Wild animal welfare

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Attitudes to wildlife welfare

In recent decades there have been great shifts in attitudes to animals and regarding the extent of our responsibilities for wildlife welfare. The world is changing rapidly and we are feeling our way with some of these issues (for a recent review, see Fraser 2010).

It is only a slight oversimplification to say that, in the past, animals were either kept, in which case their owners were responsible for their welfare, or they were wild, in which case no one was. But now it is more complicated. Because of the size of the human population and the extent to which we use or control the environment, we greatly, and often directly, influence the welfare — the quality of life — and the fates of very many wild animals (Kirkwood *et al* 1994; Sainsbury *et al* 1995). This has brought increasing responsibilities for free-living wildlife at both population (conservation) and individual (welfare) levels, but the extent to which these responsibilities are perceived, accepted, and/or acted upon varies among individuals and societies.

Threats to wildlife welfare

The world population is growing very rapidly — nearing 7 billion. We occupy many habitats and have found ways around biological limits that have imposed constraints on all other species since evolution began, with the result that not only are there very many of us, but we use resources and produce wastes at biologically unprecedented rates. We keep vast numbers of domesticated animals that require food, space and other resources. However, the world is a closed system — like a goldfish bowl — food, space and other resources are finite: the more used by humans and domesticated animals the less available for wild animals. We cannot have more of everything.

The anthropogenic factors that threaten the viability of wild animal populations: loss of habitat, environmental contamination, invasive non-indigenous species (including infec-

tious diseases), direct killing, and others, often also have harmful effects at the individual welfare level. But the problem goes beyond that, as major welfare impacts can occur without threatening population viability (eg myxomatosis in European wild rabbits [*Oryctolagus cuniculus*]). Although free-living wild animals are not owned, from a welfare perspective, the case for trying to address anthropogenic problems in free-living wildlife seems no less than that for trying to tackle the problems in kept animals.

Almost all anthropogenic wildlife welfare problems arise in one of two ways: (i) as unintended adverse effects associated with deliberate interventions, such as culling, harvesting, translocation, marking etc; and (ii) through adverse consequences of some deliberate or unintended change to the environment, such as through loss of habitat, environmental pollution, introduced infectious disease, etc.

Addressing the problems depends on their nature. The greatest welfare problems are often in the second category and may not be apparent without careful investigation. Precise determination of the major threats to health and welfare in wild animals is often a difficult task requiring substantial scientific resources (eg Kirkwood *et al* 1997). Finding solutions can, likewise, be very difficult and, where it is possible to foresee problems, every effort should be made to prevent them. Treatment is rarely possible, except in a small minority of cases, and in dealing with wildlife casualties it is important to carefully consider welfare and conservation costs and benefits.

Welfare assessment and deciding priorities

Animal welfare can have other meanings, but for many people, it is concern for animals' consciously experienced feelings (positive, negative or neutral) — their pleasures and pains — the quality of their lives. We have no direct access to feelings of other animals (including humans) and cannot measure, but can only infer, the likelihood of

pleasant or unpleasant feelings in other animals. Such inferences are based upon knowledge of the animal's biology, its behaviour and/or clinical signs, and upon our own experiences of pleasant and unpleasant feelings.

Assessment of welfare is therefore a two-stage process: making observations (typically including pathology and behaviour), and; drawing inferences from these observations about the welfare of the animal.

The first part is objective; the second part is subjective. The problem of this unavoidable subjectivity can be minimised by making the basis of our inferences as clear as possible. (However, people can reach very different conclusions. For example, signs that some may interpret as being due to pain or fear in fish are interpreted by others — who doubt that fish have the brain circuitry necessary to generate conscious perception of feelings — as just mechanical responses to stimuli). The animal kingdom includes over a million species and deciding which are likely to have feelings (of any kind) and are therefore within the fold of welfare concern, and which are not, remains a much greater difficulty than is often supposed.

As regards identifying welfare priorities, there is something of a consensus in the scientific community that a sensible approach is to take into account the intensity and duration of the problem (eg how much it hurts and for how long) and the number of animals affected. However, it is not apparent that society in general ranks animal welfare concerns in this way: particular species and cases may attract great attention for other reasons. If we believe that animal welfare is an important matter then it is perhaps inconsistent to put major efforts into protecting the welfare of, for example, laboratory rodents (as society rightly does), but to put very little effort into finding humane methods of free-living rodent control (as has been the case until very recently). The accepted standards of humaneness towards laboratory and 'pest' rodents remain very different.

Rather few taxa of free-living wild animals have been the subject of welfare workshops such as this. Due to the global oceanic ranges, independent of national borders, of many species, whales make excellent 'flagships' for the promotion of efforts for wildlife welfare.

Concluding comments

Many of our interactions with kept animals (eg farmed, laboratory, zoo and companion animals) are being re-evaluated in the light of developing understanding of their needs. The welfare consequences of our interactions (witting or unwitting) with free-living wildlife have tended — with notable exceptions, including whaling — to have received much less attention. There are signs that this is changing but there remains a great need for surveillance, detection of threats, and problem-solving. Finding funds for these activities remains very difficult.

Where pursuit of human interests adversely affects wild animal welfare, there should be review, consideration of the benefits versus the welfare costs, and efforts made to change practices so as to prevent or, if that cannot be achieved, to minimise risks of adverse welfare consequences. This process can be guided by a Three Rs approach (after Russell & Burch 1959). These are: Replacement with some other process that has no adverse animal welfare impacts where possible. Where this is not possible, Refinement of protocols and methods in order to minimise adverse welfare consequences and Reduction — taking measures that minimise the number of animals that may be adversely affected.

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