Universität für Bodenkultur Wien
University of Natural Resources and Life Sciences, Vienna

Institute of Integrative Nature Conservation Research

Masterthesis in fish population genetics and genomics

Project: Investigation on local adaptation of Nile tilapia (*Oreochromis niloticus*) from various environments in East Africa

Nile tilapia (*Oreochromis niloticus*), is an important fish species for capture fisheries and aquaculture because of its growth rates, easy breeding in captivity, tolerance etc. Despite these attributes, natural populations had been impacted by anthropogenic factors like overfishing and translocations which might have altered genetic structure by admixture and hybridization.

In an ongoing project we investigate the genetic dynamics of Nile tilapia to estimate the risk of maladaptation during restocking programs, reveal ideal brood stocks for particular regions for improving aquaculture and captures fisheries and to help in conserving of fish stock and species for future generations.

The Masterthesis will employ genotyping, next generation sequencing data and morphological data or parts of it to characterize genetic multiplicity and effective population size of Nile tilapia populations as a function of altitude from native and non-native environments. Hereby we will compare natural population and farmed fish to determine effect of genetics on yield.

The Master thesis will complement an ongoing PhD thesis and will be hosted at the molecular lab of the Institute for Integrative Nature Conservation Research in collaboration with the institute for Hydrobiology. The thesis is available immediately.

If interested, please contact Univ. Prof. Dr Harald Meimberg, meimberg@boku.ac.at or Papius Tibihika, papiust@yahoo.com