Decoding the Mitogenome of *Takydromus intermedius*: Insights into the Comparative Mitogenomics and Phylogenetic Relationships of *Takydromus* Lizards

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Supplementary Table S1. The partition and best-fit partition models used in this study.

Phylogenetic analysis	Charset	Partition	Model
ML	*COX1*	1-1542	TIM2+F+I+I+R2
	ND1_COX2_COX3_ND5_CYTB	1543-2502, 2503-3189, 4222-5004, 6730-8550, 9895-11034	TIM2+F+R3
	ND2_ND3_ND4	3190-4221, 5005-5349, 5350-6729	TIM2+F+I+G4
	ATP6_ND4L	8551-9225, 11035-11328	HKY+F+I+G4
	ND6	9226-9735	K3Pu+F+I+G4
	ATP8	9736-9894	TN+F+I+I+R2
	rrnL_rrnS	11329-12839, 12840-13781	TIM2+F+I+G4
BI	*COX1*	1-1542	HKY+F+I+G4
	ND1_COX2_COX3_ND5_CYTB	1543-2502, 2503-3189, 4222-5004, 6730-8550, 9895-11034	GTR+F+I+G4
	ND2_ND3_ND4	3190-4221, 5005-5349, 5350-6729	HKY+F+I+G4
	ATP6_ND4L	8551-9225, 11035-11328	HKY+F+I+G4
	ND6	9226-9735	HKY+F+I+G4
	ATP8	9736-9894	HKY+F+G4
	rrnL_rrnS	11329-12839, 12840-13781	GTR+F+I+G4

Supplementary Table S2. Details on the distribution of tandem repeats (TDRs) in the mitogenomes of *Takydromus* species.

Species and sequences	Consensus pattern	Consensus size (bp)	Number of copies	Location	Length (bp)
Takydromus amurensis KU641018	TAACACATGCCGCTACAAGC GGCCTATTTTCCTCTACCAT TAACAAGTAAATACAAACAT ATATCTC	67	3.6	15396-15632	237
	ATATATGTTTAATCGTGCAT TAACTTATTTACCCCATGAA AAATATATATATACAGTATC CTAATAATAAGACATAATAC	80	2.2	15909-16087	179
	AATTTTGAAAAATTTCGTCC	20	2.0	16701-16740	40
Takydromus amurensis PQ177901	TAACACATGCCGCTACAAGC GGCCTATTTTCCTCTACCAC TAGCAAGTAAATACAAACAT ATATCTC	67	3.6	15396-15633	238
	ATATATGTTTAATCGTGCAT TAACTTATTTACCCCATGAA AAATATATATATACAGTATC CTAATAATAAGACATAATAC	80	2.2	15911-16089	179
Takydromus amurensis PQ177902	TAACACATGCCGCTCTAAGC GGCTTATTTTCCCCTACTAT TAACAAGTAAATACAAACAT ATATCTC	67	3.6	15391-15630	240
	AATTTTGAAAAATTTCGTCC	20	2.0	16697-16736	40
Takydromus intermedius OQ632596	GCTTATTTTCCTCTACCATT CACAAGTAGACACAACACAA CCCATGCCGCATCCTGCGGC TTATTTTCCTCTACCATTCA CAAGTAGACCCAACCCATGC CGCATCCTGCG	111	6.9	15394-16169	776
Takydromus intermedius PX101964	GCTTATTTTCCTCTACCATT	111	16.4	15393-17229	1837

	CACAAGTAGACACAACCAA CCCATGCCGCATCCTGCGGC TTATTTTCCTCTACCATTCA CAAGTAGACACCAACCCATGC CGCATCCTGCG				
Takydromus kuehnei MZ435950	TATTAGTTTGTAATTGATCA ATTGGTTTGTAACTTTTGTA TGCCGCCTTACGCGGCTTAT TTTCCCCAGCTATTAGTCTG TAATTGATCAATTGGTTTGT AACTTTTGTATGCCG	115	2.0	15459-15688	230
Takydromus septentrionalis MK630237	ATTTTCCTCTAGCATTAATT AAACTAATACAAGTACCTAT CTACAAACCATGCCGCTATA CGCGGCTT	68	18.2	15408-16646	1239
Takydromus sexlineatus KF425529	TTTTTACATGCCGCCTCGCG CGGCTTATTTTCCCCATCTC AAATAATGAACAAACAAACA TACTTTCC	68	30.6	15382-17464	2083
Takydromus sylvaticus JX290083	ATTTTCCTCTACTCCTACAC AAGTTAATACACTCCAACCA TATTCAACACATGCCGCATC CTGCGGCTT	69	8.1	15391-15950	560
	TCCTGCGGCTTATTTTCCTC TACTCCTACACAAGTTAATA CACTCCAACCATATTCAACA CATGCCGCA	69	5.1	15970-16321	352
Takydromus sylvaticus OK513036	ATTTTCCTCTACTCCTACAC AAGTTAATACACTCCAACCA TATTCAACACATGCCGCATC CTGCGGCTT	69	8.9	15390-16002	613
Takydromus tachydromoides AB080237	TTCCTCTACATTAAACAAGT AAATACAAGAATTTTACTAT	65	16.2	1-541,17724-18245	1063

	CTCATGCCGCTATAAGCGGC TTATT				
	TGCATTAACCTATTTACCCC ATGAAATATATATATATACA GTATCCTATATATTAGACAT AATACATATATGTTTAATTA	80	2.0	933-1090	158
Takydromus tachydromoides LC101816	TGCATTAACCTATTTACCCC ATGAAATATATATATATACA GTATCCTATATATTAGACAT AATACATATATGTTTAATTA	80	2.0	539-696	158
	TTTTCCTCTACATTAAACAA GTAAATACAAGAATTTTACT ATCTCATGCCGCTATAAGCG GCCTA	65	9.1	17328-17921	594
Takydromus wolteri JX181764	TAACCATGCCGCTCTATGCG GCTTTTTTACCTCTACCACT ACTTGCACAAATACAAATAA TACCCAA	67	17.4	15446-16598	1153
Takydromus wolteri PP972212	TTGCACTAATACAGATATTA CCTTATAACCAGGCCGCTCT ATGCGGCTTTTTTACCTCTA CCAATAC	67	17.7	15417-16599	1183
Takydromus wolteri PP972213	TTGCACTAATACAGATATTA CCTTATAACCAGGCCGCTCT ATGCGGCTTTTTTACCTCTA CCAATAC	67	17.7	15419-16603	1185

Supplementary Table S3. Details on the distribution of simple sequence repeats (SSRs) in the mitogenomes of *Takydromus* species.

Species and sequences	Motif	Motif size (bp)	Repeat	Location	Length (bp)
Takydromus amurensis KU641018, PQ177901, PQ177902	None				
Takydromus intermedius OQ632596	CAAC	4	3	8229-8240	12
	AT	2	5	16347-16356	10
	AT	2	5	17650-17659	10
Takydromus intermedius PX101964	CAAC	4	3	8228-8239	12
	AT	2	5	17405-17414	10
	AT	2	5	18707-18716	10
Takydromus kuehnei MZ435950	C	1	11	1490-1500	11
	CAAC	4	3	5280-5261	12
	AT	2	6	15852-15863	12
	AT	2	5	17157-17166	10
Takydromus septentrionalis MK630237	TTA	3	4	10509-10520	12
Takydromus sexlineatus KF425529	TTA	3	5	5611-5625	15
	AT	2	6	17567-17578	12
	TA	2	8	18875-18890	16
Takydromus sylvaticus JX290083	ATTTT	5	3	10456-10470	15
	AT	2	5	16469-16478	10
	AT	2	5	17774-17783	10
Takydromus sylvaticus OK513036	ATTTT	5	3	10455-10469	15
	AT	2	5	16150-16159	10
	AT	2	5	17454-17463	10
Takydromus tachydromoides AB080237	AT	2	6	958-969	12
	TA	2	6	2265-2276	12
	TA	2	5	3281-3290	10
	TTTG	4	3	8164-8175	12
	CTT	3	4	8198-8209	12
	CAAC	4	3	10562-10573	12
Takydromus tachydromoides LC101816	AT	2	6	564-575	12
	TA	2	6	1871-1882	12

	CTT	3	4	7802-7813	12
	CAAC	4	3	10166-10177	12
Takydromus wolteri JX181764	AT	2	7	943-956	14
	C	1	10	1596-1605	10
	AAC	3	4	9945-9956	12
	TTA	3	4	10501-10512	12
	TTAT	4	5	14423-14434	12
Takydromus wolteri PP972212	AT	2	7	943-956	14
	ATTT	4	3	4490-4501	12
	AAC	3	4	9941-9952	12
	TTA	3	4	10497-10508	12
	TTAT	4	3	14419-14430	12
Takydromus wolteri PP972213	AT	2	7	943-856	14
	C	1	10	1596-1605	10
	ATTT	4	3	4492-4503	12
	AAC	3	4	9943-9954	12
	TTA	3	4	10499-10510	12
	TTAT	4	3	14421-14432	12

Supplementary Table S4. Comparative table of the geographic distributions of *Takydromus* species.

Species	Geographic range in detail
Takydromus amurensis	China (Heilongjiang, Jilin, Liaoning); Japan (Kyushu); Democratic People's Republic of Korea; Republic of Korea; Russian Federation (Eastern Asian Russia)
Takydromus intermedius	China (Yunnan, Sichuan, Guizhou, Hubei)
Takydromus kuehnei	China (Hainan, Guizhou, Guangxi, Guangdong, Taiwan); Viet Nam
Takydromus septentrionalis	China (Hubei, Henan, Guizhou, Guangdong, Gansu, Fujian, Chongqing, Anhui, Jiangxi, Jiangsu, Hunan, Shanghai, Zhejiang, Yunnan, Sichuan, Shanxi, Shandong; Taiwan)
Takydromus sexlineatus	Brunei Darussalam; Cambodia; China (Fujian, Guangdong, Guangxi, Guizhou, Hainan, Yunnan, Hunan, Hong Kong);

	India (Sikkim, Assam, Mizoram); Indonesia (Sumatera, Kalimantan, Jawa); Lao People's Democratic Republic; Malaysia (Peninsular Malaysia, Sarawak); Myanmar; Thailand; Viet Nam
Takydromus sylvaticus	China (Jiangxi, Fujian, Anhui)
Takydromus tachydromoides	Japan (Shikoku, Kyushu, Honshu, Hokkaido)
Takydromus wolteri	China (Anhui, Hubei, Jiangsu, Jilin, Heilongjiang, Liaoning, Chongqing); Democratic People's Republic of Korea; Republic of Korea; Russian Federation (Primoryi)