Monthly Report

African Bat Conservation

May 2019

Little epauletted fruit bat (*Epomophorus labiatus*) Photo by: Emily Stanford

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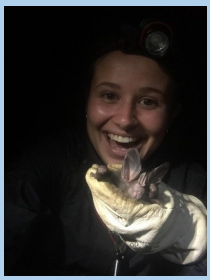

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ABC Host
University of Sussex Field Course

By: Rebecca O'Sullivan, CRA MSc Student

Figure 1: University of Sussex staff and students as well as ABC staff enjoying their last night in Vwaza

My name is Rebecca O' Sullivan, and I am an MRes student who is currently doing my project in Vwaza Marsh Wildlife Reserve with Conservation Research Africa. Before starting my project, I was with the University of Sussex as part of the African Zoology Field Course (Figure 1).

We arrived on April 22nd and we stayed in Kumbali Country Lodge for several nights. It was amazing to be in such a natural landscape so close to the city. We heard hyenas calling most nights, which was incredible. After a few days we travelled up to Vwaza Marsh Wildlife Reserve. On our first day, we got to participate in a game drive where we saw elephants, hippopotamus, puku, impala, kudu, warthog, yellow baboons, vervet monkeys, a crocodile and several raptor species. We were all astounded by the beauty of the landscape and the high diversity of species. Over the coming days we learned about small mammal trapping, vegetation surveying, entomology and bat surveying. We then began data collection for our group projects, which included dung beetle surveying, small mammal trapping and environmental impact assessments. My project focused on dung and track transects along the floodplain. I really appreciated having the opportunity to learn a new skill. I definitely hope to learn more about dung and track identification in the future. Despite doing separate projects, we also got involved in each other's projects in order to gain a variety of experiences. One group was doing bat surveying with mist nets and harp traps. During their survey on camp I learned how the equipment works and participated in the capture and identification of a Dobson's epauletted fruit bat (*Epomops dobsonii*) and a Wahlberg's epauletted fruit bat (*Epomophorus waglbergi*) (Figure 2)

On our final day in Vwaza, we went to Chigwede Cultural Village where we got to meet local people and experience their culture. We all had an incredible time and were so grateful that we got to participate in

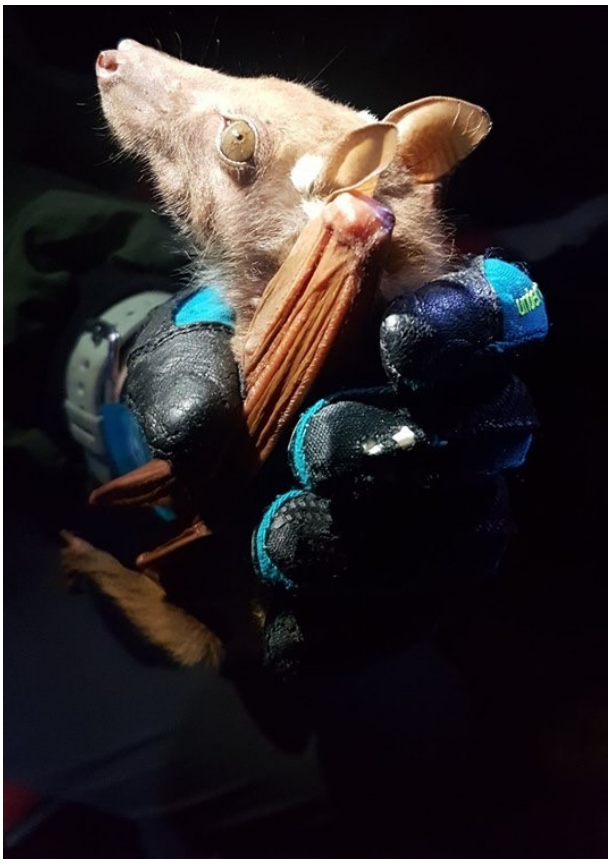


Figure 2. Dobson's epauletted fruit bat (Epomops dobsonii) caught during a survey on camp in Vwaza. Photo by: Rebecca O'Sullivan)

cultural dances. Before leaving, I was asked to sign the visitor book on behalf of our group, and I took the opportunity to let them know how much we appreciated their warm welcome. The next day we travelled back to Lilongwe, where we were greeted by another cultural dance group who taught us several dances and told us about their uses and meanings. It was an amazing way to end the trip. Overall, we all had an incredible experience in Malawi. I know that I am not alone in saying it was a life-changing experience. For me personally, it helped me realise what I was to do with the future of my career. I feel very lucky to get to spend a further 6 weeks in Vwaza Marsh Game Reserve while collecting data for my project, and I am so grateful to Conservation Research Africa for giving me this experience.

Bat Team Returns to Vwaza

By: Susan Eshelman, Research Assistant

Figure 3: Vwaza has received several upgrades including a new shower (centre)

Last month, the ABC team returned to Vwaza Marsh Wildlife Reserve to resume our continued research as well as prepare for the arrival of the University of Sussex field course at the end of April. We were very excited to get back to the park and have been working hard, upgrading certain areas of camp. Additional showering (Figure 3) and restroom facilities have been added as well as a new staff tent (Figure 4) . The common area has been upgraded with new tables and chairs to accommodate larger groups. The volunteer tents have also been upgraded with the addition of new bunk beds. We are excited about all the new improvements to camp!

Figure 4: A new tent has been added to the staff side of Vwaza Base Camp.

As we come to the end of the wet season and into the dry season, we will be resuming our regular research schedule. We will be continuing our Biodiversity Monitoring Program (BMP) to access the diversity of bats within Vwaza and the surrounding area.

A View from A Volunteer

By: Emily Stanford, ABC Volunteer

Figure 5: Volunteer, Emily Stanford, help CRM with scat walking transects in Lilongwe.

I can't remember when I first heard about African Bat Conservation, but I vividly remember the excitement I felt when I first read about the volunteer opportunities.

Close to one year later, I found myself exiting the Lilongwe airport and was greeted by a smiling man with my name on a sign. I arrived at ABC's Urban Base Camp and was given a tour of the facilities. There was a kitchen, hangout spot, four dorm rooms, an office building, a hammock, a boxing bag, two showers and two toilets. I was quite impressed. The facility was being shared by a mix of 10 staff, interns, and volunteers. Though we all came from different parts of the world, we all had a united passion for wildlife. I was happy to find myself in the mix of such a dedicated group of people.

After orientation and safety training, I was free to go out with both the bat team and the carnivore research team. I tagged along on scat surveys. I went to check dens and bat-boxes (Figure 5; Figure 6). I helped enter data. I got to catch bats in mist-nets and harp traps and I got to radio-track a jackal.

While I was working, I was learning about conservation issues. Deforestation is rampant in Malawi, and there has been very little research on what species are here, what resources they use, and what their population trends are. This information is crucial for developing effective conservation plans.

So far during my time here I have gotten to see how ABC is working to fill those gaps in knowledge. They are surveying bats, their ranges, and their habitat types. They are working on making the first acoustic database for bats in Malawi. And on top of gathering valuable scientific information, ABC is simultaneously mitigating wildlife conflicts, by working with the community to initiate wildlife education programs.

Figure 6: Volunteer, Emily Stanford, help ABC with bat box checks at the Lilongwe Wildlife Centre.

Working to protect species that are often despised, in a country with very little baseline research, is a very hard task. I was impressed to see how ABC is systematically .

tackling gathering information about bats while also working to improve people's relations with these important animals.

Though I've only been here a few weeks, I've learned a tremendous amount about field techniques, the challenge of solving conservation issues, and how science and conservation work hand-in-hand. I can't thank ABC enough for this amazing opportunity.

Interesting finds during Urban BMPs

By: Dilly Hoyt, Research Assistant

Figure 7: Rufous myotis (*Myotis bocagii*) caught during BMP in Lilongwe.

Now that dry season is finally here, we have gone ahead (uninhibited by the rain) with our research efforts as part of the biodiversity monitoring programme (BMP) in Lilongwe. The last four weeks have consisted of harp trapping and mist netting in a variety of habitat types, which have led to some interesting findings. More notably the Rufous myotis (*Myotis bocagii*) (Figure 7), a Vespertilionidae species not previously captured in the city and two species of Molossus (*Mops condylurus* and *Chaerephon pumilus*) which coexist in the same habitat in the barns nearby basecamp.

In addition to these interesting results, we have continued developing the acoustic programme by recording the calls of individual bats as they are released from our hands after being processed. Recording their calls will enable us to develop an acoustic library of bats in Malawi, which will improve the strength of our datasets as we will be more able to identify both the bats that fly into our traps as well as those that fly in the surrounding environment.

Summary of Work

Date	Type	Site code	Location	Total bats caught	Species caught
2019-05-09	Opportunistic	LLWO10	Lilongwe	7	2
2019-05-16	Opportunistic	LLWO09	Lilongwe	9	2
2019-05-22	Opportunistic	ROOST01HC	Lilongwe	25	7

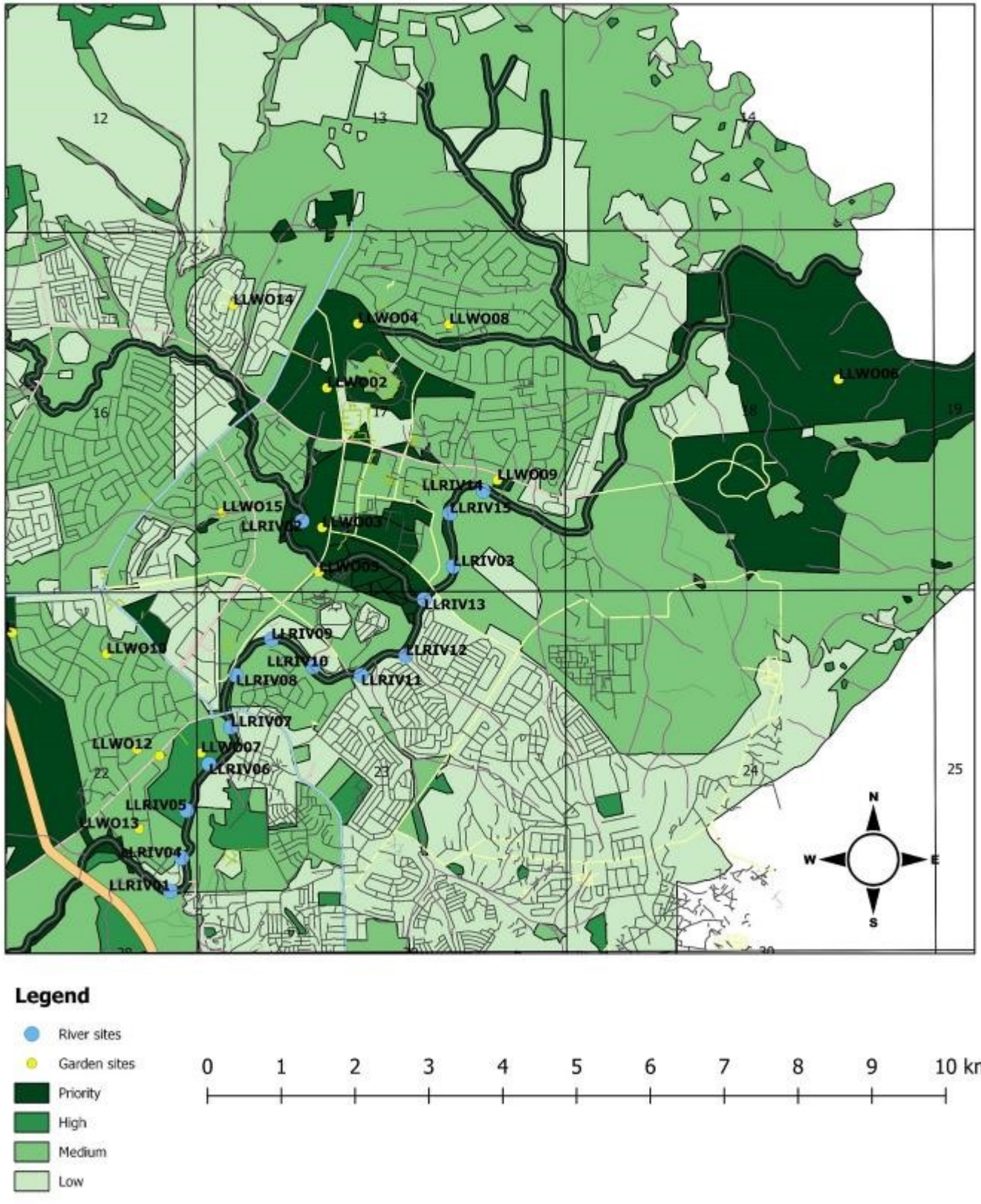
ABC Bat Species List

No	Latin Name	Common Name	Locations Caught					
			Li-wonde Park	Lilong-we	Nyika NP	Vwaza Marsh WR	Kasungu NP	Other
1	Chaerephon sp.	Free-tailed bats		X				
2	Chaerephon ansorgei	Ansorge's free-tailed bat	X					
3	Chaerephon pumilus	Little free-tailed bat	X			X	X	
4	Eidolon helvum	Straw-coloured fruit bat		X				X
5	Epomophorus crypturus	Peters's epauletted fruit bat	X	X		X	X	X
6	Epomophorus labiatus	Little epauletted fruit bat	X	X		X	X	X
7	Epomophorus wahl-bergi	Wahlberg's epauletted fruit bat	X	X		X		X
8	Epomops dobsonii	Dobson's epauletted fruit bat		X		X		
9	Eptesicus hottentotus	Long-tailed serotine	X					
10	Glauconycteris variega-ta	Variegated butterfly bat	X			X		
11	Hipposideros caffer	Sundevall's leaf-nosed bat	X	X		X	X	X
12	Hipposideros gigas	Giant leaf-nosed bat	X					X
13	Hipposideros ruber	Noack's leaf-nosed bat	X					
14	Kerivoula lanosa	Lesser woolly bat				X		
15	Laephotis botswanae	Botswana long-eared bat	X	X				X
16	Lissonycteris goliath	Harrison's soft-furred fruit bat						X
17	Mimetillus thomasi	Thomas's flat headed bat	X					
18	Miniopterus sp.	long-fingered bats	X					
19	Mops condylurus	Angolan free-tailed bat	X			X	X	X
20	Mops niveiventer	White-bellied free-tailed bat		X				X
21	Myotis bocagii	Rufous myotis	X	X		X		X
22	Myotis tricolor	Temminck's myotis	X					X
23	Myotis welwitschii	Welwitsch's myotis	X	X				
24	Neoromicia sp.*	Pipistrelles	X	X		X		X
25	Neoromicia nana	Banana bat	X	X	X	X		

ABC Bat Species List

No	Latin Name	Common Name	Locations Caught					
			Liwonde NP	Lilongwe	Nyika NP	Vwaza Marsh WR	Kasungu NP	Other
26	Neoromicia rendalli	Rendall's serotine	X			X		
27	Nycteris grandis	Large slit-faced bat	X					
28	Nycteris hispida	Hairy slit-faced bat				X		
29	Nycteris macrotis	Large-eared slit-faced bat	X					
30	Nycteris thebaica	Egyptian slit faced bat	X			X		
31	Nycticeinops schlieffeni	Schlieffen's twighlight bat	X			X		
32	Pipistrellus sp.*	Pipistrelles	X	X	X	X		X
33	Pipistrellus rueppellii	Ruppell's pipistrelle	X			X		
34	Rhinolophus clivosus	Geoffroy's horseshoe bat		X				
35	Rhinolophus fumigatus	Ruppell's horseshoe bat	X	X		X	X	
36	Rhinolophus hilde-brandtii	Hildebrandt's horseshoe bat	X			X		
37	Rousettus aegyptiacus	Egyptian rousette	X					
38	Rousettus lanosus	Hairy rousette			X			
39	Scotoecus hindei/ albigula	Dark-winged lesser house bat	X	X		X		X
40	Scotophilus dinganii	Yellow-bellied house bat		X		X	X	X
41	Scotophilus leuco-gaster	White-bellied house bat	X					
42	Scotophilus viridis	Green house bat	X	X				
43	Scotophilus nigrita	Giant yellow house bat	X					
44	Tadarida aegyptica	Egyptian free-tailed bat						X
45	Tadarida ventralis	Giant free-tailed bat						X
46	Taphozous mauritianus	Mauritian tomb bat	X	X		X	X	
47	Triaenops afer	African trident bat	X					X

BMP Sites in Lilongwe



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