



CAPACITY BUILDING AND NOT EXPERT ENDORSEMENTS OVERCOMES LIMITED TAXONOMIC EXPERTISE: ADEYANJU ET AL. (2017) REVISITED

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ABSTRACT

Local species checklists are important tools for biodiversity research and conservation. However, limited taxonomic expertise can lead to species misidentifications, thereby reducing confidence in such checklists. Decline in taxonomic expertise is implicated in the taxonomic impediment – extinction of species before they are discovered and described. Global consensus for reducing the decline in taxonomic expertise and consequent taxonomic impediment and species misidentification is capacity building and provision of reliable easy-to-use guides. However, untrained local biologists under pressure to publish results of field surveys may boycott species identification best practices. Here, I use a recent scenario to highlight the plight and responsibility of local biologists in the species identification process.

Keywords: Tropical biologists, Nigeria, bats, capacity building

INTRODUCTION

Of all the species concepts, the biological species is the most widely accepted (De Queiroz, 2007), making it the basic unit of biodiversity research and conservation. Identification to species level is thus important for providing local checklists. Whereas there is a global decline in taxonomic expertise, the biodiversity rich tropics are more susceptible to the negative implications of fewer taxonomists. This conundrum has been dubbed the taxonomic impediment, which describes the extinction of biodiversity before they are discovered and described, primarily due to limited taxonomic expertise (de Carvalho *et al.*, 2005). Similarly, limited taxonomic expertise often leads to misidentification of species, which misleads users of biodiversity information, with implications for biodiversity research and conservation.

Capacity Building

The overwhelming global consensus to overcoming the taxonomic impediment and associated limited expertise centers around development of training programs, provision of easy-to-use external

morphology identification keys and pictorial field guides for field ecologists and citizen scientists. Among bats, the taxonomy of some African taxa remain unresolved, and are constantly updated. Therefore, for local ecologists with limited taxonomic expertise, best practice for dealing with poorly resolved groups or difficult-to-identify taxa is to seek the help of established taxonomists. However, it is noteworthy that such experts may be out of reach for many tropical biologists, which necessitated the initiation of a networking program by Bat Conservation Africa (BCA), a network of researchers and conservationists working on African bats. Without hands-on capacity building, comprehensive identification guides and access to established taxonomists, tropical biologists under pressure to publish the results of arduous field surveys are susceptible to boycotting the above stated best practices and recommendations, potentially leading to local checklists that lack veracity. A recent occurrence exemplifies this scenario.

Adeyanju *et al.* (2017) Revisited

Adeyanju *et al.* (2017) reports results of a survey on bats of Omo Forest Reserve, but the reported checklist is based on a flawed species identification approach. The reserve is an important biodiversity site in southwestern Nigeria, being a Key Biodiversity Area in the Nigerian Lowland Ecoregion. Thus, this survey should be a valuable contribution to knowledge of the Nigerian bat fauna. On the contrary, the approach to species identification taken by the first author (hereafter Adeyanju *et al.*, 2017) of Adeyanju *et al.* (2017) raises concerns about the species list provided therein. Adeyanju *et al.* (2017) wrongfully claims that the current author assisted in confirming bat species identification. The current author maintains a collection of positively identified (by an established taxonomist) bat voucher specimens at the Egborge Zoological Museum, University of Benin, as part of the Bats of Nigeria Project. This reference collection was the basis for offering help with species identification to Adeyanju *et al.* (2017). However, contrary to claims in that publication, the voucher specimens for Adeyanju *et al.* (2017) were not identified by the current author. The voucher specimens for Adeyanju *et al.* (2017) were not positively identified by the current author due to inadequate time provided for specimen examination by Adeyanju *et al.* (2017). As a result, Adeyanju *et al.* (2017) was promptly advised and agreed to consult an established taxonomist Dr. Ara Monadjem at the University of Eswantini, who also co-supervised the masters research from which the voucher specimens for Adeyanju *et al.* (2017) were collected. Dr. Monadjem, confirmed that no consultation was requested by Adeyanju *et al.*

(2017). Therefore, the incorrect claim of receiving support from the current author shows an attempt to boycott the species identification process by wrongfully suggesting help and thus expert endorsement for the species list reported in Adeyanju *et al.* (2017). Boycotting thorough species identification by experts limits the likelihood of positive species identification – diminishing the value of such species checklists.

CONCLUSION

Local species checklists are valuable conservation tools that must be carefully determined to ensure the integrity of research and conservation. The scenario described here demonstrates a practical example of the plight and thus responsibility of untrained tropical field biologists to seek expert support. In this case, a checklist was provided outside established identification approach for a difficult to identify taxa, raising concerns about the veracity of the checklist. The current author disagrees with being named as a contributor to the checklist reported by Adeyanju *et al.* (2017), because such support was not provided. Similarly, the current author received no notification about being associated with the species checklist prior to publication of Adeyanju *et al.* (2017). Furthermore, the current author hereby provides a disclaimer on the species checklist reported in Adeyanju *et al.* (2017). This is not an uncommon scenario, but it is unethical. Finally, it highlights the need for hands-on capacity building programs for such poorly studied taxa, especially as young field biologists become increasingly interested in bat research and conservation in Nigeria and across Africa.

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