Using Science to Understand Elephant Welfare

Beth Posta, Katherine A. Leighty, Christina Alligood & Kathy Carlstead

a The Toledo Zoo, Toledo, Ohio
b Disney's Animal Kingdom, Bay Lake, Florida
C Honolulu Zoo Society, Honolulu, Hawaii

Published online: 30 Sep 2013.


To link to this article: http://dx.doi.org/10.1080/10888705.2013.827945

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.
potential effects to the greatest extent possible. The effects of 2 such practices, nonhuman animal transportation and social housing, were examined in relation to the welfare of giant pandas (Ailuropoda melanoleuca). Farm and lab studies suggest that transportation may be stressful, but this has not been well studied in animals in the zoo even though transportation within and between institutions is a common practice. The behavioral and hormonal effects of transporting 4 giant pandas from China to the United States were examined. The findings suggest that there are variable response patterns among individuals, but there was no evidence to support long-term negative effects on welfare. Another aspect of animal management that may affect animal welfare relates to housing conditions. As a result of space limitations or sometimes in an effort to provide social enrichment or to create more interesting exhibits, individuals from solitary species are often housed socially. The behavioral and hormonal responses in 2 giant pandas to periods of brief separation from their social partners were measured. Response patterns varied across the individuals, but there was no indication that separation or reunion caused significant distress. Overall, the results suggest that these necessary zoo husbandry practices may result in short-term stress responses and that there are no long-term negative effects on welfare. The results of these studies also highlight the importance of incorporating multiple measures when assessing welfare, as well as the extent of individual differences in response to potentially stressful practices.

Bonnie M. Perdue is now at Agnes Scott College in Decatur, GA.
Correspondence should be sent to Bonnie M. Perdue, Psychology Department, Agnes Scott College, 141 E. College Avenue, Decatur, GA 30030. Email: bonnie.m.perdue@gmail.com

Using Science to Understand Elephant Welfare

Beth Posta,¹ Katherine A. Leighty,² Christina Alligood,² and Kathy Carlstead³

¹The Toledo Zoo, Toledo, Ohio
²Disney’s Animal Kingdom, Bay Lake, Florida
³Honolulu Zoo Society, Honolulu, Hawaii

The practice of housing elephants in zoos has been a topic that has received significant media attention in recent years. Despite this, no comprehensive scientific assessment of the welfare status of elephants in North American zoos has been conducted. In a study funded by the Institute of Museum and Library Services,
A multi-institutional partnership is working to document the current condition of all elephants in the Association of Zoos and Aquariums (AZA) accredited zoos and to determine the environmental, management, and husbandry factors that are most influential to their welfare. This unprecedented 3-year study is breaking new ground in the field of welfare assessment by documenting welfare across a wide array of components and utilizing measures of both positive and negative welfare. Beginning in 2011, data were collected on a variety of facility-based input variables (e.g., training program, enclosure size) and animal-based outcome variables (e.g., hormone levels, social behavior) for African and Asian elephants at AZA institutions. Data on each elephant were collected via archival specimen reports, questionnaires, and laboratory analysis of biological samples. In addition, the study includes video documentation of the behavior of elephants housed at a representative cross section of the participating zoos. Results will identify the facility-based measures that most closely relate to welfare outcomes, providing critical information to elephant managers. The welfare assessment process developed in this study is expected to serve as a model from which welfare evaluation tools for other zoo species can be created.

Correspondence should be sent to Beth Posta, The Toledo Zoo, PO Box 140130, 2700 Broadway, Toledo, OH 43614. Email: beth.posta@toledozoo.org

Assessing Nonhuman Animal Welfare in a New Exhibit: Environmental Effects on Physical and Behavioral Well Being

Beth Posta
The Toledo Zoo, Toledo, Ohio

Defining nonhuman animal welfare has been a challenge for zoo professionals. Even more challenging is assessing the welfare of the animal collection. With the opening of the new Nature’s Neighborhood children’s zoo, the study attempted to assess animal well being, comparing welfare measures prior to moving animals into the new facility versus 1, 3, and 5 months after opening. Some animals are part of the zoo’s education collection, traveling to schools and other venues for educational programs—considerably different from an all-day, year-round exhibit. In addition, many animals moved from smaller, off-exhibit enclosures