Supplementary Material

Short Communication: Organization and Variation of the Mitochondrial DNA Control Region in Ardeidae (Aves: Ciconiiformes) and their Phylogenetic Relationship

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Supplementary Table S1.- Size and location of the mitochondrial DNA control region in Ardeidae.

Genus	Species	Code	No. of control region	Location	Length	Accession Number	Sources
Nycticorax	*Nycticorax nycticorax*	Nny	2	tRNA^{Glu} - Cytb, tRNA^{Glu} - tRNA^{Phe}	1192, 2200	KJ190954	Zhou et al., 2014
Ardea	*Ardea cinerea*	Aci	2		1178, 1500	NC025900	Zhou et al., 2014
	Ardea purpurea	Apu	2		1162, 1543	NC025919	Zhou et al., 2014
Casmerodius	*Casmerodius alba*	Eal	2		1346, 2033	NC025916	Zhou et al., 2014
Egretta	*Egretta garzetta*	Ega	2		1548, 1815	KJ190950	Zhou et al., 2014
	Egretta eulophotes	Eeu	1	tRNA^{Glu} - tRNA^{Phe}	1997	NC009736	Zhou et al., 2007
	Egretta novaehollandiae	Eno	1	tRNA^{Glu} - tRNA^{Phe}	1922	NC008551	Gibb et al., 2007
	Egretta sacra	Esa	2	tRNA^{Glu} - Cytb, tRNA^{Glu} - tRNA^{Phe}	1383, 1809	NC025920	Zhou et al., 2014
Mesophoyx	*Mesophoyx intermedia*	Min	2	ND6- Cytb, tRNA^{Glu} - tRNA^{Phe}	1143, 1438	NC025918	Zhou et al., 2014
Ixobrychus	*Ixobrychus eurhythmus*	Ieu	2	tRNA^{Glu} - Cytb, tRNA^{Glu} - tRNA^{Phe}	1191, 1852	NC025924	Zhou et al., 2014
	Ixobrychus sinensis	Isi	2	tRNA^{Glu} - Cytb, tRNA^{Glu} - tRNA^{Phe}	1345, 1660	NC025925	Zhou et al., 2014
	Ixobrychus cinnamomeus	Ici	1	tRNA^{Glu} - tRNA^{Phe}	1608	HQ690247	Zhang et al., 2012
	Ixobrychus flavicollis	Ifl	1	tRNA^{Glu} - tRNA^{Phe}	1427	NC_024575	Wang et al., 2014
Butorides	*Butorides striatus*	Bst	2	tRNA^{Glu} - Cytb, tRNA^{Glu} - tRNA^{Phe}	1195, 413	NC025922	Zhou et al., 2014
Bubulcus	*Bubulcus ibis*	Bib	2	ND6- Cytb, tRNA^{Glu} - tRNA^{Phe}	1420, 1674	NC025917	Zhou et al., 2014
Ardeola	*Ardeola bacchus*	Aba	2	tRNA^{Glu} - Cytb, tRNA^{Glu} - tRNA^{Phe}	1186, 1690	NC025921	Zhou et al., 2014
Botaurus	*Botaurus stellaris*	Bse	2		1675, 2196	NC025923	Zhou et al., 2014
Gorsachius	*Gorsachius melanolophus*	Gme	2		1177, 1420	NC028195	Zhou and Chen, 2015
	Gorsachius goisagi	Ggo	2		1174, 1505	NC028194	Zhou and Chen, 2015
	Gorsachius magnificus	Gma	2		1151, 1586	NC028193	Zhou and Chen, 2015
Outgroup	*Ciconia nigra*	Cni	1	tRNA^{Glu} - tRNA^{Phe}	2206	NC023946	Liu et al., 2014
	Ciconia boyciana	Cbo	1	tRNA^{Glu} - tRNA^{Phe}	2053	NC002196	Yamamoto et al., 2010, unp

Supplementary Table S2.- Average base composition (%) of Ardeidae control region.

Region	T	C	A	G	A+T
Domain I	32.61	21.53	29.30	16.56	61.91
Domain II	30.20	25.83	19.64	24.33	49.84
Domain III	25.04	21.44	46.50	7.02	71.54
Whole control region	30.16	22.60	32.70	14.54	62.86

Supplementary Table S3.- Average percentage divergence and transition/transversion (ts/tv) ratios in pairwise comparisons of the species within each genus.

Genus	Number of species	% divergence	ts/tv
Ardea	2	13.83	2.93
Egretta	4	12.64	2.11
Ixobrychus	4	25.26	1.20
Gorsachius	3	20.86	1.56

Supplementary Table S4.- F-, E-, D-, C-, and B- boxes and CSB-1 sequences for the Ardeidae species.

Species	F-box
Nny, Esa, Eeu	GGTCTTCTCACGTGAAATCAGCAACCCG
Eno	.................G..........
Apu, Min, Aci, Ieu, Ici, Ggo, Gme	.T..........................
Dfl, Eal	.T..C.......................
Bib	.T..C.........G.............
Bst	.T..C............C..........
Aba	.TC.........................
Gma	..C.A.......................
Ega	.....C......................
Isi	.T...C......................
Bse	.T..CC...G..A...G...........
Species	**E-box**
Gme, Ggo, Nny, Aba, Ici, Eno, Bse, Ega, Eeu, Esa, Min, Eal, Bib, Apu, Aci, Ieu, Dfl	GTTACTAGCTTCAGGACCAT
Isi	C
Gma	.C..................
Bst	ACG.............T...
Species	**D-box**
Eno, Bse, Esa, Eeu, Ega, Isi, Aci, Apu, Bib, Min, Ieu, Dfl, Ici, Gma, Aba, Bst, Nny	CCTCTGGTTCCTCGGTCAGGGCCAT
Eal	..........T..............
Gme, Ggo	.........GT.A.......A....
Species	**C-box**
Eeu, Ega, Aci, Apu, Eal, Gma, Ici, Aba, Bst	GGTCCTCTTCACAGAGTCATTTGGT
Esa	...........T.............
Nny	A........................
Bib	...G........G............
Gme	A..T...C................C
Ggo	A..T....................C
Ieu, Bse	A..T.....................
Min, Eno	A..G.....................
Dfl	.A.G.....................
Isi	AA.G.....................

Species	B-box
Gme	TTCCATTTT-TTGTTGGT
Ggo	.......C.-........
Ieu	.......CGG........
Aba	..T.....GG........
Eal, Eeu, Nny, Gma, Isi, Apu, Min, Ega, Eno, Esa, Bib, Aci, Dfl	........GG........
Ici	........GG....-...
Bst	........GG.......C
Bse	.......CGGC.A.-..C
Species	**CSB-1**
Nny, Aba	TATTTGGTGAATGCTTGTTGGACATA
Gme, Ggo	......A..........C.A......
Gma	.....A...........C.A......
Eno	.................C.A......
Eal	......T..........C.A......
Ega	......A............A......
Esa, Eeu, Dfl, Bst	......A...................
Aci, Apu, Min	......T...................
Bib	......T.................G
Ici, Bse	.............T...CC.......
Ieu	.............A...CC.......
Isi	.............T...C........

The species codes are shown in Supplementary Table S1.