

Human-wildlife interactions: the importance and benefits of effective training

J Lane and V Jackson

The Food and Environment Research Agency, Sand Hutton, York YO41 1LZ, UK
 Email: julie.lane@fera.gsi.gov.uk

Keywords: animal welfare, capture, handling, marking, training, wildlife

Introduction

Studies and projects undertaken under the auspices of conservation of wildlife are often treated as being synonymous with working to promote individual animal welfare. However, human interventions, with respect to wild animals, carry with them multiple risks for the animal subjects. Unfortunately, these risks and problems are sometimes given little consideration by practitioners, often because they are judged relative to natural processes or are incurred for the good of the species or population. Obviously, animals are subjected to a variety of natural factors likely to cause stress and poor welfare in the wild, and conservation and management of differing species to differing extents will probably always be necessary. However, in all these interventions, the welfare of the individual animal always needs to be upheld. One way of addressing this issue is by the provision of robust training. The Food and Environment Research Agency (Fera) have recently developed a training course (winner of the UFAW Wild Animal Welfare Award 2010) which centres around promoting and educating best practice in wildlife, particularly with respect to improved methods of capture, handling, marking and release. As well as standard training techniques, the course includes the use of practical scenarios and discussion platforms, tackling varying issues pertinent to working with wild species with the overall aim of ensuring high standards of welfare.

The importance of training and the issues covered

Training is a simple and effective way of highlighting and promoting welfare in all wildlife species. The training which Fera undertakes concentrates on providing information on a range of following issues.

Ethics and welfare of target species

Before embarking on any wildlife study or interaction, preparation is key. If the welfare status of an animal is unduly compromised this has repercussions in ethical terms and also (in research and conservation) on the validity and rigour of the study itself. Poor welfare can have wide-ranging effects on an animal's biology, behaviour and ecology (for a review, see Lane & McDonald 2010). Procedures and actions may have to vary depending on the circumstances encountered (eg if animal is injured, dangerous, pregnant). In an ever-changing environment it is not always possible to give specific instructions on how a person interacting with wildlife needs to act, but what is constant is that these actions must be defensible, justifiable and in the best interest of the animals and ecosystem in which they live.

Ethics and welfare of others in the ecosystem

Consideration should always be given not only to the ethical issues of treatment of the target animal but also should include issues surrounding other animals that may be inadvertently affected. This is particularly pertinent in highly social and sentient animals, such as some whale species (eg pilot whales [*Globicephala* spp]). Although the effect on others may not always be avoidable it is important to be aware of the consequences of any interaction and factor it into the ethical assessment. Particular consideration should be given to the following.

Conspecifics

This is of particular concern for group-living animals with strong social structures. Effects can include changes in dominance hierarchies and the introduction of disease through stress of an individual causing latent infections to become active (Bermúdez *et al* 2009).

Dependents

Removing parent animals from their dependents, even for short periods, may cause severe stress to the young and in some cases malnutrition, particularly among animals with altricial young and those in the earliest stages of life. Treatment with drugs, including anaesthesia, has the potential to affect lactation, potentially exacerbating nutritional problems (Yokoyama 1965). Capture of mothers when young are likely to be dependent is a risk that should be avoided or mitigated where possible. If there are obvious signs that the animals caught have dependent young (eg lactation, presence of young nearby), then it is advisable to release them as soon as possible. This may involve a judgement as to whether to carry out the intended procedures.

Non-targets

Capturing non-target species or individuals is almost unavoidable in some areas of wildlife interaction, but the consequences can be more severe than those for the intended subject. For example, while it may not be the breeding season of the subject it may be of the non-target, or the capture method may not be appropriate and cause injury.

Best practice in capture

Capture of wild animals can have far-reaching consequences and so it is important to be aware of and, where possible, minimise the potential adverse effects. Best practice in this instance does not only include practical techniques (eg best form of capture) but also other factors that may reduce welfare in these instances such as:

- Time of year — it is best, if possible, to avoid times of year when the animals will be naturally under severe external stressors (eg when food resources are low, when feeding young);
- Time of day — an awareness of an animal's circadian activities is essential for appropriate capture and handling;
- Extreme weather conditions (heat/cold/wind force/precipitation); and
- Place of capture — some areas of capture may prove less fraught and dangerous for the animal than others. It is important, for example, to consider the depth of the water and the presence of other competing species.

Best practice in handling.

Wild animals should never be handled unless necessary and if handling is required the amount of contact should be kept to a minimum with the safety of both the handler and animal paramount. The concept that handling is a major cause of stress to wild animals is a theme throughout our training course. The correct use of handling skills plays a major role in reducing stress during capture or tracking of all wild animals.

Best practice in marking

Recognition of individual animals plays an important part in most wildlife research and in other areas of wildlife conservation. Marking can provide information about survival, site fidelity, population dynamics, social behaviour, feeding ecology and almost every facet of an animal's ecology. Several invasive techniques for sea mammals are available (such as telemetry, streamers). However, many of these forms of marking can cause a myriad of adverse effects — not only directly (such as pain, stress, injury), but also indirectly. For example, external marks can affect social standing and mating success, and may affect foraging behaviour (eg Brown 1997). It is always important that the least invasive but effective type of marking is used. The use of non-invasive techniques, such as individual recognition (using natural markings/tail-fluke recognition), should always be considered first.

Conclusion

Human-animal interactions can pose welfare issues even when the interaction is intended to be in the animal's own interest. However, training of those handling or interacting with live animals, not only in long-term projects, such as wildlife research, but also in the more immediate short term, such as aiding whales in distress, can produce changes in practice that dramatically improve the animals' welfare. Training should be an integral part of ensuring the welfare of the wildlife we interact with, both by promoting best practice and by highlighting issues and welfare aspects that may be overlooked or considered unimportant.

References

- Bermúdez R, Faílde LD, Losadab AP, Nieto JM and Quiroga MI** 2009 Toxoplasmosis in Bennett's wallabies (*Macropus rufogriseus*) in Spain. *Veterinary Parasitology* 160: 155-158. <http://dx.doi.org/10.1016/j.vetpar.2008.10.082>
- Brown LJ** 1997 An evaluation of some marking and trapping techniques currently used in the study of anuran population dynamics. *Journal of Herpetology* 31: 410-419. <http://dx.doi.org/10.2307/1565670>
- Lane J and McDonald R** 2010 Welfare and 'best practice' in field studies of wildlife. In: Hubrecht R and Kirkwood JK (eds) *The UFAW Handbook on the Care and Management of Laboratory and Other Research Animal, Eighth Edition* pp 92-107. Wiley-Blackwell: Oxford, UK
- Yokoyama AK** 1965 The effect of anaesthesia on milk yield and maintenance of lactation in the goat and rat. *Journal of Endocrinology* 33: 341-351. <http://dx.doi.org/10.1677/joe.0.0330341>