

Camera Trapping + ML

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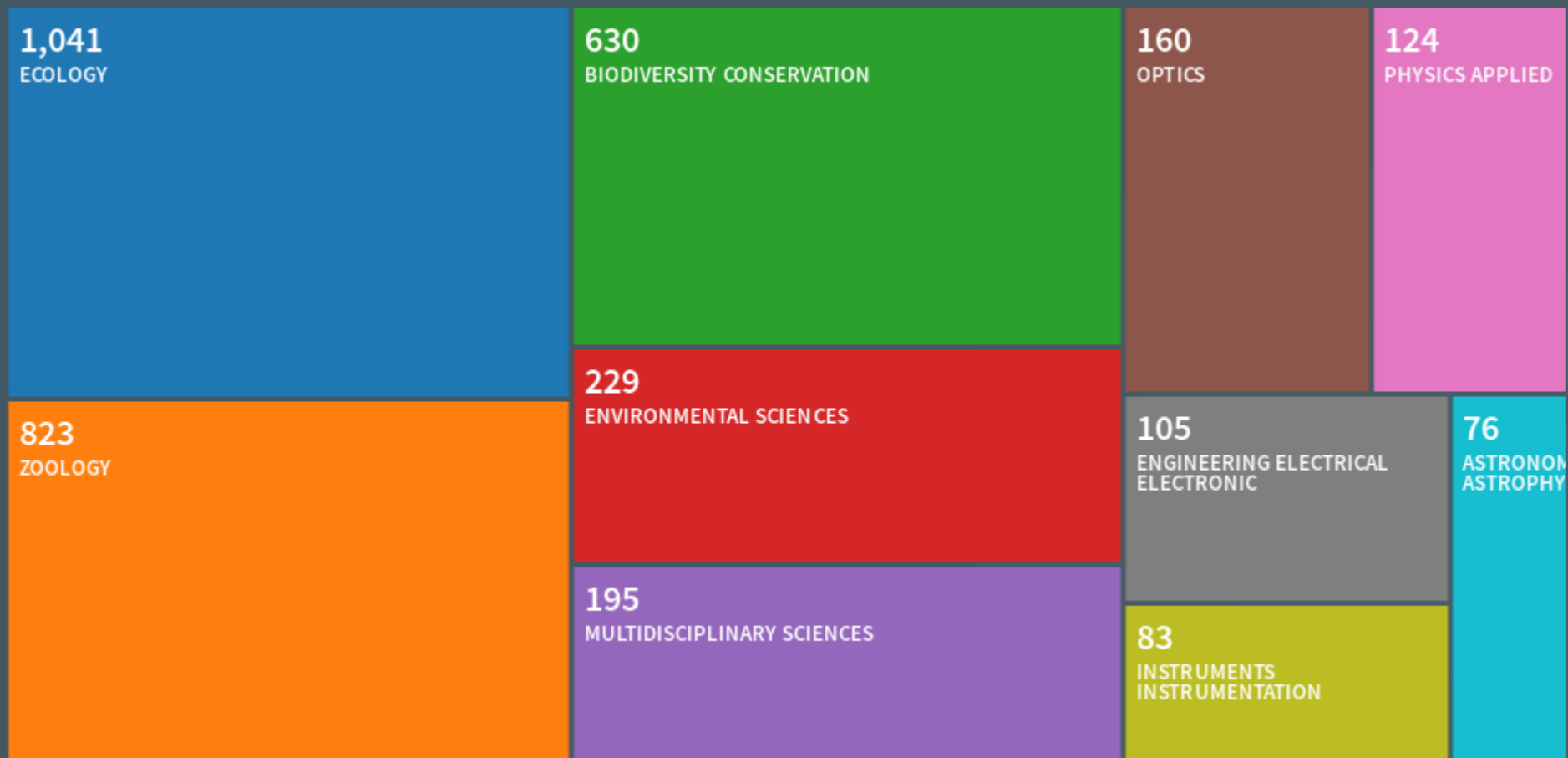
Institute of Zoology @ ZSL

Camera Trapping?

- Automatically triggered cameras
- Triggers include
 - Infrared (most common)
 - Tripwire
 - Timer
- Medium to large mammals

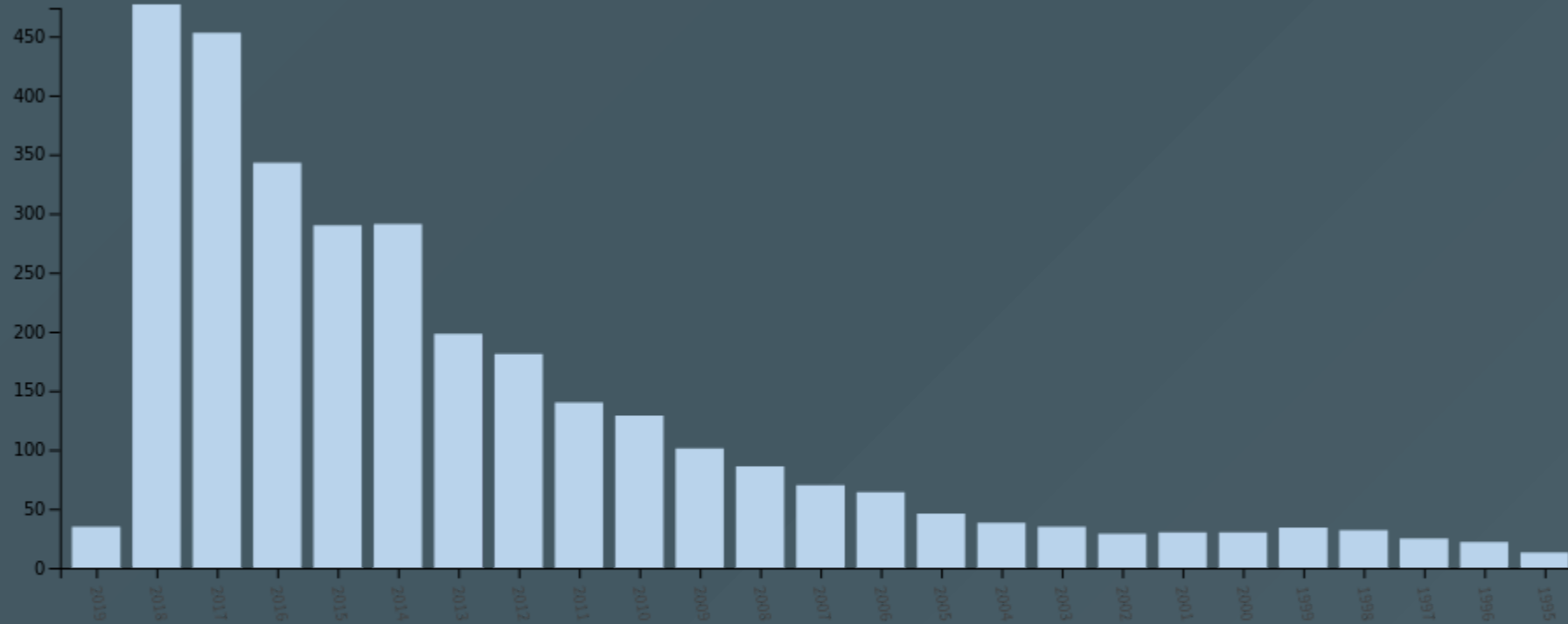


"camera trap" since 1995



(Web of Knowledge by Category, 2019)

"camera trap" since 1995



(Web of Knowledge by Year, 2019)

Labeling

- Time consuming
 - Borneo: 1 month study - 3 months labeling. (Oliver Wearne, IoZ)
- Citizen Science
 - Snapshot Serengeti:
 - 225 camera traps, 1.2 million images
 - 28,000 users
 - (<https://www.nature.com/articles/sdata201526>)

Classification

- Pretty much done
- Same problems as general study (background)

Object Detection

- Multiple in image
- Speed of movement between images...



MAXIMUM OF THE

RECONIX



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Future

- Images (Convolution) + Image Metadata (Time, Location etc.)
- Bayesian deep learning (Chances of seeing an Owl in Africa)
- Movement analysis (Help with classification?) - assist in analysing activity and health.