

**STANDARD OPERATING PROCEDURES:  
ESTACION BIOLOGICA CAÑO PALMA CAIMAN SURVEY**

Date Revised: May 29, 1998  
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## OBJECTIVE

To gather sufficient information on the stability of the caiman population within Caño de Palma and determine impacts of tourism and development.

## METHODS

The caiman survey is an ongoing record of the caiman living in the canal within the property boundaries of Caño Palma Biological Station. We are interested in keeping track of the approximate population as well as the approximate sizes of the Caño Palma caiman. The survey has been set up to take place during different lunar cycles to determine whether moon phase has an effect on the caimans' behavior. Also included are weather conditions and canal water levels.

The survey is to be carried out over two nights at two moon stages: Full and New. For considerations of practicality (rain, change of volunteers, scheduling, etc...), any two out of the three nights surrounding the moon phase are acceptable study periods. For example, the study period around the full moon in June 1998 could occur on either the 9<sup>th</sup> and 10<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup>, or 9<sup>th</sup> and 11<sup>th</sup>.

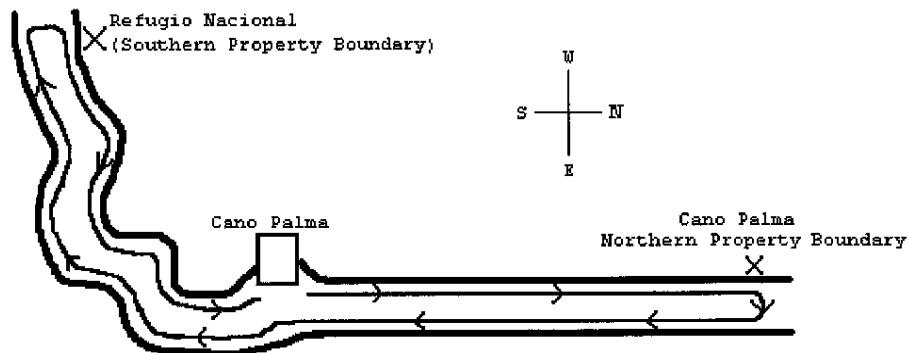
### Caiman Survey Schedule for 1998

Month	Full	New
June	9,10,11	23,24,25
July	8,9,10	22,23,24
August	7,8,9	21,22,23
September	5,6,7	19,20,21
October	4,5,6	19,20,21
November	3,4,5	18,19,20
December	2,3,4	17,18,19

The survey should be started around 9 pm. Start time and duration should be recorded. Although a specific route is covered, the time taken to complete a survey should be between one hour and 90 minutes.

Greatest success for spotting the caimans is achieved by paddling the canoe along the canal and using head lamps to spot bright orange eye-shines along the banks of the canal. The high-powered spot light can be brought along for spotting of nocturnal mammal activity although minimal disturbance to the caimans should be kept in mind. In consideration of paddling against the current of the river, it is recommended to paddle north first and then south.

### Route for Caiman Survey



Caimans should only be counted on one side of the canal at a time. For example; west bank heading north, followed by east bank returning south. Once a Caiman is spotted, it should be approached slowly in order to secure an estimate of its size. No contact should be made with a caiman. Note the exact time each caiman is spotted in order to get a rough estimate of the distance between each individual.

**RESULTS**

The following tables can be used as a guide and should be entered into the database for each night the survey is conducted.

Date	
Observers	
Moon Phase	
Weather	
Water Level	
Time Out	
Duration	

Sighting	Time	Location	Size	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

**NOTES**

1. Canal water level can be taken from the water level gauge at the end of the dock.
2. Location should be entered as NW, NE, SE and SW in relation to the station and side of canal. (See route map) Where applicable, more specific notes on location should be entered in "comments".
3. Estimates of caiman size should be given in cm and reflect overall length from tip of mouth to tip of tail.