

Project Update: July 2022

Pictures: © David Ouma, team leader



Team Members L-R: Justus Ochong', Winnie Nyagweth', Ronnie Mwangi, Purity Njeri and David Ouma pose for a photo, with a dried-up floodplain wetland in the background.



Engaging fisher folk on sustainable fishing practices, and creating awareness on breeding, and other ecologically important sites

Summary

Tana River Delta, the largest wetland ecosystem in Kenya, has a diversity of marine and coastal ecosystems that stretches to the Indian Ocean. The habitats provide valuable services and are critical source of food security and revenue to approximately 130,000 people residing in lower Tana River and beyond. Majority of these people live from small-scale fishing. Cyprinids account for the largest component of total domestic fisheries catches taken by small-scale artisanal and subsistence fishers. They are well recognised for their ecological diversity. Fishes of the genus *Labeo* are cyprinids belonging to the *Labeo* lineage in the subfamily Cyprininae. *Labeo* redbtail, *Labeo* sp. nov. 'Baomo,' is an undescribed species listed as vulnerable (VU) and endemic to the Tana River delta floodplain wetlands. The species is also highly exploited for food in local fisheries thus increasing threats to extinction.

This report discusses the activities undertaken to conserving the *Labeo* sp. nov. 'Baomo' in Tana River delta floodplains in Kenya with support from Rufford Foundation Small Grants Programme. It follows field conservation activities conducted in August 2021 and June 2022. Field sampling of fish, education and awareness raising workshops and fisher's empowerment activities have been conducted in different floodplain wetlands and next to communities living around Tarassa and Ngao in southern part of the delta and Tamaso and Lango la Simba areas in eastern part of the delta. The wetlands in these areas have their own ecological characteristics. On the southern side the river embankment along Oda channel is high overflowing only at peak floods. The surrounding community practice recession farming as lake water recede and partly irrigate their crops by drawing water from main river channel. In the eastern side, Matomba channel, part of the wetlands has Doum palms while invasion by *Prosopis juliflora* bushes cuts across the entire floodplain.

We recorded six fish species across the wetland floodplains sampled. We did not record the presence of *Labeo* redbtail or any other species in the family Cyprinidae.

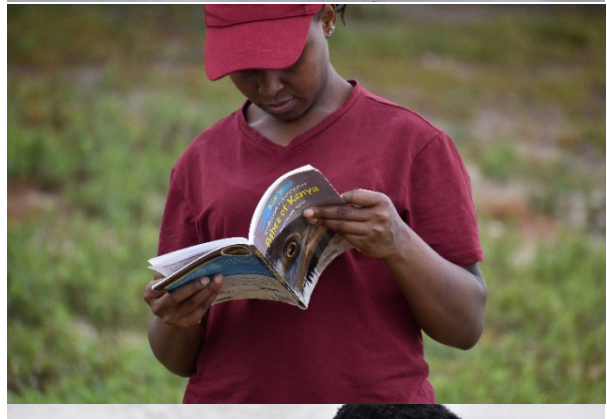
	COMMON NAME	FAMILY	SCIENTIFIC NAME
1.	Tana squeaker	Mochokidae	<i>Synodontis serpentis</i>
2.	Redfin robber	Alestidae	<i>Brycinus affinis</i>
3.	Silver catfish	Schilbeidae	<i>Schilbe intermedius</i>
4.	Tana churchill	Mormyridae	<i>Petrocephalus catostoma tanensis</i>
5.	Tank goby	Gobiidae	<i>Glossogobius giuris</i>
6.	Sabaki Tilapia	Cichlidae	<i>Oreochromis spirulus</i>

Livelihood and economic dependency on fisheries were found to have been affected by the drying of floodplain lakes in the southern part of the delta. Climate change has had a negative impact on rainfall patterns in the delta, the last major flooding event was recorded in 2018 and since then the water impulse in the main river has not been enough to overflow the riverbank to fill up the floodplains. Fishers have also limited options of livelihoods due to the lack of skills, technologies, and knowledge. They strongly rely on natural resources to adapt to climate change.

The photos below illustrate the activities undertaken and the biodiversity recorded in the last field activity under this grant. A detailed final project report will be shared in the coming weeks.



Fish Sampling at Oda Branch of Main Tana River ($02^{\circ} 24' 477''$, $E 040^{\circ} 12' 346''$, Elevation= 6m) in southern part of the delta next to Lake Shakababo



Fish sampling at Lango la Simba Area, Northern Part of Tana Delta (02° 16 923', E 040° 14 926' Elevation= 5m)



Fisherwoman carrying her catch



Fish species caught by the fisherwoman



Oreochromis spilurus, Sabaki tilapia caught at Lango la Simba wetland



Glossogobius giuris, Tank goby



Different species caught at the Lango la Simba area *Schilbe intermedius*, silver catfish



Sykes' monkey (*Cercopithecus albogularis*) spotted in the Forest vegetation along the Tana River during the sampling period. The species is the most dominant primate followed by the yellow baboon and vervet monkey. The critically endangered Tana River red colobus and Tana crested mangabey have become increasingly rare to spot due to habitat fragmentation.





Photos of dried up Lake Shakababo. This was the target lake in this project, it was filled up with water since 2018 but the water levels have been reducing drastically due to prolonged drought that has seen the water levels in the main Tana River river channel reduce to a level that it cannot overflow the river bank to fill up the floodplain. The lake area has since been taken over by recession farmers as can be seen in the photos above. The presence of cattle egrets also an indicator pastoralists occasionally graze their livestock in the area.



Knob billed ducks, *Sarkidiornis melanotos*



Great White pelican, *Pelecanus onocrotalus*



Grey Heron, *Ardea cinerea*



Sacred Ibis, *Threskiornis aethiopicus*



Cattle Egrets, *Bubulcus ibis*



Black winged stilt, *Himantopus himantopus*



Red billed stork, *Mycteria ibis*



A juvenile red-billed hornbill, *Tockus rufirostris*



Yellow-winged bat, *Lavia frons*



Hippopotamus amphibius in water spotted by their snouts



Butterflies patched on flowers



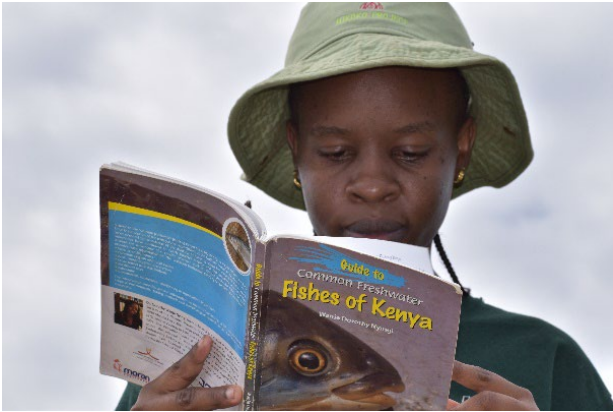
Water abstraction at Lango la Simba wetland for road construction



Project team undertaking fish seining at Lake Tamaso in the southern part of the Delta (02° 17 604', E040° 14.5 64', Elevation= 7m)



Some livestock owned by the pastoralists neighboring in the floodplain (left), a young man looking after sheep in a dried floodplain wetland. The prolonged dry season caused by climate change has impacted all livelihood sources for the community.



Onsite reference to the field guide to common freshwater fishes of Kenya



Muddy banks of Lake Tamaso (02° 17' 604", E040° 14.5' 64", Elevation= 7m)



Curious children from within the community Happy faces of project team members



A section of riverine forest that is being cleared for farming (left) activities and putting up homesteads (right). Forest fragmentation is a serious threat to the primate population in Tana Delta. Further, these degradation affects bird population and increases sedimentation during flooding.



An invasive shrub that is actively taking up cultivated areas in the floodplain



Project team strolling across the floodplain to access the remaining wetlands



River Tana bridge (left) at the point where the floodplain begins, and a section of the



Left: A boy from the pastoralist community cheering the project team. Right: A livestock holding area within the floodplain bushes. Pastoralist often spend their nights out in the field after a long day of searching for pasture. Such areas become sizeable ecological islands, supporting high diversity of plants and insects due to animal droppings.



Women fishers at one of the sensitization workshops around Ngao area.



Education and awareness raising workshop on sustainable fishing



Local fisher women excavating soil to prepare tree nursery, where they sell seedlings as an alternative form of livelihood



Participants following presentations at an awareness workshop.

