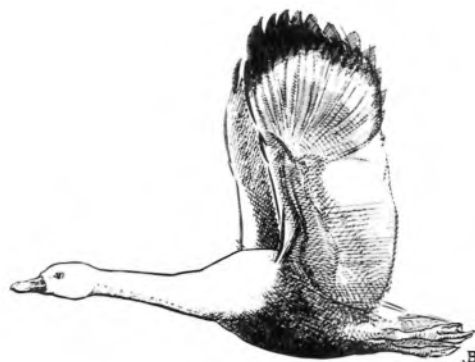


International Waterfowl and Wetlands Research Bureau (IWRB) Third International Swan Symposium



M. MOSER

The Third International Swan Symposium was convened by the International Waterfowl and Wetlands Research Bureau (IWRB), and took place from 9-13 December 1989 at Oxford, UK. The Conference was attended by 130 swan biologists from 17 countries.

Recommendations

I Census, Distribution and Migration

1. Noting the value of non-breeding season surveys for evaluating the status of swan populations, the Conference urges complete surveys of *C.olor* in central Europe and southern USSR, *C.melanocoryphus* and *C.coscoroba* in South America and all species in China and Korea.
2. Recalling the advanced techniques developed in Alaska for surveying swans on their breeding grounds, the Conference encourages the transfer of such expertise to other northern breeding areas, particularly the USSR for *C.c.cygnus*, *C.c.bewickii*, and *C.c.columbianus*.
3. Recognising the value of colour-marking in the study of swans, the Conference recommends the coordination of such activities through protocols. The controlled use of dyes, where appropriate, should be encouraged for short-term studies of population movements, while permanent (lifetime) colour bands should be used for long-term studies. There is a particular need to determine the degree of interchange between Scandinavian and Soviet populations of *C.c. cygnus*, and between the Soviet and North American populations of *C.c. bewickii* and *C.c. columbianus*.
4. Recognising the role played by climate in determining the distribution and abundance of swans, the Conference recommends monitoring the effects of climate change

(particularly global warming) on the distribution and abundance of swans. A special study of the impact of drought on dispersal in *C. melanocoryphus* is needed.

II Biometrics, Population Dynamics, Ecology and Behaviour

1. Noting the paucity of data on South American swans the Conference recommends the development of a South American Swan Research Programme (supported with funds, equipment and expertise) and emphasises the need for comparative studies of the feeding and breeding ecology of *C. coscoroba* and *C. melanocoryphus*.
2. The Conference urges studies of interactions between swan species in areas where their ranges are changing, and also urges a review of existing data on interactions between swans (esp. *olor*) and other waterfowl, with respect to claims that swans reduce densities of nesting ducks.
3. The Conference encourages collation of existing data on biometrics, habitat, nutrition, weather, survival, breeding achievement and body condition with regard to speculative models on how these might restrict productivity, and encourages collection of missing information necessary to invalidate those suggestions.
4. The Conference recommends the initiation of a circum-polar study of *C.cygnus* and *C.columbianus* with respect to population dynamics (factors limiting population size), breeding biology (reproduction in relation to weather and habitat), feeding ecology (breeding and staging areas), and genetics (especially DNA techniques).
5. Recognising the fact that feeding ecology studies in swans are relatively scarce, and that in several places swans have had to abandon their aquatic feeding habitats because of changes in the aquatic ecosystem,

the Conference urges comprehensive studies of feeding ecology, and the consequences of a changing aquatic and agricultural environment on breeding success and survival, especially in the migratory species.

III. Management and Conservation

1. Recognising the fundamental importance of habitat conservation, the Conference urges States to join the Ramsar Convention and to list important breeding, staging and wintering areas for swans under that Convention. In particular, breeding areas in the USSR and N. America, although not yet under threat, should be protected now before such threats arise. The conservation and wise use of wetlands important for swans in South America should be given high priority.
2. Recognising the importance of international cooperation and coordination for the conservation of migratory species, the Conference urges States linked by flyways of migratory swans to develop cooperative conservation plans (such as the North American Waterfowl Management Plan and the proposed Western Palearctic Waterfowl Agreement), by signing bilateral and multilateral agreements such as the Bonn Convention. This will require the establishment of Flyway Conservation Committees, which could be coordinated and linked through IWRB.
3. Noting the severe mortality of swans from lead poisoning in many situations and the suffering by the birds involved, the conference urgently recommends that lead be replaced by non-toxic alternatives for both shooting and angling as soon as possible; and that regulatory authorities monitor progress and take necessary steps to ensure total elimination of these uses of lead, worldwide.
4. Noting the high incidence of shot recorded in the tissues of fully protected swan species, the Conference recommends eliminating the shooting of swans where and when protected species co-occur with hunted species, as well as locating the sources of illegal hunting for a better enforcement of legislation. This should be addressed in the Western Palearctic (*olor/bewickii/cygnus*) and in the USA, (*bewickii/cygnus/ columbianus/buccinator*) *Bewickii* is listed in the Red Data Book of USSR; *bewickii* and *columbianus* are listed in the Red Data Book of Russian Soviet Federative Socialist Republic (RSFSR).
5. Noting allegations of crop damage (including to shell-fisheries (*columbianus*), or competition with other waterfowl species (*columbianus* and *olor*)) as justification for swan hunting, the Conference urges that these allegations should first be supported by scientific evidence before permits are issued. In addition, when documented crop damage must be reduced, methods other than shooting (refuges, set-aside areas, scaring) should first be assessed as they are likely to be more effective and more acceptable both inside and outside the country granting the permits, than is killing the offending birds.
6. Commending the US Fish & Wildlife Service for acknowledging candidly that unless additional banding and marking studies are carried out, "measurable impacts (from hunting) to the population status of Tundra Swans will be difficult to fully assess", the Conference urges the US Fish & Wildlife Service to proceed immediately with this essential research.

IV. IWRB Swan Research Group Structure

A Swan Research Group Coordinator should be elected at each of the triennial Board Meetings of IWRB. Assistant Coordinators should be appointed by the Coordinator, to be responsible for individual species.

Long-term goals

1. Publish an annual Swan Research Group newsletter each March (copy to be received by the overall Coordinator by mid-February).
2. Review the population estimates for each species every 5 years (next review to be presented in 1994).
3. Organise an International Swan Symposium every 5 years, and encourage regional meetings in the interim period (Fourth International Swan Symposium to take place at Odessa (USSR), spring 1994).
4. Stimulate and coordinate cooperative international research projects, based on recommendations of the international and regional meetings.

Short-term goals

1. Complete the network of species coordinators for all species.
2. Circulate a list of names and addresses of key swan researchers, worldwide.
3. Review the protocol on colour-marking, and urge swan biologists to adhere to it.

4. Develop guidelines for catching/handling/marking, and for a standardised methodology of recording data for swans.
5. Publicise references to mark/recapture techniques and associated software.
6. Define methodology for semi-quantitative description of swan colonies.
7. Disseminate information through the newsletter on advanced techniques for studying swans, such as radio-telemetry and DNA genetic analysis.
8. Provide telescopes to swan biologists in those countries where such equipment is difficult to obtain.