

New welfare tool to help improve the lives of elephants in human care

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Elephant. Credit: Picture by Yathin S Krishnappa. Licensed under CCBY-SA3.0

Zoos and safari parks in the UK are using a special new tool to help them more successfully monitor the wellbeing of elephants in their care, thanks to a study led by The University of Nottingham.

The new elephant behavioural welfare assessment tool, the result of research which has been published in the scientific journal *PLOS ONE*, allows keepers to quickly and easily track the welfare of individual [elephants](#) over time based on their demeanour and [behaviour](#).

Regular use by captive elephant facilities is helping them to assess the impact of any changes in animal husbandry and develop facilities which are specifically designed to enhance elephant welfare.

The research was led by Dr. Lisa Yon, a Lecturer in Zoo and Wildlife Medicine, in the University's School of Veterinary Medicine and Science, with assistance from Dr. Naomi Harvey also from the University Nottingham Vet School, and in collaboration with Dr. Lucy Asher at the University of Newcastle and Ellen Williams, a Ph.D. researcher from Nottingham Trent University.

Dr. Yon has extensive experience of studying elephant behaviour, both in the wild and captivity and, heads the Behaviour Subgroup of the multi-stakeholder UK Elephant Welfare Group.

Dr. Yon, said: "Our new tool provides, for the first time, a reliable way for people looking after captive elephants to use the elephants' behaviours to monitor their welfare over time."

Concern has previously been raised about the standard of care for elephants across North America and Europe and a report to DEFRA by academics at the University of Bristol in 2008 specifically identified some concerns about the welfare of elephants in UK zoos.

A review of this report by the government advisory committee, the Zoos Forum, suggested that evidence of welfare improvements was needed and a period of ten years was set for these to be implemented.

The research team began work to develop a questionnaire-style assessment tool that would take keepers no more than an hour to complete and without the need for specialist training or facilities.

This project built on two previous studies which examined previous evidence from peer-reviewed literature on welfare indicators for captive elephants (Williams *et al*, 2018) and used focus groups of UK zoo personnel and other stakeholders to capture their valuable knowledge of elephant behaviour (Chadwick *et al*, 2018).

From this work, they pulled together a list of behaviours which offer an indication of the animal's welfare, and this was used to develop a prototype tool to measure elephant welfare.

The tool, to be completed by the keepers consists of:

Four one-minute live observational assessments: asking keepers to record their elephant's demeanour in relation to a range of terms including: content, depressed, fearful, agitated, playful, relaxed and distressed.

Daytime behaviour questions: keepers are asked to observe their elephants for five minutes, four times a day over the course of three days and then score questions on a range of observed behaviours, which have been identified as being important measures of animal welfare.

Night time observations: keepers use overnight video footage to record a range of behaviours including social behaviour and sleep behaviour.

The prototype tool was tested at five elephant-holding facilities in the UK—including Twycross Zoo, Knowsley Safari Park, Colchester Zoo, Chester Zoo and ZSL Whipsnade Zoo—on a total of 29 elephants, representing almost half (46 per cent) of the total UK captive elephant

population at the time.

A finalised Elephant Behavioural Welfare Assessment Tool was developed, based on the results from the testing of the prototype tool; this [tool](#) has now been included in the Secretary of State's Standards of Modern Zoo Practice Guidelines as a routine part of the [welfare](#) assessment of captive elephants in UK zoos.

The researchers have suggested that similar methods could also be used to develop assessment tools for a wide range of other species in zoos and aquariums.

Provided by University of Nottingham

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