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Page(s): Page 152, Page 153, Page 154

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# The taxonomic relationship of *Buteo rufofuscus* and *B. augur*

by R. K. Brooke

Received 8th September 1975

Sclater (1918) placed *Falco (Buteo) augur* Rüppell, 1836, as a race of *B. rufofuscus* (Forster), 1798, without discussion, while proposing a new form which he called *B. jakal archeri*, *B. jakal* (Daudin), 1800, being a junior synonym of *B. rufofuscus*. Sclater's unargued decision has been followed since without, as far as I can ascertain, any discussion other than by Swann (1930) who rejected Sclater's view. Since Swann's work is not readily available it seems desirable to quote his remarks on p. 386—

"I am unable to agree with W. Sclater that this species ([*augur*]) is a form of *Buteo rufofuscus*. Although there are two phases in the present bird, white-bellied and black-bellied, neither has the least resemblance to the normal adult plumage of *B. rufofuscus* and it is only melanistic examples of the latter bird that can resemble the melanistic phase of *B. augur*, but melanism has nothing to do with specific identity."

I agree with Swann's remarks as far as they go.

TABLE

Measurements in millimetres and weights in grams of *Buteo rufofuscus* and *B. augur* by sex and age classes

	wing length	culmen from cere	hind claw	weight
<b>A. <i>B. rufofuscus</i></b>				
ad. ♂♂	400-455	24-31	24-31	
	av. (15) 421, s.d. 15.4	av. (13) 26.7, s.d. 2.0	av. (15) 27.4, s.d. 1.9	
ad. ♀♀	420-455	25-30	25-32	
	av. (13) 442, s.d. 12.5	av. (13) 28.1, s.d. 1.4	av. (13) 29.9, s.d. 1.8	
ad. overall	390-455	24-31	24-32	
	av. (39) 429, s.d. 18.0	av. (37) 27.2, s.d. 1.8	av. (37) 28.4, s.d. 2.1	
imm. overall	395-450	24-28	25-30	
	av. (13) 421, s.d. 19.0	av. (10) 26.1, s.d. 1.4	av. (12) 27.4, s.d. 1.9	
juv. overall	400-450	24-29	26-31	
	av. (9) 432, s.d. 17.3	av. (9) 26.7, s.d. 1.7	av. (10) 28.8, s.d. 1.4	
Brown and Amadon (1968) give—				
♂♂	393-410 (401)			
♀♀	423-444 (432)			1530
Swann (1930) gives—				
	♂♂ 400-430 ♀ 455			
<b>B. <i>B. augur augur</i></b>				
ad. ♂♂	395-450	25-28	25-30	710
	av. (15) 420, s.d. 15.8	av. (15) 26.3, s.d. 1.2	av. (15) 26.5, s.d. 1.6	
ad. ♀♀	430-450	28-30	28-30	1190
	av. (7) 439, s.d. 10.7	av. (6) 29.2, s.d. 0.8	av. (7) 28.9, s.d. 1.1.	
ad. overall	395-455	25-30	25-31	
	av. (25) 428, s.d. 16.8	av. (24) 27.2, s.d. 1.7	av. (25) 27.5, s.d. 1.8.	
imm. overall	395-440	24-28	24-31	
	av. (5) 414, s.d. 23.8	av. (5) 26.0, s.d. 1.6	av. (5) 27.0, s.d. 2.9	
juv. ♀♀	420, 425	26, 27	27, 27	
Brown & Amadon (1968) give—				
♂♂	384-405			880-1160
♀♀	435-466			1097-1303
Swann (1930) gives—				
	♂♂ 400-428 ♀♀ 435-475			
Verheyen (1953) gives—				
♂	406			1246
♀♀	425, 450			

*B. rufofuscus* and *augur* are essentially the same size (see Table) and allopatric. This does not by itself suffice to make them conspecific or even closely related phylogenetically. It strongly indicates that their autecologies are very similar and that this prevents their coexistence on the same ground. An examination of the pictures in Brown & Amadon (1968) which show virtually all members of the worldwide complex of *Buteo* forms does not



reveal any species whose plumage pattern resembles that of adult *B. rufofuscus* with its brick red breast between a dark grey-brown throat and abdomen whereas a number of forms, mostly in the new world resemble more or less closely *B. augur* with its dark throat and uniform pale breast and abdomen. The juvenal plumage of *B. rufofuscus* is similar to that of most juvenals in the genus which merely shows that the *Falco rufofuscus* of Forster has been correctly transferred to *Buteo* Lacépède, 1799. Their calls are remarkably dissimilar (e.g. Brown & Amadon 1968). Their flight silhouettes are not identical: *augur* has a relatively straight trailing edge to the wing whereas *rufofuscus* has the innermost secondaries and the tertials shorter than the central secondaries so that the trailing edge of the wing comes into the body at an acute angle. A similar but more obvious silhouette is found in *Aquila verreauxii* Lesson which shares with *B. rufofuscus*, though to a more marked degree, the habit of hunting by slipping around the sharp corners of crags to surprise its prey. There is no record of a hybrid or intergrade between *augur* and *rufofuscus* where their ranges abut in the Transvaal and South West Africa.

It seems to me that the foregoing points are better explained by regarding *B. rufofuscus* as a monotypic species of uncertain position within its genus.

It appears that *B. j. archeri* Sclater, 1918, which I have not seen, is a redder version of *B. augur* (Rüppell), 1836, (see Brown & Amadon 1968), and correctly placed as a race thereof in the combination *Buteo augur archeri*.

In east Africa but not in Rhodesia a melanistic morph is found in *B. augur*. Brown & Amadon (1968) point out that in forested areas this morph provides some 50% of the individuals present. Following a suggestion to me by P. A. Clancey, I would explain this situation by postulating three races of *B. augur* during the last glaciation: white bellied birds "*augur*" in southeast Africa, black bellied birds in the forested areas of east Africa, red bellied birds "*archeri*" in Somalia. After the end of the last glaciation the increasing warmth and aridity of the climate allowed white bellied birds to move into the range of the black bellied ones and since the latter had not had time to achieve reproductive isolation a mixed population appeared with the white bellied birds generally predominant in numbers and particularly so in drier areas of east Africa. I believe that many morphs with a geographical locus within the overall range of their species are to be explained as subspecies in process of extinction, a process which theoretically should be common, cf. the discussion of geographic polymorphism in North American birds by Mayr & Short (1970, p. 89).

Brown & Amadon (1968) give the impression that male *B. a. augur* are very short winged with a maximum measurement of 405 mm. If this is not a misprint for 450 mm, I would point out that east African males are not shorter winged than Rhodesian ones. The Durban Museum has three adult males from Kenya sexed personally by J. G. Williams and their wing lengths are 420, 430 and 445 mm.

The greater male standard deviations given in the Table show that there is a tendency for female *B. rufofuscus* to be sexed as male and a greater tendency for this to happen in *B. augur*. Friedmann (1930) in discussing *Terathopius ecaudatus* (Daudin) remarks that African skinners often sex female raptors as males since they often have two apparently functional ovaries which are then confused with the two testes. This situation means that the sexual dimorphism in the characters measured is, in fact, greater than the figures suggest. However, I do not believe that measurement of these characters permits the sexing of specimens in the absence of other data and feel it would be unwise



at this stage to reclassify all alleged males above a certain size as females. Although the panel is a small one, there is no suggestion that juvenals have not completed the growth of their wings, culmens and hind claws about the time they leave the nest. Thus juvenal specimens may properly be included in overall figures when desired.

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## Okinawa bird notes

by Murray D. Bruce

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Short (1973a) recorded his observations from a visit to Okinawa, in February 1972, during his studies there of the Okinawa Woodpecker *Sapheopipo noguchii* (1973b). The present paper supplements information contained therein and is based on my visits to Okinawa from 27 March to 1 April and 7 to 10 April 1975; the intervening period was spent on Amami Oshima (Bruce 1975). To the general references covering Okinawa given by Short (1973a, b) may be added two of interest, Ono (1953) and Arakaki (1975). I recorded 51 species, 21 of them observed by Short (on eight of which some additional notes are included below, the remaining 13 being listed at the end of the paper). Six species listed are not recorded for the island by the Ornithological Society of Japan (OSJ) (1974); four of these were previously known from Okinawa (Arakaki *op. cit.*; in prep.; pers. comm.); the other two represent a new record, with one earlier, doubtful sighting by Mr. H. Arakaki (*Muscicapa sibirica*), and an apparently established but unrecorded feral colony of *Trichoglossus haematodus* around Naha. In comparison with Amami Oshima, there is far less forest remaining on Okinawa and most of it is found in the north of the island (cf. Okinawa Pref. Govt. 1974).

#### SYSTEMATIC LIST

- Bubulcus ibis*: one, Hentona; two, Okuma, on northwest coast; rice paddies.
- Egretta alba*: 35+, Manko, south of Naha; estuarine area.
- Egretta intermedia*: one, Manko; six, Okuma.
- Egretta garzetta*: 75+, Manko; one, Okuma; small numbers along west coast.