

Supplementary Table S8. List of centromerically positioned 45S rDNA with corresponding chromosome morphologies

Title: Evolutionary trends in animal ribosomal DNA loci: introduction to a new online database

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Summary

	Number (percentage)	Single NOR	Percentage of all karyotypes
Number of karyotypes with centromeric 45S sites (a subset in which chromosome morphology could be distinguished). Multiplicity of rDNA was not considered.	234 (100)		17
Number of karyotypes with centromeric 45S sites in acrocentric chromosomes	182 (78)		14
Number of karyotypes with centromeric 45S sites in metacentric chromosomes	42 (18)	29 (12%) single locus	3 (2)
Number of karyotypes with centromeric 45S sites in both acrocentric and metacentric chromosomes	10 (4)		0.7

Note, metacentric and submetacentric were counted together, acrocentric and telocentric were counted together

DATA set

Number	Group	Genus	Specific epithet	Chromosome type	Chromosome type	Both chr. types	Reference
				Acrocentric	Metacentric		
1	Fish	Acaronia	nassa	1	0		162
2	Mollusk	Adamussium	colbecki	1	0		258
3	Arthropod	Aedes	aegypti	0	1		465
4	Fish	Agonostomus	monticola	1	0		168

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5	Arthropod	Amblytropidia	sp.	1	0	261
6	Mammal	Antrozous	pallidus	1	0	395
7	Fish	Argyrosomus	regius	1	0	158
8	Fish	Artedidraco	skottsbergi	1	0	358
9	Flatworm	Aspidogaster	limacoides	1	0	325
10	Fish	Astatotilapia	latifasciata	1	0	174, 239
11	Fish	Baryancistrus	xanthellus	0	1	424
12	Fish	Bathygobius	sp.	1	0	425
13	Arthropod	Brasilacris	gigas	1	0	236
14	Mammal	Carollia	castanea	1	0	24
15	Mammal	Carollia	perspicillata	1	0	24
16	Flatworm	Caryophyllaeides	fennica	0	1	182
17	Arthropod	Cauratettix	borelli	1	0	452
18	Mollusk	Clausinella	fasciata	0	1	364
19	Fish	Cobitis	sp.	1	0	298
20	Fish	Cobitis	taenia	1	0	44
21	Fish	Conger	conger	1	0	4
22	Fish	Coris	julis	1	1	110
23	Fish	Corydoras	britskii	1	0	189
24	Fish	Cryodraco	atkinsoni	0	1	219
25	Arthropod	Cycloptiloides	americanus	1	0	337
26	Arthropod	Descampsacris	serrulatum	1	0	84
27	Mammal	Desmodus	rotundus	0	1	192
28	Fish	Dicentrarchus	labrax	1	0	86
29	Fish	Dicentrarchus	punctatus	1	0	86
30	Arthropod	Dichotomius	mundus	0	1	193
31	Fish	Diplodus	sargus	1	0	194
32	Fish	Dissostichus	eleginoides	1	0	195
33	Fish	Dissostichus	mawsoni	1	0	195
34	Arthropod	Dociostaurus	jagoi	1	0	206
35	Arthropod	Dociostaurus	maroccanus	1	0	88, 206
36	Fish	Economidichthys	pygmaeus	1	0	80
37	Fish	Eleginops	maclovinus	1	0	196

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38	Mollusk	Ensis	arcuatus	1	0		198
39	Arthropod	Enyaliopsis	ephippiatus	1	0		431
40	Fish	Epinephelus	awoara	1	0		114
41	Mammal	Eptesicus	fuscus	1	0		395
42	Arthropod	Eugasteroides	loricatus	1	0		431
43	Arthropod	Eumastusia	koebelei	1	0		447
44	Arthropod	Eumigus	monticola	1	0		453
45	Arthropod	Eurytoma	robusta	0	1		331
46	Arthropod	Eurytoma	serratulae	0	1		331
47	Flatworm	Fasciola	hepatica	1	0		380
48	Fish	Gymnocypris	chui	1	0		457
49	Fish	Gymnocypris	scleracanthus	1	0		457
50	Annelid	Haemopis	sanguisuga	0	1		210
51	Fish	Haplochromis	obliquidens	1	1	1	7
52	Arthropod	Heteracris	adpersa	1	0		88
53	Fish	Hoplerythrinus	unitaeniatus	1	1	1	459
54	Fish	Hoplias	malabaricus	0	1		51
55	Amphibian	Hypsiboas	semilineatus	0	1		217
56	Mollusk	Chamelea	gallina	0	1		364
57	Fish	Channa	punctatus	0	1		8
58	Mammal	Choeroniscus	godmani	1	0		395
59	Mammal	Choeronycteris	mexicana	1	0		395
60	Arthropod	Chorthippus	bigguttulus	1	1	1	206
61	Arthropod	Chromacris	nuptialis	1	0		206, 236
62	Arthropod	Chromacris	speciosa	1	0		206, 236
63	Arthropod	Isophya	altaica	1	0		311
64	Arthropod	Isophya	amplipennis	1	0		311
65	Arthropod	Isophya	andreevae	1	0		311
66	Arthropod	Isophya	armena	1	0		311
67	Arthropod	Isophya	autumnalis	1	0		311
68	Arthropod	Isophya	brunneri	1	0		311
69	Arthropod	Isophya	burechi	1	0		311
70	Arthropod	Isophya	camptoxypha	1	0		311

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71	Arthropod	Isophya	gulae	1	0	311
72	Arthropod	Isophya	hospodar	1	0	311
73	Arthropod	Isophya	kraussii	1	0	311
74	Arthropod	Isophya	longicaudata	1	0	311
75	Arthropod	Isophya	longicaudata	1	0	311
76	Arthropod	Isophya	major	1	0	311
77	Arthropod	Isophya	miksici	1	0	311
78	Arthropod	Isophya	modestior	1	0	311
79	Arthropod	Isophya	nervosa	1	0	311
80	Arthropod	Isophya	obtusa	1	0	311
81	Arthropod	Isophya	pavelii	1	0	311
82	Arthropod	Isophya	pienensis	1	0	311
83	Arthropod	Isophya	plevnensis	1	0	311
84	Arthropod	Isophya	rectipennis	1	0	311
85	Arthropod	Isophya	rhodopensis	1	0	311
86	Arthropod	Isophya	rhodopensis	1	0	311
87	Arthropod	Isophya	rhodopensis	1	0	311
88	Arthropod	Isophya	rizeensis	1	0	311
89	Arthropod	Isophya	schneideri	1	0	311
90	Arthropod	Isophya	speciosa	1	0	311
91	Arthropod	Isophya	stenocauda	1	0	311
92	Arthropod	Isophya	stenocauda	1	0	311
93	Arthropod	Isophya	strubei	1	0	311
94	Arthropod	Isophya	sureyai	1	0	311
95	Arthropod	Isophya	taurica	1	0	311
96	Arthropod	Isophya	thracica	1	0	311
97	Arthropod	Isophya	tosevski	1	0	311
98	Arthropod	Isophya	yaraligozi	1	0	311
99	Arthropod	Isophya	zernovi	1	0	311
100	Amphibian	Itapotihyla	langsдорffii	1	0	366
101	Fish	Labeo	rohita	1	0	289
102	Lamprey	Lampetra	zanandreae	0	1	392
103	Mammal	Laonastes	aenigmamus	1	1	469

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104	Mammal	Lasiurus	cinereus	1	0	395
105	Fish	Lepidonotothen	nudifrons	1	0	357
106	Fish	Lepidonotothen	squamifrons	1	0	357
107	Arthropod	Leptopilina	boulardi	1	0	492
108	Lamprey	Lethenteron	camtschaticum	0	1	468
109	Fish	Leuciscus	cephalus	1	0	130
110	Fish	Leuciscus	idus	1	0	130
111	Fish	Leuciscus	leuciscus	1	0	130
112	Mammal	Lonchophylla	mordax	1	0	395
113	Reptile	Masticophis	flagellum	1	0	234
114	Mammal	Microtus	agrestis	1	0	24
115	Mammal	Monophyllus	redmani	1	0	395
116	Fish	Mugil	incilis	1	0	31
117	Mammal	Mus	cervicolor	1	0	375
118	Mammal	Mus	cooki	1	0	375
119	Mammal	Mus	cypriacus	1	0	375
120	Mammal	Mus	famulus	1	0	375
121	Mammal	Mus	haussa	1	0	375
122	Mammal	Mus	hortulanus	1	0	393
123	Mammal	Mus	indutus	1	0	375
124	Mammal	Mus	matthey	1	0	375
125	Mammal	Mus	minutoides	1	0	375
126	Mammal	Mus	musculoides	1	0	375
127	Mammal	Mus	musculus	1	0	393
128	Mammal	Mus	musculus	1	0	375.376
129	Mammal	Mus	musculus	1	0	375.376
130	Mammal	Mus	musculus	1	0	393, 394
131	Mammal	Mus	musculus	1	0	15, 55, 394
132	Mammal	Mus	musculus	1	0	375.376
133	Mammal	Mus	pahari	1	0	375
134	Mammal	Mus	platythrix	1	0	55
135	Mammal	Myotis	keyasi	1	0	395
136	Arthropod	Nocaracris	cyanipes	1	0	454

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137	Fish	Notothenia	coriiceps	1	0		266
138	Fish	Ocyurus	chrysurus	1	0		68
139	Fish	Ompok	bimaculatus	1	0		29
140	Fish	Ompok	pabda	1	0		29
141	Fish	Oncorhynchus	masou	1	1	1	45, 269
142	Annelid	Ophryotrocha	diadema	1	0		227
143	Amphibian	Oreobates	barituensis	0	1		489
144	Amphibian	Oreobates	berdemenos	0	1		489
145	Amphibian	Oreobates	discoidalis	0	1		489
146	Arthropod	Paranocaracris	rubripes	1	0		454
147	Arthropod	Parapyrrhicia	acutilobata	1	0		491
148	Arthropod	Parapyrrhicia	diamantina	1	0		491
149	Fish	Pargus	auriga	1	0		194
150	Fish	Pargus	pargus	1	0		194
151	Amphibian	Phasmahyla	spectabilis	0	1		164
152	Amphibian	Phyllomedusa	bahiana	1	0		164
153	Amphibian	Phyllomedusa	bahiana	1	0		493
154	Amphibian	Phyllomedusa	distincta	1	0		493
155	Amphibian	Phyllomedusa	nordestina	1	0		164
156	Amphibian	Phyllomedusa	tarsius	1	0		493
157	Amphibian	Phyllomedusa	vaillantii	1	0		493
158	Arthropod	Podisma	pedestris	1	0		402
159	Reptile	Podocnemis	expansa	0	1		496
160	Reptile	Podocnemis	unifilis	0	1		496, 514
161	Arthropod	Poecilimon	affinis	1	0		311
162	Arthropod	Poecilimon	ampliatu	1	0		311
163	Arthropod	Poecilimon	anatolicus	1	0		311
164	Arthropod	Poecilimon	armeniacus	1	0		311
165	Arthropod	Poecilimon	aturki	1	0		311
166	Arthropod	Poecilimon	bischoffi	1	0		311
167	Arthropod	Poecilimon	bosphoricus	1	0		311
168	Arthropod	Poecilimon	brunneri	1	0		311
169	Arthropod	Poecilimon	celebi	1	0		311

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170	Arthropod	Poecilimon	cervus	1	0		311
171	Arthropod	Poecilimon	ebneri	1	0		311
172	Arthropod	Poecilimon	ersisi	1	0		311
173	Arthropod	Poecilimon	glandifer	1	0		311
174	Arthropod	Poecilimon	heinrichi	1	0		311
175	Arthropod	Poecilimon	chopardi	1	0		311
176	Arthropod	Poecilimon	jablanicensis	1	0		311
177	Arthropod	Poecilimon	karakushi	1	0		311
178	Arthropod	Poecilimon	klisuriensis	1	0		311
179	Arthropod	Poecilimon	ledereri	1	0		311
180	Arthropod	Poecilimon	macedonicus	1	0		311
181	Arthropod	Poecilimon	maritinae	1	0		311
182	Arthropod	Poecilimon	marmaraensis	1	0		311
183	Arthropod	Poecilimon	miramae	1	0		311
184	Arthropod	Poecilimon	orblicus	1	0		311
185	Arthropod	Poecilimon	ornatus	1	0		311
186	Arthropod	Poecilimon	pechevi	1	0		311
187	Arthropod	Poecilimon	pliginskii	1	0		311
188	Arthropod	Poecilimon	roseoviridis	1	0		311
189	Arthropod	Poecilimon	serratus	1	0		311
190	Arthropod	Poecilimon	schmidtii	1	0		311
191	Arthropod	Poecilimon	similis	1	0		311
192	Arthropod	Poecilimon	toros	1	0		311
193	Arthropod	Poecilimon	turcicus	1	0		311
194	Arthropod	Poecilimon	ukrainicus	1	0		311
195	Arthropod	Poecilimon	zonatus	1	0		311
196	Arthropod	Poecilimon	zwicki	1	0		311
197	Fish	Prochilodus	nigricans	0	1		63
198	Arthropod	Pycnogaster	cucullata	1	1	1	21
199	Cartilaginous fis Raja		asterias	1	0		270
200	Cartilaginous fis Raja		montagui	1	1	1	66
201	Mammal	Rattus	rattus	1	0		375.377
202	Arthropod	Rhammatocerus	brasiliensis	1	0		30, 206, 261

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203	Arthropod	Rhammatocerus	brunneri	1	0		261
204	Arthropod	Rhammatocerus	palustris	1	0		261
205	Arthropod	Rhammatocerus	pictus	1	0		261
206	Fish	Rhomboplites	aurorubens	1	0		68
207	Fish	Rineloricaria	capitonia	0	1		498
208	Fish	Rineloricaria	latirostris	0	1		498
209	Mammal	Rousettus	aegyptiacus	0	1		395
210	Fish	Salmo	salar	0	1		45, 302, 303
211	Amphibian	Scinax	auratus	0	1		333
212	Amphibian	Scinax	eurydice	0	1		333
213	Fish	Semaprochilodus	insignis	0	1		63
214	Fish	Semaprochilodus	taeniurus	0	1		63
215	Arthropod	Shirakiacris	shirakii	1	0		202
216	Fish	Synbranchus	marmoratus	1	1	1	312, 323
217	Fish	Tanakia	limbata	1	0		262
218	Arthropod	Tapinoma	nigerrimum	0	1		276
219	Mammal	Taterillus	sp.	0	1		277
220	Mammal	Taterillus	tranieri	0	1		277
221	Fish	Tetraodon	fluviatilis	1	0		140
222	Arthropod	Thisoicetrinus	pterostichus	1	0		202
223	Fish	Tor	putitora	1	1	1	87
224	Fish	Trachydoras	paraguayensis	0	1		507
225	Fish	Trichomycterus	brasiliensis	0	1		346
226	Amphibian	Triturus	vulgaris	0	1		27
227	Fish	Umbra	pygmaea	0	1		280
228	Mammal	Uroderma	bilobatum	0	1		395
229	Mammal	Uroderma	magnirostrum	1	0		395
230	Reptile	Varanus	komodoensis	0	1		466
231	Arthropod	Warramaba	picta	0	1		28
232	Arthropod	Warramaba	virgo	0	1		28
233	Arthropod	Xestotrachelus	robustus	1	0		236, 282
234	Arthropod	Xyleus	discoideus	1	0		30