

The birds of Tchimpounga Nature Reserve, Congo-Brazzaville II: Results of a survey in January-February 2014, including a full reserve checklist

Stuart P. Sharp^a and Malcolm Wilson^b

^a Lancaster Environment Centre, Lancaster University, Lancaster, LA1 4YQ, UK.

E-mail: s.sharp2@lancaster.ac.uk

^b African Affinity, 19 Esmerelda Crescent, Robindale 2194, Johannesburg, South Africa.

E-mail: shoebill1961@gmail.com

Summary. The lower Kouilou basin in south-west Congo-Brazzaville is an Important Bird Area but remains poorly known. Within this area lies Tchimpounga Nature Reserve, a site rarely visited by ornithologists until 2012. A short bird survey of Tchimpounga was carried out in January and February 2014 to further document the reserve's avifauna and to provide baseline data for future research. Using a combination of observations, mist netting and point counts, a total of 209 species was recorded. Of these, 30 were new for the reserve and the full list now stands at 277 species, although more than half of the reserve is yet to be surveyed. Further work is needed to fully evaluate the diversity of Tchimpounga and to assess the impact of local threats to the reserve's habitat.

The lower Kouilou basin, Congo-Brazzaville, is recognised as an Important Bird Area and home to several Globally Threatened and poorly known species (Dowsett-Lemaire 2001). However, the birds of this region have received remarkably little attention (Rainey *et al.* 2009; Wilson & Sharp *in review*). A recently published guide to the avifauna of the Kouilou (Gonzalez-Dunia *et al.* 2014) provided an important step towards addressing this, but few ornithologists visit the area and there is great potential for important new discoveries (e.g. Delhaye-Prat & Ikonga 2015).

In 2012 and 2013, a series of brief surveys at Tchimpounga Nature Reserve (TNR), in the heart of the lower Kouilou basin, recorded 247 species including breeding colonies of African River Martin *Pseudochelidon eurystomina* and Rosy Bee-eater *Merops malimbicus*, and roosts of Grey Parrot *Psittacus erithacus* (Wilson & Sharp *in review*). Here, we report the results of a more comprehensive survey of TNR in January and February 2014, the first to be carried out at this time of year, and provide a full species list for the reserve. The main aims of this visit were: (1) to survey the major habitats of the reserve using a combination of observations and mist netting in order to compile a comprehensive species checklist; (2) to conduct point counts in each of the main habitats in order to assess the status of the species recorded and to provide baseline data for future surveys; (3) to make repeat counts of the number of Grey Parrots (listed as Endangered, BirdLife International 2020) at a roost located on a previous visit; and (4) to search for the Loango Weaver *Ploceus subpersonatus* (listed as

Vulnerable, BirdLife International 2020), a species which has been recorded in the lower Kouilou basin but not at TNR (Bulens & Dowsett 2001).

Methods

The survey took place from 21 January to 2 February inclusive, although much of 29 and 30 January were spent visiting other sites. TNR is a 523 km² area of forest-savanna mosaic located approximately 40 km north of Pointe-Noire (Wilson & Sharp *in review*). The taxonomy and nomenclature used throughout this report follow the IOC World Bird List (Gill *et al.* 2020).

Observations and Ringing

Observational surveys were combined with daily mist netting sessions at a variety of sites throughout the reserve on an opportunistic basis. Mist netting was carried out for two to three hours from dawn and sometimes for another two hours prior to dusk; all birds captured were fitted with SAFRING rings. Several areas of forest-savanna mosaic were also visited at night to survey nocturnal species.

At least three days were spent in each of three major areas at TNR: forest-savanna mosaic around the chimpanzee sanctuary ('Sanctuary') and Mpili ('Mpili'), and forested islands in the Kouilou river ('Islands'). The forests at the Sanctuary are generally around 20m in height and dominated by species such as *Symphonia globulifera* and *Xylopia aethiopica*; the savannas are dominated by *Annona senegalensis*, *Harungana madagascariensis* and *Hyparhenia diplandra*. At Mpili, the forests reach over 30m in height and dominant species include *Pentaclethra macrophylla*, *Pycnanthus angolensis*, *Musanga cecropioides* and *Symphonia globulifera*; the savanna at this site contains similar species to the Sanctuary but also significant areas of *Loudetia simplex* mixed with *Chromolaena odorata* and *Hymenocardia ulmoides*. The forests on the Islands are similar in composition to those at Mpili.

Other habitats visited included mangrove and papyrus swamps, dry forests in erosion gullies and *Eucalyptus* plantations that were established for commercial use. From the southern end of the reserve, it was also possible to survey a strip of sandy beach near to Bas-Kouilou. Although the beach itself is not part of TNR, the species seen there from the reserve have been included on the reserve list. Areas both on and adjacent to the reserve containing habitat suitable for Loango Weaver were surveyed opportunistically according to the availability of transport. A visit to Pointe Indienne, where this species has been recorded in the past (Bulens & Dowsett 2001), was made on 2 February.

Point counts

Point counts are one of the most commonly used methods in avian population studies, especially in forest habitats (Bibby *et al.* 1992, Thompson 2002). While there are a number of well-known issues with this approach, particularly the variation in detection probability between samples (Thompson 2002), our objective was to generate simple indices of status

and relative abundance for the reserve's birds. Point counts were considered the most suitable method for achieving this, thereby providing baseline data for future surveys.

Point counts were divided between each of the three major areas on an opportunistic basis. At the Sanctuary, eight were carried out in forest-savanna mosaic; five in scrub around the reserve's base; and three in forested erosion gullies. Four counts were conducted along forest edge at Mpili and five were conducted on the Islands. Count sites within an area were selected at random using a GPS unit provided that access was possible. No site was sampled more than once and sites within an area were at least 150 m apart. All counts took place within an hour of sunrise or sunset and lasted for 10 minutes. All individuals seen or heard during this time (at any distance) were identified and counted. Given the uneven sampling effort, no comparisons were made between areas and all counts were pooled to give reserve-level indices of species status (number of point counts [out of 25] during which the species was recorded) and relative abundance (the total number of individuals recorded across all 25 counts and the mean number recorded per count where present).

Grey Parrot roost

A Grey Parrot roost of 75 individuals was found at the Islands by MW in September 2012 and seen again in October 2013. This species uses traditional roost sites that offer the potential for regular surveys to monitor changes in population size (Dändliker 1992). The TNR roost site and surrounding areas were visited on the evenings of 26-28 January to compare numbers across nights and with the counts made in 2012.

Results and Discussion

Observations

A total of 209 species were recorded during the survey, including Brown Snake Eagle *Circaetus cinereus* and Grey-headed Gull *Chroicocephalus cirrocephalus*; to our knowledge, these are the first and third records for Congo-Brazzaville, respectively. 30 of the species recorded were new for TNR, bringing the total list for the reserve to 277 species. These additions included four Palearctic migrant species, providing further evidence that this may be an important wintering or stopover site for European breeders (Wilson & Sharp *in review*): Great Reed Warbler *Acrocephalus arundinaceus* (at least 10 individuals recorded most days in suitable habitat), Common Whitethroat *Curruca communis* (1 trapped and ringed on 23 January), Wood Sandpiper *Tringa glareola* (1 on 1 February) and Great Snipe *Gallinago media* (1 on 2 February). Common Whitethroat has rarely been recorded in Congo-Brazzaville (Borrow & Demey 2010), and Great Snipe (listed as Near Threatened, BirdLife International 2020) may be under-recorded due to the difficulties of observing this species in the field.

Other notable additions included Black Bee-eater *Merops gularis*, Black-collared Bulbul *Neolestes torquatus*, and African Crake *Crecopsis egregia*. Small numbers of the latter were flushed most days from a variety of sites around the reserve, suggesting that a large number may have been present. On 25 January, 13 individuals were flushed on a 5 km drive through

tall grassland, including nine in the first kilometre. This species is a partial migrant and the seasonality of its movements is complex and poorly understood (Taylor & van Perlo 1998). Its apparent absence from TNR on previous visits at other times of the year may be related to regional patterns of rainfall and grass growth. No vocalisations were heard at all during the survey and birds did not respond to playback, suggesting that this is perhaps a non-breeding population; seasonal non-breeding populations have been recorded in Gabon between October and March (Brosset & Erard 1986).

Avian diversity was extremely low in the *Eucalyptus* plantations around the reserve with just 37 species recorded when surveying this habitat (13% of the reserve list), many of them only seen flying over (e.g. hirundines and swifts). Only one species was recorded here but nowhere else: Spotted Eagle-Owl *Bubo africanus*. While these numbers do not take into account the greater effort spent surveying other habitats, *Eucalyptus* plantations were visited on most days of the survey and it is clear that further plantation of this non-native species would pose a serious threat to diversity in the region (Dowsett-Lemaire 2001), just as it does elsewhere (e.g. Marsden *et al.* 2001).

Ringling

A total of 57 species were trapped and ringed during the survey, several of which were not seen or heard during observational work. These included Fire-crested Alethe *Alethe castanea*, Black-and-white Shrike-Flycatcher *Bias musicus* and Black-faced Canary *Crithagra capistrata*. Furthermore, the most commonly trapped species were African Pygmy Kingfisher *Ispidina picta* (17 individuals) and Garden Warbler *Sylvia borin* (15 individuals), both seen infrequently in the field and recorded only once on point counts. This illustrates the need for combining different survey techniques when assessing diversity, especially in forest habitats (Bibby *et al.* 1992).

The third most commonly trapped species, and one caught at all of the ringling sites visited, was Yellow-lored Bristlebill *Bleda notatus* (10 individuals). The distribution of this species and the closely related Yellow-eyed Bristlebill *B. ugandae* (formerly considered a subspecies *B. n. ugandae*) in Congo-Brazzaville is still unclear (Rainey *et al.* 2009), but all individuals caught at TNR were *notatus*. Several of these were in breeding condition, and two birds were re-trapped at the exact site where they had been ringed in 2013.

Point counts

123 species were recorded during point counts (mean \pm SD = 22.6 \pm 5.6 per count), representing 59% of all species recorded during the survey and 44% of the reserve list. These are relatively high proportions, especially given that no counts were carried out at the coast. While sample sizes were small and point counts are prone to various sources of bias (Bibby *et al.* 1992), the data nevertheless provide a useful index of the status of the main diurnal species found at TNR at this time of year and are a useful baseline for future surveys. Of the 10 most abundant species, six were also among the 10 most widespread: Yellow-billed Turaco *Tauraco macrorhynchus*, Congo Pied Hornbill *Lophoceros fasciatus*, Little Greenbul *Eurillas virens*, Banded Martin *Riparia cincta*, Barn Swallow *Hirundo rustica* and Village Weaver *Ploceus cucullatus*. The remaining four were flocking species such as Little

Swift *Apus affinis* and various seedeaters; widespread species occurring at lower densities included Red-eyed Dove *Streptopelia semitorquata*, Senegal Coucal *Centropus senegalensis*, Common Bulbul *Pycnonotus barbatus* and Copper Sunbird *Cinnyris cupreus*.

Loango Weaver

No sightings of Loango Weaver were made during the survey despite extensive searches of apparently suitable habitat both in TNR and nearby patches of coastal scrub and swamp, including at Pointe Indienne. However, this species is thought to occur at low densities throughout its range and may be easy to overlook (BirdLife International 2000, Craig 2010). Future searches at TNR may be possible by training reserve staff in identification and survey skills.

Grey Parrot roost

Small numbers of Grey Parrot were seen most days at a variety of locations around TNR. However, no birds were recorded during three visits to the roost site and surrounding areas. This species is highly vocal when flying to roost and easily detected even at distance, so it is extremely unlikely that any birds were missed. The timing of the breeding season in central Africa is not clear (Juniper & Parr 1998), and it is possible that this survey coincided with the nesting period when birds may not roost communally. However, during a short visit on 29 January to a site in Conkouati-Douli National Park, c.80 km to the north-west of TNR, several large groups of Grey Parrots totalling at least 100 individuals were seen passing overhead at sunset. It is therefore unclear why the roost at TNR was inactive.

Conclusions

Tchimpounga Nature Reserve is a highly diverse site in the lower Kouilou basin with breeding populations of several poorly known species and non-breeding populations of declining Afro-Palaearctic migrants (Wilson & Sharp *in review*). It is also home to a range of species often targeted by birdwatchers, including Bat Hawk *Macheiramphus alcinus*, African Finfoot *Podica senegalensis* and Black Bee-eater, and the area therefore offers considerable potential for the development of local ecotourism. A large proportion of the reserve (>50%) is currently difficult to access and has yet to be surveyed, so further discoveries seem likely.

In recent years, the expansion of local *Eucalyptus* plantations has stopped and this no longer seems to be a significant threat to the reserve's habitat. However, a number of other issues remain, including regular fire outbreaks and prospecting work by international mining and oil companies. We hope that this report will stimulate further research in the region to assess the impact of these threats on its remarkable biodiversity.

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