



Unmanned Aircraft Systems (UAS) Workshop

Farm Cocodrilia, Sunday July 3rd

Presenters:

Raymond Carthy, Andrew Ortega, Lonnie McCaskill, Carlos Piña, Marco Lopez Luna, Jeff Lang.

Objective and expected results: UAS technology is becoming more affordable and accessible, and is proving to be a useful tool in wildlife research and conservation. Within the Crocodile Specialist Group there are both active UAS users and people interested in exploring use in their own work. This inaugural workshop aims to bring together experienced and new users to share information and ideas with the goal of initiating an interactive UAS Users Group within the CSG community.

0800- 1000 Introduction to Unmanned Aircraft Systems (UAS)

- Introductions: workshop presenters; workshop; Workshop overview.
- Setting the scene
 - What is a Unmanned Aerial Vehicle(UAV); types (fixed-wing, multirotor); controls; sensors, how does a drone fly?
 - What are the components of a UAS?: platform, sensor(s), ground station, post-processing system for data, data storage system.
 - Assembling, maintaining and, troubleshooting UAS system components.
 - Safety and regulatory considerations.
 - Reference information.
 - How can UAS enhance my research/conservation efforts?

1000- 1030 Coffee Break

1030- 1200 UAS applications

- Fitting the tool to the question; Turnkey solutions; Case studies.

1200- 1330 LUNCH

1330- 1600 UAS basics and hands-on

- Preparation, Precautions, and Pitfalls: “Three P’s” of UAS Use for Scientific Data Collection.
- Optimal and non-optimal flight conditions.
- Spatial mapping (orthomosaics) and density estimation (transect surveys) with UAS; How to set up flights on different programs and their utilities.
- Flight planning practice. Demonstration and practice flights (*Contingent on availability of UAS equipment and permissions*).
- *Wrap-up Session: Discussion of Standard Operating Procedures, Guidelines and Ethics for drone use in crocodylian research and conservation.*