Camera Trap Data Collection Protocol

Adapted from fieldwork protocols developed by the Koa team for the 2025 Experiential Introduction to AI and Biodiversity course, in collaboration with NEON, ABC Center, and Imageomics.

Pre-deployment Preparation

- Format SD cards in camera traps before deployment
- Label SD cards and camera traps with unique IDs
- Charge batteries and pack spares
- Access Jotform for data entry: Camera Trap Data Form, with a paper backup

Equipment Checklist

- Camera traps with paired SD cards
- GPS unit
- Zip ties for mounting to fence posts and trees
- Field notebook and pencil

Camera Configuration

- Set date/time: Navigate to settings using up/down arrows
- Configuration sequence: Time → Date → Photo burst (3 photos) → Delay (00:15) → Sensitivity (HI) → Detection mode (dEFN) → Format (FOrN). Note: confirm this is consistent across all models.
- Test trigger by waving hand in front of sensor
- Record camera ID and SD card pairing in field notebook, and back up CSV to OSC.

Confirm on Thursday

Camera Trap ID	Trap Model	Configuration Steps
CT-001	Reconyx HyperFire 2	1. Insert SD card and batteries2. Set date/time via menu3. Configure trigger sensitivity (Medium recommended)4. Set image resolution to 3MP5. Enable time-lapse mode if needed6. Test trigger mechanism7. Secure with Python lock cable

Camera Trap ID	Trap Model	Configuration Steps
CT-002	Bushnell Trophy Cam HD	1. Install 8 AA batteries2. Insert Class 10 SD card3. Power on and set clock4. Select photo + video mode5. Adjust PIR sensitivity to Normal6. Set timer interval to 1 second7. Enable multi-shot (3 photos)8. Test and mount securely
CT-003	Stealth Cam G45NGX	1. Load 8 AA lithium batteries2. Format SD card in camera3. Set up time stamp format4. Configure trigger speed to 0.4s5. Set detection range to 80ft6. Enable night vision flash7. Program quiet operation mode8. Perform field test
CT-004	Cuddeback Dual Flash	1. Insert batteries (8 AA recommended)2. Install 32GB SD card minimum3. Synchronize camera clock4. Set dual sensor mode5. Configure flash range to 20ft6. Enable burst mode (5 images)7. Set sleep timer to 5 minutes8. Calibrate motion detection

Camera Trap Deployment

Site Selection & Setup

- Select monitoring locations based on wildlife corridors, water sources, and habitat features. Confirm with conservation experts at The Wilds. - Ensure site is accessible and safe for equipment deployment
- Mount camera traps at eye-level (approximately 5 feet) on fence posts or trees using zip ties

- Ensure detection zone is free from vegetation obstructions (approximately 10-15 feet in front of camera)
- Record deployment details in Jotform and field notebook, and back up CSV to OSC.

Regular Maintenance Protocol

Camera Trap SD Card Replacement

1. Approach camera and record location ID in field notebook
2. Wave hand in front of camera to mark end of collection period
3. Turn camera off (slide switch to bottom position)
4. Remove SD card and record:
    - Camera ID
    - SD card ID
    - Date and time removed
    - Battery status
5. Insert fresh SD card from paired set
6. Record new SD card ID
7. Turn camera on and set current date/time
8. Wait 15 seconds for initialization (red light stops flashing)
9. Test trigger with hand wave

Equipment Checkslist

- Remove spider webs and debris from lens and sensor
- Check battery level (replace if low/dead)
- Tighten mounting if loose
- Verify detection zone is clear

Troubleshooting

- No photos: Check battery, SD card seating, detection settings
- Blurry images: Clean lens, check for condensation
- Inconsistent triggering: Adjust sensitivity, clear detection zone

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This protocol should be reviewed and updated based on site-specific conditions and research objectives at The Wilds.