

GENOME SEQUENCING

The Complete Genome Sequences of 64 Species of Amphibians

Timothy J. Colston^{1,2}, Stacy Pirro³, R. Alexander Pyron⁴

¹ Biology Department, University of Puerto Rico at Mayagüez, ² Genomic Resources Collection, University of Puerto Rico at Mayagüez, ³ Iridian Genomes,

⁴ Department of Biological Sciences, George Washington University

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Biodiversity Genomes

We present the complete genome sequences of 64 species of amphibians (61 Anurans, 2 Caudates and 1 Caecilian) including complete genomes from four type specimens. Illumina sequencing was performed on DNA extracted from wild-caught specimens. The reads were assembled using a de novo method followed by a finishing step. The raw and assembled data are publicly available via Genbank.

Methods

Single wild-collected individuals were sampled for this study from Ethiopia, Guyana, Mexico and the United States. DNA extraction was performed using the Qiagen DNeasy genomic extraction kit using the standard protocol. 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 × 150 bp format. The resulting fastq files were trimmed of adapter/primer sequence 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, 2021).

Results and Data Availability

All data, including raw reads and assembled genome sequence, is available via Genbank. Names in bold indicate material associated with type specimens.

taxname	specimen_voucher	accession
<i>Adenomera lutzi</i>	UPRM_GENRESCOL_1186	JBISCX000000000
<i>Afrixalus enseticola</i>	UPRM_GENRESCOL_1087	JBPHG000000000
<i>Agalychnis callidryas</i>	UPRM_GENRESCOL_1522	JBKKFR000000000
<i>Ambystoma opacum</i>	UPRM_GENRESCOL_670	JBLADG000000000
<i>Amnirana galamensis</i>	UPRM_GENRESCOL_795	JBJUSC000000000
<i>Anomaloglossus beebei</i>	UPRM_GENRESCOL_1181	JBNIJ000000000
<i>Anomaloglossus kaiei</i>	UPRM_GENRESCOL_1168	JBKSNL000000000
<i>Atelopus hoogmoedi</i>	UPRM_GENRESCOL_1133	JBNSI000000000
<i>Balebreviceps hillmani</i>	UPRM_GENRESCOL_1709	JBJPGN000000000
<i>Boana sibleszi</i>	UPRM_GENRESCOL_1223	JBIUDA000000000
<i>Conraua beccarii</i>	UPRM_GENRESCOL_709	JBINJG000000000
<i>Dendropsophus microcephalus</i>	UPRM_GENRESCOL_1326	JBJNRZ000000000
<i>Gastrophryne elegans</i>	UPRM_GENRESCOL_1582	JBJNSK000000000
<i>Hoplobatrachus occipitalis</i>	UPRM_GENRESCOL_807	JBINJP000000000
<i>Hyperolius nasutus</i>	UPRM_GENRESCOL_948	JBISCW000000000

taxname	specimen_voucher	accession
<i>Hyperolius viridiflavus</i>	UPRM_GENRESCOL_949	JBJMAJ000000000
<i>Incilius valliceps</i>	UPRM_GENRESCOL_1238	JBINKA000000000
<i>Kassina somalica</i>	UPRM_GENRESCOL_1735	JBPHC000000000
<i>Leptodactylus fragilis</i>	UPRM_GENRESCOL_1425	JBIMIZ000000000
<i>Leptodactylus knudseni</i>	UPRM_GENRESCOL_1157	JBPHD000000000
<i>Leptodactylus longirostris</i>	UPRM_GENRESCOL_1171	BJJPGM000000000
<i>Leptodactylus melanonotus</i>	UPRM_GENRESCOL_1543	JBINKL000000000
<i>Leptodactylus mystaceus</i>	UPRM_GENRESCOL_1169	JBUIDB000000000
<i>Leptodactylus rhodomystax</i>	UPRM_GENRESCOL_1138	BJJNSE000000000
<i>Leptodactylus rugosus</i>	UPRM_GENRESCOL_1173	BJJPHM000000000
<i>Leptopelis bocagii</i>	UPRM_GENRESCOL_829	BJJURZ000000000
<i>Leptopelis ragazzii</i>	UPRM_GENRESCOL_1716	BJJMAL000000000
<i>Lithobates berlandieri</i>	UPRM_GENRESCOL_1346	BJJMAI000000000
<i>Lithobates vaillanti</i>	UPRM_GENRESCOL_1234	JBKIIU000000000
<i>Osteocephalus lepreurii</i>	UPRM_GENRESCOL_1140	BJJPHL000000000
<i>Osteocephalus oophagus</i>	UPRM_GENRESCOL_1204	BJJNSH000000000
<i>Osteocephalus taurinus</i>	UPRM_GENRESCOL_1143	JBINKM000000000
<i>Paracassina kounhiensis</i>	UPRM_GENRESCOL_1086	BJJPHI000000000
<i>Phrynobatrachus minutus</i>	UPRM_GENRESCOL_1000	JBINJM000000000
<i>Phrynobatrachus natalensis</i>	UPRM_GENRESCOL_852	JBIMOX000000000
<i>Phyllomedusa bicolor</i>	UPRM_GENRESCOL_1135	BJJNRK000000000
<i>Ptychadena anchietae</i>	UPRM_GENRESCOL_1729	BJJNSA000000000
<i>Ptychadena baroensis</i>	UPRM_GENRESCOL_791	JBRED000000000
<i>Ptychadena erlangeri</i>	UPRM_GENRESCOL_984	JBIMOY000000000
<i>Ptychadena goweri</i>	UPRM_GENRESCOL_697	JBTLII000000000
<i>Ptychadena harennae</i>	UPRM_GENRESCOL_1103	BJJMAM000000000
<i>Ptychadena levenorum</i>	UPRM_GENRESCOL_692	JBKZWA000000000
<i>Ptychadena neumanni</i>	UPRM_GENRESCOL_691	BJJPGX000000000
<i>Ptychadena nilotica</i>	UPRM_GENRESCOL_956	JBIIYY000000000
<i>Ptychadena nuerensis</i>	UPRM_GENRESCOL_928	JBMAHJ000000000
<i>Rhaebo guttatus</i>	UPRM_GENRESCOL_1154	BJJMAN000000000
<i>Rhinatrema nigrum</i>	UPRM_GENRESCOL_1129	JBKOIU000000000
<i>Rhinella marina</i>	UPRM_GENRESCOL_1166	JBKIBT000000000
<i>Rhinophrynus dorsalis</i>	UPRM_GENRESCOL_1375	JBLOPD000000000
<i>Scinax boesemani</i>	UPRM_GENRESCOL_1191	BJJNSG000000000
<i>Scinax staufferi</i>	UPRM_GENRESCOL_1232	JBIMJA000000000
<i>Sclerophrys asmarae</i>	UPRM_GENRESCOL_963	JBIMOZ000000000
<i>Sclerophrys maculata</i>	UPRM_GENRESCOL_683	BJJMAO000000000
<i>Sclerophrys regularis</i>	UPRM_GENRESCOL_701	JBINJH000000000
<i>Sclerophrys steindachneri</i>	UPRM_GENRESCOL_868	JBKBFG000000000
<i>Smilisca baudinii</i>	UPRM_GENRESCOL_1276	JBINKF000000000
<i>Stefania evansi</i>	UPRM_GENRESCOL_1130	BJJPHJ000000000
<i>Tepuihyla exophthalma</i>	UPRM_GENRESCOL_1231	BJJPHB000000000
<i>Tlalocohyla loquax</i>	UPRM_GENRESCOL_1271	JBIMOT000000000
<i>Tomopterna cryptotis</i>	UPRM_GENRESCOL_690	JBKHVD000000000
<i>Tomopterna kachowskii</i>	UPRM_GENRESCOL_1732	BJJMAR000000000
<i>Trachycephalus venulosus</i>	UPRM_GENRESCOL_1336	JBINJI000000000
<i>Triprion petasatus</i>	UPRM_GENRESCOL_1272	JBINJZ000000000
<i>Xenopus clivii</i>	UPRM_GENRESCOL_724	BJJNIE000000000

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