



UIC News Bureau

UIC
HOME

[Main Menu](#)
[News Releases](#)
[Weekly Advisories](#)
[Podcast Interviews](#)
[Experts Guide](#)
[UICNEWS](#)
[In the News](#)
[UIC Quick Facts](#)
[Contact](#)

[Using the News Bureau](#)

[Send Massmail](#)

[Staff Log In](#)

UIC News Release

University of Illinois at Chicago Office of Public Affairs (MC 288)
601 S. Morgan St., Chicago, IL 60607-7113, (312) 996-3456, www.news.uic.edu

[Printer-friendly format](#)

[Email This Release](#)

Release Date: **September 6, 2007**

Media Contact: **Paul Francuch, (312) 996-3457, francuch@uic.edu**

Social Networking Software Tracks Zebras and Consumers

To better understand human behavior, tracking the social habits of zebras may be a good place to start.

Tracking zebras is part of a research plan by a multi-disciplinary group of researchers led by University of Illinois at Chicago assistant professor of computer science Tanya Berger-Wolf.

Berger-Wolf, with Princeton University ecologist Daniel Rubenstein and University of New Mexico computer scientist Jared Saia, received a \$900,000 National Science Foundation grant to create computational tools that provide a broader, more dynamic picture of animal social interactions.

The software may help ecologists devise new techniques to protect endangered species.

The initial focus is on zebras living in Kenya's vast Mpala conservancy. A number of the animals will be fitted with GPS tracking collars that will provide researchers with a more accurate picture of life among the herd, showing how animals interact and which one leads the herd to flee when predators, notably lions, are near.

Zebra species have mainly been reduced to three -- the endangered Grevy's, the Mountain and the common Plains. Rubenstein has studied zebras for more than two decades and hopes to learn more from tracking the social habits of the Plains and Grevy's species to see how they differ in evading predators.

"Zebras are 'fission-fusion' species -- groups within a herd that constantly form and break up," Berger-Wolf said. "Biologists don't know why groups in the two species form and break up differently. They have to get to the core of what it is in the pattern of social interactions and social structure that makes a difference in survival."

The zebras will be tracked every 8 to 15 minutes, and the data will be relayed by cell phone to the researchers' computers, where new computational and analytical software tools developed as part of the project will help map and analyze the animals' social networking in ways never done before.

The tools will help researchers study the time and order of animal social interaction. The approach combines ideas from academic disciplines such as social network analysis, Internet computing, data mining and machine learning to solve the complicated puzzles of population biology.

The result should be a more realistic dynamic look at social patterns that improves upon the present static, aggregate view of information collected at various points in time.

"Zebra social networks change fast," Berger-Wolf said. "You need computational tools to study the dynamics of social networks that match the temporal scale of that change."

While the dynamic computational techniques developed to study zebras and other wild animals will be a valuable tool for conservation biologists, it may eventually be adapted to study the buying and social habits of humans, the spread of disease or information, or the formation of covert organizations.

"On an abstract level, the methodology is the same," Berger-Wolf said. "But I get much more excited when dealing with questions of conservation biology than marketing."

For more information about UIC, visit www.uic.edu

[Return to News Releases Menu](#)

Copyright ©2007, The Board of Trustees of the University of Illinois.