

Tracking tigers in 3-D

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This is a three-dimensional model fitted to a camera trap image of a tiger.
Credit: WCS

New software developed with help from the Wildlife Conservation Society will allow tiger researchers to rapidly identify individual animals by creating a three-dimensional model using photos taken by remote cameras. The software, described in an issue of the journal *Biology Letters*, may also help identify the origin of tigers from confiscated skins.

The new [software](#), developed by Conservation Research Ltd., creates a 3D model from scanned photos using algorithms similar to fingerprint-matching software used by criminologists.

The study's authors include Lex Hiby of Conservation Research Ltd., Phil Lovell of the Gatty Marine Laboratory's Sea Mammal Research

Unit, and Narendra Patil, N. Samba Kumar, Arjun N. Gopaldaswamy and K. Ullas Karanth all of the Wildlife Conservation Society's India Program.

Researchers currently calculate [tiger populations](#) by painstakingly reviewing hundreds of photos of animals caught by camera "traps" and then matching their individual [stripe patterns](#), which are unique to each animal. Using a formula developed by renowned tiger expert Ullas Karanth of WCS, researchers accurately estimate local populations by how many times individual [tigers](#) are "recaptured" by the camera trap technique.

It is expected that the new software will allow researchers to rapidly identify animals, which in turn could speed up tiger conservation efforts.

"This new software will make it much easier for conservationists to identify individual tigers and estimate populations," said Ullas Karanth, Senior Conservation Scientist at the [Wildlife Conservation Society](#) and one of the study's co-authors. "The fundamentals of tiger conservation are knowing how many tigers live in a study area before you can start to measure success."

The study's authors found that the software, which can be downloaded for free at: www.conservationresearch.co.uk, was up to 95 percent accurate in matching tigers from scanned photos. Researches were also able to use the software to identify the origin of confiscated tiger skins based on solely on photos. Development of the software was funded through a Panthera project in collaboration with WCS.

Facilities for obtaining the images used for the construction of the three-dimensional surface model were provided by the Thrigby Hall Zoo, Norfolk, England. Centre for Wildlife Studies, Bangalore and the Wildlife Conservation Society, India Program provided images, local

resources and staff time for this study, which was supported in part by a grant from the Liz Claiborne / Art Ortenberg Foundation.

Source: Wildlife Conservation Society ([news](#) : [web](#))

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