

GENOME SEQUENCING

The Complete Genome Sequences of 101 Species of Reptiles

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<https://doi.org/10.56179/001c.129597>

Biodiversity Genomes

We present the complete genome sequences of 101 species of reptiles (four testudines, one crocodilian and 96 squamates) including the complete genome of one type specimen. 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 DNAeasy 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, O'Neill, and Pirro 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>Acanthocercus annectans</i>	UPRM_GenResCol_1743	JBJPGY000000000
<i>Acanthocercus atricollis</i>	UPRM_GenResCol_1740	JBJPHF000000000
<i>Acanthocercus cyanogaster</i>	UPRM_GenResCol_1025	JBHLFK000000000
<i>Acanthocercus guentherpetersi</i>	UPRM_GenResCol_1769	JBJJOB000000000
<i>Acanthocercus minutus</i>	UPRM_GenResCol_982	JBHLFA000000000
<i>Agama doriae</i>	UPRM_GenResCol_944	JBIELC000000000
<i>Agama finchi</i>	UPRM_GenResCol_900	JBHRFR000000000
<i>Ameiva ameiva</i>	UPRM_GenResCol_1198	JBJNSF000000000
<i>Anilius scytale</i>	UPRM_GenResCol_1197	JBINKI000000000
<i>Anolis lemurinus</i>	UPRM_GenResCol_1367	JBJJOQ000000000
<i>Anolis planiceps</i>	UPRM_GenResCol_1216	JBJNSJ000000000
<i>Anolis rodriguezi</i>	UPRM_GenResCol_1235	JBHLEY000000000
<i>Anolis sericeus</i>	UPRM_GenResCol_1265	JBJUSB000000000
<i>Anolis tropidonotus</i>	UPRM_GenResCol_1289	JBHLFJ000000000
<i>Aparallactus lunulatus</i>	UPRM_GenResCol_1042	JBJJOF000000000

taxname	specimen_voucher	accession
<i>Aspidoscelis angusticeps</i>	UPRM_GenResCol_1236	JBHNVU000000000
<i>Atractaspis fallax</i>	UPRM_GenResCol_1783	JBJOA000000000
<i>Atractaspis microlepidota</i>	UPRM_GenResCol_935	JBHOMR000000000
<i>Bachia flavescens</i>	UPRM_GenResCol_1137	JBINKJ000000000
<i>Basiliscus vittatus</i>	UPRM_GenResCol_1288	JBJNIN000000000
<i>Bitis arietans</i>	UPRM_GenResCol_805	JBHNWB000000000
<i>Boa imperator</i>	UPRM_GenResCol_1515	JBJNSB000000000
<i>Bofa erlangeri</i>	UPRM_GenResCol_759	JBJOIO000000000
<i>Bothrops asper</i>	UPRM_GenResCol_1417	JBHLFB000000000
<i>Bothrops atrox</i>	UPRM_GenResCol_1183	JBJNSD000000000
<i>Cachryx defensor</i>	UPRM_GenResCol_1544	JBADH000000000
<i>Causus rhombeatus</i>	UPRM_GenResCol_1020	JBHNWA000000000
<i>Chamaeleo dilepis</i>	UPRM_GenResCol_1049	JBHLFC000000000
<i>Chamaeleo gracilis</i>	UPRM_GenResCol_687	JBINKK000000000
<i>Chamaeleo laevigatus</i>	UPRM_GenResCol_801	JBIELG000000000
<i>Chelonoidis denticulatus</i>	UPRM_GenResCol_1149	JBJNID000000000
<i>Coleonyx elegans</i>	UPRM_GenResCol_1267	JBHOMS000000000
<i>Coniophanes imperialis</i>	UPRM_GenResCol_1243	JBIELE000000000
<i>Coniophanes schmidtii</i>	UPRM_GenResCol_1266	JBKIKE000000000
<i>Corallus caninus</i>	UPRM_GenResCol_1134	JBJPHE000000000
<i>Cordylus rivae</i>	UPRM_GenResCol_1038	JBJOE000000000
<i>Corytophanes hernandesii</i>	UPRM_GenResCol_1437	JBKOQM000000000
<i>Crotalus simus</i>	UPRM_GenResCol_1449	JBIELB000000000
<i>Crotaphopeltis hotamboeia</i>	UPRM_GenResCol_765	JBHNVX000000000
<i>Dasypeltis abyssina</i>	UPRM_GenResCol_525	JBJOOG000000000
<i>Diadophis punctatus</i>	UPRM_GenResCol_642	JBLLKW000000000
<i>Dipsas brevifacies</i>	UPRM_GenResCol_1300	JBJPGV000000000
<i>Drymarchon corais</i>	UPRM_GenResCol_1469	JBHLFG000000000
<i>Drymobius margaritiferus</i>	UPRM_GenResCol_1244	JBIDEK000000000
<i>Geophis sartorii</i>	UPRM_GenResCol_1308	JBJPGZ000000000
<i>Gonatodes alexandermendesi</i>	UPRM_GenResCol_1214	JBGSAX000000000
<i>Hemidactylus brookii</i>	UPRM_GenResCol_1063	JBHZFW000000000
<i>Hemidactylus flaviviridis</i>	UPRM_GenResCol_1744	JBJPHH000000000
<i>Hemidactylus macropholis</i>	UPRM_GenResCol_1747	JBJNII000000000
<i>Holcosus undulatus</i>	UPRM_GenResCol_1298	JBJNSC000000000
<i>Imantodes gemmistratus</i>	UPRM_GenResCol_1462	JBIELF000000000
<i>Imantodes tenuissimus</i>	UPRM_GenResCol_1913	JBKBH000000000
<i>Kentropyx calcarata</i>	UPRM_GenResCol_1200	JBJNRU000000000
<i>Laemantus serratus</i>	UPRM_GenResCol_1286	JBGGHT000000000
<i>Latastia doriai</i>	UPRM_GenResCol_1882	JBJIOD000000000
<i>Leptodeira frenata</i>	UPRM_GenResCol_1270	JBHNVY000000000
<i>Leptophis mexicanus</i>	UPRM_GenResCol_1274	JBFTWW000000000
<i>Marisora unimarginata</i>	UPRM_GenResCol_1575	JBJNIG000000000
<i>Mesoscincus schwartzei</i>	UPRM_GenResCol_1574	JBJPGL000000000
<i>Micrurus diastema</i>	UPRM_GenResCol_1379	JBHNWF000000000
<i>Micrurus fulvius</i>	UPRM_GenResCol_638	JBJOJ000000000
<i>Mochlus sundevallii</i>	UPRM_GenResCol_802	JBIEKX000000000
<i>Naja haje</i>	UPRM_GenResCol_828	JBHLEZ000000000
<i>Naja melanoleuca</i>	UPRM_GenResCol_763	JBIEOI000000000
<i>Naja nigricollis</i>	UPRM_GenResCol_905	JBHNWC000000000

taxname	specimen_voucher	accession
<i>Natriciteres olivacea</i>	UPRM_GenResCol_859	JBIMDY000000000
<i>Nerodia floridana</i>	UPRM_GenResCol_1115	JBINIF000000000
<i>Ninia diademata</i>	UPRM_GenResCol_1708	BJJOC000000000
<i>Ninia sebae</i>	UPRM_GenResCol_1453	BJJOH000000000
<i>Ophisaurus attenuatus</i>	UPRM_GenResCol_648	BJJON000000000
<i>Paleosuchus palpebrosus</i>	UPRM_GenResCol_1156	JBKSNM000000000
<i>Panaspis annettesabinae</i>	UPRM_GenResCol_737	JBHLFE000000000
<i>Pantherophis guttatus</i>	UPRM_GenResCol_656	JBJNIC000000000
<i>Pelomedusa sp. Ethiopia</i>	UPRM_GenResCol_809	JBIMOV000000000
<i>Philothamnus battersbyi</i>	UPRM_GenResCol_723	JBIEKW000000000
<i>Phrynonax poecilonotus</i>	UPRM_GenResCol_1392	JBHRFS000000000
<i>Psammophis punctulatus</i>	UPRM_GenResCol_934	JBHNVV000000000
<i>Psammophis sibilans</i>	UPRM_GenResCol_855	JBIELD000000000
<i>Pseudelaphe flavirufa</i>	UPRM_GenResCol_1482	JBJNIH000000000
<i>Rhinoclemmys areolata</i>	UPRM_GenResCol_1466	JBIMPB000000000
<i>Sceloporus chrysostictus</i>	UPRM_GenResCol_1269	JBHLFM000000000
<i>Siphlophis compressus</i>	UPRM_GenResCol_1185	BJJMAP000000000
<i>Sphaerodactylus glaucus</i>	UPRM_GenResCol_1514	JBINKN000000000
<i>Tarentola annularis</i>	UPRM_GenResCol_1745	BJJPGK000000000
<i>Telescopus dhara</i>	UPRM_GenResCol_783	JBHRFQ000000000
<i>Terrapene carolina</i>	UPRM_GenResCol_1380	JBIMPH000000000
<i>Thamnophis saurita</i>	UPRM_GenResCol_637	BJJMAQ000000000
<i>Thecadactylus rapicauda</i>	UPRM_GenResCol_1259	JBIMEL000000000
<i>Trachemys venusta</i>	UPRM_GenResCol_1542	JBINOP000000000
<i>Trachylepis brevicollis</i>	UPRM_GenResCol_1040	JBHLFF000000000
<i>Trachylepis maculilabris</i>	UPRM_GenResCol_715	JBIDEJ000000000
<i>Trachylepis striata</i>	UPRM_GenResCol_716	JBIELK000000000
<i>Trioceros affinis</i>	UPRM_GenResCol_989	JBHUPM000000000
<i>Trioceros balebicornutus</i>	UPRM_GenResCol_1014	JBHZFU000000000
<i>Trioceros harennae</i>	UPRM_GenResCol_1010	JBHRFO000000000
<i>Trionyx triunguis</i>	UPRM_GenResCol_808	JBIMOU000000000
<i>Tropidodipsas fasciata</i>	UPRM_GenResCol_1292	BJJNIB000000000
<i>Varanus albigularis</i>	UPRM_GenResCol_1062	JBIEOM000000000
<i>Varanus niloticus</i>	UPRM_GenResCol_854	JBIELW000000000
<i>Xenagama zonura</i>	UPRM_GenResCol_1718	JBHLFD000000000
<i>Xenodon rabdocephalus</i>	UPRM_GenResCol_1579	JBFXLW000000000

Funding

Funding was provided by Iridian Genomes, grant# IRGEN_RG_2021-1345 Genomic Studies of Eukaryotic Taxa and by NSF grants DBI 2334779 and DEB DEB1501711, awarded to TJC.

Acknowledgements

TJC thanks the Ethiopian Wildlife Conservation Authority, the Guyanese Environmental Protection Agency, SEMARNAT Mexico and the Florida FWC for research, collection and export permits pertaining to fieldwork associated with these specimens.

Submitted: February 10, 2025 EST. Accepted: February 13, 2025 EST. Published: February 13, 2025 EST.

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