Elephant movement can provide objective measure of seasonal boundaries

June 27 2012

Elephant movement in response to changes in rainfall patterns can be used to determine biologically relevant boundaries between seasons, as opposed to commonly used arbitrary definitions of seasons. The full report is published June 27 in the open access journal *PLoS ONE*.

Elephant movement patterns are known to be affected by seasonal changes in rainfall. In different years, though, rainfall patterns can vary, and it can be difficult to determine seasonal boundaries, so the authors of the study, led by Patricia Birkett of the Amarula Elephant Research Programme at the University of Kwazulu-Natal in South Africa, investigated the correlation between elephant movements and rainfall by tracking the movement speed of 14 female elephants in Kruger National Park from 2006 to 2010. They found that the speed changed sharply at the end of both the wet and dry seasons each year, suggesting that movement patterns could provide an objective definition of seasonal boundaries.

Birkettt explains, "These seasonal boundaries are relevant to the specific aspects of the environment that we are interested in understanding or managing."

More information: Birkett PJ, Vanak AT, Muggeo VMR, Ferreira SM, Slotow R (2012) Animal Perception of Seasonal Thresholds: Changes in Elephant Movement in Relation to Rainfall Patterns. PLoS ONE 7(6): e38363. doi:10.1371/journal.pone.0038363

PHYS.ORG

Provided by Public Library of Science

Citation: Elephant movement can provide objective measure of seasonal boundaries (2012, June 27) retrieved 30 April 2024 from https://phys.org/news/2012-06-elephant-movement-seasonal-boundaries.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.