Rapid Survey of the Birds of the Atewa Range Forest Reserve, Ghana

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Chapter 10

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SUMMARY

During 16 days of field work (7 – 22 June 2006) in Atewa Range Forest Reserve, one of the two important remnants of Upland Evergreen rainforest in Ghana, 155 bird species were recorded. Of these, six are of conservation concern, amongst which three are classified as Vulnerable and three as Near Threatened. Six of the 11 species restricted to the Upper Guinea Forests Endemic Bird Area and 115 (or 64 %) of the 180 Guinea-Congo Forests biome species now known from Ghana were observed during the study. A song, heard and partly tape-recorded, was thought to be from Nimba Flycatcher *Melaenornis annamarulae*, a Vulnerable species not previously found in Ghana; this record, which constitutes a major eastward range extension, was confirmed by sightings of the species in May 2007. The site, listed in 2001 as an Important Bird Area, was found to have a remarkably rich avifauna, with relatively large mixed-species flocks being a particularly conspicuous feature. Some species, such as Green-tailed Bristlebill *Bleda eximius* and Yellow-bearded Greenbul *Criniger olivaceus*, are at the eastern limit of their known range here. Several species that are rare in Ghana and uncommon to rare in their global range also occur in the reserve.

INTRODUCTION

Birds have been proven to be useful indicators of the biological diversity of a site, because they occur in most habitats on land throughout the world and are sensitive to environmental change. Their taxonomy and global geographical distribution are relatively well known in comparison to other taxa (ICBP 1992). The conservation status of most species has been reasonably well assessed and is regularly updated (BirdLife International 2000, 2004). This permits rapid analysis of the results of an ornithological study and presentation of conservation recommendations. Birds are also among the most charismatic species, which can facilitate the acceptance of the necessity to implement protective measures by policy makers and stakeholders.

As West African forests are rapidly disappearing, the survival of the birds of the Upper Guinea forests is becoming increasingly dependent on ever fewer areas. Despite a number of field studies conducted in the region in recent years (e.g. Demey and Rainey 2004, 2005; Rainey and Asamoah 2005; Demey 2007), the avifaunas of the majority of these forests remain inadequately known.

Atewa Range Forest Reserve is, together with Tano Offin, one of only two main forest reserves in Ghana holding remnants of upland evergreen rainforest (Hall and Swaine 1976). The reserve, which has a roughly north-south alignment, covers 23,663 ha and consists of a steep-sided, mostly flat plateau at 700-800 m a.s.l. The forest has been logged in the past and numerous transects are being cut at present for mineral exploration. On lower slopes it has been severely degraded by encroaching cultivation and illegal wood cutting. The forest canopy on the plateau is of variable height and presents many gaps, with larger trees reaching up to 40-50 m emerging above a closed sub-canopy of 10-25 m height. A few small streams cross the ridge and some swampy areas occur.

The main reference on the avifauna of Atewa is a report by Dowsett-Lemaire and Dowsett (2005), presenting the results of a short survey carried out in February 2005, reviewing previously published and unpublished records from the site, and including an updated species list. Atewa was listed as an Important Bird Area (IBA) by Ntiamoa-Baidu et al. (2001).

METHODS

We carried out 16 days of field work, from 7 to 22 June 2006. We accessed the forest via the ascending track starting near the village of Sagyimase, north of Kibi, and established our camp at three consecutive sites: Atiwiredu (06°12'22"N, 00°34'39"W at 817 m), Asiakwa South (06°15'44"N, 00°33'18"W at 783 m) and Asiakwa North (06°16'16"N, 00°33'52"W at 814 m). Most of our field work was carried out in the forest on the ridge, with two visits to degraded habitat lower down, along the main track from the entrance gate to the intersection 4 km further up.

The weather was variable, with alternating overcast and sunny conditions. Mist was frequent in the morning and rain in the afternoon and at night. Although June is normally the height of the rainy season, a few entirely sunny days without any rain were experienced.

The principal method used during this study consisted of observing birds by walking slowly along tracks and the many transects that have recently been cut for mining prospection. Notes were taken on both visual observations and bird vocalizations. Some tape-recordings were made for later deposition in sound archives. Field work was carried out from dawn (usually 05:30) until 13:00–14:00, and in the afternoon from 15:00–16:00 until sunset (around 18.30). Some species were recorded opportunistically during the night and two birds were captured in mist-nets set up for bats.

For each field day a list was compiled of all the species that were recorded. Numbers of individuals or flocks were noted, as well as any evidence of breeding, such as the presence of juveniles, and basic information on the habitat in which the birds were observed. An attempt has been made to give indices of abundance based on the encounter rate. However, it should be noted that many bird species were not singing (e.g. cuckoos and owls) and several thus have remained unnoticed.

For the purposes of standardization, we have followed the nomenclature, taxonomy and sequence of Borrow and Demey (2001, 2004).

RESULTS

In total, 155 species were recorded of the c. 735 bird species known from Ghana; recorded species are listed in Appendix 7, along with the encounter rate, observed breeding evidence, threat status, endemism to the Upper Guinea forest block, membership of the Guinea-Congo Forests biome assemblage, and habitat. Six species of global conservation concern were observed during the survey (Table 10.1).

In addition, a number of scarce or poorly known species were observed, including Congo Serpent Eagle *Dryotriorchis spectabilis*, Brown Nightjar *Veles binotatus*, African Dwarf Kingfisher *Ceyx lecontei* and Blue-headed Bee-eater *Merops muelleri*.

Six of the 11 restricted-range species, i.e. species which have a global breeding range of less than 50,000 km^2, that make up the Upper Guinea Forests Endemic Bird Area, and 115 of the 180 Guinea-Congo forests biome species now recorded in Ghana (Fishpool and Evans 2001, Stattersfield et al. 1998) were recorded during the survey.

Notes on specific species

West African status from Borrow and Demey (2001). Ghanaian status from Grimes (1987) and Ntiamoa-Baidu et al. (2001).

Species of conservation concern

Bycanistes cylindricus Brown-cheeked Hornbill (NT)
This species was recorded only three times: a pair was seen flying over and calling individuals were heard on two occasions. This Upper Guinea endemic is uncommon to rare in south-western Ghana.

Bleda eximius Green-tailed Bristlebill (VU)
A single was singing at Atiwiredu and another was observed

Table 10.1. Bird species of global conservation concern recorded during the RAP survey of Atewa Range Forest Reserve

Species	Common Name	Threat Status
Bycanistes cylindricus	Brown-cheeked Hornbill	NT
Bleda eximius	Green-tailed Bristlebill	VU
Criniger olivaceus	Yellow-bearded Greenbul	VU
Melaenornis annamarulae	Nimba Flycatcher	VU
Illadopsis rufescens	Rufous-winged Illadopsis	NT
Lamprotornis cupreocauda	Copper-tailed Glossy Starling	NT

Threat status (BirdLife International 2000, 2004):
VU = Vulnerable: species facing a high risk of extinction in the medium-term future
NT = Near Threatened: species coming very close to qualifying as Vulnerable

in a mixed-species flock at Asiakwa South. This Upper Guinea endemic is rare in Ghana and reaches the eastern limit of its distribution in Atewa.

Criniger olivaceus Yellow-bearded Greenbul (VU)
This species was observed in mixed-species flocks at three different locations along the main track (twice a pair and once a calling individual). This Upper Guinea endemic is generally rare in Ghana and, like the previous species, it reaches the eastern limit of its distribution in Atewa.

Melaenornis annamarulae Nimba Flycatcher (VU)
A song heard at 13:00, coming from the canopy along the main track (06°13'52"N, 00°33'17"W at c. 620 m), was thought to be from this species. A few final phrases were tape-recorded before it started to rain and the singing stopped. In an attempt to confirm the identification by hearing the bird again and seeing it, the location was visited on the three following days, with long periods of time spent at or near the spot, but the bird was not observed again. The tape-recorded part of the song was compared to published (Chappuis 2000) and unpublished recordings of this species and was found to be very similar. The species was subsequently searched for by other observers visiting Atewa and the original identification could finally be confirmed on 27 May 2007, when excellent views of two individuals were obtained (A. Hester in litt.). This remarkable find constitutes a new species for Ghana and the eastermost record to date, extending the known range by c. 500 km, the previous easternmost locality being Mopri Forest Reserve (05°50'N, 04°55'W), in Côte d'Ivoire (Fishpool and Evans 2001). Apart from the latter country, this rare to scarce and local forest resident was previously known only from Guinea, Sierra Leone and Liberia.

Illadopsis rufescens Rufous-winged Illadopsis (NT)
Remarkably common, with up to four singing individuals heard daily. A generally uncommon forest resident, endemic to Upper Guinea. As it is often confused with its congener, Puvel's Illadopsis *I. puveli*, its precise status and distribution in Ghana is inadequately known.

Lamprotornis cupreocauda Copper-tailed Glossy Starling (NT)
Faily common, with up to six individuals recorded on the majority of days. A fairly common to locally common forest resident, endemic to Upper Guinea and reaching the eastern limit of its distribution at or near Atewa.

Other noteworthy records

Dryotriorchis spectabilis Congo Serpent Eagle
Up to two individuals heard calling at two different sites on three separate days. This forest resident, which is considered scarce to locally common, has been generally under-recorded in Ghana.

Poicephalus gulielmi Red-fronted Parrot
A group of eight visiting a fruiting tree on 15 June, and a single flying over on the same day are our only records. This species is generally scarce in West Africa.

Veles binotatus Brown Nightjar
An entirely dark brown nightjar seen at 18:45 above the main track deep inside the forest was identified as this species. It flew in the headlights of the car for c. 100 m before banking, thereby clearly showing its entirely dark upperparts without any white markings, and disappearing into the forest. There is only one previous record for Atewa, from February 2005 (Dowsett-Lemaire and Dowsett 2005).

Ceyx lecontei African Dwarf Kingfisher
One seen in forest understorey, while another (a juvenile?) was heard uttering high-pitched calls nearby. This species, which is rare to uncommon in West Africa, had not been recorded previously at Atewa, but its presence was expected (Dowsett-Lemaire and Dowsett 2005).

Merops muelleri Blue-headed Bee-eater
This generally scarce to rare forest resident, which reaches the easternmost limits of its Upper Guinea range in Atewa, was encountered remarkably frequently, either singly or in pairs. A trio was observed once. The species is known from only two other IBAs in Ghana (Ntiamoa-Baidu et al. 2001) and Atewa may well hold the largest population in the country.

Sheppardia cyornithopsis Lowland Akalat
Singles were seen clearly at three locations. This species has only recently been confirmed from Atewa, based on a specimen collected in 1995 (Roy et al. 2001). A female with an active brood patch was mist-netted in February 2005 (Dowsett-Lemaire and Dowsett 2005). The reserve is the easternmost locality for the species in Upper Guinea and the only site in Ghana where it is known to occur.

Apalis sharpii Sharpe's Apalis
This Upper Guinea Forests Biome endemic was found to be common and vocal in the canopy and sub-canopy, with daily observations of up to ten individuals.

Parus funereus Dusky Tit
A small group consisting of at least three adults and another of three adults and an independent juvenile were observed in mixed-species flocks.

Malaconotus cruentus Fiery-breasted Bush-shrike
Two singles and a pair were observed at three different locations. This species is generally rare and local in West Africa and Atewa is the only IBA in Ghana where it is known to occur.

Parmoptila rubrifrons Red-fronted Antpecker
An independent juvenile and a pair with two to three juveniles were seen at two locations. This generally scarce Upper Guinea endemic is rare in Ghana.

Evidence of breeding
Alethe diademata White-tailed (Fire-crested) Alethe
A juvenile photographed by P. Naskrecki on 17 June.

Macrosphenus concolor Grey Longbill
Parents with a begging juvenile seen on 20 June.

Eremomela badiceps Rufous-crowned Eremomela
A flock of four adults with an independent juvenile seen on 14 June.

Muscicapa epulata Little Grey Flycatcher
A pair with a begging juvenile seen on 7 June.

Dyaphorophyia castanea Chestnut Wattle-eye
Small family groups consisting of parent birds with a juvenile seen on seven occasions.

Deleornis fraseri Fraser's Sunbird
Begging juveniles seen on a few occasions.

Ploceus tricolor Yellow-mantled Weaver
Independent juveniles noted on a few occasions.

Ploceus albinucha Maxwell's Black Weaver
Independent juveniles accompanying adults observed on a few occasions.

Ploceus preussi Preuss's Weaver
A family group consisting of a pair with an independent juvenile observed on 10 June.

DISCUSSION

The Atewa Range Forest Reserve, which is listed as an IBA (Ntiamoa-Baidu et al. (2001), was found to have a remarkably rich avifauna, comprising a substantial component of forest-restricted species. It is therefore of considerable importance for the conservation of these birds. The total of 155 species recorded during this study is relatively high, although a higher number could have been found if the survey had been conducted at a different season, for example in February-March, when more species are vocally active and Palearctic migrants are still present. Cuckoos, owls and honeyguides were mainly silent, which explains the absence of several of these species from our list. Black Cuckoo *Cuculus clamosus* was heard (very briefly) once and African Emerald Cuckoo *Chrysococcyx cupreus* only five times, for short periods. An African Wood Owl *Strix woodfordi* was calling briefly near camp at Asiakwa North on two consecutive evenings. Of the three honeyguide species observed, only Thick-billed *Indicator (minor) conirostris* was heard to sing, although briefly (two individuals).

Hornbills were surprisingly scarce, with only Pied *Tockus fasciatus* and White-crested *Tropicranus albocristatus* being regularly encountered, albeit in low numbers (with a maximum of five in a day for the former, and three for the latter). We recorded Brown-cheeked Hornbill *Bycanistes cylindricus* on three occasions only, with just a single pair seen, whereas it was seen daily in February 2005, with up to 12 individuals in a day (Dowsett-Lemaire and Dowsett 2005). Several hornbill species are known to wander widely in search of fruiting trees, which may at least in part explain their scarcity during our survey. Great Blue Turaco *Corythaeola cristata*, normally a conspicuous feature of good forest, was also scarce, being only observed in low numbers (one to three birds) on four days.

Mixed-species flocks were particularly numerous, occurring on average every 500 m and comprising a relatively high number of individuals. Typical members of these flocks included Icterine Greenbul *Phyllastrephus icterinus* (usually the most common species, with up to 15 individuals in a single flock), Red-tailed Bristlebill *Bleda syndactylus*, Grey-headed Bristlebill *B. canicapillus*, Western Bearded Greenbul *Criniger barbatus*, Red-tailed Greenbul *C. calurus*, Black-capped Apalis *Apalis nigriceps*, Green Hylia *Hylia prasina*, Red-bellied Paradise Flycatcher *Terpsiphone rufiventer*, Chestnut Wattle-eye *Dyaphorophyia castanea*, Green Sunbird *Anthreptes rectirostris*, Fraser's Sunbird *Deleornis fraseri* (very common), Blue-throated Brown Sunbird *Cyanomitra cyanolaema*, Many-coloured Bush-shrike *Malaconotus multicolor* (typically one calling individual per flock), Black-headed Oriole *Oriolus brachyrhynchus*, Shining Drongo *Dicrurus atripennis*, and one to three *Malimbus* species (Crested *M. malimbicus*, Blue-billed *M. nitens* and/or Red-headed Malimbe *M. rubricollis*). Other species observed in these flocks include Buff-spotted Woodpecker *Campethera nivosa*, Brown-eared Woodpecker *C. caroli*, Purple-throated Cuckoo-shrike *Campephaga quiscalina* (remarkably common), Blue Cuckoo-shrike *Coracina azurea* (uncommon), Finsch's Flycatcher Thrush *Stizorhina finschi*, Sharpe's Apalis *Apalis sharpii*, Grey Longbill *Macrosphenus concolor*, Rufous-crowned Eremomela *Eremomela badiceps*, Violet-backed Hyliota *Hyliota violacea*, Fraser's Forest Flycatcher *Fraseria ocreata*, Chestnut-capped Flycatcher *Erythrocercus mccallii*, Dusky Crested Flycatcher *Elminia nigromitrata* (remarkably common), Shrike Flycatcher *Megabyas flammulatus*, Red-cheeked Wattle-eye *Dyaphorophyia blissetti*, Bioko Batis *Batis poensis*, Dusky Tit *Parus funereus*, Tit-hylia *Pholidornis rushiae*, Sabine's Puffback *Dryoscopus sabini*, Yellow-mantled Weaver *Ploceus tricolor*, Maxwell's Black Weaver *P. albinucha* (remarkably common), Preuss's Weaver *P. preussi*, Grey-headed Negrofinch *Nigrita canicapillus*, Chestnut-breasted Negrofinch *N. bicolor* and Red-fronted Antpecker *Parmoptila rubrifrons*.

Biogeographically, Atewa appears to be at the eastern limit of the range of some Upper Guinea endemics, such as Green-tailed Bristlebill *Bleda eximius*, Yellow-bearded

Greenbul *Criniger olivaceus* and Red-fronted Antpecker *Parmoptila rubrifrons*. To these, Nimba Flycatcher *Melaenornis annamarulae* can now be added. As one of the two main sites of upland evergreen rainforest remaining in Ghana, it constitutes a particularly favorable habitat for a species like Lowland Akalat *Sheppardia cyornithopsis*, for which Atewa is the only known site in the country. Because of the specific habitat characteristics of the site, both bird species typically occurring in closed-canopy as well as species frequenting open-canopy forest are found here. Several generally uncommon or scarce species are remarkably common here, such as Blue-headed Bee-eater *Merops muelleri* and Maxwell's Black Weaver *Ploceus albinucha*, the nominate subspecies of which, *P. a. albinucha*, reaches the eastern limits of its range in Atewa. The generally rare and local Fiery-breasted Bush-shrike *Malaconotus cruentus* also occurs.

Other species occurring in the reserve that are rare in Ghana and generally uncommon in their global range include Bates's Swift *Apus batesi*, Little Grey Flycatcher *Muscicapa epulata*, Dusky Tit *Parus funereus*, Johanna's Sunbird *Cinnyris johannae*, Preuss's Weaver *Ploceus preussi* and Red-fronted Antpecker *Parmoptila rubrifrons*.

CONSERVATION RECOMMENDATIONS

Considering the very high conservation value of Atewa Range Forest Reserve, the following recommendations are made:

1. The biological importance of the reserve in Ghana, and more generally in the Upper Guinea region, is such that it should, ideally, be fully and entirely protected.

2. If, contrary to the recommendations contained within this report, future development of the area should occur, a representative and continuous part of the reserve containing all the bird species restricted to the Guinea-Congo Forests biome occurring at Atewa, should be set aside and receive full protection, in order to preserve a substantial part of its biodiversity and, in the long term, possibly enable regeneration of the forest on the area that is impacted by such development. Furthermore, surveys should be conducted in all areas which will be impacted, prior to any additional impact occurring, to document current species richness and population sizes of all bird species of global conservation concern.

3. Further surveys should be carried out to determine the population size and habitat requirements of the Nimba Flycatcher, an Upper Guinea endemic of conservation concern whose song was heard for the first time in Ghana during this RAP and for which Atewa constitutes the only known site in the country.

4. Monitoring programs should be put in place to assess the impact of any development activities and subsequent regeneration operations on biodiversity and in particular on the bird species of conservation concern and those restricted to the Guinea-Congo Forests biome. Local villagers, especially hunters, who know the forest and its wildlife best, should be employed to participate in these programs.

5. Hunting should be curtailed. Although it currently mainly targets mammals, certain large bird species, such as Crested Guineafowl, Great Blue Turaco and large hornbills, also fall victim to these illegal practices, which could explain their relative rarity.

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