



ARGOS TRACKING TO UNDERSTAND THE ECOLOGY AND BEHAVIOUR OF AGAMI HERONS

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Abstract

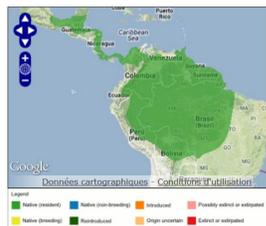
The Agami heron is ranked 13th among the world's conservation priority heron species, and 2nd for the Americas. To date, nothing is known about the areas used during the breeding and the nonbreeding season. In French Guiana, which holds the world's largest Agami heron colony (representing over 95% of the known population), the location and characterization of these habitats as well as the identification of the geographic location and routes travelled by breeding and non-breeding individuals is crucial in order to evaluate the threats on the species and develop an effective conservation action plan both in the département and throughout its distribution in South and Central America. To achieve this objective, GEPOG (Group for the Study and Protection of Birds in French Guiana) is tracking agami herons since 2012 via the European LIFE+ Cap DOM program. Data from one Agami Heron fitted with a satellite transmitter in 2012 showed that this species migrates and is able to cover the distance from French Guiana to Venezuela of about 1300 km within two months, including several stop-overs. During breeding season, this individual had a home range of about 95km² covering the colony surroundings and two feeding sites located in marshes and mangrove forest. This study is pursued in 2013 with 5 other individuals equipped in April with satellite transmitters which are able to work at least 1 year, depending on the environmental conditions.

Introduction

The Agami heron is:

- one of the **most cryptic and unknown** heron species of the Americas
- **scarce** throughout its distribution in North-Eastern South America and Southern part of Central America
- just **uplisted to "Vulnerable"** by the IUCN Red List because it is suspected to lose 19-26% of suitable habitat within its distribution over the next three generations
- one of the **French Guiana flagship bird species** thanks to the colony of over 2000 couples found in the Natural Reserve of the Kaw marshes

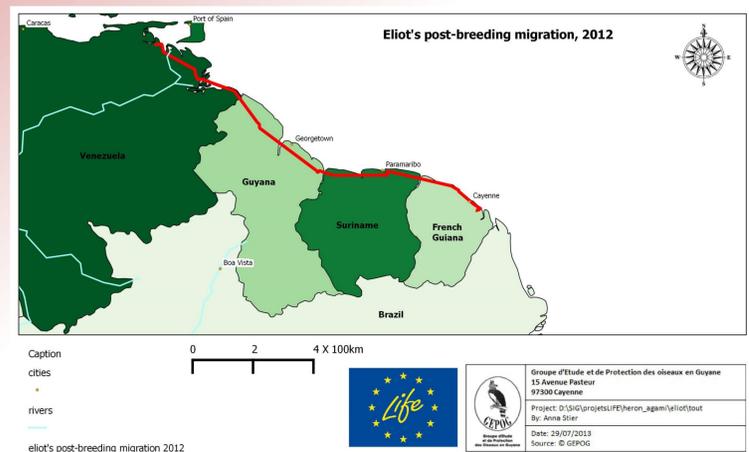
Objective: enhance the understanding of the ecology and behaviour of this species through Argos Tracking



1) Distribution of the species © BirdLife International

First migration Results

Between 8th of July and 6th of September: Eliot flew about 1300km along the coast
Between 28th of July and 21st of August: first stop-over in Guyana, 95% home range = 72km², 50% home range= 14km²
Between 6th of September and 8th of November: second stop-over in Venezuela (no home range analysis available)
8th of November: last signal



7) Mapping of Eliot's post-breeding migration along the Atlantic coast

Materials and Methods

Study conducted between 2012 and 2015 → april 2012: 2 males +1 female; april 2013: 3 males +2 females
Material: NorthStar 20g battery and 12g solar PTTs (USA); Bureau Waardenburg harnesses (Netherlands)

Procedure:

- 2) Step 1: Capture with two 12m nets near to the colony
- 3) Step 2: Biometry measures, selection of birds to be equipped

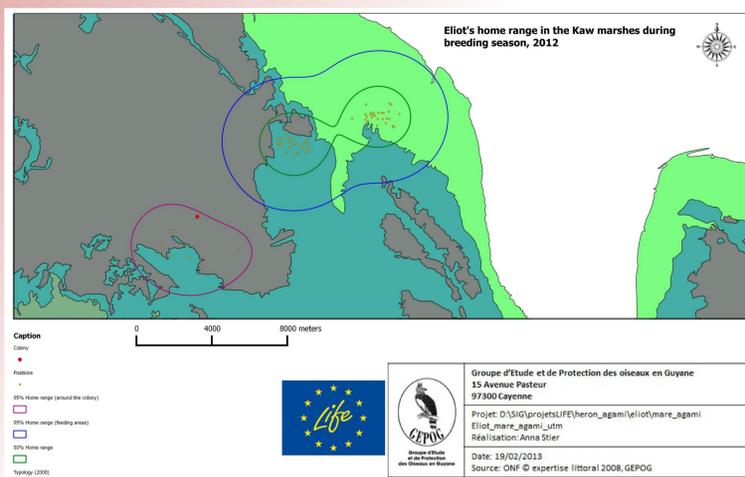


4) Step 3: Equipment, choice of PTT and harness

Step 4: Argos follow up, sex confirmation with genetic analysis, home range analysis of areas frequented during breeding season and stop-overs during migration (Kernel method)

First home range Results

1 PTT worked in 2012: Eliot, a male equipped with a 20g battery PTT
Between 24th of April and 8th of July, Eliot did several round-trips between the colony surroundings and two feeding spots in swamps and mangroves



5) Home range mapping for Eliot : 95% home range = 95km², 50% home range= 20km²



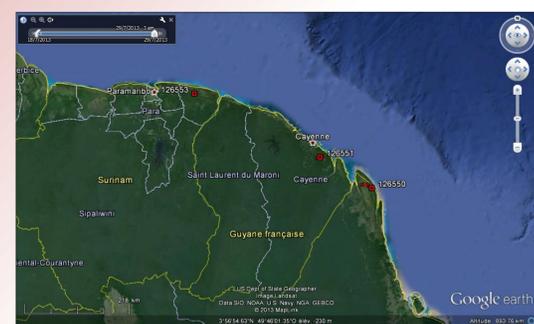
6) Habitat pictures taken from helicopter in April 2013 for each home range spot (confirms the mapping)

Discussion/Conclusions

Conclusion: Agami herons migrate long distances! → Need of international cooperation at the continent level for conservation efforts

Perspectives:

3 PTTs working in 2013: 20g battery PTTs → July 2013: 1 bird in **Suriname**, 1 bird in the **Kaw marshes** and 1 Bird in the **Parque Nacional do Cabo Orange, Brazil**



8) Locations of the birds 126550, 126551 and 126553, 29th of July, 2013



9) Excalibur (female 126553) flying with her PTT in the Kaw Marsh, French Guiana, April 2013



Project web page: www.lifecapdom.org
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 Picture ©: Anna Stier, Mathilde Segers, Vincent Ruffray, Thomas Luglia

Acknowledgments



Bibliography

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