

ecosystem to which it is returned.' It is also stated that '...any casualty retained for treatment...should have a reasonable expectation of successful release and long-term survival in the wild'. Key practical points are outlined and relevant legal aspects described in each section.

There is growing public interest in the rescue and treatment of wildlife casualties. Anyone hoping that this might be a detailed manual on running a wildlife hospital will be disappointed – but that is not the purpose of the booklet. It serves a very useful function in helping to establish a framework of standards. Veterinarians are likely to find it very valuable as initial guidance for the rehabilitators with whom they work and in helping to explain the complexities and difficulties of wildlife rehabilitation to enthusiastic but naive members of the public. Although the legal aspects described relate to UK law, much in these guidelines is relevant to wildlife rehabilitation anywhere in the world.

Guidelines for Wildlife Rehabilitation Units. British Wildlife Rehabilitation Council (1998). British Wildlife Rehabilitation Council: Chester. 24pp. Paperback. Available from the BWRC, c/o RSPCA Wildlife Department, Causeway, Horsham, West Sussex RH12 1HG, UK. Free

Introduction to animal welfare issues

Animal Welfare is the third volume in the *Issues* series published by Independence Educational Publishers. The aim of this series is to provide a starting point for obtaining up-to-date information in a readily accessible form for use in a variety of courses including GCSEs and 'A' levels (ie for the 15–18+ age group). This volume looks at three areas: animal research, hunting and animal cruelty. It comprises a selection of articles and essays (24 in total) from a variety of sources including government reports, newspaper reports and features, and literature from lobby groups and charitable organizations. The book presents a fairly well-balanced mix of arguments for and against the issues it addresses. For example, the section on fox hunting includes pieces from the Countryside Alliance, the RSPCA, *The Daily Telegraph*, the Wildlife Network and the League Against Cruel Sports. Contact details, including websites, of various organizations are provided as sources of further information. This book achieves its aim, and will be a useful first stop for school pupils who are looking for an introduction to opinions on some of the causes célèbres in animal welfare.

Animal Welfare. Volume No 3 in the *Issues* series, edited by Craig Donnellan (1998). Independence Educational Publishers: Cambridge. 44pp. Paperback. Available from the publishers, PO Box 295, Cambridge CB1 3XP, UK (ISBN 1861680791). Price £6.45 (plus postage and packing).

Welfare of ungulates used in habitat management

Wild cattle used to be widely distributed through Europe but are now largely missing from its ecosystems. In creating and maintaining clearings in forests and by mowing grassland areas, the wardens of nature reserves have, for many years, played the role that used to be fulfilled by these large herbivores. However, there is now growing interest in putting primitive cattle breeds back to work to help restore habitats to their 'natural' state before extensive human colonization and to maintain them in these states. Debate has followed about how closely such animals should be managed. Should they be treated as domestic cattle and be given supplementary food in winter, parasite control programmes and medical interventions whenever necessary? Should they be incinerated or buried when they die? Or should they become part of the wild, taking their chances with variations in food supply and threats from parasites, competitors and other natural hazards, and lying where they fall to become a food resource for scavengers?

The use of cattle in this way is a type of reintroduction. The difficulties and dilemmas are basically the same as those arising when zoo animals are reintroduced, or when wild animals are translocated from one part of their range to restock areas from which they have been lost. However, the longer an animal has been in captivity/domesticated (a very long time in the case of cattle even of primitive breeds) the greater the level of responsibility for them is felt to be. The Dutch Society for the Protection of Animals (Nederlandse Vereniging tot Bescherming van Dieren) has been pondering these issues recently following cases in which cattle have been reintroduced to live wild in nature reserves in the Netherlands and recent reintroductions of otter and beaver in that country. The Society outlined its views in a recently published position statement. This states that, in general, it considers 'the introduction of animals into the wild, or initiatives to that end, ethically impure and ill-considered insofar as animal care is concerned'. Introductions, it maintains, focus 'on the instrumental value of the animal or a return to times past and...In many cases the interests of the animals themselves are ignored'. In the opinion of the Dutch Society for the Protection of Animals, reintroduction should not take place unless the procedure has important 'surplus value to the animal or to the ecosystem', and the care for the animals involved must be optimal.

The document discusses these ethical issues and also looks at the legal position regarding responsibilities to reintroduced animals as defined under the Dutch *Animal Health and Welfare Act*. It indicates different levels of responsibility for wild animal casualties: those occurring naturally, those caused by humans, and those in wild animals which are under human control.

Reintroductions are increasingly included as components of species conservation programmes around the world. The conflicts between conservation and individual animal welfare interests in these programmes have not received as much attention as the subject deserves, and this position statement from the Dutch Society for the Protection of Animals is a useful contribution to the debate.

Large Ungulates in Self-regulating Natural Sites: The Dutch Society for the Protection of Animals' Views. (Position statement of the Dutch Society for the Protection of Animals). Diederik van Liere (1999). Nederlandse Vereniging tot Bescherming van Dieren: The Hague. 6pp. Loose-leaf. Available from the publishers, Floris Grijpstraat 2, 2596 Den Haag, The Netherlands. Free.

Guidelines for environmental enrichment

In his introductory chapter in the newly published Association of British Wild Animal Keepers' (ABWAK) compilation of environmental enrichment techniques and devices, Dr Rob Young identifies the American primatologist Robert Yerkes as the first person to suggest the use of such devices. He cites Yerkes' 1925 quote: 'The greatest possibility for improvement in our provision for captive primates lies in the invention and installation of apparatus that can be used for play or work.' However, it is really only in the last couple of decades that the concept of environmental enrichment has been taken up widely and has come to be seen as a routine component of the husbandry of some laboratory, zoo, farm and other animals. There has been great interest in the subject in zoos, with a profusion of publications on ideas, techniques and devices aimed at enriching zoo animals' lives in recent years. The aim of this substantial ring-binder file is to provide a database of these resources that can be updated by addition of further pages which will be published as the subject evolves.

This is a substantial piece of work and its editor is to be congratulated on drawing it all together. The 18 chapters have been contributed by scientists and curatorial staff from a number of (mainly UK-based) zoos and other institutions. The introductory chapter provides an excellent historical perspective, review of the principles, and discussion of environmental enrichment in