

MOLECULAR PHYLOGENY OF SOUTH-AMERICAN ANNUAL KILLIFISH

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We obtained *cytb*, 12S and 16S mitochondrial sequences and three 28S nuclear sequences from several species, populations within species and individuals within populations. DNA was extracted either from muscles, fin clips or livers.

We used mrBayes for analysis. Some individuals from the same species are still in very different branches of the tree. For each of those cases, we know the origins and relatedness between the different individuals well. For example, the strong separation of two *S. marginatus* individuals must be due to misalignment: These two individuals are from the same inbred line. We are in the process of correcting the last errors in the dataset.

