Weights of some West Indian birds

by David W. Steadman, Storrs L. Olson, John C. Barber, Charles A. Meister & Margaret E. Melville

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In 1978 and 1979 we made 3 trips to the West Indies to collect specimens of birds for use in systematic and palaeontological studies. Each specimen was weighed in the field while fresh. In some instances the birds were weighed alive and then released. Thus we were not able to determine the sex in some specimens of sexually non-dimorphic species. All specimens are deposited in the collection of the National Museum of Natural History, Smithsonian Institution.

Barber and Steadman visited Jamaica from 2–21 April 1978, collecting at Quickstep, Trelawney Parish, and Hardwar Gap, Portland Parish. Barber and Melville visited the Dominican Republic from 2–14 August 1978, collecting at Boca de Yuma, Higüey, and Cabo Engaño in La Altagracia Province, and at Gonao, La Vega Province. Weights in Jamaica were taken with a triple beam balance. Weights in the Dominican Republic were taken with 30, 50, and 100 g Pesola spring scales. Olson and Meister collected on northwestern Andros from 4–9 August 1978, and on Grand Bahama on 17 and 18 August 1978. Weights were taken with 30 g and 100 g Pesola spring scales.

We have found no other published weights of birds from the Bahamas or the Dominican Republic. Weights of Jamaican birds are given in Blake 1956 (32 species), Cruz 1974 (15 species), Kepler 1977 (1 species), and Lack 1976 (1 species). These publications collectively provide weights for 10 species of resident Jamaican birds that are not listed in Table 1. Our weights for any one species from a given island are very similar to those of the above authors except as follows: Blake (1956) – *Columbina passerina jamaicensis,* 37.3 – 40.6 g, N = 4; *Crotophaga ani,* 107.5 g, N = 1.

Some interesting inter-island comparisons can be made by combining our data (Table 1) with other available weights of West Indian birds. Larger sample sizes would surely be desirable in each instance, but nonetheless some obvious differences in size can be seen in Table 2. For example, it appears that little variation in size exists between the recognized subspecies of *Columbia passerina* or *Coereba flaveola,* in sharp contrast to the striking differences between certain forms of other taxa. Especially noteworthy in Table 2 is the *Spindalis* of Jamaica weighing twice as much as the 2 forms from the Bahamas. Although *Spindalis* is traditionally regarded as a monotypic genus, Bond (1956) suggested that *Spindalis* should perhaps be divided into 3 species (*S. zena, S. dominicensis,* and *S. nigricephala*), based mainly on the coloration of the plumage of females. Our data on weights supports this treatment.

Table 1. Weights of birds from the Bahamas (B), Dominican Republic (D), and Jamaica (J). The weight of each individual to the nearest 0.1 gm. is listed for samples of 7 or fewer birds. The mean, standard deviation, range, and sample size are given in larger samples.

D *Accipter s. striatus* ♂ (imm.) 82.0, 87.0; ♀ 105.0, 114.0
J *Falco sparverius* subsp. ♂ 87.7
D *Zenaida a. asiatica* ♂ 132.0, 142.0
B *Columbina passerina bahamensis* ♂ 28.0 (juv.), 32.4, 34.8; ♀ 29.8, 35.3, 36.2, 36.4

J *Columbina passerina jamaicensis* ♂ 30.1, 35.6; ♀ 33.6
D *Geotrygon m. montana* ♂ 126.0; ♀ 126.0
B *Coccyzus minor maynardi* ♂ 56.2, 65.5
D *Coccyzus minor nesiotes* ♂ 51.5
D *Saurothera vetula longirostris* ♀ 112.5
J *Crotophaga ani* ♀ 88.7, 93.5
D *Crotophaga ani* ♂ 112.0, 116.0
D *Tachornis p. phoenicobia* ♂ 9.0, 9.5; ♀ 9.5
B *Chlorostilbon ricordii bracei* ♂ 2.5, 2.8, 2.9, 3.0, 3.0, 3.1; ♀ 2.5, 2.6, 2.7
J *Anthracothorax mango* ♂ 8.9
J *Trochilus p. polytmus* ♂ 4.5, 4.8, 5.0, 5.2, 5.3; ♀ 4.7, ±0.3 (4.1–5.1, N=11)
B *Calliphlox e. evelynae* ♀ 2.2, 2.6
D *Todus angustirostris* ♂ 8.0, 9.0; ♀ 8.0
D *Todus subulatus* ♀ 8.0
J *Todus todus* ♂ 6.5, ±0.5 (5.5–7.2, N=12); ♀ 6.4, 6.4, 6.5, 6.5; sex ? 5.6, 6.9
J *Melanerpes radiolatus* ♂ 93.7, 106.7; ♀ 97.4
D *Chryserpes striatus* ♂ 57.5, 83.0
B *Dendrocopos villosus piger* ♂ 49.3, 53.7; ♀ 52.9, 57.4
B *Dendrocopos villosus maynardi* ♂ 54.0, 54.0; ♀ 46.0, 46.5
D *Tyrannus d. dominicensis* ♂ 41.5
B *Tyrannus caudifasciatus bahamensis* ♂ 41.3, 42.5, 43.0, 45.7, 49.5; ♀ 44.8
B *Myiarchus sagrae lucaysiensis* ♂ 22.0; ♀ 22.1, 22.3
D *Myiarchus stolidus dominicensis* ♀ 21.0
J *Myiarchus barbirostris* ♂ 12.1, 13.9, 14.0; ♀ 11.7, 13.0; sex ? 14.6
J *Myiarchus validus* ♂ 38.6, 39.2; ♀ 41.2, 43.2
D *Contopus caribaeus hispaniolensis* ♂ 11.5
J *Contopus caribaeus pallidus* ♂ 9.3
B *Contopus caribaeus bahamensis* ♂ 10.8, 12.2; ♀ 10.3, 11.0
J *Myiopagis cotta* ♂ 11.5, 11.6
B *Callichelidon cyaneoviridis* ♂ 16.3, 16.9, 17.4, 19.5; ♀ 17.3, 18.5; sex ? 16.6, 17.6
D *Hirundo f. fulva* ♂ 19.5
J *Hirundo f. fulva* ♂ 14.7, 15.0, 15.2, 15.2, 15.2, 16.4; ♀ 14.4, 15.1, 15.2; sex ? 15.0
B *Hirundo rustica erythrogaster* ♂ 16.6
B *Sitta pusilla insularis* ♂ 10.0, 10.1; ♀ 9.8, 9.9
D *Mimus polyglottos orpheus* ♂ 45.0
B *Mimus g. gundlachii* ♂ 61.0, 64.5, 68.0, 72.0, 77.0; ♀ 57.0, 59.5, 62.0, 62.0, 85.0
J *Turdus jamaicensis* ♂ 59.0, 60.9; ♀ 54.0
J *Turdus aurantius* ♂ 78.8, 79.0; ♀ 87.6
B *Mimocichla p. plumbea* ♂ 66.4, 66.5, 68.0, 70.0; ♀ 74.0
D *Mimocichla plumbea ardosiacea* ♂ 67.0, 70.0, 70.0
J *Myadestes genibarbis solitarius* ♂ 25.0, 25.5, 27.9, 30.3, 33.2
D *Myadestes genibarbis montanus* ♀ (juv.) 25.5
D *Dulus dominicus* ♂ 50.5, 51.0
B *Vireo c. crassirostris* ♂ 13.5, 13.5, 13.6, 14.0, 14.5, 15.0; ♀ 12.8, 14.3; sex ? 13.5
J *Vireo modestus* ♂ 9.2, 9.3, 9.3; ♀ 9.2, 9.5, 9.6, 10.1, 10.4
J *Vireo osburni* ♂ 19.7, 21.5
B *Vireo altiloquus barbatulus* ♀ 18.0; sex ? 17.0, 17.5
J *Mniotilta varia* ♀ 9.6
B *Protonotaria citrea* ♂ 13.5
J *Limnothlypis swainsonii* ♀ 7.9
J *Dendroica caerulescens* ♀ 8.6, 9.6
B *Dendroica dominica flavescens* ♂ 9.0, 9.3, 9.8; ♀ 8.8, 9.0, 9.4
B *Dendroica pityophila* ♂ 7.2, 7.7, 8.1; ♀ 7.6, 8.4; sex ? 7.8, 8.2
B *Dendroica pinus achrustera* ♂ 10.5, 11.0, 11.5, 12.0, 12.7; ♀ 11.0, 11.3
J *Dendroica pharetra* ♂ 9.9, 9.9, 10.4, 10.5; ♀ 9.1, 9.6
J *Geothlypis trichas* ♂ 10.1, 10.5
B *Geothlypis rostrata tanneri* ♂ 15.1, 15.6, 16.1, 16.2, 16.3, 16.8, 17.3; ♀ 15.8, 16.1
J *Coereba f. flaveola* ♂ 8.7, ±0.3 (8.3–9.3, N=8); ♀ 7.6, 7.7, 8.2, 8.7, 8.9
D *Coereba flaveola bananivora* ♂ 9.0, 9.0
B *Coereba flaveola bahamensis* ♂ 9.0, 10.0, 10.3, 10.4, 10.5; ♀ 8.6
J *Euneornis campestris* ♂ 16.4, ±1.2 (14.6–19.2, N=23); ♀ 16.2 ± 1.3 (13.2–18.5, N=20); sex ? 15.5, 17.0

B *Spindalis z. zena* ♂ 19.5, 20.0, 21.0, 22.0, 22.5, 22.5, 23.3; ♀ 17.0, 20.5, 21.5, 22.0, 22.0, 24.5; sex ? 17.4
B *Spindalis zena townsendi* ♀ 20.9, 21.1, 22.8
D *Spindalis portoricensis dominicensis* sex ? 25.0
J *Spindalis nigricephala* ♂ 42.1, 42.3, 42.5; ♀ 47.2
D *Phaenicophilus p. palmarum* ♂ 32.0, 32.0; ♀ 24.0, 26.0, 27.0, 32.0
J *Icterus l. leucopteryx* ♂ 41.7
B *Agelaius phoeniceus bryanti* ♂ 48.0, 54.0, 57.0; ♀ 36.0, 37.0, 37.0, 39.0
D *Tiaris o. olivacea* ♀ 9.5, 10.0, 10.5
J *Tiaris o. olivacea* ♀ 8.8
B *Tiaris b. bicolor* ♂ 9.5, 10.0, 10.5; ♀ 9.0, 9.2, 9.6
J *Tiaris bicolor marchii* ♂ 10.8, 10.9, 11.6; ♀ 12.0
J *Loxipasser anoxanthus* ♂ 10.6, 10.7, 10.8, 11.4, 11.5, 11.9, 12.5; ♀ 10.5, 11.2, 11.4, 12.0, 12.1
B *Loxigilla v. violacea* ♂ 20.8, 22.5; ♀ 18.0, 18.5, 19.3, 19.5, 20.5
D *Loxigilla violacea affinis* ♂ 23.5, 24.0, 25.0, 28.5, 28.5, 28.5; ♀ 19.5, 23.5, 23.5 (juv.)
J *Loxigilla violacea ruficollis* ♂ 26.9, 28.6, 29.5, 30.1, 34.5, 37.1; ♀ 25.4, 34.5

Table 2. Inter-island variation in weight of selected taxa of West Indian birds. Males and females have been combined in species which show no apparent sexual dimorphism in size. Data from Puerto Rico is modified from that of Olson & Angle (1977).

		Bahamas			*Dominican Republic*			*Jamaica*			*Puerto Rico*		
		Av.	Range	N	Av.	Range	N	Av.	Range	N	Av.	Range	N
Columbina passerina		*C. p. bahamensis*						*C. p. jamaicensis*			*C. p. portoricensis*		
		33.3	28.0–36.4	7		—		33.1	30.1–35.6	5	35.4	30.1–39.9	9
								*39.5	?	7	**35.4	33.8–39.2	6
Todus sp.			—		*T. angustirostris*			*T. todus*			*T. mexicanus*		
					8.3	8.0–9.0	3	6.5	5.5–7.2	16	5.8	5.2–6.7	15
					T. subulatus				—		** 6.0	5.0–6.9	7
					8.0	—	1						
Hirundo f. fulva			—		19.5	—	1	15.1	14.4–16.4	10	16.1	15.2–17.3	12
Coereba flaveola		*C. f. bahamensis*			*C. f. bananivora*			*C. f. flaveola*			*C. f. portoricensis*		
	♂	10.0	9.0–10.5	5	9.0	9.0	2	8.7	8.3–9.3	8	9.3	9.0– 9.8	4
	♀	8.6	—	1		—		8.2	7.6–8.9	5	9.0	8.2– 9.35	3
	♂♂ + ♀♀							***8	?	7	**9.6	7.4–12.0	40
Spindalis sp.		*S. z. zena*			*S. p. dominicensis*			*S. nigricephala*			*S. p. portoricensis*		
		21.1	17.0–24.3	14	25.0	—	1	43.5	42.1–47.2	4	31.4	29.2–33.2	4
		S. z. townsendi						***43	?	12		—	
		21.6	20.9–22.8	3		—			—				
Loxigilla sp.		*L. v. violacea*			*L. v. affinis*			*L. v. ruficollis*			*L. p. portoricensis*		
	♂	21.6	20.8–22.5	2	26.3	23.5–28.5	6	31.1	26.9–37.1	6	34.8	31.1–39.1	12
	♀	19.2	18.0–20.5	3	22.2	19.5–23.3	3	30.0	25.4–34.3	2	29.2	23.4–36.7	8
	♂♂ + ♀♀							***30	?	7	**32.9	26.0–39.0	45

*From Blake (1956)
**From Oniki (1975)
***From Cruz (1974)

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Address: Division of Birds, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560 U.S.A.

Haematozoa of British birds: post-mortem and clinical findings

M. A. Peirce

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Most observations in recent years on the haematozoa of British birds have concentrated on birds caught for ringing purposes in cooperation with the British Trust for Ornithology (Peirce & Mead 1976, 1977, 1978a, b). In addition to these, from 1965 to 1978 a total of 426 birds was examined as post-mortem or clinical cases for the presence of haematozoa. Those results are reported here.

Materials and Methods

The clinical cases were mostly birds of prey examined since 1976, subsequent to a previous report on haematozoa found in birds of this category (Peirce & Cooper 1977). All other birds were post-mortem specimens except for Canada Geese *Branta canadensis*, Starlings *Sturnus vulgaris* and Pied Wagtails *Motacilla alba* from which blood samples were obtained during the course of work carried out by the Pest Infestation Control Laboratory.

Thin blood smears were made from either peripheral or cardiac blood (post-mortem cases only), air-dried, fixed in methanol and stained with Giemsa's solution at a strength of 1:10 at pH 7.2 for one hour. Microscopical examination was carried out under an oil immersion objective.

Results

All the birds examined are listed in Table 1. Of the 426 birds representing 66 species and 52 genera from 26 families examined, 51 (11.9%) were found to harbour one or more parasites of the genera *Haemoproteus, Leucocytozoon, Plasmodium, Trypanosoma* and *Atoxoplasma.*

With the exception of 2 Long-eared Owls *Asio otus* where the parasitaemia was too low to determine whether the parasite was a species of *Haemoproteus* or *Plasmodium,* the remaining parasites were identified to the generic level and most to species. Leucocytozoids in the Accipittridae and Falconidae were all referable to *Leucocytozoon toddi*; those in the Strigidae to *L. ziemanni. L. marchouxi* was found in Wood Pigeon *Columba palumbus* and *L. dubreuili* in Blackbird *Turdus merula. Haemoproteus fallisi* was observed in Blackbird and Song Thrush *Turdus philomelos, H. palumbis* in Wood Pigeon, *H. tinnunculi* in Merlin *Falco columbarius* and *H. figueiredoi* in Goshawk *Accipiter gentilis.* Three Tawny Owls *Strix aluco* were infected with *H. syrnii.* A parasite resembling *Plasmodium subpraecox* was seen in a Snowy Owl *Nyctea scandiaca* and *P. merulae* and *P. giovannolai* were identified from Blackbirds. The trypanosome in Tawny Owl was identified as *T. avium*; that in Blackbird morphologically resembled *T. corvi.*