

GENOME SEQUENCING

The Complete Genome Sequences of 26 Species of Sri Lankan Snakes

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Biodiversity Genomes

We present the complete genome sequences of 26 species of snakes from Sri Lanka, including 12 taxa endemic to the island. Illumina sequencing was performed on genetic material 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. Details of sample collection, permitting, and localities are given by Pyron et al. (2013). 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 removal of contaminants using NCBI Foreign Contamination Screen (FCS; Astashyn et al. 2024). A finishing step was performed using Zanfona (Kieras, O'Neill, and Pirro 2021).

Results and Data Availability

All data, including raw reads and assembled genome sequences, are available via Genbank.

species	isolate	biosample	genome
Colubridae			
<i>Ahaetulla nasuta</i>	RAP0458	SAMN44529004	JBJNRS000000000
<i>Ahaetulla pulverulenta</i> *	RS-C	SAMN44529021	JBJPGR000000000
<i>Amphiesma stolatum</i>	RS-G	SAMN44529017	JBJJOR000000000
<i>Aspidura guentheri</i> *	RAP0437	SAMN44529000	JBKOJE000000000
<i>Boiga barnesii</i> *	RAP0499	SAMN44529010	JBKIYP000000000
<i>Boiga ceylonensis</i>	RAP0515	SAMN44529013	JBLLKT000000000
<i>Boiga ranawanei</i> * ¹	RAP0543 ¹	SAMN44529016	JBLLKS000000000
<i>Boiga trigonata</i>	RAP0478	SAMN44529005	JBJPGR000000000
<i>Dendrelaphis bifrenalis</i> *	RS-E	SAMN44529018	JBJPGR000000000
<i>Dendrelaphis caudolineolatus</i>	RS-W	SAMN44529019	JBPHK000000000
<i>Dendrelaphis schokari</i> *	RAP0494	SAMN44529009	JBJPGR000000000
<i>Dendrelaphis tristis</i>	RAP0526	SAMN44529015	JBKOPV000000000

species	isolate	biosample	genome
<i>Fowlea asperima</i> *	RAP0430	SAMN44528999	JBJNRT000000000
<i>Fowlea unicolor</i> ²	RAP0482	SAMN44529006	JBJNRV000000000
<i>Lycodon aulicus</i>	RAP0440	SAMN44529001	JBJPGQ000000000
<i>Lycodon carinatus</i> *	RAP0447	SAMN44529003	JBLLKQ000000000
<i>Oligodon sublineatus</i> *	RS-141	SAMN44529024	JBJPGW000000000
<i>Oligodon taeniolatus</i>	RS-136	SAMN44529022	JBJPGT000000000
<i>Sibynophis subpunctatus</i>	RAP0491	SAMN44529008	JBKKFB000000000
Elapidae			
<i>Bungarus caeruleus</i>	RAP0514	SAMN44529012	JBJJOK000000000
<i>Bungarus ceylonicus</i> *	RAP0441	SAMN44529002	JBJPGP000000000
<i>Hydrophis schistosus</i>	RAP0487	SAMN44529007	JBJJOL000000000
Uropeltidae			
<i>Rhinophis saffragamus</i> *	RS-140	SAMN44529023	JBKOJP000000000
Viperidae			
<i>Daboia russelii</i>	RAP0501	SAMN44529011	JBJJOO000000000
<i>Hypnale hypnale</i>	RS-139	SAMN44529020	JBJJOM000000000
<i>Peltopelorus trigonocephalus</i> ³	RAP0519	SAMN44529014	JBLLKO000000000

* Endemic species

1 Previously cited as *Boiga beddomei*

2 Previously cited as *Fowlea piscator*

3 Previously cited as *Trimeresurus trigonocephalus*

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