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This App Will Identify Rare Animals by Tracking Their Footprints

By **Nadia Sadi** - June 4, 2017

Researchers have developed a method to track endangered species using drones and smartphones and it will require the help of everyone. The new footprint identification called **ConservationFIT** is helping scientists locate animals by reading the digital images of the footprints from cameras, drones and smartphones taken from everyday people.

According to Stuart Pimm, the Doris Duke Chair of Conservation at Duke University's school of the Environment, the app is bringing crowdsourcing

techniques to research.

In this program, you will be able to upload an image of a bird, plant or butterfly, and the researchers will be able to help you identify it.

Although tracking rare species is not easy, this kind of technology will make it easier to look at population sizes, and follow individual animals. In addition, the software uses unique algorithms that read the digital images of animal tracks. For example, a cheetah footprint will identify the gender, species, and age of the animal that made them.

The goal of ConservationFIT
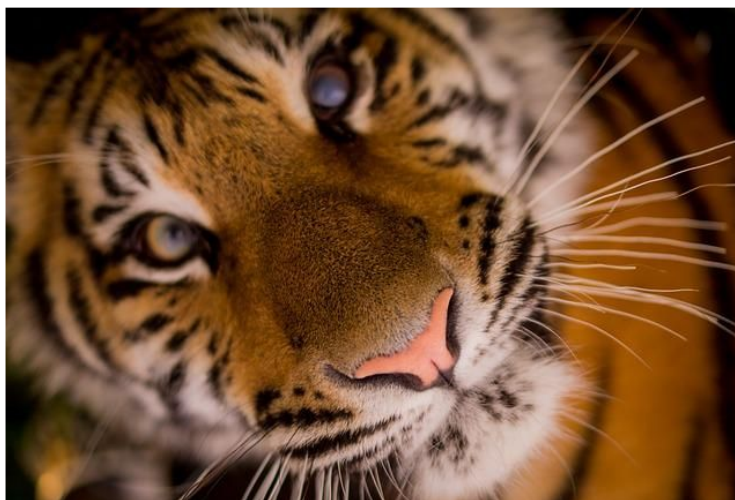
The researchers at Duke University and SAS developed the interactive software in order to monitor and locate endangered and elusive species.

That is how even if you do not know what species made the footprint, you can still upload the image.

The system is user-friendly and is integral as it is difficult getting accurate data on animal numbers, which we need for wildlife conservation.

Furthermore, ConservationFIT allows the researchers to get the attention of millions of people who own drones or smartphones. Scientists can also use data from the images and map its geographic distribution. For now, they are focusing on the endangered species of big cats, such as jaguars in the Americas, snow leopards in Asia, and cheetahs in the Middle East and Africa. More locations and species will be added later on.

The program runs JMP software from SAS, which is a data analytics company

in Cory, North Carolina. Each footprint identification technique algorithm is tailored towards each species, and then it is field-validated by graduate students. The data is fed back into the software in order to make changes to the algorithm.

What is the mission?

The mission of ConservationFIT is simple, and it is to provide non-invasive monitoring of endangered species that involves the community. It is also meant to lower human-wildlife conflict. It will not disturb the animal, and it is safe to use, and it is cost-effective.

According to Stuart Pimm, it is not recommended to go into the habitats of the wildlife, but you can place something like a ruler and you will be able to get a footprint. From that footprint, the researchers can digitize the key characteristics of the footprint. Therefore, they will be able to understand how many individuals they have.

It also involves social networking to bring communities together. Furthermore, scientists will share your findings with scientific data repositories such as the Global Biodiversity Information Facility in order to help scientists use and research your findings.

It is meant for people to reconnect with nature and the outdoors, and it is meant for us to get a better understanding of our biodiversity.