

Extract only - complete publication at www.jncc.gov.uk/worldwaterbirds

Waterbirds around the world

A global overview of the conservation,
management and research of the
world's waterbird flyways

Edited by G.C. Boere, C.A. Galbraith and D.A. Stroud

*Assisted by L.K. Bridge, I. Colquhoun, D.A. Scott,
D.B.A. Thompson and L.G. Underhill*



landbouw, natuur en
voedselkwaliteit



SCOTTISH EXECUTIVE



EDINBURGH, UK: THE STATIONERY OFFICE

© Scottish Natural Heritage 2006

First published in 2006 by The Stationery Office Limited
71 Lothian Road, Edinburgh EH3 9AZ, UK.

Applications for reproduction should be made to Scottish Natural Heritage,
Great Glen House, Leachkin Road, Inverness IV3 8NW, UK.

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN 0 11 497333 4

Recommended citation:

Boere, G.C., Galbraith, C.A. & Stroud, D.A. (eds). 2006.
Waterbirds around the world. The Stationery Office, Edinburgh, UK. 960 pp.

Names used for geographical entities do not imply recognition, by the organisers of the *Waterbirds around the world* conference or other supporting organisations or governments, of the political status or boundaries of any particular territory. Names of territories used (and any alternatives) are included solely to help users of this publication apply information contained within this volume for waterbird conservation purposes. The views expressed in papers included within this volume do not necessarily represent views of the editors or the organisations and governments that supported the conference and this publication.

Cover photography: Whooper Swans *Cygnus cygnus* arriving at Martin Mere, England. Photo: Paul Marshall.
(www.paulmarshallphotography.com)

Copyright of all photographs used in this publication resides with the named photographers.

The Arctic – origin of flyways

Kenton D. Wohl

U.S. Fish and Wildlife Service, Anchorage, Alaska 99503, USA. (email: Kent_Wohl@fws.gov)

Wohl, K.D. 2006. The Arctic – origin of flyways. *Waterbirds around the world*. Eds. G.C. Boere, C.A. Galbraith & D.A. Stroud. The Stationery Office, Edinburgh, UK. pp. 120-123.

ABSTRACT

The Arctic and its waterbird resources are unique in at least two respects. In a circumpolar perspective, the eight Arctic nations have common species, shared populations and many similar conservation issues. Such waterbird attributes clearly link the Arctic in a circumpolar manner. The Arctic region is also unique in that it contributes many species of waterbirds to all the major international flyways, linking the Arctic to offshore international waters and to many other countries in both the Northern and Southern Hemispheres. Although Alaska (the U.S. “Arctic”) is used to illustrate the international importance of the Arctic, the other seven Arctic countries share a very similar story. In Alaska, about 88% of the regular breeding waterbird species migrate beyond the jurisdiction of the USA, and use as many as eight of the 10 or 11 international flyways. Over 80% of these waterbirds either move to offshore international waters in the North Pacific Ocean or use the four “Americas” flyways en route to Mexico, the Caribbean and South America. The others use the four international flyways to the south and west of Alaska en route to Oceania (Central Pacific), East Asia/Australasia, Central Asia/South Asia, and West Asia/East Africa. These circumpolar

and hemispheric linkages imply that countries share a joint responsibility for the conservation of migratory waterbirds. It also suggests that there is a need to improve international collaboration to manage shared populations most effectively.

INTRODUCTION

I present a brief overview of international waterbird conservation in the Arctic and the Arctic’s linkages with flyways and non-breeding areas. The flyway concept and range-wide approach to migratory waterbird management is promoted. The “Birds of Arctic Conservation Concern” project of the Arctic Council’s Conservation of Arctic Flora and Fauna program, which highlights waterbird connections within the Arctic and flyways, is summarized.

ARCTIC WATERBIRD CONSERVATION ISSUES

The key waterbird conservation issues in the circumpolar Arctic are listed below. They are common to all eight Arctic countries (Canada, Finland, Greenland, Iceland, Norway, Russia, Sweden, and the U.S. [Alaska]) and, as such, clearly demonstrate the need to share management, political, legal, and outreach experiences,

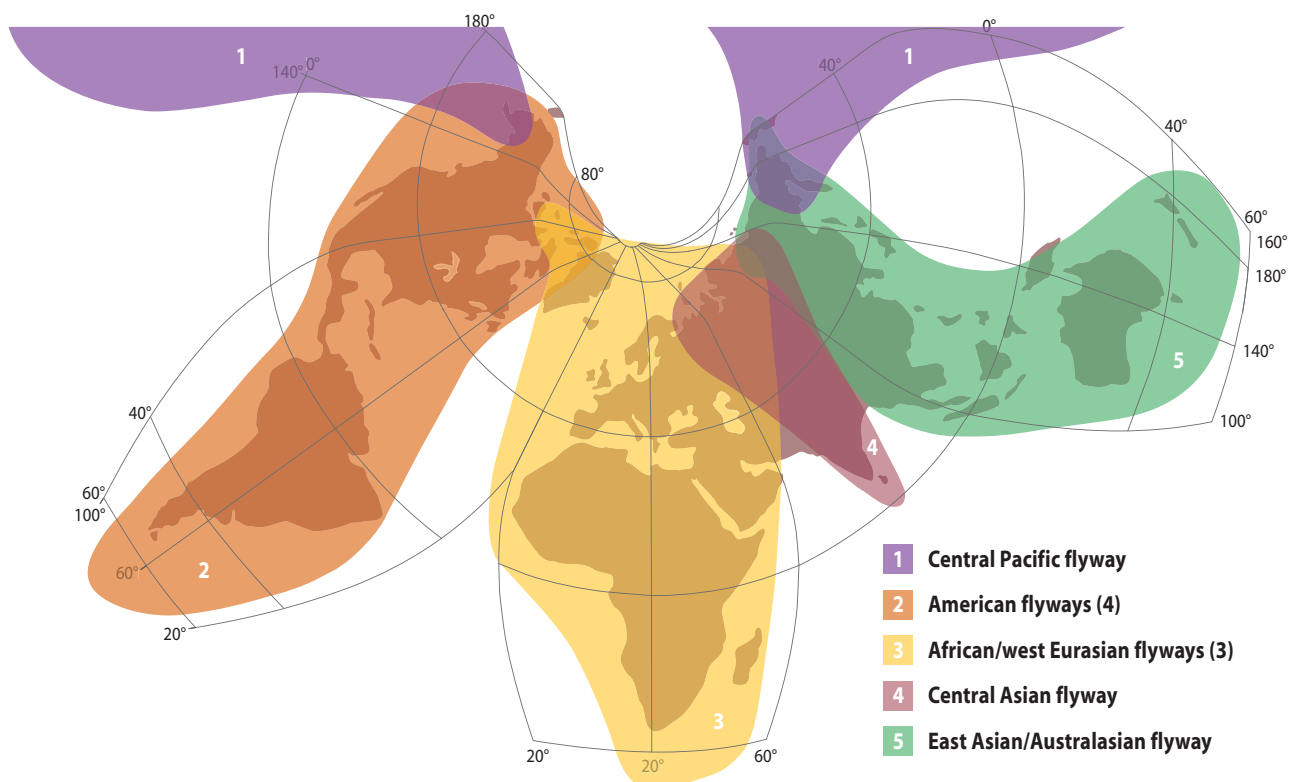


Fig. 1. International migratory bird flyways originating in the arctic.

approaches, and information with each other, and jointly develop resolutions.

- Harvest (sport, subsistence and unregulated)
- Invasive species
- Habitat alteration
- Oil pollution
- Plastics pollution
- Bycatch in commercial fisheries
- Contaminants
- Diseases
- Human disturbance
- Declining populations
- Climate change

Climate change is an issue receiving increased attention recently and is predicted to produce changes that will not only exacerbate some of the conservation issues above, but will create many new and very visible management conflicts for waterbirds in the near future. These are listed below and have been well-documented by several authors in the Arctic Council's Arctic Climate Impact Assessment Project (Hassol 2004, AMAP 2004):

- Changes in species composition and populations
- Extinction of species
- Changes in phenology/migration/foraging patterns
- Introduction of invasive species and diseases
- Inundation of coastal wetlands
- Drying of interior wetlands
- Changes in terrestrial habitats
- Changes in the values and functions of protected areas

Many of these issues are also shared in a flyway context, with some issues being a higher priority than others, depending on the flyway and the country.

NEED TO COLLABORATE

It is well known that waterbirds are an important national heritage in the eight Arctic nations, and that the Arctic is the exclusive breeding grounds for many species of waterbirds that are important to Arctic populations of humans. It is not unusual that most work on waterbirds has focused on breeding ecology and population status and trends on the Arctic's breeding grounds. As such, Arctic birders are quite "Arctic-centric".

It is also recognized that most of the Arctic's breeding waterbirds move to offshore regions or migrate to more southerly non-breeding areas via flyways (Fig. 1). For example, in Alaska 89% of the regular breeding seabirds, all of the shorebirds, 73% of the waterfowl, and 92% of the remaining waterbird species migrate beyond the USA when they leave Alaska. When waterbirds leave their Arctic breeding grounds, Arctic birders not only expect them to return the following spring, but also assume or expect that the countries in the non-breeding regions will care for the conservation and protection of these migrants with a similar passion and enthusiasm. However, there are often different legal responsibilities and conservation and protection priorities within a flyway and for particular species or species groups. This necessitates approaching waterbird issues in a range-wide manner and having the international instruments available to promote and execute the communication,



Murre *Uria lomvia*. Photo: U.S. Fish and Wildlife Service.

coordination, and collaboration between countries within a flyway or total range of a given species.

OPPORTUNITIES FOR INTERNATIONAL COLLABORATION

In the context of common species, shared populations, and similar conservation issues, it is obvious that circumpolar Arctic and flyway approaches are essential to resolve management and conservation issues most effectively. To initiate these approaches requires international frameworks. Such coordination mechanisms are, for example, formal and informal species, habitat, and flyway agreements, and bilateral and multilateral treaties. There are many good examples of flyway and range-wide instruments that provide the necessary mechanisms to create or enhance coordination between countries. In the circumpolar Arctic, the Arctic Council's Conservation of Arctic Flora and Fauna (CAFF) program and its Circumpolar Seabird Expert Group is a recent example of a very successful mechanism aimed at improving coordination of waterbird management issues and monitoring programs throughout the Arctic. The Convention on Migratory Species of Wild Animals (CMS) and its several flyway and species agreements, the Ramsar Convention on Wetlands, the Convention on International Trade in Endangered Species (CITES), and many other regional agreements represent successes in improving the flyway and range-wide approaches to waterbird conservation.

Two interesting movements have occurred in the recent past concerning institutional mechanisms for international cooperation in the conservation of migratory birds. Informal agreements are much more popular today than formal ones because they are much less expensive to implement, operate on a simpler institutional structure and decision-making process, and have the ability

to take action on issues in a timelier manner. In addition, flyway or range-wide instruments have been favored over more geographically-limited or regional instruments. Examples are: the bilateral treaties between the USA, Canada, and Mexico, reinvented into a “trilateral” approach; bilateral treaties among the USA, Japan, Russia, China, Australia, and India, some of which are being regrouped into a CMS Central Asian Flyway Agreement; and the many bilateral agreements in the East Asian-Australasian Flyway which are being coordinated by the Asia-Pacific Migratory Waterbird Conservation Committee. Of course, the CMS’s African-Eurasian Migratory Waterbirds Agreement (AEWA) is another good example of the flyway approach. Hopefully, there will soon be flyway agreements for the “Americas” flyways and for the Central Pacific Flyway that will unite the two hemispheres into range-wide approaches for waterbirds.

In 1993, the CAFF program gave recognition to the Arctic’s important migratory waterbird resources, the commonality of conservation issues, and the need to improve communication in the Arctic when it created the Circumpolar Seabird Expert Group (CSEG), formerly known as the Circumpolar Seabird Working Group. Since the CSEG’s first meeting in 1994, it has collaboratively addressed common issues such as seabird bycatch (Chardine *et al.* 2000, Bakken & Falk 1998), seabird harvest (Denlinger & Wohl 2001), and seabird disturbance guidelines (Chardine & Mendenhall 1998). The CSEG has also addressed circumpolar murre and seabird monitoring plans and common species initiatives such as the International Murre and Eider Conservation Strategies (CSWG 1996, CSWG 1997). The CSEG has addressed regional issues such as the North Atlantic murre banding (Petersen & Bakken 2004) and band/ring recovery projects. Another recent project demonstrating circumpolar collaboration is the murre climate change project (Irons *et al.* unpublished). It is an example of birders having a forum; i.e. CSEG, to discuss a common issue, share data and build a common database to develop a circumpolar story about the response of murre populations to climate change. The success of this project will certainly be the prelude for many more circumpolar data-sharing initiatives.

BIRDS OF ARCTIC CONSERVATION CONCERN

It has often been recognized that Arctic birds are dependent on non-breeding habitats outside the Arctic. In 1996, CAFF commissioned a report that discussed Arctic linkages with other countries for bird species migrating beyond the Arctic (Scott 1998). As a result of that report, CAFF and Wetlands International conducted a workshop to review and prioritize recommendations of the Scott report (Scott 2001). Recognizing the need for improving the cooperation and collaboration for migratory waterbirds beyond the Arctic and value in prioritizing species and conservation issues in both a circumpolar and flyway context, CAFF instructed the CSEG to develop the report “Birds of Arctic Conservation Concern.” It is a project that is anticipated to be completed in 2005, and will discuss for each of the eight Arctic countries their migratory bird resources, national and international conservation status, migration routes, non-breeding areas, applicable domestic and international coordination instruments, population status and trends, and list of active international projects and programs. The report will also develop a list of high priority birds called “Birds of Arctic

Conservation Concern”. This project will be presented with country, Arctic and flyway perspectives. The report will be the template for documenting each country’s priority migratory bird species, international migratory bird programs, and means for international collaboration within the Arctic and the flyways. The document will serve as the template for the Arctic countries to enhance their international migratory bird programs.

RECOMMENDATIONS

In summary, the eight Arctic nations and their birders have greatly improved their coordination and collaboration as a result of new international coordination mechanisms such as CAFF and its Circumpolar Seabird Expert Group. Arctic waterbird conservation is also greatly benefiting from recent flyway agreements and initiatives and the increasing recognition by Arctic countries of the need to focus on the range-wide and flyway concepts for the most effective approach to waterbird conservation. Effective resolutions to complex Arctic issues such as climate change will necessitate countries uniting for collaborative endeavors to protect shared populations whether on a circumpolar or flyway scale.

The highest priority needs to effect or improve waterbird conservation in the Arctic and the flyways are: 1) to initiate coordinated flyway or range-wide monitoring programs; 2) to create common flyway and circumpolar Arctic databases; and 3) to fill the species and geographic gaps in international coordination frameworks and instruments.



Steller’s Eider *Polysticta stelleri*. Photo: Glen Smart, U.S. Fish and Wildlife Service.

REFERENCES

- AMAP - Arctic Monitoring and Assessment Program** 2004. The ACIA international scientific symposium on climate change in the Arctic: extended abstracts. Reykjavik, Iceland, 9-12 November 2004. AMAP Report 2004: 4. Oslo, Norway.
- Bakken, V. & Falk, K.** (eds). 1998. Incidental take of seabirds in commercial fisheries in the Arctic countries. CAFF Technical Report No. 1. Circumpolar Seabird Working Group, Akureyri, Iceland.
- Chardine, J. & Mendenhall, V.** 1998. Human disturbance at Arctic seabird colonies. CAFF Technical Report No. 2. Circumpolar Seabird Working Group, Akureyri, Iceland.
- Chardine, J., Porter, J.M. & Wohl, K.** 2000. Workshop on seabird incidental catch in the waters of Arctic countries. CAFF Technical Report No. 7. Circumpolar Seabird Working Group, Akureyri, Iceland.

- CSWG - Circumpolar Seabird Working Group** 1996. International murre conservation strategy and action plan. CAFF, Akureyri, Iceland.
- CSWG - Circumpolar Seabird Working Group** 1997. Circumpolar eider conservation strategy and action plan. CAFF, Akureyri, Iceland.
- Denlinger, L. & Wohl, K.** 2001. Seabird harvest regimes in the circumpolar nations. CAFF Technical Report No. 9. Circumpolar Seabird Working Group, Akureyri, Iceland.
- Hassol, S.J.** 2004. Impacts of a warming Arctic. Cambridge University Press, Cambridge, UK.
- Irons, D., Anker-Nilssen, J.T., Gaston, A.J., Byrd, G.V., Falk, K., Gilchrist, G., Hario, M., Hjernquist, M., Krasnov, Y., Mosbech, A., Olsen, B., Petersen, A., Reid, J.B., Robertson, G.J., Strom, H. & Wohl, K.D.** unpublished. Fluctuation in circumpolar seabird populations linked to extreme climate shifts.
- Petersen, A. & Bakken, V.** 2004. Distribution of murrens outside the breeding season. Circumpolar murre banding program, North Atlantic Region. CAFF Technical Report No. 13. Circumpolar Seabird Expert Group, Akureyri, Iceland.
- Scott, D.A.** 1998. Global overview of the conservation of migratory Arctic breeding birds outside the Arctic. Wetlands International Publication No. 45, CAFF Technical Report No. 4. CAFF, Akureyri, Iceland.
- Scott, D.A. (ed.)** 2001. Conservation of migratory Arctic birds, summary report. CAFF & Wetlands International workshop, Songli, Norway, 10-11 November 2000. CAFF Technical Report No. 8. CAFF, Akureyri, Iceland.



Ice near Svartenhuk Halvø, north-west Greenland: an important breeding and moulting area for several waterbird species including the Greenland White-fronted Goose *Anser albifrons flavirostris*. Photo: David Stroud.