

Why Lake Tanganyika?

by Kelly West

Though the riparian communities must have admired Lake Tanganyika's beauty and depended upon it for freshwater, protein (from a fish-based diet), and regional transportation for centuries, the rest of the world first heard news of Lake Tanganyika when Richard Burton and John Speke set eyes upon it, on 13 February 1858. After traveling from Zanzibar eight months by boat and by foot, and facing desertion by most of their porters, disastrous weather, attacks from hostile tribes, shortage of money, exhaustion, malaria, loss of an expedition member to crocodiles, and ill health, Speke being temporarily blinded and Burton rendered mute and unable to eat owing to abscesses in his mouth, Burton, setting eyes upon the lake, wrote in his diary, "Nothing, in sooth, could be more picturesque than this first view of the Tanganyika Lake, as it lay in the lap of the mountains, basking in the gorgeous tropical sunshine...Forgetting toils, dangers, and the doubtfulness of return, I felt willing to endure double what I had endured."

Lake Tanganyika generated considerable scientific interest back in Europe, even though it did not prove to be the source of the Nile that Burton and Speke were seeking. During their visit to the lake, Speke made the first scientific collection of Tanganyikan fauna, empty shells gathered from the beach at Ujiji, and sent these collections back to the British Museum. These shells caught the attention of the scientific community for quite unlike most freshwater shells, the Tanganyikan shells, with their heavy armor and sculpture, were nearly indistinguishable from the shells of marine species. Further exploration of the lake and notably the discovery of jellyfish, sardines, and heavily-armored, marine-like crustaceans, in addition to the mollusks, served to strengthen the link between the Tanganyikan and marine faunas. Several authors, led by J.E.S. Moore, considered the presence of these marine-like species in Lake Tanganyika as evidence that in historic times, Tanganyika had once been connected to the sea. The possible marine origins and affinities of the Tanganyikan faunas was the subject of considerable scientific debate in the late 1880s and early 1900s, with more than 75 papers written on this subject.

With our current geologic models for the African Rift, however, these hypotheses of marine origins of the Tanganyikan faunas have been discredited. It is now generally accepted that the proto Lukuga-Lualaba Rivers and Malagarasi Rivers were previously connected in an ancient river system. Continental rifting in the region subsequently cross-cut this system and formed the nested set of basins that is Lake Tanganyika. Lake Tanganyika was probably colonized by multiple immigrations from the former river system.



Unlike most modern lakes which were formed by glaciers within the last 12,000 years, Lake Tanganyika, at about 12 million years in age, is geologically long-lived. During this long period of isolation, the immigrants which invaded proto-Lake Tanganyika have produced some spectacular evolutionary productions. Many of the African Great Lakes host numerous species of cichlid fish, but in addition to its 185+ cichlid fish species, Lake Tanganyika hosts more than 70 snail species, more than 70 ostracod species, 12 endemic crab species, 16 copepod species, 9 species of leeches and 7 species of sponges. In fact Lake Tanganyika, with more than 1,300 species of plants and animals, at least 500 of which are found only in the Tanganyika basin, is the richest freshwater ecosystem in the world.

Understanding, protecting and managing these valuable resources are the goals of this project.

Kelly West is Scientific Liaison Officer for the Lake Tanganyika Biodiversity Project.

