

**Table 1. Likelihood scores, model parameters, and likelihood-ratio test results for site-model analyses and branch-site-model analyses**

Site models	Model parameters							Likelihood ratio test details			
	lnL	w0	p0	w1	p1	w2	p2	Null model for LRT	Test statistic	df	P value
M0	-13459.32	0.108	1.000								
M3 -2 categories	-13143.49	0.025	0.696	0.367	0.304			M0	663.306	5	<0.0001
M3 -3 categories	-13127.67	0.013	0.568	0.173	0.309	0.598	0.123				
M7	-13129.55										
M8	-13128.97			1.000	0.012			M7	1.145	2	0.5642
<b>Branch-site model A</b>											
<i>E. electricus</i> null	-13196.91	0.060	0.654	1.000	0.098	1.000	0.248				
<i>E. electricus</i> A	-13192.36	0.060	0.768	1.000	0.114	3.892	0.118	<i>E. electricus</i> null	9.107	1	0.0025
<i>B. pinnicaudatus</i> null	-13216.23	0.063	0.805	1.000	0.124	1.000	0.071				
<i>B. pinnicaudatus</i> A	-13208.66	0.065	0.849	1.000	0.130	120.130	0.021	<i>B. pinnicaudatus</i> null	15.143	1	0.0001
<i>S. macrurus</i> null	-13199.54	0.059	0.666	1.000	0.099	1.000	0.234				
<i>S. macrurus</i> A	-13198.74	0.060	0.724	1.000	0.107	1.731	0.170	<i>S. macrurus</i> null	1.608	1	0.2048
<i>A. leptorhynchus</i> null	-13224.54	0.066	0.862	1.000	0.138	1.000	0.000				
<i>A. leptorhynchus</i> A	-13224.54	0.066	0.862	1.000	0.138	1.000	0.000	<i>A. leptorhynchus</i> null	0.000	1	0.9989
<i>G. petersii</i> null	-13203.14	0.059	0.739	1.000	0.114	1.000	0.147				
<i>G. petersii</i> A	-13202.79	0.059	0.762	1.000	0.117	1.431	0.121	<i>G. petersii</i> null	0.692	1	0.4054
Internal branch 1 null	-13194.48	0.061	0.498	1.000	0.076	1.000	0.425				
Internal branch 1 A	-13186.11	0.061	0.781	1.000	0.118	12.996	0.101	Internal branch 1 null	16.746	1	<0.0001
Internal branch 2 null	-13218.99	0.064	0.585	1.000	0.091	1.000	0.324				

Site models	Model parameters							Likelihood ratio test details			
	lnL	w0	p0	w1	p1	w2	p2	Null model for LRT	Test statistic	df	P value
Internal branch 2 A	-13215.63	0.064	0.823	1.000	0.126	27.008	0.051	Internal branch 2 null	6.709	1	0.0096
Internal branch 3 null	-13224.54	0.066	0.862	1.000	0.138	1.000	0.000				
Internal branch 3 A	-13224.54	0.066	0.862	1.000	0.138	33.585	0.000	Internal branch 3 null	0.000	1	0.9989
<b>Branch-site model B</b>											
<i>E. electricus</i>	-13117.64	0.025	0.644	0.371	0.244	3.710	0.112	M3-2 categories	51.711	2	<0.0001
<i>B. pinnicaudatus</i>	-13134.45	0.026	0.695	0.370	0.291	998.993	0.015	M3-2 categories	18.087	2	0.0001
<i>S. macrurus</i>	-13122.59	0.024	0.623	0.370	0.240	1.947	0.137	M3-2 categories	41.811	2	<0.0001
<i>A. leptorhynchus</i>	-13143.12	0.024	0.543	0.370	0.238	0.061	0.218	M3-2 categories	0.739	2	0.6912
<i>G. petersii</i>	-13130.56	0.023	0.650	0.374	0.261	1.557	0.090	M3-2 categories	25.857	2	<0.0001
Internal branch 1	-13110.77	0.024	0.649	0.365	0.263	11.107	0.088	M3-2 categories	65.446	2	0.0001
Internal branch 2	-13139.98	0.025	0.682	0.365	0.292	13.101	0.027	M3-2 categories	7.034	2	0.0297
Internal branch 3	-13140.21	0.025	0.368	0.379	0.161	0.000	0.471	M3-2 categories	6.576	2	0.0373

Internal branch 1, branch ancestral to *E. electricus* plus *B. pinnicaudatus*; internal branch 2, branch ancestral to *E. electricus* plus *B. pinnicaudatus* plus *S. macrurus*; internal branch 3, branch ancestral to *E. electricus* plus *B. pinnicaudatus* plus *S. macrurus* plus *A. leptorhynchus*.