



JOINT STATEMENT ON CAPTIVE BREEDING OF HEDGEHOGS IN RESPONSE TO POPULATION DECLINE

1st March 2021

Summary

The signatories to this statement do not support the use of captive breeding of European hedgehogs (*Erinaceus europaeus*) for release into the wild at this time. This position is based on concerns for the welfare of wild hedgehogs kept in captivity as breeding stock, the viability of captive bred animals released into the wild and the potential effects on wild populations of hedgehogs where captive bred animals are released. Releasing captive bred animals is likely to be ineffective and lead to suffering and mortality if the underlying problems causing population decline have not been identified and rectified. Captive breeding should only be considered a suitable strategy if the decline in the wild hedgehog population progresses despite other conservation actions and should only then be considered as a last resort measure, under carefully managed conditions.

Background

In July 2020, the Mammal Society published a report entitled "IUCN-compliant Red List assessment for Britain's terrestrial mammals". This report classified the UK population of the European hedgehog (*Erinaceus europaeus*) as 'vulnerable', citing "a decline of at least 46% over 13 years".¹ This report consolidated concerns from a variety of sources about the suspected decline in the UK hedgehog

population in recent decades, some of which have been widely reported in the media and attracted considerable interest from the general public.

In January 2017, the People’s Trust for Endangered Species (PTES) and British Hedgehog Preservation Society (BHPS) published a “Conservation strategy for hedgehogs in the United Kingdom (2015-2025)”. The report cites loss, reduced quality, and fragmentation of habitats as causes of hedgehog population decline supported by evidence, as well as other suggestions which require further investigation.² The strategy for hedgehog conservation makes recommendations related to further research leading towards habitat improvement but does not include the use of captive breeding for release as a strategy for British hedgehog conservation.

Although captive breeding and release programmes have been used in attempts to counteract population decline in wild animals, such programmes require very careful planning and organisation. They are often based in zoos and other animal collections, working in partnership with conservation and scientific organisations based in the geographical regions of origin of the animal species concerned and follow Guidelines published by the International Union for the Conservation of Nature (IUCN)³. Captive breeding programmes require genotyping of all participant animals for known polymorphic markers and the maintenance of a studbook, managed by a species co-ordinator to prevent inbreeding in order to maintain the genetic vigour of animals bred. The presence of hedgehog casualties, some of which are kept as permanent captives if they are disabled, may seem to offer a source of breeding stock which could be used to breed young animals for release in an attempt to boost a wild population. However, this approach is misguided for a number of reasons (listed below).

Potential negative consequences of captive breeding for release

- Releasing captive bred animals is likely to be ineffective if the underlying problems causing population decline (such as habitat degradation) have not been identified and rectified⁴ – leading to suffering and mortality in released animals. IUCN guidelines state that habitat issues must be resolved before releases take place. Perpetrators might also be liable for prosecution for the ‘abandonment’ of animals.
- Captivity (of breeding stock) is stressful for animals that have previously lived wild, and so good animal welfare is difficult to achieve and maintain over prolonged periods.⁵
- Use of casualty animals as breeding stock may be selecting less ‘fit’ animals from the wild population from which to breed, and there is evidence of inadvertent selection for docile behaviours⁶ and adaptation to captive environments.⁷
- Captive breeding removes much of the pressure of ‘natural selection’ on the population, meaning that subsequent generations of animals quickly become less ‘fit for survival’⁸
- There is currently no evidence available regarding potential impacts of releasing captive-bred hedgehogs on local wild populations or *vice versa* (for example, related to releasing animals which have not previously been exposed to natural parasites).

The welfare of captive hedgehogs used for breeding would also be a concern. Minimising the period of captivity for wild hedgehogs is considered by BWRC to be an essential underpinning principle for promoting animal welfare in responsible wildlife rescue and rehabilitation. Aside from the stress of captivity and the resulting restriction of natural behaviours, anecdotal evidence suggests that some disabled animals are physically less able to groom themselves thoroughly and can consequently suffer ecto-parasitism even when confined to a secure garden/enclosure. Anecdotal evidence also suggests that many UK rehabilitation centres are already at risk of overcrowding at certain times of the year. Keeping permanent captives for breeding or other reasons would reduce the available capacity for new patients, and increase the risk of disease transmission within facilities, exacerbated by the chronic stress caused by captivity itself. For these reasons the signatories do not support the permanent captivity of disabled hedgehogs.

On these grounds the signatories to this statement do not support the use of captive breeding and release of European hedgehogs as a conservation strategy at this time.

List of signatories as of 31st July 2021 (alphabetical order):

Blyth Wildlife Rescue, Newcastle upon Tyne
Brockworth Hedgehog Rescue, Gloucester
Brent lodge Wildlife Hospital, West Sussex
British Hedgehog Preservation Society (BHPS)
British Veterinary Zoological Society (BVZS)
British Wildlife Rehabilitation Council (BWRC)
Cuan Wildlife Rescue, Shropshire
East Sussex Wildlife Rescue & Ambulance Service (WRAS)
Folly Wildlife Rescue, Kent
Gower Bird Hospital, Swansea
Hamworthy Hedgehog Rescue
Hattie's Hedgehogs, Hertfordshire
Hedgehog Welfare, Lincolnshire
Hedgepigs, Nottinghamshire
Hitchin Hedgehog Care, Hertfordshire
Little Wiggly Snouts Hedgehog Rescue, Northamptonshire
London Colney Hedgehog Rescue, Hertfordshire

One Voice for Animals UK
People's Trust for Endangered Species (PTES)
Peterborough Hedgehog Hotel
Royal Society for the Prevention of Cruelty to Animals (RSPCA)
Secret World Wildlife Rescue, Somerset
Severn Wildlife Rescue, Cardiff
South Essex Wildlife Hospital, Essex
South of Scotland Wildlife Hospital, Dumfries
The Happy Hedgehog Rescue, Hampshire
Timothy Partridge BVSc, MRCVS, Lead Vet at Vale Wildlife Hospital
Vale Wildlife Hospital and Rehabilitation Centre, Gloucestershire
Wadars Animal Rescue
Wild Hogs Hedgehog Rescue, Gloucestershire
Wildlife Aid Foundation
Wolds Hedgehog Rescue

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References:

1. Mathews F, Harrower C, and *Mammal Society* (2020). *IUCN-compliant Red List* assessment for Britain's terrestrial *mammals*. Natural England, Peterborough.
2. Johnson, H., (2017) Conservation strategy for hedgehogs in the United Kingdom (2015-2025). PTES & BHPS. <https://ptes.org/wp-content/uploads/2015/11/Conservation-strategy-for-the-hedgehog-in-the-UK-2015-2025-v2.pdf>
3. IUCN (2013) Guidelines for reintroductions and other conservation translocations. ISBN: 978-2-8317-1609-1. <https://portals.iucn.org/library/sites/library/files/documents/2013-009.pdf>
4. Mammal Society Press Release 30th July 2020: <https://www.mammal.org.uk/2020/07/one-quarter-of-native-mammals-now-at-risk-of-extinction-in-britain/> Downloaded (23/11/20).

5. Dickens, M. J., Delahanty, D. J., & Romero, L. M., (2010). Stress: An inevitable component of animal translocation. *Biological Conservation*, 143(6), 1329-1341. <https://doi.org/10.1016/j.biocon.2010.02.032>
6. Willoughby J. R, Ivy J. A, Lacy R. C, Doyle J. M, DeWoody J, A. Inbreeding and selection shape genomic diversity in captive populations: Implications for the conservation of endangered species. *PLoS One*. 2017;12(4):e0175996. Published 2017 Apr 19. doi:10.1371/journal.pone.0175996
7. Frankham, R., Hemmer, H., Ryder, O.A., Cothran, E.G., Soulé, M.E., Murray, N.D. and Snyder, M. (1986), Selection in captive populations. *Zoo Biol.*, 5: 127-138. <https://doi.org/10.1002/zoo.1430050207>
8. Lynch, M., O'Hely, M. Captive breeding and the genetic fitness of natural populations. *Conservation Genetics* 2, 363–378 (2001). <https://doi.org/10.1023/A:1012550620717>