

Supplementary Material to “Expanding the mitochondrial genomic toolkit for Polyneoptera: New mitogenomes and evaluation of reduced marker sets for phylogeny and DNA barcoding”

Table S7 - Results of barcoding gap analyses for Orthoptera, Blattodea, Mantodea, and Plecoptera based on mitochondrial gene regions. The table summarizes intraspecific and interspecific genetic distances (minimum, median, and maximum), the difference between minimum interspecific and maximum intraspecific distances, and the results of Mann–Whitney–Wilcoxon tests comparing distance distributions.

Order	Gene	NCBI Gene ID	Region	Length (bp)	Number of species	Number of sequences	Interspecific distance			Intraspecific distance			(Min. inter. dist.) - (Max. intra. dist.)	Mann-Whitney-Wilcoxon	
							Min	Median	Max	Min	Median	Max		W	p-value
Orthoptera	<i>12S</i>	19893562	380..688	301	19	93	0.00	0.28	1.07	0.00	0.00	0.97	-96.97%	17098394	2.20E-16
	<i>16S</i>	19893560	750..1101	354	36	165	0.00	0.23	0.37	0.00	0.00	0.19	-19.20%	187786250	2.20E-16
	<i>ATP6</i>	19893539	1..675	678	5	24	0.08	0.19	0.39	0.00	0.00	0.03	4.68%	42320	2.20E-16
	<i>COX1</i>	19893533	97..660	564	39	278	0.00	0.22	0.37	0.00	0.02	0.29	-29.29%	1495162298	2.20E-16
	<i>CYTB</i>	19893556	430..854	440	23	120	0.00	0.22	0.38	0.00	0.01	0.24	-23.61%	50291666	2.20E-16
	<i>ND2</i>	19893529	58..1014	952	32	159	0.00	0.46	0.70	0.00	0.03	0.31	-31.42%	147852038	2.20E-16
	<i>ND4</i>	19893551	1..1336	1335	3	14	0.13	0.15	0.17	0.00	0.01	0.05	7.87%	3380	2.20E-16
	<i>ND5</i>	19893549	815..1413	627	31	164	0.00	0.12	0.24	0.00	0.01	0.08	-7.89%	158227725	2.20E-16
Blattodea	<i>ATP6</i>	19893539	22..675	660	26	138	0.09	0.28	0.48	0.00	0.01	0.15	-6.77%	74919153	2.20E-16
	<i>COX1</i>	19893533	130..637	508	55	360	0.00	0.23	0.40	0.00	0.01	0.17	-16.74%	3988399496	2.20E-16
	<i>COX2</i>	19893535	59..608	550	52	364	0.00	0.28	0.45	0.00	0.00	0.16	-15.96%	4049518131	2.20E-16
	<i>ND5</i>	19893549	1..1717	1720	14	63	0.09	0.37	0.53	0.00	0.01	0.06	2.68%	2770196	2.20E-16
	<i>ND6</i>	19893555	1..525	489	14	63	0.08	0.25	0.37	0.00	0.00	0.08	0.41%	2770196	2.20E-16
Mantodea	<i>16S</i>	19893560	1..1322	1314	3	12	0.11	0.14	0.16	0.00	0.02	0.04	6.51%	1728	5.92E-15
	<i>ATP8</i>	19893538	1..159	159	3	12	0.24	0.26	0.36	0.00	0.03	0.14	9.53%	1728	5.40E-15
	<i>COX1</i>	19893533	1..1466	1536	3	12	0.13	0.15	0.17	0.00	0.02	0.06	7.40%	1728	5.92E-15

Order	Gene	NCBI Gene ID	Region	Length (bp)	Number of species	Number of sequences	Interspecific distance			Intraspecific distance			(Min. inter. dist.) - (Max. intra. dist.)	Mann-Whitney-Wilcoxon	
							Min	Median	Max	Min	Median	Max		W	p-value
	<i>ND2</i>	19893529	22..1024	1027	3	12	0.17	0.24	0.25	0.00	0.02	0.12	4.84%	1728	5.93E-15
	<i>ND6</i>	19893555	4..522	504	3	12	0.17	0.20	0.25	0.00	0.03	0.08	8.69%	1728	5.86E-15
	<i>COXI</i>	19893533	95..668	573	12	70	0.16	0.24	0.30	0.00	0.01	0.20	-3.74%	4815396	2.20E-16
	<i>ND4</i>	19893551	1..1341	1341	3	14	0.19	0.22	0.24	0.00	0.06	0.08	10.97%	3380	2.20E-16
	<i>ND4L</i>	19893552	1..297	297	3	17	0.20	0.22	0.28	0.00	0.04	0.09	11.23%	7680	2.20E-16
	<i>ND5</i>	19893549	55..1717	1662	3	14	0.39	0.42	0.46	0.00	0.07	0.13	25.55%	4588	2.20E-16
Plecoptera	<i>ND6</i>	19893555	22..525	503	3	15	0.20	0.23	0.25	0.00	0.05	0.07	12.41%	3380	2.20E-16
Phasmatodea	<i>COXI</i>	19893533	819..1294	476	11	87	0	0.1427318 65	0.26955 2803	0	0.006342 533	0.04771263 7	-4.77%	10744453	2.20E-16