

Supplementary Table I Comparison of whole genome sizes and A + T contents, and GenBank accession numbers of the mitochondrial genomes for 44 chelicerates.

Species	Total		13 PCGs		16S rRNA gene		12S rRNA gene		Accession Numbers
	Length (bp)	A + T (%)	Length (bp)	A + T (%)	Length (bp)	A + T (%)	Length (bp)	A + T (%)	
Class Merostomata									
Order Xiphosura									
<i>Carcinoscorpius rotundicauda</i>	15,033	73.8	11,072	73.1	1,301	75.7	816	73.9	In this study
<i>Tachypleus tridentatus</i> I	15,006	74.0	11,062	73.5	1,294	75.7	800	74.5	In this study
<i>Tachypleus tridentatus</i> II	15,008	74.0	11,075	73.5	1,294	75.6	803	74.8	NC_012574.1
<i>Limulus polyphemus</i>	14,985	67.6	11,077	66.4	1,296	67.4	799	66.6	NC_003057.1
Class Pycnogonida									
Order Pantopoda									
<i>Achelia bituberculata</i>	15,474	77.0	10,991	75.9	1,210	78.9	776	78.4	NC_009724.1
<i>Ammothea carolinensis</i>	15,101	80.4	11,113	79.4	1,213	81.6	830	82.1	NC_014671.1
<i>Nymphon gracile</i>	14,681	77.3	10,930	76.6	1,196	79.3	767	75.5	NC_008572.1
<i>Tanystylum orbiculare</i>	15,251	80.0	11,091	79.0	1,193	82.1	824	79.6	NC_014505.1
Class Arachnida									
Order Scorpiones									
<i>Buthus occitanus</i>	15,060	67.8	9,937	66.3	1,151	74.1	796	72.6	NC_014505.1
<i>Mesobuthus martensii</i>	15,034	66.8	10,808	65.6	1,139	72.3	751	71.1	NC_009738.1
<i>Centruroides limpidus</i>	14,519	60.2	10,848	63.0	1,132	68.8	727	68.1	NC_006896.1
<i>Uroctonus mordax</i>	14,840	74.0	10,921	73.7	1,178	78.1	792	77.7	NC_010782.1
Order Araneae									
<i>Habronattus oregonensis</i>	14,381	69.4	10,756	73.8	1,018	75.2	691	74.0	NC_005942.1
<i>Nephila clavata</i>	14,436	76.0	10,729	74.9	1,046	79.1	695	78.4	NC_008063.1
<i>Hypochilus thorelli</i>	13,991	70.3	10,753	69.0	1,041	75.4	688	75.2	NC_010777.1
<i>Aphonopelma</i> sp. 1	14,070	64.0	10,738	63.1	1,062	67.3	691	66.0	EU_523754.1
<i>Calisoga longitarsis</i>	14,070	64.0	10,738	63.1	1,062	67.3	691	66.0	NC_010780.1
<i>Heptathela hangzhouensis</i>	14,215	67.5	10,765	71.5	1,119	72.1	698	69.0	NC_005924.1
<i>Ornithoctonus huwena</i>	13,874	65.2	10,890	71.4	1,048	66.5	666	67.9	NC_005925.1
Order Solifugae									
<i>Eremobates cf. alpisetulosus</i>	15,083	68.7	10,945	68.5	1,248	69.6	729	68.2	NC_010779.1
<i>Nothopuga</i> sp. 1	14,985	69.2	9,386	69.0	1,219	71.8	725	69.7	NC_009984.1
Order Opiliones									
<i>Opilio parietinus</i>	15,400	72.3	10,955	70.3	1,242	77.5	786	74.8	NC_014700.1
<i>Phalangium opilio</i>	14,968	71.8	10,921	69.9	1,243	78.0	790	74.6	NC_010766.1
Order Amblypygi									
<i>Damon diadema</i>	14,786	63.2	10,959	62.2	1,294	65.0	750	61.9	NC_011293.1
<i>Phrynus</i> sp. 1	14,764	67.5	11,975	66.9	1,211	68.9	786	64.9	NC_010775.1
Order Ricinulei									
<i>Pseudocellus pearsei</i>	15,099	69.1	10,823	67.7	1,250	73.2	743	69.7	NC_009985.1
Order Uropygi									
<i>Mastigoproctus giganteus</i>	14,416	70.6	10,847	69.5	1,170	75.6	774	76.0	NC_010430.1
Order Pseudoscorpiones									
<i>Pseudogarypus banksi</i>	16,546	76.8	11,301	75.8	987	78.0	700	78.4	NC_017753.1
<i>Paratemnooides elongatus</i>	14,368	73.9	10,581	72.9	1,014	76.1	728	75.6	NC_017752.1
Order Acari									
<i>Ascoschoengastia</i> sp.	16,067	70.1	10,560	69.3	1,047	76.3	680	72.8	NC_010596.1
<i>Leptotrombidium pallidum</i>	16,799	71.0	10,312	71.4	1,008	74.9	601	72.1	NC_007177.1
<i>Unionicola parkeri</i>	14,734	72.8	10,799	72.1	1,017	77.0	653	72.4	NC_014683.1
<i>Walchia hayashii</i>	14,857	73.0	10,574	73.0	1,045	77.4	625	75.0	NC_010595.1
<i>Dermatophagoides farinae</i>	14,266	71.4	10,848	70.4	1,017	72.3	661	72.0	NC_013184.1
<i>Amblyomma triguttatum</i>	14,740	73.2	10,876	78.3	1,199	77.9	693	75.9	NC_005963.1
<i>Carios capensis</i>	14,418	68.7	10,873	72.7	1,225	74.3	695	72.9	NC_005291.1
<i>Haemaphysalis flava</i>	14,686	71.8	10,818	76.7	1,196	77.7	699	75.0	NC_005292.1
<i>Ixodes hexagonus</i>	14,539	67.9	10,826	71.1	1,287	73.2	705	75.0	NC_002010.1
<i>Ornithodoros porcinus</i>	14,378	71.0	10,877	70.1	1,207	74.5	691	74.4	NC_005820.1
<i>Rhipicephalus sanguineus</i>	14,710	72.8	10,803	78.0	1,190	77.5	687	75.7	NC_002074.1
<i>Stegannacarus magnus</i>	13,818	74.6	10,560	74.4	992	76.5	609	74.4	NC_011574.1
<i>Phytoseiulus persimilis</i>	16,199	79.8	10,877	79.4	1,199	82.9	711	81.6	NC_014049.1
<i>Stylochytrus rarior</i>	14,900	72.7	10,839	71.3	1,200	76.7	653	75.3	NC_013474.2
<i>Varroa destructor</i>	16,477	74.6	10,783	79.2	1,149	79.1	726	76.7	NC_004454.2
Average values	14,849	71.3	10,823	71.7	1,156	74.9	725	73.3	