Table	1: SRA reads us	ed in the study		
Sr. No.	Species	Sample Accession	SRA Accession	Library Type
1	Pavo muticus	SAMN17255116	SRR13424288	Genomic
2	Pavo muticus	SAMN17255114	SRR13424290	Genomic
3	Pavo muticus	SAMN15488465	SRR12223809	Genomic
4	Pavo muticus	SAMN15488464	SRR12223810	Genomic
5	Pavo muticus	SAMN15488463	SRR12223811	Genomic
6	Pavo muticus	SAMN15488455	SRR12223821	Genomic
7	Pavo cristatus	SAMN05660020	SRR4068854	Genomic
8	Pavo cristatus	SAMN03322586	SRR1797848	Transcriptomic
9	Pavo cristatus	SAMN03322585	SRR1797865	Transcriptomic
10	Pavo cristatus	SAMN03322587	SRR1797860	Transcriptomic
11	Pavo cristatus	SAMN03322588	SRR1797873	Transcriptomic

Table2: Summary statistics of a			
Pavo cristatus (N=23)	Mean	SD	Range (Min-Max)
Call Period (sec)	0.653	0.072	0.520-0.769
Fundamental Frequency (Hz)	756.394	66.393	602.93-843.75
Dominant Frequency (Hz)	1488.663	122.945	1205.859-1687.5
Pavo muticus (N=20)			
Call Period (sec)	0.908	0.195	0.512-1.251
Fundamental Frequency (Hz)	551.25	70.696	516.797-689.062
Dominant Frequency (Hz)	1111.114	111.431	947.461-1378.125

Table 3:	Acousti	c measureme	nts used in the study.			
Sr. No.	ID	Call period	Fundamental frequency	Dominant Frequency	Species	Location
1	PCMH	0.7690	843.75	1593.75	P. cristatus	Maharashtra
2	PCMH	0.6941	843.75	1593.75	P. cristatus	Maharashtra
3	PCMH	0.7000	843.75	1593.75	P. cristatus	Maharashtra
4	PCMH	0.7560	843.75	1687.5	P. cristatus	Maharashtra
5	PCMH	0.7552	843.75	1500	P. cristatus	Maharashtra
6	PCMY	0.6281	775.195	1550.391	P. cristatus	Mysore
7	PCMY	0.5319	775.195	1550.391	P. cristatus	Mysore
8	PCMY	0.5458	775.195	1636.523	P. cristatus	Mysore
9	PCMY	0.5926	775.195	1636.523	P. cristatus	Mysore
10	PCMY	0.6547	775.195	1636.523	P. cristatus	Mysore
11	PCRJ	0.6546	775.195	1464.258	P. cristatus	Rajasthan
12	PCRJ	0.6369	775.195	1550.391	P. cristatus	Rajasthan
13	PCRJ	0.6748	775.195	1464.258	P. cristatus	Rajasthan
14	PCRJ	0.7012	775.195	1464.258	P. cristatus	Rajasthan
15	PCTN	0.5614	689.062	1378.125	P. cristatus	Tamilnadu
16	PCTN	0.6615	689.062	1378.125	P. cristatus	Tamilnadu
17	PCTN	0.6655	689.062	1378.125	P. cristatus	Tamilnadu
18	PCTN	0.7076	689.062	1378.125	P. cristatus	Tamilnadu
19	PCTN	0.6628	689.062	1464.258	P. cristatus	Tamilnadu
20	PCUK	0.5633	775.195	1464.258	P. cristatus	Uttarakhand
21	PCUK	0.6575	689.062	1291.992	P. cristatus	Uttarakhand
22	PCUK	0.7207	602.93	1205.859	P. cristatus	Uttarakhand
23	PCUK	0.5197	689.062	1378.125	P. cristatus	Uttarakhand
24	PMCB1	0.5956	516.797	1205.859	P. muticus	Combodia
25	PMCB1	0.5121	516.797	1119.727	P. muticus	Combodia
26	PMCB1	0.6964	516.797	1033.594	P. muticus	Combodia
27	PMCB1	0.8908	516.797	1119.727	P. muticus	Combodia
28	PMCB2	0.8722	516.797	1119.727	P. muticus	Combodia
29	PMCB2	0.8431	516.797	1033.594	P. muticus	Combodia
30	PMCB2	0.7921	516.797	947.461	P. muticus	Combodia
31	PMCB2	0.8552	516.797	1033.594	P. muticus	Combodia
32	PMIN	0.8600	516.797	1119.727	P. muticus	Indonesia
33	PMIN	0.9058	516.797	1033.594	P. muticus	Indonesia
34	PMIN	0.8009	516.797	1119.727	P. muticus	Indonesia
35	PMTH1	0.8276	516.797	1033.594	P. muticus	Thailand
36	PMTH1	0.9271	516.797	1033.594	P. muticus	Thailand
37	PMTH3	1.0518	516.797	1119.727	P. muticus	Thailand
38	PMTH3	1.0212	516.797	1033.594	P. muticus	Thailand

39	PMTH3	0.9230	516.797	1033.594	P. muticus	Thailand
40	PMVI	1.1252	689.062	1205.859	P. muticus	Vietnam
41	PMVI	1.2508	689.062	1119.727	P. muticus	Vietnam
42	PMVI	1.2275	689.062	1378.125	P. muticus	Vietnam
43	PMVI	1.1857	689.062	1378.125	P. muticus	Vietnam

Table 4: Amino acid changes across KEGG signalling pathways.				
1. Hedgehog				
Sr No	Gene	position	P. muticus	P. cristatus
1	EFCAB7	407	L	S
	ННАТ	205	R	Q
3	KIF7	695	L	S
	KIF7	1292	Т	A
4	MGRN1	504	T	S
2. Melanogene	sis			
	CREB3	339	A	T
2	PLCB1	908	L	S
3. TGF-beta				
1	RBL1	211	F	L
	RBL1	507	L	S
2	THBS1	797	N	S
3	ZFYVE16	31	A	Т
	ZFYVE16	282	С	Y
	ZFYVE16	335	S	F
	ZFYVE16	599	Q	Е
4. Wnt				
1	APC	277	G	A
	APC	877	P	A
	APC	909	M	T
	APC	1216	P	Q
	APC	1309	D	Н
2	GPC4	556	V	M
3	INVS	828	Ι	R
4	PLCB1	908	L	S
5	ROR2	149	Н	Y
5. Notch				
1	DLL1	573	I	V
2	DLL4	385	I	V
6. Extracellula	r matrix intera	ction		
1	AGRN	786	G	S
2	COL4A2	362	V	L
3	GP1BB	142	A	T
	GP1BB	179	A	T
4	HSPG2	966	R	Н

5	ITGB1	12	V	I
	LAMA4	435		R
7	LAMA5	686		Т
	LAMA5	1728		I
	LAMA5	1814		G
	LAMA5	3225	W	R
	LAMA5	3450	I	V
	LAMA5	3560	T	M
8	LAMC1	272	A	S
	LAMC1	1075	V	I
	LAMC1	1208	G	D
9	SDC1	180	P	L
10	THBS1	797	N	S
11	VWF	652	G	S
7. Actin cytosk	eleton			
1	ACTN1	851	Е	D
2	ACTN4	850	Е	D
3	APC	277	G	A
	APC	877	P	A
	APC	909	M	Т
	APC	1216	P	Q
	APC	1309	D	Н
5	ITGB1	12	V	I
6	MYLK	920	G	V
7	NCKAP1L	579	Ι	V
8	SSH2	1218	С	G
9	SSH3	409	Q	R
10	VCL	534	M	L
8. Focal adhesi	on			
1	KDR	1336	V	A
2	MYLK	920	G	V
3	VEGFC	265		A
4	ZYX	289	V	A
5	ITGB1	12	V	I
	VCL	534	M	L
	ACTN1	851		D
	ACTN4	850	Е	D
9	VWF	652		S
10	THBS1	797	N	S

11	LAMA4	435	Н	R
12	LAMA5	686	M	T
	LAMA5	1728	V	I
	LAMA5	1814	A	G
	LAMA5	3225	W	R
	LAMA5	3450	I	V
	LAMA5	3560	T	M
13	LAMC1	272	A	S
	LAMC1	1075	V	I
	LAMC1	1208	G	D
14	COL4A2	362	V	L

r. No.	Gene	amino acid #	P. muticus	P. cristatus
1	AASDH	26	N	S
	AASDH	279	V	A
	AASDH	661	S	N
2	ABCC10	13	P	L
	ABCC10	372	L	F
	ABCC10	948	Ι	Т
	ABCC10	1004	P	L
3	AKAP9	878	V	M
	AKAP9	1156	Е	A
	AKAP9	1733	G	R
	AKAP9	2711	Ι	V
	AKAP9	3093	T	S
4	ALMS1	214	R	G
	ALMS1	1168	V	L
	ALMS1	2290	I	R
5	AMOTL1	831	T	I
6	ANAPC1	1900	V	M
7	ANK2	2422	Y	F
	ANK2	2591	Ι	M
	ANK2	2631	G	S
8	APC	289	G	A
	APC	954	M	Т
	APC	1261	P	Q
	APC	1354	D	Н
9	ARID1B	798	T	A
10	BBS12	81	T	I
	BBS12	431	T	A
	BBS12	464	K	R
	BBS12	557	Е	A
	BBS12	656	D	G
11	BICC1	665	A	T
12	BMP2K	790	S	G
	BMP2K	799	L	I
	BMP2K	1043	I	M
13	BOD1L1	1285	S	N
	BOD1L1	1402	E	K
	BOD1L1	1702	G	E
	BOD1L1	2324	T	A
14	BRAT1	574	M	V

	DD AT1 505	т	T 7	
	BRAT1 585		V	
	BRAT1 645		A	
	BRAT1 746		D	
4.5	BRAT1 748		Q	
15	BRCA1 317		R	
	BRCA1 319		G	
	BRCA1 812		M	
	BRCA1 1571		V	
16	BRCA2 694		S	
	BRCA2 1081		N	
	BRCA2 1870		S	
	BRCA2 1974		Q	
	BRCA2 2834		I	
	BRCA2 3305	L	P	
17	C1orf21 75	S	P	
18	C1R 161	Q	R	
19	C8orf48 21	W	R	
	C8orf48 48	R	Н	
	C8orf48 198	R	Q	
20	CCP110 608	R	Q	
	CCP110 984	S	R	
21	CDK5RAP2 338	A	V	
	CDK5RAP2 586	V	I	
	CDK5RAP2 2005	G	S	
	CDK5RAP2 2059	N	D	
22	CENPE 782	Т	S	
	CENPE 1598	D	N	
	CENPE 1851	Т	A	
	CENPE 1951	N	T	
	CENPE 2015	F	Y	
	CENPE 2084	M	I	
23	CENPF 1267	Н	L	
24	CEP164 1550	D	Е	
25	CGGBP1 79	I	V	
26	CKAP2L 383	M	T	
27	CMYA5 677	S	C	
	CMYA5 3014	E	Q	
28	COBLL1 361	Y	Н	
	COBLL1 424	R	C	
29	COL15A1 282	I	T	
30	CPED1 376	V	I	

31	CRYBG3 405	Q	Н	
	CRYBG3 597		D	
	CRYBG3 898		T	
	CRYBG3 907	M	K	
	CRYBG3 1427	K	E	
	CRYBG3 1505	S	N	
32	CSPG4B 2491	R	S	
33	CUL9 925	M	L	
	CUL9 1968	N	S	
	CUL9 1970	P	S	
	CUL9 2010	Т	A	
34	DACH2 290	A	T	
35	DYNC2H1 1079	Q	R	
	DYNC2H1 3505	Т	I	
36	EP400 1815	S	T	
37	FAM214B 14	Н	R	
	FAM214B 390	S	A	
	FAM217B 483	T	A	
38	GCC1 128	G	A	
39	GCC2 291	M	V	
	GCC2 781	D	N	
	GCC2 1437	S	G	
	GCC2 1492	A	T	
	GCC2 1497	V	L	
	GCC2 1500	S	N	
40	GLTSCR1L 960	I	T	
41	GSAP 292	A	T	
42	HABP4 98	E	Q	
	HABP4 100		E	
	HABP4 155		Н	
	HELQ 577		E	
44	HMCN1 1851		I	
	HMCN1 2030		V	
	HMCN1 2244		L	
	HMCN1 2307		T	
	HMCN1 3456		S	
	HMCN1 4582		C	
	HMCN1 4948		S	
	HMCN1 5315		A	
45	IGF2R 753		I	
	IGF2R 920	R	Q	

	IGF2R 1878	3 L	F	
46	KAT6B 1348		Q	
		' N	S	
) I	T	
	KIF7 695		S	
	KIF7 1293		A	
50	KMT2A 2242		G	
	KMT2A 2722		V	
	KMT2A 3300		T	
51	LACTB2 276	5 C	R	
52	LOC101750635 797	V	A	
53	LTBP1 309	G	S	
54	LTK 430	T	I	
55	MBTPS1 124	M	T	
	MBTPS1 672	2 M	V	
56	METTL2B 133	М	T	
57	MKI67 190) A	Е	
	MKI67 428	3 V	A	
	MKI67 84	N	S	
	MKI67 104:	G	D	
	MKI67 1542	G	E	
	MKI67 1868	N	S	
	MKI67 1934	I	M	
58	MXRA5 89°	V	L	
	MXRA5 1433	P	R	
	MXRA5 1493	A	V	
	MXRA5 2560	Q	R	
59	NBAS 286	Y	S	
	NBAS 113:		I	
60	NBEAL1 145		D	
	NBEAL1 2224		Н	
61	NBR1 32		V	
	NRP2 846		S	
		R	G	
63		V	I	
	PCNT 460		D	
		V	M	
	PCNT 1054		V	
	PCNT 1935		L	
	PCNT 2028		R	
	PCNT 2584	R	C	

64	PDZD2 1523	Т	M
	PDZD2 1662	Т	A
	PDZD2 1735	V	L
65	PHYKPL 372	I	V
66	RALB 51	R	S
67	RNF213 1199	I	V
	RNF213 3024	V	I
	RNF213 4420	S	G
68	RNF217 353	S	T
69	RTEL1 921	T	A
70	RUFY3 536	R	W
	RUFY3 569	D	G
71	SECISBP2 227	L	S
	SECISBP2 271	S	L
	SECISBP2 440	F	I
	SECISBP2 455	R	W
	SECISBP2 881	K	E
72	SH3TC2 258	Е	V
73	SIK1 511	S	T
74	SIK2 298	I	V
	SIK2 528	V	M
75	SIMC1 692	V	A
76	SLC44A5 586	D	E
77	SLF2 428	D	N
	SLF2 434	Е	K
	SLF2 442	A	D
	SLF2 452	S	N
	SLF2 901	Q	R
78	SMS 75	S	N
	SMS 77	S	N
79	SON 851	I	T
	SON 1186	M	V
	SON 1302	K	M
	SON 1355	Т	A
	SON 1469	I	V
80	SPICE1 304		T
	SPICE1 376		S
	SPICE1 752		A
	SPICE1 788		T
	SPICE1 859		I
81	STON1 44	Н	P

	STON1 191	N	S	
	STON1 267		R	
82	TDRD3 561		H	
	TDRD3 589	-	N	
83	TET2 149		R	
	TET2 234		T	
	TET2 605		Q	
	TET2 791		H	
84	TGS1 178		I	
	TGS1 284		V	
	TGS1 298		P	
	TGS1 300	Т	A	
	TGS1 310	P	L	
	TGS1 329	D	Н	
	TGS1 335	V	I	
	TGS1 607	T	I	
85	TJP3 387	Е	D	
	TJP3 547	L	M	
	TJP3 556	Н	R	
86	TMEM14C 68	V	I	
87	TMEM38B 73	Е	A	
88	TRAF6 45	L	P	
89	UACA 282	E	D	
	UACA 658	S	F	
90	UIMC1 667	V	D	
91	USP47 175	A	S	
92	USPL1 521	R	Q	
93	VCPIP1 760	Т	A	
94	VPS13B 2051	F	I e	
	VPS13B 2386	S	T	
95	YAE1D1 173	G	S	
	YAE1D1 178	D	G	
	YAE1D1 181	G	R	
96	ZBTB21 287	R	K	
	ZBTB21 429		S	
97	ZNF318 172		P	
	ZNF318 672		P	
	ZNF318 689		V	
	ZNF318 1863		P	
98	ZNF407 223		R	
	ZNF407 498	Н	L	

	ZNF407	711	Ι	V	
	ZNF407	991	С	S	
	ZNF407	1103	T	A	
99	ZNF410	163		T	
100	ZNF462	410	Т	A	
	ZNF648	253		T	
Melanogenesis	related genes				
Sr. No.	Gene	amino acid #	P. muticus	P. cristatus	
1	LOC416959	478	R	Н	
	LOC416959	735	V	I	
2	MELTF	179	S	N	
3	KIF14	71	C	F	
	KIF14	1409	Н	R	
4	KIF18A	524	R	Н	
5	KIF4B	616	N	S	
	KIF4B	751	N	S	
6	KIF27	566	D	N	
7	KIF11	846	Q	R	
	KIF11	1188	E	D	
8	KIF9	393	V	L	
	KIF9	502	F	L	
9	KIF13A	1612	G	S	
	KIF21A	585	R	K	
	KIF21A	1608	M	V	
10	KIF7	695	L	S	
	KIF7	1293	T	A	
11	KIF26B	583	V	L	
12	DYNC2H1	1079	Q	R	
	DYNC2H1	3505	Т	I	
13	DYNC1LI1	157	N	S	
14	DNAAF1	55	C	G	
15	DNAAF5	744	A	Т	
	DNAAF5	827	Q	R	
16	DRC3	515	Т	I	
17	DYNC2LI1	178	Т	I	
18	HPGDS	37	V	A	
19	PLCB1	908	L	S	
20	CREB3L4	339	A	Т	
Chr Z genes					

1	ADAMTS12 1257	V	L	
	AGGF1 111		A	
	ANKRD31 394		S	
	ANKRD31 1354		S	
	ANKRD31 1449	Н	R	
4	AOPEP 370		P	
5	APC 289	G	A	
	APC 954	M	T	
	APC 1261	P	Q	
	APC 1354	D	Н	
6	ARSB 450	M	T	
7	BDP1 871	S	A	
	BDP1 1389	S	P	
	BDP1 2029	D	Е	
	BDP1 2098	Т	I	
8	C6 192	R	C	
	C6 231	L	S	
	C6 711	Н	R	
9	CCDC112 263	E	K	
10	CCDC125 116	T	I	
11	CCDC171 919	N	S	
	CCDC171 1157	S	R	
12	CEP120 450	A	V	
	CEP120 830	Е	Q	
13	CEP78 373	L	V	
	CEP78 382	I	L	
14	CMYA5 677	S	C	
	CMYA5 3014	Е	Q	
15	CNTLN 256		A	
	CNTLN 725		C	
	CNTLN 943		I	
	CPLANE1 2982		V	
17	CR1 1793		P	
	CR1 2509		Н	
	CR1 2869		I	
	CR1 3223		I	
	CREB3L4 339		T	
	CSPG4B 2491		S	
	DGKQ 679		V	
	DIMT1 118		A	
22	DOCK8 1959	Q	R	

23	EPG5	2021	G	D	
	ERCC6L2	192		С	
	ERCC6L2	231	L	S	
	ERCC6L2	711	Н	R	
25	FAM214B	14	Н	R	
	FAM214B	390	S	A	
26	FBN2	419	D	G	
27	FYB1	435	I	V	
	FYB1	739	P	S	
28	GAK	803	Н	R	
	GAK	1051	G	D	
29	GFM2	160	T	A	
30	GRAMD3	405	T	Ι	
31	GRHPR	318	Е	K	
32	HABP4	98	E	Q	
	HABP4	100	D	Е	
	HABP4	155	R	Н	
33	HAUS1	47	F	I	
34	HAUS6	98	E	K	
	HAUS6	258	Н	R	
	HAUS6	361	Е	K	
35	IDNK	129	I	V	
36	IKBKAP	648	S	N	
37	IL6ST	14	A	V	
	IL6ST	379	S	T	
38	KANK1	1052	P	A	
39	KIAA0368	209	S	T	
40	KIAA2026	1279	Т	A	
	KIAA2026	1879	Т	A	
	KIAA2026	1961		M	
	KIF27	566		N	
	LIFR	101		Т	
43	LNPEP	567		Т	
	LNPEP	1013		I	
44	LOC112530730	48		Q	
	LOC112530730	60		D	
41	LOC112530732	48		Q	
	LOC112530732	60		D	
42	LOC112530763	60		Q	
	LOC112530763	63		R	
43	LOC407092	158	N	S	

44	MAP1B	1038	Y	С	
	MOCS2	66	I	M	
	MPDZ	1043		P	
	MPDZ	1070		P	
	MPDZ	1937	A	G	
47	MTMR12	656		M	
	MTMR12	686	N	S	
48	NANS	141	P	L	
49	NOL6	308	N	S	
50	NUDT12	181	L	Н	
	NUDT12	189	S	N	
51	PALM2AKAP2	591	N	D	
	PALM2AKAP2	724	S	N	
52	PDZD2	1523	Т	M	
	PDZD2	1662	T	A	
	PDZD2	1735	V	L	
53	PIGG	463	S	C	
	PIGG	621	S	R	
54	PLAA	767	F	V	
55	POC5	240	Н	R	
56	POLK	15	S	*	
57	PTAR1	362	R	Н	
	PTAR1	434	D	G	
58	PUM3	137	M	V	
	PUM3	600	R	Q	
59	RIOK2	404	L	V	
60	RLN3	160	S	T	
67	RMI1	396	R	Q	
	RMI1	441	I	S	
68	ROR2	149		Y	
69	RUSC2	565	Т	A	
	RUSC2	807	S	N	
70	SECISBP2	227		S	
	SECISBP2	271		L	
	SECISBP2	440		Ι	
	SECISBP2	455		W	
	SECISBP2	881		Е	
	SHLD3	226		L	
	SLC24A2	23		D	
	SLC25A51	93		R	
74	SLC44A1	264	Q	R	

75	SLF1 643	M	V
	SLF2 428		N
	SLF2 428 SLF2 434		K
	SLF2 434 SLF2 442		D
			N
	SLF2 452		R
77	SLF2 901		
11	SNCAIP 849		L
70	SNCAIP 939		I
	SUSD1 233		I
	SUSD1 278		H
	SYK 10		N
	TAF1C 263		C
	TBC1D2 96		Y
	TMC1 17		P
	TMC1 912		L
	TMEM38B 73		A
	TMEM8B 463		R
	TRIM36 559		Т
	TRIM36 662	S	A
86	TTC33 197	Е	Q
87	UBQLN1 125	S	Т
88	VPS13A 2044	S	G
	VPS13A 2404	Е	G
89	WDR36 733	T	A
90	WDR41 419	A	V
91	ZBTB5 175	I	M
92	ZCCHC6 668	C	Y
	ZCCHC6 673	T	K
93	ZDHHC21 48	V	L
94	ZFYVE16 31	A	T
	ZFYVE16 282	C	Y
	ZFYVE16 335	S	F
	ZFYVE16 599	Q	E
95	ZNF462 410	T	A

: Previo	usly published divergence time estimates between Pavo cristatus and	l Pavo muticus.			
Sr. No.	Title	Author	Journal	Year	Split time (MYA)
1	Resolution of the Phylogenetic Position of the Congo Peafowl,	Kimball et al.	Proc R Soc B	1997	
	Afropavo congensis: A Biogeographic and Evolutionary Enigma				
	cytochrome b - 4.2 mya				4.2
	D-loop - 6.2 mya				6.2
2	The global diversity of birds in space and time	Jetz et al.	Nature	2012	
	nuclear + mitochondrial markers tree - 1.5 Mya				1.5
3	A molecular genetic time scale demonstrates Cretaceous origins and	Stein et al.	MPE	2015	2.27
	multiple diversification rate shifts within the order Galliformes (Aves)				
	nuclear + mitochondrial markers tree				
4	Genetic Divergence between Pavo muticus and Pavo cristatus	Ouyang, Y. N., et al.	Journal of Yunnan	2009	2.96
	by Cyt b gene.		Agricultural University		
	Cyt b				
5	A Phylogenomic Supertree of Birds	Kimball et al.	Diversity	2019	3.17
	WGS+UCE supertree				
6	Ancestral range reconstruction of Galliformes: the effects of topology	Wang et al.	Journal of Biogeography	2016	2.58
	and taxon sampling				
	nuclear + mitochondrial markers tree				
7	Divergence time estimation of Galliformes based on the best gene	Chen et al.	BMC Ecology and	2021	3.12
	shopping scheme of ultraconserved elements		Evolution		
	UCE				
8	this study (UCE)				2.02
9	this study (PSMC)				1.1