Complete mitochondrial genome of Sineleotris saccharae (Perciformes, Odontobutiae) and phylogenetic analysis

Liying Zhou¹, Minghua Wang¹, Daming Li¹, Shengkai Tang¹, Yanshan Liu¹, Xiaohui Chen¹, and Liqiang Zhong²

¹Key Laboratory of Fisheries Resources in Inland Water of Jiangsu ProvinceFreshwater Fisheries Research Institute of Jiangsu Province

²(1) Freshwater Fisheries Research Institute of Jiangsu Province

November 2, 2022

Abstract

The freshwater sleeper, Sineleotris saccharae, endemic to southeastern of China belongs to the family of Odontobutiae. The composition of the Odontobutidae is controversial due to the lack of molecular data. Information about genetic characteristics of S. saccharae was still not reported. In the present study, we determined the complete mitochondrial genome of S. saccharae for the first time and analyzed its evolutionary relationship. The complete mitochondrial genome of S. saccharae was 16,487 bp in length, and consisted of 13 protein-coding genes (PCGs), 22 transfer RNAs (tRNAs), 2 ribosomal RNA (rRNAs) and a control region (CR). The gene arrangement and orientation of S. saccharae mitogenome was identical to those of other teleosts. Phylogenetic analysis by Maximum likelihood (ML) methods strongly supported the monophyly of Odontobutidae containing two clades. The genus Odontobutis was sister to the clade consisting of Perccottus and Neodontobutis. Meanwhile, Microdous, Sineleotris and Micropercops formed another clade. These data will be helpful for understanding the genetic information of S. saccharae and systematics of the odontobutids.

Hosted file

Manuscript.doc available at https://authorea.com/users/519402/articles/593171-complete-mitochondrial-genome-of-sinelectris-saccharae-perciformes-odontobutiae-and-phylogenetic-analysis