

## Project Update: December 2019

### Activity: Fieldwork to administer questionnaires and collect tissue samples

Field trips were conducted from 1<sup>st</sup> -25<sup>th</sup> November 2019 to administer questionnaires and collect tissue samples of the endemic Manyara tilapias *Oreochromis amphimelas* and the exotic tilapias Nile tilapia (*Oreochromis niloticus*) and Singida tilapia (*Oreochromis esculentus*) in the study area.

- Three students and two interns were recruited to assist during fieldwork. Also, fieldwork was organised in collaboration with fisheries officers from the study area.
- A total of 50 questionnaires were administered to fishers, community leaders, and the local people in Lake Kindai. Also, meetings with the fishers were organised to raise awareness of the fishers regarding the effects of illegal fishing on fish stocks.
- A total of 160 Manyara tilapias were collected in Lakes Kindai, Singida, and Manyara. The fish were obtained from the local fishermen at landing sites.



Plate 1: Local fishermen using a beach seine net in Lake Singida (© Rumisha 2019).



Plate 2: Dr. Rumisha observing the fish caught with a mosquito bed net at Lake Kindai (© Rumisha 2019). Plate 3: Manyara tilapias caught in a beach seine net (© Rumisha 2019).



Plate 4: The Manyara tilapia *Oreochromis amphimelas* (© Rumisha 2019).

- Also, a total of 15 and 40 Nile tilapia were collected from Lake Kindai and Lake Manyara respectively. Furthermore, 35 Singida tilapia were collected from Lake Basuto.





**Plate 5:** The Nile tilapia *Oreochromis niloticus* (© Rumisha 2019).



**Plate 6:** Rumisha returning from a fishing trip (© Rumisha 2019). **Plate 7:** Dr. Rumisha and fish vendors going to collect fish at a landing site in Lake Kitangiri (© Rumisha 2019).



**Plate 8:** The Manyara tilapia brooding its eggs (© Rumisha 2019)



- Fin clips were collected from the pectoral fins of each fish and the fish were given to fish vendors at landing sites. The collected samples were stored in 2.0 ml specimen collection tubes containing 99.9% ethanol for further analysis.



Plate 9: Dr. Rumisha and his students collecting fin clip samples from fish at Lake Basuto (© Rumisha 2019).



Plate 11: Collection of fin clips from fish (© Rumisha 2019).

- The collected tissue samples were stored in a refrigerator at the molecular laboratory, SUA for further analysis.

### **Challenges encountered and the way forward**

We did not obtain enough samples from Lake Kitangiri, Burungi, and Sulunga because they were generally dry. Therefore, another sampling campaign will be conducted in the rainy season in February 2020 to collect the samples and to administer more questionnaires.