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Report progress By

Franclin Kuate Simo : 42577-2

This research project was aimed (1) to assess population structure (sex ratios, breeding season, fecundity, and distribution), and to monitor changes in population levels; (2) to assess the condition of the crab's habitat by monitoring abiotic water quality indicators (such as oxygen, dissolved ions, and pH) and biotic factors (predators, competition with other freshwater species, food sources); and (3) to use these data to implement conservation management measures aimed at stabilising crab population levels.

I have conducted fieldwork each month with my supervisor Dr. Pierre A. Mvogo Ndongo in EkomNkam Waterfall and surrunding areas that include Eboforest Ecological Reserve and Lake Ossa Faunal Reserve.

Fig.1. Ekom-Nkam Water falls

Fig.2- Fieldwork at surrunding areas (Eboforest)

Fig.3 Fieldwork at surrunding areas (Lake Ossa)

A Ekom-Nkam Waterfall, (fig.3), we have assessed the population structure (sex ratios, breeding season, fecundity, and distribution) of *Louisea cataracta*. My supervisors have described the new species, *Louisea cataracta* (Mvogo Ndongo et al. 2025), while I'm working on conservation manuscript on *Louisea cataracter*, *L. edeaensis* and *L. yabassi*. I have also learned from my suppervisors the taxonomic aspects of crab species.

Over a 10 months period we carried out 10 different transects (one transect per month) Ekom Kam waterfall. A total of 70 specimens were collected. All specimens of Louisea cataracta were collected from hidden in puddles, under fallen leaves and small stones, or inside burrows, and it is noteworthy that no specimens were found in nearby streams themselves and no ovigerous specimens was collected. The estimated population density of *L. cataracta* ranged from 1 to 10 individuals/transect during our surveys, and the population consisted mostly of juvenile and sub-adult individuals, with a male to female ratio of 1:1. No ovigerous females or females carrying hatchlings were encountered during the study so there is still no basic reproductive information available on the number of eggs laid, and the number of hatchlings produced, and when the breeding season occurs. In this respect reproductive biology are carried out in the laboratory.

Fig.4 Culturing of *Louisea cataracta* in the laboratory of my supervisor for reproductive biology.

The data collected also show that *Louisea cataracta* (Ekom Nkam waterfall) is threatened by tourists whose unregulated activities have led to the trampling of crabs (as well as also killing endangered species of amphibians (Conraua goliath, Hyperolius dintelmanni), reptiles (Arthroleptis nlonakoensis), and plants (Begonia pelargoniiflora) found there). To overcome on this, we adopt the ongoing education component strategies in that was aimed at encouraging local people to become aware of the negative impact on crab species and the stp that need to avoid thremping them. At the moment, the reproductive biology studies is continue in the laboratory.

The fieldwork at Eborest was very successful in rediscovering the threatened specimens of *Louisea* that were identified by Dr. Pierre A Mvogo Ndongo and Prof. Neil Cumberlidge as new species of *Louisea* (Fig. 5).

Fig.5. A new species of *Louisea* collected from Ebofrest zone near Eyingui. @Dr. Pierre A. Mvogo Ndongo

Fig.6. Habitat of the new species of *Louisea* collected from Ebofrest zone near Eyingui.

At the Lake Ossa Faunal reserve, we collected additional data on *Louisea edeaensis* for conservation manuscript that I'm working.

Fig.7. A specimen of *Louisea edeaensis* collected from Lake Ossa Faunal Area @. Pierre A. Mvogo Ndongo

In this project, other interessing species have been collected :

Fig.7. A specimen of a potential new species of Sudanonautes from Eboforest near Eyingui @. Pierre A. Mvogo Ndongo

Fig.7. Photo of Kuate Simo Franclin collecting data in surrunding areas of Ekom-Nkam Water fall.