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A new model on the evolution of the Asian arowana: integration of molecular and geological evidence

Yoshinori Kumazawa[1], Mutsumi Nishida[2]

[1] Earth and Planet. Sci., Nagoya Univ., [2] Ocean Res. Inst., Univ. of Tokyo

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We have calibrated the molecular clock of bony fishes, with which phylogenetic relationships and divergence times among highly freshwater-adapted arowana fishes were inferred. Based on the molecular and geological evidence, we propose a new model on the evolution of the Asian arowana. We hypothesize that the Asian arowana vicariantly diverged from the Australasian arowanas in the eastern margin of Gondwanaland and migrated into Eurasia on the Indian subcontinent or smaller continental blocks. This provides the rare corroborative evidence to support a hypothesis that India or smaller continental blocks could serve as a cradle to convey Gondwanian freshwater faunas.