

KUMBIRA FIELD TRIP
October 11th – November 7th, 2012
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Luanda

Martim Melo and I arrived to Angola on October 11th. We spent two days in Luanda to:

- Visit the “Instituto de Geografia e Cartografia de Angola” (IGCA) and buy military maps (scale 1:100 000) for Kumbira forests, Mount Moco and Mount Namba.
- Meet with Paulo Cardoso, environmental consultant for STRIX. He is doing Environmental Impact Assessments in Angola and is very experienced in GIS and ecological modelling. He is very interested in Angola’s biodiversity and willing to assist with anything he can with the Kumbira project (he thinks that a person brave enough to do a PhD in Angola needs all the help she can get).
- Meet with Nito Rocha and Wolfram Brock. Pedro Vaz Pinto put us in contact with them. They recently acquired a land concession in Kumbira Forest, called Fazenda “Andua” (means “Turaco”), and are interested in developing an ecotourism initiative mainly based in birdwatching. Their concession is near Monte Belo and in an area, according with the census performed in 2010, with the presence of the endemics.
- Collect the car and equipment at Luanda International School. Catherine McMahon was extremely helpful with everything and very supportive. She even took us to do supplies shopping in a nearby supermarket.

Michael Mills was supposed to join us for the field trip to Kumbira. Unfortunately he had problems with his visa (very common in Angola) and had to stay in Luanda waiting for his passport.

Conda

We arrived to Conda on October 13th and were able to meet with the new administrator, Fernando Fonseca. Mr. Fonseca is interested in the importance of the forest and its biodiversity and was supportive of the project. He introduced us to the Police Commander and invited us to assist to a dinner where we had the opportunity to meet the administrator of Seles and owners of lands and farms in and around Kumbira. This was very good for networking and establishing contacts.

Unfortunately we received the news that an asphalted road is being planned to pass through the middle of Kumbira Forest, in order to make a direct link between Conda and Sumbe. We have heard about this from different persons, not only in Conda but also in Kumbira and even Luanda (Nito and Wolfram).

When we left Conda after the fieldwork, Mr. Fonseca asked us to prepare a report about our findings and the importance of the forests. He was going to have a meeting the following weekend with the Governor of the Kwanza Sul province and wanted to present this report to him.

Kumbira

We spent 15 days in Kumbira at the start of the rainy season. Nevertheless it rained mostly in the afternoons and nights and so we were able to do bird surveys in the early mornings. The roads were in very bad shape and, for this reason; we decided to get supplies for the 15 days and stayed all that time in Kumbira.

Data collected in 2010 showed that the endemic species were more abundantly present in two areas of Kumbira: Fazenda Zeca and near Monte Belo. For this reason in this field trip we focused in collecting bird and vegetation data in these two areas.

Bird data was collected using 10 minutes point counts. In order to better assess the impact of deforestation and forest degradation and have more statistical power when analysing results, points were grouped in triplets. Each triplet had a point in the following habitat:

- Slash-and-burn
- Mix habitat (coffee plantation or abandoned farm)
- Secondary forest

The points in the triplet were more or less 200m away of each other, and each triplet was at least 400m away from another triplet. The original study design intended to assess “good forest” as part of the different habitats triplet. However when we arrived in Kumbira it became evident that it was not possible to find “good forest” within the distance range of the other habitats (slash-and-burn and mix). Nevertheless we noticed that near the farmed areas, secondary forest patches are present next to trails and rivers. For this reason we decided to include points in these secondary forests as part of the triplet.

We also assessed points in “good forests”. Points in these forests were at least 150m away of each other (because of the reduced area of good forest left in Kumbira) and at least 400m away of any triplet.

In each area, Fazenda Zeca (**Table 1** and **Figure 1**) and Monte Belo (**Table 2** and **Figure 2**), three triplets and three points in “good forest” were assessed, making a total of 24 points. In each point three repetitions were done (early morning, mid-morning and late morning) so a total of 72 bird point counts were performed.

Table 1. Census points in Fazenda Zeca

Point ID	Point Type	Triplet
30SB	Slash-and-burn	Triplet 4
AbacaxiCoffee	Mix habitat	Triplet 4
29F	Secondary Forest	Triplet 4
25SB	Slash-and-burn	Triplet 3
22M	Mix habitat	Triplet 3
24F	Secondary Forest	Triplet 3
37SB	Slash-and-burn	Triplet 2
36M	Mix habitat	Triplet 2
35F	Secondary Forest	Triplet 2
55F	Good Forest	Forest 1
56F	Good Forest	Forest 1
57F	Good Forest	Forest 1



Figure 1. Census points in Fazenda Zeca area.

Table 2. Census points in Monte Belo

Point ID	Point Type	Triplet
72SB	Slash-and-burn	Triplet 5
73M	Mix habitat	Triplet 5
75F	Secondary Forest	Triplet 5
69SB	Slash-and-burn	Triplet 6
61M	Mix habitat	Triplet 6
70F	Secondary Forest	Triplet 6
67SB	Slash-and-burn	Triplet 7
63M	Mix habitat	Triplet 7
65F	Secondary Forest	Triplet 7
76F	Good Forest	Forest 8
77F	Good Forest	Forest 8
78F	Good Forest	Forest 8



Figure 2. Census points in Monte Belo area.

In each point birds inside the 20m and 50m radius were registered. When we were not able to identify a call, we recorded the call or song of the species. Michael Mills assisted us with the identification of the calls in these recordings.

We also collected vegetation data for each point. This data included: canopy cover, canopy height, understory vegetation, amount of trees in a 20m circular plot and tree density index.

We registered a total of 101 bird species during the point counts and in other times of the day (**Appendix 1**). These species included Gabela Akalat, Monteiro's Bushshrike, Gabela Bushshrike, Pulitzer's Longbill and Red Crested Turaco. We also registered (seen and call recorded) Lemon Dove, a species previously recorded in the area by Michael Mills (in what was a new record for the country) and for which very few records for the country exist.

Lubango

After the fieldwork in Kumbira we travelled to Lubango to attend the scientific meetings of the Instituto Superior de Ciências da Educação de Huila (ISCED). ISCED holds the mammalogy and ornithology museums, featuring the third largest bird skin collection in Africa.

The purpose of this visit was to attend the signing of a scientific collaboration protocol between ISCED and the Research Center in Biodiversity and Genetic Resources (CIBIO), the institution to which Martim and I are associated. This protocol

will help improve the logistic conditions for developing projects in Angola and establish a local partner in the country.

As part of the scientific meetings, Martim and I gave the following talks:

- The origin of the species: The Endemic Birds of Angola (Martim).
- Uncertain future for the largest endemism centre in Angola: The Central Escarpment Forests (Aimy)

Michael Mills was unable to join us for the meetings but a video about the work being developed in Mount Moco was presented.

Others

- Michael Mills kindly contacted me with Louise Peat from the Turaco International Society who presently is the European studbook holder for Red-crested Turaco. She is interested in the research we are performing in Kumbira and would like to have some information about Red-crested Turaco. She also wants to include a little note about the project in the next year studbook with the objective to help fundraising.
- My funding applications for Mohamed Bin Zayed Conservation Fund and Wildlife Conservation Society were rejected. However I am still awaiting a response from the Chicago Zoological Society and the British Ornithological Union. All this year work had been done with support from the Leventis Foundation support and the Percy Fitzpatrick Institute.

Project difficulties

Visas

At the moment I have only managed to get 30 days visas to enter Angola. I am looking for other alternatives in order to get visas for a longer amount of time. Some alternatives are to apply for:

- Angola-Portugal special protocol visa. This visa allows a stay in the country of 3 months for each semester, making a total of 6 months in a year. It is valid for 3 years. I had asked in the consulate and it is possible for me to apply for this visa (because I am married to a Portuguese). However I haven't yet heard of anyone being successful in getting this visa and it is extremely expensive (1300€).
- A temporary permanence visa. This visa allows a stay of 365 days in Angola and costs 400€. It is intended for scientific research and humanitarian projects.
- A regular 30 days visa that can be renew for two times in an Immigration Office (for a total period of 90 days). This could be the cheapest option (the visa costs 120€ but I am not sure how much the renewal costs) but I would need a contact in a city that can do or help me do this. I will have to give my passport to the Immigration Office

and wait for them to do the renewal and give me my passport back. I do not feel very comfortable with this option because if anything happens with my passport there is no Peruvian Consulate in Angola.

It is expected that the protocol between CIBIO-ISCED can assist somehow in the visa application process for Martim and I.

Access and Roads

During the rainy season access to Kumbira is almost impossible. This limits the amount of months per year that fieldwork can be performed. Usually the dry season goes from May to September, but at the beginning of this season (May) the roads can be in very bad state making extremely difficult to enter to Kumbira. It will have to be discussed if fieldwork just at the end of the dry season – early rainy season and after the rainy season is enough, or if one must consider the possibility of living within the valley (based at Fazenda Belita) for an extensive period of time during the rainy season. Work would be done on foot, and/or by bicycle or motorbike (with driver). This option would require a long-term visa.

Local collaborators

Getting Angolan students or researchers to participate in the project has been extremely difficult. Most students do not seem interested in participating in this type of project. For example, during the talks given in the scientific meetings of ISCED, no biology students attended. It is expected that the protocol between CIBIO-ISCED will help better this situation, by the implementation of workshops and courses, but any benefits arising from this will probably come too late for this project.

Angolan researchers, such as the botanists Francisco Maiato (ISCED) and Amândio Gomes (Agostinho Neto University), have shown interest in participating in the project as long as the field trips are not at the same time of their own project's field trips (Amândio is a good botanist but he is not particularly keen in field work).

Methodology

Implementing a study design in Kumbira is very difficult because the landscape is extremely fragmented and the different habitats patches are small and organised in a mosaic pattern. The forests are disappearing very rapidly for agriculture while some agricultural fields are abandoned, making the landscape change constantly.

In this field trip the data was collected using triplets. The analysis of this data will allow establishing if the triplets are the best way to assess the effects of deforestation and forest degradation in the bird community. If this methodology does not work other methodologies need to be considered. One must also decide on how

many bird points should be performed in the future, and which areas should be assessed and explored for new forest patches.

The best methodologies to evaluate vegetation characteristics and forest biomass have to be selected and also the amount of time and effort needed to apply these methodologies. Researchers of the Instituto de Investigação Científica Tropical (IICT) in Lisbon will be contacted to discuss the different methodologies that could be used in the study site.

Funding

Angola is an expensive country to do fieldwork. As mentioned before, during this year I applied to different funding opportunities. Some of the feedback I received from the rejected applications is related with the lack of charismatic species in the study area (sorry, there are no parrots in Kumbira), the lack of information about the country and the lack of local partners for funding organizations. At the moment I count with funding from Leventis Foundation, Percy FitzPatrick Institute and I can direct part of the monthly stipend I receive from the Portuguese studentship to cover some expenses of my fieldwork. Nevertheless I need to address alternatives sources of funding in order to cover the project fieldwork expenses. A crowdfunding initiative is being considered.

APPENDIX

Appendix 1. Bird species list registered in Kumbira by Martim Melo and Aimy Cáceres.

Nº	Species Common Name
1	African Goshawk
2	African Broadbill
3	African Harrier Hawk
4	African Paradise-Flycatcher
5	African Thrush
6	African Yellow White-eye
7	African-wood Owl
8	Angola Batis
9	Ashy Flycatcher
10	Black Saw-wing
11	Black-faced Canary
12	Black-and-White Mannikin
13	Black-necked Weaver
14	Black-throated Apalis
15	Blue Malkoha
16	Blue spotted wood- Dove
17	Blue Waxbill
18	Bronze Mannikin
19	Brown Illadopsis
20	Brown-backed Honeyguide
21	Brown-chested Alethe
22	Bubbling Cisticola
23	Buff-throated Apalis
24	Collared Sunbird
25	Common Waxbill
26	Compact Weaver
27	Crowned Hornbill
28	Chestnut Wattle-eye
29	Dark-backed Weaver
30	Dark-capped Bulbul
31	Dark-capped yellow Warbler
32	Dusky Tit
33	Eastern Black-headed Oriole
34	Emerald Cuckoo
35	Forest scrub- Robin
36	Gabela Akalat
37	Gabela's Bushshrike
38	Gabon Coucal
39	Green Crombec
40	Green Hylia
41	Green Pigeon
42	Green Twinspot
43	Greenbacked Heron
44	Green-headed Sunbird
45	Grey Kestrel

Nº	Species Common Name
46	Grey-headed Nigrita
47	Grey-striped Spurfowl
48	Hartert's Camaroptera
49	Klaas' Cuckoo
50	Lemon Dove
51	Lesser striped Swallow
52	Little-green Sunbird
53	Lizard Buzzard
54	Long-crested Eagle
55	Mackinnon's Fiscal
56	Monteiro's Bushshrike
57	Naked-faced Barbet
58	Narina Trogon
59	Northern grey-headed Sparrow
60	Olive Pigeon
61	Olive Sunbird
62	Olive-bellied Sunbird
63	Orange-breasted Bushshrike
64	Pale-billed Firefinch
65	Pale-olive Greenbul
66	Palmnut Vulture
67	Peregrine Falcon
68	Perrin's Bushshrike
69	Petit's Cuckooshrike
70	Pied Crow
71	Pigmy Kingfisher
72	Pink-footed Puffback
73	Purple-banded Sunbird
74	Pulitzer's Longbill
75	Red-billed Quelea
76	Red-capped Robin-chat
77	Red-crested Turaco
78	Red-faced Crimsonwing
79	Red-headed Bluebill
80	Red-necked Spurfowl
81	Red-tailed Bristlebill
82	Rufous Flycatcher-thrush
83	Rufous-vented Flycatcher
84	Southern Hyliota
85	Hairy-breasted Barbet
86	Superb Sunbird
87	Tambourine Dove
88	Tawny-flanked Prinia
89	Trumpeter Hornbill
90	Village Weaver
91	Violet-backed Starling
92	White-tailed blue Flycatcher
93	Yellow-bellied Wattle-eye

Nº	Species Common Name
94	Yellow-billed Barbet
95	Yellow-fronted Canary
96	Yellow-rumped Tinkerbird
97	Yellow-throated Tinkerbird
98	Yellow-throated Greenbul
99	Yellow-throated Nicator
100	Yellow-whiskered Greenbul
101	(Large-brown) Swift

Appendix 2. Photos from the field trip



Photo 1. Kumbira Forest



Photo 2. Forest being cleared off for agriculture



Photo 3. The project's car



Photo 4. Campsite in Monte Belo area



Photo 5. Looking for forest with a group of children



Photo 6. Martin's talk in ISCED, Lubango.