A review of the status, distribution and habitat of Baumann's Greenbul Phyllastrephus baumanni

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Of the African Pycnonotidae, Baumann's Greenbul Phyllastrephus baumanni is one of the poorest known and least recorded. Despite the fact that its range extends in a belt of over 2,000 km, from northwestern Sierra Leone to southeastern Nigeria, there are few specimens in collections and the species is rarely mentioned or depicted in the literature. This lack of information, coupled with the bird's rather nondescript appearance (a medium-sized bulbul, brown above, grey below, with a rufous tail and few other distinguishing characters) and a large number of potential confusion species (Plate 1), has made identification of the species in the field difficult. This paper is an attempt to bring together what is known of its distribution and habitat preferences. I also hope that by focussing attention on the species in this way, it might provoke the generation of new data which will determine whether its conservation status, adjudged to be Near-Threatened by Collar et al. (1994), is justified.

Phyllastrephus baumanni was described by Reichenow (1895) from a specimen taken at Misahöhe, Togo. Since then it has, as far as I can determine, been collected from another 16 localities, three in Sierra Leone, three in Liberia, one in Côte d'Ivoire, two in Ghana, two more in Togo and five in Nigeria. I have found published records of field observations of the species from a further 20 or so sites. These are mapped in Fig. 1 and listed in Tables 1 and 2. Fewer than 40 records across six countries in over 100 years implies that the species is genuinely rare. Indeed, it has been more rarely seen than the number of these records imply since several of them are shown here to be based upon misidentifications while others remain inconclusive but are considered doubtful. These are also the reasons why a number of misconceptions and inaccuracies about the species have entered the literature.

Phyllastrephus baumanni is here treated as monotypic. The Toro Olive Greenbul, Phyllastrephus hypochloris has sometimes been considered (White 1962, Hall & Moreau 1970) to be a subspecies of P. baumanni but this has not found widespread support, for the reasons given by Zimmerman (1972). There is one synonym: Phyllastrephus eburneus Bannerman 1923. Full descriptions of P. baumanni are given by Bannerman (1936) and Keith (1992) while notes on the field identification and illustrations of the species are provided by Fishpool et al. (1994) and Fishpool (1999).

Details of all specimens that I have been able to trace and know or believe to be genuine are shown in Table 1. Ecological data on skin labels and contained in papers detailing the collection of these specimens are summarised below, country by country, together with, where appropriate, additional information from maps on altitude and topography of the collecting localities. Other published records of P. baumanni, based



Plate 1. Baumann's Greenbul *Phyllastrephus baumanni* (second from bottom) and species with which it has been confused: Slender-billed Greenbul *Andropadus gracilirostris* (top), White-throated Greenbul *Phyllastrephus albigularis* (second from top) and Brown Illadopsis *Illadopsis fulvescens iboensis* (bottom). Original artwork by Nik Borrow.

upon field observations only, are then detailed and assessed in light of this information and other evidence.

Specimen record information (see Table 1)

Nigeria

Five specimens - five localities. The specimen from Ede was collected "near the ground in thick foliage in second-growth" in country which generally "has the appearance of the northern savannas rather than of the forested south. The surviving forest, usually secondary in character, is restricted in the main to river banks" (Serle 1950). The Enugu specimen was "one of two in a small wood in the savanna" (Serle 1957). Marchant (1953) states of the Awgu skin that it "...is my only record, in very thick shrubberies at the edge of a thin strip of high bush flanking a stream in the orchard-bush country on the Awgu plain." Elsewhere in the paper Marchant describes "high bush" as "those patches of tall trees or thick woods which still remain here and there within the forest belt; may now be narrow strips along stream courses." Enugu and Awgu are both located near the base of the scarp slope of the Udi Hills which rise to over 500 m a.s.l. There is no information in Bannerman's (1921) account of the Iju Waterworks, Lagos to indicate in what habitat Lowe collected his specimen (where it is referred to as "Phyllastrephus (species uncertain)", its identity later being provided by Bannerman (1923)); the label states merely that it was shot in dense bush. Details of the Ibadan specimen are given in the next section.

Togo

Six specimens - three localities; no relevant published information. All three localities lie between 600 and 700 m a.s.l.; the terrain at Misahöhe consists of steep-sided forest-clad hills (R. A. Cheke *in litt.* 1998).

Ghana

Two specimens - two localities. Of his specimen from Ejura Lowe (1937) writes that "it is a shy bird, frequenting thick bushes, and so is no doubt easily overlooked." In the introduction of this paper he says of Ejura that "..the comfortable guest-house was situated near the escarpment, which is a dividing line between the forest and savannah country." However, it is possible that the specimen may have been collected a short way south of Ejura, for elsewhere in the paper he states: "...we could vary our ground by going to the Afram River, where a gallery forest existed, and so could get forest birds too. It was only a small stream at this spot.... The undergrowth was very thick, and the ground covered with *Costus*, a wild ginger, whose large leaves make excellent cover for birds that never intend to be seen."

Label data of the Mt Kyabobo specimen indicate that it was collected at an altitude of 610 m and "was netted in 4 ha patch of submontane forest isolated by woodland and cultivation". Moyer (*in litt.* 1998) has confirmed this, adding that "the general

habitat of the area consisted of a mosaic of Guinea woodland on the ridges and forest and thicket in a few of the valleys. Most forest patches were tiny, no more than 10 to 30 ha. The place where I netted the greenbul was a forest patch of about 4 ha on the upper side of a valley. The valley bottom was covered in a maize field and the ridge was woodland."

Côte d'Ivoire

Three specimens - one locality. Lowe, in Bannerman & Lowe (1923), states that around Béoumi "the country is open, with low rolling hills, well watered and covered at this time of year with tall grass, above one's head, whilst trees and bush are scattered in clumps everywhere....such birds as existed were chiefly in the 'bush'. Now the 'bush' here was more difficult to work in than anything I had experienced. ... sometimes one could crawl in with great difficulty on hands and knees but it was not possible to go far, for the tangle of thorns and unbreakable network of vines of varying size which held one fast."

Liberia

Twelve specimens - three localities. Of these, 10 (5 males 4 females 1 indet.) were collected on Mt Nimba (Colston & Curry-Lindahl 1986). Eight specimens are in The Natural History Museum, Tring (BMNH), the other two were presumably among the 150 skins left at the Nimba Research Laboratory, Grassfield, Nimba and lost or destroyed in 1981 "when the laboratory was ransacked". Of the eight in BMNH, label data of six indicate they were collected between 1,000 and 1,300 m a.s.l. on the "mine road" and "mine area", one was taken at 500 m on the "mine road" and one at 550 m at Grassfield. In the description of the vegetation of the mountain Colston & Curry-Lindahl (1986) state that between 500/600 and 1,200 m the predominant habitat consists of "slope and ridge rain forests", with "slope forests...a type...transitional between lowland and montane rain forest while 'at about 900 m contour there is an important ecological boundary line. From here upwards a dense layer of clouds and mists usually cover the upper slopes and summits except during the dry months.*Parinari excelsa* dominates..." while along the summit at 1,000 - 1,200 m "is the ridge forest" where *Parinari* often occurred as pure stands.

The region whence the Ganta specimen was collected is described by Rand (1951) as follows: "...the St John river and several smaller streams drain the area, most of which is farmed, although there are vast stretches of thick second growth of varying ages. Except for occasional 'islands' much of the original primary forest lies in remote spots. One such area lies ten miles east of Ganta, where a range of rugged hills covered with a belt of primary forest several miles wide cuts across the country for some twenty miles." These hills rise to over 500 m a.s.l.

Finally, of the specimen from Paiata it is only stated that 'like others of this group it is probably a bird of thick growth, seldom seen" (Allen 1930). Elsewhere in the work Paiata is described as being "85 miles from the coast on the St Paul's river, 740 ft a.s.l." (c.250 m).

Country Locality Map Collector Locality No. reference (Fig. 1)					Date Depository Specimens Reference			
Nigeria	Iju Water works, Lagos	1	06°20'N, 03°35'E	WP Lowe	12.II.20	1 0	BMNH Tring [specimen number 1920.3.10.36]	Bannerman (1921)
Lite	Ede	2	07°40'N, 04°30'E	W Serle	13.XI.43	13?	BMNH Tring [specimen number 1966.16.1441]	Serle (1950)
	nr Awgu, Onitsha Prov.	3	06°05'N 07°28'E	S Marchant	14.XII.47	19?	BMNH Tring [specimen number 1948.22.33]	Marchant (1953)
	Enugu	4	06°25'N, 07°30'E	W Serle	30.VIII.54	1ð	BMNH Tring [specimen number 1966.16.1442]	Serle (1957)
	Ibadan, University College	5	07°22'N, 03°54'E	FC Sibley	5.XI.60	1ð	LSU Baton Rouge [accession number 247]	Elgood & Sibley (1964)
Togo	Misahöhe	6	06°57'N, 00°35'E	E Baumann	13.II.1895	1ð	MFN Berlin [type, accession number 49.52]	Reichenow (1895)
	Misahöhe	6	06°57'N, 00°35'E	F de Vree & E van der Straeten	27.XII.69	1∂ 1♀?	RMCA Tervuren [alcohol specimens nos 73.13.A291 & A292]	de Roo <i>et al</i> (1972)
	Ahoué- houé	7	07°33'N, 00°36'E	A de Roo, F de Vree & W Verheyen	18.VIII.68	1 0	RMCA Tervuren	de Roo <i>et al.</i> (1969)
	Ounabé	8	07°34'N, 00°59'E	C Veronese	28.X- 4.XI.68	1ð 19?	RMCA Tervuren [alcohol specimen nos 121.399 & 121.400]	de Roo (1970)
Ghana	Ejura	9	07°23'N, 01°15'W	WP Lowe	16.II.34	1ð	BMNH Tring [specimen number 1934.3.16.495]	Lowe(1937)

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Specimens records of Phyllastrephus baumanni

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	Kyabobo Mountain, 2.5 km S of Shiare	10 (08°16'N, 1 00°37'E	DC Moyer	13.X.94	13.	LSU Baton Rouge [accession number 1373]		
Côte d'Ivoire	Béoumi	11	07°44'N, 05°23'W	WP Lowe & HR Hardy	11-15. XII.22	1ð 19 1ð	BMNH Tring [specimen numbers 1923.11.12.207 (type, G, of <i>eburneus</i>), 1923.11.12.208]; MNHN Paris [specimen number C.G. 1927-62]	Bannerman (1923) Bannerman & Lowe (1923)	
Liberia	Paiata [= Peahtah, Pehata]	12	07°25'N, 09°40'W	GM Allen	14.X.26	19?	MCZ Harvard [specimen number 236485]	Allen (1930)	
	Ganta	13	07°15'N, 08°59'W	H Beatty	20.111.48	1 ♀	Field Mus. Chicago [specimen number FMNH 186790]	Rand (1951)	
anter Accieve Jonel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Manel Mane	Mt Nimba	14	07°32'N, 08°32'W	A Forbes- Watson	I.68 - I.71	5♂ 4♀ 10	58,39 BMNH Tring [specimen numbers 1977. 20.1131-1138] (remaining 2 left in Mt Nimba collection?)	Colston & Curry- Lindahl (1986)	
Sierra Leone	Kamasigi North	15	09°17'N, 11°57'W	GL Bates	9.11.30 11.11.30	1 o 1 ð ?	BMNH Tring [specimen number 1930.12.3.328]; AMNH, New York [specimen number 787309]	Bannerman (1932) Bates & Bannerman (1931)	
	Buedu, nr Kailahun	16	08°17'N, 10°23'W	GL Bates	12.IV.30	1ð	BMNH Tring [specimen number 1930.12.3.326]	Bannerman (1932) Bates & Bannerman (1931)	
	Njala	17	08°06'N, 12°05'W	TS Jones	29.VI.49	18	MCZ Harvard [specimen number 279264]	antis propi	

Sierra Leone

Four specimens - three localities. Two of these localities are described briefly by Bates in Bates & Bannerman (1931). Of Kamasigi North, (700 ft a.s.l., c.230 m) he writes: "At Kamasigi I also got forest birds... This is because of the many arms or 'galleries' of the forest running into the savannah. Near Kamasigi was a small river with wooded banks in which were forest birds such as....the rare *Phyllastrephus*" (i.e. *baumanni*). Buedu (1,600 ft a.s.l., c.530 m) "is surrounded by second-growth thickets and nearly all birds I caught there were characteristic birds of such places..." There is no published information or relevant label data for the Njala specimen.

Literature and unpublished record information (see Table 2)

Nigeria

Button (1964a, 1967) gives notes on and compares the status of 15 species of bulbul from the Ilaro area. He says that *P. baumanni* is "fairly common" in "secondary bush and parkland with high trees" where it "frequents tops of trees and lower growth 10-70 feet high" (*c*.3-23 m) and in which it behaves by "perching or moving quietly [in the] topmost levels, often in groups of 3-5". Its voice is a "thrush-like 'seer, seer' sometimes with a few guttural tones". Conspicuous by its absence among the other bulbul species Button lists is Slender-billed Greenbul *Andropadus gracilirostris* and, indeed, Button (1964b) states that he did not record *A. gracilirostris* at Ilaro. However, the habitat preferences, foraging height, behaviour and voice ascribed by Button to *P. baumanni* fit (the generally widespread, common and superficially similar in appearance) *A. gracilirostris* perfectly (Chappuis 1975, Keith 1992, pers. obs.). It seems probable therefore that Button confounded these two species.

Elgood (1977) considered the "overall status" of *P. baumanni* in southwest Nigeria to be "widespread, occasional" while that of *A. gracilirostris* was "dispersed, occasional". Of the ten forest reserves for which he presented data, *baumanni* was reported from seven (Table 2). He recorded *A. gracilirostris* at only 4 of the 10 sites. Elgood (*loc.cit.*) indicates that, in general, he relied heavily on vocalisations to identify species and that he knew the voice of *P. baumanni* but not that of *A. gracilirostris*. Mist nets were used "to some extent" at only Gambari, Olokemeji and Lagos. He states that his Ipake (= Ilaro Forest Reserve of Button (1967)) records were supplemented by those of Button, who also used mist nets. Combining these facts, it therefore seems probable that the confusion of *P. baumanni* and *A. gracilirostris* shown by Button (1964a, 1967) (who thanks Elgood for help in identification of species on the basis of plumage and voice) also applied to Elgood.

Elgood indicates that the Lagos Relict record(s) of *P. baumanni* are not his own but, by implication, those of Gee & Heigham (1977). These authors, however, did not record *P. baumanni* during their work in the Lagos area between 1966 and 1975 and only report Lowe's Iju Waterworks specimen. Indeed, they suggest that *P. baumanni* may have been lost to the Lagos area although they were not able to visit

TABLE 2

Published and unpublished field records of Phyllastrephus baumanni

Country	Locality Loca (F	ility ig. 1	No. Map) reference	Reference	Assessment of Record (see text)
Nigeria	Ilaro	31	06°53'N, 03°01'E	Button (1964a, 1967)	Incorrect or doubtful
	Gambari Olokemeji Ibadan Relict Ipake Araromi	23 24 5 25 26	07°15'N, 03°52'E 07°25'N, 03°32'E 07°22'N, 03°54'E 06°50'N, 03°03'E 07°15'N, 04°22'E	Elgood (1977)	Unconfirmed Unconfirmed Confirmed Unconfirmed
	Owena Lagos Relict	20 27 1	07°13'N, 04°22'E 07°14'N, 05°07'E 06°20'N, 03°25'E		Unconfirmed Confirmed
11 18.0	Ogba Forest	32	06°15'N, 05°40'E	Johnson (1989)	Incorrect
	Pandam	33	08°40'N, 09°03'E	Elgood et al. (1994)	Incorrect
	Ebok Boje	18	06°17'N, 08°55'E	Hewson (in litt. 1998)	Confirmed
Ghana	Cape Coast	19	05°06'N, 01°17'W	Karr (1976)	Confirmed
	Tano-Ehuro Forest Reserve	34	05°58'N, 02°37'W	Nash (1990), Dutson & Branscombe (1990)	Incorrect or doubtful
	Bosuso (=Bosusu)	28	06°19'N, 00°24'W	Grimes (1987)	Unconfirmed
Côte d'Ivoire	Lamto	35	06°13'N, 05°02'W	Brunel & Thiollay (1968), Thiollay (1985)	Incorrect or doubtful
	Таї	37	05°51'N, 07°23'W	Thiollay (1985)	Incorrect
Wingth	San Pedro	36	04°45'N, 06°37'W	Weitkowitz (1979)	Incorrect or doubtful
Liberia	Wologizi	29	08°10'N, 09°56'W	Gatter (1997)	Unconfirmed
	Mt Balagizi	30	08°07'N, 09°55'W		Unconfirmed
Sierra Leone	Mogbai, Gola North Forest Reserve	38	07°39'N, 10°52'W	Allport <i>et al.</i> (1989)	Incorrect or doubtful
	Loma Mountains Tingi Mountains Bendugu	20 21 22	09°14'N, 11°10'W 08°55'N, 10°46'W 09°04'N, 11°30'W	Field (<i>in litt</i> . 1993, 1998)	Confirmed Confirmed Confirmed

the forests around Iju since they were then closed to access for security reasons. Elgood's (1977) Lagos Relict record therefore seems to refer back to Lowe's original specimen.

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Previously, Elgood & Sibley (1964) had recorded *P. baumanni* from within a "10 mile radius of the city centre" (*c*.16 km) of Ibadan for which there was "skin evidence", collected by F. C. Sibley (confirmed by the specimen at LSU, Baton Rouge - see Table 1). Around Ibadan they report *P. baumanni* as being occasional - a "species met with a good many times over the years, but irregularly and in some cases not at all recently" and as a "forest species" within which its "most preferred habitat" is "thicket" but is also "regularly seen" in "secondary forest". *Andropadus gracilirostris* was considered rare, (i.e. not met with than on more than five occasions), too rarely for its habitat preferences to be assessed.

In summary, although the Ibadan skin confirms that some of Elgood's records are indeed of *P. baumanni* there is sufficient evidence to suggest that others were probably based on misidentifications of *A. gracilirostris*. It is not possible now to determine which are correct; his locality data, other than for Ibadan, have therefore to be treated with caution.

Johnson (1989), in a study of feeding habits of forest bulbuls, reports *P. baumanni* from Ogba Forest, southwest of Benin City - a site "reasonably typical of much of Nigeria's lowland forest". Johnson recorded *P. baumanni* at a density of 1 bird/5 ha, and described it as "a very cryptic species, seen only twice but frequently captured in mist nets". However, the morphometric data Johnson provides suggest that the species called by him *P. baumanni* is unlikely to have been so. For example, he gave bill length (n=9) 14-16-19 mm; tarsus length 25-27-29 mm, where the middle figures are, presumably, means. Compare these with data from Keith (1992) for 10 males and 4 females (mm): bill length - males 20.0 - 22.0 (mean 20.6), females 17.5 - 21.0 (mean 19.0); tarsus length – males 21.5-24.0 (mean 23.1), females 21.0 - 23.0 (mean 21.8). The differences between these figures indicate that Johnson's birds were unlikely to have been *P. baumanni* and the tarsus length, in particular, of the Ogba specimens suggest that the bird was not a *Phyllastrephus* at all.

Heigham (1976), in an avifaunal survey of mid-west Nigeria, makes use of Johnson's data from Ogba where *P. baumanni* is reported to be "seen regularly". It is of interest that Heigham gives no record of any *Illadopsis* sp. (Timaliidae) from Ogba; "the very long legs" that Johnson (1989) reports for *P. baumanni* may indicate the bird to have been an *Illadopsis*. D.N. Johnson (*in litt*. 1998) agrees that the morphometric data do rule out *P. baumanni* but is unable now, over 20 years after the study was made, to provide any further information which would resolve the identity of the species concerned.

There is, however, further, indirect evidence for believing it to have been an *Illadopsis*. Elgood *et al.* (1994) mention a record of *P. baumanni* from Pandam Game Reserve where it had been caught by C. Smeenk. Pandam is considerably further north than any other record of this species in Nigeria. Chris Smeenk (*in litt.* 1998) has kindly provided me with copies of photographic slides of the specimen taken at

the time and informed me that the capture was made in company with D.N. Johnson, who made the determination. The photographs prove, on comparison with skins in The Natural History Museum, to be of Brown Illadopsis *Illadopsis fulvescens iboensis*. *Illadopsis fulvescens* is known to occur in the Jos Plateau region (Dyer *et al.* 1986). It seems therefore that both the Ogba and Pandam records of *P. baumanni* are incorrect.

Elgood *et al.* (1994) summarise the status of *P. baumanni* in Nigeria as a "not uncommon resident at forest edges and in secondary growth right across the country, possibly less numerous in the southeast, north to Ibadan, Ife, and Enugu. Also netted at Pandam in gallery forest at southern edge of the Jos Plateau, but no other Guinea zone records." In view of the foregoing, this assessment merits revision.

More recently, a record of *P. baumanni* has come from Ebok Boje on the edge of the Obudu plateau in the south-east of the country. An individual was netted and photographed in February 1996 in 2 m high regrowth in an abandoned cassava field, some 50 m from the edge of forest, described as a mixture of remnant primary and secondary with clearings for banana (C.M. Hewson *in litt.* 1998). A copy of the photograph has kindly been sent to me by Chris Hewson and compared with skin material which confirms the identification.

Togo

Cheke & Walsh (1996) consider *P. baumanni* an "uncommon forest resident, but status uncertain as probably overlooked." They make it clear, however, that the only records for the country are the four specimens mentioned above and in Table 1.

Ghana

There is a record from Cape Coast (Karr 1976), where two individuals were netted in "forest converted to shrubland" on the campus of Cape Coast University in June 1971. The weights are given as 27.5 and 30.5 g but no other details are given. J.R. Karr (*in litt.* 1998) has provided me with further details. "The birds were caught in vegetation described as 'charcoal subclimax' which appeared to be maintained in a stunted condition as a consequence of the activities of wood-cutters. The result was a very short 'forest' with a maximum height of 16 to 20 ft (c.5 to 7 m) and less than 10% cover above 10 ft (c.3 m) high. Ground cover was sparse and vegetation density was relatively uniform through most of the profile with a rapid decrease above 10 ft (c.3 m). The avifauna was a mixture of second growth species associated with short vegetation profiles and a component of forest interior species." Dr Karr has also kindly provided me with skins in The Natural History Museum confirms the identification. One of these photographs has since been published (Fishpool 1999).

Nash (1990) and Dutson & Branscombe (1990) report the same (putative) records of *P. baumanni* from Tano-Ehuro Forest Reserve in the southwest of the country in 1989. Nash (1990) states that "up to 3 individuals were seen in the berry bushes at the edge of the clearings on three dates, and individuals were also seen in the nearby logging park, and in a low bush beside a logging road." In the tabulated list of species, however, four *Andropadus* species (*ansorgei, curvirostris, gracilis* and *virens*) are listed together simply as "small grey greenbuls" since they are "virtually indistinguishable in the field". Further, *A. gracilirostris* is not mentioned in the species accounts while in the annotated list it is included but not recorded from Tano-Ehuro. The evidence given is inconclusive but the frugivorous habits and the open locations in which they were seen suggest that the birds were unlikely to have been *P. baumanni*, with *A. gracilirostris* a more probable alternative. J. Branscombe (verbally 1998) has since confirmed that he now considers the original identification to be unsafe.

Grimes (1987) summarises the status of *P. baumanni* in Ghana as being a "rare resident of forest undergrowth and forest edge, probably more widespread and more abundant than records suggest. Collected Ejura 16 Feb (Lowe 1937) and 2 netted at Cape Coast 7 Jun (J. Karr, D. James); also seen at Bosusu, east of Mpraeso (D. James)." I have been unable to obtain any further information on the Bosusu record. Bosusu is situated at about 250 m a.s.l. at the foot of the scarp of the Mampong hills which rise steeply nearby to over 500 m. From its location and topography, Bosusu would seem to be plausible habitat for *P. baumanni*.

Côte d'Ivoire

Brunel & Thiollay (1969) assessed its status in the country as "très rare. Collecté seulement une fois Lamto et, par Lowe, à Béoumi." Thiollay (1985) later wrote that it had been "collected in Taï (Chappuis) and Beoumi (Lowe). Also observed from San Pedro (Weitkowitz) to Nimba and Lamto. Rare, primary forest." There is no mention therefore of the Lamto specimen in the later paper. Thiollay (in litt. 1998) has written that his Lamto records "were based upon 1 or 2 birds caught in mistnets" but which in retrospect he admits were "not safely identified" and of birds seen subsequently that "could have been this species". In addition, Chappuis (in litt. 1998), informs me that he has never seen or heard P. baumanni. The specimen to which Thiollay (1985) refers and initially thought by its collectors, Chappuis and Vieillard, to be P. baumanni was subsequently re-identified by Chappuis as A. gracilirostris. I have examined the specimen (in MNHN, Paris), which was collected in Côte d'Ivoire from Adiopodoumé, not Taï, and agree with the later identification. Indeed, the only specimen of P. baumanni in MNHN is one of Lowe's Béoumi skins obtained through exchange with The Natural History Museum. It is not clear whether the observations of P. baumanni from Nimba reported by Thiollay (1985) refer to the Ivorian or Liberian side of the trans-border mountain, as a number of species known to occur on Liberian Nimba are admitted to the Ivorian list by Thiollay on inference.

Of the record from San Pedro, Weitkowitz (1979) states that *P. baumanni* was "seen in the understorey of rain forest". The characteristics of the bird(s) seen were noted as an olive brown mantle, olive grey-brown belly and tail with a rust-coloured wash. No other details are given except for basic features which distinguish the species from White-throated Greenbul *Phyllastrephus albigularis* (also reported from San Pedro) and *Andropadus* spp. These differences are however of the sort gained

from comparison of skins, which the author says he has done, rather than from detailed field notes (no soft part colour data for example are provided). From the information given the identity of the bird(s) seen cannot be inferred with confidence but on distributional grounds at least (Fig. 1) it appears unlikely to have been *P. baumanni*. It seems therefore that the only substantiated record of *P. baumanni* from Côte d'Ivoire remains Lowe's from Béoumi.

Liberia

Gatter (1997), in addition to mentioning the previously published specimen records for Liberia detailed above, reports that he found *P. baumanni* to be a "rare to not uncommon resident especially in the north....not known from forest areas in southeast Liberia". He records having "mist-netted it in second growth at Wologizi and in ridge forest on Mt Balagizi, where the bird was found to be common." In montane primary and secondary forest on Mt Nimba, above 1,000-1,500 m, he reports it to be "a fairly common canopy species, occasionally mist-netted in undergrowth", but considers it not to be an undergrowth species, *contra* Keith (1992). He also found the species "in several mountain ranges of southern Nimba county as a dweller of lowland forest at higher elevations". These latter are not shown in Fig. 1 since no actual locality data are given and they are, in any case, adjacent to the mapped Nimba specimen locality. He reports the species to have "a quite large and stable population in the north of Liberia" and indeed provides an estimate of 15,000 pairs for the country. A colour photograph, labelled *P. baumanni*, is reproduced in this work.

This photograph, however, differs in a number of important features from that of *P. baumanni* reproduced in Fishpool (1999), the original of which has been compared



Fig. 1. Map of West Africa showing localities of specimens, published and unpublished records of Baumann's Greenbul, *Phyllastrephus baumanni*. Numbers correspond to localities given in Tables 1 and 2.

■ = specimen records, ● = confirmed sight records, ▼ = unconfirmed records , \Leftrightarrow = incorrect or doubtful records. Solid line = approximate position of the limits of lowland rainforest zone; broken line = approximate position of the boundary between the rainforest-secondary grassland mosaic and Sudanian woodland and hatched area = Afromontane vegetation of the Cameroon highlands (simplified from White 1983). Pale shading = land above 330 m (1,000 ft), dark shading = land above 670 m (2,000 ft). Contour data lacking for parts of southeastern Nigeria and western Cameroon.

against skins in The Natural History Museum, including those from Nimba. In particular, the pale yellowish eye and the uniform scaly grey head, contrasting with the olive-green wing, are features suggestive rather of *Phyllastrephus albigularis*. Gatter (*in litt.* 1998) has, however, confirmed his belief that his photograph does illustrate *P. baumanni*. In view of this it is hard to know what to make of Gatter's account of *P. baumanni*. Certainly, the location and altitude of Mt Balagizi, which rises to 1,100 m, and nearby Wologizi seem likely to offer suitable habitat for *P. baumanni*, while it is, in any case, known from Nimba (Table 1). Uncertainty has to remain over these records, however, in view of the doubt of the birds' identity.

Sierra Leone

Allport *et al.* (1989) have a record of *P. baumanni* from Mogbai, Gola North Forest Reserve, where two birds were seen on 14 February 1989. At *c.* 300 m altitude Mogbai is considered by Allport *et al.* (1989) as unlogged primary forest with a closed canopy and fairly open undergrowth. P.V. Hayman, whose record this is, has informed me (verbally, 1998) that he cannot now be certain of the identity of the species involved. It seems advisable therefore to treat this record as doubtful.

Field (in litt. 1993, 1998), one the few ornithologists who knows P. baumanni well in life, has provided the following information for Sierra Leone. "Seen in only three areas: I) Loma Mountains, c.5,000 ft (c.1,670 m) or a bit lower. A dry, gloomy gallery with little undergrowth though ground choked with acanthaceous weed species, not far below the open plateau. Birds in middle shrub layer with various other species, e.g. Cossypha polioptera [Grey-winged Robin-Chat]. II) Tingi Mountains c.3,600 -4,000 ft. (c.1,200 - 1,330 m) frequent sightings on various slopes of the central plateau, throughout the forest clothing the slopes, from the edge of the open plateau (once in small trees above a small gully on the plateau) down to the valley floor, both in open and thick forest. Seems widespread throughout, right down into 'proper' forest. Usually seen in undergrowth e.g. in streamside tangles, or in small thin shrubs of dark forest, close to stream, but also in the open mid-layer. Usually with other spp. e.g. Camaroptera chloronota [Olive-green Camaroptera], Sylvietta denti [Lemonbellied Crombec], Macrosphenus concolor [Grey Longbill]. III) Bendugu c. 1,350 -1,400 ft (c.450 - 470 m) one sighting with a bird party of forest species in a patch of undistinguished forest, in an area where there is no continuous forest, only little patches."

Discussion

From the information of collection localities of authenticated specimens (plus associated label data), and from the distribution of these localities shown in Fig. 1, in relation to altitude and the main vegetational boundaries of the region, simplified from White (1983), the habitat preferences of Baumann's Greenbul appear to be quite narrow and well defined. They comprise mid-altitude forest occurring between c.500 and 1,100 m, often on hill and mountain slopes, both within and a little way

beyond the limits of the lowland forest zone. At lower altitudes (down to sea level), it mostly occurs in gallery forest and thicket on the fringes of the forest zone proper, both north and, as at Cape Coast, Ghana, south of it. Baumann's Greenbul seems to be closely tied to the forest-savanna ecotone across much of its range, entering more deeply into the lowland rainforest - secondary grassland mosaic zone only in the far west. In the Togo Mountains, along the Ghana-Togo border, it also penetrates a little way into the Sudanian woodland zone but overall it is confined throughout to a relatively narrow latitudinal range.

There is no evidence to suggest that *P. baumanni* is a species of lowland rainforest. Records of where it does occur within the lowland forest zone, other than those from higher altitude, are of observations shown here to be based on misidentifications or, at most, unsubstantiated sight records. This is supported by Field who (*in litt.* 1993) states "in my experience, it is not a rainforest species" and by a complete absence of records from recent intensive studies of lowland rainforest avifaunas in various parts of Upper Guinea, for example in Côte d'Ivoire (Gartshore *et al.* 1995). The only apparent exceptions are the specimens from Ganta and Paiata in Liberia (Fig. 1). As mentioned above, however, Rand (1951) wrote of rugged, forested hills near Ganta while Gatter (*in litt.* 1998) has pointed out that there are inselbergs that reach over 600 m a.s.l. in the vicinity of Paiata and that upland elements do occur, indicated by the fact that Allen (1930) collected a Lemon Dove *Aplopelia larvata* here. I believe it is likely, therefore, that in neither case were the *P. baumanni* specimens taken in lowland forest.

Unfortunately, the published misidentifications of *P. baumanni* noted above have resulted in a number of misleading impressions about the species being given wide currency in regional and continental works. These include its reputed association with lowland rain forest. This is explicit or implied in Hall & Moreau (1970) who considered it (united with *P. hypochloris*) "...a little known bird of primary forest"; Mackworth-Praed & Grant (1973) – "A bird of fairly wide range found both in the higher trees and also in forest undergrowth...."; Serle *et al.* (1977) – "Lowland forest from Sierra Leone to Nigeria" and Keith (1992) – "Inhabits thick undergrowth in primary and secondary forest and forest edge; also gallery forest, small woods in savanna, parklands with tall trees, thick brush along streams in orchard bush country". This mistaken belief may also date back to Bannerman (1936) who, not unreasonably based on the seven localities across six countries from which *P. baumanni* was then known, wrote that "its range evidently extends in Upper Guinea through the whole of the forest country, keeping to the thick undergrowth where it is seldom observed".

It should also be noted that, due to the confusion with *Andropadus gracilirostris* (Button 1964a) and *Illadopsis fulvescens* (Johnson 1989), inaccuracies of voice and foraging height and population density respectively appear in Keith (1992). Given that there is little doubt that Button's (1964a) notes refer to *A. gracilirostris*, the idea that *P. baumanni* frequents the tops of trees may, I think, be discounted. In common with many other *Phyllastrephus* spp. it is likely that *P. baumanni* is a skulking species that forages at and near ground level. Evidence for this comes from Field's field

observations quoted above, from the fact that the Ede, Nigeria, specimen was shot "near the ground" (Serle 1950), from the species' association with thicket and scrubby habitats, and from the fact that, where it occurs, it appears to be caught readily in mist nets. If so, this makes Gatter's (1997) comment that it is a canopy species hard to interpret.

The Ebok Boje record from southeastern Nigeria represents a small but significant eastward range extension since it brings the species virtually into contact with the closely related Cameroon Olive Greenbul *Phyllastrephus poensis*. This species occurs in montane forest between 1,000 and 2,200 m in the Cameroon highlands and adjacent parts of Nigeria, including the Obudu Plateau (Keith 1992, Elgood *et al.* 1994). It is possible that the presence of *P. poensis* in this region excludes *P. baumanni* from montane forest while the absence of a similar competitor further west means that it is there able to exploit such habitat.

The overall status of Baumann's Greenbul remains difficult to assess. It is widely but thinly distributed in a relatively restricted latitudinal range which is little worked by ornithologists or visited by birders. It seems likely, however, that it will be found at more localities across its range, and may be expected to occur in parts of Guinea adjacent to known localities in Liberia and Sierra Leone as well as, possibly, in Benin and the extreme west of Cameroon. Its lack of ready diagnostic features, skulking habits, preference for habitat often difficult of access, the numerous species with which it can be and has been confused and, as a result, inadequate treatment in the literature have all conspired to obscure its true status. Given that the species clearly remains an identification challenge in the field all reported sightings need to be supported with as much detail as possible.

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