ABSTRACT

Studies of molecular phylogenetics and phylogeography of freshwater fishes from major river drainages of the Indian Ocean and endorheic basins of the Great Rift Valley of central, western and southern Kenya have revealed deep genetic divergences within several nominal species. The present study focuses on phylogeography of Kenyan populations of putative hexaploid cyprinid fishes, originally described as species of *Barbus* or *Labeobarbus*, and now regarded as species of *Labeobarbus* Rüppell. The nominal species under study here are the Ripon Barbel, *Barbus altianalis* Boulenger, the Pangani Barb, *Barbus oxyrhynchus* Pfeffer, and *Labeobarbus intermedius* Rüppell. All of the studied species and populations are recovered as a monophyletic group with strong bootstrap support. The most basal lineage is a population from the Yala River (Lake Victoria Basin), which is sister to a lineage comprising all other nominal species. *Barbus altianalis* and *Labeobarbus intermedius* for a group sister to *Barbus oxyrhynchus*, which itself comprises several divergent lineages. The phylogeny provides evidence that *L. intermedius* and *B. altianalis* are co-distributed in the Lake Victoria Basin. We present preliminary morphological evidence in an attempt to diagnose species.