

LAKE BUNYONYI'S TOURISM POTENTIAL

BIODIVERSITY ASSESSMENTS SHOW THAT LAKE BUNYONYI AND ASSOCIATED WETLANDS HAVE GREAT TOURISM POTENTIAL

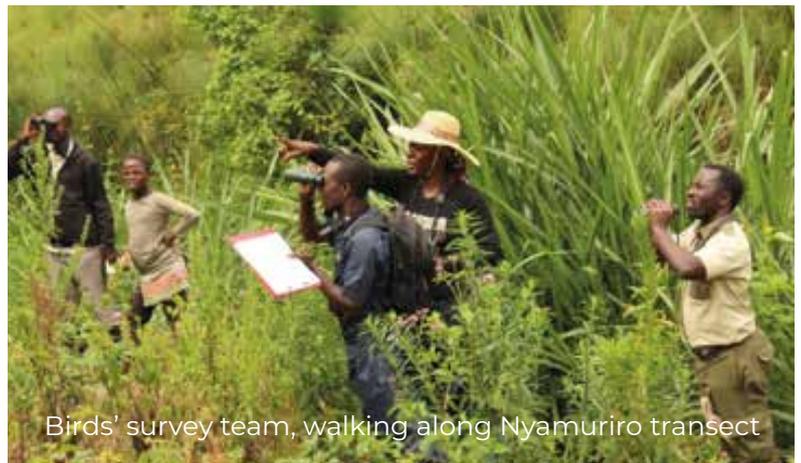
Through a project on “Securing Wetland Ecosystems to improve livelihoods through Community Conservation Agreements in western Uganda”, NatureUganda commissioned a biodiversity study of three wetlands of Lake Nyamuriro, Kiruruma and Lake Bunyonyi. The results indicate that the Lake Bunyonyi and its associated systems are wetlands of international importance. The wetlands contain globally threatened species of birds such as Grey Crowned Cranes, Papyrus Yellow Warblers and many other ecosystem endemic species.

The wetlands contain red listed amphibians, small mammals, insects and plants. In addition to the biodiversity assessments, the project also conducted a study on peat stocks to understand the role of wetlands in mitigating climate change and an assessment on upland carbon stocks to understand the needs to improve agricultural productivity in Kigezi hills.

The project goal is to conserve the lake and its associated wetlands for perpetual ecosystem service provision to the communities in the catchment and to conserve threatened species contained within these wetlands. The assessments of biodiversity, Ecosystem services and Peat stock in these wetlands were conducted to provide a baseline against which project interventions towards biodiversity conservation, livelihood support to communities and mitigation of the effects of climate change can be evaluated. The assessments will also support NatureUganda and its stakeholders in undertaking the profiling of Lake Bunyo-



Lake Bunyonyi



Birds' survey team, walking along Nyamuriro transect

nyi for potential designation as a Ramsar site, a wetland of international importance. The data and information resulting from the studies clearly show that Lake Bunyonyi should be listed among the most important ecosystems in the world.

Based on the criteria of detectability, indicative of ecosystem functioning and ability to function as indicators, NatureUganda selected six taxa (groups of animals and plants) to be assessed, namely Plants, Birds, Mammals, Amphibia & Reptiles, Insects and Fish. These assessments were conducted between November 2019 and March 2020 by independent consultants and renowned scientists using international standard assessment protocols.

Below is a summary of results from the studies.

PLANTS

The Flora assessment was led by Dr. Mary Namaganda and 312 plant species belonging to 75 families were recorded, of which none is globally red-listed. However, one species of national conservation importance was recorded (Water lily *Nymphaea nouchali*). The highest number of species was recorded from Nyamuriro swamp followed by Lake Bunyonyi areas. However, there is evidence that 10 aquatic species recorded in the last 2 decades on Lake Bunyonyi were not encountered in this survey.



Eulophia horsfalli, one of the Orchids recorded around Lake Bunyonyi

MAMMALS

The mammal assessment was led by Dr Robert Kityo and 21 species of small mammals were recorded, with three species (Kahuzi Swamp Shrew *Crocidura stenocephala*, Tarella Shrew *Crocidura tarella* and Montane Shaggy *Dasymys montanus*) being listed as globally endangered. Additionally, five species are nationally red-listed. The swamps around Lake Bunyonyi had the highest species records and the lowest were Kiruruma and Nyombe swamps.



Dasymys incomtus the shaggy swamp rat – a typical wetland species captured in the Nyombe Wetland

INSECTS

The entomological assessment was led by Dr. Perpetra Akite and 37 species of butterflies and 19 species of dragonflies were recorded. The area around Nyombe swamp was the richest both in terms of butterflies and dragonflies. The least number of records was Kiruruma for butterflies and Mujja hill for dragon flies. No species of global conservation concern was recorded both for butterflies and dragonflies.

However, six species of butterfly species are nationally red-listed. There was also one species of butterfly (*Aloeides* sp) that was recorded for the first time in Uganda. In addition, one species (*Harpencyreus reginaldi*) of Albertine endemism was recorded and rated vulnerable on the Ugandan red- list.



Dragon flies

BIRDS

The birds' assessment was led by Dr Dianah Nalwanga and 130 bird species were recorded, of which two are globally red-listed as endangered (Grey crowned Crane *Balearica regulorum* and Papyrus Yellow Warbler *Calamonastides gracilirostris*) and nineteen are nationally and regionally threatened. Six indicator species were selected to support long term monitoring of the wetlands, namely; Grey Crowned Crane, Papyrus Yellow Warbler, Blue-Headed Coucal, Carruther's Cisticola, Greater Swamp Warbler and Lesser Swamp Warbler; these were recorded in most swamps and considered sensitive to changes in the wetland ecosystem.



Grey Crowned Cranes, one of the common endangered species in the project area

The different studies observed that the wetlands faced tremendous threats. Major sections of the wetlands in all surveyed areas have been converted into agricultural land and cattle farms. The teams recorded and observed heavy use of herbicides and pesticides in the cultivated areas which is detrimental to biodiversity especially the insect fauna which conversely is critical to the productivity of crops. There was also evidence of some birds and other wildlife being hunted for food and in some cases wildlife trade was reported.

Based on the numbers of species recorded, Lake Bunyonyi and associated wetlands are critical sites for biodiversity conservation and ecosystem services provision for Kabale, Kisoro and Rubanda districts. However, there is urgent need for restoration of the wetlands systems and the catchment to maintain ecological balance and land productivity. Water and soil conservation measures including agroforestry, terracing, restoration and protection and other soil conservation Innovations should be considered to protect land where communities depend for food and income, protect the species in the remaining wetlands and revive ecological integrity of the area.

That said, there will be need to develop innovative financing mechanisms such as tourism and payment for ecosystem services to promote local economies and incomes and provide incentives for residents to protect the wetland ecosystems.

By Micheal Kibuule

AMPHIBIANS AND REPTILES

The Herpetological assessment was led by Dr Mathias Behangana and 21 species of amphibian were recorded, of which, one species (*Leptopelis Kivuensis*-Kisenyi forest tree frog) is being rated near threatened globally and vulnerable in Uganda. *Arixalus fulvovittatus* (Lake Bunyonyi River Frog) was the other nationally red-listed species. The area around Nyombe swamp had the highest number of frog species probably because it still has original habitat, the least was Kiruruma swamp which is completely converted to agricultural land and farms. Besides amphibians, eight species and 36 individuals of reptiles were recorded, with two nationally red-listed species recorded; *Trioceros Johnstoni* (Ruwenzori Three-horned Chameleon) and *Deberria Lutrix* (Slug Eater).



Ruwenzori Three-horned Chameleon, one of the Albertine endemic species recorded at Nyamuriro wetland