

## **Lion collaring report, Waza National Park**

**February 14-16, 2009**



**Part of collaring team with lionesses**

### **Objective**

Collar two lions (male and female) in Waza National Park with two refurbished GPS Plus collars. This operation was conducted within the framework of ongoing research on lions by the University of Leiden, the Netherlands and the Centre for Environment and Development Studies in Cameroon, the University of Dschang. One of the objectives of this research is to monitor the movement of lions in Waza NP in relation to stock raiding.

### **Participants**

- Hans de Iongh (Team leader)
- Iris Kirsten (Leo Foundation)
- Gregory Rasmussen (Lion darting)
- Hans Bauer (Visiting guest)
- Pricelia Tumenta (PhD data collection)

- Lana Muller (Student CML)
- Hermen Visser (Student CML)
- Derick (Student CML)
- Tuqa Jirmo (KWS)
- Charles Musyoki (KWS)
- Armed guards (2)
- Guides (2)
- Drivers (2)

## Materials

|   |                         |
|---|-------------------------|
| Dan-inject gun                                | 1.5ml darts             |
| 30ml needles                                  | Gas canisters           |
| Zalopine( medetomidine) & Ketaject (Ketamine) | Antisedan (Atipamazole) |
| Syringes                                      | knife                   |
| Pliers  | Blood sampling kit      |
| 40 litres gallon of water                     | Bucket & soap           |
| Night vision goggles                          | GPS Plus collars        |
| Bait  | Collar key              |
| Receiver to test collars                      | Meg light               |
| Rope  | Torches                 |
| Machete                                       | 200kg scale balance     |
| Spot light                                    | Sticks                  |
| Speakers                                      | Hooks                   |
| MP3 player                                    | Large sac               |
| Amplifier                                     | Measuring tape          |
| Wire/plugs                                    | GPS unit, range finder  |

## Method

Calling stations were used to attract lions for darting. Calls were played 30-45 minutes alternated by 15 minutes of silence until lions showed up. An MP-3 player connected to a 400 Watt amplifier and two speakers (50 Watt each) placed on the roof the car supplied the sound playback. This car was positioned at 20m from a tree on which the bait was attached. Before attaching the bait to a tree, a scent drag was made from behind a vehicle for 1km in different directions. Darting was accomplished from a Dan-inject immobilization gun with a 1.5 ml dart containing 1.0ml Zalopine + 2.0ml ketaject.

The combination of morning survey, bait, scent drag and pig squeal playback (distress calls of a warthog) optimized the chances of attracting lions. When a lion appeared at bait, it was gradually habituated to a spotlight before darting. The team only approached an immobilized lion on instructions and measurements only started if the health status of the lion was judged to be good. After collaring, measurements and collection of samples were over, the lions were monitored during recovery. 10ml of Antisedan was administered as antidote.



**Fitted collar on lioness, named Perdita**

### **Collaring operation**

The collaring team arrived Waza at 13:30pm February 14, 2009. After a short briefing on the protocol by Hans de Iongh, the team entered the park at 16:00pm for Goumbouremaram waterhole where a lion and lioness were sighted that morning. After installing the calling station and capture site, calling was to commence at 18:00pm. All attempts to get the calling station functioning failed, thus the operation was aborted at 19:00 and the team retired to the camp.

The next day February 15, 2009, the team entered the park at 5:30 am for morning survey and search for fresh lion signs at watering points. Fresh lion spoor were seen at Dourbatssa and at Goumbouremaram. A thorough scanning of the Dourbatassa area which was relatively open yielded no fruits. The team retired to the camp at 10.00am. After a meeting with Hans de Iongh and a briefing, he departed for Maroua at 14:00pm for other responsibilities. The team joined by the park warden entered the park at 16:00pm for Goubouremaram again where spoor belonging to more than one lion were seen that morning. After a scent drag, the capture site and calling station were installed. Because there were additional team members from WWF and CRTV, a briefing on the protocol and rules was given by Pricelia Tumenta delegated by Hans de Iongh.

Calling started at 19:00pm and within 15mins two lionesses responded to the call. They moved in and settled at the bait. After habituation with light, the first dart was shot at about 19:35pm. This was however unsuccessful due to low pressure in the dart. After a vain effort

to track the shot lioness, we returned to the capture site to retrieve the bait. Surprisingly, the second lioness was feeding on the bait so we quickly backed out and repositioned the car for darting. Giving the lioness time to feed, a second dart was shot which was assumed to have missed the target. After waiting quietly for some time, a lioness was on the bait again and was successfully darted. Locating the lioness became an uphill task in the high vegetation. Back tracking to the capture site to retrace the direction into which the lion ran took longer than necessary due to lack of experience by the tracker and the absence of navigation equipment. We however got to the site and followed the direction for less than 100m. We were astonished to find the two lionesses lying side by side under sedation. After an assessment by Gregory Rasmussen, the lionesses were reached for collaring, measurements and collection of samples. Both lionesses were young and in good health condition. Only one lioness was collared and no vein was available for blood sample collection. The collared lioness was named Perdita while her sister was named Mardidi. With all team members back into their respective cars, the antidote was administered. Within 5-10mins the lionesses recovered sufficiently and walked off. The team retired at 24:00h.

Departure for Maroua on February, 16 2009 was at 10:00am. Hans Bauer stayed behind with the WWF staff and got contact with the collared lioness and her sister through telemetry.

### **Collared lion**

|                       |                           |
|-----------------------|---------------------------|
| Capture site          | Goumbouremaram            |
| GPS location          | N : 11.26316 ; E 14.62496 |
| Total number of lions | 2                         |
| No. of males          | 0                         |
| No. of females        | 2                         |
| No. of cubs           | 0                         |
| Start calling station | 17 :00                    |
| Time of darting       | 19: 35 h, 20 :15, 20 :35  |
| Lion name             | Perdita & Mardidi         |
| Collar code           | 03593                     |
| Body weight           | 87kg                      |
| Time team left        | 23: 10 h                  |
|                       |                           |



**Leiden University students recording lion measurements**

Only a lioness was collared because upon testing the refurbished collars at the camp before the collaring operation, the male collar failed to communicate with the handheld station.

### **Acknowledgments**

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