



JRS Biodiversity
Foundation

GBIF
Global Biodiversity
Information Facility



FIMC OF NORTH EASTERN TANZANIA

INTRODUCTION

This project aims at collating existing freshwater Insects (Odonata, Coleoptera, Hemiptera, Ephemeroptera, and Diptera), Mollusks (Gastropoda), and Crustacea (Crabs and Shrimps) (FIMC) species data from northeastern, Tanzania from River Basins to create a useable and accessible FIMC portal, FIMC species distribution maps, establish FIMC monitoring protocol and brochures that can be used by policymakers and different stakeholders. The project covered three main water basins of: Pangani basin, internal drainage basin and Lake Victoria basin.

Pangani basin is located along the slopes of Mt. Kilimanjaro (5,985 m.a.s.l) and Mount Meru (4,566 m.a.s.l). The basin is endowed with considerable freshwater resources that include lakes, rivers, wetlands, ponds, and man-made reservoirs; forming an important hotspot of freshwater biodiversity. The main Pangani River Basin, with an area of about 43,650 km², is the largest of the four sub-basins. The tropical montane rivers and streams found within Pangani River Basin draining Eastern Arc mountain blocks harbors a highly endemic freshwater fauna.

Simiyu River is part of the Lake Victoria Basin located in Tanzania, East Africa at latitude of -2.55°S and longitude of 33.4167°E, with an elevation of 1,133m. The river covers two regions of Simiyu and Arusha.

INTRODUCTION

It is one of the three catchments that discharge water to Lake Victoria which forms part of the upper headwaters of the Nile River. The catchment is formed by two major tributaries namely Duma and Simiyu rivers. Simiyu River support livelihoods of human populations within and outside the catchment as a major source of water for domestic and agriculture activities.

Covering approximately 6942 km², Lake Manyara Basin in the northern-Tanzania is home to charismatic and unique flora and fauna. The basin is a corridor for wildlife constantly moving to and from Tarangire, Burunge and Lake Manyara National Parks. The basin is also a home to the most bio diverse aquatic ecosystems including Mto wa Mbu River, Simba River, Kirurumo River, Msasa River, Endabashi River, Lyambi River, Magara River, and Makuyuni River, Lake Burunge, Lake Manyara and several permanent and temporary wetlands.

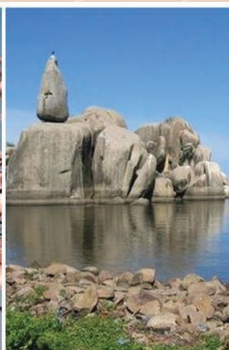
FIMC biodiversity data presented in this brochure are categorized into FIMC of conservation, health and food concern as perceived by data holders involved in the survey.



Pangani basin



Internal drainage basin



Lake Victoria basin

FRESHWATER SPECIES OF CONSERVATION CONCERN

(a) Large branchiopods (keystone species) in temporary wetlands

Taxa:



i. *Streptocephalus manyarensis*
(fairy shrimp)



ii. *Streptocephalus lamellifer*
(Fairy shrimp)



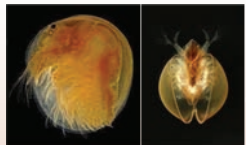
iii. *Streptocephalus bourquinni*
(Fairy shrimp)



iv. *Triops granarius* (Tadpole shrimp)



v. *Cyzicus sp.* (Clam shrimp)



vi. *Lynceus sp.* (Clam shrimp)

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(b) Family: Potamonautidae (Vulnerable threatened species)

Taxa:

Some species are considered vulnerable/ threatened by IUCN

(e.g., *Potamonautes gerdalensis* (freshwater crab) is categorized



by the IUCN as Vulnerable due to its narrow range of occurrence and a restricted area of occupancy. It is endemic to northern Tanzania. This species is threatened by habitat loss due to degradation of habitat and water pollution, both resulting from agricultural expansion)

*Crabs are important shredders in Afrotropical river systems

(c) Family: Megapodagrionidae (Endemic species)

Taxa:

Is an iconic endemic species restricted to a small area within the Amani Nature Reserve (Sigi/Zigi river catchment) e.g. critically endangered Amanipodagrion gilliesi (Amani Flatwing damselfly-Odonata)



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(d) (Indicators of good water quality)

Taxa:



i. Family: Heptageniidae (Mayflies)



ii. Family Leptophlebiidae (Mayflies)



iii. Family: Perlidae (Stoneflies)



iv. Family: Philopotamidae (Caddisflies)



v. Family: Ecnomidae (Caddisflies)



vi. Family: Psephenidae (Water penny beetles)

FRESHWATER SPECIES OF FOOD CONCERN

Taxa:



i. Crabs: Family Potamonautidae: Potamonautes spp (African fresh water crabs)



Shrimps: Family Atyidae: Caridina nilotica (Freshwater atyid shrimp)

FRESHWATER SPECIES OF HEALTH CONCERN

(a) Freshwater Snail

Taxa:

i. Family: Planorbidae:
(Biomphalaria sp., e.g. Biomphalaria pfeifferi
(Fresh water snail))



-The intermediate host for Schistosoma mansoni. Most common in Lake Victoria.

ii. Family Planorbidae
(Bulinus sp., e.g. Bulinus globosus (Fresh water snail))



-The intermediate host for Schistosoma haematobium
Most common in central and northern Tanzania.



(b) Mosquitoes

Taxa:



i. *Anopheles gambiae* (African malaria mosquito): vector for Malaria



ii. *Culex quinquefasciatus* (Southern house mosquito): vector for Elephantiasis lymphatic filariasis



iii. *Aedes aegypti* (Yellow fever mosquito): vector for dengue, yellow fever, zika, and chikungunya



iv. *Culex pipiens* (Northern house mosquito): carriers of West Nile Virus, avian malaria (*Plasmodium relictum*)