

**Appendix 12 Study of Avifauna  
Environmental and Social Impact Assessment  
Yaoure Gold Project, Côte d'Ivoire**



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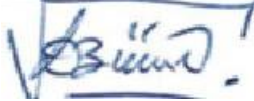


**Amara Mining Côte d'Ivoire SARL**

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## EXECUTIVE SUMMARY

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The analysis of avifauna conducted within the Yaoure study area is part of an environmental and social impact assessment (ESIA) required for the implementation of Amara Mining plc's gold mining project, situated in central Côte d'Ivoire. The main aim of this study is to establish baseline levels for avifauna and to update the list of birds according to their status (e.g. IUCN, CITES, endemism, migratory). It is also aimed at identifying, then evaluating, the potential impacts linked to this project, while proposing adequate mitigation measures in order to reduce the potential negative impacts for the sustainable management of wildlife.

The field survey took place over fourteen days, from 16 to 29 January 2015. Four methods were used for the data collection: 1) slow reconnaissance walks through different habitat types, with visual and audio observations including call-playback techniques; 2) observations from fixed points; 3) capture in mist nets and 4) ethnozoological surveys. This permitted us to identify 5,333 individual birds from 172 species belonging to 49 families. Four of these species are included on the list of species whose protection is of global interest, and an additional 24 are listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Nine were recognised as species endemic to West Africa and four others were identified as species with restricted distribution. A relatively significant proportion of Côte d'Ivoire's forest species was encountered, as 52 of the 185 species associated with the Guineo-Congolian Forest biome were found in this area. Also noted was the presence of 7 of the 39 species of bird reported in Côte d'Ivoire which are confined to the Sudano-Guinean Savannah biome. These results reflect the geographical situation of the project, being situated in a transition zone between forest and savannah.

The significant number of bird species and their abundance, especially in terms of individuals, seems very interesting given the many man-made disturbances encountered within the Yaoure mining zone. This makes this site a place of interest for bird conservation.

The principal impacts linked to the proposed mining operation at the site were identified as: the loss and fragmentation of habitats; increased noise and dust, and potential water pollution. These impacts could disturb the ecology of bird species in the area and, in certain cases, lead to their death. Measures to mitigate the negative impacts of this project have been proposed in order to contain or to reduce to a minimum the anticipated negative effects.

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**LIST OF ABBREVIATIONS AND ACRONYMS**

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- BS : Biogeographical status  
 CITES : Convention on International Trade in Endangered Species of Wild Fauna and Flora  
 CNP : Comoé National Park  
 CS : Conservation status  
 ESIA : Environmental and Social Impact Assessment  
 GC : Confined to the Guinean-Congolian Forest Biome  
 IBA : Important Bird Area  
 IEC-CB: Information, Education, Communication and Changes in Behaviour  
 ISH : Shannon's diversity index  
 IUCN : International Union for the Conservation of Nature  
 LC : Least concern  
 m : Metre  
 M : Intra-African migrator  
 MNP : Marahoué National Park  
 NF : Number of families  
 NI : Number of individual birds  
 NS : Number of species  
 NT : Near threatened  
 P : Palearctic migrator  
 R : Resident  
 R / M : Resident and/or intra-African migrator  
 R / P : Resident and/or palearctic migrator  
 RD : Endemic with restricted distribution: area of distribution less than 50,000 Km<sup>2</sup>  
 SG : Confined to the Sudanian-Guinean Savannah biome  
 VU : Vulnerable  
 WA : Endemic to West Africa

## 1.0 INTRODUCTION

The Earth Summit held in June 1992 in Rio de Janeiro, which brought together the vast majority of the countries on our planet, helped to alert the global public to the risks of ecological degradation and to allow the adoption of certain commitments, including the Rio Declaration on Environment and Development, Agenda 21 and a genuine employment programme aimed at reconciling development with the environment (Anonymous, 2004). Since this date, biodiversity has become a major concern, even an international issue.

In Côte d'Ivoire, human activities, such as mining, urbanisation and deforestation, have a considerable impact on natural resources and threaten the notion of sustainable development, in which biodiversity plays an important role. Mining in Côte d'Ivoire has experienced a boom since the eighties (80), but at that time this activity was mainly conducted by artisanal miners. These days, mining operations are characterised by the coexistence of large-scale operations by big companies, which constitute a significant source of revenue for the state, and small-scale operations. These activities have consequently become a severe threat to the equilibrium of biodiversity. Côte d'Ivoire has thus ratified the Convention on Biological Diversity and has included in its development program the implementation of an Environmental and Social Impact Assessment (ESIA) prior to the implementation of any project likely to impact the environment, such as the Yaoure mining project.

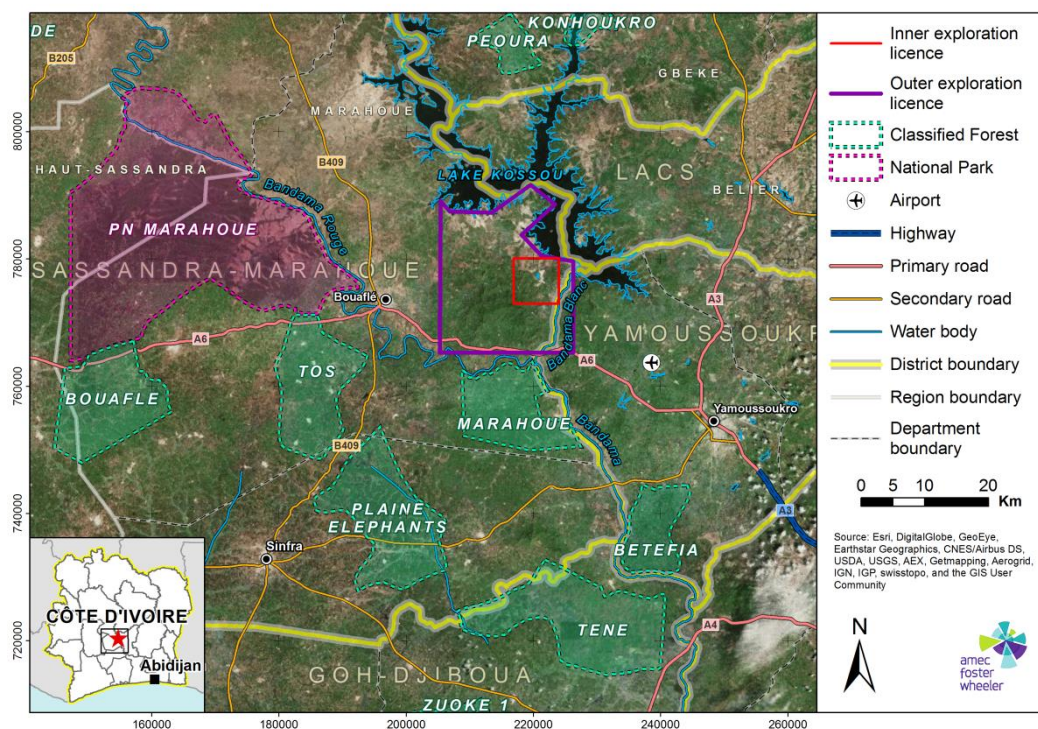
Wildlife, and more specifically birds, occupy an important position at the heart of this biodiversity, since they contribute to the maintenance of the ecosystem through seed dispersal and pollination. In this way, because of their visibility, the spread and diversity of their habitats, as well as their ecological role, birds are important indicators of the health of the ecosystem – it has been proven that birds are good indicators of the biological diversity of a site (Stattersfield et al., 1998). They are also the best-known group of vertebrates (Alonso et al., 2005). Their taxonomy and their worldwide geographical distribution are relatively well-documented in comparison with other taxa (ICBP, 1992), which facilitates their identification and permits the rapid analysis of the results of ornithological studies. They are also some of the most charismatic species (Alonso, et al., 2005), which aids the presentation of recommendations to policy-makers and all those involved in their conservation. Since the conservation status of the majority of species has been fairly well-assessed (bird life International, 2000), the results and conclusions of a survey can be assessed and implemented relatively easily.

Within the basic biodiversity data collection framework of a study of the environmental and social impacts of Amara Mining plc's Yaoure mining project in the Bouaflé area, a survey of avifauna was required. This survey was completed by Dr. Ahon, an ornithologist from Jean Lorougnon Guédé University in Côte d'Ivoire.

## 1.1 Project Area

The Yaoure mining site is situated in the department of Bouaflé, in the vicinity of Lake Kossou. The study area identified for surveys, including the area of influence, extends over a surface of approximately 50km<sup>2</sup>, and corresponds with the limits of the “Inner Exploration Licence” (Figure 1.1). This area is located between 6°59' and 7°3' north and 5°30' and 5°34' west.

**Figure 1.1: Location of the Project Area**



According to Fabio et al. (2002), the Bandama River is the principal hydrographic network which irrigates the lands around Lake Kossou. The climate is transitional and is characterised by two dry seasons (August-September and December-March) and two rainy seasons (April-July and October-November). The average annual rainfall fluctuates between 800mm and 1200mm. The highest and lowest monthly rainfall levels are 160.42mm and 12.29mm respectively, recorded in the months of July and January. The average monthly temperature is 25.5°C, with minimum and maximum readings varying between 20.4°C and 37.5°C. Relative humidity varies between 63.55% and 80%, with an average of 74%. The lowest levels are recorded between January and February, and sometimes in March (Yao-Kouame et al., 2008).

The relief of the Lake Kossou region consists of small hills alternating with low-lying plains, undeveloped and not conducive to development. The soil is gritty or consists of



clayey sands, which together rest on granite which, under the influence of erosion and bad weather, appears as outcrops. The soil layer is quite deep, especially on the hillsides and plains (Fabio et al., 2002).

The geological formations of the Yaoure region relate specifically to the Precambrian, Paleoproterozoic or Birimian, widespread in West Africa (e.g. Ghana, Burkina Faso). The various facies encountered form the Birimian Series of Yaoure, characterised by the presence of rocks of volcanic or detritic origin, a slight manifestation of metamorphism in the epimetamorphic zone and isoclinic folding along N-S and NE-SW axes (Yao-Kouame et al., 2008).

The vegetation varies from south to north, with sparse forest in the former and wooded savannah in the latter. Fallow lands cover an important surface in this area. Nonetheless, the presence of denser gallery forest is noted on the banks of the White Bandama, isolated areas of forest in the mountains and on hills on which grow plants such as Caesalpiniaceæ, Convolvulaceæ, Apocynaceæ, Poaceæ and Asteraceæ, characterised by dense undergrowth and shaped by the presence of thorny plants (Yao-Kouame et al., 2008).

### 1.1.1 Regional and International Importance

The study area does not have a special status. On the other hand, it is close to the Marahoué National Park (MNP) and two other protected forests: Marahoué and Tos Classified Forests.

The MNP was identified as one of 14 IBAs (Important Bird Areas) confirmed for Côte d'Ivoire, internationally recognised areas as defined by Fishpool and Evans (2001). The four criteria used in their identification are, according to Fishpool and Evans (2001):

- A1: Presence at the site of a species recognised internationally as being threatened, i.e. appearing on the IUCN's Red List (vulnerability, based on the presence of populations of species with a high probability of short or medium-term extinction in the near future);
- A2: Presence of a species with reduced or limited distribution or a species endemic to one site or defined region;
- A3: Presence of a species limited to a particular biome or one of its subdivisions;
- A4: Is an area of concentration of birds representing at least 1% of the national, continental or global population, be it used for nesting, migration or overwintering.

The study area contains both biomes encountered in Côte d'Ivoire: the Guinean-Congolian Forest and the Sudanian-Guinean Savannah. The Yaoure mining area contains similar habitats as the MNP, which makes this area particularly interesting since it straddles two ecological zones, forest and savannah, and protects a threatened forest ecosystem (Lauginie, 2007).

## 1.2 Aims of the Study

The principal aim of this study is to establish baseline levels for the avifauna and to update the list of species present in the area. In specific objectives of this study are to:

- Estimate the diversity of birds and determine their status in the study's area of influence;
- Identify possible nesting sites and migration routes;
- Determine the conservation status of various species;
- Identify rare or endangered species;
- Evaluate the impact of mining operations on the avifauna.

## 1.3 Literature Review

The fauna in the study area appears very rich and diverse (Tano et al., 2007). Concerning the birds at the survey site, the latest survey, completed in 2007, counted 132 species of bird from 45 families, of which four are endemic to West Africa: the Senegal parrot *Poicephalus senegalus*; the violet touraco *Musophaga violacea*; Sharpe's apalis *Apalis sharpii* and the copper-tailed starling *Lamprotornis cupreocauda*.

The data on the avifauna from the Marahoué and Comoé National Parks (MNP and CNP) (two sites in the region recognised as IBAs by Fishpool (2001)) could be considered in this study. Indeed, in terms of habitats, the two parks appear to be similar to the survey area, with the MNP being the closest to the Yaoure site.

A total of 287 species of bird were identified in the MNP (IBA CI006), reflecting a great variety of habitat types (Fishpool, 2001; Lauginie, 2007). Furthermore, the white-breasted guineafowl (*Agelastes meleagrides*) would appear to exist at this site, but this would need confirmation. This park is one of the two IBAs in the country in which the presence of *Lamprotornis iris* has been reported. Also, the recent discovery of *Melignomon eisentrauti* and *Merops breweri* deserves a great deal of interest. Among the species identified, we note the presence of nine of the 14 species of bird with restricted distributions, which make up the Endemic Bird Areas of the Upper Guinean Forest observed in Côte d'Ivoire. Also noted is the presence of nine of the 39 species of birds of the Sudanian-Guinean Savannah biome and 136 of the 185 species of bird of the Guinean-Congolian Forest biome known in Côte d'Ivoire. Fifteen of the 287 species of bird of the MNP are included on the list of birds whose protection is of global interest. The distribution of these 15 species across the categories Endangered (EN), Vulnerable (VU), Near-threatened (NT) and Data deficient (DD) is respectively one (*Scotopelia ussheri*); four (*Lamprotornis cupreocauda*, *Criniger olivaceus*, *Agelastes meleagrides* and *Melaenornis annamarulae*); eight (*Gyps africanus*, *Terathopius ecaudatus*, *Polemaetus bellicosus*, *Psittacus timneh*, *Bycanistes cylindricus*, *Ceratogymna elata*, *Bathmocercus cerviniventris* and *Illadopsis rufescens*), and two (*Melignomon eisentrauti* and *Lamprotornis iris*) species.

A total of 497 species of bird were recorded in the CNP (IBA CI001), according to the results of ornithological surveys (Salewski, 2000; Salewski and Göken, 2001; Rheindt et al., 2002) and bibliographical research (Fishpool 2001, Lauginie 2007). This effectively shows that the CNP possesses a rich and diversified avifauna, which can be explained not just by the large area the site covers, but also by the great diversity of habitat types. Among the species of bird identified, nine were identified as species whose protection is of global interest (bird life International, 2009). These nine species are: the lappet-faced vulture *Torgos tracheliotus*, the pallid harrier *Circus macrourus*, the lesser kestrel *Falco naumanni*, the red-footed falcon *Falco vespertinus*, Denham's bustard *Neotis denhami*, the European roller *Coracias garrulus*, the brown-cheeked hornbill *Bycanistes cylindricus*, the yellow-casqued hornbill *Ceratogymna elata* and Dorst's cisticola *Cisticola dorsti*. Four of these nine species, *Circus macrourus*, *Falco naumanni*, *Falco vespertinus* and *Coracias garrulus* are merely rare migrators from the palearctic. The five others are resident species. Two species with restricted distribution (terrestrial species whose reproductive area is less than 50,000 km<sup>2</sup>) were recorded at the site, namely the brown-cheeked hornbill *Bycanistes cylindricus* and Sharpe's apalis *Apalis sharpii*. Fifty-nine species of birds of prey, of which 51 are diurnal and eight nocturnal, with presence of reproductive populations, were identified in the aforementioned park. Noted was the presence of 35 of the 39 of the Sudanian-Guinean Savannah biome's bird species, and 85 of the 185 of the Guinean-Congolian Forest biome's bird species known in Côte d'Ivoire. Two of the park's species, namely the lappet-faced vulture *Torgos tracheliotus* and the lesser kestrel *Falco naumanni* come under the category Vulnerable (VU). Also noted was the presence of six others, of which the pallid harrier *Circus macrourus*, the red-footed falcon *Falco vespertinus*, Denham's bustard *Neotis denhami*, the European roller *Coracias garrulus*, the brown-cheeked hornbill *Bycanistes cylindricus* and the yellow-casqued hornbill *Ceratogymna elata* come under the category Near-threatened (NT) and one species under the category Data Deficient (Dorst's cisticola *Cisticola dorsti*).

#### 1.4 National Legislation and International Conventions

The principal pertinent legislative texts drawn up by the Republic of Côte d'Ivoire for the purpose of defining a suitable legal framework for the sustainable protection of its natural resources, including wildlife, which may affect the project are mainly:

- The Convention Relative to the Preservation of Fauna and Flora in the Natural State, signed in London on 8 November 1933;
- Law No. 65-425 of 20 December 1965 on the Forestry Code;
- The African Convention on the Conservation of Nature and Natural Resources, adopted in Algiers on 15 September 1968;
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora, adopted in Washington;
- The Rio Convention of Biological Diversity in 1992;
- The Framework Convention on Climate Change, signed in Rio de Janeiro in 1992;

- Law No. 65-255 of 4 August 1965 pertaining to the protection of fauna and hunting, some articles modified by law No. 94-442 of 16 August 1994;
- Law No. 96-766 of 3 October 1996 on the Environmental Code;
- Decree No. 96-894 of 8 November 1996, determining procedural rules applicable to studies on the environmental impact of development projects;
- Decree No. 97-393 of 9 July 1997 on the public administrative institution referred to as the Agence Nationale de l'Environnement (ANDE) (English: National Environment Agency (NEA));
- Decree No. 98-19 of 14 January 1998 on the creation of the Fonds National de l'Environnement (FNDE) (English: National Environment Fund (NEF));
- Law No. 98-755 of 23 December 1998 on the Water Code.

## 1.5 Structure of the Report

This document is a report on the survey of the avifauna in the study area, including the identification and evaluation of project's impacts on avifauna, proposing measures to mitigate any potential negative impact.

Hence, after an introduction and a description of the principal objectives, we describe the study area and the methodology adopted, and present subsequently:

- Firstly, results of data collected on avifauna in the study area, followed by discussions and a conclusion;
- And secondly, the identification, then evaluation of the potential impact linked to the project, before proposing measures to mitigate any negative impact.

## **2.0 METHOD**

### **2.1 Subject of Study**

This study covers the ornithological domain, focusing in particular on birds.

### **2.2 Sampling Period and Study Area**

The evaluation of the avifauna within the Yaoure study area took place between 16 and 29 January 2015, corresponding to the main wet season, when the majority of migratory birds are likely to be seen in the area. The sites chosen for the survey were generally in a good condition taking into account the advanced state of degradation of the vegetation of the site as a whole.

Consequently, the sites selected comprised forests, usually with the presence of hills (and therefore difficult to access), which may represent refuge areas for the birds in this area.

### **2.3 Sampling Method**

The survey sites (TMF4; TMF3; TMF2; TMF1; WRD West and WRD North), having been identified beforehand by the client, the first activity was to conduct reconnaissance on the ground. This allowed us to note that, with some exceptions, the principal habitat types encountered over the six specific survey sites as a whole were: forests, plantations, crops, fallow areas, wooded savannahs and watercourses.

#### *Methods used*

For the survey of the avifauna, four methods were used:

#### 1) Slow reconnaissance walks (Recce)

The principal method used during this study consisted of observing birds while walking slowly (for a total of 32km) through the various habitats in the area of study (Figure 2.1). In this way, notes were taken from visual observations, vocalisations and the a description of habitats in which birds were found. The sky was regularly scanned with the aid of binoculars, in order to identify the potential species of bird in flight, namely birds of prey and other birds (e.g. swallows, swifts), which flew over the site in passing. In certain cases, a telescope was also used to observe those birds that were very far away. A sound-recording device (a dictaphone) was used either to record unknown birdsongs and calls, which were later identified at the laboratory using Claude Chappuis's CD-ROM (Chappuis, 2000), or to do call playbacks in order to attract distant birds closer to us for better observation and identification. The work on the ground generally took place between 06:30 and 18:30.

## 2) Fixed points

A number of observations were made from fixed points at the site known as \$1500 PIT (Figure 2.1), which offered a good view of the landscape for identifying potential species of bird using the area of study as a migration route. Unfortunately, the amount of time passed, as well as the GPS coordinates of the different observation points at the \$1500 PIT were not recorded. Indeed as the \$1500 PIT site had not been pre-selected as one of our survey sites, we conducted survey there only opportunistically. Each visit at this site was approximately of 10 minutes duration, and we observed migratory bird species such as *Milvus migrans*, *Merops albicollis*, *Bubulcus ibis* and *Apus affinis*, and some other swallows and swifts which visited or overflew the site.

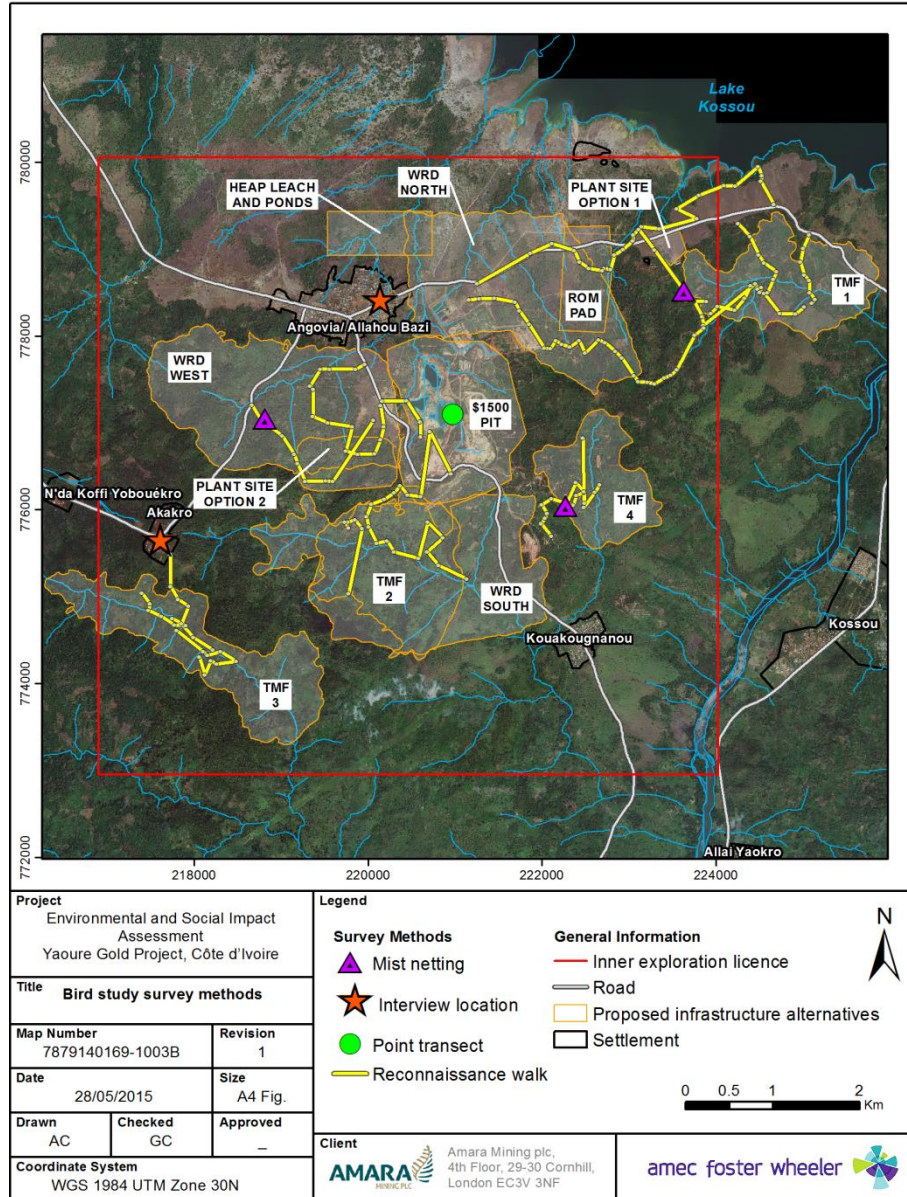
## 3) Capture in mist nets

Three captures in mist nets were made at different locations (Figure 2.1). The principal objective was to obtain data on quiet and cryptic species, which can easily be missed by visual or auditory observations. For these captures, two 12m by 3m mist nets (with a 1cm mesh) were positioned vertically side-by-side at a given location. It is worth noting that for these three capture operations, the nets are first left at the site the evening before and kept folded (i.e. not spread out) at the location indicated. The nets are then spread out only on the day of capture. Once stretched, the nets are visited regularly (every 15 minutes) and any captured birds are identified in situ, then photographed and released around 100m from the capture location. Thus, the first capture operation (setting up of the mist net) was carried out on the morning of 18 January 2015 between 06:30 and 09:30, and in the afternoon between 15:00 and 18:00, in an area of secondary forest at the TMF4 site. The second capture, lasting half a day, was carried out on 21 January 2015 between 13:00 and 18:00 at the TMF1 site, in a transition area between forest and fallow land, close to a watercourse. The final capture took place over a whole day (from 07:00 to 18:00 on 28 January 2015) in an area of forest in a good state of conservation in WRD West, close to the sacred forest known as "Akpessèklofoué".

## 4) Ethnozoological interviews

Two ethnozoological interviews were conducted in the villages of Allahou-bazi and Akakro (Figure 2.1). The aim of this activity was partly to record the names of birds in Baoulé, the local language, and partly to determine the scale of threats to the avifauna of the area. It also aimed to get an idea of the presence or absence of any species from the major bird groups such as birds of prey, hornbills, parrots, pigeons and guinea fowl, which are particularly threatened in Côte d'Ivoire. These surveys were conducted by showing photographs and/or drawings (from Field Guide of Birds of Western Africa) of the species of bird in question to the various people interviewed. The people targeted for interview were mainly fishermen, farmers and poachers.

**Figure 2.1: Surveyed Locations according to the Four Sampling Methods Used**



*Compilation of data*

Each day, an exhaustive list of species observed was made, along with the GPS coordinates and habitat types crossed during surveys (Appendix 1). The number of individuals or groups seen was noted, as well as information concerning the habitat in which the birds were observed. Abundance indexes, the various status (conservation, migratory or biogeographical, CITES), endemism and biome mentioned in this report are defined in the bottom panel of the checklist of birds for this study area.

It is worth noting that in order to standardize the bird names given in the various tables, the nomenclature, taxonomy and order follow that of Borrow and Demey (2001 and 2004), but the genus of certain scientific names was corrected according to David and Gosselin (2002a and 2002b). The names of bird species were given in scientific terms, in English and French, and when available, the names of some species were given in the local language, Baoulé.

## **2.4 Analyses**

At the end of each day, the number of individuals or groups was noted, as well as information concerning the habitat in which the birds were observed. This allowed us to produce an abundance index based on the encounter rate (number of individuals and/or groups recorded according to the number of survey days on which the species was noted) and obtain the species richness (i.e. number of individuals recorded by species). The Shannon's diversity index was calculated for each site using Excel.



## 3.0 RESULTS

### 3.1 Avifauna of the Study Area

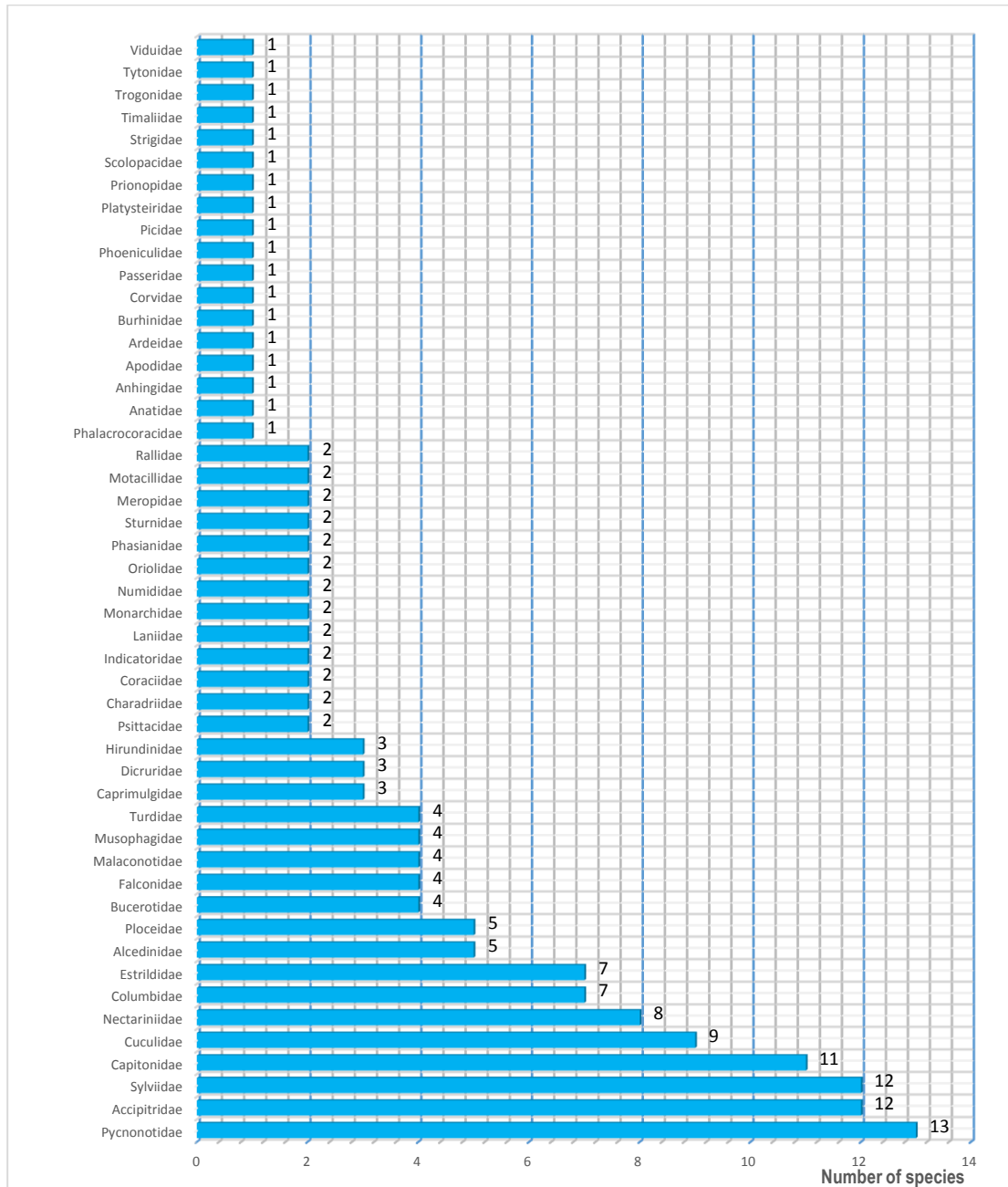
Overall, taking all methods into account at all the sites surveyed in this study, a total count of 5,333 individual birds was recorded, belonging to 172 species from 49 families (Appendix 2), among which four species are globally threatened species (bird life International, 2014). One species is categorised as Vulnerable (VU): the Timneh parrot *Psittacus timneh*, and three species as Near-threatened (NT): the green-tailed bristlebill *Bleda eximius*; the black-headed rufous warbler *Bathmocercus cerviniventris* and the copper-tailed starling *Lamprotornis cupreocauda*. The other species identified belong to the category Least Concern (LC). Furthermore, it should be noted that 24 of these species of bird are included in Appendix II of CITES (CITES, 2015). These are essentially the species of birds of prey (diurnal and nocturnal), turacos and parrots (Appendix 2).

From the four species whose protection is of global importance, a total of 96 individuals were recorded, distributed as follow: *Psittacus timneh* (2 individuals); *Bleda eximius* (24 individuals); *Bathmocercus cerviniventris* (54 individuals) and *Lamprotornis cupreocauda* (16 individuals).

It should be noted that no major nesting site of bird species was found during our explorations of the various sites surveyed. However, considering the differing nesting season periods of the resident species, as well as of migratory species passing through the site, we think that future investigations (in different seasons) would allow us to locate potential nesting sites of bird species in the Yaoure mining area.

The analysis of the results of this study show that the family with the highest representation from the perspective of its species richness is that of the Pycnonotidæ with 13 species (Figure 3.1). This is closely followed by the Accipitridæ and the Sylviidæ families, each with 12 species. Following on, there are the Capitonidæ (11 species), the Culcidæ (9 species), the Nectariniidæ (8 species), the Columbidae and the Estrildidæ, each with seven species. These eight principal families account for almost half of the number of bird species in the area of study.

**Figure 3.1: Histogram of the Distribution of the Number of Bird Species by Family**



With regard to the population of the various species, the dominant ones in decreasing order of abundance are the laughing dove *Streptopelia senegalensis*; the African grey hornbill *Tockus nasutus*, the naked-faced barbet *Gymnobucco calvus*; the white-throated bee-eater *Merops albicollis*; the common bulbul *Pycnonotus barbatus*; the cattle egret *Bubulcus ibis* and the blue-spotted wood dove *Turtur afer*, with their respective relative frequencies of 2.30%, 2.24%, 2.22%; 2.08%, 2.06%, 2.02% and 1.83% (Appendix 2).

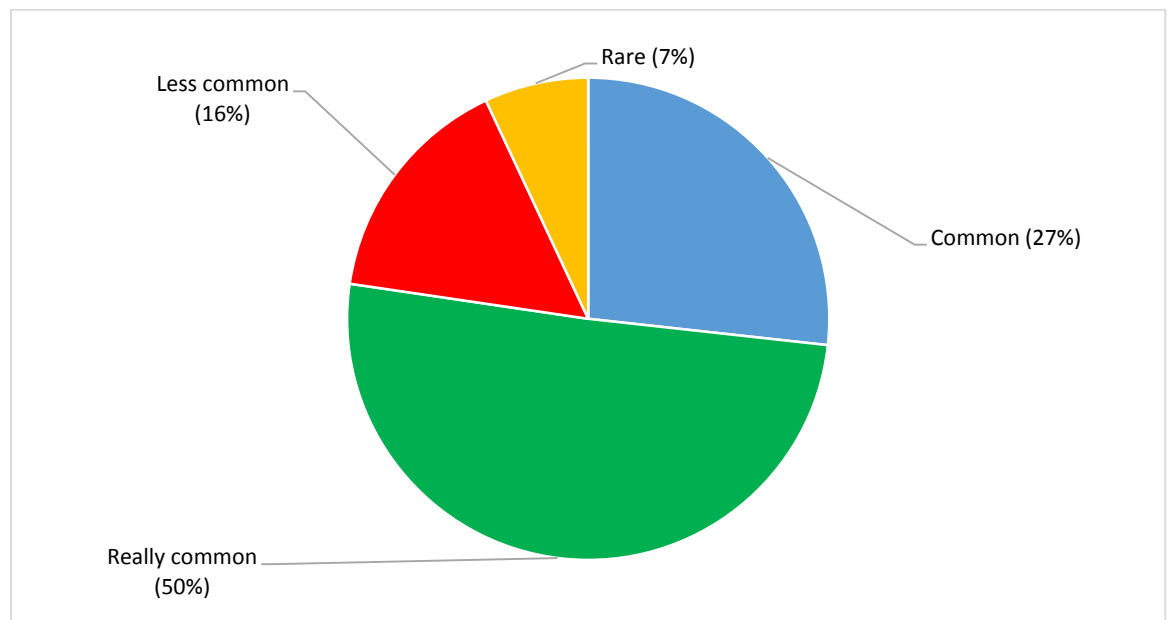
Of species with restricted distribution, meaning species of land birds whose reproductive area is less than 50,000km<sup>2</sup>, which belong to the Endemic Bird Area of the Upper Guinean Forest, four of the 14 species recorded in Côte d'Ivoire were seen (Fishpool, 2001, Stattersfield et al., 1998). These were Sharpe's apalis *Apalis sharpii* (species not threatened) and three near-threatened species: the green-tailed bristlebill, the black-headed rufous warbler and the copper-tailed starling (Appendix 2).

In terms of species endemic to West Africa, nine were reported, namely the Senegal parrot *Poicephalus senegalus*, the violet turaco *Musophaga violacea*, Sharpe's apalis *Apalis sharpii*, the green-tailed bristlebill *Bleda eximius*, the black-headed rufous warbler *Bathmocercus cerviniventris*, the bearded barbet *Lybius dubius*, the copper-tailed starling *Lamprotornis cupreocauda*, the yellow-crowned gonolek *Laniarius barbarus* and the red-vented malimbe *Malimbus scutatus* (Appendix 2).

As for the different biomes, 52 (28.11%) of the 185 known Côte d'Ivoire species belonging to the Guinean-Congolian Forest biome were observed, and 7 (17.85%) of the 39 known species confined to the Sudanian-Guinean Savannah biome in Côte d'Ivoire were recorded.

According to their abundance, the bird population of the study area is composed of 50 % of really common species, 27 % of common species, 16 % of less common species and 7 % of rare species (Figure 3.2).

**Figure 3.2: Characteristics of the Abundance of Bird Populations in the Study Area**

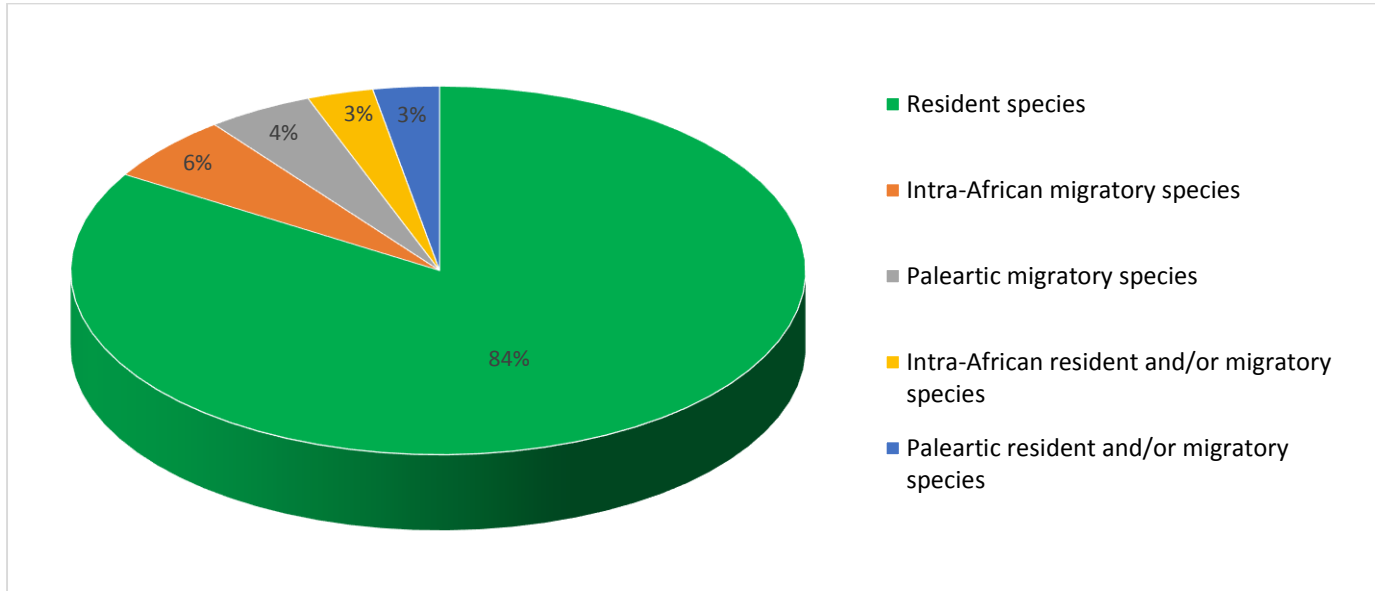


Regarding the migratory status of the various species listed in Appendix 2, it appears that 28 species, that is around 17% of the number of species catalogued, are migratory. Among these, 18 (10%) are completely migratory (4% palearctic and 6% intra-African

migrant species) and 10 (6%) are partially migratory (Figure 3.3). The species making up the various categories of migratory birds are as follows:

- Completely migratory palearctic species (numbering eight), represented by species such as the European honey buzzard *Pernis apivorus*; the barn swallow *Hirundo rustica*; the western yellow wagtail *Motacilla flava*; the common nightingale *Luscinia megarhynchos*; the sedge warbler *Acrocephalus schoenobaenus*; the Eurasian reed warbler *Acrocephalus scirpaceus*; the great reed warbler *Acrocephalus arundinaceus* and the greater swamp warbler *Acrocephalus rufescens*.
- Completely migratory intra-African species (numbering 10) are represented by the black kite *Milvus migrans*; the grasshopper buzzard *Butastur rufipennis*; the spur-winged lapwing (or spur-winged plover) *Vanellus spinosus*; Levillant's cuckoo *Oxylophus levillanti*; the red-chested cuckoo *Cuculus solitarius*; the plain nightjar *Caprimulgus inornatus*; the standard-winged nightjar *Macrodypteryx Longipennis*; the grey-headed kingfisher *Halcyon leucocephala*; the white-throated bee-eater *Merops albicollis* and the African grey hornbill *Tockus nasutus*.
- Partially migratory species, also numbering 10, are made up of five resident/migratory palearctic species (the squacco heron *Ardeola ralloides*; the grey heron *Ardea cinerea*; the common kestrel *Falco tinnunculus*; the Long-tailed nightjar *Caprimulgus climacurus* and the African paradise flycatcher *Tersiphone viridis*) and five resident/migratory intra- African species (the cattle egret *Bubulcus ibis*; the red-necked buzzard *Buteo auguralis*; Klaas's cuckoo *Chrysococcyx klaas*; the diderik cuckoo *Chrysococcyx caprius* and the cinnamon roller *Eurystomus glaucurus*).

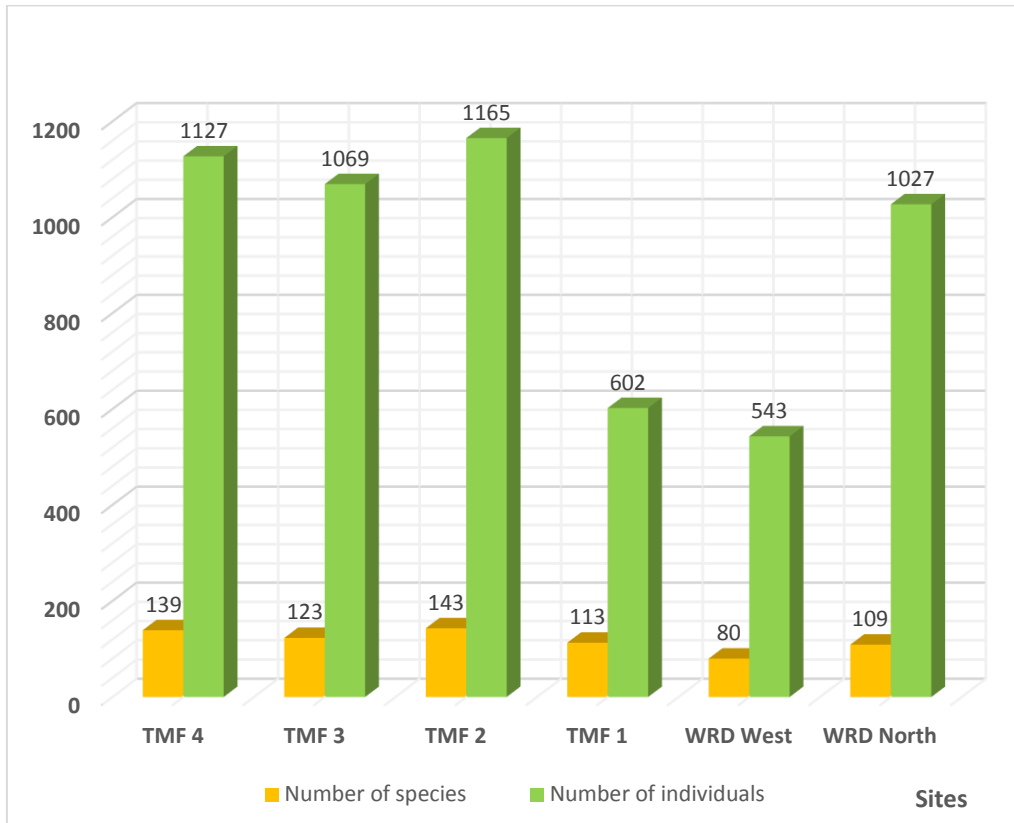
**Figure 3.3: Proportion of Migratory Species in the Bird Population in the Study Area**



### 3.2 Distribution of Avifauna by Site

Figure 3.4 shows the bird population at the different sites surveyed. The assessment of the quantitative composition of each of the study sites is shown in Table 3.1. The qualitative and quantitative composition of the sites TMF4, TMF3, TMF2, TMF1, WRD West and WRD North are presented respectively in Tables A1-A6 (Appendix 3).

**Figure 3.4: Distribution of Bird Populations by Site Sampled**



**Table 3.1: Summary of Avifauna Observations by Site Sampled**

Sites	NF	NS	NI	ISH	Conservation Status			Biogeographical Status					Endemism		Biome		Annexe II CITES
					VU	NT	LC	P	M	R	R/M	R/P	WA	RD	GC	SG	
TMF 4	41	140	1127	6,77	1	3	137	8	7	119	5	1	8	4	45	7	18
TMF 3	39	123	1069	6,67	0	3	120	8	6	103	5	1	9	4	41	1	12
TMF 2	42	143	1165	6,8	0	3	140	6	8	121	5	3	6	4	51	5	16
TMF 1	37	113	602	6,47	0	2	111	4	6	95	4	4	6	3	32	6	10
WRD West	35	80	543	6,03	0	1	79	1	4	73	2	0	6	2	21	6	11
WRD North	44	109	1027	6,34	0	1	108	3	8	89	5	4	5	2	20	6	14
<b>TOTAL</b>	<b>49</b>	<b>173</b>	<b>5533</b>	<b>6,92</b>	<b>1</b>	<b>3</b>	<b>169</b>	<b>8</b>	<b>10</b>	<b>145</b>	<b>5</b>	<b>5</b>	<b>9</b>	<b>4</b>	<b>52</b>	<b>7</b>	<b>24</b>

**NF:** Number of families **NS:** Number of species **NI:** Number of individual birds **ISH:** Shannon's diversity index **CS:** Conservation status **VU:** Vulnerable **NT:** Near-threatened **LC:** Least concern **BS:** Biogeographical status **R:** Resident **M:** Intra-African migrant **P:** Palearctic migrant **R/P:** Resident/palearctic migrant **R/M:** Resident/intra-African migrant **WA:** Endemic to West Africa **RD:** Endemic with restricted distribution - area of distribution less than 50,000km<sup>2</sup> **GC:** Confined to the Guinean-Congolian Forest biome **SG:** Confined to the Sudanian-Guinean Savannah biome

### Avifauna at the TMF4 Site

At the TMF4 site, 1,127 individuals from 140 species of birds, belonging to 41 families were identified (Table 3.1 and A1). In terms of population, these individuals represent 20.37% of the total count of birds identified at the six sites inventoried in the Yaoure mining area. The 140 species and 41 bird families at the site represent respectively 81.40% and 83.67% of the bird species richness and number of bird families observed in the whole of the study area.

Picnonotidæ (13 species, that is, all species of Picnonotidæ encountered in the area surveyed) represent the most important family at this site in terms of abundance.

The species richness and the frequencies of observation of various species reveal that *Merops albicollis*, *Spermestes cucullatus*, *Streptopelia senegalensis*, *Pycnonotus barbatus* and *Ploceus cucullatus* are the most abundant at this site. The specific diversity index of the site is 6.77. In terms of vulnerability, the presence of all four species of bird whose protection is of global interest (i.e. those species in the categories Vulnerable (VU) and Near-threatened (NT)) that were recorded for all sites surveyed were recorded at this site (Appendix 2). Eighteen (18) species of birds at this site are also included in Appendix II of CITES. In terms of endemism, eight of the nine species endemic to West Africa recorded across all the sites, and the four species with restricted distribution were identified at this site. As for the different biomes, 45 of the 52 species recorded for this area as belonging to the Guinean-Congolian Forest biome, as well as the seven bird species of the Sudanian-Guinean Savannah biome were observed at this site. With regard to migration, a total of 15 migratory species were reported (7 intra-African and 8 palearctic) and 6 partially migratory (5 resident/inter-African migrators and 1 resident/palearctic migrator) (Table A1).

### Avifauna at the TMF3 Site

One hundred and twenty-three bird species, representing 71.51% of all bird species identified in the study area, belonging to 39 (79.59%) families with a population of 1,069 (19.32%) individuals were counted at this site (Table 3.1 and A2). In terms of abundance, the Picnonotidæ family (13 species) was, once again, the most important. The same applies for species such as *Bubulcus ibis*, *Treron calvus*, *Streptopelia senegalensis*, *Merops albicollis*, *Estrilda melpoda* and *Hirundo rustica*, taking into account, respectively, their species richness and frequency of observation. The specific diversity index of the site is 6.67. In terms of vulnerability, three species categorised as Near-threatened (NT) for the study area were observed at this site (Appendix 2), along with twelve species included in Appendix II of CITES. In terms of endemism and biome, all species endemic to West Africa and those with restricted distribution recorded for the study area were observed at this site, as well as 41 of the 52 species of the Guinean-Congolian Forest, and one species from the Sudanian-Guinean Savannah. As regards to migratory species, 14 completely migratory species (6 intra-African and 8 palearctic) and 6 partially migratory species (5 resident/inter-African migrants and 1 palearctic migrant) were identified at this site (Table A2).

### Avifauna at the TMF2 Site

The avifauna survey at this site compiled 1,165 (21.06%) individuals from 143 (83.014%) species belonging to 42 (85.71%) families (Table 3.1 and A3). Here, once again, the



Pycnonotidæ family, with its 13 species, was the best-represented among the families of bird species. With a species diversity of 6.80, this site has a very high headcount of *Bubulcus ibis*, *Tockus nasutus* et *Ploceus cucullatus*. The presence of three species whose protection is of global importance, 16 species included in Appendix II of CITES, six endemic to West Africa, four with restricted distribution, 51 from the Guinean-Congolian Forest, five from the Sudanian-Guinean Savannah, 14 completely migratory species (6 palearctic and 8 intra-African) and eight partially migratory species (5 resident/intra-African migrators and 3 resident/palearctic migrators) was recorded at this site (Table A3).

#### Avifauna at the TMF1 Site

In total, 602 (10.88%) individuals from 113 (65.70%) species belonging to 37 (75.51%) families (Table 3.1 and A4) were observed at this site. With eleven species each, the Pycnonotidæ and Sylviidæ represent the most important families at this site in terms of abundance of species. The species diversity of the site is 6.47. Some bird species, notably *Egretta garzetta*, *Numida meleagris*, *Streptopelia semitorquata* and *Spermestes cucullatus* were found to be the most dominant. The presence of two species categorised as Near-threatened, 10 species listed in Appendix II of CITES, six species endemic to West Africa and three with restricted distribution, as well as 32 from the Guinean-Congolian Forest, six from the Sudanian-Guinean Savannah, 10 completely migratory species (4 palearctic and 6 intra-African) and eight partially migratory species (4 resident/intra-African migrators and 4 resident/palearctic migrators) was noted for this site (Table A4).

#### Avifauna at the WRD West Site

At this site, 80 (48.51%) species of bird spread between 35 (71.43%) families, with a population of 543 (9.81%) individuals (Table 3.1 and A5) were identified. The Capitonidæ family was the most represented, with seven species. The species diversity of the site is 6.03.

The most abundant species were *Gymnobucco calvus*, *Bubulcus ibis*, *Turtur afer*, *Tockus nasutus* and *Numida meleagris*. One Near-threatened species, 11 species from Appendix II of CITES, six species endemic to West Africa and two with restricted distribution, as well as 21 from the Guinean-Congolian Forest, six from the Sudanian-Guinean Savannah, five completely migratory species (1 palearctic and 4 intra-African and two partially migratory species, all resident/inter-African migrants were observed at this site (Table A5).

#### Avifauna at the WRD North Site

Investigations of bird life at this site permitted the identification of 1,027 (18.56%) individual birds from 109 (63.37%) species coming from 44 (89.80%) families (Table 3.1 and A6). The Sylviidæ family (8 species) is the main one. With a specific diversity of 6.34, *Gymnobucco calvus*, *Streptopelia senegalensis*, *Francolinus bicalcaratus*, *Pycnonotus barbatus*, *Milvus migrans* and *Tockus nasutus* represent the site's most abundant species. In terms of vulnerability, endemism and biome, this site has a single Near-threatened species and 14 species in Appendix II of CITES, five species endemic to West Africa and two species with restricted distribution, 20 species from the Guinean-Congolian Forest as well as six species from the Sudanian-Guinean Savannah. As for migrators, 11 completely migratory species (8 intra-African and 3 palearctic) and nine partially migratory species (of which 5 were

resident/intra-African migrators and 4 resident/paleartic migrators) were counted (Table A6).

### 3.3 Data from Ethnozoological Interviews

The names of birds in Baoulé (Appendix 2), the indigenous language spoken in most of the study area, were compiled. It should be mentioned that generally the people interviewed were only able to give the names of some of the most common bird species and families. With regard to threats, the people interviewed identified the destruction of habitats, the capture for the commercial trade, and poaching as the principal threats with which birds are confronted in the study area.

### 3.4 Discussion of Avifauna Data

The total number of 172 species recorded using the different survey methods for the study area, represent 22.75% of the 756 bird species encountered in Côte d'Ivoire (Halle and Bruzon, 2006). This number is relatively high, taking into account the numerous threats (e.g. deforestation, poaching, intensive farming, small-scale gold mining) with which birds are confronted in this area. Indeed, with the rarity, if not the disappearance of large mammals, birds, particularly large ones, are poached extensively. Not only do they represent an important source of protein for local populations, but certain species such as grey parrots are captured extensively for the commercial trade. With the Ebola virus running rampant in some neighbouring countries, it would seem clear that efforts to heighten awareness through campaigns of information, education, communication and changes in behaviour (IEC-CB) must be conducted in this region.

In comparison to the data obtained from previous studies, the results of this survey appear very interesting. As a matter of fact, in 2007, 1,947 individual birds, from 132 species spread across 45 families were counted in the same area over a field survey period of eight days (Tano et al., 2007). With our sampling effort being higher, as well as using different methods, we were able to bring the total number of species recorded for the study area to 172 species. In the neighbouring Marahoué National Park (MNP), some 287 species were identified after studies carried out over a longer period (Fishpool, 2001; Lauginie, 2007). Among these 287 species from the MNP, 15 were included on the list of birds whose protection is of global importance. Indeed, the larger number of bird species whose protection is of global importance observed in the MNP might be explained by the fact that it remains a protected site, but also by its large area (over 101,000 hectares). However, with four species of bird whose protection, according to the Red List of threatened bird species, is of global importance, among which one bird species is listed as Vulnerable and 24 listed in Appendix II of the CITES list, the study area (the Yaoure mining area) warrants particular attention.

The species endemic to West Africa (numbering nine) and those with restricted distribution (four in total) observed at the various sites surveyed further reinforce the vital importance of this area in terms of the conservation of the avifauna.

Also, the data from 52 of the 185 species confined to the Guinean-Congolian Forest biome and those of 7 of the 39 species confined to the Sudanian-Guinean Savannah biome identified in the area of study are quite remarkable considering the large-scale disturbance of natural habitats linked to the numerous human activities taking place in this area.

The proportion of 17% of migratory species among the species identified is fairly representative, and very interesting. This is because the study was conducted in the main dry season, which seemed to be very favourable to survey migratory birds in Côte d'Ivoire (Thiollay, 1985). According to this author, bird migration in Côte d'Ivoire peaks around January. Compared with the avifauna data from the neighbouring MNP, some 56 species of migratory birds were recorded there, out of the 287 total species of bird found in the park (Lauginie, 2007). This represents around 20% of the number of bird species at this site, which adequately confirms that the 17% of migratory species within the Yaoure mining perimeter is not negligible. The 56 migratory species in the MNP are made up of 27 palearctic migrators, 18 intra-African migrators, nine species categorised as resident/intra-African migrants and two categorised as resident/palearctic migrants. Also, it is worth noting that, with the exception of two species (*Ardeola ralloides* and *Falco tinnunculus*), the 26 other migratory species observed at the Yaoure site were reported in the MNP.

These data indicate that monitoring and surveillance should be carried out, and that the necessary steps should be taken before, during and after the mining operation life, especially important would be monitoring at the \$1500 PIT. Indeed, even though this site was not among the sites suggested for bird survey, the observations carried out at this site indicated that it appear very interesting for the migratory birds in the area.

With regard to the composition of avifauna at the various sites surveyed, we found that they all have similar species diversity indexes. This may be because, with a few exceptions, similar habitats are encountered at all six sites surveyed. It is worth mentioning that there is a small forest in a good state of conservation at the WRD West site (0218816 N / 0777052 W, near the sacred grove known as "Akpassèklofouê", between the villages of Angovia and Akakro), which appeared to be of great interest for birds found in the undergrowth.

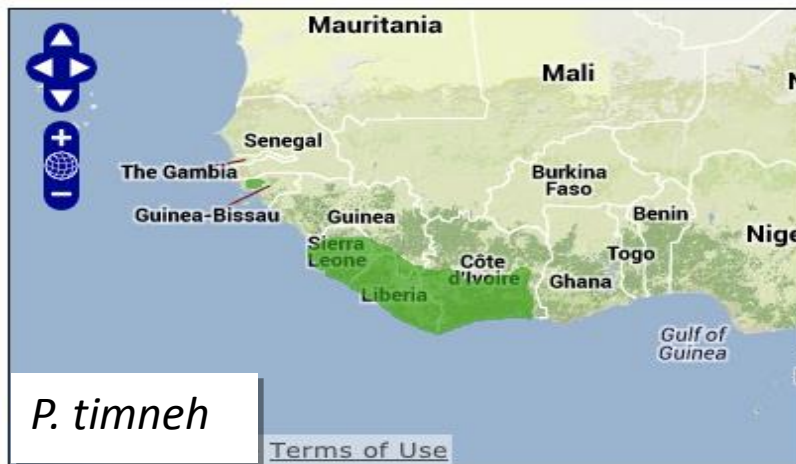
### 3.4.1 Globally Threatened Bird Species Observed in the Yaoure Area

#### Timneh parrot *Psittacus timneh* (VU)

Until 2012, the timneh parrot *Psittacus timneh* and the African grey parrot *Psittacus erithacus* were considered as two different subspecies of the same species. Only in 2012 did BirdLife International recognised these two subspecies as two fully distinct species (BirdLife International, 2012 and 2014). *Psittacus timneh* is a typical forest species, but is occasionally found at the forest edges and in open areas, ranging from the forested areas of Guinea-Bissau to the far east of Côte d'Ivoire and a small area of southeast Mali (Figure 3.5). Of a total population estimated at between 120,000 and 259,000 individual birds, the largest populations are in Côte d'Ivoire (54,000-130,000) and in Liberia (50,000-100,000), according to BirdLife International 2012 ([WWW.BIRDLIFE.ORG](http://WWW.BIRDLIFE.ORG)). It is estimated that there are around 11,000-18,000 individuals in Sierra Leone, 5,000-10,000 in Guinea, 100-1,000 in Guinea-Bissau and negligible numbers in southern Mali.

Populations of Timneh parrots have suffered a decline due to the loss of their forested habitat and by the capture of individuals destined for the international trade in wild birds. This has encouraged the addition of this species to the IUCN Red List, and that of CITES Appendix II.

**Figure 3.5: Distribution map of the Timneh parrot *Psittacus timneh* VU**



#### **Green-tailed bristlebill *Bleda eximius* (NT)**

The optimal habitat for this species is closed canopy forest (up to an altitude of 1,400m). It is found in the Upper Guinean forest and also in mature secondary forests (Gatter, 1997). In Côte d'Ivoire, the green-tailed bristlebill has been reported in locations such as the Taï National Park (Gartshore et al., 1995) and the classified forests of Yapo-Abbé (Demey and Fishpool, 1994), Cavally (Rainey, 2007) and Bossematié (Waltert et al., 1999). The size of the population is estimated at 10,000-19,999 mature individuals. The population is suspected to be in rapid decline due to deforestation for logging as well as for commercial and subsistence farming. The rate of decline is not alarming, as this species seems to show a tolerance for changes in their habitats.

#### **Black-Headed Rufous Warbler *Bathmocercus cerviniventris* (NT)**

This species is found in dense secondary vegetation near watercourses and in diverse habitat types (e.g. primary and secondary, marshy and gallery forests) (Gartshore et al., 1995; Gatter, 1997). This species is also found in forest belonging to the Upper Guinean forest. In Côte d'Ivoire, it has been reported at Nimba and Sipilou in the west of the country, in the Taï National Park (Gartshore, et al., 1985) and in Marahoué National Park (Lauginie, 2007). In 1997 in Liberia, based on estimates of density, the population was estimated at at least 60,000 pairs (Gatter, 1997). The size of the global population has not been measured (del Hoyo et al., 2006).

#### **Copper-Tailed Starling *Lamprotornis cupreocauda* (NT)**

The copper-tailed starling is a forest species, which can also be found at the forests edge and in gallery forest (Gatter, 1997). It is limited to the Upper Guinean forests of West Africa,

southern Guinea and south-west Ghana, passing through Sierra Leone, Liberia and Côte d'Ivoire. In Côte d'Ivoire, it is abundant in the Taï National Park. Between 1985 and 1990, it was quite common in the classified forest of Yapo-Abbé (Demey and Fishpool, 1994), and has recently been noted as quite common in Mount Péko National Park (H. Rainey, 2007). The population size of this species has not been measured, but it is talked of as being generally common. However, it is suspected that the population is in decline due to the destruction and fragmentation of its habitats.

## 4.0 EVALUATION OF IMPACTS

### 4.1 Description of Impacts

Mining operations at the Project site will probably impact considerably the fauna that live there. The impacts identified that affect particularly birds in the area are: the loss and fragmentation of habitats, noise, dust and potential pollution of watercourses.

- The loss of habitats could lead to the disappearance or displacement of species and severely damage the food chain, of which they constitute an essential element. The loss of particular habitats where mining infrastructures, such as waste storage installations, areas used for dumping rocks, is placed will be permanent. However, the extent to which the fragmentation will further affect the natural environment is presumed insignificant, due to the already degraded nature of the vegetation in the area. In addition, job seekers coming to the area will increase the pressure on forests by farming, hunting, searching for construction materials and exploiting resources. The area will also be more accessible due to the renovation and maintenance of roads by Amara Mining and may have a cumulative impact on the ecosystem. The role the forests play as places of refuge for birds are also important and could be affected. These impacts may lead to changes in behaviour, alter reproductive cycles, and may lead to the death of certain individuals;
- The level of noise and dust will increase due to the mining operations. This could have an impact on the safety of bird communities. Noise pollution could lead to changes in their behaviour and alter their reproductive cycle. The increase in dust levels during construction and operation of the mine may have an impact on birds' health (due to breathing in the dust) and be a nuisance; and
- The potential pollution of watercourses as a result of mining operations poses a cumulative threat (in addition to artisanal gold panning and the already poor water conditions) for the birds that depend on the rivers for drinking water.

## 4.2 Impact Evaluation

### 4.2.1 Habitat Loss and Fragmentation

Impact	Habitat loss and fragmentation		
Nature	Negative	Positive	
	Negative: The loss of habitats is negative, as it can lead to the disappearance or displacement of bird species and severely damage the food chain of which they constitute an essential element. Fragmentation has also negative impacts as it alters the phenomenon of "biological continuity" in the forests to a great extent.		
Nature of Impact	Direct	Indirect (Secondary)	Cumulative
	Direct: The loss and fragmentation of habitats appears to have a direct impact in the sense that it encourages the migration of affected species and their adaptation to other environments, but leads to the disappearance of those		

Impact	Habitat loss and fragmentation			
	which are unable to do so. Cumulative: However, the permanent influx into the now more accessible sites could have a cumulative impact on the ecosystem.			
Likelihood / Probability	1 = Unlikely	2 = Possible	3 = Likely	4 = Definite likelihood
	1 = Unlikely: Low probability if suitable mitigation measures are considered			
Duration	1 = Short term	2 = Medium term	4 = Long term	4 = Permanent
	4= Long term: Replenishing the forest will be possible if reforestation programmes are put in place at the end of the project. This will allow the bird species that have disappeared to come back.			
Extent / Spatial	1 = Localised	2 = Site	3 = Wider and Adjacent Region	4 = National / International
	1 = Localised : The loss and fragmentation of habitats will be localised in the areas of operation.			
Magnitude / Scale	1 = Low	2 = Minor	3 = Moderate	4 = High
	2 = Minor : These impacts are minor, since they have only been observed at and around the site.			
Resource/Receptor Sensitivity/ Importance of Value	2 = Low	4 = Moderate Low	6 = Moderate	8 = High
	2 = Low : Low sensitivity, since the area of study does not have a particular conservation status and the species of bird catalogued are, on the whole, seen in most areas similar in composition to those in the area of study.			
Significance of the impact	1 – 20 = Negligible	21 – 56 = Low	57 – 92 = Medium	93 – 128 = High
	(1+ 4 +1 + 2) x 2 = 16 = Negligible			

#### 4.2.2 Noise and Dust

Impact	Noise and Dust			
Nature	Negative		Positive	
	Negative: These impacts could lead to changes in birds' behaviour and alter their reproductive cycles.			
Nature of Impact	Direct		Indirect (Secondary)	Cumulative
	Direct: The noise and dust's impacts are directly observable in birds, and in the long term may leave to the displacement of species and individuals from the area.			
Likelihood / Probability	1 = Unlikely	2 = Possible	3 = Likely	4 = Definite likelihood
	2 = Possible: This is possible in the sense that most birds prefer quiet areas or those only slightly disrupted by human activities			
Duration	1 = Short term	2 = Medium term	4 = Long term	4 = Permanent
	4 = Long term: These impacts will be observed for the entire duration and execution of the project.			
Extent / Spatial	1 = Localised	2 = Site	3 = Wider and Adjacent Region	4 = National / International
	1 = Localised: Noise and dust are localised solely in the areas in which they are generated.			
Magnitude / Scale	1 = Low	2 = Minor	3 = Moderate	4 = High
	2 = Minor: These impacts are minor, since they have only been observed at and			

Impact	Noise and Dust			
	around the site.			
Resource/Receptor Sensitivity/ Importance of Value	2 = Low	4 = Moderate Low	6 = Moderate	8 = High
	2 = Low: Low sensitivity, since the area of study does not have a particular conservation status and the species of bird catalogued are, on the whole, seen in most areas similar in composition to those in the area of study.			
Significance of the impact	1 – 20 = Negligible	21 – 56 = Low	57 – 92 = Medium	93 – 128 = High
	(1+ 4 +1 + 2) x 2 = 18 = Negligible			

### 4.2.3 Water Pollution

Impact	Water pollution			
Nature	Negative		Positive	
	Negative: Water pollution represents a negative impact for birds. Indeed, coming into contact with polluted water could poison them and decimate their populations.			
Nature of Impact	Direct		Indirect (Secondary)	Cumulative
	Cumulative: This impact is cumulative, since it is combined with local pollution from local population and artisanal miners.			
Likelihood / Probability	1 = Unlikely	2 = Possible	3 = Likely	4 = Definite likelihood
	1 = Unlikely: The pollution of the water is unlikely, as all precautions will be taken to avoid such a disaster.			
Duration	1 = Short term	2 = Medium term	4 = Long term	4 = Permanent
	4 = Permanent: This impact is permanent, since in case of contamination, the water, as well as all the vegetation and the soils neighbouring the watercourse would be polluted.			
Extent / Spatial	1 = Localised	2 = Site	3 = Wider and Adjacent Region	4 = National / International
	3 = Wider and Adjacent Region: The pollution of the water could affect the site and the entire length of the region through which the watercourse flows.			
Magnitude / Scale	1 = Low	2 = Minor	3 = Moderate	4 = High
	3 = Moderate: The pollution of water can be lessened if the appropriate care is taken.			
Resource/Receptor Sensitivity/ Importance of Value	2 = Low	4 = Moderate Low	6 = Moderate	8 = High
	2 = Low: Low sensitivity, since the area of study does not have a particular conservation status and the species of bird catalogued are, on the whole, seen in most areas similar in composition to those in the area of study.			
Significance of the impact	1 – 20 = Negligible	21 – 56 = Low	57 – 92 = Medium	93 – 128 = High
	1+ 4 +3 + 3) x 2 = 22 Low			

### 4.3 Evaluation of the Various Infrastructure Options

As the results are more or less similar across all the sites surveyed, it does not seem that one option would be more recommended than another.



Tracking the birds seems to be a somewhat difficult and delicate task, in the sense that these birds are constantly on the move. Therefore, individuals have been identified in flight or while resting, and sometimes observed at a distance. The only opportunity available to us would be to consider the type of habitat in which these bird species are likely to be encountered. Indeed, within the framework of this study, four species of bird were listed as being species whose protection is of global importance. Among these species, only the Timneh parrot *Psittacus timneh*, categorised as Vulnerable (VU), is genuinely considered to be a threatened species. The three other species, (the green-tailed bristlebill *Bleda eximius*, the black-headed rufous warbler *Bathmocercus cerviniventris* and the copper-tailed starling *Lamprotornis cupreocauda*) belong to the category Near-threatened (NT). These four are typical forest species, so those forests in a more-or-less good state of conservation in the area of study may constitute their preferred area, and also act as their place of refuge. It would therefore be worthwhile directing particular attention to these types of forest across the whole of the area inventoried.

## 5.0 LONG-TERM MONITORING AND MANAGEMENT PLAN

### 5.1 Mitigation measures

Keeping in mind that the implementation of the project in the area would certainly have an impact on the environment in general, and birds in particular, it is desirable that the developers of this project make provisions, or employ measures to mitigate any short- and long-term negative impacts, in order to ensure the survival and sustainable management of animal populations in this area. Wildlife resources represent an important source of protein and income for the majority of the local populations in the area studied. Their sustainable management would allow these populations not only to combat poverty, but also to ensure a long-term protein resources.

As measures to mitigate any negative impact in the area concerning the loss and fragmentation of habitats, it is necessary to:

- Conserve sacred forests (including very small ones) for the duration of the Project life;
- Avoid using vulnerable or rare wood resources and to put in place effective reforestation procedures during rehabilitation;
- Ban the collection of plants, deforestation and poaching outside the area given over to employees of Amara Mining and contractors;
- Perform regular bio-surveillance checks.

With regard to noise and dust:

- Utilise noise-reduction measures when using machinery and other devices;
- Choose equipment which produces low levels of noise and avoid travelling through areas of habitation where possible;
- Limit explosions and the operation of certain pieces of equipment to daylight hours.
- Ensure that the magnitude of explosions do not exceed permitted limits;
- Regularly spray roads and mining areas to minimise dust;
- Reduce the speed of vehicles, clean dust away, use water spray and suppressors to control the amount of dust.

As for water pollution, it is necessary to:

- Monitor local aquatic habitats;
- Conduct programmes to raise environmental awareness with the employees of Amara mining, contractors and the local populations.

In order to minimise the extent of the project's negative impact on the area's avifauna, it will be necessary to involve the local populations, especially artisanal miners, in all sustainable management activities at the site and in conducting environmental awareness campaigns. Campaigns of Information, Education and Changes in Behaviour must be conducted by people with adequate resources, or by NGOs with experience in this field. Throughout the various phases of the project's implementation, capacity-building in the sustainable management of biodiversity will be necessary for the local populations and the workers who work in the area of study. In order to reduce the project's impact on wildlife resources in general, particular conservation attention must be directed towards unique environments near the area studied (e.g. sacred and gallery forests) for their effective long-term conservation, and alternative livelihood projects (e.g. grasscutter farming) need to be initiated so that local populations can benefit.

It is also necessary to prepare the application of a decommissioning and rehabilitation plan. For example, topsoil must be kept for the rehabilitation phase, and measures to control erosion over the course of the various phases of the project need to be put into place.

## **5.2 Residual Impacts**

Contamination and erosion of the soil may represent some residual impacts at the end of the project. Indeed, even after the implementation of any mitigation measures, it is possible that the soil will remain unsuitable for agriculture. This could increase the pressure on animal resources.

## **5.3 Long-Term Monitoring**

A team of qualified resource persons should be built to monitor in the short and long term the impact of the project, both on the environment and on the human populations who live near the project area.

## 6.0 CONCLUSION

At the end of this study, it is apparent that the six sites targeted for surveys contain an important and diverse bird community. The results are more-or-less the same across the six sites surveyed. Although not really containing any migratory routes or major nesting sites that could cause serious harm in terms of a high mortality rate on the avifauna, the site \$1500 PIT (important for the area's migratory birds) deserves particular attention. The potential impacts of this project on the avifauna in this area are the loss and fragmentation of habitats, noise, dust, and water pollution, erosion and the potential soil contamination. In the end, there might be a decrease in availability and suitability of remaining land for farming, leading to pressure on natural resources, among which birds occupy an important position. Hence, monitoring and surveillance efforts and, above all, the necessary apparatus (cf. the suggested mitigation measures) must be followed before, during and after the mining operations across the entire Yaoure mining area, but with a particular attention to the PIT area.

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## Appendices



**Appendix 1: GPS coordinates (in UTM) of recorded observation points along transects walked in the study area. Mist netting capture points are highlighted in yellow.**

Date	Time	Site	Transect	Recorded point	Latitude (X)	Longitude (Y)	Altitude (m)	Habitat description
17/01/2015		TMF 4	1	1	30N0222113	775695	280	Fallow land
				2	30N0221990	775839	275,3	Fallow land, young teak plantation
				3	30N0222033	775905	280,9	young teak plantation
				4	30N0222059	775960	279,1	Cocoa plantation
				5	30N0221999	776060	294,8	
				6	30N0222111	776128	296,7	Cocoa plantation
				7	30N0222363	776054	284,2	Fallow land
				8	30N0222396	776161	279,3	
				9	30N0222485	776203	258,2	Cassava crop, young cocoa plantation
				10	30N0222493	776074	269,7	Fallow land
18/01/2015		TMF 4	2	1	30N0222485	776206	258,6	Fallow land, cassava crop, young cocoa plantation
				2	30N0222394	776315	274,5	Secondary forest, fallow land, cassava crop, young cocoa plantation
			3	1	30N0222472	776823	274,2	Bush, Secondary forest, fallow land, cassava crop, young cocoa plantation
				2	30N0222485	776027	264,2	
				3	30N0222613	776202	255,3	Primary forest, cocoa plantation
				4	30N0222667	776286		Fallow land
25/01/2015		TMF 1	1	1	30N0223945	778260	228,2	Forest
				2	30N0224021	778342	228,8	Fallow land
				3	30N0224219	778298	226,8	Fallow land
				4	30N0224335	778438	211,9	Fallow land, forest
				5	30N0224402	778581	211	Fallow land
				6	30N0224451	778602	208,4	Fallow land, dry watercourse
				7	30N0224479	778540	210,6	Riparian forest
				8	30N0224506	778503	203	Riparian forest
				9	30N0224523	778563	263,8	Riparian forest
				2	1	30N0223893	778400	243,7
		2	30N0223750		778406	241	Fallow land	
		TMF 1	3	1	30N0225076	779163	253,9	Fallow land
				2	30N0225008	779010	253,4	Woodland savannah
				3	30N0224976	778854	240	Fallow land, Teak plantation
				4	30N0225020	778701	217,7	Cocoa plantation, Teak plantation
				5	30N0225072	778642	208,3	Cocoa plantation, Fallow land
				6	30N0225084	778497	180,5	Fallow land
				7	30N0225144	778422	157,9	Secondary forest

Date	Time	Site	Transect	Recorded point	Latitude (X)	Longitude (Y)	Altitude (m)	Habitat description
27/01/2015		TMF 1	4	8	30N0225105	778379	205,5	Savannah
				1	30N0225016	778337	220,8	Savannah, Secondary forest
				2	30N0224920	778256	215,5	Woodland savannah
				3	30N0224737	778260	204,2	Woodland savannah
			5	4	30N0224558	778489	196,1	Secondary forest
				1	30N0224593	778498	222,5	Woodland savannah
				2	30N0224665	778652	196	Forest, cocoa plantation
				3	30N0224698	778742	170,5	Fallow land
				4	30N0224559	778842	231,9	Cocoa plantation
				5	30N0224495	778932	227,6	Teak plantation
				6	30N0224393	779149	251,5	Young cocoa plantation, Fallow land
			6	7	30N0224259	779295	243,1	Fallow land
				1	30N0224668	779514	231,5	Savannah
				2	30N0224522	779782	218,7	Savannah, Gallery forest
				3	30N0224533	779844	219,7	Gallery forest
				4	30N0224488	779950	202,7	Gallery forest
				5	30N0224228	779730	211,6	Savannah, Gallery forest
				6	30N0224096	779733	207,1	Woodland savannah, forest
				7	30N0223805	779618	220,7	Woodland savannah
				8	30N0223554	779467	217,4	Savannah
				9	30N0223782	779351	221,3	Savannah
				10	30N0223350	779237	222,9	Woodland savannah
				11	30N0223146	779261	222,7	Savannah, Gallery forest
				12	30N0223050	779163	221,6	Fallow land
13	30N0223049	779096		231,4	Woodland savannah			
14	30N0222933	779000		228,5	Fallow land			
15	30N0222836	778932		207,4	Secondary forest			
16	30N0222789	778766		229	Secondary forest			
17	30N0222716	778777		246	Forest, Fallow land			
18	30N0222698	778756		241,8	Fallow land			
19	30N0222542	778779		236,6	Fallow land, Savannah			
20	30N0222433	778851	229,9	Woodland savannah				
21	30N0222371	778984	225,8	Woodland savannah				
22	30N0222116	779063	226,8	Woodland savannah				
23	30N0221865	778952	222,9	Savannah				
24	30N0221255	778604	226,6	Fallow land				
22/01/2015		TMF2	1	1	30N0221136	775206	274,5	Forest
				2	30N0220814	775358	249,5	Fallow land, young teak plantation

Date	Time	Site	Transect	Recorded point	Latitude (X)	Longitude (Y)	Altitude (m)	Habitat description				
				3	30N0220682	775517	250,3	Fallow land				
				4	30N0220862	775679	265,9	Banana plantation				
				5	30N0220687	775858	278,8	Fallow land				
				6	30N0220579	775438	238,9	Cocoa plantation, Fallow land				
				7	30N0220230	775512	225,2	Cocoa plantation				
				8	30N0220223	775642	248,9	Primary forest				
				9	30N0220101	775614	231,1					
				10	30N0220005	775803	258,3	Fallow land				
				11	30N0219985	775919	283,8	Fallow land, banana plantation				
				12	30N0220038	776066	308,9	Fallow land				
				13	30N0220190	776119	310,4	Cocoa plantation, Fallow land				
				14	30N0220300	776193	305	Fallow land				
				15	30N0220367	776276	302,4	Fallow land				
				16	30N0220460	776172	309,1	Fallow land				
				17	30N0220604	776151	302,7	Fallow land				
				18	30N0220713	776902	303,4	Fallow land				
				19	30N0220954	776416	298,5	Forest, Fallow land				
				23/01/2015			2	1	30N0219778	775034	298,1	Fallow land
								2	30N0219931	775781	267,6	Secondary forest
3	30N0219852	775882						Forest, Fallow land				
4	30N0219771	775858	301,8					Yam crop, Forest				
5	30N0219734	775856	273,8					Forest				
6	30N0219780	775787	265,5					Fallow land				
20/01/2015		TMF 3	1	1	30N0217397	775039	347,9	Fallow land				
				2	30N0217495	774918	345,9	Fallow land, cocoa plantation				
				3	30N0217475	774842	337					
				4	30N0217626	774774	341,1	Fallow land				
				5	30N0217771	774675	334,1	Secondary forest, Fallow land				
				6	30N0217903	774668	330,8	Cocoa plantation				
				7	30N0217749	774745	329,5	Cocoa plantation				
21/01/2015		TMF 3	2	1	30N0217796	774612	315,7	Cocoa plantation, Secondary forest, Fallow land				
				2	30N0218104	774365	310,3	Secondary forest, banana plantation				
				3	30N0218157	774321	327,2	Secondary forest				
				4	30N0218303	774369	310,4					
				5	30N0218486	774252	324,9	Cocoa and banana plantations				
				6	30N0218262	774225	315,6	Fallow land				
				7	30N0218190	774258	306,7	Forest, Fallow land				
				8	30N0218126	774097	347,7	Cocoa plantation				
				9	30N0218060	7743022	413,2	Secondary forest				

Date	Time	Site	Transect	Recorded point	Latitude (X)	Longitude (Y)	Altitude (m)	Habitat description
			3	1	30N0218216	774387	380,1	Forest, Fallow land
				2	30N0217990	774527		Cocoa plantation, forest, watercourse
				3	30N0217855	774686		Cocoa plantation, gallery forest, watercourse
				4	30N0217934	774891	304,8	Cocoa plantation
				5	30N0217817	774969	378,6	Fallow land
				6	30N0217729	775118	367,8	Fallow land
				7	30N0217727	775489	368,8	Fallow land
19/01/2015		WRD North	1	1	30N0222368	776213	283,6	Fallow land
				2	30N0220858	778461	226,2	Teak plantation, Fallow land, administration Amara mining
					30N0220201	778521	221,6	Village of Allahou-Bazi
20/012015			2	1	30N0223114	779228	219	Savannah, Secondary forest
25/01/2015				2	30N0223294	778988	223	
				3	30N0223636	778522	234,9	Cocoa plantation, Fallow land
				4	30N0223750	778408	224	
				5	30N0223847	778223	235	Cocoa plantation, Fallow land
				6	30N0223860	778124	240,1	Fallow land
					30N0224455	778606	241,4	Fallow land, secondary forest
26/01/2015		WRD North	3	1	30N0223863	778094	243,9	Fallow land
				2	30N0223760	778010	262,8	Cocoa plantation, Fallow land
				3	30N0223555	777609	250,8	Fallow land
				4	30N0223481	777549	271,7	Fallow land
				5	30N0223406	777520	280,6	Secondary forest
				6	30N0223298	777449	325,7	Cocoa plantation
				7	30N0223213	777471	341,9	Cocoa plantation, Fallow land
				8	30N0223110	777474	311,9	Cocoa plantation
				9	30N0223062	777540	329,8	Cocoa plantation
				10	30N0222922	777746	305,7	Fallow land
				11	30N0222844	777824	300	Cocoa and banana plantations, maize crop
				12	30N0222726	777924	278,9	Cocoa and coffee plantations
				13	30N0222654	777958	259,6	Fallow land
				14	30N0222499	7778056	274,2	Fallow land
				15	30N0222427	777946	269,1	Fallow land
				16	30N0222326	777876	273,8	Fallow land
				17	30N0222231	777908	243,4	Fallow land
				18	30N0222159	777946	263,2	Fallow land
				19	30N0222098	777856	260,6	Fallow land
				20	30N0222028	777864	266,1	Fallow land
				21	30N0221858	778134	249,1	Fallow land
				22	30N0221744	778289	245,1	Woodland savannah

Date	Time	Site	Transect	Recorded point	Latitude (X)	Longitude (Y)	Altitude (m)	Habitat description			
				23	30N0221691	778390	227,1	Woodland savannah			
				24	30N0221458	778434	237	Woodland savannah			
				25	30N0221278	778430	225,7	Savannah			
				26	30N0221162	778415	217,2	Savannah			
24/01/2015		WRD West	1	1	30N0220148	777200	233,3	Savannah			
				2	30N0220182	776958	247,9	Savannah			
				3	30N0220145	776808	273	Cocoa plantation, Fallow land			
				4	30N0220078	776643	289,5	Cocoa plantation			
				5	30N0219881	776637	285,1	Fallow land			
				6	30N0219747	7766739	280,8	Fallow land			
				7	30N0219822	776956	274	Fallow land			
				8	30N0219541	777002	268,4	Fallow land			
				9	30N0219365	777074	277,2	Fallow land			
				10	30N0219370	777385	263,7	Fallow land			
				11	30N0219333	777423	263,4	Fallow land			
				12	30N0219450	777618	249,4	Fallow land			
				13	30N0219561	777617	248,9	Fallow land			
				14	30N0219856	777616	245,6	Fallow land			
				15	30N0219962	777677	241,2	Fallow land			
			2				1	30N0218668	777203	275	Fallow land
							2	30N0218769	777035	280,9	Sacred forest Akpèssèklofoùè
							3	30N0219017	776848	294,8	Teak, cocoa and banana plantations, hill
							4	30N0219151	776639	310,7	Young cocoa plantation
							5	30N0219192	776534	322,9	Young cocoa plantation
6	30N0219277	776329					331,3	Fallow land			
7	30N0219514	776333					312,6	Fallow land			
8	30N0219593	776329					315,2	Cocoa plantation, Fallow land			
9	30N0220061	777033					263	Savannah			
3				1	30N0220164	777250	250	Savannah			
				2	30N0220445	777253	233,1	Savannah, Fallow land, quarry			
				3	30N0220598	777011	247,6	Savannah, carrière			
				4	30N0220609	776838	255	Savannah, carrière			
28/01/2015					30N0218816	777052	300,5	Secondary forest			

## Appendix 2: Bird checklist for species recorded in the study area

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
PHALACROCORACIDAE (1)												
<i>Phalacrocorax africanus</i>	Long-tailed Cormorant	Cormoran africain		13	0,23	0,02	U	LC	R			
ANHINGIDAE (1)												
<i>Anhinga rufa</i>	African Darter	Anhinga d'Afrique		3	0,05	0,01	Ra	LC	R			
ARDEIDAE (9)												
<i>Ixobrychus minutus</i>	Little Bittern	Blongios nain		2	0,04		Ra	LC	R			
<i>Ardeola ralloides</i>	Squacco Heron	Crabier chevelu		1	0,02	0,00	Ra	LC	R/P			
<i>Bubulcus ibis</i>	Cattle Egret	Héron garde-bœufs		112	2,02	0,11	C	LC	R/M			
<i>Butorides striata</i>	Green-backed Heron	Héron strié		3	0,05	0,01	U	LC	R			
<i>Egretta garzetta</i>	Little Egret	Aigrette garzette		15	0,27	0,02	F	LC	R			
<i>Egretta intermedia</i>	Intermediate Egret	Aigrette intermédiaire		5	0,09	0,01	F	LC	R			
<i>Egretta alba</i>	Great Egret	Grande Aigrette		3	0,05	0,01	U	LC	R			
<i>Ardea cinerea</i>	Grey Heron	Héron cendré		2	0,04	0,00	Ra	LC	R/P			
<i>Ardea melanocephala</i>	Black-headed Heron	Héron mélanocéphale		3	0,05	0,01	Ra	LC	R			
ANATIDAE (1)												
<i>Nettapus auritus</i>	African Pygmy Goose	Anserelle naine		5	0,09	0,01	U	LC	R			
ACCIPITRIDAE (12)												
<i>Pernis apivorus</i>	European Honey Buzzard	Bondrée apivore		1	0,02	0,00	Ra	LC	P	II		

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
<i>Aviceda cuculoides</i>	African Cuckoo Hawk	Baza coucou		1	0,02	0,00	Ra	LC	R	II		
<i>Milvus migrans</i>	Black Kite	Milan noir	Dagadali	96	1,74	0,10	C	LC	M	II		
<i>Gypohierax angolensis</i>	Palm-nut Vulture	Palmiste africain	Agninikoua	5	0,09	0,01	U	LC	R	II		
<i>Polyboroides typus</i>	African Harrier Hawk	Gymnogène d'Afrique	Logobou	14	0,25	0,02	F	LC	R	II		
<i>Circus aeruginosus</i>	Eurasian Marsh Harrier	Busard des roseaux		2	0,04	0,00	U	LC	R	II		
<i>Accipiter tachiro</i>	African Goshawk	Autour tachiro		6	0,11	0,01	U	LC	R	II		
<i>Accipiter badius</i>	Shikra	Epervier shikra		22	0,40	0,03	C	LC	R	II		
<i>Accipiter melanoleucus</i>	Black Sparrowhawk	Autour noir		1	0,02	0,00	Ra	LC	R	II		
<i>Butastur rufipennis</i>	Grasshopper Buzzard	Busautour des sauterelles		4	0,07	0,01	U	LC	M	II		
<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	Autour unibande		32	0,58	0,04	F	LC	R	II		
<i>Buteo auguralis</i>	Red-necked Buzzard	Buse d'Afrique		8	0,14	0,01	F	LC	R/M	II		
FALCONIDAE (4)												
<i>Falco tinnunculus</i>	Common Kestrel	Faucon crécerelle		11	0,20	0,02	F	LC	R/P	II		
<i>Falco ardosiaecus</i>	Grey Kestrel	Faucon ardoisé		31	0,56	0,04	C	LC	R	II		
<i>Falco cuvierii</i>	African Hobby	Faucon de Cuvier		9	0,16	0,02	F	LC	R	II		
<i>Falco biarmicus</i>	Lanner Falcon	Faucon lanier		23	0,42	0,03	F	LC	R	II		
PHASIANIDAE (2)												
<i>Francolinus lathamii</i>	Latham's Forest Francolin	Francolin de Latham	Klôa	18	0,33	0,03	F	LC	R			GC
<i>Francolinus bicalcaratus</i>	Double-spurred	Francolin à double éperon	Tchintchindalo	81	1,46	0,09	F	LC	R			

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
	Francolin											
NUMIDIDAE (2)												
<i>Guttera pucherani</i>	Crested Guineafowl	Pintade huppée		17	0,31	0,03	F	LC	R			
<i>Numida meleagris</i>	Helmeted Guineafowl	Pintade commune	Blokôdjê	78	1,41	0,09	F	LC	R			
RALLIDAE (2)												
<i>Himantornis haematopus</i>	Nkulengu Rail	Râle à pieds rouges	Kangloglo	7	0,13	0,01	F	LC	R			GC
<i>Sarothrura pulchra</i>	White-spotted Flufftail	Râle perlé		16	0,29	0,02	F	LC	R			GC
BURHINIDAE (1)												
<i>Burhinus senegalensis</i>	Senegal Thick-knee	Oedicnème du Sénégal		2	0,04	0,00	Ra	LC	R			
CHARADRIIDAE (2)												
<i>Vanellus albiceps</i>	White-headed Lapwing	Vanneau à tête blanche		16	0,29	0,02	F	LC	R			
<i>Vanellus spinosus</i>	Spur-winged Lapwing	Vanneau à éperons		5	0,09	0,01	U	LC	M			
SCOLOPACIDAE (1)												
<i>Actitis hypoleucos</i>	Common Sandpiper	Chevalier guignette		14	0,25	0,02	F	LC	R			
COLUMBIDAE (7)												
<i>Columbar irriditorques</i>	Western Bronze-naped Pigeon	Pigeon à nuque bronzée		11	0,20	0,02	F	LC	R			GC
<i>Treron calvus</i>	African Green Pigeon	Colombar à front nu	Blissosso	87	1,57	0,09	C	LC	R			
<i>Turtur brehmeri</i>	Blue-headed Wood Dove	Tourtelette demoiselle		7	0,13	0,01	U	LC	R			GC
<i>Turtur tympanistria</i>	Tambourine	Tourtelette tambourette	Ahoublé	19	0,34	0,03	F	LC	R			



Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
	Dove											
<i>Turtur afer</i>	Blue-spotted Wood Dove	Tourtelette améthystine		101	1,83	0,11	C	LC	R			
<i>Streptopelia semitorquata</i>	Red-eyed Dove	Tourterelle à collier	Okoumomo	77	1,39	0,09	C	LC	R			
<i>Streptopelia senegalensis</i>	Laughing Dove	Tourterelle maillée		127	2,30	0,12	F	LC	R			
PSITTACIDAE (2)			Ako									
<i>Psittacus timneh</i>	Grey Parrot	Perroquet de Timneh		2	0,04	0,00	Ra	VU	R	II		GC
<i>Poicephalus senegalus</i>	Senegal Parrot	Perroquet youyou		58	1,05	0,07	C	LC	R	II	AO	SG
MUSOPHAGIDAE (4)												
<i>Tauraco persa</i>	Green Turaco	Touraco vert		21	0,38	0,03	F	LC	R	II		GC
<i>Tauraco macrorhynchus</i>	Yellow-billed Turaco	Touraco à gros bec	Béhira	29	0,52	0,04	F	LC	R	II		GC
<i>Musophaga violacea</i>	Violet Turaco	Touraco violet		14	0,25	0,02	F	LC	R	II	AO	SG
<i>Crinifer piscator</i>	Western Grey Plantain-eater	Touraco gris	Kpoloukpolou	95	1,72	0,10	C	LC	R			
CUCULIDAE (9)												
<i>Oxylophus levillantii</i>	Levillant's Cuckoo	Coucou de Levillant		30	0,54	0,04	C	LC	M			
<i>Cuculus solitarius</i>	Red-chested Cuckoo	Coucou solitaire		6	0,11	0,01	F	LC	M			
<i>Cercococcyx olivinus</i>	Olive Long-tailed Cuckoo	Coucou olivâtre		8	0,14	0,01	F	LC	R			GC
<i>Chrysococcyx cupreus</i>	African Emerald Cuckoo	Coucou foliotocol	Yaomindi-aboua	24	0,43	0,03	F	LC	R			
<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	Coucou de Klaas		43	0,78	0,05	C	LC	R/M			
<i>Chrysococcyx caprius</i>	Didric Cuckoo	Coucou didric		29	0,52	0,04	C	LC	R/M			

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
<i>Ceuthmochares aereus</i>	Yellowbill	Malcoha à bec jaune		20	0,36	0,03	C	LC	R			
<i>Centropus leucogaster</i>	Black-throated Coucal	Coucal à ventre blanc		3	0,05	0,01	U	LC	R			GC
<i>Centropus senegalensis</i>	Senegal Coucal	Coucal de Sénégal	Blékou	35	0,63	0,05	C	LC	R			
TYTONIDAE (1)												
<i>Tyto alba</i>	Barn Owl	Effraie des clochers		2	0,04	0,00	Ra	LC	R	II		
STRIGIDAE (1) Akpatoué												
<i>Strix woodfordii</i>	African Wood Owl	Chouette africaine		9	0,16	0,02	Ra	LC	R	II		
CAPRIMULGIDAE (3) Pélou												
<i>Caprimulgus inornatus</i>	Plain Nightjar	Engoulevent terne		9	0,16	0,02	U	LC	M			
<i>Caprimulgus climacurus</i>	Long-tailed Nightjar	Engoulevent à longue queue		17	0,31	0,03	F	LC	R/P			
<i>Macrodipteryx longipennis</i>	Standard-winged Nightjar	Engoulevent à balanciers		21	0,38	0,03	F	LC	M			
APODIDAE (1)												
<i>Apus affinis</i>	Little Swift	Martinet des maisons		58	1,05	0,07	F	LC	R			
TROGONIDAE (1)												
<i>Apaloderma narina</i>	Narina's Trogon	Trogon narina		12	0,22	0,02	F	LC	R			
ALCEDINIDAE (5) Tchouatchoua												
<i>Halcyon leucocephala</i>	Grey-headed Kingfisher	Martin-chasseur à tête grise		31	0,56	0,04	F	LC	M			
<i>Halcyon malimbica</i>	Blue-breasted Kingfisher	Martin-chas. à poitrine bleue		11	0,20	0,02	F	LC	R			
<i>Halcyon senegalensis</i>	Woodland Kingfisher	Martin-chasseur du Sénégal		35	0,63	0,05	C	LC	R			
<i>Ceyx lecontei</i>	African Dwarf Kingfisher	Martin-pêcheur à tête rousse		7	0,13	0,01	U	LC	R			GC

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
<i>Ceyx pictus</i>	African Pygmy Kingfisher	Martin-pêcheur pygmée		17	0,31	0,03	F	LC	R			
MEROPIDAE (2) Srôlo												
<i>Merops pusillus</i>	Little Bee-eater	Guêpier nain		24	0,43	0,03	F	LC	R			
<i>Merops albicollis</i>	White-throated Bee-eater	Guêpier à gorge blanche		115	2,08	0,12	C	LC	M			
CORACIIDAE (2)												
<i>Coracias cyanogaster</i>	Blue-bellied Roller	Rollier à ventre bleu		38	0,69	0,05	C	LC	R			SG
<i>Eurystomus glaucurus</i>	Broad-billed Roller	Rolle violet	Tcouôrôrô	32	0,58	0,04	U	LC	R/M			
PHOENICULIDAE (1)												
<i>Phoeniculus purpureus</i>	Green Wood-hoopoe	Irrisor moqueur	Douhonou-anonman	24	0,43	0,03	F	LC	R			
BUCEROTIDAE (4)												
<i>Tropicranus albocristatus</i>	White-crested Hornbill	Calao à huppe blanche	Pépési-anoman	8	0,14	0,01	F	LC	R			GC
<i>Tockus fasciatus</i>	African Pied Hornbill	Calao longibande	Ayoman	76	1,37	0,08	C	LC	R			GC
<i>Tockus nasutus</i>	African Grey Hornbill	Calao à bec noir	Avrouélébo-ayoman	124	2,24	0,12	C	LC	M			
<i>Bycanistes fistulator</i>	Piping Hornbill	Calao siffleur	Touétouékankan	37	0,67	0,05	C	LC	R			GC
CAPITONIDAE (11) Kpôkprôkprô												
<i>Gymnobucco peli</i>	Bristle-nosed Barbet	Barbican à narines emplumées		13	0,23	0,02	F	LC	R			GC
<i>Gymnobucco calvus</i>	Naked-faced Barbet	Barbican chauve	Kpinhan	123	2,22	0,12	C	LC	R			GC
<i>Pogoniulus scolopaceus</i>	Speckled Tinkerbird	Barbion grivelé		57	1,03	0,07	C	LC	R			GC
<i>Pogoniulus subsulphureus</i>	Yellow-throated	Barbion à gorge jaune		27	0,49	0,04	F	LC	R			GC

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
	Tinkerbird											
<i>Pogolinus bilineatus</i>	Yellow-rumped Tinkerbird	Barbion à croupion jaune		44	0,80	0,06	C	LC	R			
<i>Pogoniulus atroflavus</i>	Red-rumped Tinkerbird	Barbion à croupion rouge		7	0,13	0,01	U	LC	R			GC
<i>Tricholaema hirsuta</i>	Hairy-breasted Barbet	Barbican hérissé		13	0,23	0,02	F	LC	R			GC
<i>Lybius bidentatus</i>	Double-toothed Barbet	Barbican bidenté		24	0,43	0,03	F	LC	R			
<i>Lybius dubius</i>	Bearded Barbet	Barbican à poitrine rouge		39	0,70	0,05	F	LC	R		AO	SG
<i>Lybius vieilloti</i>	Vieillot's Barbet	Barbican de Vieillot		30	0,54	0,04	C	LC	R			
<i>Trachylaemus purpuratus</i>	Yellow-billed Barbet	Barbican pourpré		4	0,07	0,01	U	LC	R			GC
INDICATORIDAE (2)												
<i>Melignomon eisentrauti</i>	Yellow-footed Honeyguide	Indicateur d'Eisentraut		7	0,13	0,01	U	LC	R			GC
<i>Indicator maculatus</i>	Spotted Honeyguide	Indicateur tacheté		26	0,47	0,04	F	LC	R			GC
PICIDAE (1)												
<i>Dendropicos pyrrhogaster</i>	Fire-bellied Woodpecker	Pic à ventre de feu	Babakpôkpô	20	0,36	0,03	U	LC	R			GC
HIRUNDINIDAE (3) Gnamienpia												
<i>Hirundo daurica</i>	Red-rumped Swallow	Hirondelle rousseline		19	0,34	0,03	F	LC	R			
<i>Hirundo rustica</i>	Barn Swallow	Hirondelle rustique		53	0,96	0,06	F	LC	P			
<i>Hirundo lucida</i>	Red-chested Swallow	Hirondelle de Guinée		22	0,40	0,03	F	LC	R			
MOTACILLIDAE (2)												
<i>Motacilla flava</i>	Yellow Wagtail	Bergeronnette printanière		46	0,83	0,06	C	LC	P			

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
<i>Motacilla clara</i>	Mountain Wagtail	Bergeronnette à longue queue		27	0,49	0,04	F	LC	R			
<i>Macronyx croceus</i>	Yellow-throated Longclaw	Sentinelle à gorge jaune	Djéssékolèba	19	0,34	0,03	F	LC	R			
<i>Anthus leucophrys</i>	Plain-backed Pipit	Pipit à dos uni		47	0,85	0,06	C	LC	R			
PYCNONOTIDAE (13)												
<i>Andropadus virens</i>	Little Greenbul	Bulbul verdâtre		77	1,39	0,09	C	LC	R			
<i>Andropadus gracilis</i>	Little Grey Greenbul	Bulbul gracile		15	0,27	0,02	F	LC	R			GC
<i>Andropadus gracilirostris</i>	Slender-billed Greenbul	Bulbul à bec grêle		22	0,40	0,03	F	LC	R			
<i>Andropadus latirostris</i>	Yellow-whiskered Greenbul	Bulbul à moustaches jaunes		20	0,36	0,03	F	LC	R			
<i>Baeopogon indicator</i>	Honeyguide Greenbul	Bulbul à queue blanche		28	0,51	0,04	F	LC	R			GC
<i>Pyrrhurus scandens</i>	Leaflove	Bulbul à queue rousse		29	0,52	0,04	F	LC	R			GC
<i>Tchescelocichla leucopleura</i>	Swamp Palm Bulbul	Bulbul des raphia		23	0,42	0,03	F	LC	R			GC
<i>Phyllastrephus icterinus</i>	Icterine Greenbul	Bulbul icterin		23	0,42	0,03	F	LC	R			GC
<i>Phyllastrephus albigularis</i>	White-throated Greenbul	Bulbul à gorge blanche		23	0,42	0,03	F	LC	R			GC
<i>Bleda eximius</i>	Green-tailed Bristlebill	Bulbul à queue verte		24	0,43	0,03	F	NT	R		AO, RR	GC
<i>Bleda canicapillus</i>	Grey-headed Bristlebill	Bulbul fourmilier		29	0,52	0,04	U	LC	R			GC
<i>Pycnonotus barbatus</i>	Common Bulbul	Bulbul des jardins	Tongblé	114	2,06	0,12	C	LC	R			
<i>Nicator chloris</i>	Western Nicator	Bulbul nicator		18	0,33	0,03	F	LC	R			GC
TURDIDAE (4)												

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
<i>Luscinia megarhynchos</i>	Common Nightingale	Rossignol philomèle		12	0,22	0,02	F	LC	P			
<i>Cossypha albicapilla</i>	White-crowned Robin Chat	Cossyphé à calotte blanche		10	0,18	0,02	F	LC	R			SG
<i>Alethe diademata</i>	Fire-crested Alethe	Alèthe à huppe rousse		47	0,85	0,06	C	LC	R			GC
<i>Stizorhina finschi</i>	Finsch's Flycatcher Thrush	Stizorhin de Finsch		13	0,23	0,02	F	LC	R			GC
SYLVIIDAE (12)												
<i>Bathmocercus cerviniventris</i>	Black-headed Rufous Warbler	Bathmocercue à capuchon		54	0,98	0,07	F	NT	R		AO, RR	GC
<i>Cisticola galactotes</i>	Winding Cisticola	Cisticole roussâtre		47	0,85	0,06	F	LC	R			
<i>Acrocephalus schoenobaenus</i>	Sedge Warbler	Phragmite des joncs		50	0,90	0,06	F	LC	P			
<i>Acrocephalus scirpaceus</i>	European Reed Warbler	Rousserolle effarvate		41	0,74	0,05	F	LC	P			
<i>Acrocephalus arundinaceus</i>	Great Reed Warbler	Rousserolle turdoïde		37	0,67	0,05	F	LC	P			
<i>Acrocephalus rufescens</i>	Greater swamp warbler	Rousserolle des Cannes		46	0,83	0,06	F	LC	P			
<i>Prinia subflava</i>	Tawny-flanked Prinia	Prinia modeste		59	1,07	0,07	C	LC	R			
<i>Heliolais erythropterus</i>	Red-winged Warbler	Prinia à ailes rousses		31	0,56	0,04	C	LC	R			
<i>Apalis sharpii</i>	Sharpe's Apalis	Apalis de Sharpe		48	0,87	0,06	U	LC	R		AO, RR	GC
<i>Camaroptera brachyura</i>	Grey-backed Camaroptera	Camaroptère à tête grise		38	0,69	0,05	U	LC	R			
<i>Eremomela pusilla</i>	Senegal Eremomela	Erémomèle à dos vert		51	0,92	0,06	U	LC	R			SG
<i>Hylia prasina</i>	Green Hylia	Hylia verte		42	0,76	0,05	F	LC	R			GC

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
MONARCHIDAE (2)												
<i>Tersiphone viridis</i>	African Paradise Flycatcher	Tchitrec d'Afrique		13	0,23	0,02	F	LC	R/P			
<i>Terpsiphone rufiventer</i>	Red-bellied Paradise Flycatcher	Tchitrec à ventre roux		51	0,92	0,06	C	LC	R			GC
PLATYSTEIRIDAE (1)												
<i>Dyaphorophya castanea</i>	Chestnut Wattle-eye	Prirot châtain		50	0,90	0,06	U	LC	R			
TIMALIIDAE (1)												
<i>Illadopsis fulvescens</i>	Brown Illadopsis	Akalat brun		42	0,76	0,05	C	LC	R			GC
NECTARINIIDAE (8) Srika												
<i>Hedydipna collaris</i>	Collared Sunbird	Souimanga à collier		41	0,74	0,05	C	LC	R			
<i>Cyanomitra verticalis</i>	Green-headed Sunbird	Souimanga à tête verte		19	0,34	0,03	F	LC	R			
<i>Cyanomitra olivacea</i>	Olive Sunbird	Souimanga olivâtre		40	0,72	0,05	F	LC	R			
<i>Cinnyris superbus</i>	Superb Sunbird	Souimanga superbe		32	0,58	0,04	U	LC	R			GC
<i>Cinnyris johanae</i>	Johanna's Sunbird	Souimanga de Johanna		21	0,38	0,03	F	LC	R			GC
<i>Cinnyris minillus</i>	Tiny Sunbird	Souimanga minule		21	0,38	0,03	F	LC	R			GC
<i>Cinnyris coccinigastrus</i>	Splendid Sunbird	Souimanga éclatant		17	0,31	0,03	F	LC	R			SG
<i>Cinnyris cupreus</i>	Copper Sunbird	Souimanga cuivré		23	0,42	0,03	F	LC	R			
LANIIDAE (2)												
<i>Laniarius barbarus</i>	Yellow-crowned Gonolek	Gonolek de Barbarie		8	0,14	0,01	U	LC	R		AO	
<i>Lanius collaris</i>	Common Fiscal	Pie-grièche fiscale		36	0,65	0,05	U	LC	R			

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
MALACONOTIDAE (4)												
<i>Tchagra senegalus</i>	Black-crowned Tchagra	Tchagra à tête noire		59	1,07	0,07	C	LC	R			
<i>Dryoscopus gambensis</i>	Northern Puffback	Cubla de Gambie		21	0,38	0,03	F	LC	R			
<i>Laniarius aethiopicus</i>	Tropical Boubou	Gonolek d'Abyssinie		22	0,40	0,03	F	LC	R			
<i>Nilaus afer</i>	Brubru	Brubru africain		8	0,14	0,01	U	LC	R			
PRIONOPIDAE (1)												
<i>Prionops plumatus</i>	White Helmet-shrike	Bagadais casqué		36	0,65	0,05	F	LC	R			
ORIOLIDAE (2)												
<i>Oriolus nigripennis</i>	Black-winged Oriole	Loriot à ailes noires		9	0,16	0,02	F	LC	R			GC
<i>Oriolus brachyrhynchus</i>	Western Black-headed Oriole	Loriot à tête noire		33	0,60	0,04	F	LC	R			GC
DICRURIDAE (3)												
<i>Dicrurus atripennis</i>	Shining Drongo	Drongo de forêt		23	0,42	0,03	F	LC	R			GC
<i>Dicrurus modestus</i>	Velvet-mantled Drongo	Drongo modeste		45	0,81	0,06	C	LC	R			
<i>Dicrurus adsimilis</i>	Fork-tailed Drongo	Drongo brillant		21	0,38	0,03	C	LC	R			
CORVIDAE (1) Ekpôtê												
<i>Corvus albus</i>	Pied Crow	Corbeau pie		63	1,14	0,07	C	LC	R			
STURNIDAE (2)												
<i>Lamprotornis splendidus</i>	Splendid Glossy Starling	Choucador splendide		48	0,87	0,06	C	LC	R			



Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
<i>Lamprotornis cupreocauda</i>	Copper-tailed Glossy Starling	Choucador à queue bronzée		16	0,29	0,02	F	NT	R		AO, RR	GC
PASSERIDAE (1)												
<i>Passer griseus</i>	Northern Grey-headed Sparrow	Moineau gris		66	1,19	0,08	C	LC	R			
PLOCEIDAE (5) N'djôle												
<i>Ploceus nigricollis</i>	Black-necked Weaver	Tisserin à cou noir		31	0,56	0,04	F	LC	R			
<i>Ploceus tricolor</i>	Yellow-mantled Weaver	Tisserin tricolore		21	0,38	0,03	F	LC	R			GC
<i>Malimbus scutatus</i>	Red-vented Malimbe	Malimbe à queue rouge		25	0,45	0,04	F	LC	R		AO	GC
<i>Malimbus rubricollis</i>	Red-headed Malimbe	Malimbe à tête rouge		24	0,43	0,03	F	LC	R			GC
<i>Ploceus cucullatus</i>	Village Weaver	Tisserin gendarme		99	1,79	0,10	C	LC	R			
ESTRILDIDAE (7) Awouéssou-anoman												
<i>Nigrita canicapillus</i>	Grey-crowned Nigrofinch	Nigrette à calotte grise		50	0,90	0,06	C	LC				
<i>Nigrita bicolor</i>	Chestnut-breasted Nigrofinch	Nigrette à ventre roux		39	0,70	0,05	C	LC	R			GC
<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	Astrild à joues oranges		81	1,46	0,09	F	LC	R			
<i>Spermophaga haematina</i>	Western Bluebill	Sénégalé sanguin		34	0,61	0,05	F	LC	R			GC
<i>Spermestes cucullatus</i>	Bronze Mannikin	Capucin nonnette		115	2,08	0,12	C	LC	R			
<i>Spermestes bicolor</i>	Black-and-white Mannikin	Capucin bicolore		34	0,61	0,05	C	LC	R			
<i>Spermestes fringilloides</i>	Magpie	Capucin pie		30	0,54	0,04	F	LC	R			

Scientific name	English name	French name	Baoulé name (local language)	Species richness	Observation Frequency(%)	Shannon Diversity index	Abundance	Cons Status IUCN	Bio Status g	Annexe CITES	Endemism	Biome
	Mannikin											
VIDUIDAE (1)												
<i>Vidua macroura</i>	Pin-tailed Whydah	Veuve dominicaine	Afra	88	1,59	0,10	C	LC	R			
TOTAL				5533	100,00	6,92						

NF : Number of Families, NE : Number of Species.

#### Annexe CITES

II: Species listed on appendix II of CITES

#### Abundance:

**C:** Common: observed daily, alone or few individuals  
**F:** Really common: observed nearly daily  
**U:** Less common: not regularly observed, and not observed daily  
**Ra:** Rare: rarely observed, one or two observations of solitary individuals

#### Conservation Status:

**VU:** Vulnerable  
**LC:** Least Concern  
**NT:** Near-Threatened

#### Endemism:

**AO:** Endemic to West Africa  
**RR:** Restricted Range

#### Biome:

**GC:** Belong to Guinea-Congolian forest biome  
**SG:** Belong to Sudano-Guinean savannah biome

#### Biogeographical or Migratory Status

**R:** Resident  
**M:** Intra-african migrator  
**R / P:** Resident and/or palearctic migrator  
**R / M:** Resident and/or Intra-African migrator  
**P:** Palearctic migrator

### Appendix 3: Bird checklist according to the different block surveyed

Table A1 : Bird species list for TMF 4													
NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
1		ARDEIDAE (1)											
	1	<i>Bubulcus ibis</i>	Cattle Egret	Héron garde-boeufs		16	1,42	0,09	LC	R/M			
2		ACCIPITRIDAE (8)											
	2	<i>Pernis apivorus</i>	European Honey Buzzard	Bondrée apivore		1	0,09	0,01	LC	P	II		
	3	<i>Aviceda cuculoides</i>	African Cuckoo Hawk	Baza coucou		1	0,09	0,01	LC	R	II		
	4	<i>Milvus migrans</i>	Black kite	Milan noir	Dagadali	14	1,24	0,08	LC	M	II		
	5	<i>Polyboroides typus</i>	Palm-nut Vulture	Gymnogène d'Afrique	Logobou	4	0,35	0,03	LC	R	II		
	6	<i>Accipiter tachiro</i>	African Goshawk	Autour tachiro		5	0,44	0,03	LC	R	II		
	7	<i>Accipiter badius</i>	Shikra	Epervier shikra		3	0,27	0,02	LC	R	II		
	8	<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	Autour unibande		8	0,71	0,05	LC	R	II		
	9	<i>Buteo auguralis</i>	Red-necked Buzzard	Buse d'Afrique		2	0,18	0,02	LC	R/M	II		
3		FALCONIDAE (2)											
	10	<i>Falco ardosiaceus</i>	Grey Kestrel	Faucon ardoisé		4	0,35	0,03	LC	R	II		
	11	<i>Falco biarmicus</i>	Lanner Falcon	Faucon lanier		6	0,53	0,04	LC	R	II		
4		PHASIANIDAE (1)											
	12	<i>Francolinus bicalcaratus</i>	Double-spurred Francolin	Francolin à double éperon	Tchintchindalo	6	0,53	0,04	LC	R			
5		NUMIDIDAE (2)											
	13	<i>Guttera pucherani</i>	Crested Guineafowl	Pintade huppée		5	0,44	0,03	LC	R			
	14	<i>Numida meleagris</i>	Helmeted Guineafowl	Pintade commune	Blokôdjê	14	1,24	0,08	LC	R			
6		RALLIDAE (2)											
	15	<i>Himantomis haematopus</i>	Nkulengu Rail	Râle à pieds rouges	Kangloglo	2	0,18	0,02	LC	R			
	16	<i>Sarothrura pulchra</i>	White-spotted Flufftail	Râle perlé		5	0,44	0,03	LC	R			

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
7	SCOLOPACIDAE (1)												
	17	<i>Actitis hypoleucos</i>	Common Sandpiper	Chevalier guignette		3	0,27	0,02	LC	R			
8	COLUMBIDAE (7)												
	18	<i>Columbar iriditorques</i>	Western Bronze-naped Pigeon	Pigeon à nuque bronzée		3	0,27	0,02	LC	R			GC
	19	<i>Treron calvus</i>	African Green Pigeon	Colombar à front nu	Blissosso	17	1,51	0,09	LC	R			
	20	<i>Turtur brehmeri</i>	Blue-headed Wood Dove	Tourtelette demoiselle		3	0,27	0,02	LC	R			GC
	21	<i>Turtur tympanistria</i>	Tambourine Dove	Tourtelette tambourine	Ahoublé	3	0,27	0,02	LC	R			
	22	<i>Turtur afer</i>	Blue-spotted Wood Dove	Tourtelette améthystine		21	1,86	0,11	LC	R			
	23	<i>Streptopelia semitorquata</i>	Red-eyed Dove	Tourterelle à collier	Okoumomo	8	0,71	0,05	LC	R			
	24	<i>Streptopelia senegalensis</i>	Laughing Dove	Tourterelle maillée		26	2,31	0,13	LC	R			
9	PSITTACIDAE (2) Ako												
	25	<i>Psittacus timneh</i>	Grey Parrot	Perroquet de Timneh		2	0,18	0,02	VU	R	II		GC
	26	<i>Poicephalus senegalus</i>	Senegal Parrot	Perroquet youyou		7	0,62	0,05	LC	R	II	AO	SG
10	MUSOPHAGIDAE (4)												
	27	<i>Tauraco persa</i>	Green Turaco	Touraco vert		3	0,27	0,02	LC	R	II		GC
	28	<i>Tauraco macrorhynchus</i>	Yellow-billed Turaco	Touraco à gros bec	Béhira	9	0,80	0,06	LC	R	II		GC
	29	<i>Musophaga violacea</i>	Violet Turaco	Touraco violet		2	0,18	0,02	LC	R	II	AO	SG
	30	<i>Crinifer piscator</i>	Western Grey Plantain-eater	Touraco gris	Kpoloukpolou	19	1,69	0,10	LC	R	II		
11	CUCULIDAE (9)												
	31	<i>Oxylophus levaiillanti</i>	Levaiillant's Cuckoo	Coucou de Levaiillant		6	0,53	0,04	LC	M			
	32	<i>Cuculus solitarius</i>	Red-chested Cuckoo	Coucou solitaire		4	0,35	0,03	LC	M			
	33	<i>Cercococcyx olivinus</i>	Olive Long-tailed Cuckoo	Coucou olivâtre		2	0,18	0,02	LC	R			GC
	34	<i>Chrysococcyx cupreus</i>	African Emerald Cuckoo	Coucou foliotocol	Yaomindi-aboua	4	0,35	0,03	LC	R			
	35	<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	Coucou de Klaas		5	0,44	0,03	LC	R/M			
	36	<i>Chrysococcyx caprius</i>	Didric Cuckoo	Coucou didric		7	0,62	0,05	LC	R/M			
	37	<i>Ceuthmochares aereus</i>	Yellowbill	Malchoa à bec jaune		4	0,35	0,03	LC	R			
	38	<i>Centropus leucogaster</i>	Black-throated Coucal	Coucal à ventre blanc		2	0,18	0,02	LC	R			GC

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	39	<i>Centropus senegalensis</i>	Senegal Coucal	Coucal de Sénégal	Blékou	7	0,62	0,05	LC	R			
12	TYTONIDAE (1)												
	40	<i>Tyto alba</i>	Barn Owl	Effraie des clochers		2	0,18	0,02	LC	R	II		
13	STRIGIDAE (1) Akpatoué												
	41	<i>Strix woodfordii</i>	African Wood Owl	Chouette africaine		2	0,18	0,02	LC	R	II		
14	CAPRIMULGIDAE (2) Pélou												
	42	<i>Caprimulgus climacurus</i>	Long-tailed Nightjar	Engouevent à longue queue		5	0,44	0,03	LC	R/P			
	43	<i>Macrodipteryx longipennis</i>	Standard-winged Nightjar	Engouevent à balanciers		2	0,18	0,02	LC	M			
15	APODIDAE (1)												
	44	<i>Apus affinis</i>	Little Swift	Martinet des maisons		19	1,69	0,10	LC	R			
16	TROGONIDAE (1)												
	45	<i>Apaloderma narina</i>	Narina's Trogon	Trogon narina		2	0,18	0,02	LC	R			
17	ALCEDINIDAE (5) Tchouatchoua												
	46	<i>Halcyon leucocephala</i>	Grey-headed Kingfisher	Martin-chasseur à tête grise		8	0,71	0,05	LC	M			
	47	<i>Halcyon malimbica</i>	Blue-breasted Kingfisher	Martin-chas. à poitrine bleue		2	0,18	0,02	LC	R			
	48	<i>Halcyon senegalensis</i>	Woodland Kingfisher	Martin-chasseur du Sénégal		8	0,71	0,05	LC	R			
	49	<i>Ceyx lecontei</i>	African Dwarf Kingfisher	Martin-pêcheur à tête rousse		1	0,09	0,01	LC	R			GC
	50	<i>Ceyx pictus</i>	African Pygmy Kingfisher	Martin-pêcheur pygmée		4	0,35	0,03	LC	R			
18	MEROPIIDAE (2) Srôlo												
	51	<i>Merops pusillus</i>	Little Bee-eater	Guépier nain		9	0,80	0,06	LC	R			
	52	<i>Merops albicollis</i>	White-throated Bee-eater	Guépier à gorge blanche		28	2,48	0,13	LC	M			
19	CORACIIDAE (2)												
	53	<i>Coracias cyanogaster</i>	Blue-bellied Roller	Rollier à ventre bleu		10	0,89	0,06	LC	R			SG
	54	<i>Eurystomus glaucurus</i>	Broad-billed Roller	Rolle violet	Tcouôróró	10	0,89	0,06	LC	R/M			
20	BUCEROTIDAE (3)												
	55	<i>Tockus fasciatus</i>	African Pied Hornbill	Calao longibande	Ayoman	16	1,42	0,09	LC	R			GC
	56	<i>Tockus nasutus</i>	African Grey Hornbill	Calao à bec noir	Avrouélébo-ayoman	19	1,69	0,10	LC	M			

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	57	<i>Bycanistes fistulator</i>	Piping Hornbill	Calao siffleur	Touétouékankan	12	1,06	0,07	LC	R			GC
21	CAPITONIDAE (11)		Kpókròkprò										
	58	<i>Gymnobucco peli</i>	Bristle-nosed Barbet	Barbican à narines emplumées		5	0,44	0,03	LC	R			GC
	59	<i>Gymnobucco calvus</i>	Naked-faced Barbet	Barbican chauve	Kpinhan	14	1,24	0,08	LC	R			GC
	60	<i>Pogoniulus scolopaceus</i>	Speckled Tinkerbird	Barbion grivelé		10	0,89	0,06	LC	R			GC
	61	<i>Pogoniulus subsulphureus</i>	Yellow-throated Tinkerbird	Barbion à gorge jaune		11	0,98	0,07	LC	R			GC
	62	<i>Pogolinus bilineatus</i>	Yellow-rumped Tinkerbird	Barbion à croupion jaune		2	0,18	0,02	LC	R			
	63	<i>Pogoniulus atroflavus</i>	Red-rumped Tinkerbird	Barbion à croupion rouge		1	0,09	0,01	LC	R			GC
	64	<i>Tricholaema hirsuta</i>	Hairy-breasted Barbet	Barbican hérissé		2	0,18	0,02	LC	R			GC
	65	<i>Lybius bidentatus</i>	Double-toothed Barbet	Barbican bidenté		3	0,27	0,02	LC	R			
	66	<i>Lybius dubius</i>	Bearded Barbet	Barbican à poitrine rouge		2	0,18	0,02	LC	R		AO	SG
	67	<i>Lybius vieilloti</i>	Vieillot's Barbet	Barbican de Vieillot		4	0,35	0,03	LC	R			
	68	<i>Trachylaemus purpuratus</i>	Yellow-billed Barbet	Barbican pourpré		1	0,09	0,01	LC	R			GC
22	INDICATORIDAE (2)												
	69	<i>Melignomon eisentrauti</i>	Yellow-footed Honeyguide	Indicateur d'Eisentraut		2	0,18	0,02	LC	R			GC
	70	<i>Indicator maculatus</i>	Spotted Honeyguide	Indicateur tacheté		5	0,44	0,03	LC	R			GC
23	HIRUNDINIDAE (3)		Gnamienpia										
	71	<i>Hirundo daurica</i>	Red-rumped Swallow	Hirondelle rousseline		11	0,98	0,07	LC	R			
	72	<i>Hirundo rustica</i>	Barn Swallow	Hirondelle rustique		16	1,42	0,09	LC	P			
	73	<i>Hirundo lucida</i>	Red-chested Swallow	Hirondelle de Guinée		11	0,98	0,07	LC	R			
24	MOTACILLIDAE (4)												
	74	<i>Motacilla flava</i>	Yellow Wagtail	Bergeronnette printanière		8	0,71	0,05	LC	P			
	75	<i>Motacilla clara</i>	Mountain Wagtail	Bergeronnette à longue queue		5	0,44	0,03	LC	R			
	76	<i>Anthus leucophrys</i>	Plain-backed Pipit	Pipit à dos uni		6	0,53	0,04	LC	R			
25	PYCNONOTIDAE (13)												
	77	<i>Andropadus virens</i>	Little Greenbul	Bulbul verdâtre		14	1,24	0,08	LC	R			

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	78	<i>Andropadus gracilis</i>	Little Grey Greenbul	Bulbul gracile		3	0,27	0,02	LC	R			GC
	79	<i>Andropadus gracilirostris</i>	Slender-billed Greenbul	Bulbul à bec grêle		4	0,35	0,03	LC	R			
	80	<i>Andropadus latirostris</i>	Yellow-whiskered Greenbul	Bulbul à moustaches jaunes		4	0,35	0,03	LC	R			
	81	<i>Baeopogon indicator</i>	Honeyguide Greenbul	Bulbul à queue blanche		4	0,35	0,03	LC	R			GC
	82	<i>Pyrrhurus scandens</i>	Leaflove	Bulbul à queue rousse		3	0,27	0,02	LC	R			GC
	83	<i>Tchescelocichla leucopleura</i>	Swamp Palm Bulbul	Bulbul des raphia		6	0,53	0,04	LC	R			GC
	84	<i>Phyllastrephus icterinus</i>	Icterine Greenbul	Bulbul icterin		5	0,44	0,03	LC	R			GC
	85	<i>Phyllastrephus albicularis</i>	White-throated Greenbul	Bulbul à gorge blanche		5	0,44	0,03	LC	R			GC
	86	<i>Bleda eximius</i>	Green-tailed Bristlebill	Bulbul à queue verte		5	0,44	0,03	NT	R		AO, RR	GC
	87	<i>Bleda canicapillus</i>	Grey-headed Bristlebill	Bulbul fourmilier		5	0,44	0,03	LC	R			GC
	88	<i>Pycnonotus barbatus</i>	Common Bulbul	Bulbul des jardins	Tongblé	25	2,22	0,12	LC	R			
	89	<i>Nicator chloris</i>	Western Nicator	Bulbul nicator		5	0,44	0,03	LC	R			GC
26	TURDIDAE (4)												
	90	<i>Luscinia megarhynchos</i>	Common Nightingale	Rossignol philomèle		3	0,27	0,02	LC	P			
	91	<i>Cossypha albicapilla</i>	White-crowned Robin Chat	Cossyphé à calotte blanche		2	0,18	0,02	LC	R			SG
	92	<i>Alethe diademata</i>	Fire-crested Alethe	Alèthe à huppe rousse		7	0,62	0,05	LC	R			GC
	93	<i>Stizorhina finschi</i>	Finsch's Flycatcher Thrush	Stizorhin de Finsch		7	0,62	0,05	LC	R			GC
27	SYLVIIDAE (12)												
	94	<i>Bathmocercus cerviniventris</i>	Black-headed Rufous Warbler	Bathmocerque à capuchon		14	1,24	0,08	NT	R		AO, RR	GC
	95	<i>Cisticola galactotes</i>	Winding Cisticola	Cisticole roussâtre		11	0,98	0,07	LC	R			
	96	<i>Acrocephalus schoenobaenus</i>	Sedge Warbler	Phragmite des joncs		12	1,06	0,07	LC	P			
	97	<i>Acrocephalus scirpaceus</i>	European Reed Warbler	Rousserolle effarvatte		8	0,71	0,05	LC	P			
	98	<i>Acrocephalus arundinaceus</i>	Great Reed Warbler	Rousserolle turdoïde		14	1,24	0,08	LC	P			
	99	<i>Acrocephalus rufescens</i>	Greater swamp warbler	Rousserolle des Cannes		13	1,15	0,07	LC	P			
	100	<i>Prinia subflava</i>	Tawny-flanked Prinia	Prinia modeste		13	1,15	0,07	LC	R			
	101	<i>Heliolais erythropterus</i>	Red-winged Warbler	Prinia à ailes rousses		6	0,53	0,04	LC	R			

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	102	<i>Apalis sharpii</i>	Sharpe's Apalis	Apalis de Sharpe		13	1,15	0,07	LC	R		AO, RR	GC
	103	<i>Camaroptera brachyura</i>	Grey-backed Camaroptera	Camaroptère à tête grise		16	1,42	0,09	LC	R			
	104	<i>Eremomela pusilla</i>	Senegal Eremomela	Erémomèle à dos vert		13	1,15	0,07	LC	R			SG
	105	<i>Hylia prasina</i>	Green Hylia	Hylia verte		6	0,53	0,04	LC	R			GC
28	MONARCHIDAE (1)												
	106	<i>Terpsiphone rufiventer</i>	Red-bellied Paradise Flycatcher	Tchitrec à ventre roux		12	1,06	0,07	LC	R			GC
29	PLATYSTEIRIDAE (1)												
	107	<i>Dyaphorophya castanea</i>	Chestnut Wattle-eye	Pirit châtain		15	1,33	0,08	LC	R			
30	TIMALIIDAE (1)												
	108	<i>Illadopsis fulvescens</i>	Brown Illadopsis	Akalat brun		13	1,15	0,07	LC	R			GC
31	NECTARINIIDAE (7) Srika												
	109	<i>Hedydipna collaris</i>	Collared Sunbird	Souimanga à collier		14	1,24	0,08	LC	R			
	110	<i>Cyanomitra verticalis</i>	Green-headed Sunbird	Souimanga à tête verte		5	0,44	0,03	LC	R			
	111	<i>Cyanomitra olivacea</i>	Olive Sunbird	Souimanga olivâtre		10	0,89	0,06	LC	R			
	112	<i>Cinnyris superbus</i>	Superb Sunbird	Souimanga superbe		5	0,44	0,03	LC	R			GC
	113	<i>Cinnyris johanae</i>	Johanna's Sunbird	Souimanga de Johanna		9	0,80	0,06	LC	R			GC
	114	<i>Cinnyris minillus</i>	Tiny Sunbird	Souimanga minule		5	0,44	0,03	LC	R			GC
	115	<i>Cinnyris coccinigastrus</i>	Splendid Sunbird	Souimanga éclatant		3	0,27	0,02	LC	R			SG
	116	<i>Cinnyris cupreus</i>	Copper Sunbird	Souimanga cuivré		2	0,18	0,02	LC	R			
32	LANIIDAE (2)												
	117	<i>Laniarius barbarus</i>	Yellow-crowned Gonolek	Gonolek de Barbarie		5	0,44	0,03	LC	R		AO	
	118	<i>Lanius collaris</i>	Common Fiscal	Pie-grièche fiscale		2	0,18	0,02	LC	R			
33	MALACONOTIDAE (3)												
	119	<i>Tchagra senegalus</i>	Black-crowned Tchagra	Tchagra à tête noire		8	0,71	0,05	LC	R			
	120	<i>Dryoscopus gambensis</i>	Northern Puffback	Cubla de Gambie		6	0,53	0,04	LC	R			
	121	<i>Laniarius aethiopicus</i>	Tropical Boubou	Gonolek d'Abyssinie		5	0,44	0,03	LC	R			
34	ORIOLOIDAE (2)												



NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	122	<i>Oriolus nigripennis</i>	Black-winged Oriole	Loriot à ailes noires		1	0,09	0,01	LC	R			GC
	123	<i>Oriolus brachyrhynchus</i>	Western Black-headed Oriole	Loriot à tête noire		7	0,62	0,05	LC	R			GC
35	DICRURIDAE (2)												
	124	<i>Dicurus atripennis</i>	Shining Drongo	Drongo de forêt		8	0,71	0,05	LC	R			GC
	125	<i>Dicurus modestus</i>	Velvet-mantled Drongo	Drongo modeste		14	1,24	0,08	LC	R			
36	CORVIDAE (1) Ekpôté												
	126	<i>Corvus albus</i>	Pied Crow	Corbeau pie		14	1,24	0,08	LC	R			
37	STURNIDAE (2)												
	127	<i>Lamprotonis splendidus</i>	Splendid Glossy Starling	Choucador splendide		9	0,80	0,06	LC	R			
	128	<i>Lamprotonis cupreocauda</i>	Copper-tailed Glossy Starling	Choucador à queue bronzée		4	0,35	0,03	NT	R		AO, RR	GC
38	PASSERIDAE (1)												
	129	<i>Passer griseus</i>	Northern Grey-headed Sparrow	Moineau gris		15	1,33	0,08	LC	R			
39	PLOCEIDAE (3) N'djôle												
	130	<i>Ploceus nigricollis</i>	Black-necked Weaver	Tisserin à cou noir		15	1,33	0,08	LC	R			
	131	<i>Malimbus rubricollis</i>	Red-headed Malimbe	Malimbe à tête rouge		10	0,89	0,06	LC	R			GC
	132	<i>Ploceus cucullatus</i>	Village Weaver	Tisserin gendarme		23	2,04	0,11	LC	R			
40	ESTRILDIDAE (7) Awouéssou-anoman												
	133	<i>Nigrita canicapillus</i>	Grey-crowned Negrofinch	Nigrette à calotte grise		9	0,80	0,06	LC	R			
	134	<i>Nigrita bicolor</i>	Chestnut-breasted Negrofinch	Nigrette à ventre roux		11	0,98	0,07	LC	R			GC
	135	<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	Astrild à joues oranges		14	1,24	0,08	LC	R			
	136	<i>Spermophaga haematina</i>	Western Bluebill	Sénégalé sanguin		11	0,98	0,07	LC	R			GC
	137	<i>Spermestes cucullatus</i>	Bronze Mannikin	Capucin nonnette		27	2,40	0,13	LC	R			
	138	<i>Spermestes bicolor</i>	Black-and-white Mannikin	Capucin bicolore		6	0,53	0,04	LC	R			
	139	<i>Spermestes fringilloides</i>	Magpie Mannikin	Capucin pie		5	0,44	0,03	LC	R			
41	VIDUIDAE (1)												

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	140	<i>Vidua macroura</i>	Pin-tailed Whydah	Veuve dominicaine	Afra	18	1,60	0,10	LC	R			
						1127	100,01	6,77					

**Table A2 : Bird species list for TMF 3**

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
1	ARDEIDAE (1)												
	1	<i>Bubulcus ibis</i>	Cattle Egret	Héron garde-bœufs		26	2,43	0,13	LC		R/M		
2	ACCIPITRIDAE (5)												
	2	<i>Milvus migrans</i>	Black Kite	Milan noir	Dagadali	13	1,22	0,08	LC	II	M		
	3	<i>Polyboroides typus</i>	African Harrier Hawk	Gymnogène d'Afrique	Logobou	3	0,28	0,02	LC	II	R		
	4	<i>Accipiter badius</i>	Shikra	Epervier shikra		5	0,47	0,04	LC	II	R		
	5	<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	Autour unibande		7	0,65	0,05	LC	II	R		
	6	<i>Buteo auguralis</i>	Red-necked Buzzard	Buse d'Afrique		1	0,09	0,01	LC	II	R/M		
3	FALCONIDAE (2)												
	7	<i>Falco ardosiaecus</i>	Grey Kestrel	Faucon ardoisé		4	0,37	0,03	LC	II	R		
	8	<i>Falco biarmicus</i>	Lanner Falcon	Faucon lanier		2	0,19	0,02	LC	II	R		
4	PHASIANIDAE (1)												
	9	<i>Francolinus bicalcaratus</i>	Double-spurred Francolin	Francolin à double éperon	Tchintchindalo	13	1,22	0,08	LC		R		
5	NUMIDIDAE (1)												
	10	<i>Numida meleagris</i>	Helmeted Guineafowl	Pintade commune	Blokôdjé	4	0,37	0,03	LC		R		
6	RALLIDAE (1)												
	11	<i>Sarothrura pulchra</i>	White-spotted Flufftail	Râle perlé		6	0,56	0,04	LC		R		GC
7	COLUMBIDAE (6)												
	12	<i>Treron calvus</i>	African Green Pigeon	Colombar à front nu	Blissosso	20	1,87	0,11	LC		R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	13	<i>Turtur brehmeri</i>	Blue-headed Wood Dove	Tourtelette demoiselle		1	0,09	0,01	LC		R		GC
	14	<i>Turtur tympanistria</i>	Tambourine Dove	Tourtelette tambourette	Ahoublé	5	0,47	0,04	LC		R		
	15	<i>Turtur afer</i>	Blue-spotted Wood Dove	Tourtelette améthystine		17	1,59	0,10	LC		R		
	16	<i>Streptopelia semitorquata</i>	Red-eyed Dove	Tourterelle à collier	Okoumomo	13	1,22	0,08	LC		R		
	17	<i>Streptopelia senegalensis</i>	Laughing Dove	Tourterelle maillée		22	2,06	0,12	LC		R		
8	PSITTACIDAE (1)			Ako									
	18	<i>Poicephalus senegalus</i>	Senegal Parrot	Perroquet youyou		11	1,03	0,07	LC	II	R	AO	SG
9	MUSOPHAGIDAE (3)												
	19	<i>Tauraco macrorhynchus</i>	Yellow-billed Turaco	Touraco à gros bec	Béhira	10	0,94	0,06	LC	II	R		GC
	20	<i>Musophaga violacea</i>	Violet Turaco	Touraco violet		3	0,28	0,02	LC	II	R	AO	SG
	21	<i>Crinifer piscator</i>	Western Grey Plantain-eater	Touraco gris	Kpoloukpolou	18	1,68	0,10	LC	II	R		
10	CUCULIDAE (6)												
	22	<i>Oxylophus levaillantii</i>	Levaillant's Cuckoo	Coucou de Levaillant		5	0,47	0,04	LC		M		
	23	<i>Chrysococcyx cupreus</i>	African Emerald Cuckoo	Coucou foliotocol	Yaomindi-aboua	5	0,47	0,04	LC		R		
	24	<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	Coucou de Klaas		8	0,75	0,05	LC		R/M		
	25	<i>Chrysococcyx caprius</i>	Didric Cuckoo	Coucou didric		3	0,28	0,02	LC		R/M		
	26	<i>Ceuthmochares aereus</i>	Yellowbill	Malcoha à bec jaune		5	0,47	0,04	LC		R		
	27	<i>Centropus senegalensis</i>	Senegal Coucal	Coucal de Sénégal	Blékou	5	0,47	0,04	LC		R		
11	STRIGIDAE (1)			Akatoué									
	28	<i>Strix woodfordii</i>	Barn Owl	Chouette africaine		4	0,37	0,03	LC	II	R		
12	CAPRIMULGIDAE (2)			Pêlou									
	29	<i>Caprimulgus climacurus</i>	Long-tailed Nightjar	Engoulevent à longue queue		2	0,19	0,02	LC		R/P		
	30	<i>Macrodipteryx longipennis</i>	Standard-winged Nightjar	Engoulevent à balanciers		3	0,28	0,02	LC		M		
13	APODIDAE (1)												
	31	<i>Apus affinis</i>	Little Swift	Martinet des maisons		14	1,31	0,08	LC		R		
14	TROGONIDAE (1)												
	32	<i>Apaloderma narina</i>	Narina's Trogon	Trogon narina		5	0,47	0,04	LC		R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
15		ALCEDINIDAE (3)		Tchouatchoua									
	33	<i>Halcyon leucocephala</i>	Grey-headed Kingfisher	Martin-chasseur à tête grise		8	0,75	0,05	LC		M		
	34	<i>Halcyon senegalensis</i>	Woodland Kingfisher	Martin-chasseur du Sénégal		5	0,47	0,04	LC		R		
	35	<i>Ceyx pictus</i>	African Pygmy Kingfisher	Martin-pêcheur pygmée		2	0,19	0,02	LC		R		
16		MEROPIIDAE (1)		Srôlo									
	36	<i>Merops albicollis</i>	White-throated Bee-eater	Guêpier à gorge blanche		24	2,25	0,12	LC		M		
17		CORACIIDAE (2)											
	37	<i>Coracias cyanogaster</i>	Blue-bellied Roller	Rollier à ventre bleu		6	0,56	0,04	LC		R		SG
	38	<i>Eurystomus glaucurus</i>	Broad-billed Roller	Rolle violet	Tcouôrôrô	6	0,56	0,04	LC		R/M		
18		BUCEROTIDAE (4)											
	39	<i>Tropicranus albocristatus</i>	White-crested Hornbill	Calao à huppe blanche	Pépési-anoman	3	0,28	0,02	LC		R		GC
	40	<i>Tockus fasciatus</i>	African Pied Hornbill	Calao longibande	Ayoman	19	1,78	0,10	LC		R		GC
	41	<i>Tockus nasutus</i>	African Grey Hornbill	Calao à bec noir	Avrouélébo-ayoman	23	2,15	0,12	LC		M		
	42	<i>Bycanistes fistulator</i>	Piping Hornbill	Calao siffleur	Touétouékankan	7	0,65	0,05	LC		R		GC
19		CAPITONIDAE (11)		Kpôkpôkpôrô									
	43	<i>Gymnobucco peli</i>	Bristle-nosed Barbet	Barbican à narines emplumées		5	0,47	0,04	LC		R		GC
	44	<i>Gymnobucco calvus</i>	Naked-faced Barbet	Barbican chauve	Kpinhan	19	1,78	0,10	LC		R		GC
	45	<i>Pogoniulus scolopaceus</i>	Speckled Tinkerbird	Barbion grivelé		11	1,03	0,07	LC		R		GC
	46	<i>Pogoniulus subsulphureus</i>	Yellow-throated Tinkerbird	Barbion à gorge jaune		3	0,28	0,02	LC		R		GC
	47	<i>Pogolinus bilineatus</i>	Yellow-rumped Tinkerbird	Barbion à croupion jaune		6	0,56	0,04	LC		R		
	48	<i>Pogoniulus atroflavus</i>	Red-rumped Tinkerbird	Barbion à croupion rouge		3	0,28	0,02	LC		R		GC
	49	<i>Tricholaema hirsuta</i>	Hairy-breasted Barbet	Barbican hérissé		5	0,47	0,04	LC		R		GC
	50	<i>Lybius bidentatus</i>	Double-toothed Barbet	Barbican bidenté		8	0,75	0,05	LC		R		
	51	<i>Lybius dubius</i>	Bearded Barbet	Barbican à poitrine rouge		3	0,28	0,02	LC		R	AO	SG
	52	<i>Lybius vieilloti</i>	Vieillot's Barbet	Barbican de Vieillot		8	0,75	0,05	LC		R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	53	<i>Trachylaemus purpuratus</i>	Yellow-billed Barbet	Barbican pourpré		2	0,19	0,02	LC		R		GC
20	INDICATORIDAE (1)												
	54	<i>Indicator maculatus</i>	Spotted Honeyguide	Indicateur tacheté		11	1,03	0,07	LC		R		GC
21	HIRUNDINIDAE (2) Gnamienpia												
	55	<i>Hirundo daurica</i>	Red-rumped Swallow	Hirondelle rousseline		8	0,75	0,05	LC		R		
	56	<i>Hirundo rustica</i>	Barn Swallow	Hirondelle rustique		23	2,15	0,12	LC		P		
22	MOTACILLIDAE (3)												
	57	<i>Motacilla flava</i>	Yellow Wagtail	Bergeronnette printanière		11	1,03	0,07	LC		P		
	58	<i>Motacilla clara</i>	Mountain Wagtail	Bergeronnette à longue queue		5	0,47	0,04	LC		R		
	59	<i>Anthus leucophrys</i>	Plain-backed Pipit	Pipit à dos uni		9	0,84	0,06	LC		R		
23	PYCNONOTIDAE (13)												
	60	<i>Andropadus virens</i>	Little Greenbul	Bulbul verdâtre		18	1,68	0,10	LC		R		
	61	<i>Andropadus gracilis</i>	Little Grey Greenbul	Bulbul gracie		5	0,47	0,04	LC		R		GC
	62	<i>Andropadus gracilirostris</i>	Slender-billed Greenbul	Bulbul à bec grêle		8	0,75	0,05	LC		R		
	63	<i>Andropadus latirostris</i>	Yellow-whiskered Greenbul	Bulbul à moustaches jaunes		5	0,47	0,04	LC		R		
	64	<i>Baeopogon indicator</i>	Honeyguide Greenbul	Bulbul à queue blanche		11	1,03	0,07	LC		R		GC
	65	<i>Pyrhurus scandens</i>	Leaflove	Bulbul à queue rousse		8	0,75	0,05	LC		R		GC
	66	<i>Tchescelocichla leucopleura</i>	Swamp Palm Bulbul	Bulbul des raphia		3	0,28	0,02	LC		R		GC
	67	<i>Phyllastrephus icterinus</i>	Icterine Greenbul	Bulbul icterin		6	0,56	0,04	LC		R		GC
	68	<i>Phyllastrephus albigularis</i>	White-throated Greenbul	Bulbul à gorge blanche		11	1,03	0,07	LC		R		GC
	69	<i>Bleda eximius</i>	Green-tailed Bristlebill	Bulbul à queue verte		8	0,75	0,05	NT		R	AO, RR	GC
	70	<i>Bleda canicapillus</i>	Grey-headed Bristlebill	Bulbul fourmiier		7	0,65	0,05	LC		R		GC
	71	<i>Pycnonotus barbatus</i>	Common Bulbul	Bulbul des jardins	Tongblé	17	1,59	0,10	LC		R		
	72	<i>Nicator chloris</i>	Western Nicator	Bulbul nicator		5	0,47	0,04	LC		R		GC
24	TURDIDAE (2)												
	73	<i>Luscinia megarhynchos</i>	Common Nightingale	Rossignol philomèle		6	0,56	0,04	LC		P		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	74	<i>Alethe diademata</i>	Fire-crested Alethe	Alèthe à huppe rousse		8	0,75	0,05	LC		R		GC
25	SYLVIIDAE (12)												
	75	<i>Bathmocercus cerviniventris</i>	Black-headed Rufous Warbler	Bathmocerque à capuchon		8	0,75	0,05	NT		R	AO, RR	GC
	76	<i>Cisticola galactotes</i>	Winding Cisticola	Cisticole roussâtre		11	1,03	0,07	LC		R		
	77	<i>Acrocephalus schoenobaenus</i>	Sedge Warbler	Phragmite des joncs		13	1,22	0,08	LC		P		
	78	<i>Acrocephalus scirpaceus</i>	European Reed Warbler	Rousserolle effarvate		14	1,31	0,08	LC		P		
	79	<i>Acrocephalus arundinaceus</i>	Great Reed Warbler	Rousserolle turdoïde		8	0,75	0,05	LC		P		
	80	<i>Acrocephalus rufescens</i>	Greater swamp warbler	Rousserolle des Cannes		15	1,40	0,09	LC		P		
	81	<i>Prinia subflava</i>	Tawny-flanked Prinia	Prinia modeste		15	1,40	0,09	LC		R		
	82	<i>Heliolais erythropterus</i>	Red-winged Warbler	Prinia à ailes rouges		5	0,47	0,04	LC		R		
	83	<i>Apalis sharpii</i>	Sharpe's Apalis	Apalis de Sharpe		10	0,94	0,06	LC		R	AO, RR	GC
	84	<i>Camaroptera brachyura</i>	Grey-backed Camaroptera	Camaroptère à tête grise		4	0,37	0,03	LC		R		
	85	<i>Eremomela pusilla</i>	Senegal Eremomela	Érémomèle à dos vert		7	0,65	0,05	LC		R		SG
	86	<i>Hylia prasina</i>	Green Hylia	Hylia verte		5	0,47	0,04	LC		R		GC
26	MONARCHIDAE (1)												
	87	<i>Terpsiphone rufiventer</i>	Red-bellied Paradise Flycatcher	Tchitrec à ventre roux		12	1,12	0,07	LC		R		GC
27	PLATYSTEIRIDAE (1)												
	88	<i>Dyaphorophya castanea</i>	Chestnut Wattle-eye	Priit châtain		9	0,84	0,06	LC		R		
28	TIMALIIDAE (1)												
	89	<i>Illadopsis fulvescens</i>	Brown Illadopsis	Akalat brun		10	0,94	0,06	LC		R		GC
29	NECTARINIIDAE (8) Srika												
	90	<i>Hedydipna collaris</i>	Collared Sunbird	Souimanga à collier		11	1,03	0,07	LC		R		
	91	<i>Cyanomitra verticalis</i>	Green-headed Sunbird	Souimanga à tête verte		5	0,47	0,04	LC		R		
	92	<i>Cyanomitra olivacea</i>	Olive Sunbird	Souimanga olivâtre		8	0,75	0,05	LC		R		
	93	<i>Cinnyris superbus</i>	Superb Sunbird	Souimanga superbe		2	0,19	0,02	LC		R		GC

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	94	<i>Cinnyris johanae</i>	Johanna's Sunbird	Souimanga de Johanna		3	0,28	0,02	LC		R		GC
	95	<i>Cinnyris minillus</i>	Tiny Sunbird	Souimanga minule		7	0,65	0,05	LC		R		GC
	96	<i>Cinnyris coccinigastrus</i>	Splendid Sunbird	Souimanga éclatant		2	0,19	0,02	LC		R		SG
	97	<i>Cinnyris cupreus</i>	Copper Sunbird	Souimanga cuivré		9	0,84	0,06	LC		R		
30	LANIIDAE (2)												
	98	<i>Laniarius barbarus</i>	Yellow-crowned Gonolek	Gonolek de Barbarie		3	0,28	0,02	LC		R	AO	
	99	<i>Lanius collaris</i>	Common Fiscal	Pie-grièche fiscale		7	0,65	0,05	LC		R		
31	MALACONOTIDAE (3)												
	100	<i>Tchagra senegalus</i>	Black-crowned Tchagra	Tchagra à tête noire		14	1,31	0,08	LC		R		
	101	<i>Dryoscopus gambensis</i>	Northern Puffback	Cubla de Gambie		6	0,56	0,04	LC		R		
	102	<i>Laniarius aethiopicus</i>	Tropical Boubou	Gonolek d'Abyssinie		5	0,47	0,04	LC		R		
32	ORIOIIDAE (2)												
	103	<i>Oriolus nigripennis</i>	Black-winged Oriole	Loriot à ailes noires		5	0,47	0,04	LC		R		GC
	104	<i>Oriolus brachyrhynchus</i>	Western Black-headed Oriole	Loriot à tête noire		9	0,84	0,06	LC		R		GC
33	DICURURIDAE (3)												
	105	<i>Dicurus atripennis</i>	Shining Drongo	Drongo de forêt		5	0,47	0,04	LC		R		GC
	106	<i>Dicurus modestus</i>	Velvet-mantled Drongo	Drongo modeste		12	1,12	0,07	LC		R		
34	CORVIDAE (1) Ekpôté												
	107	<i>Corvus albus</i>	Pied Crow	Corbeau pie		10	0,94	0,06	LC		R		
35	STURNIDAE (2)												
	108	<i>Lamprotornis splendidus</i>	Splendid Glossy Starling	Choucador splendide		8	0,75	0,05	LC		R		
	109	<i>Lamprotornis cupreocauda</i>	Copper-tailed Glossy Starling	Choucador à queue bronzée		3	0,28	0,02	NT		R	AO, RR	GC
36	PASSERIDAE (1)												
	110	<i>Passer griseus</i>	Northern Grey-headed Sparrow	Moineau gris		10	0,94	0,06	LC		R		
37	PLOCEIDAE (5) N'djôle												

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	111	<i>Ploceus nigricollis</i>	Black-necked Weaver	Tisserin à cou noir		5	0,47	0,04	LC		R		
	112	<i>Ploceus tricolor</i>	Yellow-mantled Weaver	Tisserin tricolore		9	0,84	0,06	LC		R		GC
	113	<i>Malimbus scutatus</i>	Red-vented Malimbe	Malimbe à queue rouge		8	0,75	0,05	LC		R	AO	GC
	114	<i>Malimbus rubricollis</i>	Red-headed Malimbe	Malimbe à tête rouge		11	1,03	0,07	LC		R		GC
	115	<i>Ploceus cucullatus</i>	Village Weaver	Tisserin gendarme		16	1,50	0,09	LC		R		
38	ESTRILDIDAE (7)		Awouéssou-anoman										
	116	<i>Nigrita canicapillus</i>	Grey-crowned Negrofinch	Nigrette à calotte grise		12	1,12	0,07	LC				
	117	<i>Nigrita bicolor</i>	Chestnut-breasted Negrofinch	Nigrette à ventre roux		14	1,31	0,08	LC		R		GC
	118	<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	Astrild à joues oranges		20	1,87	0,11	LC		R		
	119	<i>Spermophaga haematina</i>	Western Bluebill	Sénégal sanguin		6	0,56	0,04	LC		R		GC
	120	<i>Spermestes cucullatus</i>	Bronze Mannikin	Capucin nonnette		19	1,78	0,10	LC		R		
	121	<i>Spermestes bicolor</i>	Black-and-white Mannikin	Capucin bicolore		7	0,65	0,05	LC		R		
	122	<i>Spermestes fringilloides</i>	Magpie Mannikin	Capucin pie		6	0,56	0,04	LC		R		
39	VIDUIDAE (1)												
	123	<i>Vidua macroura</i>	Pin-tailed Whydah	Veuve dominicaine	Afra	14	1,31	0,08	LC		R		
						1069	100,00	6,67					

**Table A3 : Bird species list for TMF 2**

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
1	ARDEIDAE (2)												
	1	<i>Bubulcus ibis</i>	Cattle Egret	Héron garde-bœufs		21	1,80	0,00	LC		R/M		



NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	2	<i>Butorides striata</i>	Green-backed Heron	Héron strié		2	0,17	0,02	LC		R		
2		ACCIPITRIDAE (8)											
	3	<i>Milvus migrans</i>	Black Kite	Milan noir	Dagadali	14	1,20	0,08	LC	II	M		
	4	<i>Gypohierax angolensis</i>	Palm-nut Vulture	Palmiste africain	Agninikoua	5	0,43	0,03	LC	II	R		
	5	<i>Polyboroides typus</i>	African Harrier Hawk	Gymnogène d'Afrique	Logobou	2	0,17	0,02	LC	II	R		
	6	<i>Accipiter tachiro</i>	African Goshawk	Autour tachiro		1	0,09	0,01	LC	II	R		
	7	<i>Accipiter badius</i>	Shikra	Epervier shikra		5	0,43	0,03	LC	II	R		
	8	<i>Accipiter melanoleucus</i>	Black Sparrowhawk	Autour noir		1	0,09	0,01	LC	II	R		
	9	<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	Autour unibande		2	0,17	0,02	LC	II	R		
	10	<i>Buteo auguralis</i>	Red-necked Buzzard	Buse d'Afrique		2	0,17	0,02	LC	II	R/M		
3		FALCONIDAE (3)											
	11	<i>Falco tinnunculus</i>	Common Kestrel	Faucon crécerelle		3	0,26	0,02	LC	II	R/P		
	12	<i>Falco ardosiaceus</i>	Grey Kestrel	Faucon ardoisé		4	0,34	0,03	LC	II	R		
	13	<i>Falco biarmicus</i>	Lanner Falcon	Faucon lanier		4	0,34	0,03	LC	II	R		
4		PHASIANIDAE (2)											
	14	<i>Francolinus lathamii</i>	Latham's Forest Francolin	Francolin de Latham	Klôa	10	0,86	0,06	LC		R		GC
	15	<i>Francolinus bicalcaratus</i>	Double-spurred Francolin	Francolin à double éperon	Tchintchindalo	9	0,77	0,05	LC		R		
5		NUMIDIDAE (2)											
	16	<i>Guttera pucherani</i>	Crested Guineafowl	Pintade huppée		9	0,77	0,05	LC		R		
	17	<i>Numida meleagris</i>	Helmeted Guineafowl	Pintade commune	Blokôdjê	9	0,77	0,05	LC		R		
6		RALLIDAE (2)											
	18	<i>Himantornis haematopus</i>	Nkulengu Rail	Râle à pieds rouges	Kangloglo	1	0,09	0,01	LC		R		GC
	19	<i>Sarothrura pulchra</i>	White-spotted Flufftail	Râle perlé		2	0,17	0,02	LC		R		GC
7		SCOLOPACIDAE (1)											
	20	<i>Actitis hypoleucos</i>	Common Sandpiper	Chevalier guignette		2	0,17	0,02	LC		R		
8		COLUMBIDAE (7)											
	21	<i>Columbar iriditorques</i>	Western Bronze-naped	Pigeon à nuque bronzée		5	0,43	0,03	LC		R		GC

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
			Pigeon										
	22	<i>Treron calvus</i>	African Green Pigeon	Colombar à front nu	Blisso	14	1,20	0,08	LC		R		
	23	<i>Turtur brehmeri</i>	Blue-headed Wood Dove	Tourtelette demoiselle		2	0,17	0,02	LC		R		GC
	24	<i>Turtur tympanistria</i>	Tambourine Dove	Tourtelette tambourette	Ahoublé	4	0,34	0,03	LC		R		
	25	<i>Turtur afer</i>	Blue-spotted Wood Dove	Tourtelette améthystine		12	1,03	0,07	LC		R		
	26	<i>Streptopelia semitorquata</i>	Red-eyed Dove	Tourterelle à collier	Okoumomo	16	1,37	0,08	LC		R		
	27	<i>Streptopelia senegalensis</i>	Laughing Dove	Tourterelle maillée		15	1,29	0,08	LC		R		
9		PSITTACIDAE (1)		Ako									
	28	<i>Poicephalus senegalus</i>	Senegal Parrot	Perroquet youyou		8	0,69	0,05	LC	II	R	AO	SG
10		MUSOPHAGIDAE (3)											
	29	<i>Tauraco persa</i>	Green Turaco	Touraco vert		14	1,20	0,08	LC	II	R		GC
	30	<i>Tauraco macrorhynchus</i>	Yellow-billed Turaco	Touraco à gros bec	Béhira	7	0,60	0,04	LC	II	R		GC
	31	<i>Crinifer piscator</i>	Western Grey Plantain-eater	Touraco gris	Kpoloukpolou	15	1,29	0,08	LC	II	R		
11		CUCULIDAE (9)											
	32	<i>Oxylophus levillantii</i>	Levaillant's Cuckoo	Coucou de Levaillant		7	0,60	0,04	LC		M		
	33	<i>Cuculus solitarius</i>	Red-chested Cuckoo	Coucou solitaire		2	0,17	0,02	LC		M		
	34	<i>Cercococcyx olivinus</i>	Olive Long-tailed Cuckoo	Coucou olivâtre		4	0,34	0,03	LC		R		GC
	35	<i>Chrysococcyx cupreus</i>	African Emerald Cuckoo	Coucou foliotocol	Yaomindi-aboua	10	0,86	0,06	LC		R		
	36	<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	Coucou de Klaas		11	0,94	0,06	LC		R/M		
	37	<i>Chrysococcyx caprius</i>	Didric Cuckoo	Coucou didric		8	0,69	0,05	LC		R/M		
	38	<i>Ceuthmochares aereus</i>	Yellowbill	Malcoha à bec jaune		3	0,26	0,02	LC		R		
	39	<i>Centropus leucogaster</i>	Black-throated Coucal	Coucal à ventre blanc		1	0,09	0,01	LC		R		GC
	40	<i>Centropus senegalensis</i>	Senegal Coucal	Coucal de Sénégal	Blékou	8	0,69	0,05	LC		R		
12		STRIGIDAE (1)		Akpatoué									
	41	<i>Strix woodfordii</i>	African Wood Owl	Chouette africaine		3	0,26	0,02	LC	II	R		
13		CAPRIMULGIDAE (3)		Pélou									

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	42	<i>Caprimulgus inornatus</i>	Plain Nightjar	Engoulevent tere		5	0,43	0,03	LC		M		
	43	<i>Caprimulgus climacurus</i>	Long-tailed Nightjar	Engoulevent à longue queue		3	0,26	0,02	LC		R/P		
	44	<i>Macrodipteryx longipennis</i>	Standard-winged Nightjar	Engoulevent à balanciers		5	0,43	0,03	LC		M		
14	APODIDAE (1)												
	45	<i>Apus affinis</i>	Little Swift	Martinet des maisons		11	0,94	0,06	LC		R		
15	TROGONIDAE (1)												
	46	<i>Apaloderma narina</i>	Narina's Trogon	Trogon narina		5	0,43	0,03	LC		R		
16	ALCEDINIDAE (5) Tchouatchoua												
	47	<i>Halcyon leucocephala</i>	Grey-headed Kingfisher	Martin-chasseur à tête grise		6	0,52	0,04	LC		M		
	48	<i>Halcyon malimbica</i>	Blue-breasted Kingfisher	Martin-chas. à poitrine bleue		7	0,60	0,04	LC		R		
	49	<i>Halcyon senegalensis</i>	Woodland Kingfisher	Martin-chasseur du Sénégal		10	0,86	0,06	LC		R		
	50	<i>Ceyx lecontei</i>	African Dwarf Kingfisher	Martin-pêcheur à tête rousse		6	0,52	0,04	LC		R		GC
	51	<i>Ceyx pictus</i>	African Pygmy Kingfisher	Martin-pêcheur pygmée		5	0,43	0,03	LC		R		
17	MEROPIIDAE (2) Srôlo												
	52	<i>Merops pusillus</i>	Little Bee-eater	Guêpier nain		6	0,52	0,04	LC		R		
	53	<i>Merops albicollis</i>	White-throated Bee-eater	Guêpier à gorge blanche		19	1,63	0,10	LC		M		
18	CORACIIDAE (2)												
	54	<i>Coracias cyanogaster</i>	Blue-bellied Roller	Rollier à ventre bleu		8	0,69	0,05	LC		R		SG
	55	<i>Eurystomus glaucurus</i>	Broad-billed Roller	Rolle violet	Tcouôrôrô	8	0,69	0,05	LC		R/M		
19	PHOENICULIDAE (1)												
	56	<i>Phoeniculus purpureus</i>	Green Wood-hoopoe	Irrisor moqueur	Douhonou-anonman	15	1,29	0,08	LC		R		
20	BUCEROTIDAE (4)												
	57	<i>Tropicranus albocristatus</i>	White-crested Hornbill	Calao à huppe blanche	Pépési-anoman	5	0,43	0,03	LC		R		GC
	58	<i>Tockus fasciatus</i>	African Pied Hornbill	Calao longibande	Ayoman	13	1,12	0,07	LC		R		GC
	59	<i>Tockus nasutus</i>	African Grey Hornbill	Calao à bec noir	Avrouélébo-ayoman	24	2,06	0,12	LC		M		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	60	<i>Bycanistes fistulator</i>	Piping Hornbill	Calao siffleur	Touétouékankan	8	0,69	0,05	LC		R		GC
21	CAPITONIDAE (11)		Kpòkpòkpòrò										
	61	<i>Gymnobucco peli</i>	Bristle-nosed Barbet	Barbican à narines emplumées		3	0,26	0,02	LC		R		GC
	62	<i>Gymnobucco calvus</i>	Naked-faced Barbet	Barbican chauve	Kpinhan	14	1,20	0,08	LC		R		GC
	63	<i>Pogoniulus scolopaceus</i>	Speckled Tinkerbird	Barbion grivelé		8	0,69	0,05	LC		R		GC
	64	<i>Pogoniulus subsulphureus</i>	Yellow-throated Tinkerbird	Barbion à gorge jaune		10	0,86	0,06	LC		R		GC
	65	<i>Pogolinus bilineatus</i>	Yellow-rumped Tinkerbird	Barbion à croupion jaune		7	0,60	0,04	LC		R		
	66	<i>Pogoniulus atroflavus</i>	Red-rumped Tinkerbird	Barbion à croupion rouge		1	0,09	0,01	LC		R		GC
	67	<i>Tricholaema hirsuta</i>	Hairy-breasted Barbet	Barbican hérissé		5	0,43	0,03	LC		R		GC
	68	<i>Lybius bidentatus</i>	Double-toothed Barbet	Barbican bidenté		8	0,69	0,05	LC		R		
	69	<i>Lybius dubius</i>	Bearded Barbet	Barbican à poitrine rouge		5	0,43	0,03	LC		R	AO	SG
	70	<i>Lybius vieilloti</i>	Vieillot's Barbet	Barbican de Vieillot		4	0,34	0,03	LC		R		
	71	<i>Trachylaemus purpuratus</i>	Yellow-billed Barbet	Barbican pourpré		1	0,09	0,01	LC		R		GC
22	INDICATORIDAE (2)												
	72	<i>Melignomon eisentrauti</i>	Yellow-footed Honeyguide	Indicateur d'Eisentraut		5	0,43	0,03	LC		R		GC
	73	<i>Indicator maculatus</i>	Spotted Honeyguide	Indicateur tacheté		8	0,69	0,05	LC		R		GC
23	PICIDAE (1)												
	74	<i>Dendropicos pyrrhogaster</i>	Fire-bellied Woodpecker	Pic à ventre de feu	Babakpòkpò	8	0,69	0,05	LC		R		GC
24	MOTACILLIDAE (2)												
	75	<i>Motacilla flava</i>	Yellow Wagtail	Bergeronnette printanière		14	1,20	0,08	LC		P		
	76	<i>Anthus leucophrys</i>	Plain-backed Pipit	Pipit à dos uni		9	0,77	0,05	LC		R		
25	PYCNONOTIDAE (13)												
	77	<i>Andropadus virens</i>	Little Greenbul	Bulbul verdâtre		13	1,12	0,07	LC		R		
	78	<i>Andropadus gracilis</i>	Little Grey Greenbul	Bulbul gracie		7	0,60	0,04	LC		R		GC
	79	<i>Andropadus gracilirostris</i>	Slender-billed Greenbul	Bulbul à bec grêle		4	0,34	0,03	LC		R		
	80	<i>Andropadus latirostris</i>	Yellow-whiskered Greenbul	Bulbul à moustaches jaunes		4	0,34	0,03	LC		R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	81	<i>Baeopogon indicator</i>	Honeyguide Greenbul	Bulbul à queue blanche		9	0,77	0,05	LC		R		GC
	82	<i>Pyrrhurus scandens</i>	Leaflove	Bulbul à queue rousse		6	0,52	0,04	LC		R		GC
	83	<i>Tchescelocichla leucopleura</i>	Swamp Palm Bulbul	Bulbul des raphia		11	0,94	0,06	LC		R		GC
	84	<i>Phyllastrephus icterinus</i>	Icterine Greenbul	Bulbul icterin		7	0,60	0,04	LC		R		GC
	85	<i>Phyllastrephus albigularis</i>	White-throated Greenbul	Bulbul à gorge blanche		7	0,60	0,04	LC		R		GC
	86	<i>Bleda eximius</i>	Green-tailed Bristlebill	Bulbul à queue verte		8	0,69	0,05	NT		R	AO, RR	GC
	87	<i>Bleda canicapillus</i>	Grey-headed Bristlebill	Bulbul fourmilier		12	1,03	0,07	LC		R		GC
	88	<i>Pycnonotus barbatus</i>	Common Bulbul	Bulbul des jardins	Tongblé	18	1,55	0,09	LC		R		
	89	<i>Nicator chloris</i>	Western Nicator	Bulbul nicator		2	0,17	0,02	LC		R		GC
26	TURDIDAE (4)												
	90	<i>Luscinia megarhynchos</i>	Common Nightingale	Rossignol philomèle		3	0,26	0,02	LC		P		
	91	<i>Cossypha albicapilla</i>	White-crowned Robin Chat	Cossyphé à calotte blanche		5	0,43	0,03	LC		R		SG
	92	<i>Alethe diademata</i>	Fire-crested Alethe	Alèthe à huppe rousse		11	0,94	0,06	LC		R		GC
	93	<i>Stizorhina finschi</i>	Finsch's Flycatcher Thrush	Stizorhin de Finsch		3	0,26	0,02	LC		R		GC
27	SYLVIIDAE (12)												
	94	<i>Bathmocercus cerviniventris</i>	Black-headed Rufous Warbler	Bathmocerque à capuchon		12	1,03	0,07	NT		R	AO, RR	GC
	95	<i>Cisticola galactotes</i>	Winding Cisticola	Cisticole roussâtre		11	0,94	0,06	LC		R		
	96	<i>Acrocephalus schoenobaenus</i>	Sedge Warbler	Phragmite des joncs		16	1,37	0,08	LC		P		
	97	<i>Acrocephalus scirpaceus</i>	European Reed Warbler	Rousserolle effarvate		14	1,20	0,08	LC		P		
	98	<i>Acrocephalus arundinaceus</i>	Great Reed Warbler	Rousserolle turdoïde		9	0,77	0,05	LC		P		
	99	<i>Acrocephalus rufescens</i>	Greater swamp warbler	Rousserolle des Cannes		13	1,12	0,07	LC		P		
	100	<i>Prinia subflava</i>	Tawny-flanked Prinia	Prinia modeste		7	0,60	0,04	LC		R		
	101	<i>Helioiols erythropterus</i>	Red-winged Warbler	Prinia à ailes rouges		7	0,60	0,04	LC		R		
	102	<i>Apalis sharpii</i>	Sharpe's Apalis	Apalis de Sharpe		8	0,69	0,05	LC		R	AO, RR	GC

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	103	<i>Camaroptera brachyura</i>	Grey-backed Camaroptera	Camaroptère à tête grise		4	0,34	0,03	LC		R		
	104	<i>Eremomela pusilla</i>	Senegal Eremomela	Erémomèle à dos vert		3	0,26	0,02	LC		R		SG
	105	<i>Hylia prasina</i>	Green Hylia	Hylia verte		13	1,12	0,07	LC		R		GC
28	MONARCHIDAE (2)												
	106	<i>Tersiphone viridis</i>	African Paradise Flycatcher	Tchitrec d'Afrique		5	0,43	0,03	LC		R/P		
	107	<i>Tersiphone rufiventer</i>	Red-bellied Paradise Flycatcher	Tchitrec à ventre roux		15	1,29	0,08	LC		R		GC
29	PLATYSTEIRIDAE (1)												
	108	<i>Dyaphorophya castanea</i>	Chestnut Wattle-eye	Priit châtain		11	0,94	0,06	LC		R		
30	TIMALIIDAE (1)												
	109	<i>Illadopsis fulvescens</i>	Brown Illadopsis	Akalat brun		8	0,69	0,05	LC		R		GC
31	NECTARINIIDAE (7) Srika												
	110	<i>Hedydipna collaris</i>	Collared Sunbird	Souimanga à collier		6	0,52	0,04	LC		R		
	111	<i>Cyanomitra verticalis</i>	Green-headed Sunbird	Souimanga à tête verte		7	0,60	0,04	LC		R		
	112	<i>Cyanomitra olivacea</i>	Olive Sunbird	Souimanga olivâtre		8	0,69	0,05	LC		R		
	113	<i>Cinnyris superbus</i>	Superb Sunbird	Souimanga superbe		2	0,17	0,02	LC		R		GC
	114	<i>Cinnyris johanae</i>	Johanna's Sunbird	Souimanga de Johanna		6	0,52	0,04	LC		R		GC
	115	<i>Cinnyris minillus</i>	Tiny Sunbird	Souimanga minule		5	0,43	0,03	LC		R		GC
	116	<i>Cinnyris cupreus</i>	Copper Sunbird	Souimanga cuivré		7	0,60	0,04	LC		R		
32	LANIIDAE (1)												
	117	<i>Lanius collaris</i>	Common Fiscal	Pie-grièche fiscale		11	0,94	0,06	LC		R		
33	MALACONOTIDAE (3)												
	118	<i>Tchagra senegalus</i>	Black-crowned Tchagra	Tchagra à tête noire		10	0,86	0,06	LC		R		
	119	<i>Dryoscopus gambensis</i>	Northern Puffback	Cubla de Gambie		6	0,52	0,04	LC		R		
	120	<i>Laniarius aethiopicus</i>	Tropical Boubou	Gonolek d'Abyssinie		6	0,52	0,04	LC		R		
34	PRIONOPIDAE (1)												
	121	<i>Prionops plumatus</i>	White Helmet-shrike	Bagadais casqué		19	1,63	0,10	LC		R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
35	ORIOLIDAE (2)												
	122	<i>Oriolus nigripennis</i>	Black-winged Oriole	Loriot à ailes noires		3	0,26	0,02	LC		R		GC
	123	<i>Oriolus brachyrhynchus</i>	Western Black-headed Oriole	Loriot à tête noire		7	0,60	0,04	LC		R		GC
36	DICRURIDAE (3)												
	124	<i>Dicurus atripennis</i>	Shining Drongo	Drongo de forêt		10	0,86	0,06	LC		R		GC
	125	<i>Dicurus modestus</i>	Velvet-mantled Drongo	Drongo modeste		11	0,94	0,06	LC		R		
	126	<i>Dicurus adsimilis</i>	Fork-tailed Drongo	Drongo brillant		3	0,26	0,02	LC		R		
37	CORVIDAE (1) Ekpôté												
	127	<i>Corvus albus</i>	Pied Crow	Corbeau pie		17	1,46	0,09	LC		R		
38	STURNIDAE (2)												
	128	<i>Lamprotornis splendidus</i>	Splendid Glossy Starling	Choucador splendide		12	1,03	0,07	LC		R		
	129	<i>Lamprotornis cupreocauda</i>	Copper-tailed Glossy Starling	Choucador à queue bronzée		4	0,34	0,03	NT		R	AO, RR	GC
39	PASSERIDAE (1)												
	130	<i>Passer griseus</i>	Northern Grey-headed Sparrow	Moineau gris		10	0,86	0,06	LC		R		
40	PLOCEIDAE (5) N'djôlé												
	131	<i>Ploceus nigricollis</i>	Black-necked Weaver	Tisserin à cou noir		5	0,43	0,03	LC		R		
	132	<i>Ploceus tricolor</i>	Yellow-mantled Weaver	Tisserin tricolore		12	1,03	0,07	LC		R		GC
	133	<i>Malimbus scutatus</i>	Red-vented Malimbe	Malimbe à queue rouge		12	1,03	0,07	LC		R	AO	GC
	134	<i>Malimbus rubricollis</i>	Red-headed Malimbe	Malimbe à tête rouge		3	0,26	0,02	LC		R		GC
	135	<i>Ploceus cucullatus</i>	Village Weaver	Tisserin gendarme		22	1,89	0,11	LC		R		
41	ESTRILDIDAE (7) Awouéssou-anoman												
	136	<i>Nigrita canicapillus</i>	Grey-crowned Negrofinch	Nigrette à calotte grise		11	0,94	0,06	LC				
	137	<i>Nigrita bicolor</i>	Chestnut-breasted Negrofinch	Nigrette à ventre roux		6	0,52	0,04	LC		R		GC
	138	<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	Astrild à joues oranges		19	1,63	0,10	LC		R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	139	<i>Spermophaga haematina</i>	Western Bluebill	Sénégalis sanguin		9	0,77	0,05	LC		R		GC
	140	<i>Spermestes cucullatus</i>	Bronze Mannikin	Capucin nonnette		16	1,37	0,08	LC		R		
	141	<i>Spermestes bicolor</i>	Black-and-white Mannikin	Capucin bicolore		12	1,03	0,07	LC		R		
	142	<i>Spermestes fringilloides</i>	Magpie Mannikin	Capucin pie		14	1,20	0,08	LC		R		
42	VIDUIDAE (1)												
	143	<i>Vidua macroura</i>	Pin-tailed Whydah	Veuve dominicaine	Afra	12	1,03	0,07	LC		R		
						1165	100,00	6,80					

**Table A4 : Bird species list for TMF 1**

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
1	PHALACROCORACIDAE (1)												
	1	<i>Phalacrocorax africanus</i>	Long-tailed Cormorant	Cormoran africain		13	2,16	0,12	LC		R		
2	ANHINGIDAE (1)												
	2	<i>Anhinga rufa</i>	African Darter	Anhinga d'Afrique		3	0,50	0,04	LC		R		
3	ARDEIDAE (5)												
	3	<i>Ixobrychus minutus</i>	Little Bittern	Blongios nain		2	0,33	0,03	LC		R		
	4	<i>Ardeola ralloides</i>	Squacco Heron	Crabier chevelu		1	0,17	0,02	LC		R/P		
	5	<i>Bubulcus ibis</i>	Cattle Egret	Héron garde-bœufs		12	1,99	0,11	LC		R/M		
	6	<i>Butorides striata</i>	Green-backed Heron	Héron strié		1	0,17	0,02	LC		R		
	7	<i>Egretta garzetta</i>	Little Egret	Aigrette garzette		15	2,49	0,13	LC		R		
4	ACCIPITRIDAE (3)												
	8	<i>Milvus migrans</i>	Black Kite	Milan noir	Dagadali	11	1,83	0,11	LC	II	M		
	9	<i>Accipiter badius</i>	Shikra	Epervier shikra		2	0,33	0,03	LC	II	R		
	10	<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	Autour unibande		3	0,50	0,04	LC	II	R		



NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
5	FALCONIDAE (4)												
	11	<i>Falco tinnunculus</i>	Common Kestrel	Faucon crécerelle		2	0,33	0,03	LC	II	R/P		
	12	<i>Falco ardosiaceus</i>	Grey Kestrel	Faucon ardoisé		4	0,66	0,05	LC	II	R		
	13	<i>Falco cuvierii</i>	African Hobby	Faucon de Cuvier		2	0,33	0,03	LC	II	R		
	14	<i>Falco biarmicus</i>	Lanner Falcon	Faucon lanier		3	0,50	0,04	LC	II	R		
6	PHASIANIDAE (2)												
	15	<i>Fringilla lathami</i>	Latham's Forest Francolin	Fringilla de Latham	Klôa	8	1,33	0,08	LC		R		GC
	16	<i>Fringilla bicalcaratus</i>	Double-spurred Francolin	Fringilla à double éperon	Tchintchindalo	12	1,99	0,11	LC		R		
7	NUMIDIDAE (2)												
	17	<i>Guttera pucherani</i>	Crested Guineafowl	Pintade huppée		3	0,50	0,04	LC		R		
	18	<i>Numida meleagris</i>	Helmeted Guineafowl	Pintade commune	Blokôdjê	15	2,49	0,13	LC		R		
8	RALLIDAE (2)												
	19	<i>Himantornis haematopus</i>	Nkulengu Rail	Râle à pieds rouges	Kangloglo	1	0,17	0,02	LC		R		GC
	20	<i>Sarothrura pulchra</i>	White-spotted Flufftail	Râle perlé		3	0,50	0,04	LC		R		GC
9	CHARADRIIDAE (1)												
	21	<i>Vanellus albiceps</i>	White-headed Lapwing	Vanneau à tête blanche		3	0,50	0,04	LC		R		
10	COLUMBIDAE (7)												
	22	<i>Columba irroratorques</i>	Western Bronze-naped Pigeon	Pigeon à nuque bronzée		1	0,17	0,02	LC		R		GC
	23	<i>Treron calvus</i>	African Green Pigeon	Colombar à front nu	Blissosso	12	1,99	0,11	LC		R		
	24	<i>Turtur brehmeri</i>	Blue-headed Wood Dove	Tourtelette demoiselle		1	0,17	0,02	LC		R		GC
	25	<i>Turtur tympanistria</i>	Tambourine Dove	Tourtelette tambourine	Ahoublé	2	0,33	0,03	LC		R		
	26	<i>Turtur afer</i>	Blue-spotted Wood Dove	Tourtelette améthystine		14	2,33	0,13	LC		R		
	27	<i>Streptopelia semitorquata</i>	Red-eyed Dove	Tourterelle à collier	Okoumomo	15	2,49	0,13	LC		R		
	28	<i>Streptopelia senegalensis</i>	Laughing Dove	Tourterelle maillée		13	2,16	0,12	LC		R		
11	PSITTACIDAE (1) Ako												
	29	<i>Poicephalus senegalus</i>	Senegal Parrot	Perroquet youyou		5	0,83	0,06	LC	II	R	AO	SG

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
12	MUSOPHAGIDAE (2)												
	30	<i>Tauraco persa</i>	Green Turaco	Touraco vert		2	0,33	0,03	LC	II	R		GC
	31	<i>Crinifer piscator</i>	Western Grey Plantain-eater	Touraco gris	Kpoloukpolou	10	1,66	0,10	LC	II	R		
13	CUCULIDAE (6)												
	32	<i>Oxylophus levillantii</i>	Levaillant's Cuckoo	Coucou de Levaillant		1	0,17	0,02	LC		M		
	33	<i>Chrysococcyx cupreus</i>	African Emerald Cuckoo	Coucou foliotocol	Yaomindi-aboua	2	0,33	0,03	LC		R		
	34	<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	Coucou de Klaas		5	0,83	0,06	LC		R/M		
	35	<i>Chrysococcyx caprius</i>	Didric Cuckoo	Coucou didric		3	0,50	0,04	LC		R/M		
	36	<i>Ceuthmochares aereus</i>	Yellowbill	Malcoha à bec jaune		2	0,33	0,03	LC		R		
	37	<i>Centropus senegalensis</i>	Senegal Coucal	Coucal de Sénégal	Blékou	3	0,50	0,04	LC		R		
14	CAPRIMULGIDAE (2) Pélou												
	38	<i>Caprimulgus climacurus</i>	Long-tailed Nightjar	Engoulevent à longue queue		3	0,50	0,04	LC		R/P		
	39	<i>Macrodipteryx longipennis</i>	Standard-winged Nightjar	Engoulevent à balanciers		3	0,50	0,04	LC		M		
15	ALCEDINIDAE (4) Tchouatchoua												
	40	<i>Halcyon leucocephala</i>	Grey-headed Kingfisher	Martin-chasseur à tête grise		3	0,50	0,04	LC		M		
	41	<i>Halcyon malimbica</i>	Blue-breasted Kingfisher	Martin-chas. à poitrine bleue		2	0,33	0,03	LC		R		
	42	<i>Halcyon senegalensis</i>	Woodland Kingfisher	Martin-chasseur du Sénégal		2	0,33	0,03	LC		R		
	43	<i>Ceyx pictus</i>	African Pygmy Kingfisher	Martin-pêcheur pygmée		3	0,50	0,04	LC		R		
16	MEROPIIDAE (1) Srôlo												
	44	<i>Merops albicollis</i>	White-throated Bee-eater	Guépier à gorge blanche		12	1,99	0,11	LC		M		
17	CORACIIDAE (2)												
	45	<i>Coracias cyanogaster</i>	Blue-bellied Roller	Rollier à ventre bleu		2	0,33	0,03	LC		R		SG
	46	<i>Eurystomus glaucurus</i>	Broad-billed Roller	Rolle violet	Tcouôrôrô	2	0,33	0,03	LC		R/M		
18	BUCEROTIDAE (3)												
	47	<i>Tockus fasciatus</i>	African Pied Hornbill	Calao longibande	Ayoman	5	0,83	0,06	LC		R		GC
	48	<i>Tockus nasutus</i>	African Grey Hornbill	Calao à bec noir	Avrouélébo-ayoman	13	2,16	0,12	LC		M		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	49	<i>Bycanistes fistulator</i>	Piping Hornbill	Calao siffleur	Touétouékankan	3	0,50	0,04	LC		R		GC
19	CAPITONIDAE (6)		Kpòkpòkpòrò										
	50	<i>Gymnobucco calvus</i>	Naked-faced Barbet	Barbican chauve	Kpinhan	9	1,50	0,09	LC		R		GC
	51	<i>Pogoniulus scolopaceus</i>	Speckled Tinkerbird	Barbion grivelé		9	1,50	0,09	LC		R		GC
	52	<i>Pogolinus bilineatus</i>	Yellow-rumped Tinkerbird	Barbion à croupion jaune		5	0,83	0,06	LC		R		
	53	<i>Lybius bidentatus</i>	Double-toothed Barbet	Barbican bidenté		2	0,33	0,03	LC		R		
	54	<i>Lybius dubius</i>	Bearded Barbet	Barbican à poitrine rouge		5	0,83	0,06	LC		R	AO	SG
	55	<i>Lybius vieilloti</i>	Vieillot's Barbet	Barbican de Vieillot		4	0,66	0,05	LC		R		
20	MOTACILLIDAE (4)												
	56	<i>Motacilla flava</i>	Yellow Wagtail	Bergeronnette printanière		5	0,83	0,06	LC		P		
	57	<i>Motacilla clara</i>	Mountain Wagtail	Bergeronnette à longue queue		3	0,50	0,04	LC		R		
	58	<i>Macronyx croceus</i>	Yellow-throated Longclaw	Sentinelle à gorge jaune	Djéssékpòlèba	3	0,50	0,04	LC		R		
	59	<i>Anthus leucophrys</i>	Plain-backed Pipit	Pipit à dos uni		5	0,83	0,06	LC		R		
21	PYCNONOTIDAE (11)												
	60	<i>Andropadus virens</i>	Little Greenbul	Bulbul verdâtre		10	1,66	0,10	LC		R		
	61	<i>Andropadus gracilirostris</i>	Little Grey Greenbul	Bulbul à bec grêle		6	1,00	0,07	LC		R		
	62	<i>Andropadus latirostris</i>	Slender-billed Greenbul	Bulbul à moustaches jaunes		2	0,33	0,03	LC		R		
	63	<i>Baeopogon indicator</i>	Yellow-whiskered Greenbul	Bulbul à queue blanche		3	0,50	0,04	LC		R		GC
	64	<i>Pyrhurus scandens</i>	Honeyguide Greenbul	Bulbul à queue rousse		6	1,00	0,07	LC		R		GC
	65	<i>Tchescelocichla leucopleura</i>	Leaflove	Bulbul des raphia		3	0,50	0,04	LC		R		GC
	66	<i>Phyllastrephus icterinus</i>	Swamp Palm Bulbul	Bulbul icterin		5	0,83	0,06	LC		R		GC
	67	<i>Bleda eximius</i>	Green-tailed Bristlebill	Bulbul à queue verte		3	0,50	0,04	NT		R	AO, RR	GC
	68	<i>Bleda canicapillus</i>	Grey-headed Bristlebill	Bulbul fourmilier		5	0,83	0,06	LC		R		GC
	69	<i>Pycnonotus barbatus</i>	Common Bulbul	Bulbul des jardins	Tongblé	8	1,33	0,08	LC		R		
	70	<i>Nicator chloris</i>	Western Nicator	Bulbul nicator		3	0,50	0,04	LC		R		GC
22	TURDIDAE (3)												

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	71	<i>Cossypha albicapilla</i>	White-crowned Robin Chat	Cossyphe à calotte blanche		3	0,50	0,04	LC		R		SG
	72	<i>Alethe diademata</i>	Fire-crested Alethe	Alèthe à huppe rousse		2	0,33	0,03	LC		R		GC
	73	<i>Stizorhina finschi</i>	Finsch's Flycatcher Thrush	Stizorhin de Finsch		3	0,50	0,04	LC		R		GC
23	SYLVIIDAE (11)												
	74	<i>Bathmocercus cerviniventris</i>	Black-headed Rufous Warbler	Bathmocerque à capuchon		11	1,83	0,11	NT		R	AO, RR	GC
	75	<i>Cisticola galactotes</i>	Winding Cisticola	Cisticole roussâtre		14	2,33	0,13	LC		R		
	76	<i>Acrocephalus scirpaceus</i>	European Reed Warbler	Rousserolle effarvate		5	0,83	0,06	LC		P		
	77	<i>Acrocephalus arundinaceus</i>	Great Reed Warbler	Rousserolle turdoïde		6	1,00	0,07	LC		P		
	78	<i>Acrocephalus rufescens</i>	Greater swamp warbler	Rousserolle des Cannes		5	0,83	0,06	LC		P		
	79	<i>Prinia subflava</i>	Tawny-flanked Prinia	Prinia modeste		3	0,50	0,04	LC		R		
	80	<i>Heliolais erythropterus</i>	Red-winged Warbler	Prinia à ailes rousses		5	0,83	0,06	LC		R		
	81	<i>Apalis sharpii</i>	Sharpe's Apalis	Apalis de Sharpe		8	1,33	0,08	LC		R	AO, RR	GC
	82	<i>Camaroptera brachyura</i>	Grey-backed Camaroptera	Camaroptère à tête grise		6	1,00	0,07	LC		R		
	83	<i>Eremomela pusilla</i>	Senegal Eremomela	Erémomèle à dos vert		9	1,50	0,09	LC		R		SG
	84	<i>Hylia prasina</i>	Green Hylia	Hylia verte		3	0,50	0,04	LC		R		GC
24	MONARCHIDAE (2)												
	85	<i>Tersiphone viridis</i>	African Paradise Flycatcher	Tchitrec d'Afrique		3	0,50	0,04	LC		R/P		
	86	<i>Tersiphone rufiventer</i>	Red-bellied Paradise Flycatcher	Tchitrec à ventre roux		2	0,33	0,03	LC		R		GC
25	TIMALIIDAE (1)												
	87	<i>Illadopsis fulvescens</i>	Brown Illadopsis	Akalat brun		6	1,00	0,07	LC		R		GC
26	NECTARINIIDAE (8) Srika												
	88	<i>Hedydipna collaris</i>	Collared Sunbird	Souimanga à collier		5	0,83	0,06	LC		R		
	89	<i>Cyanomitra verticalis</i>	Green-headed Sunbird	Souimanga à tête verte		2	0,33	0,03	LC		R		
	90	<i>Cyanomitra olivacea</i>	Olive Sunbird	Souimanga olivâtre		3	0,50	0,04	LC		R		
	91	<i>Cinnyris superbus</i>	Superb Sunbird	Souimanga superbe		4	0,66	0,05	LC		R		GC

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	92	<i>Cinnyris johanae</i>	Johanna's Sunbird	Souimanga de Johanna		3	0,50	0,04	LC		R		GC
	93	<i>Cinnyris minillus</i>	Tiny Sunbird	Souimanga minule		4	0,66	0,05	LC		R		GC
	94	<i>Cinnyris coccinigastrus</i>	Splendid Sunbird	Souimanga éclatant		3	0,50	0,04	LC		R		SG
	95	<i>Cinnyris cupreus</i>	Copper Sunbird	Souimanga cuivré		2	0,33	0,03	LC		R		
27	LANIIDAE (1)												
	96	<i>Lanius collaris</i>	Common Fiscal	Pie-grièche fiscale		8	1,33	0,08	LC		R		
28	MALACONOTIDAE (1)												
	97	<i>Tchagra senegalus</i>	Black-crowned Tchagra	Tchagra à tête noire		5	0,83	0,06	LC		R		
29	PRIONOPIDAE (1)												
	98	<i>Prionops plumatus</i>	White Helmet-shrike	Bagadais casqué		4	0,66	0,05	LC		R		
30	ORIOIIDAE (1)												
	99	<i>Oriolus brachyrhynchus</i>	Western Black-headed Oriole	Loriot à tête noire		8	1,33	0,08	LC		R		GC
31	DICRURIDAE (2)												
	100	<i>Dicrurus modestus</i>	Velvet-mantled Drongo	Drongo modeste		6	1,00	0,07	LC		R		
	101	<i>Dicrurus adsimilis</i>	Fork-tailed Drongo	Drongo brillant		5	0,83	0,06	LC		R		
32	CORVIDAE (1) Ekpôté												
	102	<i>Corvus albus</i>	Pied Crow	Corbeau pie		5	0,83	0,06	LC		R		
33	STURNIDAE (1)												
	103	<i>Lamprolornis splendidus</i>	Splendid Glossy Starling	Choucador splendide		4	0,66	0,05	LC		R		
34	PASSERIDAE (1)												
	104	<i>Passer griseus</i>	Northern Grey-headed Sparrow	Moineau gris		9	1,50	0,09	LC		R		
35	PLOCEIDAE (2) N'djôle												
	105	<i>Malimbus scutatus</i>	Red-vented Malimbe	Malimbe à queue rouge		3	0,50	0,04	LC		R	AO	GC
	106	<i>Ploceus cucullatus</i>	Village Weaver	Tisserin gendarme		13	2,16	0,12	LC		R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
36	ESTRILDIDAE (6)		Awouéssou-anoman										
	107	<i>Nigrita canicapillus</i>	Grey-crowned Nigrofinch	Nigrette à calotte grise		2	0,33	0,03	LC				
	108	<i>Nigrita bicolor</i>	Chestnut-breasted Nigrofinch	Nigrette à ventre roux		3	0,50	0,04	LC		R		GC
	109	<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	Astrild à joues oranges		8	1,33	0,08	LC		R		
	110	<i>Spermophaga haematina</i>	Western Bluebill	Sénégal sanguin		0	0,00	0,00	LC		R		GC
	111	<i>Spermestes cucullatus</i>	Bronze Mannikin	Capucin nonnette		18	2,99	0,15	LC		R		
	112	<i>Spermestes bicolor</i>	Black-and-white Mannikin	Capucin bicolore		5	0,83	0,06	LC		R		
37	VIDUIDAE (1)												
	113	<i>Vidua macroura</i>	Pin-tailed Whydah	Veuve dominicaine	Afra	9	1,50	0,09	LC		R		
						602	100,00	6,47					

**Table A5 : Bird species list for WRD West**

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
1	ARDEIDAE (1)												
	1	<i>Bubulcus ibis</i>	Cattle Egret	Héron garde-bœufs		18	3,31	0,16	LC		R/M		
2	ACCIPITRIDAE (4)												
	2	<i>Milvus migrans</i>	Black Kite	Milan noir	Dagadali	13	2,39	0,13	LC	II	M		
	3	<i>Polyboroides typus</i>	African Harrier Hawk	Gymnogène d'Afrique	Logobou	2	0,37	0,03	LC	II	R		
	4	<i>Accipiter badius</i>	Shikra	Epervier shikra		4	0,74	0,05	LC	II	R		
	5	<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	Autour unibande		5	0,92	0,06	LC	II	R		
3	FALCONIDAE (2)												
	6	<i>Falco ardosiaecus</i>	Grey Kestrel	Faucon ardoisé		7	1,29	0,08	LC	II	R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	7	<i>Falco biarmicus</i>	Lanner Falcon	Faucon lanier		3	0,55	0,04	LC	II	R		
4	PHASIANIDAE (1)												
	8	<i>Francolinus bicalcaratus</i>	Double-spurred Francolin	Francolin à double éperon	Tchintchindalo	6	1,10	0,07	LC		R		
5	NUMIDIDAE (1)												
	9	<i>Numida meleagris</i>	Helmeted Guineafowl	Pintade commune	Blokôdjé	15	2,76	0,14	LC		R		
6	RALLIDAE (1)												
	10	<i>Himantornis haematopus</i>	Nkulengu Rail	Râle à pieds rouges	Kangloglo	1	0,18	0,02	LC		R		GC
7	SCOLOPACIDAE (1)												
	11	<i>Actitis hypoleucos</i>	Common Sandpiper	Chevalier guignette		3	0,55	0,04	LC		R		
8	COLUMBIDAE (5)												
	12	<i>Columbar irriditorques</i>	Western Bronze-naped Pigeon	Pigeon à nuque bronzée		2	0,37	0,03	LC		R		GC
	13	<i>Treron calvus</i>	African Green Pigeon	Colombar à front nu	Blissosso	9	1,66	0,10	LC		R		
	14	<i>Turtur afer</i>	Blue-spotted Wood Dove	Tourtelette améthystine		16	2,95	0,15	LC		R		
	15	<i>Streptopelia semitorquata</i>	Red-eyed Dove	Tourterelle à collier	Okoumomo	8	1,47	0,09	LC		R		
	16	<i>Streptopelia senegalensis</i>	Laughing Dove	Tourterelle maillée		13	2,39	0,13	LC		R		
9	PSITTACIDAE (1) Ako												
	17	<i>Poicephalus senegalus</i>	Senegal Parrot	Perroquet youyou		11	2,03	0,11	LC	II	R	AO	SG
10	MUSOPHAGIDAE (4)												
	18	<i>Tauraco persa</i>	Green Turaco	Touraco vert		2	0,37	0,03	LC	II	R		GC
	19	<i>Tauraco macrorhynchus</i>	Yellow-billed Turaco	Touraco à gros bec	Béhira	3	0,55	0,04	LC	II	R		GC
	20	<i>Musophaga violacea</i>	Violet Turaco	Touraco violet		5	0,92	0,06	LC	II	R	AO	SG
	21	<i>Crinifer piscator</i>	Western Grey Plantain-eater	Touraco gris	Kpoloukpolou	14	2,58	0,14	LC	II	R		
11	CUCULIDAE (6)												
	22	<i>Oxylophus levillantii</i>	Levaillant's Cuckoo	Coucou de Levaillant		6	1,10	0,07	LC		M		
	23	<i>Cercococcyx olivinus</i>	Olive Long-tailed Cuckoo	Coucou olivâtre		2	0,37	0,03	LC		R		GC
	24	<i>Chrysococcyx cupreus</i>	African Emerald Cuckoo	Coucou foliotocol	Yaomindi-aboua	3	0,55	0,04	LC		R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	25	<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	Coucou de Klaas		7	1,29	0,08	LC		R/M		
	26	<i>Ceuthmochares aereus</i>	Yellowbill	Malcoha à bec jaune		3	0,55	0,04	LC		R		
	27	<i>Centropus senegalensis</i>	Senegal Coucal	Coucal de Sénégal	Blékou	4	0,74	0,05	LC		R		
12	ALCEDINIDAE (2)		Tchouatchoua										
	28	<i>Halcyon senegalensis</i>	Woodland Kingfisher	Martin-chasseur du Sénégal		5	0,92	0,06	LC		R		
	29	<i>Ceyx pictus</i>	African Pygmy Kingfisher	Martin-pêcheur pygmée		3	0,55	0,04	LC		R		
13	MEROPIIDAE (2)		Srôlo										
	30	<i>Merops pusillus</i>	Little Bee-eater	Guêpier nain		5	0,92	0,06	LC		R		
	31	<i>Merops albicollis</i>	White-throated Bee-eater	Guêpier à gorge blanche		14	2,58	0,14	LC		M		
14	CORACIIDAE (1)												
	32	<i>Coracias cyanogaster</i>	Blue-bellied Roller	Rollier à ventre bleu		4	0,74	0,05	LC		R		SG
15	PHOENICULIDAE (1)												
	33	<i>Phoeniculus purpureus</i>	Green Wood-hoopoe	Irrisor moqueur	Douhonou-anonman	6	1,10	0,07	LC		R		
16	BUCEROTIDAE (3)												
	34	<i>Tockus fasciatus</i>	African Pied Hornbill	Calao longibande	Ayoman	10	1,84	0,11	LC		R		GC
	35	<i>Tockus nasutus</i>	African Grey Hornbill	Calao à bec noir	Avrouélébo-ayoman	16	2,95	0,15	LC		M		
	36	<i>Bycanistes fistulator</i>	Piping Hornbill	Calao siffleur	Touétouékankan	2	0,37	0,03	LC		R		GC
17	CAPITONIDAE (7)		Kpòkpòkpòrò										
	37	<i>Gymnobucco calvus</i>	Naked-faced Barbet	Barbican chauve	Kpinhan	23	4,24	0,19	LC		R		GC
	38	<i>Pogoniulus scolopaceus</i>	Speckled Tinkerbird	Barbion grivelé		11	2,03	0,11	LC		R		GC
	39	<i>Pogolinus bilineatus</i>	Yellow-rumped Tinkerbird	Barbion à croupion jaune		6	1,10	0,07	LC		R		
	40	<i>Pogoniulus atroflavus</i>	Red-rumped Tinkerbird	Barbion à croupion rouge		2	0,37	0,03	LC		R		GC
	41	<i>Tricholaema hirsuta</i>	Hairy-breasted Barbet	Barbican hérissé		1	0,18	0,02	LC		R		GC
	42	<i>Lybius dubius</i>	Bearded Barbet	Barbican à poitrine rouge		9	1,66	0,10	LC		R	AO	SG
	43	<i>Lybius vieilloti</i>	Vieillot's Barbet	Barbican de Vieillot		5	0,92	0,06	LC		R		



NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
18	MOTACILLIDAE (3)												
	44	<i>Motacilla flava</i>	Yellow Wagtail	Bergeronnette printanière		2	0,37	0,03	LC		P		
	45	<i>Macronyx croceus</i>	Yellow-throated Longclaw	Sentinelle à gorge jaune	Djéssékoléba	5	0,92	0,06	LC		R		
	46	<i>Anthus leucophrys</i>	Plain-backed Pipit	Pipit à dos uni		5	0,92	0,06	LC		R		
19	PYCNONOTIDAE (5)												
	47	<i>Andropadus virens</i>	Little Greenbul	Bulbul verdâtre		7	1,29	0,08	LC		R		
	48	<i>Andropadus latirostris</i>	Yellow-whiskered Greenbul	Bulbul à moustaches jaunes		2	0,37	0,03	LC		R		
	49	<i>Pyrhurus scandens</i>	Leaflove	Bulbul à queue rousse		2	0,37	0,03	LC		R		GC
	50	<i>Pycnonotus barbatus</i>	Common Bulbul	Bulbul des jardins	Tongblé	13	2,39	0,13	LC		R		
	51	<i>Nicator chloris</i>	Western Nicator	Bulbul nicator		3	0,55	0,04	LC		R		GC
20	TURDIDAE (1)												
	52	<i>Alethe diademata</i>	Fire-crested Alethe	Alèthe à huppe rousse		7	1,29	0,08	LC		R		GC
21	SYLVIIDAE (6)												
	53	<i>Prinia subflava</i>	Tawny-flanked Prinia	Prinia modeste		8	1,47	0,09	LC		R		
	54	<i>Heliolais erythropterus</i>	Red-winged Warbler	Prinia à ailes rouges		5	0,92	0,06	LC		R		
	55	<i>Apalis sharpii</i>	Sharpe's Apalis	Apalis de Sharpe		5	0,92	0,06	LC		R	AO, RR	GC
	56	<i>Camaroptera brachyura</i>	Grey-backed Camaroptera	Camaroptère à tête grise		3	0,55	0,04	LC		R		
	57	<i>Eremomela pusilla</i>	Senegal Eremomela	Érémomèle à dos vert		9	1,66	0,10	LC		R		SG
	58	<i>Hylia prasina</i>	Green Hylia	Hylia verte		12	2,21	0,12	LC		R		GC
22	MONARCHIDAE (1)												
	59	<i>Terpsiphone rufiventer</i>	Red-bellied Paradise Flycatcher	Tchitrec à ventre roux		3	0,55	0,04	LC		R		GC
23	PLATYSTEIRIDAE (1)												
	60	<i>Dyaphorophya castanea</i>	Chestnut Wattle-eye	Priit châtain		6	1,10	0,07	LC		R		
24	TIMALIIDAE (1)												
	61	<i>Illadopsis fulvescens</i>	Brown Illadopsis	Akalat brun		2	0,37	0,03	LC		R		GC
25	NECTARINIIDAE (4)												
	Srika												

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	62	<i>Cyanomitra olivacea</i>	Olive Sunbird	Souimanga olivâtre		6	1,10	0,07	LC		R		
	63	<i>Cinnyris superbus</i>	Superb Sunbird	Souimanga superbe		8	1,47	0,09	LC		R		GC
	64	<i>Cinnyris coccinigastrus</i>	Splendid Sunbird	Souimanga éclatant		6	1,10	0,07	LC		R		SG
	65	<i>Cinnyris cupreus</i>	Copper Sunbird	Souimanga cuivré		3	0,55	0,04	LC		R		
26	LANIIDAE (1)												
	66	<i>Lanius collaris</i>	Common Fiscal	Pie-grièche fiscale		5	0,92	0,06	LC		R		
27	MALACONOTIDAE (2)												
	67	<i>Tchagra senegalus</i>	Black-crowned Tchagra	Tchagra à tête noire		9	1,66	0,10	LC		R		
	68	<i>Laniarius aethiopicus</i>	Tropical Boubou	Gonolek d'Abyssinie		6	1,10	0,07	LC		R		
28	PRIONOPIDAE (1)												
	69	<i>Prionops plumatus</i>	White Helmet-shrike	Bagadai casqué		8	1,47	0,09	LC		R		
29	DICRURIDAE (1)												
	70	<i>Dicrurus adsimilis</i>	Fork-tailed Drongo	Drongo brillant		5	0,92	0,06	LC		R		
30	CORVIDAE (1) Ekpôté												
	71	<i>Corvus albus</i>	Pied Crow	Corbeau pie		5	0,92	0,06	LC		R		
31	STURNIDAE (2)												
	72	<i>Lamprolornis splendidus</i>	Splendid Glossy Starling	Choucador splendide		7	1,29	0,08	LC		R		
	73	<i>Lamprolornis cupreocauda</i>	Copper-tailed Glossy Starling	Choucador à queue bronzée		5	0,92	0,06	NT		R	AO, RR	GC
32	PASSERIDAE (1)												
	74	<i>Passer griseus</i>	Northern Grey-headed Sparrow	Moineau gris		11	2,03	0,11	LC		R		
33	PLOCEIDAE (2) N'djôle												
	75	<i>Malimbus scutatus</i>	Red-vented Malimbe	Malimbe à queue rouge		2	0,37	0,03	LC		R	AO	GC
	76	<i>Ploceus cucullatus</i>	Village Weaver	Tisserin gendarme		12	2,21	0,12	LC		R		
34	ESTRILDIDAE (7) Awouéssou-anoman												
	77	<i>Nigrita canicapillus</i>	Grey-crowned Negrofinch	Nigrette à calotte grise		8	1,47	0,09	LC				

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	78	<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	Astrild à joues oranges		8	1,47	0,09	LC		R		
	79	<i>Spermestes cucullatus</i>	Bronze Mannikin	Capucin nonnette		14	2,58	0,14	LC		R		
VIDUIDAE (1)													
35	80	<i>Vidua macroura</i>	Pin-tailed Whydah	Veuve dominicaine	Afra	9	1,66	0,10	LC		R		
						543	100,00	6,03					

**Table A6: Bird species list for WRD North**

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
1 ARDEIDAE (5)													
	1	<i>Bubulcus ibis</i>	Cattle Egret	Héron garde-bœufs		19	1,85	0,11	LC		R/M		
	2	<i>Egretta intermedia</i>	Intermediate Egret	Aigrette intermédiaire		5	0,49	0,04	LC		R		
	3	<i>Egretta alba</i>	Great Egret	Grande Aigrette		3	0,29	0,02	LC		R		
	4	<i>Ardea cinerea</i>	Grey Heron	Héron cendré		2	0,19	0,02	LC		R/P		
	5	<i>Ardea melanocephala</i>	Black-headed Heron	Héron mélanocéphale		3	0,29	0,02	LC		R		
2 ANATIDAE (1)													
	6	<i>Nettapus auritus</i>	African Pygmy Goose	Anserelle naine		5	0,49	0,04	LC		R		
3 ACCIPITRIDAE (7)													
	7	<i>Milvus migrans</i>	Black Kite	Milan noir	Dagadali	31	3,02	0,15	LC	II	M		
	8	<i>Polyboroides typus</i>	African Harrier Hawk	Gymnogène d'Afrique	Logobou	3	0,29	0,02	LC	II	R		
	9	<i>Circus aeruginosus</i>	Eurasian Marsh Harrier	Busard des roseaux		2	0,19	0,02	LC	II	R		
	10	<i>Accipiter badius</i>	Shikra	Epervier shikra		3	0,29	0,02	LC	II	R		
	11	<i>Butastur rufipennis</i>	Grasshopper Buzzard	Busautour des sauterelles		4	0,39	0,03	LC	II	M		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	12	<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	Autour unibande		7	0,68	0,05	LC	II	R		
	13	<i>Buteo auguralis</i>	Red-necked Buzzard	Buse d'Afrique		3	0,29	0,02	LC	II	R/M		
4	FALCONIDAE (4)												
	14	<i>Falco tinnunculus</i>	Common Kestrel	Faucon crécerelle		6	0,58	0,04	LC	II	R/P		
	15	<i>Falco ardosiaecus</i>	Grey Kestrel	Faucon ardoisé		8	0,78	0,05	LC	II	R		
	16	<i>Falco cuvierii</i>	African Hobby	Faucon de Cuvier		7	0,68	0,05	LC	II	R		
	17	<i>Falco biarmicus</i>	Lanner Falcon	Faucon lanier		5	0,49	0,04	LC	II	R		
5	PHASIANIDAE (1)												
	18	<i>Francolinus bicalcaratus</i>	Double-spurred Francolin	Francolin à double éperon	Tchintchindalo	35	3,41	0,17	LC		R		
6	NUMIDIDAE (1)												
	19	<i>Numida meleagris</i>	Helmeted Guineafowl	Pintade commune	Blokôdjê	21	2,04	0,11	LC		R		
7	RALLIDAE (1)												
	20	<i>Himantornis haematopus</i>	Nkulengu Rail	Râle à pieds rouges	Kangloglo	2	0,19	0,02	LC		R		GC
8	BURHINIDAE (1)												
	21	<i>Burhinus senegalensis</i>	Senegal Thick-knee	Oedicnème du Sénégal		2	0,19	0,02	LC		R		
9	CHARADRIIDAE (2)												
	22	<i>Vanellus albiceps</i>	White-headed Lapwing	Vanneau à tête blanche		13	1,27	0,08	LC		R		
	23	<i>Vanellus spinosus</i>	Spur-winged Lapwing	Vanneau à éperons		5	0,49	0,04	LC		M		
10	SCOLOPACIDAE (1)												
	24	<i>Actitis hypoleucos</i>	Common Sandpiper	Chevalier guignette		6	0,58	0,04	LC		R		
11	COLUMBIDAE (5)												
	25	<i>Treron calvus</i>	African Green Pigeon	Colombar à front nu	Blissozzo	15	1,46	0,09	LC		R		
	26	<i>Turtur tympanistria</i>	Tambourine Dove	Tourtelette tambourine	Ahoublé	5	0,49	0,04	LC		R		
	27	<i>Turtur afer</i>	Blue-spotted Wood Dove	Tourtelette améthystine		21	2,04	0,11	LC		R		
	28	<i>Streptopelia semitorquata</i>	Red-eyed Dove	Tourterelle à collier	Okoumomo	17	1,66	0,10	LC		R		
	29	<i>Streptopelia senegalensis</i>	Laughing Dove	Tourterelle maillée		38	3,70	0,18	LC		R		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
12		PSITTACIDAE (1)			Ako								
	30	<i>Poicephalus senegalus</i>	Senegal Parrot	Perroquet youyou		16	1,56	0,09	LC	II	R	AO	SG
13		MUSOPHAGIDAE (2)											
	31	<i>Musophaga violacea</i>	Violet Turaco	Touraco violet		4	0,39	0,03	LC	II	R	AO	SG
	32	<i>Crinifer piscator</i>	Western Grey Plantain-eater	Touraco gris	Kpoloukpolou	19	1,85	0,11	LC	II	R		
14		CUCULIDAE (5)											
	33	<i>Oxylophus levaillantii</i>	Levaillant's Cuckoo	Coucou de Levaillant		5	0,49	0,04	LC		M		
	34	<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	Coucou de Klaas		7	0,68	0,05	LC		R/M		
	35	<i>Chrysococcyx caprius</i>	Didric Cuckoo	Coucou didric		8	0,78	0,05	LC		R/M		
	36	<i>Ceuthmochares aereus</i>	Yellowbill	Malcoha à bec jaune		3	0,29	0,02	LC		R		
	37	<i>Centropus senegalensis</i>	Senegal Coucal	Coucal de Sénégal	Blékou	8	0,78	0,05	LC		R		
15		CAPRIMULGIDAE (3)			Pèlou								
	38	<i>Caprimulgus inornatus</i>	Plain Nightjar	Engoulevent teme		4	0,39	0,03	LC		M		
	39	<i>Caprimulgus climacurus</i>	Long-tailed Nightjar	Engoulevent à longue queue		4	0,39	0,03	LC		R/P		
	40	<i>Macrodipteryx longipennis</i>	Standard-winged Nightjar	Engoulevent à balanciers		8	0,78	0,05	LC		M		
16		APODIDAE (1)											
	41	<i>Apus affinis</i>	Little Swift	Martinet des maisons		14	1,36	0,08	LC		R		
17		ALCEDINIDAE (2)			Tchouatchoua								
	42	<i>Halcyon leucocephala</i>	Grey-headed Kingfisher	Martin-chasseur à tête grise		6	0,58	0,04	LC		M		
	43	<i>Halcyon senegalensis</i>	Woodland Kingfisher	Martin-chasseur du Sénégal		5	0,49	0,04	LC		R		
18		MEROPIIDAE (2)			Srôlo								
	44	<i>Merops pusillus</i>	Little Bee-eater	Guêpier nain		4	0,39	0,03	LC		R		
	45	<i>Merops albicollis</i>	White-throated Bee-eater	Guêpier à gorge blanche		18	1,75	0,10	LC		M		
19		CORACIIDAE (2)											
	46	<i>Coracias cyanogaster</i>	Blue-bellied Roller	Rollier à ventre bleu		8	0,78	0,05	LC		R		SG
	47	<i>Eurystomus glaucurus</i>	Broad-billed Roller	Rolle violet	Tcouôrôrô	6	0,58	0,04	LC		R/M		

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
20	PHOENICULIDAE (1)												
	48	<i>Phoeniculus purpureus</i>	Green Wood-hoopoe	Irrisor moqueur	Douhonou-anonman	3	0,29	0,02	LC		R		
21	BUCEROTIDAE (3)												
	49	<i>Tockus fasciatus</i>	African Pied Hornbill	Calao longbande	Ayoman	13	1,27	0,08	LC		R		GC
	50	<i>Tockus nasutus</i>	African Grey Hornbill	Calao à bec noir	Avrouélébo-ayoman	29	2,82	0,15	LC		M		
	51	<i>Bycanistes fistulator</i>	Piping Hornbill	Calao siffleur	Touétouékankan	5	0,49	0,04	LC		R		GC
22	CAPITONIDAE (7) Kpòkpòkpòrò												
	52	<i>Gymnobucco calvus</i>	Naked-faced Barbet	Barbican chauve	Kpinhan	44	4,28	0,19	LC		R		GC
	53	<i>Pogoniulus scolopaceus</i>	Speckled Tinkerbird	Barbion grivelé		8	0,78	0,05	LC		R		GC
	54	<i>Pogoniulus subsulphureus</i>	Yellow-throated Tinkerbird	Barbion à gorge jaune		3	0,29	0,02	LC		R		GC
	55	<i>Pogolinus bilineatus</i>	Yellow-rumped Tinkerbird	Barbion à croupion jaune		18	1,75	0,10	LC		R		
	56	<i>Lybius bidentatus</i>	Double-toothed Barbet	Barbican bidenté		3	0,29	0,02	LC		R		
	57	<i>Lybius dubius</i>	Bearded Barbet	Barbican à poitrine rouge		15	1,46	0,09	LC		R	AO	SG
	58	<i>Lybius vieilloti</i>	Vieillot's Barbet	Barbican de Vieillot		5	0,49	0,04	LC		R		
23	INDICATORIDAE (1)												
	59	<i>Indicator maculatus</i>	Spotted Honeyguide	Indicateur tacheté		2	0,19	0,02	LC		R		GC
24	PICIDAE (1)												
	60	<i>Dendropicos pyrrhogaster</i>	Fire-bellied Woodpecker	Pic à ventre de feu	Babakpòkpò	12	1,17	0,08	LC		R		GC
25	HIRUNDINIDAE (2) Gnamienpia												
	61	<i>Hirundo rustica</i>	Barn Swallow	Hirondelle rustique		14	1,36	0,08	LC		P		
	62	<i>Hirundo lucida</i>	Red-chested Swallow	Hirondelle de Guinée		11	1,07	0,07	LC		R		
26	MOTACILLIDAE (4)												
	63	<i>Motacilla flava</i>	Yellow Wagtail	Bergeronnette printanière		6	0,58	0,04	LC		P		
	64	<i>Motacilla clara</i>	Mountain Wagtail	Bergeronnette à longue queue		14	1,36	0,08	LC		R		
	65	<i>Macronyx croceus</i>	Yellow-throated Longclaw	Sentinelles à gorge jaune	Djéssékpòlèba	11	1,07	0,07	LC		R		

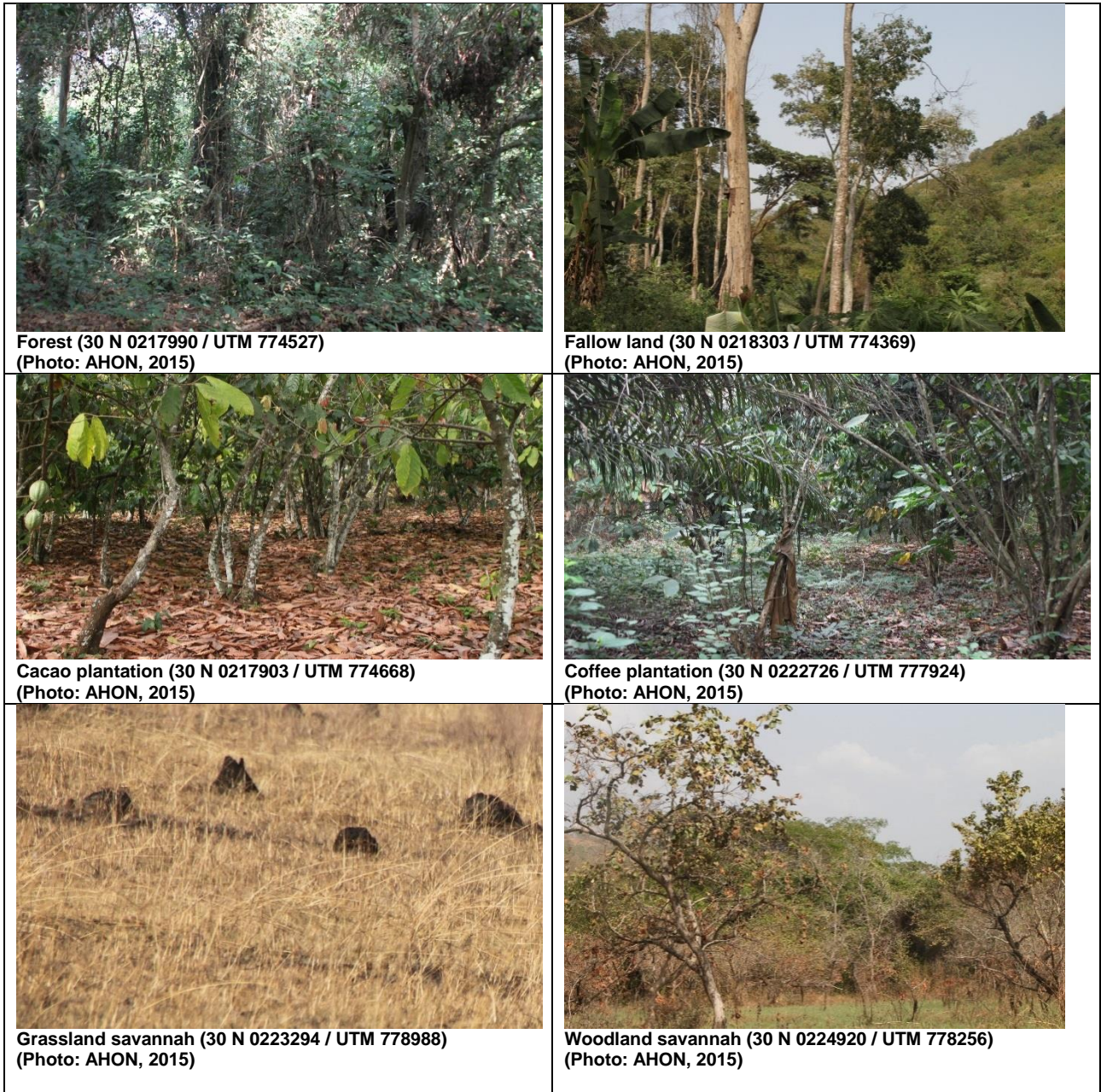
NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	66	<i>Anthus leucophrys</i>	Plain-backed Pipit	Pipit à dos uni		13	1,27	0,08	LC		R		
27	PYCNONOTIDAE (5)												
	67	<i>Andropadus virens</i>	Little Greenbul	Bulbul verdâtre		15	1,46	0,09	LC		R		
	68	<i>Andropadus latirostris</i>	Yellow-whiskered Greenbul	Bulbul à moustaches jaunes		3	0,29	0,02	LC		R		
	69	<i>Baeopogon indicator</i>	Honeyguide Greenbul	Bulbul à queue blanche		1	0,10	0,01	LC		R		GC
	70	<i>Pyrhurus scandens</i>	Leaflove	Bulbul à queue rousse		4	0,39	0,03	LC		R		GC
	71	<i>Pycnonotus barbatus</i>	Common Bulbul	Bulbul des jardins	Tongblé	33	3,21	0,16	LC		R		
28	TURDIDAE (1)												
	72	<i>Alethe diademata</i>	Fire-crested Alethe	Alèthe à huppe rousse		12	1,17	0,08	LC		R		GC
29	SYLVIIDAE (8)												
	73	<i>Bathmocercus cerviniventris</i>	Black-headed Rufous Warbler	Bathmocerque à capuchon		9	0,88	0,06	NT		R	AO, RR	GC
	74	<i>Acrocephalus schoenobaenus</i>	Sedge Warbler	Phragmite des joncs		9	0,88	0,06	LC		P		
	75	<i>Prinia subflava</i>	Tawny-flanked Prinia	Prinia modeste		13	1,27	0,08	LC		R		
	76	<i>Heliolais erythropterus</i>	Red-winged Warbler	Prinia à ailes rousses		3	0,29	0,02	LC		R		
	77	<i>Apalis sharpii</i>	Sharpe's Apalis	Apalis de Sharpe		4	0,39	0,03	LC		R	AO, RR	GC
	78	<i>Camaroptera brachyura</i>	Grey-backed Camaroptera	Camaroptère à tête grise		5	0,49	0,04	LC		R		
	79	<i>Eremomela pusilla</i>	Senegal Eremomela	Erémomèle à dos vert		10	0,97	0,07	LC		R		SG
	80	<i>Hylia prasina</i>	Green Hylia	Hylia verte		3	0,29	0,02	LC		R		GC
30	MONARCHIDAE (2)												
	81	<i>Tersiphone viridis</i>	African Paradise Flycatcher	Tchitrec d'Afrique		5	0,49	0,04	LC		R/P		
	82	<i>Tersiphone rufiventer</i>	Red-bellied Paradise Flycatcher	Tchitrec à ventre roux		7	0,68	0,05	LC		R		GC
31	PLATYSTEIRIDAE (1)												
	83	<i>Dyaphorophya castanea</i>	Chestnut Wattle-eye	Priit châtain		9	0,88	0,06	LC		R		
32	TIMALIIDAE (1)												
	84	<i>Illadopsis fulvescens</i>	Brown Illadopsis	Akalat brun		3	0,29	0,02	LC		R		GC
33	NECTARINIIDAE (4) Srika												

NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	85	<i>Hedydipna collaris</i>	Collared Sunbird	Souimanga à collier		5	0,49	0,04	LC		R		
	86	<i>Cyanomitra olivacea</i>	Olive Sunbird	Souimanga olivâtre		5	0,49	0,04	LC		R		
	87	<i>Cinnyris superbus</i>	Superb Sunbird	Souimanga superbe		11	1,07	0,07	LC		R		GC
	88	<i>Cinnyris coccinigastrus</i>	Splendid Sunbird	Souimanga éclatant		3	0,29	0,02	LC		R		SG
34	LANIIDAE (1)												
	89	<i>Lanius collaris</i>	Common Fiscal	Pie-grièche fiscale		3	0,29	0,02	LC		R		
35	MALACONOTIDAE (3)												
	90	<i>Tchagra senegalus</i>	Black-crowned Tchagra	Tchagra à tête noire		13	1,27	0,08	LC		R		
	91	<i>Dryoscopus gambensis</i>	Northern Puffback	Cubla de Gambie		3	0,29	0,02	LC		R		
	92	<i>Nilaus afer</i>	Brubru	Brubru africain		8	0,78	0,05	LC		R		
36	PRIONOPIDAE (1)												
	93	<i>Pronops plumatus</i>	White Helmet-shrike	Bagadais casqué		5	0,49	0,04	LC		R		
37	ORIOIIDAE (1)												
	94	<i>Oriolus brachyrhynchus</i>	Western Black-headed Oriole	Loriot à tête noire		2	0,19	0,02	LC		R		GC
38	DICRURIDAE (2)												
	95	<i>Dicrurus modestus</i>	Velvet-mantled Drongo	Drongo modeste		2	0,19	0,02	LC		R		
	96	<i>Dicrurus adsimilis</i>	Fork-tailed Drongo	Drongo brillant		8	0,78	0,05	LC		R		
39	CORVIDAE (1) Ekpôté												
	97	<i>Corvus albus</i>	Pied Crow	Corbeau pie		12	1,17	0,08	LC		R		
40	STURNIDAE (1)												
	98	<i>Lamprolornis splendidus</i>	Splendid Glossy Starling	Choucador splendide		8	0,78	0,05	LC		R		
41	PASSERIDAE (1)												
	99	<i>Passer griseus</i>	Northern Grey-headed Sparrow	Moineau gris		11	1,07	0,07	LC		R		
42	PLOCEIDAE (2) N'djôle												
	100	<i>Ploceus nigricollis</i>	Black-necked Weaver	Tisserin à cou noir		6	0,58	0,04	LC		R		
	101	<i>Ploceus cucullatus</i>	Village Weaver	Tisserin gendarme		13	1,27	0,08	LC		R		
43	ESTRILDIDAE (7) Awouéssou-anoman												



NF	NE	Scientific name	English name	French name	Name in Baoulé	Species richness	Observation Frequency (%)	Shannon Diversity Index	Cons Status	Status Biog	Annexe CITES	Endemism	Biome
	102	<i>Nigrita canicapillus</i>	Grey-crowned Negrofinch	Nigrette à calotte grise		8	0,78	0,05	LC				
	103	<i>Nigrita bicolor</i>	Chestnut-breasted Negrofinch	Nigrette à ventre roux		5	0,49	0,04	LC		R		GC
	104	<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	Astrild à joues oranges		12	1,17	0,08	LC		R		
	105	<i>Spermophaga haematina</i>	Western Bluebill	Sénégalé sanguin		8	0,78	0,05	LC		R		GC
	106	<i>Spermestes cucullatus</i>	Bronze Mannikin	Capucin nonnette		21	2,04	0,11	LC		R		
	107	<i>Spermestes bicolor</i>	Black-and-white Mannikin	Capucin bicolore		4	0,39	0,03	LC		R		
	108	<i>Spermestes fringilloides</i>	Magpie Mannikin	Capucin pie		5	0,49	0,04	LC		R		
	VIDUIDAE (1)												
44	109	<i>Vidua macroura</i>	Pin-tailed Whydah	Veuve dominicaine		26	2,53	0,13	LC		R		
						1027	100,00	6,34					

**Appendix 4: Selected pictures of habitat surveyed**



**Appendix 5: Selected pictures of bird species recorded in the study area**

	
<p><b>Calao siffleur <i>Bycanistes fistulator</i></b> 30 N 0223350 / UTM 779237; (Photo: AHON, 2015)</p>	<p><b>Bagadais casqué <i>Prionops plumatus</i></b> 30 N 0223049 / UTM 779096; (Photo: AHON, 2015)</p>
	
<p><b>Columbar à front nu <i>Treron calvus</i></b> 30 N 0221136 / UTM 775206; (Photo: AHON, 2015)</p>	<p><b>Astrild à joues oranges <i>Estrilda melpoda</i></b> 30 N 0223805 / UTM 779618; (Photo: AHON, 2015)</p>
	
<p><b>Tchagra à tête noir <i>Tchagra senegalus</i></b> 30 N 0223805 / UTM 779618; (Photo: AHON, 2015)</p>	<p><b>Choucadour splendide <i>Lamprotornis splendidus</i></b> 30 N 0219771 / UTM 775858; (Photo: AHON, 2015)</p>



Irrisor moqueur *Phoeniculus purpureus*  
30 N 0219771 / UTM 775858; (Photo: AHON, 2015)



Calao à bec noir *Tockus nasutus*  
30 N 0220145 / UTM 776808; (Photo: AHON, 2015)



Coucou de Levillant *Oxylophus levillantii*  
30 N 0218126 / UTM 774097; (Photo: AHON, 2015)



Guêpier à gorge blanche *Merops albicollis*  
30 N 0220078 / UTM 776643; (Photo: AHON, 2015)



Rollier à ventre bleu *Coracias cyanogaster*  
30 N 0222433 / UTM 778851; (Photo: AHON, 2015)



Capucin bicolore *Spermestes bicolor*  
30 N 0221858 / UTM 778134; (Photo: AHON, 2015)



Faucon ardoisé *Falco ardosiaceus*  
 30 N 0220078 / UTM 77664; (Photo: AHON, 2015)



Touraco violet *Musophaga violacea*  
 30 N 0223805 / UTM 779618; (Photo: AHON, 2015)



Touraco gris *Crinifer piscator*  
 30 N 0224488 / UTM 779950; (Photo: AHON, 2015)



Barbican de Vieillot *Lybius vieilloti*  
 30 N 0224228 / UTM 779730; (Photo: AHON, 2015)



Barbican à poitrine rouge *Lybius dubius*  
 30 N 0224533 / UTM 779844; (Photo: AHON, 2015)



Barbican bidenté *Lybius bidentatus*  
 30 N 0224081 / UTM 778322; (Photo: AHON, 2015)



Loriot à tête noire *Oriolus brachyrhynchus*  
30 N 0224081 / UTM 778322; (Photo: AHON, 2015)



Milan noir *Milvus migrans*  
30 N 0221744 / UTM 778289 ; (Photo: AHON, 2015)



Sentinelle à gorge jaune *Macronyx croceus*  
30 N 0223294 / UTM 778988; (Photo: AHON, 2015)



Vanneau à tête blanche *Vanellus albiceps*  
30 N 0224668 / UTM 779514; (Photo: AHON, 2015)



Souimanga olivâtre *Cyanomitra olivacea*  
30N 0218816 / UTM 777052; (Photo: AHON, 2015)



Drongo modeste *Dicrurus modestus*  
30N 0222271 / UTM 77604; (Photo: AHON, 2015)