

Research Collaborative for Conservation: Zoos and Universities Working Together

Engaging and Empowering Local Communities in Conservation

(Report on a presentation by Dr. Daniel Rubenstein of Princeton University
at the AAAS Annual Meeting, Saint Louis, MO)

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AAAS Annual Meeting, St. Louis, Missouri, 17 February 2006 - The Grevy's zebra (*Equus grevyi*) is one of the most endangered members of the horse family in the world. Dr. Daniel Rubenstein of Princeton University reported at the annual meeting of the American Association for the Advancement of Science (AAAS) that population numbers for Grevy's in their home range of Kenya and Ethiopia have plummeted from 15,000 to 2,000 animals. More than 70% of these live in the Samburu region of northern Kenya, most of them on unprotected community lands. Now an innovative partnership between Princeton University and the Saint Louis Zoo's WildCare Institute is bringing effective conservation of Grevy's zebras within reach for Samburu pastoral cooperatives.

Dr. Rubenstein reported that the increase in the number of plains zebras (*Equus burchelli*), which are not endangered, impacts on the Grevy's while the presence of Grevy's has no negative impact on plains zebras. Parasitism is not an issue as there is less found in Grevy's than plains zebras. Thus the decrease in number of Grevy's zebras cannot be attributed to disease or poor condition from parasite infestation.

To find out how livestock impact Grevy's populations in the historical central part of their range, WildCare Institute, in collaboration with Lewa Wildlife Conservancy and the Northern Rangeland Trust, employed local scouts from pastoral communities in northern Kenya to gather data on the activities of zebras relative to livestock. One man and two women in each of six districts were given training in the use of GPS systems and notebooks to record weather, landscape, other animals, which Grevy's were present (males, lactating females, non-lactating females, etc.), and what they were doing. The scouts were employed 100 days a year and the male scouts worked more in the open areas while the women worked more enclosed areas.

Communications were in three languages: Samburu, Swahili and English. When female scouts remained quiet at the first meetings held to go over field results, separate meetings for the male and female scouts were initiated. As a result, the women spoke of their experiences and what they saw quite freely. After the first year, the results of their data found that only about 35% of their sightings of Grevy's zebras were in the presence of livestock, and for non-lactating females the percentage was even lower. This suggested that the Grevy's were relegated to suboptimal habitat, a potentially harmful situation for female zebras attempting to regain body condition after weaning their young. "The people heard our message," commented Dr. Rubenstein, "as one year later more Grevy's were walking with the livestock and, when asked about this change, 'we quit throwing rocks at them' was the reply". By allowing the Grevy's to drink during the day with the livestock, the zebras were subject to less risk of predation than when they had been kept away from the water during the day and had to wait until nightfall to drink.

Since 2001, Earthwatch® volunteers working at the Lewa Wildlife Conservancy have been instrumental in helping us show that part of the reason that Grevy's zebras fare poorly even in the best of conditions is related to competition with plains zebras," said Rubenstein. "Their data also showed that Grevy's zebras prefer to drink during the morning, highlighting the problem of co-existing with herds of livestock outside the conservancy that occupy waterholes during the daylight

hours. By having to wait until dusk to drink, Grevy's zebras face elevated risks of predation." Earthwatch® is celebrating its 35th anniversary of putting researchers in the field, helping to keep them there via funding and volunteer support as well as a long tradition of putting zookeepers in the field.

In March, two zookeepers from Saint Louis, two from San Diego Zoo and one from Minnesota Zoological Park added their special expertise to the Grevy's Zebras project. They will be able to share first-hand knowledge of Grevy's zebra behavior and habitat needs in the wild.

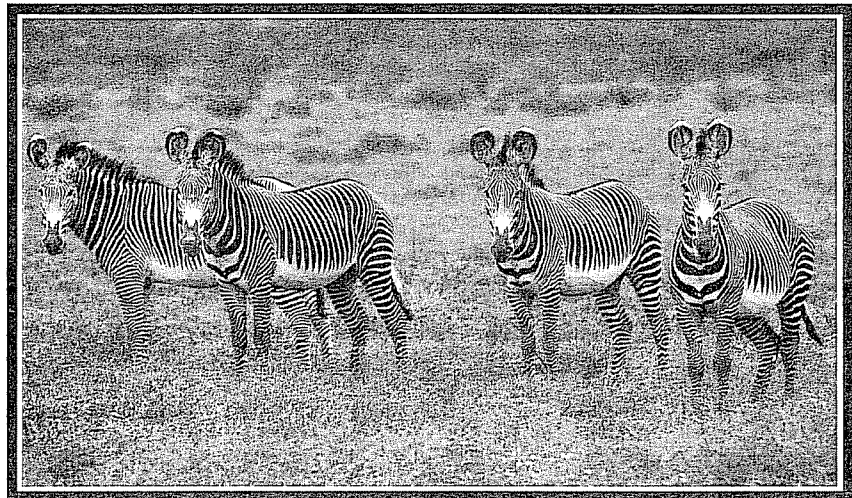
Part of WildCare Institute's involvement in Samburu is helping to develop a teacher training program to introduce ecological and conservation thinking into local schools. Therefore, learning about the Grevy's zebra and conservation issues can be a year-round effort rather than simply the workshops held once or twice a year. And this year, the Saint Louis Zoo is recruiting a team of interested volunteers to participate in Earthwatch's Grevy's Zebras project in September. The Earthwatch® project began in 2001 and Dr. Rubenstein advised that "Much of my data comes from my working with Earthwatch® teams."

Dr. Rubenstein is chair of the Department of Ecology and Evolutionary Biology and Director of the Program in African Studies at Princeton University, as well as a Board member and principal investigator for Earthwatch® Institute.

To learn more about Earthwatch's Grevy's Zebras project, go to www.earthwatch.org/conservation/samburu.html

To join Saint Louis Zoo's special September Grevy's Zebras team, go to <http://www.stlzoo.org/education/zootravelprogram/kenyaeearthwatchtrip906.htm>

For more information about WildCare Institute's Grevy's zebras program: <http://www.stlzoo.org/wildcareinstitute/grevyszebrasinthehornofafr/conservingthegrevyszebrasin/>.



(Photo courtesy of Saint Louis Zoo)