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Wildlife

Badger cull

Despite growing public concern, the appreciation of the welfare needs of wild animals is often inadequate. The RSPCA wildlife department seeks to improve welfare provisions for captive and free-living wild animals. This is achieved through research, promoting an awareness of the requirements of animals, and an emphasis on a precautionary and humane approach to human interactions with wild animals.

The contentious issue of culling badgers to prevent the spread of bovine tuberculosis (bovine TB) to cattle continued to be the focus of much attention and activity – on both a scientific and political level, and at the interface between those two.

Research results on various aspects of bovine TB continued to appear in the scientific journals, with important papers on topics such as the continued monitoring of cattle data after completion of the badger culling trial and a study investigating the effect of vaccinating free-living badgers with BCG. Assessing these and their potential implications for policy – whether that of the RSPCA or the government's position – is important because the evidence base is not static!

The RSPCA expressed its disappointment when the coalition government scaled back the plans of the previous government regarding the implementation of a Badger Vaccine Deployment Project in England, restricting its use to one area of 100 square kilometres instead of six. In September, Defra announced the launch of a consultation on its proposal to issue licences to farmers/landowners who wish to cull and/or vaccinate badgers at their own expense. The RSPCA wildlife department produced a detailed, evidence-based response to the proposals, outlining concerns that implementing the proposed culling policy could increase the risk of disease spreading and cause suffering to badgers.

In Wales, the original plan by the Welsh Assembly Government to cull badgers in an area of north Pembrokeshire was withdrawn after the Badger Trust won a Judicial Review on the Statutory Order the government had passed to implement its plan. Subsequently, however, the government redrafted the Order and launched a new consultation to which the RSPCA produced another detailed response.

Wild animals in circuses

For many years, the RSPCA has pushed for a ban on the use of wild animals in circuses. Unfortunately, around 40 wild animals, including tigers, zebras and an elephant, continue to tour with circuses in the UK. The import of three elephants from Germany in 2009 also suggests the industry is looking to expand.

As we reported in 2007, the previous government promised to ban the use of some species in circuses but, due to numerous shortcomings in the process and despite extensive submissions from the Society and other welfare groups, it failed to deliver.

In December 2008, Defra issued a public consultation to canvas opinion. Three options were presented: a total ban of wild animals in circuses, statutory regulation and voluntary self-regulation. The RSPCA submitted a detailed response outlining why a total ban is required to adequately protect animal welfare. Out of nearly 13,000 responses received, an overwhelming 94 percent agreed, including veterinarians and zoo professionals.

Worryingly, in the latter part of 2010, Ministers made reference to a proposal



for self-regulation received from an industry body. As well as doing nothing to advance animal welfare, self-regulation would fail to deliver what the overwhelming majority of consultation respondents want, including the circus industry itself.

With such unequivocal results from the consultation, the Society had hoped for swift action from the new coalition government but, at the time of going to press, no decision has yet been made. An announcement is expected in early 2011.

AROUND 40 WILD ANIMALS, INCLUDING TIGERS, ZEBRAS, AND AN ELEPHANT, CONTINUE TO TOUR WITH CIRCUSES IN THE UK

Euthanasia of large cetaceans

When a juvenile female bottle-nosed whale was spotted in the Thames in 2006 it created a media sensation, with millions of people watching the drama of this animal's plight unfold over three days. Unfortunately, subsequent investigations have shown that the animal would have died, regardless of the rescue attempts, due to a build-up of myoglobin in her bloodstream. Myoglobin is an important oxygen and iron binding protein that is found in the muscles of most mammals, with particularly high concentrations found in diving mammals like whales. The physical impact of a heavy animal beaching causes trauma to the whale's body, resulting in the release of myoglobin into the bloodstream. This, along with the effects of dehydration which beached whales also suffer from, then causes irreversible damage to the kidneys.

Post-mortems of northern bottle-nosed whales, and other similar species, have shown that they all died – or would have died had they not been euthanised – of kidney failure. The Marine Animal Rescue Coalition (MARC), of which the RSPCA is a member, therefore took the difficult decision that all stranded large

toothed whales should be euthanised at the earliest opportunity, to prevent further suffering.

Work is now underway to find the most humane method of euthanising these animals. This needs to take into account the circumstances of the stranding, especially if large numbers of onlookers are present. The RSPCA is working with MARC and the Institute of Zoology on this research and we hope that the post-mortem findings that led to this decision will be published in due course.



Compassionate conservation

As an animal welfare organisation, the RSPCA is primarily concerned with individuals rather than populations; but it is vice versa for conservationists. This difference in priorities can sometimes lead to conflict between the two fields but they are not necessarily mutually exclusive. At a basic level, it could be argued that the survival of a population depends on the well-being of individuals within it.

Welfare should be an integral consideration when developing conservation strategies. Historically there has been little collaboration between conservationists and welfarists but, in September, members of the wildlife department attended a Compassionate Conservation Symposium held in Oxford. Hosted by the Wildlife Conservation Research Unit (WildCRU) and the Born Free Foundation, this meeting aimed to stimulate debate and promote dialogue between scientists and practitioners on animal welfare issues in conservation. The conference was organised around four themes: animal welfare in field conservation; captive animal welfare and conservation; international trade in live wild animals; and conservation consequences of wildlife rescue, rehabilitation and release. Wildlife department staff gave presentations on wild animal rehabilitation as a model for reintroductions, the ethics of keeping animals in zoos, and welfare implications of international trade in live animals.

Welfare and conservation may clearly overlap on issues such as the trade in exotic pets but compassionate conservation has a potentially important role to play in the UK, including reintroductions of native species such as dormice and beavers, management of wildlife such as deer, and research (for example, radio-collaring of water voles).



RSPCA wildlife centres review

The centres continue to strive for a better understanding of the casualties in their care. Numerous research projects have been undertaken this year to investigate post-release survival in several species. Techniques such as radio tracking are used, as well as simpler methods such as marking – for example, ringing birds and relying on re-sightings for information on how long these animals survive and how far they have travelled.

Some of this work is carried out in conjunction with the wildlife department and has been promoted widely at various conferences and symposia. In addition, the wildlife department and centres continue to develop species rehabilitation protocols, based on best practice and sound science.

RSPCA EAST WINCH WILDLIFE CENTRE



Corkscrew injuries to seals

During July 2010, the RSPCA East Winch Wildlife Centre was approached by Norfolk police to assist in the investigation of unusual mortality of common seals being found on the north Norfolk coast. Several bodies were brought to the centre and thorough forensic post-mortem examinations were performed to determine the cause of death. All had identical injuries, with the skin sliced off the body in a distinctive corkscrew-shaped pattern. It became apparent that similar injuries had occurred in seals in Scotland, Northern Ireland and Canada.

An international collaboration with other marine mammal experts ruled out deliberate killing or predation and concluded that the

injuries were being caused by certain ships or boats, equipped with modern encased propellers such as the Kort nozzle or a type of azimuth thruster, operating in shallow coastal waters. Such systems are common to a wide range of vessels including tugs, self-propelled barges and rigs, various types of offshore support vessels and research boats.

Further investigation is ongoing to precisely identify the type of vessels involved

and what measures can be taken to prevent future seal deaths. In order to do this, it is necessary to determine the reasons why seals are attracted to the propellers; are they lured towards particular vessels because of prey associated with them or in response to an acoustic cue created by the propeller?

Further details can be found in the preliminary report at: www.smru.st-and.ac.uk/documents/366.pdf



RSPCA MALLYDAMS WOOD WILDLIFE CENTRE



Investigating radio tag attachment methods for the juvenile little owl (*Athene noctua*)

In the 2006 *Science Group Review*, we reported on the use of tail-mounted radio tags in order to assess juvenile little owl survival following release. Three further years of tracking have been undertaken and two methods investigated to find the most appropriate attachment that considers both animal welfare and the collection of sufficient survival data.

Following a period of artificial rearing, 19 juveniles were fitted with TW-4 tail-mounted tags and released within areas of favoured little owl habitat, including grazed farmland and orchards. Eleven individuals were soft released and were quick to disperse. With none returning for support feed, the remaining owls were hard released.

Following tagging, no adverse behavioural effects were evident, although premature tag-shedding did occur, limiting the number of subjects tracked. Tracking was also restricted by signal loss, either through tag failure or owl dispersal.



As a result of insufficient data collection, in 2009 Ag393 leg mounts were fitted to a further seven hard released individuals. These were quicker to fit, so decreased handling time and, despite initial fitting problems, appeared to be better tolerated. All leg tags remained attached, although signal was lost on one. The table below shows an overview of survival data collected.

Both tag attachments confirmed independent survival following release, with leg mounts allowing for greater data collection. Further investigation is necessary in order to understand overall survival. Continued tracking using leg mounts is therefore recommended.

Overall comparison of survival data collected using both tail- and leg-mounted tag attachments

OUTCOME	TAIL-MOUNTED TAGS		LEG-MOUNTED TAGS	
	Number (n=19)	Mean days before tracking ceased*	Number (n=7)	Mean days before tracking ceased*
ALIVE	4	36.3	2	127.5
PREDATED/KILLED	4	7.4	4	8.0
SIGNAL LOSS	4	4.8	1	12.0
TAG LOSS	7	4.0	0	0.0

* Tracking ceased either due to bird death, tag being shed, signal loss or completion of study.

RSPCA STAPELEY GRANGE WILDLIFE CENTRE



Factors affecting the likelihood of release of injured and orphaned wood pigeons (*Columba palumbus*)

We investigated the reasons for admission and outcomes for 2,653 wood pigeons brought to Stapeley Grange between 2005 and 2009.

Reasons for admission varied, with the most common reason for adults (33 percent) and juveniles (38 percent) being 'injury (cause uncertain)' and 'orphan', respectively. Twenty-one percent of adults and 16 percent of juveniles had been attacked by cats. Sixty-five percent of adults and 37 percent of juveniles were euthanised within 48 hours of admission to prevent further suffering. Only 14 percent of adults and 31 percent of juveniles were

released back to the wild. The remainder were either euthanised more than 48 hours after admission or died in care despite treatment.

Unlike body condition on admission, age, weight on admission and severity of symptoms were significant factors in determining the likelihood of release.

The percentage of adults and juveniles euthanised within the first 48 hours increased over the five-year period, from 54.6 percent to 75 percent and 26.5 percent to 39.1 percent, respectively. This indicates that triage has improved over the five-year period and those birds unlikely to survive to the release stage were identified sooner.

In 2007 and 2008, there was a reduction in the median number of days in care for those birds euthanised more than 48 hours after being admitted, possibly due to the introduction of radiography for all birds on



admission. Leg band recovery data for 15 birds revealed post-release survival ranging from 21–2,545 days (median = 231 days) compared to 1–2,898 days (median = 295) for non-rehabilitated birds. The data suggests that rehabilitated juveniles were able to survive independently following release.



The post-release survival and dispersal of rehabilitated juvenile Eurasian badgers (*Meles meles*)

For many years, rehabilitators have sought badger-free areas to release orphaned badger cubs but this has become increasingly difficult. Therefore West Hatch Wildlife Centre has been investigating the survival of badger cubs released into 'dispersal sites', where badgers are known to be in the vicinity.

Between 2005 and 2009, 16 cubs were released in four groups at two 'dispersal sites'. They were fitted with radio collars and tracked until they died or their signal was lost.

Results show all four groups separated and dispersed within four weeks of release. Of the 16 badgers tracked, nine died within the first four months (five in road traffic collisions and four from unknown causes), five radio signals were lost and one slipped its collar before release. One cub is still alive after 300 days (at 1st December 2010).

Using Kaplan-Meier survival estimates, only three badgers (19 percent) survived post release. Survivorship curves show that overall median survival was 100 days (95 percent CI 49.74–150.26). Males fared worst, with estimated survival of zero percent compared to females at 32.5 percent with median survival times of 71 days (95 percent CI 38.1–103.8) and 103 days (95 percent CI 53.79–152.21) respectively.

Results indicate that badger cubs are poor candidates for this type of release, possibly due to the complexities of group living.

Important questions remain: are badger-free sites best? Would cubs do better released at an earlier age? Should they be reared in groups? We will continue this research into their survival.



INVESTIGATING THE POST-RELEASE SURVIVAL OF REHABILITATED BADGER CUBS

Photo: Richard Thompson, Mallydams Wood Wildlife Centre

Influencing decision makers

Scientific staff from the RSPCA's wildlife department promote the Society's agreed policies, aims and objectives through advocacy to government, statutory bodies and other organisations at the highest level. They are members of many national and international committees and working groups and also have key input into a range of consultations, both to government and non-governmental bodies, on a wide range of wildlife issues.

Below is a small selection of the committees, meetings, events and consultations in which wildlife staff have participated during 2010:

Representation on external committees

- Animal Welfare Network (Wales).
- Ashdown Area Deer Group.
- British Wildlife Rehabilitation Council (BWRC) steering committee.
- International Wildlife Rehabilitation Council (IWRC) symposia committee.
- Marine Animal Rescue Coalition (MARC).
- Species Survival Network (SSN) board (until November 2010).
- The Deer Initiative.
- The Mammal Society.
- Whalewatch coalition.
- Wildlife and Countryside Link (Trustee until November 2010).
- Wildlife and Countryside Link Whale working group.
- Wildlife and Countryside Link Wildlife Trade working group.
- World Conservation Union's Otter Specialist Group.
- Zoos Forum.

Consultation responses

Defra

- The use of wild animals in travelling circuses.
- A badger control policy in relation to bovine tuberculosis.

Natural England

- Informal consultation: wildlife general licences.

Welsh Assembly Government

- An issue paper on wild deer management in Wales.
- Badger control in the Intensive Action Area.
- Informal consultation: wildlife general licences.

Meetings and events

- 15th meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Flora and Fauna (CITES), 13–25 March in Doha, Qatar.
- Eurogroup wildlife experts' meeting in Brussels, Belgium to review Eurogroup's wildlife policies, EU Invasive Species Strategy, sanctuary guidelines and other wildlife issues.
- Compassionate Conservation Symposium, Oxford University. Presentations made by staff on wild animal rehabilitation as a model for reintroductions, the ethics of keeping animals in zoos for conservation purposes, and welfare implications of international trade in live animals.
- Meeting with RSPCA Australia's chief scientist to discuss wildlife welfare issues faced by both organisations.
- Meeting with the Welsh Assembly Government about wildlife issues.
- Meeting with Minister of State for Agriculture and Food, regarding badgers and bovine tuberculosis.
- Meeting with Parliamentary Under Secretary of State, regarding wild animals in circuses.
- Meetings with non-governmental organisations (NGOs) and local authority representatives about updating a guidance document on licensing pet shops and other sellers.
- International Wildlife Rehabilitation Council conference in Albuquerque, New Mexico. An RSPCA co-sponsored event with presentations by staff on the importance of animal welfare in wildlife rehabilitation.
- Presentations at The Badgers' Trust conference and the British Wildlife Rehabilitation Council conference on the post-release survival and dispersal of rehabilitated juvenile Eurasian badgers (*Meles meles*).
- Deer Management Conference 2010.
- Deer Initiative Partnership meetings: Swindon and Oxford/Wytham Woods. Discussion of recent deer management activities by organisations and a visit to discuss research and illustrative issues arising on a specific site.
- Meeting of NGOs to discuss issues relating to cetaceans in UK waters.
- Meeting with other member organisations of MARC to review current practice and discuss procedures for euthanasia of large stranded cetaceans around the UK.

- Sea Alarm meeting at Mallydams Wood Wildlife Centre. Representatives from various European oiled wildlife rescue organisations met to discuss contingency planning for large oil spills within Europe and further afield.
- Symposium on crustacean sentience to discuss current research into humane dispatch methods and the ability of these animals to feel pain.
- UFAW symposium on wild bird care in the garden; poster prepared by staff on the numbers of birds caught by cats that were admitted to RSPCA wildlife centres.
- Meeting with Pest Management Alliance to discuss glue boards and other issues.
- Campaign Against Illegal Poisoning Stakeholder meeting, in which there was a review of recent campaign-related work and proposed action.

External funding

- Research into the effect of tags on rehabilitated and released seabirds, Swansea University. Jointly funded by the RSPCA and Oiled Wildlife Care Network.
- Research into the survival of hedgehogs during hibernation, Reading University. The RSPCA has contributed radio transmitters to this project for tracking the hedgehogs.
- Review of the humaneness of rat and mole traps, Wildlife Conservation Research Unit, University of Oxford.

Scientific publications

- Bexton S and Couper D. (2010) Handling and veterinary care of British bats. *In Practice* 32(6):254–262.
- Couper D and Gibbons L M. (2010) *Tetrameres* species parasites in tawny owls (*Strix aluco*). *The Veterinary Record* 167(7):258–259.
- Couper D, Margos G, Kurtenbach K and Turton S. (in press) Prevalence of *Borrelia* infection in ticks from wildlife in south-west England. *The Veterinary Record*.
- Dowding C V, Shore R F, Worgan A, Baker P J and Harris S. (2010) Accumulation of anticoagulant rodenticides in a non-target insectivore, the European hedgehog (*Erinaceus europaeus*). *Environmental Pollution* 158(1):161–166.
- Griffiths R, Murn C and Clubb R. (2010) Survivorship of rehabilitated juvenile tawny owls (*Strix aluco*) released without support food, a radio tracking study. *Avian Biology Research* 3(1):1–6.
- Kelly A, Scrivens R and Grogan A. (2010) Post-release survival of orphaned wild-born polecats (*Mustela putorius*) reared in captivity at a wildlife rehabilitation centre in England. *Endangered Species Research* 12(2):107–115. (doi:10.3354/esr00299).
- Kelly A, Leighton K and Newton J. (2010) Using stable isotopes to investigate the provenance of a Eurasian eagle owl (*Bubo bubo*) found in Norfolk, England. *British Birds* 103:213–222.
- McConnell B, Morrison C, Sparling C, Sadler L, Charles A and Sharples R. (in press) Post-release dive ability in rehabilitated Harbour seals (*Phoca vitulina*). *Marine Mammal Science*.