily on either breeding or wintering grounds due to their dispersed nature. Counting these species during their spring migration is an excellent way of monitoring their populations whilst simultaneously providing a variety of other much needed information.

Population estimates and trends are poorly known for a number of these largely northerly birds. These populations are exposed to a number of risks such as climate change, oil spillage (Barent's sea development is a current "hot topic") and overfishing.

Systematic counting will also provide information on the phenology of the spring migration; developments over time can then be monitored.

The main species of conservation interest are given below:

English Name	Scientific Name	Category of interest
Red-throated Diver	<i>Gavia stellata</i>	Declining / poorly known population
White-billed Diver	<i>Gavia adamsii</i>	Poorly known population
Common Gull	<i>Larus canus</i>	Declining / Poorly known population

Significant numbers of species that are monitored reasonably well, either in breeding or wintering areas, also pass Skogsøy on their way north. Examples of such are:

English Name	Scientific Name	Category of interest
Great Cormorant	<i>Phalacrocorax carbo</i>	Timing and population trends
European Shag	<i>Phalacrocorax aristotelis</i>	Migration patterns / pop. trends
Common Eider	<i>Somateria mollissima</i>	Migration patterns
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>	Timing of migration

Large numbers of Barnacle Goose (*Branta leucopsis*), Long-tailed duck (*Clangula hyemalis*), Common Scoter (*Melanitta nigra*), Velvet Scoter (*Melanitta fusca*) and other duck are also noted.

Additionally a number of species of popular interest to European birders are noted regularly. Such species include Great Northern Diver (*Gavia immer*) and all four skua (*Stercorarius*) species.

Data regarding the numbers and timing for all species observed will be reported.



For the 2006 season (mid March – early June) systematic counts will be performed on a daily basis. The data collected will be used to provide the following information:

- Population size (minimum numbers north of Skogsøy)
- Population trends (over a number of years)
- Phenology (timing) of the migration (at various levels)
- Migration patterns
- Migration in relation to weather conditions.

Further details on how the data are to be used are presented below:

Data collection

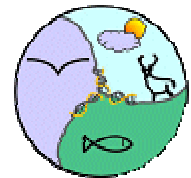
Data collection will be conducted daily from 15 March – 05 June. A period from dawn and for a period of six (March) to seven hours (from 01 April onwards) will be covered.

Data will be reported on a hourly basis, with specific times noted for certain species or flocks (e.g. White-billed Diver (*Gavia adamsii*), Barnacle goose (*Branta leucopsis*)) in order to facilitate the tracking of single birds or flocks up the coast.

It is hoped to involve other birders in this project. Although this participation is likely to be limited, it is hoped to gather some additional useful data – an example of this is documenting the passage during the afternoon and evening periods in order to validate assumptions used during estimation.

Analysis of data

This project is being run in collaboration with CEES at the University of Oslo.



Population sizes

Although the results will not give exact population sizes the total figures noted and estimates (using extrapolated data) will give an indication of the size of the populations involved.

Estimates will be produced by calculating an average individuals per hour using observed data. Using this average, in conjunction with the assumed number of hours of migration per day for each species, an estimate of the numbers passing during the hours where there is no observation will be derived.

Population trends

The data from 2006 will be used to calculate an index for use in subsequent years. An index will be produced for all migrating species, although some, such as auks and terns, may have to be grouped together.

Phenology

The seasonal timing of the passage for each species will be studied. Data from subsequent years can then be compared to monitor trends. There are some indications that the timing of the spring migration is changing for at least one species.



The “micro-phenology” will also be studied i.e. the timing within the day. Some species show a clear peak around dawn, others later in the day and yet others appear seemingly randomly. There are indications that certain species may change their migration strategy during the course of the season. This information may be helpful for determining:

- estimates of numbers passing for the times at which the migration is not covered.
- the origin of certain species (based on an assumed time of departure and flight speed).
- the migration pattern for each species (diurnal, nocturnal or both)

Migration patterns

There are some indications that information regarding the origin of certain overwintering populations and/or age classes can be determined (or at least more data collected). Some species seem to head south during at least parts of the spring migration, these birds may be birds returning to the Baltic or other areas from wintering areas further north. More information is required to clarify this situation.

Correlation of data

The main advantage of Skogsøy is that dispersed breeding and/or wintering populations can be monitored on migration. However, where possible, results will be coordinated with other monitoring programs. Examples of such are Oystercatcher (monitored on the wintering grounds in Europe) and Cormorant (monitored on breeding grounds in Norway).

Publication of data

Results will be presented on the internet on website produced expressly for this purpose: www.naturalbornbirder.com. A comprehensive report will be written and made available.

Additionally a number of popular and scientific journals will also have the chance to publish the data.

Funding

At present the project is entirely privately funded; for the project to succeed in the long term this cannot continue. It is hoped that funding will be made available from both public and private sectors.

The uniqueness of this study and the general level of interest in some of the key species means that it will generate a great deal of attention among ornithologists and birders across Norway, NW Europe and beyond.

The future

It is hoped that regular (annual) monitoring of the spring migration off SW Norway will be possible in a similar manner to the monitoring of raptor migration at Falsterbo, Sweden and other locations further south in Europe.

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