

Unique Research Collaboration is Foundation of Recent Giant Panda Loan.

Doug Tolleson and Jerry Stuth
Grazingland Animal Nutrition Lab
Department of Rangeland Ecology and Management
Texas A&M University
408B Animal Industries Building
2126 TAMU,
College Station, TX 77843-2126
(979) 845-3958
tolleson@cnrit.tamu.edu

Giant Panda populations in the wild are under extreme pressure from habitat loss and or fragmentation. Additionally, these animals have a very specialized diet, consuming bamboo almost exclusively. To this end, a more complete understanding of Giant Panda population dynamics, nutrient intake, and the relationship between pandas and various bamboo species are needed. The Memphis Zoological Association recently received two Giant Pandas on loan from the Chinese government. A Giant Panda loan lasts ten years and requires the zoo in question to develop an extensive research plan. The Memphis Zoo took a unique approach in developing their plan. First, they chose to focus on methods and technology which can ultimately be extended to the wild panda population in China, i.e. all research must be conservation driven. Second, as a smaller organization compared to other US zoos with pandas (Washington DC, Atlanta, San Diego), they do not have a large in-house research staff, so they assembled a team of researchers from five universities (Texas A&M, U. Ark.-Little Rock, U. Memphis, Miss. State, and U. Tenn.). Each institution brings a certain expertise to the table. The Grazingland Animal Nutrition Lab at Tx A&M has developed nutritional monitoring systems for several herbivorous species, both wild and domestic, in the US, East Africa, and South America. Our involvement in this project will focus on 1) applying near infrared reflectance spectroscopy (NIRS) for assessing the nutrient utilization of various bamboo species by pandas, 2) expanding the use of NIRS for monitoring the physiological status of individual pandas. Memphis Zoo personnel have traveled to the Foping Natural Reserve, Shaanxi province, laying the groundwork for future collaboration in applying captive-derived information to the animals there. 2003 is year one of this project. The pair of pandas, Le Le the male and Ya Ya the female, arrived at Memphis in April 2003. They were accompanied by Chinese and Memphis keepers during the trip and closely monitored for several months post-arrival to ensure a complete adaptation to their new surroundings. This accomplished, the first digestibility trials have just been completed and samples should begin arriving at our lab this fall. The first phase of this project is scheduled to last three years with extension to Chinese Zoos and nature preserves to occur after that time.