

SEARCH

THE WEB CNN.com

Powered by YAHOO! search

SCIENCE & SPACE

Elephants' hair tells story

GPS tracking technology could help endangered species

Tuesday, January 3, 2006; Posted: 10:36 a.m. EST (15:36 GMT)



GAP PHOTO

Scientists can track the needs and roaming habits of elephants by analyzing hairs from their tails.

[what's this?](#)
[advertiser links](#)

RELATED

['Rogue' African elephant gets reprieve](#)

YOUR E-MAIL ALERTS

Conservation

Environmental Issues

Kenya

Hunting

or [Create Your Own](#)

[Manage Alerts](#) | [What Is This?](#)

Search Jobs [MORE OPTIONS](#)

Find Your Graduating Class



I Graduated in:



- Home Page
- World
- U.S.
- Weather
- Business at CNNMoney
- Sports at SI.com
- Politics
- Law
- Technology
- Science & Space**
- Health
- Entertainment
- Travel
- Education
- Special Reports
- Video
- Autos with Edmunds.com

SUBSCRIBE TO TIME FOR \$1.99!

[CLICK HERE >>](#)

- SERVICES**
- CNN Pipeline
 - E-mail Newsletters
 - Your E-mail Alerts
 - Podcasts
 - RSS
 - CNNtoGO
 - Contact Us

SEARCH

WEB CNN.com

Powered by

WASHINGTON (AP) -- Lewis had gourmet taste: Whenever the dry season browned grass in his Kenyan sanctuary, he'd abandon the other elephants and race 25 miles to the mountains -- to raid farmers' corn fields under cover of night.

A foot-long hair plucked from his tail, and GPS technology, tell the story.

It's a new way to track elephants' dietary needs and roaming habits that scientists hope ultimately could help the endangered species survive, information key to minimizing conflicts between pachyderms and people.

Indeed, Lewis' roaming cost him his life. Shortly after the research ended, he was found shot to death, presumably by a farmer tired of the crop-raiding.

"Part of the problem with the elephant is, we need to know how much space they really need," explained geochemist Thure Cerling of the University of Utah, who led the research reported Monday in the online edition of Proceedings of the National Academy of Sciences.

"Why do they need a particular space? Could we manage the parks to make them work better for them?"

Shrinking living space, as more people move into lands they once freely foraged, and poaching for ivory threaten elephant populations worldwide. But populations vary widely by country. South Africa, Namibia and Botswana, for example, have booming herds. In contrast, Kenya and certain other African countries are struggling to increase decimated elephant populations.

Because elephants are so large and eat so much, a key question for conservationists is how to designate officially protected areas suitable enough to their needs that they won't roam toward encroaching human settlements.

"Elephants need to find food and water, but also to avoid danger, seek safety and to make social contact with other elephants," explained Iain Douglas-Hamilton of the Save the Elephants Foundation in Nairobi, Kenya. "Understanding elephant motivation defines their needs, and understanding these can help secure a future for the species."

Enter the hair study.

Hair is "like a tape recorder," Cerling said, harboring for long periods traces of dietary chemicals.

He gathered hair from the tails of 35 elephants in Kenya's Samburu National Reserve to analyze for long-lasting forms, called "stable isotopes," of carbon and nitrogen that would appear when an elephant ate mostly grass, trees or some other plant. He matched that testing to Save the Elephants' tracking, using Global Positioning System technology, of elephant movements.

Among the first seven elephants tested, 40-year-old Lewis was the wild guy. During the rainy season, he stayed in Samburu with his fellow pachyderms and ate the plentiful grass.

When the dry season hit and the grass died, the other pachyderms started munching bushes and trees. But Lewis bolted for Mount Kenya's thick Imeni Forest -- he could make the 25-mile trek in just 15 hours, an elephant phenomenon called streaking. There, he'd munch bushes or trees by day and raid for corn by night.

Tracking elephant movements suggests the intelligent mammals do know where their protected habitats end, but some still risk human contact to find higher quality food, said Douglas-Hamilton, whose earlier research helped lead to the 1989 international ivory ban.

Bulls in particular are prone to such forays, because the better diet can help their quest for

a mate.

More hair sampling, now under way, should help scientists determine how much of certain plants elephants need in their diet, and exactly when they start foraging for them, he said.

That data should help conservationists' not only better plan elephant sanctuaries, but help local communities find ways to minimize crop damage when bulls like Lewis decide to roam.

Copyright 2006 The [Associated Press](#). All rights reserved. This material may not be published, broadcast, rewritten, or redistributed.

Story Tools

- [SAVE THIS](#)
- [E-MAIL THIS](#)
- [PRINT THIS](#)
- [MOST POPULAR](#)

advertisement

[Click Here to try 4 Free Trial Issues of Time!](#)



SPACE

[Section Page](#) | [Video](#)

[Elephants' hair tells story](#)



- [Aquarium restocking after Katrina losses](#)
- [Mars rovers keep exploring Red Planet](#)
- [Scientists grow stem cells in new medium](#)

TOP STORIES

[Home Page](#) | [Video](#) | [Most Popular](#)

[Mine rescuers speed up efforts](#)



- [Source: Abramoff to plead guilty to fraud, other charges](#)
- [Search for survivors ends at collapsed ice rink](#)
- [Recovery teams search for fire victims](#)

[International Edition](#) [CNN TV](#) [CNN International](#) [Headline News](#) [Transcripts](#) [Advertise with Us](#) [About Us](#)

SEARCH

[THE WEB](#)

[CNN.com](#)

Powered by **YAHOO!** search

© 2006 Cable News Network LP, LLLP.
A Time Warner Company. All Rights Reserved.
[Terms](#) under which this service is provided to you.
Read our [privacy guidelines](#). [Contact us](#).

External sites open in new window; not endorsed by CNN.com
 [Pay service with live and archived video. Learn more](#)
 [Download audio news](#) | [Add RSS headlines](#)