

Neossoptile distribution patterns of only 5 species of Thraupinae have been described (Table 3). Only 4 pterylae (coronal, occipital, scapular and spinal) are always present; they are all found on the upper parts. The occipital tract only has a constant number of 4/4 neossoptiles. Neossoptile numbers for wing and leg pterylae are extremely variable throughout the 5 species. This variability is found also in the natal down pattern of Tersininae, e.g. *Tersina viridis* (Collins 1973) and of other Emberizinae, e.g. *Sicalis flaveola* and *Tiaris olivacea* (Harrison 1974), *Sporophila* finches (Collins & Kemp 1976) and *Paroaria gularis* (Collins & Bender 1977).

With regard to this extreme variability within the natal pterylosis, the neossoptile distribution pattern may prove to be a taxonomic character of limited utility. Only more extensive data on the natal pterylosis of neotropical passerines may reveal any real value in establishing taxonomic relationships.

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Morphometry, wing loading and food of western Darfur birds

by R. T. Wilson & D. M. Ball

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Darfur is known ornithologically only from the pioneering work of Admiral Lynes (Lynes 1924-1925) and some minor publications by Madden (1934, 1935, 1946). Later books with references to Darfur draw, apparently in entirety, from Lynes (Cave & MacDonald 1955, Mackworth-Praed & Grant 1960). The opportunity presented by an 18 months stay in western Darfur was taken advantage of and an effort has been made to monitor changes in the environment, the distribution and the seasonality of the avifauna which have taken place in the last 60 years. Full results have not yet been analysed. This preliminary note presents some physical data and information on food for a number of Darfur birds. Nomenclature generally follows that of White (1961-1965).

In Table 1, linear measurements are all in millimetres, wing area in square centimetres, weights in grams. Wing area was calculated from a drawn

TABLE I

Morphometry, wing loading and food of western Darfur birds.

Species and Sex	Bill length	Tarsus length	Wing length	Wing area	Total weight	Weight of crop/ gut contents	Net weight	Wing loading
<i>Ardeola ibis</i> ♀	55	83	230	972	342.5	27.9	314.6	0.352
Food items: 300-400 alate Isoptera.								
<i>Circus pygargus</i> ♂ imm.	16	95	315	1842	647.0	4.0	643.0	0.355
Food items: One lizard.								
<i>Accipiter badius</i> ♀	12	49	190	525	128.8	0.0	128.8	0.245
<i>Melierax metabates</i> 3♀♀	29.3±2.31 28-32	92.7±7.57 84-98	319.0±19.31 302-340	1470.3±26.39 1440-1488	597.7±27.21 580-629	9.8±11.54 0.0-22.5	587.9±32.53 557.5-622.2	0.405±0.012 0.394-0.418
Food items: Rodents, lizards, orthoptera.								
<i>Haliaetus vocifer</i> ♂	63	100	545	4960	2022	47	1975	0.408
Food items: Fish scales, bird bones, bird's foot, unidentified leaves, earth.								
<i>Milvus migrans</i> ♂	30	79	425	2324	583.6	27.5	556.1	0.239
Food items: Well digested remains of largish bird (?domestic fowl), small quantity of rodent fur and bones (shot in Zalingei town).								
<i>Falco tinnunculus</i> ♀	13	54	269	710	217.0	19.9	197.1	0.306
Food items: Identifiable abdomens of seven Orthoptera plus digested Orthoptera parts (17.00 hours).								
<i>Francolinus clappertoni</i> ♂	16	67	166	522	399.0	7.2	391.8	0.764
Food items: Formicidae (14), grass seeds (30), dicotyledon seeds (26) (10.00 hours).								
♀	17	72	165	488	414.0	5.1	408.9	0.848
Food items: Several hundred grass and dicotyledon seeds (10.00 hours).								
<i>Numida meleagris</i> 2♀♀					1175.0; 1177.0	3.6; 1.0	1171.4; 1176.0	
Food items: About 60% grass seeds and 40% dicotyledon seeds (16.30 hours).								
♀	19	95	260	1600	1168.0	1.1	1166.9	0.730
Food items: Sorghum seeds (15) (12.00 hours).								

Neotis denhami

♂ 72 195 545 4821 4120.0 120 4000.0 0.855
Food items: Stomach contained tightly packed mass comprised of approx. 90% Orthoptera, 4% Coleoptera, 1% Arachnid, 5% unidentified.

Columba guinea

3♂♂ 27(1) 36; 37(2) 228±3 632±59.09 346.4±56.49 9.1±2.72 337.3±57.08 0.549±0.08
2♀♀ 23(1) 37; 36 225-231 566-680 312.0-411.6 6.8-12.1 303.5-403.2 0.464-0.633
Food items: Groundnuts in 3 birds, including complete shell, sorghum *Sorghum vulgare* in one bird, millet *Pennisetum typhoides* in one bird which had also eaten peanuts, 3 seeds of sesame *Sesamum indicum* in one bird having eaten groundnuts. The heavier female was in breeding condition on 12 ix. 1976 with 17 ovules.

20 *Streptopelia* (not including *S. senegalensis*) were taken between Oct 1976 and May 1977. The principal breeding season appeared to be Nov (rainy season June-Sep): a male and female shot on 15 Nov both had crops containing pigeon's milk and the female had one developing follicle plus 17 ovules. Millet appeared to be the preferred food being found in 75% of birds, sorghum 60%, groundnuts 20%, maize 15%, grass seeds 10%, water melon, sesame and *Labiab niger* 5%, earth 10% and snail shell in 5%; green leaves of the rainy season deciduous *Acacia albida* were found in one bird and the crop of one contained approximately equal volumes of unidentified leaves and quartz and feldspar debris. Wing loading was 0.391±0.04 g/cm².

Streptopelia senegalensis

♂ 15 24 147 284 97.5 0.6 96.9 0.343
♀ 15 25 135 321 90.5 0.0 90.5 0.282
Food items: Crop of male contained sorghum. Female coming into breeding condition on 15 Jan 1977.

Turtur abyssinicus

♀ 13 27 105 162 68.7 2.0 66.7 0.424

Treron waalia

♂ 14 32 181 553 250.8 11.3 239.5 0.433

Food items: Figs.

Poicephalus meyeri

2♀♀ 22; 20 21; 20 144; 139 344; 330 124.9; 113.7 7.3; 0.0 117.6; 113.7 0.363; 0.345
Food items: Pink and yellow caterpillars and yellow seeds (? *Elassus* sp.).

Pittacula krameri

3♀♀ 17.0±1.0 19.3±1.16 154.0±1.73 303.0±23.30 103.0±7.30 0.8±0.75 102.2±6.90 0.342±0.064
16-18 18-20 152-155 284-329 95.8-110.4 0.15 95.8-109.5 0.292-0.373
Food items: seeds of sorghum, millet, lentils, *Acacia albida* and *Elassus*: flesh of guava and mango. One female coming into breeding (15 ovules) on 15 Nov 1976.

Agapornis pullaria

not sexed. 16 17 153 388 99.8 0.0 99.8 0.257
Taken on Wadi Barei (13° 00' N, 23° 00' E) in *Acacia albida* woodland. Not mentioned by Lynes and possibly represents an extension of range.

Species and Sex	Bill length	Tarsus length	Wing length	Wing area	Total weight	Weight of crop/ gut contents	Net weight	Wing loading
<i>Crinifer zornurus</i> 2♀	32; 31	49; 52	251; 249	1007; 979	391.7; 521.5	9.5; 1.2	382.2; 520.3	0.389; 0.531
Food items: One had eaten only guava fruit and leaves. The other had seeds of millet, <i>Elaeagnus</i> leaf (an introduced drought-resistant tree), mango flesh and 8 alate Isoptera.								
<i>Centropus senegalensis</i> not sexed.	28	52	178	not measured	135.4	not measured	unknown	not measured
<i>Otus scops</i> ♀	11	20	129	345	85.5	1.9	83.6	0.245
Food items: Mushy insect remains and gravel. Taken at dusk 19 Apr 1977. One developing follicle (15 mm) plus 9 ovules.								
<i>Ceryle rudis</i> ♂	52	18	145	not measured	80.7	7.3	73.4	not measured
Food items: One recently caught <i>Alester</i> sp.								
<i>Halcyon senegalensis</i> ♀	43	17	112	228	57.3	0.9	56.4	0.247
Food items: Alate Formicidae.								
<i>Coracias abyssinica</i> ♂	28	20	162	533	102.5	—	102.5	0.192
♀	25	26	153	493	104.2	6.0	98.2	0.211
Food items: Female, taken at 15.00 hours, had caught 3 Orthoptera and 2 Coleoptera.								
<i>Eurystomus glaucurus</i> ♂	19	23	180	378	116.6	0.4	116.2	0.308
♀	18	25	175	382	108.5	0.2	108.3	0.284
Food items: Both birds had eaten formicids and Coleoptera.								
<i>Phoeniculus purpureus</i> ♂	56	29	140	347	72.2	0.6	71.6	0.208
♀	40	27	140	360	66.3	1.0	65.3	0.184
Food items: Male had taken only Coleoptera, all of which with the exception of chitinous parts (mandibles, elytra) had been digested at 15.30 hours. Female had eaten 1 Orthoptera, 3 Dermoptera, 1 Hemiptera, 1 Diptera larva and 1 rosella (<i>Hibiscus sabdariffa</i>) flower.								
<i>Tockus nasutus</i> ♂	92	44	233	978	234.1	5.6	228.5	0.239
Food items: Large yellow seeds plus hard parts of ants.								

<i>Bucorvus abyssinicus</i> ♀ imm. (28 months) Food items: Stomach contained tightly packed mass of sorghum, groundnuts, Orthoptera, millipedes and 12 brightly coloured plastic beads. Breeds July, this one taken late Feb.	178	180	555	6434	3040	136	2904	0.451
<i>Mesopicos goertae</i> ♀	19	24	110	344	42.9	0.6	42.3	0.123
Food items: Ant and caterpillar.								
<i>Prionops cristatus</i> 2♀♀	17; 19	28; 31	132; 115	314; 245	50.3; 43.4	1.2; 0.3	49.1; 43.1	0.160; 0.170
Food items: Orthoptera and Coleoptera.								
<i>Laniarus barbarus</i> ♂	16	36	110	372	54.9	0.6	54.3	0.147
Food items: Largely well digested unrecognisable Insecta at 16.00 hours.								
<i>Philostomus afer</i> not sexed.	27	55	171					
Common in Zalingei (12° 54' N, 23° 29' E) in Mar and Apr: probably represents a northern extension of range. Stated categorically to be not present by Lynes and previously apparently recorded only as far north as Dilling (12° 03' N).								
<i>Corvus albus</i> ♂	62	70	375	1718	594.2	7.5	586.7	0.346
Food items: Groundnuts only in male; egg shell and bird embryo in one female (Zalingei town) and insects, fragments of bone and quartz grains in other.	55; 55	72; 69	379; 345	1486; 1510	491.4; 501.0	4.4; 7.5	487; 493.5	0.331; 0.334
<i>Rhinocorax rhipidurus</i> ♂	60	82	400	2407	745	11.1	733.9	0.305
Food items: Shot at slaughterhouse and in addition to blood and offal had eaten sorghum.								
<i>Turdoides plebejus</i> ♂	19	41	115	256	67.9	0.1	67.8	0.265
Food items: Insect remains.								
<i>Bradornis pallida</i> ♀	14	31	91	147	34.3	0.5	33.8	0.230
Food items: Formicidae and mango flesh.								
<i>Estrilda bengala</i> ♀	8	17	57	43	9.3	0.0	9.3	0.216
Food items: 10 grass seeds.								
<i>Lagonosticta senegala</i> ♂	8	13	51	59	6.7	0.1	6.6	0.112
Food items: 50 grass seeds.								

outline of one wing either by counting squares on graph paper or by using a gravimetric method, the resulting figure being doubled to obtain total wing area: wing loading, expressed as g/cm², was determined as the net weight divided by the wing area. Where parametric data for a number of individuals of a species are available they are presented as the mean $\pm$ standard deviation and extremes of range. All data refer to adult, non-breeding birds, unless otherwise stated.

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A further note on the status of *Monticola pretoriae* Gunning & Roberts, 1911

by T. Farkas

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In his remarks on *Monticola pretoriae*, Clancey (1968) stated that this species is simply a well-marked race of *Monticola brevipes*. It seems that his opinion has been taken over without further examination of the available material, even by Hall & Moreau (1970).

The fact that *M. brevipes* shows a well-marked seasonal dimorphism, the different stages of which had earlier been misconstrued by Sclater (1930) as morphs, was first described in detail by Farkas (1962), but Clancey evidently overlooked this paper. Later, in a paper on *M. pretoriae* (Farkas 1966), I chose the lack of seasonal dimorphism in *pretoriae* as the main evidence for the reinstatement of it as a good species; this also Clancey appears not to have taken into account.

Clancey (1968) describes 2 male 'intergrades', though it is not clear why he regards these specimens as such, nor is it stated at what time of year they were collected. Certainly, as Clancey describes, the 2 specimens show some white colour on their heads, concealed by blue-grey apices; but this only qualifies them, together with a third specimen from Kosterfontein in Western Transvaal, as adult males of *M. brevipes* in different stages of their eclipse plumage. The dry Griqualand West and adjoining areas of the Orange Free State are, in any case, outside the range of *M. pretoriae* as there is no suitable habitat in that area.



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