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Notes on the Drinking Habits of Birds in Semi Desertic Bechuanaland

By Mr. Michael P. Stuart Irwin

Received 29th December, 1955

The notes that follow were made in Northern Bechuanaland, Ngamiland and the western Kalahari during the C. S. Barlow Expedition of the National Museum of Southern Rhodesia in September and October 1954, whose primary object was the collection of Ornithological material.

All observations were made at pans, wells, or water holes, usually close to camp; localities at which these were made are as follows: The Nata River and the Makarikari Pan at its junction with the Nata, Mumpswe, 15 miles west of Nata; Odiakwe and Bushmans Pits on the main Nata-Maun road; Lake Ngami, then rapidly filling and a vast expanse of water; the Ghanzi district; and finally the isolated Tsodilo Hills, 35 miles west of the Okavango delta at Sepopa.

Notes made concerned mostly the smaller Passerines, observations on large birds such as Bustards being difficult. Sandgrouse, whose drinking behaviour is so well known are not discussed.

The ability to subsist without drinking must have a strong bearing upon bird distribution in arid areas and a major factor in limiting the dispersal of those forms which depend on a regular water supply. Granivorous species seem most dependant upon a regular supply, but insufficient is known of the types of food taken. It is significant, however, that most small insect eating Passerines are able to subsist without taking moisture, though the Hirundines as a whole seem to be an exception, and to Swifts, also aerial plankton feeders the same would seem to apply.

No members of the following Passerine families were seen at water: Timaliidae, Muscicapidae, Turdidae†, Sylviidae, Zosteropidae, Prionopidae, Dicruridae, Paridae, Laniidae and Nectarinidae.

In the list that follows, species marked with an asterisk were trapped by means of using water as bait.

Numididae.

Guineafowl, Numida mitrata though undoubtedly able to exist without water over long periods, drink when it is available. At Ghanzi, Guineafowl coming to drink at a well, were prevented from doing so through our presence and roosted for two successive nights in the vicinity, on each occasion having had to go without.

Columbidae.

In the Kalahari and adjacent arid Mopane areas Streptopelia senegalensis is widespread, watering regularly in the early mornings and again in the late evening, and on occasion must have to travel great distances. On the other hand S. capicola does not appear to occur away from the close proximity of permanent water.

Apodidae.

Migrant Apus apus were seen coming down to the Mumpswe pans; in Southern Rhodesia Apus spp. are frequent at water.

†Turdus litsipsirupa in the Ghanzi district is a possible exception.
Alaudidae.

Larks of the genus *Mirafra* seem quite independant of water, the four species observed being *M. africana*, *M. africanoides*, *M. apiata* and *M. sabota*. On the other hand, the Sparrow Larks, *Eremopterix leucotis* and *E. verticalis* drink at least twice a day; in the early morning and again in the evening, though at Mumpswe, *E. verticalis* and to a lesser extent *E. leucotis* came throughout the day. At this locality *Calandrella cinerea* came to drink in considerable numbers; this is of interest, as Meinertzhagen with his very wide experience, states in *Proc. Zool. Soc.* 121: 1951, p. 94 that he has never seen any lark of this genus at water. I have also observed it drinking on a number of occasions in Southern Rhodesia, so the habit must be regular in Southern Africa.

*Motacillidae.*

At Mumpswe, recently arrived *Motacilla flava* ssp., came regularly to the pans, often in company with loose flocks of *Anthus similis*. The pallid form of *A. novaeezalandiae* that live around the saline Makarikari must drink its waters, though at Mumpswe they took fresh water. A darker form of this species was extremely abundant about Lake Ngami, and in the Ghanzi district were seen visiting a limestone spring in what was virtually waterless country.

*Pycnonotidae.*

*Pycnonotus nigricans*, although it replaces *P. barbatus* in the dry country, is closely tied to the vicinity of surface water which it takes regularly, and is therefore very localised, but where water is present, it is sure to be found, even at the remote Tsodilo spring.

*Hirundinidae.*

*Riparia paludicola* arrived irregularly at the Mumpswe pans, drinking on the wing.

*Sturnidae.*

*Lamprotornis nitens*, the only Glossy Starling of the Kalahari and the waterless country generally, is completely dependant on surface water and drinks regularly.

*Ploceidae:* *Plocepasserinae.*

*Plocepasser mahali*, though common and often in the vicinity of pans, was never observed to drink.

*Sporopipinae.*

Although very abundant, especially at Ghanzi, *Sporopipes squamifrons* seemed to be entirely independant of water.

*Ploceinae.*

Both *Ploceus velatus* and *Quelea quelea* drink regularly whereas *Anaplectes melanotus* at Nata, Odiakwe and the Tsodilo Hills was seemingly independent of water.

*Estrildidae.*

All Estrildines must apparently have water at regular intervals and at Bushmans Pits and the Ghanzi district visited the available water supply in large numbers and of the following species: *Estrilda angolensis*, *E. granatina* and *E. erythronotos*, and in the Ghanzi district alone, *Amadina erythrocephala*. At the pans at Mumpswe and Odiakwe, *Ortygospiza atricollis* was present in pairs or small flocks, coming to drink throughout the day.
Passeridae.
In the Ghanzi district *Passer diffusus* came continuously to drink throughout the day, the regularity of their arrival in flocks, sometimes several hundred strong, pointed to their having traversed great distances. On the other hand, *Passer iagoensis* appeared to live only in the immediate vicinity of water, and was even then uncommon, there not being more than a pair at a pan.

Fringillidae: Fringillinae.
Serinus flaviventris at Ghanzi and *S. atrogularis* at Odiakwe and Mumpswe came to drink at intervals in small flocks.

Emberizinae.
Emberiza flaviventris came to drink at all localities where observations were made.

Notes on *Anomalophrys superciliosus* (Reichenow) in West Africa with special reference to its nidification.

by Dr. William Serle

Exhibited at the December meeting of the B.O.C.

Dr. William Serle exhibited a series of Nigerian skins and eggs of *Anomalophrys superciliosus* including a juvenile and a nestling in down, and communicated the following remarks.

*Anomalophrys superciliosus* is a rather local and uncommon Plover of tropical Africa described in 1886 by Reichenow (Journ. Ornith. 1886. pp. 115–116) from Mpara on the western shore of Lake Tanganyika on the eastern Belgian Congo border. Since its discovery it has been reported from widely separated localities in Togoland, the Gold Coast, French Equatorial Africa, Uganda, Western Kenya, and the Belgian Congo.

From the recorded dates of its occurrence north and south of the equatorial forest, its regular biannual appearances within the Belgian Congo equatorial forest, and an examination of the state of moult and gonads of individual specimens, Chapin (Bds. of Belg. Congo, Vol. 2 p. 77) concluded that *Anomalophrys superciliosus* was a regular transequatorial migrant breeding in the northern savannas about January–April and spending the off-season in the southern savannas.

To date the only definite recorded evidence of breeding of *Anomalophrys superciliosus* is contained in a note by J. D. Clarke (Nigerian Field, 1936 pp. 129–130) who caught a young chick on 27th February in south east Ilorin Province, Northern Nigeria. In West Africa it has been recorded from several localities† in the savanna north of the forest from Krachi, 0° 5' W on the Volta River in the west to Bozoum, 16° 22' E in French Cameroons in the east. The dates all fall between December and July. The only forest locality in Rio del Rey, in the Cameroons mangrove area. The two birds obtained there were not in their normal habitat and they were probably on passage.