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# Waterbirds around the world

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

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

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## 4.2 Disease emergence and impacts in migratory waterbirds. Workshop Introduction

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Rocke, T. 2006. Disease emergence and impacts in migratory waterbirds. Workshop Introduction. *Waterbirds around the world*. Eds. G.C. Boere, C.A. Galbraith & D.A. Stroud. The Stationery Office, Edinburgh, UK. pp. 410-411.



The increasing frequency of several waterbird diseases, many of which are zoonotic, has highlighted the important need for more systematic disease surveillance at national and international scales. Current concerns regarding avian influenza have focussed attention on how best to undertake the scientific support functions. Photo: Paul Marshall.

The frequency and magnitude of disease losses amongst waterbirds (from emerging or re-emerging disease agents) have increased to the extent that they demand attention. These diseases not only affect waterbirds, but have impacts on the economic, health and cultural values of humans. Solutions require the integration of numerous scientific disciplines in an ecological approach.

The symposium reviewed existing diseases frequently carried and transported by migratory waterbirds, including botulism (Rocke), avian influenza (Shortridge & Melville) and avian cholera (Samuel).

A number of common themes and conclusions emerged from the presentations:

- Disease (both newly emerging and previously established agents) has increased in prominence as a cause of mortality in wild waterbirds and significantly impacts certain water-

bird populations, as reported by Friend, Rocke and Kuiken *et al.*. Novel etiologies now cause recurring waterbird mortalities as reported by Cole & Franson.

- Some waterbird diseases also have human and domestic animal implications and vice versa. Communication, collaboration and co-ordination between ornithologists, conservation biologists, wildlife health experts, veterinarians, and public health officials are critical to improve knowledge of these diseases and facilitate their mitigation.
- Underlying factors for emergence of diseases are related to increases in human populations, human consumption patterns, the redistribution of species and/or further aggregation of gregarious species in a manner that facilitates disease transmission.
- Improvements in disease surveillance, diagnosis and prevention are critically needed to address and manage disease problems in waterbirds.

- Integration and understanding of underlying concepts and impacts of disease are critical for global waterbird conservation.
- Education of the public, government officials and the media on the role of wild birds in disease transmission should be mandatory to prevent common misperceptions. Proactive approaches to engage with the media are necessary.

The following four recommendations were made:

1. There is a need to increase awareness, and to educate others, that disease in waterbird populations should be viewed in an ecological context, responsive to environmental changes and perturbations.
2. A global wildlife health policy should be instituted that provides standardized methods for investigation, diagnosis and reporting of mortality events in waterbirds and other

wildlife (similar to those put in place for domestic animals and humans, by, for example, the World Health Organisation and the World Organisation for Animal Health - OIE).

3. Discourse and interaction between conservation biologists, animal welfare proponents and the food animal industry should be strongly encouraged so that animal welfare considerations do not jeopardise wildlife conservation (*i.e.* proximity of open range animal production to wetlands).
4. Active steps should be undertaken to curtail the excessive movement of wild animals through the exotic pet trade so as to reduce the risk of disease transmission and to enhance the conservation of wild species.

The workshop called, in particular, for urgent action to mitigate disease emergence and losses in waterbirds by integrating fundamental disease concepts into global strategies for waterbird conservation.



There is an urgent need to better integrate animal health surveillance into programmes of waterbird monitoring so as to better understand the consequences of disease for both individual birds and for populations. The UK Wildfowl & Wetlands Trust have embarked on long-term health screening of Greenland White-fronted Geese *Anser albifrons flavirostris* as an adjunct to the internationally co-operative research and monitoring of this population. Photo: Alyn Walsh.