**Supplementary materials**

Figure S1. Estimates of divergence time.

Table S1. Genomic data, assembly version, and data sources used in this study.

Table S2. Calibration points used in divergence date estimation.

Table S3. List of genes that bear signals of positive selection in the Shedao pit-viper.

Table S4. List of genes that possess sites of convergent substitutions.

Table S5. List of genes that possess sites of parallel substitutions.

File S1. Codon sequences with evidences of positive selection in FASTA format.

File S2. Protein sequences containing convergent/parallel substitutions in FASTA format.

File S3. Protein sequences containing multiple amino acid substitutions specific to Shedao pit-viper in FASTA format.

File S4. Codon sequence alignments of all single-copy genes used in this study in FASTA format.