

Dataset S6. Basal metabolic rates in birds

McKechnie & Wolf (2004, Table A1) analyzed whole-body basal metabolic rates Q ($W \text{ ind}^{-1}$) as compiled by Reynolds & Lee (1996) for 254 bird species, to find that in 42 cases the conditions for measurements of basal metabolic rate had not been met. Those 42 values were not analyzed in our study. Additionally, McKechnie & Wolf (2004, Table A2) compiled literature data on basal metabolic rate in 60 bird species.

In some cases where no sufficient details were given in the published study, McKechnie & Wolf (2004) contacted the authors to ensure that basal metabolic rate conditions were strictly met. Most data of V. Gavrilov (Gavrilov 1974; Kendeigh, Dol'nik & Gavrilov 1977, ~60 species), who had not been contacted, were presented in Table A1 of McKechnie & Wolf (2004) as having an unknown or small ($n < 3$) number of individuals measured.

Below in Table **S6a** the following data are presented. 314 values from McKechnie & Wolf (2004) (254-42+60) were pooled with 113 values of basal metabolic rate of 113 bird species measured by V. Gavrilov. As no sufficient details about the data of V. Gavrilov are present in the international literature, these data are provided below in a separate Table **S6b** with a detailed description of the measurement procedure, the number of individuals studied, time and season of measurements and reference publications.

In the resulting compilation of 385 values, some species were represented twice, like where McKechnie & Wolf (2004) cited the work of Gavrilov (1974) or Kendeigh, Dol'nik & Gavrilov (1977), or where two or more studies investigated one and the same species. In the former case the original value provided by V. Gavrilov in Table **S6b** was taken. In the latter case the lowest value for the species was chosen. This yielded a total of 321 BMR values for 321 species that are presented in Table **S6a**. These values were used in the analyses presented in Table 1 and Figures 1-3 in the paper.

References:

- Gavrilov V.M. (1974) Sezonnnye i sutochnnye izmeneniya urovnya standartnogo metabolizma u vorob'inykh ptits. Pp. 134-136 in R.L. Beme and V.E. Flint, eds. Materialy. VI. Vsesoyuznoi Ornitologicheskoi Konferentsii, Moskva, 1–5 fevralya 1974 goda. Izdatel'stvo Moskovskogo Universiteta, Moskva.
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- McKechnie A.E., Wolf B.O. (2004) The allometry of avian basal metabolic rate: good predictions need good data. *Physiological and Biochemical Zoology* 77: 502-521.
- Reynolds P.S., Lee, R.M. (1996) Phylogenetic analysis of avian energetics: passerines and non-passerines do not differ. *American Naturalist* 147: 735-759.

Table **S6a**. Basal metabolic rate in birds

Notations: qWkg — mass-specific basal metabolic rate, W kg⁻¹; LogqWkg — decimal logarithm of qWkg; Mg — body mass, g; LogMg — decimal logarithm of Mg; Src — source of data, G: experimental data of V. Gavrilov (Table **S6b**); MW: data compiled from the literature by McKechnie & Wolf (2004).

Species	qWkg	LogqWkg	Mg	LogMg	Src
1. <i>Acanthis cannabina</i>	20.1	1.302	16.9	1.228	G
2. <i>Acanthis flammea</i>	20.4	1.310	14.0	1.146	G
3. <i>Acanthorhynchus tenuirostris</i>	25.7	1.409	9.7	0.987	MW
4. <i>Accipiter nisus</i>	7.0	0.848	135	2.130	G
5. <i>Acrocephalus palustris</i>	18.9	1.276	10.8	1.033	G
6. <i>Acridotheres cristatellus</i>	11.0	1.042	109.4	2.039	MW
7. <i>Acrocephalus arundinaceus</i>	11.7	1.069	21.9	1.340	MW
8. <i>Acrocephalus bistrigiceps</i>	16.6	1.220	7.9	0.898	MW
9. <i>Acrocephalus palustris</i>	18.8	1.274	10.8	1.033	MW
10. <i>Acrocephalus schoenobaenus</i>	18.9	1.277	11.5	1.061	G
11. <i>Aegithalos caudatus</i>	22.4	1.350	8.9	0.949	G
12. <i>Aegolius acadicus</i>	5.3	0.722	124	2.093	MW
13. <i>Aethopyga christinae</i>	22.7	1.356	5.2	0.716	MW
14. <i>Agapornis fisheri</i>	9.3	0.969	56.7	1.754	G
15. <i>Agapornis roseicollis</i>	9.6	0.983	48.4	1.685	G
16. <i>Agelaius phoeniceus</i>	14.7	1.167	56.7	1.754	MW
17. <i>Agleactis cupripennis</i>	35.0	1.544	7.2	0.857	MW
18. <i>Aix sponsa</i>	5.0	0.701	448	2.651	G
19. <i>Alaemon alaudipes</i>	11.3	1.054	37.7	1.576	MW
20. <i>Alauda arvensis</i>	22.8	1.357	31.7	1.501	MW
21. <i>Alcedo atthis</i>	11.0	1.043	34.3	1.535	G
22. <i>Alectoris graeca</i>	4.0	0.602	633	2.801	G
23. <i>Alophoixus bres</i>	10.1	1.005	35	1.544	MW
24. <i>Amadina erythrocephala</i>	9.5	0.978	22.4	1.350	MW
25. <i>Amadina fasciata</i>	12.4	1.095	17.2	1.236	MW
26. <i>Ammodramus savannarum</i>	12.9	1.111	13.8	1.140	MW
27. <i>Amphispiza bilineata</i>	17.0	1.230	11.6	1.064	MW
28. <i>Anas acuta</i>	6.1	0.782	721	2.858	MW
29. <i>Anas penelope</i>	3.9	0.592	723	2.859	G
30. <i>Anas platyrhynchos</i>	4.0	0.601	1020	3.009	G
31. <i>Anas strepera</i>	7.8	0.894	791	2.898	MW
32. <i>Anhinga rufa</i> (anhinga)	3.1	0.487	1040	3.017	MW
33. <i>Anser anser</i>	3.3	0.524	3250	3.512	G
34. <i>Anthracothorax nigricollis</i>	39.6	1.598	7.7	0.886	MW
35. <i>Anthus campestris</i>	17.6	1.245	21.8	1.338	G
36. <i>Anthus pratensis</i>	15.9	1.201	18.9	1.276	MW
37. <i>Anthus trivialis</i>	17.2	1.236	19.7	1.294	G
38. <i>Aptenodytes patagonica</i>	2.0	0.298	11080	4.045	G
39. <i>Apteryx australis</i>	1.7	0.229	2380	3.377	MW
40. <i>Apteryx haasti</i>	1.7	0.232	2450	3.389	MW
41. <i>Apteryx owenii</i>	1.9	0.276	1096	3.040	MW
42. <i>Apus apus</i>	9.7	0.988	44.9	1.652	G
43. <i>Arachnothera longirostra</i>	14.5	1.163	13	1.114	MW
44. <i>Ardea herodias</i>	3.3	0.520	1870	3.272	MW
45. <i>Arenaria interpres</i>	10.2	1.010	90	1.954	MW
46. <i>Asio flammeus</i>	3.2	0.501	406	2.609	MW
47. <i>Asio otus</i>	3.8	0.578	252	2.401	MW
48. <i>Authus pratensis</i>	15.9	1.202	18.9	1.276	G
49. <i>Barnardius zonarius</i>	5.2	0.719	137	2.137	MW
50. <i>Bombycilla garrulus</i>	13.2	1.120	72.5	1.860	G
51. <i>Bonasa umbellus</i>	3.7	0.568	644	2.809	MW
52. <i>Botaurus lentiginosus</i>	4.5	0.655	600	2.778	MW
53. <i>Bubo virginianus</i>	3.6	0.557	1450	3.161	MW

54.	<i>Buteo buteo</i>	3.7	0.570	1012	3.005	MW
55.	<i>Buteo lineatus</i>	3.2	0.506	658	2.818	MW
56.	<i>Cacactua tenuirostris</i>	5.8	0.760	549.9	2.740	MW
57.	<i>Cacatua galerita</i>	4.4	0.644	776.1	2.890	MW
58.	<i>Cacomantis variolosus</i>	5.1	0.706	23.8	1.377	MW
59.	<i>Calidris canutus</i>	6.8	0.831	130	2.114	MW
60.	<i>Callipepla gambelii</i>	6.0	0.777	126.1	2.101	MW
61.	<i>Caprimulgus europaeus</i>	8.3	0.921	77.4	1.889	G
62.	<i>Cardinalis cardinalis</i>	12.3	1.090	41	1.613	MW
63.	<i>Cardinalis sinuata</i>	12.3	1.088	32	1.505	MW
64.	<i>Carduelis carduelis</i>	21.1	1.325	16.5	1.217	G
65.	<i>Carduelis pinus</i>	20.8	1.318	14	1.146	MW
66.	<i>Carduelis tristis</i>	24.6	1.390	13.6	1.134	MW
67.	<i>Carpodacus cassinii</i>	12.4	1.092	27.4	1.438	MW
68.	<i>Carpodacus erythrinus</i>	16.6	1.220	21.6	1.334	G
69.	<i>Carpodacus mexicanus</i>	15.2	1.182	20.4	1.310	MW
70.	<i>Casurarius bennetti</i>	1.4	0.152	17600	4.246	MW
71.	<i>Catharactus skua</i>	4.9	0.690	970	2.987	MW
72.	<i>Centropus senegalensis</i>	8.6	0.935	175	2.243	MW
73.	<i>Certhilauda erythrochlamys</i>	15.1	1.179	27.3	1.436	MW
74.	<i>Chalcophaps inidica</i>	6.4	0.806	124	2.093	MW
75.	<i>Charadius dubius</i>	10.9	1.038	44	1.643	G
76.	<i>Chauna chavaria</i>	2.6	0.419	2620	3.418	MW
77.	<i>Chloris chloris</i>	16.8	1.226	28.2	1.450	G
78.	<i>Chloropsis sonnerati</i>	9.5	0.979	39.7	1.599	MW
79.	<i>Chlorostilbon mellisugus</i>	50.0	1.699	2.9	0.462	MW
80.	<i>Chordeiles minor</i>	6.1	0.787	72	1.857	MW
81.	<i>Cinclus mexicanus</i>	9.2	0.962	50.2	1.701	MW
82.	<i>Coccothraustes coccothraustes</i>	14.5	1.160	48.3	1.684	G
83.	<i>Coereba flaveola</i>	21.5	1.332	10	1.000	MW
84.	<i>Coleus monedula</i>	7.3	0.861	209.0	2.320	G
85.	<i>Colinus virginianus</i>	5.7	0.759	194	2.288	MW
86.	<i>Colius castanotus</i>	15.0	1.176	69	1.839	MW
87.	<i>Colius colius</i>	5.0	0.703	35.1	1.545	MW
88.	<i>Colius striatus</i>	4.6	0.665	51	1.708	MW
89.	<i>Columba leucomela</i>	5.3	0.728	456	2.659	MW
90.	<i>Columba livia</i>	4.5	0.654	368	2.566	G
91.	<i>Columba palumbus</i>	4.0	0.604	493	2.693	G
92.	<i>Columba unicincta</i>	5.4	0.732	318	2.502	MW
93.	<i>Contopus virens</i>	18.5	1.267	13.9	1.143	MW
94.	<i>Copsychus saularis</i>	6.9	0.840	33.5	1.525	MW
95.	<i>Cornus ruficollis</i>	5.1	0.712	660.0	2.820	G
96.	<i>Corvus brachyrhynchos</i>	8.5	0.931	384.8	2.585	MW
97.	<i>Corvus corax</i>	4.6	0.661	1203.0	3.080	G
98.	<i>Corvus corone cornix</i>	6.4	0.807	518.0	2.714	G
99.	<i>Corvus frugilegus</i>	6.7	0.827	390.0	2.591	G
100.	<i>Coturnix chinensis</i>	8.2	0.914	44.9	1.652	MW
101.	<i>Coturnix coturnix</i>	7.6	0.881	109	2.037	G
102.	<i>Coturnix japonica</i>	8.5	0.930	115	2.061	MW
103.	<i>Coturnix pectoralis</i>	6.6	0.821	95.8	1.981	MW
104.	<i>Crax alberti</i>	2.4	0.371	2800	3.447	MW
105.	<i>Crax daubentoni</i>	2.6	0.409	2800	3.447	MW
106.	<i>Crex crex</i>	8.2	0.915	96	1.982	G
107.	<i>Cuculus canorus</i>	7.5	0.876	111.6	2.048	G
108.	<i>Cyanocitta cristata</i>	10.3	1.013	80.8	1.907	MW
109.	<i>Cygnus buccinator</i>	2.3	0.362	8800	3.944	MW
110.	<i>Dendragapus obscurus</i>	4.4	0.642	1131	3.053	MW
111.	<i>Dendrocopus major</i>	8.9	0.950	117.0	2.068	G
112.	<i>Dendroica coronata</i>	16.4	1.216	11.5	1.061	MW
113.	<i>Dendroica dominica</i>	16.3	1.213	9.8	0.991	MW
114.	<i>Dendroica palmarum</i>	15.8	1.199	9.8	0.991	MW
115.	<i>Dendroica pinus</i>	14.9	1.174	12	1.079	MW
116.	<i>Diomedea chrysostoma</i>	2.3	0.355	3753	3.574	MW

117.	<i>Diomedea exulans</i>	2.5	0.398	8130	3.910	MW
118.	<i>Diomedea immutabilis</i>	3.0	0.471	2522	3.402	MW
119.	<i>Emberiza citrinella</i>	16.3	1.212	26.8	1.428	G
120.	<i>Emberiza hortulana</i>	15.1	1.179	27.0	1.431	G
121.	<i>Emberiza schoeniclus</i>	17.1	1.233	17.6	1.246	G
122.	<i>Empidonax virescens</i>	14.6	1.163	12.3	1.090	MW
123.	<i>Eolophus roseicapillus</i>	4.6	0.667	268.7	2.429	MW
124.	<i>Eremalauda dunni</i>	13.5	1.130	20.6	1.314	MW
125.	<i>Eremophila alpestris</i>	11.9	1.076	26	1.415	MW
126.	<i>Erithacus rubecula</i>	16.0	1.204	17.6	1.246	G
127.	<i>Estrilda melpoda</i>	17.5	1.242	7.5	0.875	MW
128.	<i>Estrilda troglodytes</i>	20.1	1.302	7.5	0.875	G
129.	<i>Eudocimus albus</i> (Guara alba)	4.4	0.641	940	2.973	MW
130.	<i>Eudynamis scolopacea</i>	8.8	0.942	188	2.274	MW
131.	<i>Eudytes chrysolophus</i>	2.2	0.349	3870	3.588	G
132.	<i>Eudytes cristatus</i>	2.5	0.399	2330	3.367	G
133.	<i>Eudiptula minor</i>	3.9	0.590	960	2.982	MW
134.	<i>Eurostopodus argus</i> (<i>Eurostopodus guttatus</i>)	4.6	0.665	88	1.944	MW
135.	<i>Excalfactoria chinensis</i>	9.2	0.966	44	1.643	G
136.	<i>Falco sparverius</i>	7.2	0.858	117	2.068	MW
137.	<i>Falco subbuteo</i>	6.2	0.795	208	2.318	G
138.	<i>Falco tinnunculus</i>	5.9	0.772	131	2.117	G
139.	<i>Ficedula hypoleuca</i>	19.9	1.299	11.7	1.068	G
140.	<i>Fregata magnificens</i>	2.6	0.411	1078	3.033	MW
141.	<i>Fringilla coelebs</i>	17.7	1.249	21.0	1.322	G
142.	<i>Fringilla montifringilla</i>	18.2	1.261	21.0	1.322	G
143.	<i>Fulica atra</i>	5.0	0.695	412	2.615	G
144.	<i>Gallus gallus</i>	2.2	0.346	2710	3.433	MW
145.	<i>Garrulus glandarius</i>	9.1	0.957	153.0	2.185	G
146.	<i>Geococcyx californianus</i>	5.1	0.711	284.7	2.454	MW
147.	<i>Geopelia cuneata</i>	6.8	0.834	39	1.591	MW
148.	<i>Geopelia placida</i>	6.8	0.834	52	1.716	MW
149.	<i>Geophaps plumifera</i>	4.9	0.687	81	1.908	MW
150.	<i>Geophaps smithii</i>	4.4	0.644	198	2.297	MW
151.	<i>Glaucidium cuculoides</i>	5.3	0.726	163	2.212	MW
152.	<i>Glaucidium gnoma</i>	8.2	0.912	54	1.732	MW
153.	<i>Grus canadensis</i>	2.1	0.321	3890	3.590	MW
154.	<i>Grus paradisea</i>	2.6	0.422	4030	3.605	MW
155.	<i>Gypaetus barbatus</i>	2.2	0.338	5070	3.705	MW
156.	<i>Haematopus ostralegus</i>	5.3	0.720	554	2.744	MW
157.	<i>Himatione sanguinea</i>	22.2	1.347	13.5	1.130	MW
158.	<i>Hippolais icterina</i>	20.2	1.305	12.5	1.097	G
159.	<i>Hirundo rustica</i>	16.4	1.214	18.4	1.265	G
160.	<i>Hirundo tahitica</i>	12.7	1.104	14.1	1.149	MW
161.	<i>Icterus galbula</i>	13.4	1.128	37.5	1.574	MW
162.	<i>Jabiru mycteria</i>	2.4	0.382	5470	3.738	MW
163.	<i>Junco hyemalis</i>	16.4	1.215	18	1.255	MW
164.	<i>Lagopus lagopus</i>	5.1	0.705	567	2.754	G
165.	<i>Lagopus leucurus</i>	7.2	0.860	326	2.513	MW
166.	<i>Lanius collurio</i>	14.2	1.152	27.0	1.431	G
167.	<i>Lanius excubitor</i>	11.2	1.051	72.4	1.860	G
168.	<i>Larus argentatus</i>	4.8	0.682	1000	3.000	MW
169.	<i>Larus atricilla</i>	6.8	0.833	275.6	2.440	MW
170.	<i>Larus canus</i>	5.2	0.718	431	2.634	G
171.	<i>Larus ridibundus</i>	6.1	0.784	306	2.486	G
172.	<i>Leptoptilos javanicus</i>	2.6	0.416	5710	3.757	MW
173.	<i>Leptotila verreauxi</i>	6.8	0.830	131	2.117	MW
174.	<i>Leucosarcia melanoleuca</i>	3.8	0.581	445	2.648	MW
175.	<i>Lichenostomus virescens</i>	14.2	1.151	25	1.398	MW
176.	<i>Lichmera indistincta</i>	23.1	1.364	9	0.954	MW
177.	<i>Lonchura fuscans</i>	10.2	1.009	9.5	0.978	MW
178.	<i>Lonchura maja</i>	11.7	1.069	12.8	1.107	MW

179.	<i>Lonchura malacca</i>	11.9	1.074	11.8	1.072	MW
180.	<i>Lonchura striata</i>	19.7	1.295	10.1	1.004	G
181.	<i>Loxia curvirostra</i>	15.2	1.183	39.4	1.595	G
182.	<i>Loxia pytiopsittacus</i>	14.9	1.173	53.7	1.730	G
183.	<i>Loxoides baileui</i>	12.9	1.109	36	1.556	MW
184.	<i>Lullula arborea</i>	14.7	1.169	33.2	1.521	G
185.	<i>Luscinia svecica</i>	17.3	1.237	20.8	1.318	G
186.	<i>Macronectes giganteus</i>	2.8	0.446	4780	3.679	MW
187.	<i>Malacopteron cinereum</i>	13.5	1.130	15.8	1.199	MW
188.	<i>Manacus vitellinus</i>	15.0	1.175	15.5	1.190	MW
189.	<i>Megadyptes antipodes</i>	2.4	0.380	4800	3.681	MW
190.	<i>Meitihreptus lunatus</i>	17.4	1.241	14.3	1.155	MW
191.	<i>Melanerpes formicivorus</i>	10.1	1.004	73	1.863	MW
192.	<i>Melopsittacus undulatus</i>	9.8	0.992	33.6	1.526	G
193.	<i>Melospiza georgiana</i>	14.2	1.151	14.9	1.173	MW
194.	<i>Melospiza melodia</i>	13.1	1.117	19.1	1.281	MW
195.	<i>Merops viridis</i>	8.7	0.941	33.8	1.529	MW
196.	<i>Motacilla alba</i>	15.5	1.189	18.2	1.260	G
197.	<i>Motacilla flava</i>	17.5	1.243	14.7	1.167	G
198.	<i>Muscicapa striata</i>	17.1	1.234	14.4	1.158	G
199.	<i>Myiarchus crinitus</i>	11.3	1.053	33.9	1.530	MW
200.	<i>Nectarinia venusta</i>	19.7	1.295	7.1	0.851	MW
201.	<i>Neophema petrophila</i>	13.1	1.117	48.4	1.685	MW
202.	<i>Nucifraga caryocatactes</i>	9.2	0.962	147.0	2.167	G
203.	<i>Nyctea scandiaca</i>	2.1	0.318	2026	3.307	MW
204.	<i>Nymphicus hollandicus</i>	8.0	0.906	85.6	1.932	G
205.	<i>Oceanodroma furcata</i>	10.1	1.004	44.6	1.649	MW
206.	<i>Ocyphaps lophotes</i>	5.8	0.764	187	2.272	MW
207.	<i>Oreotrochilus estella</i>	22.9	1.359	8.4	0.924	MW
208.	<i>Oriolus oriolus</i>	10.0	1.000	64.9	1.812	G
209.	<i>Otus asio</i>	3.5	0.548	166	2.220	MW
210.	<i>Otus trichopsis</i>	3.7	0.570	120	2.079	MW
211.	<i>Padda oryzivora</i>	12.1	1.084	25.4	1.405	MW
212.	<i>Parus ater</i>	22.0	1.342	10.8	1.033	G
213.	<i>Parus atricapillus</i>	24.5	1.389	10.3	1.013	MW
214.	<i>Parus major</i>	20.1	1.303	16.4	1.215	G
215.	<i>Parus varius</i>	20.3	1.307	17.7	1.248	G
216.	<i>Passer domesticus bactrianus</i>	15.9	1.200	23.2	1.365	G
217.	<i>Passer montanus</i>	17.9	1.253	22.0	1.342	G
218.	<i>Passerculus sandwichensis</i>	13.9	1.143	15.9	1.201	MW
219.	<i>Patagona gigas</i>	15.0	1.175	19.1	1.281	MW
220.	<i>Pelacanoides urinatrix</i>	10.3	1.011	136	2.134	MW
221.	<i>Pelecanus conspicillatus</i>	3.6	0.551	5090	3.707	MW
222.	<i>Pelecanus occidentalis</i>	3.4	0.533	3038	3.483	MW
223.	<i>Penelope purpurescens</i>	2.7	0.425	2040	3.310	MW
224.	<i>Perdix perdix</i>	4.3	0.634	501	2.700	G
225.	<i>Perisoreus canadensis</i>	9.5	0.979	71.2	1.852	MW
226.	<i>Pernis apivorus</i>	3.6	0.555	652	2.814	G
227.	<i>Phalacrocorax auritus</i>	4.1	0.616	1330	3.124	MW
228.	<i>Phalaenoptilus nuttalli</i>	4.4	0.646	35	1.544	MW
229.	<i>Phaps chalcoptera</i>	5.0	0.702	304	2.483	MW
230.	<i>Phaps elegans</i>	6.5	0.814	190	2.279	MW
231.	<i>Phaps histrionica</i>	5.0	0.703	257	2.410	MW
232.	<i>Philidonyris novaehollandiae</i>	18.3	1.263	17.3	1.238	MW
233.	<i>Phoenicopus ruber</i>	5.0	0.701	3040	3.483	MW
(Phoenicopus antiquorum)						
234.	<i>Phoeniculus purpureus</i>	2.3	0.371	74.07	1.870	MW
235.	<i>Phoenicurus ochruros</i>	17.4	1.241	13.9	1.143	G
236.	<i>Phoenicurus phoenicurus</i>	17.9	1.253	13.0	1.114	G
237.	<i>Phylidonyris melanops</i>	15.6	1.193	18.8	1.274	MW
238.	<i>Phylloscopus collybita</i>	20.0	1.302	8.2	0.914	G
239.	<i>Phylloscopus sibilatrix</i>	19.0	1.279	9.2	0.964	G
240.	<i>Phylloscopus trochilus</i>	19.5	1.289	10.7	1.029	G

241.	<i>Pica nuttalli</i>	9.7	0.985	151.9	2.182	MW
242.	<i>Pica pica</i>	7.5	0.877	158.9	2.201	MW
243.	<i>Picoides major</i>	8.9	0.949	117	2.068	MW
244.	<i>Picoides pubescens</i>	17.7	1.247	21.7	1.336	MW
245.	<i>Pinicola enucleator</i>	13.8	1.141	78.4	1.894	G
246.	<i>Pipra mentalis</i>	15.8	1.198	12.3	1.090	MW
247.	<i>Pluvialis dominica</i>	5.5	0.737	118	2.072	MW
248.	<i>Pluvialis squatarola</i>	7.9	0.896	226	2.354	MW
249.	<i>Podargus ocellatus</i>	3.9	0.592	145	2.161	MW
250.	<i>Podargus strigoides</i>	2.7	0.434	380.3	2.580	MW
251.	<i>Poocetes gramineus</i>	12.6	1.101	21.5	1.332	MW
252.	<i>Protonotaria citrea</i>	15.5	1.192	12.8	1.107	MW
253.	<i>Prunella modularis</i>	19.4	1.287	16.8	1.225	G
254.	<i>Psaltriparus minimus</i>	22.0	1.342	5.5	0.740	MW
255.	<i>Pterocles orientalis</i>	5.0	0.702	386.4	2.587	MW
256.	<i>Pterodroma phaeopygia</i>	12.4	1.092	425	2.628	MW
257.	<i>Ptilinopus melanospila</i>	5.0	0.697	98	1.991	MW
258.	<i>Ptilinopus superbus</i>	6.3	0.798	120.4	2.081	MW
259.	<i>Puffinus griseus</i>	3.9	0.591	740	2.869	MW
260.	<i>Pycnonotus finlaysoni</i>	8.4	0.924	26.3	1.420	MW
261.	<i>Pycnonotus goiavier</i>	8.6	0.936	28.6	1.456	MW
262.	<i>Pygoscelis adeliae</i>	3.1	0.489	3970	3.599	MW
263.	<i>Pygoscelis papua</i>	3.0	0.470	6290	3.799	MW
264.	<i>Pyrrhula pyrrhula</i>	18.2	1.259	30.4	1.483	G
265.	<i>Regulus regulus</i>	26.5	1.423	5.5	0.740	G
266.	<i>Riparia riparia</i>	17.1	1.233	13.6	1.134	G
267.	<i>Saxicola rubetra</i>	16.9	1.228	14.3	1.155	G
268.	<i>Sayornis phoebe</i>	15.9	1.202	21.6	1.334	MW
269.	<i>Scardefella inca</i>	6.2	0.794	40.5	1.607	MW
270.	<i>Scolopax minor</i>	6.8	0.833	156.7	2.195	MW
271.	<i>Scolopax rusticola</i>	5.0	0.701	430	2.633	G
272.	<i>Sephanoides sephaniodes</i>	17.8	1.250	5.74	0.759	MW
273.	<i>Serinus canaria</i>	17.1	1.234	13.3	1.124	G
274.	<i>Sialia mexicana</i>	15.4	1.187	27.5	1.439	MW
275.	<i>Spermestes cucullatus</i>	7.3	0.866	10.62	1.026	MW
276.	<i>Spheniscus humboldti</i>	2.5	0.390	3870	3.588	MW
277.	<i>Spinus spinus</i>	20.8	1.317	14.0	1.146	G
278.	<i>Spizella arborea</i>	19.8	1.297	16.6	1.220	MW
279.	<i>Spizella passerina</i>	16.3	1.212	11.9	1.076	MW
280.	<i>Sterna maxima</i>	6.7	0.828	373	2.572	MW
281.	<i>Streptopelia senegalensis</i>	7.9	0.895	108	2.033	G
282.	<i>Streptopelia turtur</i>	7.4	0.869	154	2.188	G
283.	<i>Strix aluco</i>	4.0	0.602	520	2.716	MW
284.	<i>Strix occidentalis</i>	4.7	0.671	571	2.757	MW
285.	<i>Struthio camelus</i>	0.6	-0.200	100000	5.000	MW
286.	<i>Sturnus vulgaris</i>	12.0	1.078	75.0	1.875	G
287.	<i>Sula dactylatra</i>	4.3	0.631	1289	3.110	MW
288.	<i>Sylvia atricapilla</i>	19.0	1.279	21.9	1.340	G
289.	<i>Sylvia borin</i>	16.8	1.225	24.8	1.394	G
290.	<i>Sylvia curruca</i>	18.8	1.274	10.6	1.025	G
291.	<i>Sylvia nisoria</i>	15.1	1.180	21.4	1.330	G
292.	<i>Taeniopygia castanotis</i>	19.5	1.290	11.7	1.068	G
293.	<i>Tarsiger cyanurus</i>	16.0	1.205	14.8	1.170	G
294.	<i>Tetrao urogallus</i>	2.9	0.470	4010	3.603	G
295.	<i>Thamnophilus punctatus</i>	16.4	1.214	21	1.322	MW
296.	<i>Thinocorus rumicivorus</i>	5.6	0.747	55.5	1.744	MW
297.	<i>Tiaris canora</i>	19.9	1.299	7.8	0.892	G
298.	<i>Tringa ochropus</i>	10.2	1.010	90	1.954	MW
299.	<i>Troglodytes troglodytes</i>	23.7	1.374	9.0	0.954	G
300.	<i>Trogon rufus</i>	8.1	0.910	53	1.724	MW
301.	<i>Tudus viscivorus</i>	10.2	1.009	108.2	2.034	MW
302.	<i>Turdus iliacus</i>	12.5	1.095	58.0	1.763	G
303.	<i>Turdus merula</i>	11.3	1.052	82.6	1.917	G

304.	<i>Turdus philomelos</i>	11.6	1.063	62.8	1.798	G
305.	<i>Turdus viscivorus</i>	10.2	1.009	108.2	2.034	G
306.	<i>Turnix suscitator</i>	6.7	0.824	58.1	1.764	MW
307.	<i>Tyrannus tyrannus</i>	12.2	1.087	35.7	1.553	MW
308.	<i>Upupa epops</i>	8.2	0.916	67	1.826	MW
309.	<i>Uraeginthus bengalis</i>	17.0	1.232	9.1	0.959	G
310.	<i>Uria aalge</i>	7.1	0.852	956	2.980	MW
311.	<i>Uria lomvia</i>	6.9	0.838	989	2.995	MW
312.	<i>Vermivora pinus</i>	19.2	1.284	7.8	0.892	MW
313.	<i>Vidua paradisaea</i>	18.5	1.267	10.5	1.021	MW
314.	<i>Vultur gryphus</i>	1.6	0.217	10320	4.014	MW
315.	<i>Xiphorhynchus guttatus</i>	9.9	0.994	45.2	1.655	MW
316.	<i>Yynx torquilla</i>	11.3	1.052	31.8	1.502	G
317.	<i>Zenaida macroura</i>	6.0	0.777	123	2.090	MW
318.	<i>Zonotricha querula</i>	13.4	1.127	33.3	1.522	MW
319.	<i>Zonotrichia albicollis</i>	13.8	1.139	20.2	1.305	MW
320.	<i>Zonotrichia leucophrys</i>	12.9	1.110	26.1	1.417	MW
321.	<i>Zosterops lateralis</i>	13.5	1.132	11	1.041	MW

Table **S6b**. Basal metabolic rate in birds (experimental data obtained by V. Gavrilov)

Notes on measurements procedure. Basal metabolism is the rate of energy utilization by a bird at complete rest, without the energetic costs of digestion and assimilation of food or cold stress, i.e. the rate of energy utilization of fasting, inactive birds in the zone of thermoneutrality. Basal metabolism was determined by measuring rates of oxygen consumption in closed boxes of different volumes, where CO₂ was absorbed using NaOH or KOH (closed-circuit respirometry). Basal oxygen consumption was measured in birds under postabsorptive conditions at night (N), as indicated in Table **S6a**, at different ambient temperatures that allowed strict determination of the thermoneutrality zone. The larger birds were deprived of food from mid-day, and the smaller birds from 3 to 4 hours before the nightfall. The birds were placed singly in small cages, which were then placed in plexiglass chambers in the dark. The chamber sizes varied from 3 to 25 liters, depending on the size of the bird. The flow of air through the chamber was controlled, and after stabilizing chamber temperature, the outflow was connected to an oxygen measuring instrument. Actual measurements of oxygen consumption were never started earlier than 1-3 hours after dusk and always ended 1 to 2 hours before dawn. Each experiment lasted from 1 to 4 hours. Tests were done at the beginning and end of the experiments to make certain that the boxes were properly sealed. Measurements were also done in the daytime on birds with different amounts of food in the alimentary tract. **The number of individuals measured varied from two (*Tetrao urogallus*) or three-four (in some large nonpasserine birds) to eight-twelve (in most other species) and up to 20-35 (in well-studied species, like for example *Parus major*, *Fringilla coelebs*).** The birds were weighed early at the beginning and at the end of the experiment. If the change of body mass was small (not more than 1.5-2% of body mass), corrections were made using a caloric equivalent equal to 25.1 kJ g⁻¹. If the change of body mass was greater, the data were not used.

Notations:

Mg — mean body mass, g; *N* — number of measured birds;

D — measurements were made during the active (day-time) phase of the avian circadian cycle;

N — measurements were made during the resting (night-time) phase of the avian circadian cycle;

W — measurements were made during the nonproductive "winter" phase of the avian annual cycle;

S — measurements were made during the reproductive "summer" phase of the avian annual cycle;

A — measurements were made during the nonproductive "autumnal" (postmoult) phase of the avian annual cycle;

V — measurements were made during the early part of the productive "vernal" phase of the avian annual cycle;

Y — measurements were made during the whole year;

QkJday — whole-body basal metabolic rate, $\text{kJ ind}^{-1} \text{day}^{-1}$.

Note: data in Table S6a marked "G" are taken from Table S6b and correspond to the minimum night-time (N) mass-specific basal metabolic rate for the corresponding species, $qWkg = (\text{QkJday}/\text{Mg}) \times 10^6 / 24 / 3600 \text{ W kg}^{-1}$.

Species	N	Mg	Sea- son	Time	QkJday	References
<u>Sphenisciformes</u>						
Eudyptes cristatus	4	2330	W	N	504.5	Gavrilov, 1977
Eudyptes chrysolophus	4	3870	W	N	747.8	Gavrilov, 1977
Aptenodytes patagonica	3	11080	W	N	1899.2	Gavrilov, 1977
<u>Anseriformes</u>						
Aix sponsa	8	448	S	N	194.3	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Aix sponsa	8	448	S	D	221.5	Gavrilov, 1985ab, 1997
Aix sponsa	8	468	W	N	205.6	Gavrilov, 1981, 1997, 1999ab
Aix sponsa	8	468	W	D	273.4	Gavrilov, 1981, 1997
Anas penelope	4	723	S	N	244.1	Gavrilov, 1980abc, 1982ab, 1997
Anas penelope	4	718	W	N	260.4	Gavrilov, 1980abc, 1982ab, 1997
Anas platyrhynchos	12	1020	S	N	351.7	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Anas platyrhynchos	12	1020	S	D	415.6	Gavrilov, 1985ab, 1997
Anas platyrhynchos	12	1132	W	N	435.4	Gavrilov, 1981, 1997, 1999ab
Anas platyrhynchos	12	1132	W	D	566.9	Gavrilov, 1981, 1997
Anser anser	4	3250	S	N	937.9	Gavrilov, Dolnik, 1985
<u>Falconiformes</u>						
Falco tinnunculus	4	131	A	N	67.0	Gavrilov, 1985ab
Accipiter nisus	6	135	S	N	82.1	Gavrilov, Dolnik, 1985
Falco subbuteo	4	208	A	N	112.2	Gavrilov, Dolnik, 1985
Pernis apivorus	2	652	S	N	202.2	Gavrilov, Dolnik, 1985
<u>Galliformes</u>						
Excalfactoria chinensis	6	44	S	N	35.15	Gavrilov, 1985ab
Excalfactoria chinensis	6	44	S	D	35.56	Gavrilov, 1985ab
Excalfactoria chinensis	6	41	W	N	50.7	Gavrilov, 1981
Excalfactoria chinensis	6	41	W	D	60.3	Gavrilov, 1981
Coturnix coturnix	4	97	S	N	77.0	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Coturnix coturnix	4	97	S	D	83.2	Gavrilov, 1985ab, 1997
Coturnix coturnix	4	109	W	N	71.6	Gavrilov, 1981, 1997, 1999ab
Coturnix coturnix	4	109	W	D	85.4	Gavrilov, 1981, 1997
Perdix perdix	5	483	S	N	207.3	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Perdix perdix	5	483	S	D	225.9	Gavrilov, 1985ab, 1997
Perdix perdix	5	501	W	N	186.3	Gavrilov, 1981, 1997, 1999ab
Perdix perdix	5	501	W	D	235.3	Gavrilov, 1981, 1997
Lagopus lagopus	6	524	S	N	268.8	Gavrilov, 1980abc, 1982ab, 1997, 1999ab

Lagopus lagopus	6	524	S	D	306.4	Gavrilov, 1985ab, 1997
Lagopus lagopus	6	567	W	N	248.3	Gavrilov, 1981, 1997, 1999ab
Lagopus lagopus	6	567	W	D	328.7	Gavrilov, 1981, 1997
Alectoris graeca	4	620	S	N	246.6	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Alectoris graeca	4	633	W	N	219.0	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Tetrao urogallus ♀	2	3900	S	N	1030.0	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Tetrao urogallus ♀	2	4010	W	N	1021.6	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<u>Gruiformes</u>						
Crex crex	4	96	S	N	68.2	Gavrilov, Dolnik, 1985
Fulica atra	3	412	S	N	176.3	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Fulica atra	3	436	W	N	204.3	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<u>Charadriiformes</u>						
Charadrius dubius	4	36	S	N	36.0	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Charadrius dubius	4	44	W	N	41.5	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Larus ridibundus	5	285	S	N	173.3	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Larus ridibundus	5	285	S	D	194.1	Gavrilov, 1985ab, 1997
Larus ridibundus	5	306	W	N	160.8	Gavrilov, 1981, 1997, 1999ab
Larus ridibundus	5	306	W	D	193.0	Gavrilov, 1981, 1997
Larus canus	3	428	S	N	201.0	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Larus canus	3	428	S	D	215.0	Gavrilov, 1985ab, 1997
Larus canus	3	431	W	N	194.3	Gavrilov, 1981, 1997, 1999ab
Larus canus	3	431	W	D	251.2	Gavrilov, 1981, 1997
Scolopax rusticola	4	430	S	N	186.7	Gavrilov, 1981
<u>Columbiformes</u>						
Streptopelia senegalensis	3	108	S	N	73.3	Gavrilov, Dolnik, 1985
Streptopelia turtur	4	154	A	N	98.4	Gavrilov, Dolnik, 1985
Columba livia	6	353	W	N	160.4	Gavrilov, 1981
Columba livia	6	353	W	D	178.8	Gavrilov, 1981
Columba livia	6	368	S	N	143.2	Gavrilov, 1985ab
Columba livia	6	368	S	D	154.4	Gavrilov, 1985ab
Columba palumbus	4	493	A	N	171.3	Gavrilov, Dolnik, 1985
<u>Psittaciformes</u>						
Melopsittacus undulatus	18	25,2	S	N	26.0	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Melopsittacus undulatus	18	25,2	S	D	28.0	Gavrilov, 1985ab, 1997
Melopsittacus undulatus	18	33,6	W	N	28.5	Gavrilov, 1981, 1997, 1999ab
Melopsittacus undulatus	18	33,6	W	D	31.4	Gavrilov, 1981, 1997
Agapornis roseicollis	6	48.1	S	N	40.2	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Agapornis roseicollis	6	48.1	S	D	44.0	Gavrilov, 1985ab, 1997
Agapornis roseicollis	6	48.4	W	N	40.2	Gavrilov, 1981, 1997, 1999ab
Agapornis roseicollis	6	48.4	W	D	53.2	Gavrilov, 1981, 1997
Agapornis fisheri	3	56.7	W	N	45.6	Gavrilov, Dolnik, 1985
Nymphicus hollandicus	5	85.6	S	N	59.5	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Nymphicus hollandicus	5	85.6	S	D	65.4	Gavrilov, 1985ab, 1997
Nymphicus hollandicus	5	94.3	W	N	74.5	Gavrilov, 1981, 1997, 1999ab
Nymphicus hollandicus	5	94.3	W	D	88.3	Gavrilov, 1981, 1997
<u>Cuculiformes</u>						
Cuculus canorus	4	111.6	S	N	72.4	Gavrilov, Dolnik, 1985
<u>Strigiformes</u>						
Asio otus	6	236	S	N	113.0	Gavrilov, Dolnik, 1985
<u>Caprimulgiformes</u>						
Caprimulgus europeus	3	77.4	S	N	55.7	Gavrilov, Dolnik, 1985
<u>Apodiformes</u>						
Apus apus	6	44.9	S	N	37.7	Gavrilov, 1985ab
<u>Coraciiformes</u>						
Alcedo atthis	4	34.3	S	N	32.7	Gavrilov, Dolnik, 1985

Piciformes

<i>Yynx torquilla</i>	6	31.8	S	N	31.0	Gavrilov, Dolnik, 1985
<i>Dendrocopus major</i>	7	98.0	S	N	77.5	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Dendrocopus major</i>	7	117.0	W	N	90.0	Gavrilov, 1980abc, 1982ab, 1997, 1999ab

Passeriformes

<i>Regulus regulus</i>	22	5.5	S	N	12.6	Gavrilov, 1997, 1999ab
<i>Regulus regulus</i>	22	5.5	W	N	15.9	Gavrilov, 1997, 1999ab
<i>Estrilda troglodytes</i>	6	7.5	S	N	13.0	Gavrilov, 1980abc, 1982ab , 1997, 1999ab
<i>Estrilda troglodytes</i>	6	7.5	S	D	14.0	Gavrilov, 1985ab, 1997
<i>Estrilda troglodytes</i>	6	7.7	W	N	13.4	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Estrilda troglodytes</i>	6	7.7	W	D	14.6	Gavrilov, 1985ab, 1997
<i>Tiaris canora</i>	4	7.6	S	N	13.4	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Tiaris canora</i>	4	7.8	W	N	13.4	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Phylloscopus collybita</i>	6	8.2	A	N	14.2	Gavrilov, Dolnik, 1985
<i>Aegithalos caudatus</i>	17	8.9	S	N	17.2	Gavrilov, 1974, 1980abc, 1982ab, 1997, 1999ab
<i>Aegithalos caudatus</i>	17	8.8	W	N	21.8	Gavrilov, 1974, 1980abc, 1982ab, 1997, 1999ab
<i>Troglodytes troglodytes</i>	16	9.0	S	N	18.4	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Troglodytes troglodytes</i>	16	9.2	W	N	20.9	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Uraeginthus bengalis</i>	5	9.1	S	N	13.4	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Uraeginthus bengalis</i>	5	9.2	W	N	14.2	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Phylloscopus sibilatrix</i>	4	9.2	S	N	15.1	Gavrilov, Dolnik, 1985
<i>Lonchura striata</i>	6	10.1	S	N	17.2	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Lonchura striata</i>	6	10.3	W	N	18.4	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Sylvia curruca</i>	8	10.6	S	N	17.2	Gavrilov, Dolnik, 1985
<i>Phylloscopus trochilus</i>	7	10.7	W	N	18.0	Gavrilov, Dolnik, 1985
<i>Acrrocephalus palustris</i>	4	10.8	S	N	17.6	Gavrilov, Dolnik, 1985
<i>Parus ater</i>	18	10.8	S	N	20.5	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Parus ater</i>	18	10.8	S	D	22.6	Gavrilov, 1985ab, 1997
<i>Parus ater</i>	18	11.0	W	N	23.4	Gavrilov, 1981, 1997, 1999ab
<i>Parus ater</i>	18	11.0	W	D	27.7	Gavrilov, 1981, 1997
<i>Taeniopygia castanotis</i>	14	11.7	S	N	19.7	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Taeniopygia castanotis</i>	14	11.8	S	D	20.3	Gavrilov, 1985ab, 1997
<i>Taeniopygia castanotis</i>	14	11.8	W	N	20.1	Gavrilov, 1981, 1997, 1999ab
<i>Taeniopygia castanotis</i>	14	11.8	W	D	22.6	Gavrilov, 1981, 1997
<i>Acrocephalus schoenobaenus</i>	3	11.5	S	N	18.8	Gavrilov, Dolnik, 1985
<i>Ficedula hypoleuca</i>	9	11.7	A	N	20.1	Gavrilov, Dolnik, 1985, Gavrilov et al., 1995b, 1998
<i>Hippolais icterina</i>	6	12.5	S	N	21.8	Gavrilov, Dolnik, 1985
<i>Acanthis flammea</i>	16	14.0	S	N	24.7	Gavrilov, 1974, 1980abc, 1982ab, 1997, 1999ab
<i>Acanthis flammea</i>	16	14.3	W	N	29.3	Gavrilov, 1974, 1980abc, 1982ab, 1997, 1999ab
<i>Phoenicurus phoenicurus</i>	4	13.0	S, A	N	20.1	Gavrilov, Dolnik, 1985
<i>Serinus canaria</i>	5	13.3	A	N	19.7	Gavrilov, Dolnik, 1985
<i>Riparia riparia</i>	3	13.6	A	N	20.1	Gavrilov, 1986
<i>Phoenicurus ochruros</i>	3	13.9	S	N	20.9	Gavrilov, Dolnik, 1985
<i>Spinus spinus</i>	18	14.0	S	N	25.1	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
<i>Spinus spinus</i>	18	14.0	S	D	27.6	Gavrilov, 1985ab, 1997
<i>Spinus spinus</i>	18	14.2	W	N	28.5	Gavrilov, 1981, 1997, 1999ab
<i>Spinus spinus</i>	18	14.2	W	D	31.4	Gavrilov, 1981, 1997
<i>Saxicola rubetra</i>	4	14.3	S	N	20.9	Gavrilov, Dolnik, 1985
<i>Muscicapa striata</i>	3	14.4	S	N	21.3	Gavrilov, Dolnik, 1985
<i>Motacilla flava</i>	2	14.7	S	N	22.2	Gavrilov, Dolnik, 1985
<i>Tarsiger cyanurus</i>	5	14.8	W	N	20.5	Gavrilov, 1985ab

Parus major	20	16.4	S	N	28.5	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Parus major	20	16.4	S	D	31.6	Gavrilov, 1985ab, 1997, Gavrilov et al. 1995a
Parus major	20	17.1	W	N	32.2	Gavrilov, 1981, 1997, 1999ab
Parus major	20	17.1	W	D	35.6	Gavrilov, 1981, 1997, Gavrilov et al. 1995a
Carduelis carduelis	6	16.5	W	N	30.1	Gavrilov, 1982b
Prunella modularis	4	16.8	A	N	28.1	Gavrilov, Dolnik, 1985
Acanthis cannabina	4	16.9	A	N	29.3	Gavrilov, 1982b
Emberiza schoeniclus	3	17.6	A	N	26.0	Gavrilov, 1982b
Erithacus rubecula	18	17.6	S	N	26.0	Gavrilov, 1980abc, 1982ab
Erithacus rubecula	18	17.6	S	D	29.1	Gavrilov, 1985ab
Erithacus rubecula	18	17.6	W	N	24.3	Gavrilov, 1981
Erithacus rubecula	18	17.6	W	D	26.4	Gavrilov, 1981
Parus varius	5	17.7	W	N	31.0	Gavrilov, 1985ab
Parus varius	5	17.7	W	D	37.2	Gavrilov, 1985ab
Hirundo rustica	4	18.4	S	N	26.0	Gavrilov, 1986
Motacilla alba	8	18.0	S	N	26.0	Gavrilov, 1980abc, 1982ab
Motacilla alba	8	18.2	W	N	24.3	Gavrilov, 1980abc, 1982ab
Anthus pratensis	3	18.9	S	N	26.0	Gavrilov, 1982b
Anthus trivialis	5	19.7	A	N	29.3	Gavrilov, 1982b
Luscinia svecica	3	20.8	S	N	31.0	Gavrilov, 1982b
Fringilla coelebs	35	21.0	S	N	32.2	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Fringilla coelebs	35	21.0	S	D	39.0	Gavrilov, 1985ab, 1997
Fringilla coelebs	35	20.8	W	N	38.1	Gavrilov, 1981, 1997, 1999ab
Fringilla coelebs	35	20.8	W	D	41.5	Gavrilov, 1981, 1997, 1999ab
Fringilla montifringilla	12	21.0	A	N	33.1	Gavrilov, 1982b
Sylvia nisoria	3	21.3	S	N	33.1	Gavrilov, 1982b
Sylvia nisoria	3	21.4	W	N	28.0	Gavrilov, 1982b
Carpodacus erythrinus	14	21.2	S	N	31.8	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Carpodacus erythrinus	14	21.2	S	D	36.6	Gavrilov, 1985ab, 1997
Carpodacus erythrinus	14	21.6	W	N	31.0	Gavrilov, 1981, 1997, 1999ab
Carpodacus erythrinus	14	21.6	W	D	33.1	Gavrilov, 1981, 1997
Anthus campestris	2	21.8	S	N	33.1	Gavrilov, 1981
Sylvia atricapilla	8	21.9	A	N	36.0	Gavrilov, 1981
Emberiza hortulana	8	24.3	S	N	36.0	Gavrilov, 1980abc, 1982ab
Emberiza hortulana	8	27.0	W	N	35.2	Gavrilov, 1980abc, 1982ab
Passer montanus	7	22.0	S	N	34.0	Gavrilov, 1981
Passer montanus	7	22.3	A	N	35.2	Gavrilov, 1981
Passer domesticus bactrianus	32	23.0	S	N	31.8	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Passer domesticus bactrianus	32	23.2	W	N	31.8	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Sylvia borin	12	24.8	A	N	36.0	Gavrilov, 1982b
Passer domesticus	33	26.5	S	N	41.0	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Passer domesticus	33	26.5	S	D	47.2	Gavrilov, 1985ab, 1997
Passer domesticus	33	26.4	W	N	42.3	Gavrilov, 1981, 1997, 1999ab
Passer domesticus	33	26.4	W	D	44.8	Gavrilov, 1981, 1997
Emberiza citrinella	27	26.8	S	N	37.7	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Emberiza citrinella	27	26.8	S	D	43.3	Gavrilov, 1985ab, 1997
Emberiza citrinella	27	27.4	W	N	43.1	Gavrilov, 1981, 1997, 1999ab
Emberiza citrinella	27	27.4	W	D	49.4	Gavrilov, 1981, 1997
Lanius collurio	4	27.0	S	N	33.1	Gavrilov, 1982b
Chloris chloris	17	28.2	S	N	41.0	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Chloris chloris	17	28.2	S	D	46.4	Gavrilov, 1985ab, 1997
Chloris chloris	17	29.0	W	N	48.1	Gavrilov, 1981, 1997, 1999ab
Chloris chloris	17	29.0	W	D	51.9	Gavrilov, 1981, 1997
Loxia curvirostra	9	39.4	S	N	51.9	Gavrilov, 1980abc, 1982ab, 1997, 1999ab
Loxia curvirostra	9	42.7	W	N	58.2	Gavrilov, 1980abc, 1982ab, 1997, 1999ab

<i>Pyrrhula pyrrhula</i>	11	30.4	W	N	47.7	Gavrilov, 1982b
<i>Lullula arborea</i>	7	33.2	A	N	42.3	Gavrilov, 1982b
<i>Coccothraustes coccothraustes</i>	4	48.3	A	N	60.3	Gavrilov, 1982b
<i>Loxia pytiopsittacus</i>	6	53.7	W	N	69.1	Gavrilov, 1982b
<i>Turdus iliacus</i>	9	58.0	W	N	62.4	Gavrilov, 1979ab, 1981
<i>Turdus iliacus</i>	9	58.0	W	D	72.8	Gavrilov, 1981
<i>Turdus philomelos</i>	12	62.8	S	N	62.8	Gavrilov, 1979ab, 1980abc, 1982ab, 1997, 1999ab
<i>Turdus philomelos</i>	12	62.8	S	D	71.0	Gavrilov, 1985ab, 1997
<i>Turdus philomelos</i>	12	64.0	W	N	65.3	Gavrilov, 1979ab, 1980abc, 1982ab, 1997, 1999ab
<i>Turdus philomelos</i>	12	64.0	W	D	74.9	Gavrilov, 1982ab, 1997
<i>Oriolus oriolus</i>	3	64.9	S	N	56.1.	Gavrilov, 1982b
<i>Lanius excubitor</i>	4	72.4	A	N	70.3	Gavrilov, 1982b
<i>Bombycilla garrulus</i>	6	72.5	A	N	82.5	Gavrilov, Dolnik, 1985
<i>Sturnus vulgaris</i>	13	75.0	A	N	77.5	Gavrilov, 1982b
<i>Pinicola enucleator</i>	5	78.4	W	N	93.8	Gavrilov, Dolnik, 1985
<i>Turdus merula</i>	12	82.6	S	N	80.4	Gavrilov, 1979ab, 1980abc, 1982ab, 1997, 1999ab
<i>Turdus merula</i>	12	82.6	S	D	93.3	Gavrilov, 1997
<i>Turdus merula</i>	12	83.0		N	89.6	Gavrilov, 1979ab, 1980abc, 1982ab, 1997, 1999ab
<i>Turdus merula</i>	12	83.0	W	D	105.5	Gavrilov, 1981, 1997, 1999ab
<i>Turdus viscivorus</i>	9	108.2	W	N	95.5	Gavrilov, 1979ab
<i>Nucifraga caryocatactes</i>	11	147.0	W	N	116.4	Gavrilov, 1979ab
<i>Garrulus glandarius</i>	13	153.0	W	N	119.7	Gavrilov, 1979ab
<i>Pica pica</i>	6	202.0	W	N	148.6	Gavrilov, 1979ab
<i>Coleus monedula</i>	9	209.0	S	N	131.2	Gavrilov, 1985ab
<i>Coleus monedula</i>	9	209.0	S	D	151.2	Gavrilov, 1985ab
<i>Coleus monedula</i>	9	215.0	W	N	160.8	Gavrilov, 1979ab, 1981
<i>Coleus monedula</i>	9	215.0	W	D	167.5	Gavrilov, 1981
<i>Corvus frugilegus</i>	5	390.0	W	N	226.1	Gavrilov, 1979ab
<i>Corvus corone cornix</i>	11	518.0	S	N	286.8	Gavrilov, 1979ab, 1980abc, 1982ab, 1997, 1999ab
<i>Corvus corone cornix</i>	11	518.0	S	D	329.8	Gavrilov, 1985ab, 1997
<i>Corvus corone cornix</i>	11	540.0	W	N	330.8	Gavrilov, 1979ab, 1980abc, 1981, 1982ab, 1997, 1999ab
<i>Corvus corone cornix</i>	11	540.0	W	D	386.9	Gavrilov, 1981, 1997
<i>Cornus ruficollis</i>	4	660.0	W	N	293.5	Gavrilov, 1979ab
<i>Corvus corax</i>	7	1203.0	S	N	476.1	Gavrilov, 1979ab, 1980abc, 1981, 1982ab, 1997, 1999ab
<i>Corvus corax</i>	7	1203.0	S	D	518.9	Gavrilov, 1985ab, 1997
<i>Corvus corax</i>	7	1208	W	N	518.3	Gavrilov, 1979ab, 1980abc, 1982ab, 1997, 1999ab
<i>Corvus corax</i>	7	1208	W	D	618.0	Gavrilov, 1981, 1997

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