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GENOME SEQUENCING

The Complete Genome Sequences of 7 Hypoplectrus species (Serranidae, Perciformes)

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Biodiversity Genomes

Species in the genus *Hypoplectrus* are found primarily in coral reefs in the Caribbean Sea and the Gulf of Mexico, particularly around Florida and the Bahamas. They are a popular choice for hobbyist saltwater aquariums. Members of this genus are simultaneous hermaphrodites, as they have both male and female sexual organs at the same time as an adult. We present the genome sequences of 7 species of *Hypoplectrus*. Raw read data and assembled genomes are available in Genbank.

Methods

Tissue from single, wild-collected individuals were used for this study. DNA extraction was performed using the Qiagen DNAeasy genomic extraction kit using the standard process. A paired-end sequencing library was constructed using the Illumina TruSeq kit according to the manufacturer’s instructions. The library was sequenced on an Illumina Hi-Seq platform in paired-end, 2 × 150bp format. The resulting fastq files were trimmed of adapter/primer sequences and low-quality regions with Trimmomatic v0.33 (Bolger, Lohse, and Usadel 2014). The trimmed sequence was assembled by SPAdes v2.5 (Bankevich et al. 2012) followed by a finishing step using Zanfona (Kieras, O’Neill, and Pirro 2021).

Results and Data Availability

All raw read data and assembled genomes are available on Genbank:

Species	Raw Read	Assembled Genome
Hypoplectrus aberrans	SRR19070321	JAOYMT000000000
Hypoplectrus chlorurus	SRR18184334	JAOXJR000000000
Hypoplectrus guttavarius	SRR18184176	JAOXOB000000000
Hypoplectrus indigo	SRR19070349	JAOXJS000000000
Hypoplectrus nigricans	SRR18272038	JAOWBK000000000
Hypoplectrus providencianus	SRR17839752	JAOWBC000000000
Hypoplectrus randallorum	SRR17839729	JAOXNY000000000

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