

Table 1. Organization of the complete mtDNAs of *Mergus serrator*

Gene	location	Length(bp)	Start codon	End codon	Spacer (+) or overlap (-)	Strand
tRNA ^{Phe}	1-72	72			-1	H
12S rRNA	72-1066	995			0	H
tRNA ^{Val}	1067-1137	71			0	H
16S rRNA	1138-2737	1600			0	H
tRNA ^{Leu(UUR)}	2738-2811	74			6	H
ND1	2818-3795	978	ATA	AGG	-2	H
tRNA ^{Ile}	3794-3866	73			7	H
tRNA ^{Gln}	3874-3944	71			-1	L
tRNA ^{Met}	3944-4012	69			0	H
ND2	4013-5051	1039	ATG	T--	0	H
tRNA ^{Trp}	5052-5127	76			3	H
tRNA ^{Ala}	5131-5199	69			1	L
tRNA ^{Asn}	5201-5273	73			0	L
tRNA ^{Cys}	5274-5337	64			0	L
tRNA ^{Tyr}	5338-5408	71			1	L
COI	5410-6960	1551	GTG	AGG	-9	H
tRNA ^{Ser(UCN)}	6952-7024	73			2	L
tRNA ^{Asp}	7027-7095	69			1	H
COII	7097-7783	687	GTG	TAA	1	H
tRNA ^{Lys}	7785-7853	69			1	H
ATP8	7855-8022	168	ATG	TAA	-10	H
ATP6	8013-8696	684	ATG	TAA	-1	H
COIII	8696-9479	784	ATG	T--	0	H
tRNA ^{Gly}	9480-9548	69			0	H
ND3	9549-9722	174	ATG	TAG	1	H
	9724-9900	177			1	H
tRNA ^{Arg}	9902-9971	70			0	H
ND4L	9972-10268	297	ATG	TAA	-7	H
ND4	10262-11639	1378	ATG	T--	0	H
tRNA ^{His}	11640-11708	69			0	H
tRNA ^{Ser(AGY)}	11709-11774	66			-1	H
tRNA ^{Leu(CUN)}	11774-11844	71			0	H
ND5	11845-13668	1824	GTG	TAA	-1	H
CYTB	13668-14810	1143	ATG	TAA	2	H

tRNA ^{Thr}	14813-14880	68			10	H
tRNA ^{Pro}	14891-14960	70			10	L
ND6	14971-15492	522	ATG	TAG	0	L
tRNA ^{Glu}	15493-15560	68			0	L
CR	15561-16627	1067			0	H

Negative values indicate overlapping; H heavy strand; L light strand.

Table 2. Nucleotide composition of the mitochondrial genomes of 53 Anseriformes species

Family	Genus	Species	T	C	A	G	AT skew	GC skew	A+T	G+C	Total	Accession number
Anatidae	<i>Aix</i>	<i>Aix galericulata</i>	22.35	32.77	29.21	15.66	0.13	-0.35	51.57	48.43	16605	NC023969
	<i>Anas</i>	<i>Anas acuta</i>	22.12	32.86	28.78	16.24	0.13	-0.34	50.90	49.10	16599	NC024631
		<i>Anas crecca</i>	22.35	32.64	29.05	15.96	0.13	-0.34	51.40	48.60	16601	NC022452
		<i>Anas platyrhynchos</i>	22.21	32.81	29.20	15.78	0.14	-0.35	51.41	48.59	16604	NC009684
	<i>Anser</i>	<i>Anas poecilorhyncha</i>	22.21	32.82	29.17	15.81	0.14	-0.35	51.37	48.63	16608	NC022418
		<i>Anser albifrons</i>	22.63	32.05	30.15	15.18	0.14	-0.36	52.78	47.22	16737	NC004539
		<i>Anser anser</i>	22.58	32.14	30.18	15.10	0.14	-0.36	52.77	47.23	16738	NC011196
		<i>Anser cygnoides</i>	22.49	32.24	30.21	15.06	0.15	-0.36	52.70	47.30	16739	NC023832
		<i>Anser fabalis</i>	22.73	31.84	30.07	15.36	0.14	-0.35	52.80	47.20	16688	NC016922
		<i>Anser indicus</i>	22.50	32.23	30.17	15.10	0.15	-0.36	52.67	47.33	16730	NC025654
		<i>Asarcornis</i>										
	<i>Aythya</i>	<i>Asarcornis scutulata</i>	21.77	33.22	28.88	16.13	0.14	-0.35	50.64	49.36	16539	NC052827
		<i>Aythya americana</i>	22.24	32.75	29.39	15.62	0.14	-0.35	51.62	48.38	16616	NC000877
		<i>Aythya ferina</i>	22.19	32.83	29.42	15.56	0.14	-0.36	51.61	48.39	16616	NC024602
		<i>Aythya fuligula</i>	22.18	32.87	29.42	15.52	0.14	-0.36	51.61	48.39	16616	NC024595
		<i>Aythya nyroca</i>	22.28	32.71	29.66	15.35	0.14	-0.36	51.94	48.06	16623	MW287344
	<i>Branta</i>	<i>Branta bernicla</i>	22.68	31.99	29.91	15.42	0.14	-0.35	52.59	47.41	16747	KJ680301
		<i>Branta canadensis</i>	22.60	32.07	30.18	15.14	0.14	-0.36	52.79	47.21	16760	NC007011
	<i>Bucephala</i>	<i>Bucephala albeola</i>	21.82	33.36	28.52	16.30	0.13	-0.34	50.34	49.66	16614	MW849286
		<i>Bucephala clangula</i>	21.65	33.46	28.68	16.21	0.14	-0.35	50.33	49.67	16625	MW849283
		<i>Bucephala islandica</i>	21.65	33.43	28.68	16.24	0.14	-0.35	50.32	49.68	16627	MW849281
	<i>Cairina</i>	<i>Cairina moschata</i>	21.93	32.95	29.01	16.12	0.14	-0.34	50.93	49.07	16610	NC010965
	<i>Clangula</i>	<i>Clangula hyemalis</i>	21.83	33.31	29.18	15.68	0.14	-0.36	51.01	48.99	16610	MW849278

<i>Cygnus</i>	<i>Cygnus atratus</i>	22.20	32.55	29.52	15.73	0.14	-0.35	51.72	48.28	16748	NC012843
	<i>Cygnus columbianus</i>	22.79	31.89	30.09	15.23	0.14	-0.35	52.88	47.12	16728	NC007691
	<i>Cygnus cygnus</i>	22.79	31.97	29.97	15.27	0.14	-0.35	52.76	47.24	16724	NC027095
	<i>Cygnus olor</i>	22.59	32.12	29.64	15.65	0.13	-0.34	52.23	47.77	16739	NC027096
<i>Dendrocygna</i>	<i>Dendrocygna javanica</i>	23.67	30.44	30.44	15.45	0.13	-0.33	54.11	45.89	16753	NC012844
<i>Heteronetta</i>	<i>Heteronetta atricapilla</i>	23.00	31.93	30.01	15.06	0.13	-0.36	53.00	47.00	16723	CM021836
<i>Histrionicus</i>	<i>Histrionicus histrionicus</i>	21.79	33.29	29.32	15.61	0.15	-0.36	51.11	48.89	16634	MW849288
<i>Lophodytes</i>	<i>Lophodytes cucullatus</i>	21.96	33.02	29.01	16.01	0.14	-0.35	50.97	49.03	16549	MW849287
<i>Mareca</i>	<i>Mareca falcata</i>	22.35	32.65	28.88	16.11	0.13	-0.34	51.24	48.76	16601	NC023352
	<i>Mareca penelope</i>	22.29	32.71	28.89	16.11	0.13	-0.34	51.18	48.82	16596	NC050973
	<i>Mareca strepera</i>	22.19	32.81	28.84	16.16	0.13	-0.34	51.03	48.97	16600	NC045373
<i>Melanitta</i>	<i>Melanitta deglandi</i>	21.58	33.45	28.74	16.22	0.14	-0.35	50.33	49.67	16452	MW849279
	<i>Melanitta nigra</i>	21.77	33.32	28.83	16.08	0.14	-0.35	50.60	49.40	16552	MW849282
	<i>Melanitta perspicillata</i>	21.61	33.49	28.66	16.24	0.14	-0.35	50.27	49.73	16499	MW849280
<i>Mergus</i>	<i>Mergus merganser</i>	21.88	33.24	28.73	16.16	0.14	-0.35	50.60	49.40	16630	NC040986
	<i>Mergus serrator</i>	21.72	33.38	28.77	16.13	0.14	-0.35	50.49	49.51	16627	MZ365040
	<i>Mergus squamatus</i>	22.26	32.76	29.03	15.95	0.13	-0.35	51.29	48.71	16595	NC016723
<i>Netta</i>	<i>Netta rufina</i>	22.44	32.59	29.61	15.37	0.14	-0.36	52.04	47.96	16625	NC024922
<i>Nettapus</i>	<i>Nettapus auritus</i>	22.83	32.07	29.79	15.31	0.13	-0.35	52.62	47.38	16643	CM021833
<i>Oxyura</i>	<i>Oxyura jamaicensis</i>	22.94	32.30	28.81	15.94	0.11	-0.34	51.75	48.25	15914	CM021834
<i>Polysticta</i>	<i>Polysticta stelleri</i>	21.89	33.04	28.79	16.28	0.14	-0.34	50.68	49.32	16612	MW849289
<i>Sibirionetta</i>	<i>Sibirionetta formosa</i>	22.51	32.44	29.52	15.53	0.13	-0.35	52.03	47.97	16592	NC015482
<i>Somateria</i>	<i>Somateria fischeri</i>	21.90	33.12	28.74	16.25	0.14	-0.34	50.64	49.36	16601	MW849290
	<i>Somateria mollissima</i>	21.97	33.02	28.62	16.39	0.13	-0.34	50.59	49.41	16626	MW849292
	<i>Somateria spectabilis</i>	21.93	33.07	28.71	16.29	0.13	-0.34	50.65	49.35	16627	MW849291
<i>Spatula</i>	<i>Spatula clypeata</i>	22.47	32.49	29.39	15.65	0.13	-0.35	51.86	48.14	16599	NC028346

	<i>Stictonetta</i>	<i>Stictonetta naevosa</i>	22.39	32.80	28.45	16.35	0.12	-0.33	50.84	49.16	16778	CM021835
	<i>Tadorna</i>	<i>Tadorna ferruginea</i>	21.99	32.96	29.57	15.48	0.15	-0.36	51.56	48.44	16639	NC024640
		<i>Tadorna tadorna</i>	22.21	32.82	29.20	15.78	0.14	-0.35	51.40	48.60	16604	NC024750
Anhimidae	<i>Chauna</i>	<i>Chauna torquata</i>	24.01	30.82	31.31	13.87	0.13	-0.38	55.31	44.69	16766	NC052807
Anseranatidae	<i>Anseranas</i>	<i>Anseranas semipalmata</i>	23.49	31.38	30.92	14.20	0.14	-0.38	54.41	45.59	16868	NC005933
	averages		22.31	32.63	29.36	15.71	0.14	-0.35	51.67	48.33	16632	
	standard deviation		0.51	0.64	0.64	0.52	0.01	0.01	1.10	1.10	127.12	
