Environmental wrongs and animal rights

Interactions between animal rights groups and conservation biologists.

Abstract

Alien species are considered by conservation biologists to be a major threat to biodiversity. To deal with alien invasions, they often recommend completely eradicating the invasive species. Animal rights groups categorically oppose killing animals but have not always responded to eradication attempts. In the case of the Grey Headed Flying Foxes at the Royal Botanical gardens at Melbourne Australia, conservation biologists and animal rights groups cooperated. The solution eventually selected was beneficial for both sides, and for the animals. Animal rights groups' opposition to the Grey Squirrel's eradication in northern Italy brought the attempt to a halt. As a result red squirrels may disappear from Europe.

It would be beneficial for both conservation biologists and animal rights groups if they found some middle ground they could both agree on, but the differences between animal rights and conservation biologists' views make cooperation seem impossible. Scientists in general, and conservation biologists dealing with invasive alien species in particular, should consult with social scientists and moral philosophers to gain a better understanding of the implications of some of their policy decisions. Once they understand animal rights views, the chance for cooperation will be much higher. Examining these two cases can supply the key to future cooperation between the two sides, and can help scientist avoid future opposition from animal rights advocates.

Introduction

Environmental issues have become a major concern for policy makers throughout the world. More and more funds are allocated for conservation initiatives, and stricter rules are set for the prevention of further damage. Science and technology are used to reduce the effects of human activities.

Conservation biology is a relatively new scientific field. Its aims are: "…to develop the scientific and technical means for the protection, maintenance, and restoration of life on Earth: species, ecosystems, and the processes that sustain

them”[1]. One of the greatest threats to biodiversity is the introduction of exotic or alien species defined as "a species, subspecies, or lower taxon occurring outside of its natural range" (IUCN 2000). These may become invasive and pose a threat to local species or even cause dramatic changes to whole ecosystems, thus jeopardizing their biodiversity. The preferred method of dealing with invasive alien species is their complete eradication (Bomford and O’Brien 1995, Zavaleta 2002). When eradication is not feasible other alternatives such as containment or maintenance at low densities can be attempted.

The concept of animal rights has its roots in Greek philosophy, but the publication of Peter Singers *Animal Liberation* in 1975 is considered by many to be the birth of the modern animal rights philosophical debate, from which activists have also gained momentum (Jasper and Nelkin, 1992). Since the 1970s the movement has had a growing influence on public opinion, education and, in some cases, even legislation. Their main paradigm is that at least some rights, which are considered basic human rights, should also apply to some animals (Singer, 1993). This definition is vague and partial because a variety of perspectives and doctrines coexist within the animal rights movement. One right on which there is hardly any dispute among animal rights advocates is the right to a full and natural lifespan. Killing an animal, except in extreme cases such as self protection, is considered unethical (Regan, 1976).

Both animal rights activist and conservation biologists focus on topics the general public would categorize as "green issues". Both claim to value nature and/or living organisms over at least some economic considerations, and both view the role of humanity as preserver and supporter, rather then mere exploiter of natural resources. In spite of their seemingly similar goals, animal rights organisations and biological conservationists have often found themselves on opposite sides of environmental policy debates.

Grey squirrels in Italy

The American grey squirrel (*Sciurus carolinensis*), a species native to eastern North America, was first introduced into the Piedmont area (north-western Italy) in 1948. Two pairs were imported from Washington, DC (USA) and released at Stupinigi (province of Turin).

The Piedmont population has shown an exponential increase in range since its introduction. In the winter of 1999 the grey squirrel was already present in an area of 880 km^2. In the British Isles, the grey squirrel has extensively replaced the native red squirrel (*Sciurus vulgaris*) (Gurnell and Pepper, 1993, Gurnell, 1996); a similar replacement pattern has been recorded in Italy (Genovesi and Bertolino, 2001, Bertolino and Genovesi, 2003).

In 1989 the National Wildlife Institute (NWI the Italian government agency for wildlife research and conservation) approved a recommendation to eradicate the grey squirrel from Italy and warned the Ministry of Environment, the Ministry of Agriculture, and all local administrations (responsible for pest management plans) of the drastic expansion of the grey squirrel's range and of the risks related to its presence (Bertolino and Genovesi, 2003). In 1996 the NWI, in co-operation with the University of Turin, proposed a management action plan. This consisted of three steps: (1) continuous monitoring of the grey squirrel's range using hair-tubes; (2) a trial eradication to assess the feasibility of total removal; (3) planning and implementation of the eradication of the entire Piedmont population, if feasible.

One of the first steps of the plan was the experimental removal of the small population present in the Racconigi Park, in order to test techniques, while further steps in the eradication were to have been carried out by the local authorities. In April 1997 a consultation meeting with some of the animal rights organizations who opposed the project was organized to discuss possible alternative techniques. Both translocation to the greys' original range (North America) and the possibility of neutering the whole population were rejected (Gevonesi and Bertolino, 2001). The following protocol was adopted: 1) live-trapping of the squirrels, in order to avoid risks to non-target species; 2) frequent control of traps, to reduce captivity of animals; 3) anaesthesia with halothane, a tranquillizer that reduces stress in rodents; 4) subsequent euthanasia of animals with an overdose of halothane; and 5) constant supervision by a veterinarian. On the basis of the revised protocol, most NGOs approved the eradication plan.

In mid-April 1997, the trial eradication was started. Captured animals were placed in a sealed box, treated with halothane, and monitored by a veterinarian to detect stress indicators and the time needed for unconsciousness. After euthanasia, a blood sample was taken and a post-mortem examination was carried out in the laboratory. During the two trapping sessions (a total of eight trapping days), 188

animals were trapped; no non-target species were captured. The squirrels reached unconsciousness in less than a minute and were then euthanised in the field.

In June 1997, animal rights groups took the coordinator of the trial eradication and the director of the NWI to court, charging them with illegal hunting, damage to state property and cruelty to animals. The trial eradication was halted. The first stage of the trial ended in December 1999. The judge ruled that the two officers were guilty of illegal hunting and cruelty to animals. They were acquitted of the charge of damage to state property. The sentence was appealed and in July 2000 the two officers were acquitted by the Appeals Court (Genovesi and Bertolino, 2001, Bertolino and Genovesi, 2003).

The three-year legal struggle caused the failure of the entire campaign. The early termination of the trial eradication did not allow an estimation of the effort needed to remove the total population and local administrations did not proceed with the planned eradication. As a result, the species has significantly expanded its range and eradication is no longer considered feasible (Bertolino and Genovesi, 2003).

A strategy for the control of the grey squirrel was developed in 2000. The aims of the strategy are to:

1) Identify and protect key areas for the conservation of viable populations of the red squirrel and
2) Contain the grey squirrel in order to delay its expansion to neighbouring countries and to the mountain system of Italy.

Adoption of alternative plans, such as relocation of the trapped animals, could have gained the support of the opposing animal rights organizations, and ensured the success of the campaign.

Grey headed flying foxes at the Melbourne Royal Botanic Gardens

The grey-headed flying fox *Pteropus poliocephalus,* is a fruit bat native to Australia. It was first described by Temminck in 1825 (and is sometimes referred to in the literature as Temminck, 1825). Its range covers the southeastern coast of Australia, from Miriam Vale in south eastern Queensland to Melbourne, Victoria (ABS 2004; Hall and Richards 2000; NSWSC 2001). They form daytime camps that are usually located in mangroves, rainforests or tall mixed forests (Hall and Richards 2000; NSWSC 2001). The first recorded report of its presence in Melbourne dates

back to 1903, and the first reported presence of grey headed flying foxes at the Royal Botanic Gardens dates back to 1952 (DNRE 2001).

Camps used over a long period of time show damage to trees unless some movement within the camp, which allows trees to recover, is possible. Dense or continual use of camps can kill trees or strip them from leaves completely (DSE 2003). Forest clearing has left the flying foxes fewer roosting sites, and the damage to the frequently reused sites is therefore substantially higher (Hall and Richards 2000). At the same time a movement to plant native trees in city parks by local councils has created a year round supply of food for the flying foxes in urban areas (Tasker 2002).

Populations of grey-headed flying foxes have registered a gradual decline during the past decades. In 1998 an estimate of the national population showed that less then 400,000 individuals existed in the whole of Australia (Eby et al 1999; Richards and Hall 2000). This population decline has persuaded authorities to grant the grey headed flying foxes the status of “vulnerable to extinction” in the 1999 federal “Action Plan for Australian Bats” (ABS 2001; Eby et al 1999)

In 1980 a colony of grey-headed flying foxes established a camp at the Melbourne Royal Botanic Gardens’ Fern Gully, and since 1986 it became active year round (ABS 2001). The population of this colony increased to almost 20,000 during certain seasons in the early 90's. This is the only camp in Victoria where breeding has been recorded, and is the southern most permanent camp in the world for any species of flying fox (Hall et al 2001).

Fern Gully is a collection of trees and plants that includes some rare and threatened plant species; it has scientific importance for plant and tree conservationists (RGB 2004). This assemblage cannot be found anywhere in nature, it was put together by humans, and is dependent on human maintenance.

Officials at the Royal Botanic Gardens wanted to remove the colony because of the damage inflicted to trees and other vegetation by the flying foxes, and the reduced appeal of the roost area to the public due to the bat’s excrements. Previous attempts, at other sites, to remove flying fox roosts by culling have failed (Hall and Richards 2000), and a number of flying fox experts suggested that a cull would not solve the Royal Botanic Gardens problem, but may dramatically reduce the total species population (Richards and Hall 2000).

The Royal Botanic Gardens initiated a culling program aimed at a complete removal of the bats from the gardens. In May 2000 they started the program using a harp trap; about 100 animals were killed until the Humane Society International moved to list grey headed flying foxes as threatened under the Threatened Species Act and the cull was halted. The RBG proceeded with the cull in March 2000 (Moors 2001), about two weeks after the Victoria Minister for Environment and Conservation decided not to list grey headed flying foxes as vulnerable, and her office issued a new permit for the RBG to cull grey headed flying foxes by shooting or other means. In April 2000(within the breading period), 50 to several hundreds were culled (ABS 2001).

Culling at the RGB met with public, scientific, and media opposition (Tasker 2002). A joint campaign against the culling attempt, supported by bat lovers, animal rights organizations and scientists, in which threats to cut a tree for each bat killed were made (Hannan 2003), and the gardens were vandalised (Miller 2001; Leone 2002), halted the cull, and led to the development and adoption of a plan to relocate the flying foxes to a near by site. In March 2001 the minister for the Environment and Conservation announced the establishment of a task force to investigate the feasibility of a relocation project (DNRE 2001). 42 alternative locations were examined, and the final selection was Horseshoe Bend on the Yarra River at Ivanhoe (DSE 2003; DNRE 2002a). On 9th April 2002, the Australian Minister for the Environment and Heritage, approved the proposed plan (DNRE 2002c). In July 2002 the project was started when 85 individuals were moved from the RBG to Melbourne Zoo, and later to special enclosures at the relocation site, where their presence was expected to lure other grey headed flying foxes (DNRE 2002b; Clancy et al 2001). Relocation of the whole camp population, with the aid of acoustic deterrents, began on 11th March 2003, after two weeks the entire colony left the Botanic Gardens. The colony did not move to the site at Horseshoe Bend, but to a distant park some sixty kilometres away, and to other parks within the city (DSE 2003; Hannan 2003). The colony later relocated to Kew, at Yarra Bend Park, where they are now allowed to stay.

Conclusions

What can we learn from these two cases? The Italian case was a clear invasion of an alien invasive species. The squirrel originated in a different continent and was

known for replacing natives elsewhere. Most scientists supported the eradication. This was also a case where the interests of two mammals were at stake, favouring one meant either killing or the disappearance of the other. Animal rights groups opposed the attempt from the start, and although some changes to the original plan turned a few NGO's in favour of the plan, others were still clearly opposed. In April 1997, just before the actual trial eradication, a meeting with representatives of the animal rights organizations opposing the proposal was held in hope to solve some of the differences, but this meeting too was terminated before an understanding could be reached. (Genovesi 2000, Genovesi and Bertolino 2001, Bertolino and Genovesi 2003). Economic factors were a decisive element in rejecting other alternatives, believed by the NWI to be economically infeasible (Perry 2004).

In contrast, in the case of the grey headed flying fox, the animals were natives, “invading” a part of their natural habitat that has been converted by humans into an artificial ensemble of native and non-native trees. The conservation community was divided from the start. Indigenous mammal lives were weighed against trees, not all of which were even Australian. Eventually political and public opposition led to the development and acceptance of a more expensive alternative, but one which took both sides into consideration.

From the AR community's perspective, the outcome of both cases was a success. But in Italy, the disappearance of the local red squirrel is not a desired effect of not killing the greys. A solution of neutering or relocation would have satisfied both the AR's and the environmentalists. Both cases demonstrate that ignoring public opinion, in these cases animal rights groups, could jeopardize conservation attempts. This may be true only with higher mammals, or at least animal species with good P.R. The lack of response by AR's to the killing of brown tree snakes (*Boiga irregularis*) on Guam, and the continued killing of cane toads (*Bufo marinus*) in Australia, may indicate the limits to AR success.

What is apparent in both cases is that economic considerations take precedence over moral or social ones for most scientists, at least when they are faced with policy decisions that have to be approved by politicians. It may be true that an expensive plan has less chance of being approved by policy makers, but the same officials are usually also highly concerned with their public image.

Cooperation between animal rights groups and conservation biologists is possible when both individual animals and species are taken into consideration. Such solutions will generally be more expensive, and are therefore usually rejected by conservation biologists when they present policy recommendations. In the long run, these plans may have a greater success rate since they enjoy a wider public support.

Animal rights groups are highly motivated and well organized. They can be, and have been, a destructive force for conservation efforts. They too should understand the motivation behind eradication attempts, and should offer alternatives, and demonstrate how they can help reduce costs for these alternative solutions, to gain the trust and cooperation of the scientific community. Most scientists would prefer to avoid unnecessary killing, so if an alternative they perceived as feasible existed, they could be persuaded to endorse it. At the present, as a result of past interactions, most scientists are suspicious of any animal rights involvement.

Animal rights groups and conservationists have much to gain from cooperation. Conservation biologists may find a motivated work force in animal rights advocates, and animal rights groups may find that conservation biologists are really trying to help animals. Working together can prevent some undesirable outcomes for both groups, and for animals.

References

Australian Bat Society (ABS) (2001). The Great Grey Headed Flying Fox Debate. Available from: http://abs.ausbats.org.au/

Bertolino S, Genovesi P, (2003). Spread and attempted eradication of the grey squirrel (Sciurus carolinensis) in Italy, and consequences for the red squirrel (Sciurus vulgaris) in Eurasia. Biological Conservation 109, 351–358.

Bomford, M., O'Brien, P. (1995). Eradication or control for vertebrate pests? Wildlife Society Bulletin 23 (2), 249–255.

Clancy, T., Cheal, D. and Beardsell, C. (2001). Proposal for the Establishment of a Grey-Headed Flying-Fox Campsite at Horseshoe Bend - Report to Banyule Council. Melbourne, Department of Natural Resources and Environment.

Department of Natural Resources and Environment. (DNRE) (2001). Options for the Establishment of an Alternative Campsite for the Grey-Headed Flying-Fox Petropus poliocephalus in Melbourne. Melbourne, State of Victoria, Department of Natural Resources and Environment.

Department of Natural Resources and Environment. (DNRE) (2002a). Flying-Fox: Relocating Melbourne's Flying-Foxes. Melbourne, State of Victoria, Department of Natural Resources and Environment.

Department of Natural Resources and Environment. (DNRE) (2002b). Flying Foxes Make a Successful Move, Melbourne, State of Victoria, Department of Natural Resources and Environment.

Department of Natural Resources and Environment. (DNRE) (2002c). Referral Form. Melbourne, State of Victoria, Department of Natural Resources and Environment.

Department of Sustainability and Environment (DSE) (2003). Relocating Flying-Foxes. Melbourne, State of Victoria, Department of Sustainability and Environment.

Eby, P., Richards, G., Collins, L., Parry-Jones, K. (1999). "The Distribution, Abundance and Vulnerability to Population Reduction of a Nomadic Nectarivore, the Grey-Headed Flying-Fox Pteropus poliocephalus in New South Wales, During a Period of Resource Concentration." Australian Zoologist 31(1): 240-253.
Elton, C. S., 1927. Animal Ecology. Sidgwick & Jackson, London.

Genovesi, P.(2000). Guidelines for Eradication of Terrestrial Vertebrates: a European Contribution to the Invasive Alien Species Issue. Council of Europe, tpvs65e-2000, 61 pp.

Genovesi, P., Bertolino, S. (2001). Human dimension aspects in invasive alien species issues: the case of the failure of the grey squirrel eradication project in Italy. In: McNeely, J.A. (Ed.), The Great Reshuffling: Human Dimensions of Invasive Alien Species. IUCN, Gland Switzerland and Cambridge, UK, pp. 113–119.

Gurnell, J. (1996). The effects of food availability and winter weather on the dynamics of a grey squirrel population in southern England. Journal of Applied Ecology 33, 325–338.

Gurnell, J., Pepper, H. (1993). A critical look at conserving the British red squirrel Sciurus vulgaris. Mammal Review 23, 125–136.

Hall, L. and G. Richards (2000). Flying Foxes Fruit and Blossom Bats of Australia. Malabar, Florida, Krieger Publishing Company.

Hall, L., Richards, G., Markus, N. (2001). Why Culling Will Fail to Solve the Flying Fox Problem at Melbourne Botanic Gardens.

Hannan, E. (2003), The Great Bat Bungle, The Age, 21.4.2003. p.7.

IUCN (2000). IUCN Guidelines for the Prevention of Biodiversity Loss Caused by Alien Invasive Species. Gland, Switzerland, the International Union for Conservation of Nature and Natural Resources, Species Survival Commission, Invasive Species Specialist Group.

Jasper, J. M., and D. Nelkin. (1992). The Animal Rights Crusade: The Growth of a Moral Protest. The Free Press, New York.

Leone, V. (2002), Bat Mobile to the Rescue. The Age, 28.8.2002. p.11.

Miller, C. (2001), Botanic Bats Win Protection, The Age, 8.12.2001, p.7.

Moors, P. (2001). Press Release, Melbourne, Royal Botanic Gardens.

New South Wales Scientific Committee (NSWSC) (2001). Grey-Headed Flying Fox - Vulnerable Species Listing, New South Wales Scientific Committee.

Perry, D. (2004) "Animal Rights and Environmental Wrongs: The Case of the Grey Squirrel in Northern Italy ".*Essays in Philosophy* ,5(2).

Regan, T. (1976). Do Animals Have a Right to Life? In Regan, T. and Singer, P. (Eds.), Animal Rights and Human Obligations. Prentice-Hall, Englewood Cliffs, pp 197-204.

Richards, G. and L. Hall (2000). "Australia's Flying Foxes at a Crossroad." Bats 18(2): 5-7.

Singer, P. (1993), Practical Ethics, Second Edition.Cambridge University Press, Cambridge, Massachusetts.

Tasker, E. M. (2002). Bat Colonies Overwhelming Australian Gardens. National Geographic News.

Zavaleta, E. S. (2002). It's Often Better to Eradicate, But Can We Eradicate Better? In: Veitch, C.R., Clout, M.N. (Eds.), Turning the Tide: the Eradication of Invasive Species. Invasive Species Specialist Group of IUCN, Gland and Cambridge. Pp. 393-404.

[1] The Society for Conservation Biology web page (http://conbio.org/SCB/Information/Mission/)