

SUPPLEMENTARY MATERIALS

Table S1. Species information of SSRs analysis.

Order	Species	Assembly level	Genome coverage	Sequencing technology	Genome size (bp)	Accession
Galliformes	<i>Coturnix japonica</i>	Chromosome	73x	Illumina GA IIx	927656957	GCF_001577835.2
Galliformes	<i>Meleagris gallopavo</i>	Chromosome	35.0x	Illumina GAII; Sanger; 454	1115474681	GCF_000146605.3
Galliformes	<i>Gallus gallus</i>	Chromosome	102.01x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1053332251	GCF_016699485.2
Galliformes	<i>Numida meleagris</i>	Chromosome	100.0x	Illumina HiSeq	1043264150	GCF_002078875.1
Anseriformes	<i>Oxyura jamaicensis</i>	Chromosome	60.0x	Illumina NovaSeq	1147585764	GCF_011077185.1
Anseriformes	<i>Heteronetta atricapilla</i>	Chromosome	60.0x	Illumina NovaSeq	1151880818	GCA_011075105.1
Anseriformes	<i>Cygnus olor</i>	Chromosome	60.23x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1134186642	GCF_009769625.2
Anseriformes	<i>Aythya fuligula</i>	Chromosome	64.03x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1127004725	GCF_009819795.1
Anseriformes	<i>Anas platyrhynchos</i>	Chromosome	143.0x	PacBio RSII; PacBio Sequel	1188533289	GCF_015476345.1
Anseriformes	<i>Stictonetta naevosa</i>	Chromosome	60.0x	Illumina NovaSeq	1132698962	GCA_011074415.1
Anseriformes	<i>Cairina moschata</i>	Chromosome	128.0x	Illumina NovaSeq	1118556028	GCA_018104995.1
Piciformes	<i>Colaptes auratus</i>	Chromosome	34.0x	Illumina NovaSeq; PacBio Sequel	1378187165	GCA_015227895.1
Piciformes	<i>Pogoniulus pusillus</i>	Chromosome	165.44x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1272358903	GCA_015220805.1
Bucerotiformes	<i>Bucorvus abyssinicus</i>	Chromosome	66.0x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1132597561	GCA_009769605.1

Psittaciformes	<i>Myiopsitta monachus</i>	Chromosome	67.0x	PacBio RSII	1168583304	GCA_017639245.1
Psittaciformes	<i>Amazona aestiva</i>	Chromosome	60.0x	Illumina	1130393257	GCA_017639355.1
Psittaciformes	<i>Melopsittacus undulatus</i>	Chromosome	61.11x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1171617451	GCF_012275295.1
Passeriformes	<i>Rhegmatorhina hoffmannsi</i>	Chromosome	141.0x	Illumina HiSeq	1066555733	GCA_013398505.2
Passeriformes	<i>Certhia americana</i>	Chromosome	80.0x	PacBio Sequel; Illumina HiSeq; Illumina NovaSeq	1113356413	GCA_018697195.1
Passeriformes	<i>Hirundo rustica</i>	Chromosome	51.15x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1105955550	GCF_015227805.1
Passeriformes	<i>Catharus ustulatus</i>	Chromosome	60.58x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1131616530	GCF_009819885.2
Passeriformes	<i>Erithacus rubecula</i>	Chromosome	41x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1086738418	GCA_903797595.2
Passeriformes	<i>Ficedula albicollis</i>	Chromosome	60.0x	Illumina GAI; Illumina HiSeq	1118343587	GCF_000247815.1
Passeriformes	<i>Sylvia atricapilla</i>	Chromosome	66.29x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1066786587	GCA_009819655.1
Passeriformes	<i>Sylvia borin</i>	Chromosome	72.07x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1045652180	GCA_014839755.1
Passeriformes	<i>Acrocephalus scirpaceus</i>	Chromosome	200x	Unknown	1075083815	GCA_910950805.1
Passeriformes	<i>Parus major</i>	Chromosome	95.0x	Illumina HiSeq	1020310769	GCF_001522545.3
Passeriformes	<i>Camarhynchus parvulus</i>	Chromosome	31x	Unknown	1051609828	GCF_901933205.1
Passeriformes	<i>Diglossa brunneiventris</i>	Chromosome	30.0x	PacBio Sequel	1079473785	GCA_019023105.1
Passeriformes	<i>Passer domesticus</i>	Chromosome	130.0x	Illumina HiSeq	1042720703	GCA_001700915.1
Passeriformes	<i>Molothrus ater</i>	Chromosome	200.0x	PacBio Sequel II	1087312585	GCF_012460135.1

Passeriformes	<i>Setophaga coronata</i>	Chromosome	100.0x	Illumina	1022651334	GCA_001746935.2
Passeriformes	<i>Geothlypis trichas</i>	Chromosome	52.11x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1078128490	GCA_009764595.1
Passeriformes	<i>Motacilla alba</i>	Chromosome	18x	PacBio Sequel II HiFi	1072670728	GCF_015832195.1
Passeriformes	<i>Fringilla coelebs</i>	Chromosome	249.0x	Illumina HiSeq	994865760	GCA_015532645.2
Passeriformes	<i>Lonchura striata</i>	Chromosome	151.0x	Illumina HiSeq	1060269806	GCF_005870125.1
Passeriformes	<i>Taeniopygia guttata</i>	Chromosome	Unknown	PacBio	1056271262	GCF_003957565.2
Passeriformes	<i>Corvus moneduloides</i>	Chromosome	62.08x	PacBio Sequel I; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1112734094	GCF_009650955.1
Passeriformes	<i>Corvus monedula</i>	Chromosome	64.0x	PacBio; Hi-C	1035863955	GCA_013407035.1
Passeriformes	<i>Malurus cyaneus</i>	Chromosome	51.2x	PacBio RSII; Illumina HiSeq; Illumina MiSeq	1078891882	GCA_009741485.1
Columbiformes	<i>Streptopelia turtur</i>	Chromosome	44x	PacBio Sequel I; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1178816852	GCA_901699155.2
Phoenicopteriformes	<i>Phoenicopus ruber</i>	Chromosome	61.27x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1246226932	GCA_009819775.1
Ciconiiformes	<i>Ciconia maguari</i>	Chromosome	88.32x	PacBio Sequel II CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1239437416	GCA_017639555.1
Cathartiformes	<i>Gymnogyps californianus</i>	Chromosome	20.0x	PacBio RSII; Phase Genomics HiC	1240179868	GCA_018139145.1
Charadriiformes	<i>Alca torda</i>	Chromosome	64.69x	PacBio Sequel; Illumina NovaSeq; 10X Genome; Arima Hi-C	1178492568	GCA_008658365.1
Charadriiformes	<i>Sterna hirundo</i>	Chromosome	67.91x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1229972541	GCA_009819605.1
Charadriiformes	<i>Pluvialis apricaria</i>	Chromosome	60.0x	PacBio Sequel II CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1247767512	GCA_017639485.1

Falconiformes	<i>Falco naumanni</i>	Chromosome	104.34x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1215719661	GCF_017639655.2
Falconiformes	<i>Falco rusticolus</i>	Chromosome	44.28x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1195847496	GCF_015220075.1
Accipitriformes	<i>Aquila chrysaetos</i>	Chromosome	60x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1233704830	GCF_900496995.4
Caprimulgiformes	<i>Calypte anna</i>	Chromosome	54.0x	PacBio RSII; 10X Genomics linked reads; Bionano Genomics DLS; Arima Genomics HiC	1059687259	GCF_003957555.1
Caprimulgiformes	<i>Caprimulgus europaeus</i>	Chromosome	87x	PacBio	1177791212	GCA_907165065.1
Caprimulgiformes	<i>Nyctibius grandis</i>	Chromosome	88.4x	PacBio Sequel I CLR; Illumina NovaSeq; Arima Genomics Hi-C; Bionano Genomics DLS	1256414880	GCA_013368605.1

Table S2. The number of different SSR types.

Species	Number of three SSR types				Number of six P-SSR types					
	Total	C-SSR	I-SSR	P-SSR	Mono-	Di-	Tri-	Tetra-	Penta-	Hexa-
<i>Coturnix japonica</i>	1206213	18271	925257	262685	133890	30357	23844	50784	19476	4334
<i>Meleagris gallopavo</i>	1265444	7413	1022305	235726	138861	25204	19857	36605	12414	2785
<i>Gallus gallus</i>	1411711	15856	1081648	314207	192740	27640	24452	42210	21404	5761
<i>Numida meleagris</i>	1199459	6884	967765	224810	161606	16696	14988	20530	8881	2109
<i>Oxyura jamaicensis</i>	2005910	34605	1413610	557695	349210	46121	52444	76181	29319	4420
<i>Heteronetta atricapilla</i>	1961030	30645	1404201	526184	331094	46307	49410	70241	25108	4024
<i>Cygnus olor</i>	1854591	27228	1351045	476318	291568	38832	40694	61821	32743	10660
<i>Aythya fuligula</i>	2080570	40930	1454294	585346	367470	44730	45811	81765	35363	10207
<i>Anas platyrhynchos</i>	2068309	36550	1482880	548879	327692	44738	43836	80680	39084	12849
<i>Stictonetta naevosa</i>	1875358	25268	1359084	491006	306880	36739	44960	70680	26971	4776
<i>Cairina moschata</i>	2004732	31704	1426106	546922	351659	44295	41955	75178	27824	6011
<i>Colaptes auratus</i>	1630446	28920	1286013	315513	103043	30357	23014	36788	116021	6290
<i>Pogoniulus pusillus</i>	1273033	11525	1061581	199927	94906	29543	27126	29414	15244	3694
<i>Bucorvus abyssinicus</i>	1197660	5689	968972	222999	163378	14979	17369	14691	10478	2104

<i>Myiopsitta monachus</i>	1193100	7715	986814	198571	129866	16947	15813	24443	9186	2316
<i>Amazona aestiva</i>	935817	5118	781069	149630	104108	13148	10223	15460	5414	1277
<i>Melopsittacus undulatus</i>	1124634	5151	951607	167876	102848	17467	13077	24928	6407	3149
<i>Rhegmatorhina hoffmannsi</i>	1037755	6599	876901	154255	76584	21869	17879	23508	10650	3765
<i>Certhia americana</i>	1311143	15572	1012166	283405	185434	28171	22069	28241	14097	5393
<i>Hirundo rustica</i>	1453654	24673	1075224	353757	230875	27580	26377	40476	22005	6444
<i>Catharus ustulatus</i>	1248256	12804	1017876	217576	116588	18353	22001	34139	18999	7496
<i>Erithacus rubecula</i>	1341694	18682	1033586	289426	172994	24023	21178	40120	23403	7708
<i>Ficedula albicollis</i>	1394779	31267	1042916	320596	216726	21308	18832	38410	16383	8937
<i>Sylvia atricapilla</i>	1277875	16507	990662	270706	178464	22582	22676	25340	17182	4462
<i>Sylvia borin</i>	1238537	14941	975681	247915	158854	21280	23389	25044	14275	5073
<i>Acrocephalus scirpaceus</i>	1162762	10900	946581	205281	118625	19668	21710	25991	14844	4443
<i>Parus major</i>	1086323	7621	900149	178553	100191	23808	20132	19460	10283	4679
<i>Camarhynchus parvulus</i>	1136783	12917	933498	190368	88348	21559	23694	30668	20656	5443
<i>Diglossa brunneiventris</i>	1221936	13968	981917	226051	123787	23703	22361	31991	19635	4574
<i>Passer domesticus</i>	1030645	5644	861297	163704	99506	16270	16408	19055	9721	2744
<i>Molothrus ater</i>	1238753	11787	1005981	220985	115606	27267	26520	30313	16413	4866

<i>Setophaga coronata</i>	948979	4816	802844	141319	82000	17907	15420	16384	7876	1732
<i>Geothlypis trichas</i>	1165658	13231	952893	199534	98540	25671	22025	30797	18631	3870
<i>Motacilla alba</i>	1200479	12083	960720	227676	136111	23725	21455	28214	13701	4470
<i>Fringilla coelebs</i>	1044105	5637	868571	169897	105464	16556	17704	18337	8953	2883
<i>Lonchura striata</i>	1190217	17267	940324	232626	149392	21006	19996	22166	13548	6518
<i>Taeniopygia guttata</i>	1247305	15203	975477	256625	160950	20478	20474	26615	21423	6685
<i>Corvus moneduloides</i>	1122068	8963	918233	194872	113661	19692	19095	25287	11997	5140
<i>Corvus monedula</i>	1051173	9068	856330	185775	111017	17366	16974	24518	12754	3146
<i>Malurus cyaneus</i>	1276017	16537	1007121	252359	168175	17552	16935	26202	19047	4448
<i>Streptopelia turtur</i>	1358590	12101	1073064	273425	177511	24261	17841	34784	15960	3068
<i>Phoenicopterus ruber</i>	1376453	7374	1111063	258016	187532	16258	21178	19075	11716	2257
<i>Ciconia maguari</i>	1327554	7439	1084256	235859	162002	18250	22010	17654	12823	3120
<i>Gymnogyps californianus</i>	1428162	7276	1149500	271386	190967	17281	29662	19457	11485	2534
<i>Alca torda</i>	1503572	12074	1171425	320073	243793	20962	17500	22382	12933	2503
<i>Sterna hirundo</i>	1509488	10890	1187831	310767	234262	20872	20140	21328	11602	2563
<i>Pluvialis apricaria</i>	1455786	9294	1166013	280479	207134	18561	20269	18722	12356	3437
<i>Falco naumanni</i>	1431181	11570	1141991	277620	202431	23592	19152	21244	8948	2253

<i>Falco rusticolus</i>	1378322	9449	1111283	257590	185864	23100	18600	19669	8510	1847
<i>Aquila chrysaetos</i>	1512190	9854	1180798	321538	245911	20247	23749	19969	9859	1803
<i>Calypte anna</i>	1355939	13766	1073222	268951	173511	24237	19014	28458	18506	5225
<i>Caprimulgus europaeus</i>	1438778	11478	1161094	266206	169093	28206	22800	26490	15109	4508
<i>Nyctibius grandis</i>	1288597	4973	1082013	201611	144754	16074	16916	13259	8119	2489

Table S3. The frequency of different SSR types.

Species	Frequency of three SSR types			Frequency of six P-SSR types					
	C-SSR (%)	I-SSR (%)	P-SSR (%)	Mono- (%)	Di- (%)	Tri- (%)	Tetra- (%)	Penta- (%)	Hexa- (%)
<i>Coturnix japonica</i>	1.51	76.71	21.78	50.97	11.56	9.08	19.33	7.41	1.65
<i>Meleagris gallopavo</i>	0.59	80.79	18.63	58.91	10.69	8.42	15.53	5.27	1.18
<i>Gallus gallus</i>	1.12	76.62	22.26	61.34	8.80	7.78	13.43	6.81	1.83
<i>Numida meleagris</i>	0.57	80.68	18.74	71.89	7.43	6.67	9.13	3.95	0.94
<i>Oxyura jamaicensis</i>	1.73	70.47	27.80	62.62	8.27	9.40	13.66	5.26	0.79
<i>Heteronetta atricapilla</i>	1.56	71.61	26.83	62.92	8.80	9.39	13.35	4.77	0.76
<i>Cygnus olor</i>	1.47	72.85	25.68	61.21	8.15	8.54	12.98	6.87	2.24
<i>Aythya fuligula</i>	1.97	69.90	28.13	62.78	7.64	7.83	13.97	6.04	1.74
<i>Anas platyrhynchos</i>	1.77	71.70	26.54	59.70	8.15	7.99	14.70	7.12	2.34
<i>Stictonetta naevosa</i>	1.35	72.47	26.18	62.50	7.48	9.16	14.39	5.49	0.97
<i>Cairina moschata</i>	1.58	71.14	27.28	64.30	8.10	7.67	13.75	5.09	1.10
<i>Colaptes auratus</i>	1.77	78.87	19.35	32.66	9.62	7.29	11.66	36.77	1.99
<i>Pogoniulus pusillus</i>	0.91	83.39	15.70	47.47	14.78	13.57	14.71	7.62	1.85
<i>Bucorvus abyssinicus</i>	0.48	80.91	18.62	73.26	6.72	7.79	6.59	4.70	0.94
<i>Myiopsitta monachus</i>	0.65	82.71	16.64	65.40	8.53	7.96	12.31	4.63	1.17
<i>Amazona aestiva</i>	0.55	83.46	15.99	69.58	8.79	6.83	10.33	3.62	0.85
<i>Melopsittacus undulatus</i>	0.46	84.61	14.93	61.26	10.40	7.79	14.85	3.82	1.88
<i>Rhegmatorhina hoffmannsi</i>	0.64	84.50	14.86	49.65	14.18	11.59	15.24	6.90	2.44
<i>Certhia americana</i>	1.19	77.20	21.62	65.43	9.94	7.79	9.96	4.97	1.90
<i>Hirundo rustica</i>	1.70	73.97	24.34	65.26	7.80	7.46	11.44	6.22	1.82
<i>Catharus ustulatus</i>	1.03	81.54	17.43	53.58	8.44	10.11	15.69	8.73	3.45
<i>Erithacus rubecula</i>	1.39	77.04	21.57	59.77	8.30	7.32	13.86	8.09	2.66

<i>Ficedula albicollis</i>	2.24	74.77	22.99	67.60	6.65	5.87	11.98	5.11	2.79
<i>Sylvia atricapilla</i>	1.29	77.52	21.18	65.93	8.34	8.38	9.36	6.35	1.65
<i>Sylvia borin</i>	1.21	78.78	20.02	64.08	8.58	9.43	10.10	5.76	2.05
<i>Acrocephalus scirpaceus</i>	0.94	81.41	17.65	57.79	9.58	10.58	12.66	7.23	2.16
<i>Parus major</i>	0.70	82.86	16.44	56.11	13.33	11.28	10.90	5.76	2.62
<i>Camarhynchus parvulus</i>	1.14	82.12	16.75	46.41	11.32	12.45	16.11	10.85	2.86
<i>Diglossa brunneiventris</i>	1.14	80.36	18.50	54.76	10.49	9.89	14.15	8.69	2.02
<i>Passer domesticus</i>	0.55	83.57	15.88	60.78	9.94	10.02	11.64	5.94	1.68
<i>Molothrus ater</i>	0.95	81.21	17.84	52.31	12.34	12.00	13.72	7.43	2.20
<i>Setophaga coronata</i>	0.51	84.60	14.89	58.02	12.67	10.91	11.59	5.57	1.23
<i>Geothlypis trichas</i>	1.14	81.75	17.12	49.39	12.87	11.04	15.43	9.34	1.94
<i>Motacilla alba</i>	1.01	80.03	18.97	59.78	10.42	9.42	12.39	6.02	1.96
<i>Fringilla coelebs</i>	0.54	83.19	16.27	62.08	9.74	10.42	10.79	5.27	1.70
<i>Lonchura striata</i>	1.45	79.00	19.54	64.22	9.03	8.60	9.53	5.82	2.80
<i>Taeniopygia guttata</i>	1.22	78.21	20.57	62.72	7.98	7.98	10.37	8.35	2.60
<i>Corvus moneduloides</i>	0.80	81.83	17.37	58.33	10.11	9.80	12.98	6.16	2.64
<i>Corvus monedula</i>	0.86	81.46	17.67	59.76	9.35	9.14	13.20	6.87	1.69
<i>Malurus cyaneus</i>	1.30	78.93	19.78	66.64	6.96	6.71	10.38	7.55	1.76
<i>Streptopelia turtur</i>	0.89	78.98	20.13	64.92	8.87	6.53	12.72	5.84	1.12
<i>Phoenicopterus ruber</i>	0.54	80.72	18.74	72.68	6.30	8.21	7.39	4.54	0.87
<i>Ciconia maguari</i>	0.56	81.67	17.77	68.69	7.74	9.33	7.48	5.44	1.32
<i>Gymnogyps californianus</i>	0.51	80.49	19.00	70.37	6.37	10.93	7.17	4.23	0.93
<i>Alca torda</i>	0.80	77.91	21.29	76.17	6.55	5.47	6.99	4.04	0.78
<i>Sterna hirundo</i>	0.72	78.69	20.59	75.38	6.72	6.48	6.86	3.73	0.82
<i>Pluvialis apricaria</i>	0.64	80.10	19.27	73.85	6.62	7.23	6.68	4.41	1.23
<i>Falco naumanni</i>	0.81	79.79	19.40	72.92	8.50	6.90	7.65	3.22	0.81

<i>Falco rusticolus</i>	0.69	80.63	18.69	72.15	8.97	7.22	7.64	3.30	0.72
<i>Aquila chrysaetos</i>	0.65	78.09	21.26	76.48	6.30	7.39	6.21	3.07	0.56
<i>Calypte anna</i>	1.02	79.15	19.84	64.51	9.01	7.07	10.58	6.88	1.94
<i>Caprimulgus europaeus</i>	0.80	80.70	18.50	63.52	10.60	8.56	9.95	5.68	1.69
<i>Nyctibius grandis</i>	0.39	83.97	15.65	71.80	7.97	8.39	6.58	4.03	1.23

Table S4. The top five most abundant repeat motif of P-SSRs.

Species	1st	%	2nd	%	3rd	%	4th	%	5th	%
<i>Coturnix japonica</i>	A	46.64	AAAT	6.69	AT	6.32	AAAC	5.78	C	4.33
<i>Meleagris gallopavo</i>	A	57.98	AAAC	5.87	AT	4.90	AAAT	4.64	AC	4.09
<i>Gallus gallus</i>	A	54.12	C	7.22	AAAC	5.20	AT	3.99	AAAT	3.28
<i>Numida meleagris</i>	A	68.22	C	3.66	AT	3.45	AAAC	2.83	AC	2.70
<i>Oxyura jamaicensis</i>	A	57.19	C	5.43	AAAT	5.42	AT	5.17	AAAC	5.07
<i>Heteronetta atricapilla</i>	A	58.45	AT	5.55	AAAT	5.10	AAT	4.89	AAAC	4.82
<i>Cygnus olor</i>	A	55.18	C	6.03	AT	4.56	AAAT	4.53	AAAC	4.39
<i>Aythya fuligula</i>	A	59.42	AAAC	5.51	AAAT	5.39	AT	4.29	AAT	3.36
<i>Anas platyrhynchos</i>	A	56.26	AAAT	5.85	AAAC	5.44	AT	4.57	C	3.44
<i>Stictonetta naevosa</i>	A	57.86	AAAT	5.51	AAAC	5.36	C	4.65	AAT	4.40
<i>Cairina moschata</i>	A	61.02	AAAT	5.73	AAAC	5.18	AT	4.72	AAT	3.39
<i>Colaptes auratus</i>	A	25.42	C	7.23	AATAG	6.82	AAGAT	6.61	AATAC	6.11
<i>Pogoniulus pusillus</i>	A	36.21	C	11.26	AC	5.49	AT	5.08	AG	4.21
<i>Bucorvus abyssinicus</i>	A	68.07	C	5.19	AC	3.05	AT	2.32	AGG	1.83
<i>Myiopsitta monachus</i>	A	52.36	C	13.04	AC	3.85	AT	3.24	AAAC	2.82
<i>Amazona aestiva</i>	A	66.74	AAAC	4.21	AT	4.08	AC	3.84	C	2.84
<i>Melopsittacus undulatus</i>	A	44.13	C	17.13	AT	5.18	AAAG	5.13	AC	4.36
<i>Rhegmatorhina hoffmannsi</i>	A	44.19	AC	7.14	C	5.46	AT	4.62	AAAC	4.24
<i>Certhia americana</i>	A	61.52	AT	4.24	AC	4.12	C	3.91	AAAC	2.68
<i>Hirundo rustica</i>	A	62.06	AAAC	5.12	AC	3.22	C	3.21	AT	3.01
<i>Catharus ustulatus</i>	A	51.43	AC	4.07	AT	3.10	AAAC	2.73	AAT	2.30
<i>Erithacus rubecula</i>	A	56.93	AAGG	4.03	AT	3.38	AC	3.34	C	2.84
<i>Ficedula albicollis</i>	A	45.15	C	22.45	ATCC	4.44	AC	2.83	AT	2.65

<i>Sylvia atricapilla</i>	A	63.82	AT	3.59	AAAC	3.41	AC	3.08	C	2.10
<i>Sylvia borin</i>	A	61.9	AAAC	3.81	AT	3.53	AC	3.17	C	2.18
<i>Acrocephalus scirpaceus</i>	A	55.24	AT	4.11	AC	3.55	AAAC	3.00	AAT	2.64
<i>Parus major</i>	A	55.09	AT	6.76	AC	4.74	AAT	3.23	AAAC	2.58
<i>Camarhynchus parvulus</i>	A	44.68	AC	4.85	AT	4.63	AAAC	2.95	AGG	2.82
<i>Diglossa brunneiventris</i>	A	52.19	AC	4.6	AT	4.15	ATCC	3.18	C	2.57
<i>Passer domesticus</i>	A	60.05	AC	4.29	AT	3.99	AAAC	3.42	AAT	2.21
<i>Molothrus ater</i>	A	48.98	AC	5.11	AT	4.91	ATCC	3.56	C	3.33
<i>Setophaga coronata</i>	A	57.54	AT	6.19	AC	4.66	AAT	3.13	AAAC	3.06
<i>Geothlypis trichas</i>	A	46.65	AT	5.88	AC	4.84	AAGG	2.84	C	2.73
<i>Motacilla alba</i>	A	56.84	AT	4.62	AC	4.10	C	2.95	AAAC	2.80
<i>Fringilla coelebs</i>	A	60.55	AC	4.17	AT	4.03	AAAC	2.61	AAT	2.31
<i>Lonchura striata</i>	A	62.42	AT	4.42	AC	3.36	AAAC	2.81	AGG	2.18
<i>Taeniopygia guttata</i>	A	59.91	AT	3.65	AC	3.12	C	2.81	ATCC	2.47
<i>Corvus moneduloides</i>	A	52.95	C	5.38	AC	4.15	AT	4.01	AAGG	3.33
<i>Corvus monedula</i>	A	55.14	C	4.62	AT	3.98	AC	3.65	AAGG	3.52
<i>Malurus cyaneus</i>	A	64.55	AC	2.97	AT	2.60	C	2.09	AAT	1.72
<i>Streptopelia turtur</i>	A	62.58	AAAC	6.39	AT	5.02	AC	3.00	C	2.34
<i>Phoenicopterus ruber</i>	A	62.78	C	9.91	AC	2.86	AAT	2.31	AAAC	2.02
<i>Ciconia maguari</i>	A	57.66	C	11.03	AC	3.29	AAT	2.97	AT	2.52
<i>Gymnogyps californianus</i>	A	59.53	C	10.84	AAT	4.05	AC	3.30	AGG	2.16
<i>Alca torda</i>	A	67.67	C	8.5	AC	2.85	AT	2.40	AAAC	1.68
<i>Sterna hirundo</i>	A	65.71	C	9.68	AC	3.17	AT	2.10	AAAC	1.66
<i>Pluvialis apricaria</i>	A	61.72	C	12.13	AC	3.63	AGG	1.76	AAAC	1.68
<i>Falco naumanni</i>	A	60.06	C	12.86	AC	4.04	AT	3.34	AAAC	2.03
<i>Falco rusticolus</i>	A	60.23	C	11.93	AC	4.24	AT	3.55	AAAC	2.06

<i>Aquila chrysaetos</i>	A	61.41	C	15.07	AC	2.90	AT	2.17	AAAC	1.85
<i>Calypte anna</i>	A	61.41	AT	3.98	AC	3.47	AAAC	3.18	C	3.10
<i>Caprimulgus europaeus</i>	A	59.72	AT	4.85	AC	4.29	C	3.80	AAAC	2.93
<i>Nyctibius grandis</i>	A	67.11	C	4.69	AC	3.41	AAT	2.83	AT	2.78

Table S5. The most abundant repeat motif of six P-SSR types.

Species	Mono-	%	Di-	%	Tri-	%	Tetra-	%	Penta-	%	Hexa-	%
<i>Coturnix japonica</i>	A	46.64	AT	6.32	AAT	4.01	AAAT	6.69	AAAAC	1.41	AAAAAG	0.40
<i>Meleagris gallopavo</i>	A	57.98	AT	4.90	AAT	2.87	AAAC	5.87	AAAAC	1.57	AATCCC	0.27
<i>Gallus gallus</i>	A	54.12	AT	3.99	AAT	2.37	AAAC	5.20	AAAAC	1.13	AACCCT	0.84
<i>Numida meleagris</i>	A	68.22	AT	3.45	AAT	1.86	AAAC	2.83	AAAAC	0.78	AAAAAG	0.13
<i>Oxyura jamaicensis</i>	A	57.19	AT	5.17	AAT	4.85	AAAT	5.42	AAAAC	1.53	AAAAAG	0.18
<i>Heteronetta atricapilla</i>	A	58.45	AT	5.55	AAT	4.89	AAAT	5.10	AAAAC	1.25	AAAAAG	0.17
<i>Cygnus olor</i>	A	55.18	AT	4.56	AAT	3.53	AAAT	4.53	AAAAC	1.27	AAAAAG	0.51
<i>Aythya fuligula</i>	A	59.42	AT	4.29	AAT	3.36	AAAC	5.51	AAAAC	1.76	AATCCC	0.28
<i>Anas platyrhynchos</i>	A	56.26	AT	4.57	AAT	3.42	AAAT	5.85	AAAAT	1.82	AATCCC	0.93
<i>Stictonetta naevosa</i>	A	57.86	AT	4.34	AAT	4.40	AAAT	5.51	AAAAC	1.60	AAAAAG	0.21
<i>Cairina moschata</i>	A	61.02	AT	4.72	AAT	3.39	AAAT	5.73	AAAAT	1.61	AAAAAT	0.17
<i>Colaptes auratus</i>	A	25.42	AC	3.99	AAT	1.46	AAAC	2.97	AATAG	6.82	AAAAAG	0.24
<i>Pogoniulus pusillus</i>	A	36.21	AC	5.49	ACG	3.56	AAAC	3.42	AGAGG	0.84	AAAAAG	0.30
<i>Bucorvus abyssinicus</i>	A	68.07	AC	3.05	AGG	1.83	AAAC	1.74	AAGGG	0.83	AAAAAG	0.09
<i>Myiopsitta monachus</i>	A	52.36	AC	3.85	AAT	2.06	AAAC	2.82	AAAAC	0.82	AACCCT	0.15
<i>Amazona aestiva</i>	A	66.74	AT	4.08	AAT	2.10	AAAC	4.21	AAAAC	1.41	AACCCT	0.14
<i>Melopsittacus undulatus</i>	A	44.13	AT	5.18	AAT	2.41	AAAG	5.13	ATCCC	0.60	AATCCC	0.92
<i>Rhegmatorhina hoffmannsi</i>	A	44.19	AC	19.83	AGG	19.31	AAAC	4.24	AAAAC	1.00	ACAGGG	0.22
<i>Certhia americana</i>	A	61.52	AT	4.24	AAT	1.99	AAAC	2.68	AAAAC	0.74	ACAGGG	0.16
<i>Hirundo rustica</i>	A	62.06	AC	3.22	AAC	2.26	AAAC	5.12	AAAAC	1.45	ACAGGG	0.18
<i>Catharus ustulatus</i>	A	51.43	AC	4.07	AAT	2.30	AAAC	2.73	ATCCC	1.22	ACAGGG	0.43
<i>Erithacus rubecula</i>	A	56.93	AT	3.38	AAT	1.55	AAGG	4.03	AGAGG	1.22	ACAGGG	0.26
<i>Ficedula albicollis</i>	A	45.15	AC	2.83	AAT	1.40	ATCC	4.44	AAAAC	0.80	AATCCC	0.23

<i>Sylvia atricapilla</i>	A	63.82	AT	3.59	AAT	1.98	AAAC	3.41	AAAAC	1.19	AAAAAG	0.18
<i>Sylvia borin</i>	A	61.90	AT	3.53	AAT	2.10	AAAC	3.81	AAAAC	1.26	ACAGGG	0.24
<i>Acrocephalus scirpaceus</i>	A	55.24	AT	4.11	AAT	2.64	AAAC	3.00	AAAAT	0.83	AAAAAG	0.25
<i>Parus major</i>	A	55.09	AT	6.76	AAT	3.23	AAAC	2.58	AAAAT	0.95	AAATAT	0.23
<i>Camarhynchus parvulus</i>	A	44.68	AC	4.85	AGG	2.82	AAAC	2.95	AATAT	1.29	ACAGGG	0.23
<i>Diglossa brunneiventris</i>	A	52.19	AC	4.60	AAT	2.17	ATCC	3.18	AATAT	1.24	AAAAAG	0.17
<i>Passer domesticus</i>	A	60.05	AC	4.29	AAT	2.21	AAAC	3.42	AAAAC	1.05	AAAAAG	0.16
<i>Molothrus ater</i>	A	48.98	AC	5.11	AGG	2.64	ATCC	3.56	ATCCC	0.93	ACAGGG	0.19
<i>Setophaga coronata</i>	A	57.54	AT	6.19	AAT	3.13	AAAC	3.06	AATAT	0.83	AAATAT	0.12
<i>Geothlypis trichas</i>	A	46.65	AT	5.88	AAT	2.59	AAGG	2.84	AATAT	1.38	AAATAT	0.15
<i>Motacilla alba</i>	A	56.84	AT	4.62	AAT	2.03	AAAC	2.80	AAAAC	0.85	AAAAAG	0.16
<i>Fringilla coelebs</i>	A	60.55	AC	4.17	AAT	2.31	AAAC	2.61	AAAAC	0.68	ATATAG	0.14
<i>Lonchura striata</i>	A	62.42	AT	4.42	AGG	2.18	AAAC	2.81	AAAAC	0.98	ATATAG	0.21
<i>Taeniopygia guttata</i>	A	59.91	AT	3.65	AGG	1.96	ATCC	2.47	AAGGG	1.55	ACAGGG	0.24
<i>Corvus moneduloides</i>	A	52.95	AC	4.15	AGG	2.59	AAGG	3.33	ATCCC	0.83	AATCCC	0.89
<i>Corvus monedula</i>	A	55.14	AT	3.98	AAT	2.10	AAGG	3.52	AAGGG	1.01	AAAAAG	0.23
<i>Malurus cyaneus</i>	A	64.55	AC	2.97	AAT	1.72	AAAC	1.64	AGAGG	1.32	ACAGGG	0.19
<i>Streptopelia turtur</i>	A	62.58	AT	5.02	AAC	1.98	AAAC	6.39	AAAAC	1.44	AAAAAG	0.13
<i>Phoenicopterus ruber</i>	A	62.78	AC	2.86	AAT	2.31	AAAC	2.02	AAAAC	0.58	CCCCGG	0.14
<i>Ciconia maguari</i>	A	57.66	AC	3.29	AAT	2.97	AAAC	2.10	AAAAC	0.60	CCCCGG	0.22
<i>Gymnogyps californianus</i>	A	59.53	AC	3.30	AAT	4.05	AAAC	1.91	AAAAC	0.45	CCCCGG	0.13
<i>Alca torda</i>	A	67.67	AC	2.85	AGG	1.41	AAAC	1.68	AAAAC	0.65	AAAAAG	0.13
<i>Sterna hirundo</i>	A	65.71	AC	3.17	AGG	1.62	AAAC	1.66	AAAAC	0.57	AAAAAG	0.16
<i>Pluvialis apricaria</i>	A	61.72	AC	3.63	AGG	1.76	AAAC	1.68	AAAAC	0.54	AAAAAG	0.15
<i>Falco naumanni</i>	A	60.06	AC	4.04	AAT	1.77	AAAC	2.03	AAAAC	0.50	AATCCC	0.13
<i>Falco rusticolus</i>	A	60.23	AC	4.24	AAT	1.81	AAAC	2.06	AAAAC	0.52	AAAAAG	0.07

<i>Aquila chrysaetos</i>	A	61.41	AC	2.90	AAT	1.71	AAAC	1.85	AAAAC	0.52	CCCCGG	0.11
<i>Calypte anna</i>	A	61.41	AT	3.98	AAT	1.96	AAAC	3.18	AAAAC	1.05	AAAAAG	0.32
<i>Caprimulgus europaeus</i>	A	59.72	AT	4.85	AAT	2.75	AAAC	2.93	AAAAT	0.91	AAAAAG	0.31
<i>Nyctibius grandis</i>	A	67.11	AC	3.41	AAT	2.83	AAAC	1.79	AAAAC	0.61	AAAAAG	0.21