

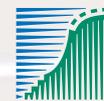
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Waterbirds around the world

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*



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Non-toxic shot – Danish experiences

Niels Kanstrup

Danish Hunters' Association, Molsvej 34, DK-8410 Rønne, Denmark. (email: nk@jaegerne.dk)

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Lead poisoning of waterbirds as a consequence hunters' use of lead shot is an issue which needs to be addressed internationally, since migratory waterbirds cross many borders during their migrations. Hence management practices - such as whether the use of lead shot is, or is not, permitted - in one country has consequences for the conservation of waterbirds in all countries on their flyways. The issue is also one of public relations and the image of hunting, and both hunters' and national and local government administrations can benefit from international co-operation and the exchange of knowledge and experience. To phase out lead shot, suitable alternatives must be available, and the research and development of alternatives and analysis of the market for their sale facilitated through international co-operation.

In Denmark, when the use of lead shot was first regulated in 1985, the hunters themselves initiated the use of alternative shot. The successful introduction of steel shot for clay pigeon shooting allayed the concerns of many hunters by showing that steel shot cartridges were not dangerous to fire and that the price of steel shot cartridges was still acceptable. Research by the Hunters Association also demonstrated that steel shot was just as effective as lead shot for killing birds.

Denmark enforced a total ban on the use of lead shot in 1996. However, this led to problems not for hunting in wetlands but in forests, since the use steel shot was unacceptable to foresters because of its hardness and the consequent risk of damage to machinery used in the timber industry from steel shot embedded in trees. This led to pressure to develop softer shot alternatives such as bismuth, tin and wolfram products. Five such alternatives have now been introduced and have proved to be popular, even though the prices of these cartridges are significantly higher than those of lead or steel shot.

Many Danish hunters were concerned the phasing out of lead shot would lead to the phasing out of hunting, but this has not been the case and the number of hunters and the annual bag has not changed significantly. In addition, the hunters' initial main concern, that there was increased risk of guns exploding or being damaged by steel shot, proved groundless.

The efficiency of alternative shot has been investigated in several scientific studies and more popular programmes, with results showing that efficiency is more related to hunters' experience and their shooting distances rather than to the performance of the cartridge; and in turn that the performance of the cartridge (its velocity generated, conformity etc.) is more critical than the shot material itself. Although lead is still regarded as an ideal shot material due to its ballistic qualities, there have been many examples of lead shot cartridges operating far less efficiently than cartridges containing alternative shot material.



Concerns by Danish hunters about the consequences of changing from lead to non-toxic shots have proved groundless. Photo: Else Ammentorp, Danmarks Jægerforbund/Danish Hunters Association.

The phasing out of lead shot has now led to more focus on the efficiency and effectiveness of hunting techniques. Steel shot has, to some extent, taught hunters to be more cautious, by shortening their shooting distances to quarry. This seems to have caused an increase in the efficiency of the hunting since shortening the quarry distance will markedly increase the probability of cleanly striking the birds.

Addressing the problems of lead poisoning of waterbirds caused by hunting with lead shot may seem a less important issue in many countries than addressing other pressures on wetland conservation such as safeguarding the future existence of ecosystems such as wetlands themselves. But maintaining and restoring the quality of wetlands, including reducing pollution levels such as from toxic lead, is an important component of their conservation. The Danish example of a total ban on lead for hunting has demonstrated that this can be achieved, and to inspire and motivate the process there is a clear need for a constructive dialogue at both national and international level between governments, nature conservationists and hunters – all of whom share the objective of maintaining wetlands for waterbirds. Such co-operation is a precondition for continuing the momentum and progress towards flyway-wide phasing out the use of lead shot in wetlands.