# ICON:
# International Camera Observation Network
## Transforming Images to Estimates

Wildlife photographer and enthusiast, George Shiras, pioneered the first use of camera traps in the late 1800s and, since that time camera traps have been used as a window into the secret habits of animals in the wild.

**Today, camera traps are used by:**

- **Wildlife enthusiasts for viewing enjoyment**

- **Park and game mangers to determine species occurrence**

- **Wildlife Scientists and Managers to estimate populations and trends, discover new species, and to manage and protect critical habitat**
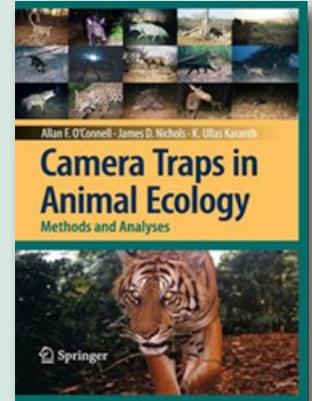


First camera trap book to address population estimates by A. O'Connell, J. Nichols and, U. Karanth

Because camera traps are now available commercially, there has been a proliferation of cameras deployed for hobbyist and scientific purposes. This creates an opportunity to transform images of wildlife to estimates of populations.

## Study Design

Many study design issues have been considered for conventional capture-recapture studies that use camera traps; more research is needed for single- and multi-species occupancy modeling or for spatially explicit capture-recapture models.

Photo by Ullas Karanth, Wildlife Conservation Society



Camera trap

### Population/Community Inferences

More research is needed to enhancemodels to analyze camera-trap data, especially for spatially-explicit capture-recapture models and multi-species occupancy models. In addition, exciting opportunities exist to combine camera-trap data with other types of data (e.g., genetic identification data, animal sign data, radio-telemetry data). This type of research will require close cooperation between quantitative biologists and field biologists, a focus of this new initiative.

### Science-based Decisions

The majority of camera-trap studies being conducted around the world are motivated by interest in informing conservation. However, virtually nowhere is there a program for management or conservation in which there is a clear path from data and inferences to decisions. This approach will effectively embed science within a larger management framework, insuring optimal use of camera-trap data for conservation purposes.