











## DISCUSSION

### **Stomach contents analysis of *S. intermedius***

The stomach contents of *S. intermedius* were analysed during a three month (May-July 2018) sampling period. The result of the present study showed that 87.01% had food in their stomach and only 12.99% stomach were empty. The result indicates that there were availability of food the study area and the food consumed had not been fully digested by the fish. The result is contrary to those reported earlier (Ayoade *et al.*, 2018) in their study with *Schilbe mystus* from two artificial lakes. Ayoade *et al.* (2018) reported more empty stomach and suggested that it might be due to less availability of food and digestion of the consumed food (mainly protein), which starts in the stomach. The results indicated that the food of *S. intermedius* consist mainly (61.85%) of animal origin (see Table 1 and Fig 1). The result is in line with those recorded (Merron and Mann, 1995) in the study with *Schilbe intermedius* in Botswana. According to Merron and Mann, (1995), *S. intermedius* diet consisting largely of fish (41%), aquatic larvae (25%), terrestrial insects (14%), aquatic insects (7%) and crustacean (5%).

The result indicated that *S. intermedius* from Agbura landing site, has great preference for parts of crustacean (39.47%); parts of fish (33.19%) and parts of insect (14.93%). Also, parts of plant (4.31%) and pepper seed (3.33%) were observed as primary food items in the study. The result is in line with Ayoade *et al.* (2008); Omondi and Ogari (1994), who recorded plants materials in the food of *Schilbe mystus*. Although, parts of plants and pepper seed were shown as primary food items (i.e., IFS  $\geq$  3%), the authors thinks otherwise. This is because parts of insect which is the least preference in terms of animal origin is ~3.5 fold higher when compared to parts of plants and ~4.5 fold higher when compared to pepper seed. The stomach also contained sand/ mud particles, which is in line with Omondi and Ogari (1994) however, they suggested that the sand/mud particles were probably ingested accidentally with other food materials. Allison and Sikoki (2003) also reported sand particles in the stomach of *Parailia pellucida* (Schilbeidae) from Nun River but did not consider sand particles as food.

There is controversy on the food habit of *S. intermedius*. Some researchers classify the species as omnivore as plant materials were found in the stomach (Omondi and Ogari, 1994; Idodo-Umeh, 2003; FishBase team RMCA and Geelhand, 2016) while others (e.g., Merron and Mann 1995; Ayoade *et al.*, 2008) called them predators as the food is majorly on animal other than plant materials or detritus. However, one thing is common in all the reports, the species can change its diet based on the availability of food in the environment. Based on the ease at which the species changes its diet, it has been called facultative feeder (Omondi and Ogari, 1994); opportunistic omnivore (Idodo-Umeh, 2003; FishBase team RMCA and Geelhand, 2016); opportunistic

predator (Merron and Mann, 1995) and predator (Ayoade *et al*, 2008).

## CONCLUSION

In conclusion, the present study agrees with earlier reports that *S. intermedius* is a predator as the majority of the food items observed in the stomach content are of animal origin and the species is not rigid in its feeding habit hence can readily adjust due to availability of food item in the environment.

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