Andrew Kelly BSc PhD
Head of department from 4.1.11

Colin Booty BSc
Deputy head

Adam Grogan BSc
Ros Clubb BSc DPhil (until 11.11.11)
Lisa Riley BSc MSc MRes MSc PhD
(from 1.11.11)
Senior scientific officers

Sophie Adwick BSc MSc
Nicola Cunningham BSc MSc PGDip
(from 14.11.11)
Scientific information officers

Alison Charles VN
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Peter Venn BA
RSPCA wildlife centre managers

Sue Gallagher
Office manager
Tash Faulding
Administrative assistant

Wildlife

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 international trade in wild animals

Every year millions of wild animals are taken from the wild or bred in captivity for the pet, skin and meat trade. The welfare of the animals involved is rarely, if ever, taken into consideration and many animals suffer as a result. The RSPCA is opposed to the trade in wild-caught animals and also to the trade in captive-bred wild animals if any animal suffers at any stage of the process.

Some species are afforded a level of protection by the Convention on the International Trade in Endangered Species of Flora and Fauna (CITES) to which over 170 countries are signatories. CITES allows trade in listed species under certain circumstances. The RSPCA wildlife department engages with CITES in a number of ways, nationally and internationally. At the national level we work closely with other animal welfare and conservation non-governmental organisations (NGOs) to engage with the UK's CITES authorities to advocate for a higher level of protection for CITES listed species. At the international level, we are active members of Species Survival Network (SSN), a coalition of over eighty NGOs committed to the promotion, enhancement, and strict enforcement of CITES. Through scientific and legal research, education and advocacy, SSN is working to prevent over-exploitation of animals due to international trade which is worth billions of pounds each year.

Through attendance at CITES meetings (Animals Committee, Standing Committee and Conference of the Parties), we are attempting to ensure that listed species are not over exploited and that the core issues related to animal welfare within CITES are adhered to by member states and enforced by the CITES authorities.

Lewis Phillips/RSPCA Photolibrary, RSPCA

Fish used in beauty treatments

The last 12 months has seen a dramatic increase in the number of establishments offering skin treatments, such as pedicures, using *Garra rufa* (Dr. Fish)[1].

During 2011 the Health Protection Agency (HPA) investigated human health risks posed by this practice, finding a minimal but existing risk of infection transmission between clients[2]. Interestingly, the practice is banned in at least 18 US states, partly because regulators believe it to be unsanitary[3].

The RSPCA has received enquiries from members of the public, entrepreneurs and local authorities concerning the welfare of fish used in this way, and RSPCA inspectors have been called to visit and advise Dr. Fish establishments. We have initial concerns[4] – including water quality and temperature, effect of cosmetic products on fish, housing conditions, handling, disposal, feeding regimes and training of staff – but at present there is no scientific evidence on which to base an RSPCA (or indeed any other) policy on the practice.

Throughout 2011, the RSPCA wildlife department has been working to learn more about the practice and set-ups involved, gather expert opinion on the practice, and commission scientific welfare assessment of fish used in this way. This research is vital in order for the RSPCA to develop a science-based policy on the practice. We also responded to the Fish Spa working group's consultation on draft *Guidance on the Management of the Public Health Risks of Fish Pedicures*[5] and produced, on request, a briefing for local authorities outlining our current knowledge on the practice, welfare concerns and advice.

FOOTNOTES AND REFERENCES

1 A spring 2011 survey amongst environmental health practitioners identified 279 'fish spas' in a third (119) of the UK's local authorities and at least 12 new companies established to import and supply fish spa systems and equipment. Cited in: *Guidance on the Management of the Public Health Risks from Fish Pedicures.* Fish Spa Working Group, June 2011.
2 Available at: www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317131046498.
3 *Guidance on the Management of the Public Health Risks of Fish Pedicures*, HPA (link below).
4 Concerns have also been voiced by the fish-keeping community (eg. www.practicalfishkeeping.co.uk); the Ornamental Aquatic Trade Association (OATA) has stated that it will not accept beauty parlours as members despite being approached (pers. comm. August 2010).
5 Final report available at: www.hpa.org.uk/webw/HPAweb&Page&HPAwebAutoListName/Page/1317130999316.

Working for wildlife casualties

RSPCA inspectors are often the first part of the process of wildlife rehabilitation. They are called out to attend injured wild animals and make the initial decisions regarding their treatment. During 2011, our inspectors collected approximately 60,000 wild animals, while our four widlife centres admitted nearly 16,700 sick or injured wild animals. Others were taken to independent wildlife rehabilitators.

Unfortunately, many more of the wildlife casualties found by our inspectors have to be put to sleep to prevent further suffering. This is normally done by using pentibarbitone sodium (PBS), but in September 2010, the RSPCA had to withdraw this drug from use by inspectors due to changes in the legislation regarding how the drug is stored and prescribed. This created a major welfare problem for the inspectors, who now had to take many wildlife casualties to vets to be humanely dispatched.

The RSPCA therefore applied for a group authority for its inspectors to use the PBS, arguing that all pieces of legislation relating to the protection or management of wildlife include defences that allow anyone to humanely dispatch a protected wild animal to prevent further suffering. Therefore the problem was not whether RSPCA inspectors could make the decision to euthanase wild animal casualties when necessary; it was that they should have the most humane tools available to them to do the job.

The RSPCA was successful in arguing its case and in April 2011 the RSPCA obtained a licence from the Home Office for its inspectors to carry and use PBS for wildlife casualties only.

Joe Murphy/RSPCA Photolibrary, ©istock.com/Maridav

Mole damage and control

With an estimated population of about 31 million, moles are one of the commonest animals in Britain yet their underground lifestyle means that they are seldom seen. The only visible signs of their presence in an area may be the mole hills they create with soil excavated from their system of tunnels. It is the tunnelling and mole hills that can be the cause of conflict and the perceived need for control in a range of situations.

The cruel poison strychnine was one of the main methods used to kill moles until it was withdrawn in 2006. The RSPCA therefore decided that this was an opportune time to commission research to establish the need for mole control and to determine the efficacy and welfare implications of the remaining mole control methods. This work was undertaken by the Wildlife Conservation Research Unit at Oxford University and consisted of a large-scale national questionnaire covering farmers, amenity managers and gardeners; visiting a sample of respondents to ground-truth replies and to conduct high resolution mapping of mole activity; and an examination of control methods.

The study included post-mortem examination of a large sample of moles killed by trappers. Subsequently it was agreed to extend the work to include measurement of the impact and clamp forces exerted by different mole traps. The research has now been completed and reports submitted to the RSPCA. The researchers are preparing papers for scientific journals and some aspects of the work will be presented at the Universities Federation for Animal Welfare (UFAW) conference in June 2012 on *Recent advances in animal welfare science.*

RSPCA wildlife centres review

The wildlife centres continue to strive for a better understanding of the casualties in their care. Numerous research projects are undertaken to investigate post-release survival in rehabilitated species. Techniques such as radio tracking are used, as well as simpler methods such as marking, e.g. 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

Post-release dive ability in rehabilitated harbour (common) seals (*Phoca vitulina*)

Every year the RSPCA rehabilitates and releases over 100 seals – the majority of these at RSPCA East Winch Wildlife Centre. In 2003, East Winch joined with the Sea Mammal Research Unit, based at St Andrews University, to tag and track six rehabilitated juvenile harbour seals alongside five wild adult seals that were being tagged as part of a separate research programme.

The rehabilitated seals had been recovered from locations in Norfolk and Kent. They were around two to three months old on admittance, suffering from a variety of complaints. The seals were released in February 2004, once they had reached a weight greater than 30kg and were free of all clinical symptoms. Prior to release each animal was fitted with Satellite Relay Data Loggers (SDRLs, SMRU, UK)[1], which relayed the seals' position and provided information on dive depth and duration.

The rehabilitated seals were tracked for a mean of 121 days (shortest: 100, longest: 175). There was no significant difference between rehabilitated and wild seals in this regard, suggesting that the rehabilitated group survived as well as the wild group. Dive durations varied between individuals, but there was no significant difference when seal mass was taken into account. There was no significant difference in the percentage dive times between the wild and rehabilitated seals.

These results indicate that our rehabilitation of harbour seals is successful; this work has now been published[2].

Andrew Forsyth/RSPCA, Ros Shaw, WildCRU (mole), Dr. Sandra Baker, WildCRU (traps), David Couper, RSPCA West Hatch Wildlife Centre

FOOTNOTES AND REFERENCES

1 Fedak M, Lovell P, McConnell B and Hunter C (2002). *Overcoming the constraints of long range radio telemetry from animals: Getting more useful data from smaller packages.* Integrative and Comparative Biology 42:3–10.

2 Morrison C, Sparling C, Sadler L, Charles A, Sharples R, McConnell B (2011) *Post-release dive ability in rehabilitated harbour seals.* Marine Mammal Science DOI: 10.1111/j.1748-7692.2011.00510.x

RSPCA MALLYDAMS WOOD WILDLIFE CENTRE

Winter retention of rehabilitated hedgehogs (*Erinaceus europaeus*)

The hedgehog *Erinaceus europaeus* is the casualty most frequently brought into UK wildlife centres, most commonly when too small to hibernate (TSTH), with insufficient resources to survive hibernation. Traditional rehabilitation methods suggest retaining hedgehogs for four to five months in suitable indoor enclosures, while feeding daily to maintain weight in preparation for release in April/May. By mid-December/January the increasing number of animals retained creates the issue of providing adequate space for housing.

Observations at RSPCA Mallydams Wood Wildlife Centre concluded that keeping more than one hedgehog in a pen caused unrelated individuals to fight or dominate food and it was not possible to increase the number of pens. In 2006 the centre altered their protocol to encourage hedgehogs to hibernate in care. The animals were individually housed with decreasing ambient temperature, then placed in an unheated building in individual pens and provided with materials to encourage nesting behaviour.

Although successful, there were still limitations on the number of animals that could be comfortably held for several months, prompting the next phase – to release hedgehogs once they had entered hibernation. Hibernating animals were selected by torpidity and stable weight (above 550g – see Table 1) and taken to release sites during mild weather between December and March 2006-2011. The question remained whether the individuals would sustain hibernation or stay active during periods of depleted food sources and subsequently perish?

In 2010 Mallydams approached the University of Reading to engage in a joint project for three consecutive years, radio-tracking hedgehogs released during the winter months. The results will be used to further develop the RSPCA's hedgehog rehabilitation protocol.

TABLE 1

Average monthly hedgehog release weights: 2006-2011

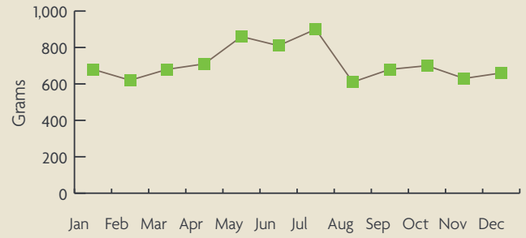
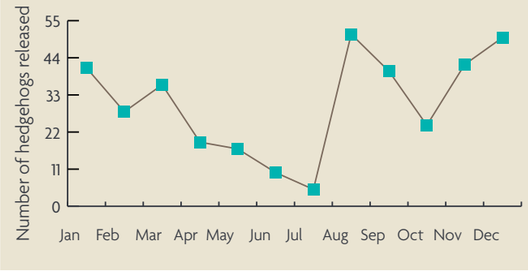


TABLE 2

Average monthly hedgehog releases: 2006-2011



RSPCA WEST HATCH WILDLIFE CENTRE

Tetrameres species parasites in tawny owls (*Strix aluco*)

Tetrameres species parasites were identified in seven tawny owls *Strix aluco* at RSPCA West Hatch Wildlife Centre on routine post mortem examination. There appear to be no previous reports of *Tetrameres* species parasites in tawny owls, and hence this is a new host record, and could be considered to represent an emerging infectious disease.

Adult *Tetrameres* species are parasites of the proventriculus (stomach) of birds. They are generally found in poultry. Heavy infestations may be fatal in chicks, but the parasite is usually present only in moderate numbers, and is well tolerated. Birds become infected by ingesting the intermediate host, which may be either aquatic crustaceans, or terrestrial insects or isopods containing the third-stage larva.

Tawny owls have a very varied diet, which includes small mammals, birds, amphibians, earthworms and beetles. They are therefore at risk of consuming the intermediate hosts for *Tetrameres* species.

Adult female *Tetrameres* worms are deep red in colour, and are typically found embedded in the gastric glands. The central part of the body is globular, having a diameter of approximately 5mm. The parasites can be seen on the serosal (outer) surface of the proventriculus, appearing like tiny grapes (as shown).

The parasite generally appears to be present in low numbers in tawny owls. One individual examined at post mortem had a high burden, and was emaciated. However, this owl also had an extensive necrotic lesion of the oral cavity, and so it is not possible to comment on the significance of a heavy infection.

RSPCA STAPELEY GRANGE WILDLIFE CENTRE

'Heal to fly' project – wing tear injuries in bats (*Pipistrellus spp.*)

The ultimate aim of our wildlife centres is to release casualties into the wild in a fit and competitive state and to avoid unnecessary holding of animals at the hospital if their chances of survival are minimal. Currently, based on existing scientific knowledge, the RSPCA's bat rehabilitation protocol recommends that bats with complete wing tears be euthanised. The 'heal to fly' project is looking at whether an alternative method of care could result in some of these bats being successfully rehabilitated and released.

200 bats were admitted in 2011 to RSPCA Stapeley Grange Wildlife Centre, including 144 pipistrelles; of these, nine were admitted with severe wing membrane injuries, largely thought to be caused by cats. The usual veterinary technique of stitching or gluing has been problematic with bats removing stitches or glue when grooming. Stapeley has looked to simplify the process by keeping bats in a warm and confined box, providing antibiotics and supplementing feeds with vitamins and minerals. This method has restricted their flight, giving them time to rest and heal.

Out of the nine bats that were admitted and eligible for this project over the past 15 months, five were returned to the wild, two were put to sleep and one died from other injuries not associated with wing tears. The remaining individual is being over-wintered in care. On average it has taken 49 days to reach an outcome.

Before being released, the bats were all flight tested extensively in both indoor and outdoor flight aviaries at Stapeley, a practice that has been proven to be important for their post-release survival.

REF NO	AGE/SEX	ARRIVAL	COMMENTS	OUTCOME	LENGTH OF STAY (days)
28576	J (A)	04/09/10	Amputation of distal wing	05/11/10 Released	62
28696	A (M)	10/09/11	Catted, extensive left arm/ wing tear	12/03/11 Died in Care	182
29685	A (F)	11/12/11	Wire through arm/wing	19/02/11 Released	63
32060	A (F)	31/05/11	Catted, tears in both wings	28/07/11 Released	58
32443	A (M)	13/06/11	Catted, old and new tears	22/07/11 Released	39
33179	A (F)	10/07/11	Catted, missing large area left arm/wing and skin trauma to thorax	20/07/11 Euthanized	37
33742	A (F)	29/07/11	Catted, large left arm/wing tear and missing 1/2 fifth finger bone	Being over-wintered	–
34389*	J (F)	30/08/11	Catted, tight arm/wing tear	22/10/11 Released	53
34795	J (F)	24/09/11	Unknown – series of holes in right wing and trauma to the left carpel joint	25/11/11/ wintered	62

A: adult, J: juvenile

Photo: Wendy Northrop, RSPCA Stapeley Grange Wildlife Centre

* Bat number 34389, before and after healing

Influencing decision makers

Scientific staff from the RSPCA's wildlife department promote the Society's agreed policies, aims and objectives through advocacy to 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 2012.

Representation on external committees

- Animal Welfare Network for Wales.
- British Wildlife Rehabilitation Council (BWRC) steering committee.
- Marine Animal Rescue Coalition (MARC).
- Species Survival Network (SSN) Board.
- The Deer Initiative.
- The Mammal Society.
- Whalewatch coalition.
- Wildlife and Countryside Link: Policy director; whale and wildlife trade working groups.
- World Conservation Union's otter specialist group.
- Zoos expert committee.

Consultation responses

Defra

- Guidance to Natural England on the implementation and enforcement of a badger control policy.
- Rabies control strategy.

Other

- Oil spill treatment product approval review.
- National Contingency Plan (NCP) for Marine Pollution from Shipping and Offshore Installations.
- Guidance on the management of the public health risks of fish pedicures.

Meetings and events

- Meeting at New Forest otter and owl park to discuss protocol for otter rehabilitation with the Environment Agency, and wildlife trusts.
- Dormouse conference, University of Greenwich. Presentation on the dormouse monitoring programme at RSPCA Mallydams Wood Wildlife Centre.
- Whaling welfare and ethics workshop: meeting of welfare experts to discuss welfare in terms of whaling and the International Whaling Convention (IWC).
- Mammal Society conference: presentation on post-release survival of rehabilitated badger cubs and juvenile pipistrelle bats.
- Invasive species meeting, Defra: to discuss development of the EU strategy and the work being undertaken in three working groups set up by the Commission.
- Deer Initiative partnership meeting and field visit to examine deer-related issues in East Anglia.
- British Veterinary Association (BVA) Animal Welfare Discussion Forum: presentation and panel discussion on the trade and welfare implications of keeping reptiles as pets.
- Meetings with experts to arrange regular health checks of Anne the elephant in order to monitor her progress in her new home at Longleat.
- BVA/RSPCA meeting to discuss Memorandum of Understanding and issues related to wildlife rehabilitation.
- Meeting with BVA, Humane Society International (HSI) UK, Born Free Foundation (BFF) and Care for the Wild (CWI) on the issue of wild animals in circuses in England.
- Bat lyssavirus meeting, Defra: an update on Defra's work on this topic.
- 25th Animals Committee meeting of Conference of the Parties to the Convention on International Trade in Endangered Species of Flora and Fauna (CITES), July 18–22 in Geneva, Switzerland.
- Irish wildlife rehabilitation conference. Presentation by head of department on the importance of post-release studies for determining success in wildlife rehabilitation.
- International Wildlife Rehabilitation Council (IWRC) training at RSPCA Mallydams Wood Wildlife Centre. President of IWRC presented Basic Skills class to an invited group from the RSPCA and BWRC. This course is used to demonstrate ability when applying for a permit to rehabilitate wildlife in the US.
- RSPB meeting on oiled wildlife response to discuss co-operative working in the event of a major incident.
- First national bat carers' workshop. Presentation on the ethics of rehabilitating bats.
- Animal Welfare Network meeting for Wales. Discussion about finalising report on animal welfare establishments (sanctuaries) for presentation to the Welsh government.
- SSN Board meeting, Washington DC.
- IWRC symposium 2011. Presentation on the RSPCA's work on rehabilitating oiled guilemots.
- 50th anniversary conference of the British Veterinary Zoological Society (BVZS).
- Attended *Manchex*, Dover: an exercise simulating a collision between a tanker and ferry in the English Channel, which included an RSPCA representation to describe response for oiled wildlife.
- Meeting with Defra, Joint Nature Conservation Committee (JNCC), HSI UK and IFAW to discuss animal welfare provisions under CITES.

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. Ongoing from 2010.
- Research into the survival of hedgehogs during hibernation, Reading University. The RSPCA has contributed radio transmitters for this project for tracking the hedgehogs. Ongoing from 2010.
- Review of the humaneness of rat, mouse and mole traps, Wildlife Conservation Research Unit (WildCRU), University of Oxford. Reports being written up in 2011.
- Research into welfare and ethical aspects of wildlife reintroductions as a method of wildlife conservation, WildCRU.
- Research into rehabilitated badgers, through Knowledge, Ecology Skills Scholarship (KESS) with Swansea University.
- Research into the welfare implications for Garra rufa fish of being used to provide beauty treatments such as pedicures.
- Enabled representative from Burkina Faso to attend the 61st Standing Committee of CITES in Geneva, Switzerland.
- Practical workshop, organised by the Deer Initiative with the Police and East Sussex County Council, on dealing with deer vehicle collisions for volunteer deer wardens in East Sussex.

Scientific publications

- Grogan A, Wilson RP and Vandenabeele SP (2011). *Implications of fitting monitoring devices to wild animals*. Veterinary Record Dec 3rd 2011 doi: 10.1136/vr.d7782.
- Kelly A, Halstead C, Hunter D, Leighton K, Grogan A and Harris, M (2011). *Factors affecting the likelihood of release of injured and orphaned woodpigeons (Columba palumbus)*. Animal Welfare 20, 523-534.
- Morrison C, Sparling C, Sadler L, Charles A, Sharples R, McConnell B (2011). *Post-release dive ability in rehabilitated harbour seals*. Marine Mammal Science DOI: 10.1111/j.1748-7692.2011.00510.x
- Vandenabeele SP, Wilson RP and Grogan A (2011) *Tags on seabirds: how seriously are instrument-induced behaviours considered?* Animal Welfare 20: 559-571.

For a full list of papers produced by or in conjunction with the RSPCA wildlife centres, please go to:
www.rspca.org.uk/sciencegroup/wildlife/currentresearch