

Project Update June 2024

The primary goal of this project is to understand the impact of cave disturbance on bat diversity, and health (body condition, and parasite load) of bats.

I have identified 15 cave roosts across five communities in Enugu State, southeast Nigeria. I have collected complete data from these caves such as environmental variables (i.e. microclimate -temperature and humidity) and characterised the caves by taking their dimensions (length, height, and width of cave compartments), and coordinates. I have also collected data on hunting activities such as sticks used for hunting bats in these caves. I have identified eight species and 309 individuals of bats belonging to three families from these caves. The eight species I have identified roosting at these caves are *Hipposideros ruber*, *H. jonesi*, *H. beatus*, *H. caffer*, *H. abae*, *H. fuliginosus*, *Nycteris hispida*, and a potential new species awaiting confirmation.

Below are my project objectives and milestones achieved:

1. Establish bat diversity in sandstone caves across Enugu State.
Accomplishments: I have established the bat species richness and abundance across 15 caves of my project sites.
2. Investigate the relationship between disturbance from local cave tourism and indicators of bat health (body condition and parasite load).
Accomplishments: I have quantified anthropogenic disturbance measures across 15 caves. I have identified 18 endoparasites (intestinal and haemoparasites) and six ectoparasites across 96 individuals of bats and computed health conditions for these bats. I have recorded anthropogenic activities in and around the caves.
3. Launch a tourist-awareness campaign and train tour guides to educate tourists.
Accomplishments: I have trained 79 tour guides who would educate tourists in five communities where I sampled bats. In addition, I have educated 53 hunters, 204 youths, and 484 pupils (10 primary schools, two schools for each town).



Elijah Okwuonu holding *Hipposideros ruber*



Elijah Okwuonu measuring environmental variables and microclimates



Elijah Okwuonu and his team



Elijah Okwuonu and Obeagu youths after a successful conservation education



Elijah Okwuonu educating four guides at Obeagu during a conservation education



Elijah Okwuonu educating Ugbo youths during a conservation education



Elijah Okwuonu and Ugbo youths after a successful conservation education



Elijah Okwuonu and Ugbo hunters after a successful conservation education



Elijah Okwuonu educating Obeagu tour guides during conservation education



Elijah Okwuonu and Obeagu tour guides after a successful conservation education