



## Supplementary Material

# Sequencing Analysis of the Mitochondrial Genome of Japanese Sand Lance *Ammodytes personatus* Based on Next-Generation Sequencing Technology

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**Supplementary Table I.- Composition and skewness in the mitochondrial genomes of Perciformes species.**

Species	Size	Base composition					AT skewness	GC skewness
		A	G	T	C	G+C		
<b>Whole genome</b>								
<i>A. Personatus</i> JQ085861	16,537	25.9	17.9	26.7	29.5	47.4	-0.015	-0.245
<i>A. Personatus</i> KF672362	16,527	25.7	18.1	26.7	29.4	47.6	-0.019	-0.238
<i>A. Personatus</i> AP006023	16,537	25.9	17.8	26.8	29.4	47.4	-0.017	-0.246
<b>AP1</b>	<b>16,536</b>	<b>25.9</b>	<b>17.9</b>	<b>26.9</b>	<b>29.4</b>	<b>47.3</b>	<b>-0.019</b>	<b>-0.243</b>
<b>AP2</b>	<b>16,537</b>	<b>25.8</b>	<b>17.9</b>	<b>26.8</b>	<b>29.4</b>	<b>47.3</b>	<b>-0.019</b>	<b>-0.243</b>
<b>AP3</b>	<b>16,527</b>	<b>25.8</b>	<b>18.1</b>	<b>26.7</b>	<b>29.5</b>	<b>47.5</b>	<b>-0.017</b>	<b>-0.239</b>
<i>Omobranchus elegans</i>	16,517	28.6	15.9	29.4	26.1	42.0	-0.014	-0.243
<i>Pholis fangi</i>	16,523	25.4	18.8	27.1	28.7	47.6	-0.032	-0.208
<i>Sillago sinica</i>	16,572	25.2	19.7	26.1	28.9	48.7	-0.018	-0.189
<i>Acanthogobius hasta</i>	16,663	27.7	17.4	26.8	28.0	45.5	0.017	-0.233
<i>Rhinogobius giurinus</i>	16,520	27.7	16.6	26.1	29.6	46.2	0.030	-0.281
<i>Larimichthys crocea</i>	16,466	27.5	16.3	25.5	30.7	47.0	0.038	-0.306
<i>Larimichthys polyactis</i>	16,470	27.6	16.2	25.0	31.3	47.4	0.049	-0.318
<b>PCGs</b>								
<i>A. Personatus</i> JQ085861	11,436	23.6	16.8	28.2	31.4	48.2	-0.089	-0.303
<i>A. Personatus</i> KF672362	11,436	23.4	17.2	28.1	31.3	48.5	-0.091	-0.291
<i>A. Personatus</i> AP006023	11,436	23.7	16.7	28.3	31.3	48.0	-0.089	-0.295
<b>AP1</b>	<b>11,436</b>	<b>23.6</b>	<b>16.8</b>	<b>28.4</b>	<b>31.2</b>	<b>48.0</b>	<b>-0.092</b>	<b>-0.300</b>
<b>AP2</b>	<b>11,436</b>	<b>23.6</b>	<b>16.7</b>	<b>28.3</b>	<b>31.3</b>	<b>48.1</b>	<b>-0.091</b>	<b>-0.304</b>
<b>AP3</b>	<b>11,436</b>	<b>23.5</b>	<b>17.1</b>	<b>28.1</b>	<b>31.4</b>	<b>48.4</b>	<b>-0.089</b>	<b>-0.295</b>
<i>Omobranchus elegans</i>	11,426	26.8	14.7	30.8	27.8	42.4	-0.069	-0.308
<i>Pholis fangi</i>	11,428	23.1	17.9	28.5	30.6	48.4	-0.105	-0.262
<i>Sillago sinica</i>	11,428	23.3	18.7	27.3	30.6	49.4	-0.079	-0.241
<i>Acanthogobius hasta</i>	11,505	26.1	16.3	28.0	29.6	45.9	-0.035	-0.290
<i>Rhinogobius giurinus</i>	11,432	26.1	15.1	27.3	31.5	46.6	-0.022	-0.352
<i>Larimichthys crocea</i>	11,431	25.7	15.0	26.5	32.8	47.8	-0.015	-0.372
<i>Larimichthys polyactis</i>	11,432	25.8	14.8	25.9	33.5	48.3	-0.002	-0.387

Species	Size	Base composition					AT skewness	GC skewness
		A	G	T	C	G+C		
<b>tRNAs</b>								
<i>A. Personatus</i> JQ085861	1,557	30.3	20.4	24.7	24.7	45.0	0.102	-0.095
<i>A. Personatus</i> KF672362	1,557	30.1	20.4	24.9	24.5	45.0	0.095	-0.091
<i>A. Personatus</i> AP006023	1,557	30.3	20.4	24.7	24.7	45.0	0.098	-0.093
<b>AP1</b>	<b>1,555</b>	<b>30.2</b>	<b>20.4</b>	<b>24.8</b>	<b>24.6</b>	<b>45.0</b>	<b>0.098</b>	<b>-0.093</b>
<b>AP2</b>	<b>1,557</b>	<b>30.3</b>	<b>20.3</b>	<b>24.8</b>	<b>24.7</b>	<b>45.0</b>	<b>0.100</b>	<b>-0.098</b>
<b>AP3</b>	<b>1,556</b>	<b>30.2</b>	<b>20.4</b>	<b>24.8</b>	<b>24.6</b>	<b>45.0</b>	<b>0.091</b>	<b>-0.088</b>
<i>Omobranchus elegans</i>	1,530	31.1	19.3	26.5	23.1	42.4	0.080	-0.090
<i>Pholis fangi</i>	1,553	29.6	21.2	23.6	25.6	46.8	0.113	-0.094
<i>Sillago sinica</i>	1,566	28.4	21.5	23.8	26.3	47.8	0.088	-0.100
<i>Acanthogobius hasta</i>	1,555	29.5	21.1	24.0	25.5	46.6	0.103	-0.094
<i>Rhinogobius giurinus</i>	1,554	30.5	19.9	23.3	26.3	46.2	0.134	-0.139
<i>Larimichthys crocea</i>	1,556	30.7	19.7	24.1	25.5	45.2	0.120	-0.128
<i>Larimichthys polyactis</i>	1,552	30.2	19.9	24.1	25.8	45.7	0.112	-0.129
<b>rRNAs</b>								
<i>A. Personatus</i> JQ085861	2,643	31.9	21.5	20.5	26.0	47.6	0.218	-0.095
<i>A. Personatus</i> KF672362	2,641	32.0	21.3	20.6	26.1	47.4	0.217	-0.101
<i>A. Personatus</i> AP006023	2,643	31.9	21.5	20.5	26.0	47.6	0.215	-0.092
<b>AP1</b>	<b>2,643</b>	<b>31.9</b>	<b>21.5</b>	<b>20.5</b>	<b>26.0</b>	<b>47.5</b>	<b>0.218</b>	<b>-0.095</b>
<b>AP2</b>	<b>2,643</b>	<b>31.8</b>	<b>21.6</b>	<b>20.6</b>	<b>26.0</b>	<b>47.6</b>	<b>0.214</b>	<b>-0.092</b>
<b>AP3</b>	<b>2,641</b>	<b>31.9</b>	<b>21.6</b>	<b>20.6</b>	<b>26.0</b>	<b>47.6</b>	<b>0.217</b>	<b>-0.101</b>
<i>Omobranchus elegans</i>	2,628	33.9	19.6	23.4	23.2	42.8	0.183	-0.084
<i>Pholis fangi</i>	2,642	31.2	21.8	22.2	24.8	46.7	0.169	-0.064
<i>Sillago sinica</i>	2,664	30.1	23.2	21.9	24.8	48.0	0.158	-0.033
<i>Acanthogobius hasta</i>	2,627	33.2	21.1	21.2	24.6	45.6	0.221	-0.077
<i>Rhinogobius giurinus</i>	2,659	32.8	20.8	21.0	25.3	46.1	0.219	-0.098
<i>Larimichthys crocea</i>	2,640	32.8	20.2	20.6	26.3	46.5	0.228	-0.131
<i>Larimichthys polyactis</i>	2,647	32.6	20.3	20.5	26.6	46.9	0.228	-0.134
<b>Control region</b>								
<i>A. Personatus</i> JQ085861	870	30.0	17.2	30.2	22.5	39.8	-0.003	-0.134
<i>A. Personatus</i> KF672362	862	29.8	17.5	29.9	22.7	40.3	-0.002	-0.129
<i>A. Personatus</i> AP006023	870	30.0	17.2	30.2	22.5	39.8	-0.003	-0.129
<b>AP1</b>	<b>870</b>	<b>29.9</b>	<b>17.2</b>	<b>30.3</b>	<b>22.5</b>	<b>39.8</b>	<b>-0.007</b>	<b>-0.134</b>
<b>AP2</b>	<b>870</b>	<b>29.5</b>	<b>17.7</b>	<b>30.1</b>	<b>22.6</b>	<b>40.3</b>	<b>-0.010</b>	<b>-0.122</b>
<b>AP3</b>	<b>870</b>	<b>30.1</b>	<b>17.2</b>	<b>30.3</b>	<b>22.3</b>	<b>39.5</b>	<b>-0.002</b>	<b>-0.142</b>
<i>Omobranchus elegans</i>	869	33.4	14.4	33.7	18.5	32.9	-0.004	-0.125
<i>Pholis fangi</i>	853	31.5	17.7	29.9	20.9	38.6	0.026	-0.083
<i>Sillago sinica</i>	826	30.0	18.6	28.6	22.8	41.4	0.024	-0.101
<i>Acanthogobius hasta</i>	984	31.8	14.5	32.9	20.7	35.3	-0.017	-0.176
<i>Rhinogobius giurinus</i>	842	30.3	16.7	31.1	21.9	38.6	-0.013	-0.135
<i>Larimichthys crocea</i>	795	31.9	15.7	29.3	23.0	38.7	0.042	-0.189
<i>Larimichthys polyactis</i>	799	32.2	14.3	30.3	23.3	37.5	0.030	-0.239