

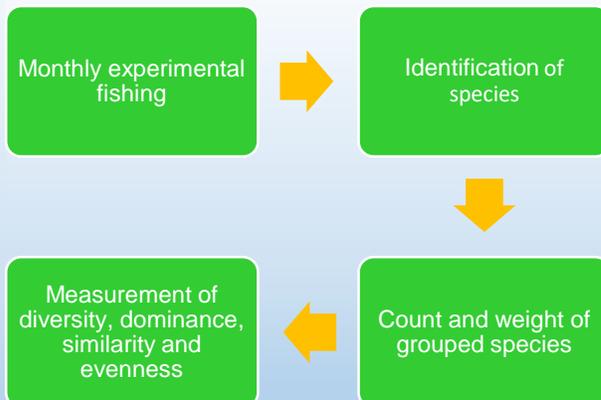
The Influence of Cage Culture on Fish Relative Abundance and Species Diversity in the Volta Lake Stratum II

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INTRODUCTION

- ❑ Cage culture has experienced rapid growth in Ghana as part of efforts to increase domestic fish production, employment and reduce poverty (GNA, 2012).
- ❑ Kpeve-Tornu, a fishing village located in stratum II of Lake Volta, due to the increasing numbers of cage farms in that part of the lake, could be described as one of the upcoming 'tilapia baskets' of Ghana (Ameworwor, 2014).
- ❑ Cage culture, however, can impact wild fisheries both negatively and positively and wild fish populations either directly or indirectly (Cripps & Kumar, 2003; Halwart & Moehl, 2006).
- ❑ The objective of the study was to determine the influence of cage culture on the wild fisheries at Kpeve-Tornu. Specific objectives were to
 - Assess the species diversity in the cage and non cage areas and
 - Assess the impact of "escapees" on the relative abundance of the fish species

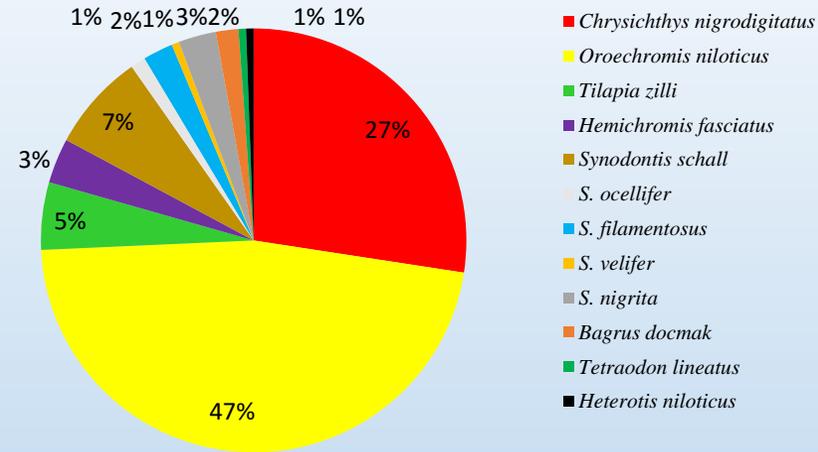
MATERIALS AND METHOD



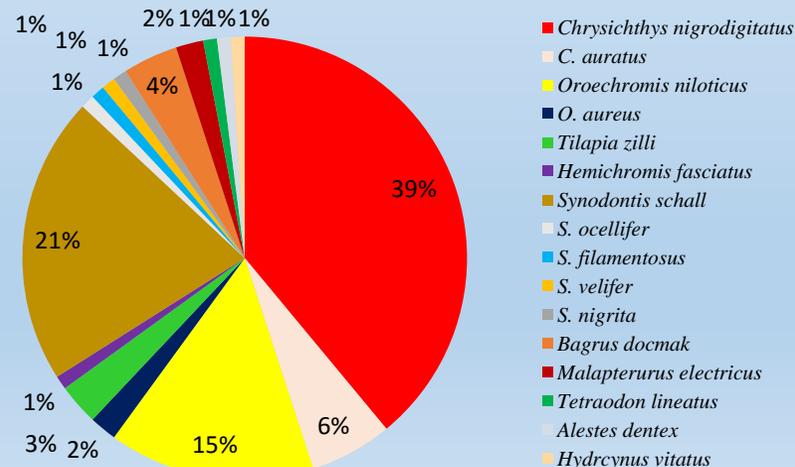
RESULTS

Total of 254 fishes were sampled comprising of 17 species from 18 families.

Cage site: 12 fish species from 6 families identified from 174 samples.



Non-cage site: 16 fish species from 7 families identified from 180 individuals.



RESULTS

Diversity Index	Cage site	Non-cage site
Simpson's (D)	0.305	0.226
Shannon Weiner (H')	0.673	0.816
Pielou's (J')	0.624	0.678
Sorensen's (QS)	0.786	

CONCLUSION

- ❖ *C. nigriodigitatus* dominated the Non-cage site and *O. niloticus* dominated the cage site.
- ❖ The dominance of *O. niloticus* in the culture area may be as a result of "escapees" from the fish cages that added to the population in the cage site since the fish farmers culture mainly Nile tilapia.
- ❖ Species diversity was impacted by availability and abundance of food sources of the fish species in the sites.

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