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REPORT OF FIELDWORK

Camera-traps Efficiency and Local Knowledge to African Golden Cat in Boumba-Bek National Park, Cameroon.

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by

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Summary

Boumba Bek National Park (BBNP) is a protected area in Cameroon, a Key Biodiversity Area (KBA) and a hotspot for many species of global conservation importance, including Africa's endangered and elusive cat, the African golden cat Caracal aurata. The African golden cat is still little known and their numbers are declining due to human activities, especially poaching, habitat destruction, loss and fragmentation. This study collected the data needed to design conservation measures by: (i) using community interviews to document local ecological knowledge (LEK), perceptions and extent of human-AGC conflict in six (6) randomly selected villages surrounding the BBNP; (ii) Conduct camera trap surveys of African golden cats to obtain AGC images and determine spatiotemporal distribution, occupancy and abundance; and (iii) initiate and encourage awareness of local population on the importance of protecting AGC by promoting alternatives activities to hunting such as sustainable agriculture in order to mitigate human-AGC conflicts in the BBNP; camera traps efficiency methods inside the park, and questionnaire survey within local communities. The workshop was an opportunity to share research findings with local stakeholders in order to generate community awareness of the plight of AGC.

I.   Background

The African Golden Cat (*Caracal aurata*) hereafter 'AGC', is endemic to tropical Africa (Equatorial western, and central Africa); it is one of the African's least-studied and poorly known felids, and is considered rare in most of its geographic range (Bahaa-el-din *et al*., 2015). The Golden cat is predominantly terrestrial, but irregularly active at any time of night or day. The species is particularly under threat from traditional hunting for subsistence using snares and reported being often caught by wire snares (Bruce *et al*., 2018a; Simo *et al*., 2019, 2021). The African Golden Cat occurs mainly in primary moist equatorial forest, although on the periphery of its range it penetrates savannah regions along riverine forest. In Cameroon the species is reported present in some protected area like Mpem and Djim, complex of Boumba-Bek and Nki, Mbam and Djerem National Parks (Simo *et al*., 2019, 2021; Hongo *et al*., 2020; Mouafo *et al*., 2021). This species is vulnerable on the IUCN Red List and is threatened throughout its range by forest degradation, habitat loss, habitat fragmentation and by unsustainable hunting (Bahaa-el-din *et al*., 2016). Also, and under the national law, the AGC is in Class A (the highest of protection level that means the

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prohibition of hunting, killing, capture and trade in African Golden Cat) - fully protected (MINFOF, 2020). The African Golden Cat is rare species and remains poorly studied over its Africa distribution especially in Cameroon where very few studies have focused on their ecology in the protected areas using Camera-traps methods in the field and local ecological knowledge.

II. Project results

The project was aimed at halting the decline of African Golden Cats by reduce poaching in Boumba-Bek National Park (BBNP) and its surroundings:

1) Local Ecological Knowledge (LEK)

Data were collected in six randomly villages and (Figure 1).

Figure 1: Conducting local ecological survey: a) Research Assistant, b) Principal Investigator

Among the six villages surveyed, we found that all the villagers know the golden cats. Some villages know more than others like the life represented by the village which had more knowledge of golden cats (19.12%), while the village Mambele had less knowledge of golden cats (13.24%), see (Figure 2).
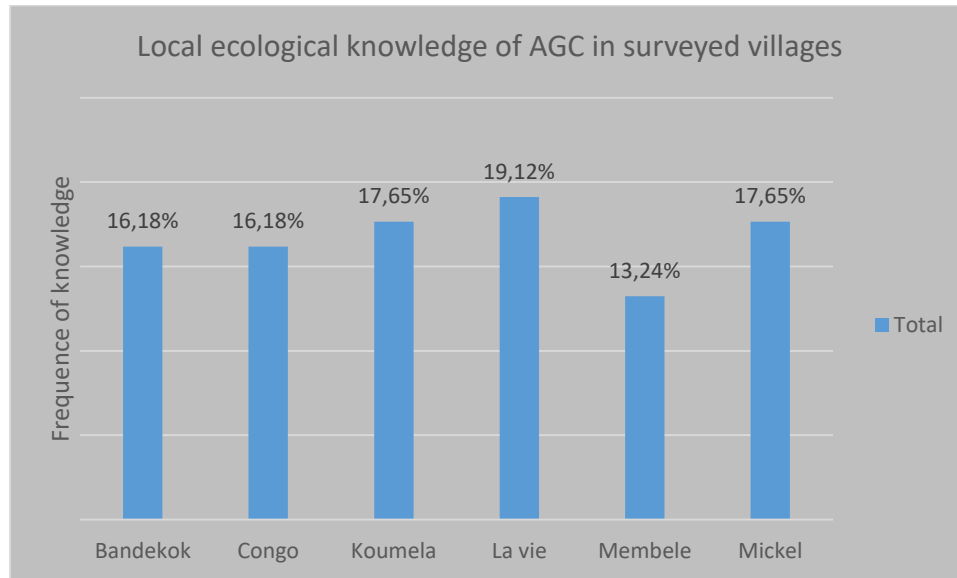

Figure 2: Local knowledge of ACG around the Park

2) Camera Trapping

Camera traps were placed on two blocks of the park, the north and south. These cameras capture important endangered animals such as elephants, gorillas, chimpanzees and many others. They have yet to successfully photograph African golden cats, but locals have reported their presence when collecting local cognitive data. We are still working on it though, and hope to find more camera traps to be deployed widely throughout the park. Interestingly, the project not only led to research on the park's golden cats, but also benefited the protection of many other globally threatened species that also need protection. We noticed a strong anthropological footprint, characterized by signs of human presence in the park, such as wire snares, cartridges, hunting camps and footprints that were removed at the same time. Images obtained by camera traps will be interpreted and analyzed for publication.

Figure 3: Camera Traps Deployment in the field.

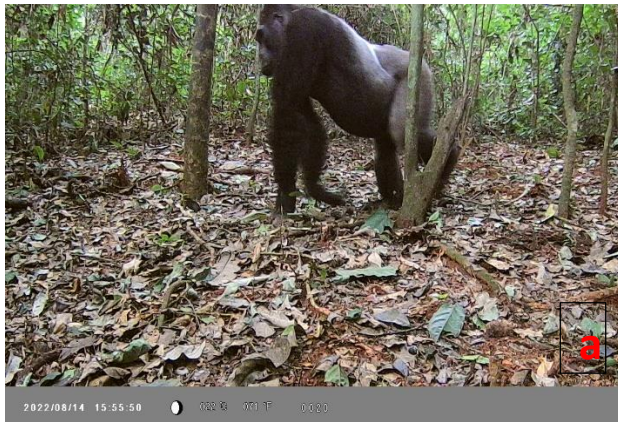Some pictures recorded from Camera traps inside the Park.

Figure 4: Images of mammals recorded: (a) *Gorilla gorilla*, (b) *Bdeogale nigripes,* (c) *Philantomba monticola*, (d) *Pan troglodytes*, (e) *Loxodonta africana,* (f) *Potamochoerus porcus.*

3) Awareness raising campaign

In 2022, awareness-raising activities were organized in villages and schools around the park. The team consisted of a lead researcher who presented the general concept of wild cats and the threats they face, and the African golden cat in particular, highlighting the importance of the AGC and its habitat, mitigation solutions and some basic environmental education. We have used PowerPoint presentations in elementary and middle school. Each awareness session lasts approximately 2 hours, is presented in French and the preferred dialect, and is based on a traditional community meeting format, allowing sufficient time for questions and discussion. The

local community is shy and suspicious of the authorities/foreigners, so we chose to involve locals in the interaction as liaisons between them. A total of at least 600 people were publicized at the scene.

Figure 5: Sensitization of local people in schools and in villages.

Next steps

- We will continue our efforts and seek other sources of funding to continue our investigation and better protect the golden cats in and around the park,
- Maps of study villages will be digitized,
- Descriptive socio-demographic results from six villages,
- The data already collected from Camera traps will be further analyzed for publication in the peer review journal. Our assessment found no conflict between humans and cats as locals complained more about attacks and damage to forests elephants and gorillas.

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