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Comparative studies on the catch selectivity of galvanized wire gauze trap from fresh and brackish water tropical creeks in south-western Nigeria.

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ABSTRACT
The comparative studies on the catch selectivity of galvanized wire gauze trap from fresh and brackish water creeks in the south – western; Nigeria was investigated between October, 2006 and March, 2007. Water samples from the two creeks (Abule - eledu and Iponri) were collected for physico – chemical analysis. A monthly wire gauze trap catch composition was examined for 6 months. Salinity in the dry season in Abule Eledu creek has been associated with increased tidal seawater incursion coupled with reduced flood, water inflow from associated rivers and creeks. This was not so with Iponri creek which is totally freshwater creek throughout the year. The wire basket trap was highly selective for the crab, Callinectes amnicola in Abule Eledu creek. The effectiveness of the trap to catch different species in the two creeks made it a good small – scale fishing gear. The soak time of twelve hours was affecting the fishing operation negatively by rendering the catch commercially value less. The dead fish attract more crabs which ended up feasting on the commercially important catch. The low species diversity noted in the creeks may be a reflection of fishing gear type used. Most fish specimen caught in this study from both creeks were juveniles meaning that the creeks served as nursery ground for these species. The longevity of the trap was related to the salinity of the area. The highest catch per Unit effort for Abule Eledu creek was in October (9 fish/trap/day) and the least was in January (2 fish/trap/day) while the highest catch per unit effort (CPUE) for Iponri creek was in March (12fish/trap/day) and the least was in December (6fish/trap/day). This trap is selective for both crabs and fin fishes and can be operated in both fresh and brackish shallow creeks.

***Keywords*:** *Selectivity, galvanized wire gauze, fish species, creek.*

INTRODUCTION

The widely different habits and habitats of the vast variety of West African freshwater and brackish water fishes, the striking seasonal variations in their environment and the ingenuity of local fishermen have all contributed to the development throughout the region of a bewildering array of traditional fish-catching devices (Holden & Reed, 1991; Emmanuel, 2004; Emmanuel & Kusemiju, 2005). It is well recognised that estuaries, lagoon and enclosed embayment are important spawning habitats and nursery areas for inshore fishes (Potter *et al.*, 1990; Emmanuel and Kusemiju, 2005).

The fish fauna of Lagos lagoon were classified by Fagade and Olaniyan (1974) into three main ecological groups namely the marine group made up of fishes that use the lagoon as nursery ground. These were made up of thirty-one species, the freshwater fishes that dominate the lagoon during the low salinity periods consisted of seventeen species and the euryhaline group which included twenty-four species that were found in the lagoon throughout the year.Over the years the resources of the Lagos lagoon have contaminated with a high level of industrial and domestic pollutants (Akpata & Ekundayo, 1978; Ajao and Fagade, 1990; Akpata, 2002; Emmanuel, 2004). The pollution has invariably affected the lives and species of fishes inhabiting the lagoon. The fisheries are declining in the lagoon and adjacent creeks and many of the fish species are greatly threatened (Emmanuel, 2004; Emmanuel & Kusemiju, 2005). Despite these, the mangrove forest, the creeks and the lagoons still serve as major sources of livelihood for the resident around them (Emmanuel, 2004). The Lagos lagoon and its adjacent creeks serve as important nursery grounds for many fish species.

A number of studies conducted on fishes using galvanized wire gauze trap reported that that the wire gauze trap was simple to construct and widely used in artisanal fishery in Lagos lagoon and its environs (Udolisa *et al.*, 1994; Emmanuel & Onyema 2007 and Emmanuel 2008). Von-Brandt (1984) reported on the entire traps used in the wild, their construction and operation as well as their efficiency where traps were referred to as simple fishing gears used majorly in shallow waters. Slack-Smith (1997) reported that traps are large structures fixed to the shore while pots are smaller, movable traps, enclosed baskets or boxes that are set from a boat or by hand. Traps are simple and passive fishing gears that allow fish to enter and then make it hard for them to escape (Emmanuel 2008).

This is often achieved by putting chambers in the trap or pot that can be closed once the fish enters having a funnel that makes it difficult for the fish to escape. Trapping is a passive way to catch fish, shell fish, crustaceans (crabs, prawns e.t.c.) and cephalopod (octopus, squid etc) and is different from active fishing methods such as dredging and trawling (Okawra and Matthawee, 1980).

The number of catch depends on density of fin fish, and shell fish are in the area and how concentrated they are in the water (Emmanuel, 2008). Slack-smith (1997) added that the cost of setting and hauling traps are usually not great. Simple traps can be set and handled from a canoe or a vessel without a motor. Slack-smith (1997) and Emmanuel (2008) jointly reported that good bait is essential for effective trap fishing. Von-Brandt (1984) added that the handling and maintenance of the large traps are expensive. It was further implicated that even when fish worth the money are caught, the season can be limited and very short in relation to the long time spent in preparing and removing it. Despite all these foreign reports, very few information is available on the galvanized wire gauze traps in Nigeria.

The aim of this study was to determine the design, construction specification and operation of wire guaze trap, fish species index of abundance and monthly variation of the catches from the Abule - eledu and Iponri creeks in Lagos, South-western, Nigeria.

MATERIALS AND METHODS

The sites used for this study were Abule - eledu and Iponri creeks in Lagos State. Abule - eledu creek is situated near the University of Lagos Guest House and extends to the back of University of Lagos Chapel subsequently terminates at the back of Faculty of Environmental Sciences. The Sampling area is located between 06^0 31' 09.65 and 06^0 31' 23. 61 N latitudes and 03^0 23' 20. 70 and 03^0 23' 51. 44 E longitudes. It is one of the numerous sluggish creeks that empty into the Lagos lagoon. It is tidal with depth which decreases inland and located in the wet tropic where the alternation of the dry and wet seasons is phenomenal. During the wet season, nutrients are brought down into the creek via the storm waters. The riparian vegetation was characterized by *Paspalum vaginatum, Acrostichum aureum* and *Rhizophora racemosa*. The floating macrophytes associated with the creek are: *Eichornia crassipes, Pistia stratiotes, Lemna pancicostrate* and *Vossia cuspidata*. Artisanal fishing is the mainstay of communities that are found around the creek.

The Iponri creek on the other hand is a fresh water creek with a surface area of about 1282.6m^2. It is situated directly behind the National Stadium in Surulere Local Government and extends to Tejuosho area of Yaba. It has no obvious link with Lagos lagoon. The Sampling area is located between 06^0 29'25.99 and 06^0 29' 24.96 N latitudes and 03^0 21' 54.16'' and 03^0 31' 57.61 E longitudes. The riparian vegetation is composed of reeds and the floating macrophytes associated with the creek are *Eichharnia crassipes, Pistia stratiotes* and *Lemna pancicostrate.*

Wire gauze trap design details

The galvanized wire gauze materials were bought from Idumagbo market on Lagos Island. The wire mesh stretch was measured with thread which was finally measured with metre rule as described by Klust (1982). The trap had single funnel entrance (valve of no-return) and two threaded sides. The length of the trap was 45cm and 40cm diameter. The wire was stitched together to form a dome shape as described by Emmanuel (2008) **(Figure 1)**

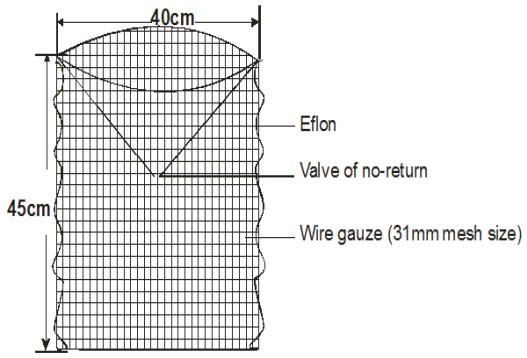

Fig. 1: The wire basket trap

Field Operation

Water samples from the two creeks (Abule - eledu and Iponri) were collected for physico – chemical analysis. A monthly wire gauze trap catch composition was examined for 6 months (October 2006 – March 2007). Galvanized wire gauze trap fishing operation was done by fencing across the creeks. The fences were made from reeds; grass *(Paspalum* sp) and sticks in connection with the traps placed in the hole created on the fence alternating each other (that is, where they were facing) and were tightened by placing *Paspalum* sp and reeds on the sides to block any available holes as described by Emmanuel (2008). The catches were removed by loosing one of the sides rope half way. The traps longevity and efficiency were also investigated.

Laboratory analysis

All fish samples were transported to the laboratory and stored in a deep freezer ($<4^0$C) immediately after appropriate labelling and identification were made with the aid of relevant literatures (Tobor and Ajayi, 1979; Schneider, 1990; Olaosebikan and Raji, 1998) while numerical abundance of the fish species were recorded. The measurement (in centimetre) of the fishes (standard and total length) and the crabs (carapace length and width) species were taken using methods described by Chindah *et al.* (2000). The specimens were also weighed on a Sartorious weighing balance to the nearest gram.

Physical and chemical Analysis

Surface water temperature was measured in situ using mercury in glass thermometer, pH was measured in the field using a BDH Lovibond comparator and confirmed in the laboratory with Griffin pH meter (model 80) while Salinity (‰) was determined using Hanna refractometer. Dissolved Oxygen (DO) was determined using the azide modification of the Winkler methods as described by Welch (1948). The Department of Meteorology Oshodi, Lagos supplied rainfall data.

RESULTS

Physico-chemical characteristic of the creeks

Variations in some physical and chemical parameters of Abule Eledu (brackish) and Iponri fresh water creeks are presented in Tables 1 and 2. In Abule Eledu, water temperature ranged from 26.5 ^{0}C (November) to 30.8 ^{0}C (February) while air temperature ranged from 28.6 ^{0}C (January) to 32.0 ^{0}C (March). The pH throughout the study was slightly alkaline (7.4 – 7.8). Also dissolved oxygen levels were between 3.4mg/l (January) to 4.0mg/l (March). On the other hand the Iponri Creek highest air temperature was recorded in March (31.0 ^{0}C) while highest water temperature (28.7 ^{0}C) was recorded in November. Furthermore, the pH value for Iponri creek was alkaline throughout the study period. The dissolved oxygen levels ranged between 4.0mg/l (January and February) and 4.6mg/l (October).

Table 1: Monthly variation in physico-chemical parameters in Abule Eledu creek

Parameters	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Air Temperature (°C)	29.5	29.8	29.8	28.6	30.8	32.0
Water Temperature (°C)	28.5	26.5	26.5	26.9	30.8	28.6
Salinity (‰)	3.0	5.3	5.3	12.6	18.3	19.7
Dissolved Oxygen (mg/1)	3.5	4.4	3.6	3.4	3.5	4.0
pH	7.4	7.8	7.6	7.4	7.7	7.8
Rainfall (mm)	115.0	50.0	0.0	22.0	35.0	23.0

Table 2: Monthly variation in physico-chemical parameters in Iponri creek

Parameters	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Air Temperature (°C)	29.8	29.6	29.5	29.6	30.6	31.0
Water Temperature (°C)	28.6	26.5	26.9	26.8	26.9	28.7
Salinity (‰)	0.03	0.12	0.15	0.20	0.21	0.21
Dissolved Oxygen (mg/1)	4.6	4.4	4.4	4.0	4.0	4.1
pH	7.8	7.6	7.5	7.4	7.1	7.2
Rainfall (mm)	115.0	50.0	0.0	22.0	35.0	23.0

The Wire guaze trap in Abule Eledu and Iponri creeks

Most fish specimens caught were eaten by the crab when checked in the morning and more crabs were caught. The traps that were not well placed on the gaps were empty in most cases. Most specimens caught from the two creeks were juveniles.

General survey of fish fauna in the creeks

A total of 391 fish specimens made up mostly juveniles and weighing 12,474.28g (12.47kg) were caught from Abule Eledu and Iponri Creeks, Lagos (Table 3 and 4). They were comprised of two hundred and sixty-seven (267) specimens from Abule Eledu and one hundred and twenty-four (124) specimens from Iponri Creeks. Abule Eledu creek's total catch comprised twelve (12) fish species belonging to 8 families. Numerically, the portunid crab *Callinectes amnicola* (DeRocheburne) accounted for 167 (62.55%) of the catch. The cichlids, *Sarotherodon melanotheron* (Ruppel), *Hemichromis fasciatus* (Peters) and *Tilapia guineensis* (Bleeker) accounted for 40(14.99%). Gobiidae was represented by *Bathygobius soporator* (Valenciennes), Mugilidae, *Liza dumerilli* (Steindachner) and *Liza falcipinnis* occurred in two and three respectively. The Eleotridae was represented by *Eleotris vittata* (Dumeril) and the other decapod crustaceans were represented by Grapsidae, *Goniopsis pelii* (Herklots) and *Sesarma huzardi* (=*Perisesarma huzardi* (Desmarest); Xanthidae, *Menippe nodifrons* (Stimpson) and Gercarcinidae, *Cardiosoma armatum* (Herklots).

Iponri creek's total catch comprised ten (10) fish species belonging to 8 families with two by-catches (tortoise and water snail). Numerically, Channidae, *Parachanna obscura* (Gunther) was the most abundant accounting for 30(24.19%) of the catch. The clarriids, *Clarias gariepinus* (Burchell) and *Clarias agboyiensis* (Sydenham) accounted for 15 (14.52%) of the catch. Polyteridae was represented by *Polypterus senegalus* (Cuvier) with 6 (4.84%) Gobiidae *Bathygobius soporator* (Valenciennnes) Notopteridae, *Xenomystus nigri* (Gunther) with four numbers in occurrence respectively. Also *Hemichromis fasciatus* and *Sarotherodon melanotheron* were recorded and the Decapod crustaceans, the portunidae, *C. amnicola*. The by-catches tortoise and water snail accounted for 44 (14.52%) of the total catch (Table 4).

Table 3: Fin and Shell Fish Caught from Abule Eledu Creek

Family/Species	Number	Total Length Range (cm)	Weight Range (g)
Cichlidae			
Sarotherodon melanotheron (Ruppell)	17	6.50 – 13.00	4.28 – 39.33
Hemichromis fasciatus (Peters)	13	8.90 – 14.00	9.13 – 42.16
Tilapia guinensis (Bleekers)	10	5.50 – 15.00	9.12 – 36.34
Gobiidae			
Bathygobius soporator (Valenciennes)	16	10.0 – 20.00	10.0 – 86.32
Mugilidae			
Liza dumerilli (Steindachner)	3	11.0 – 14.00	13.81 – 16.20
Liza falcipinnis (Valenciennes)	2	11.0 – 11.5	13.68 – 13.75
Eleotridae			
Eleotris rittata (Dumeril)	8	11.50 – 16.00	16.79 – 39.70
Portunidae			
Callinectes amnicola (DeRocheburne)	167	2.60 – 12.00	8.09 – 67.00
Grapsidae			
Sesarma huzardi (Desmarest)	7	2.50 – 7.00	11.0 – 26.00
Gonopsis pelii (Herklots)	14	3.00 – 3.60	20.61 – 31.00
Gecarcinidae			
Cardiosoma armatum (Herklots)	5	4.00 – 5.30	20.13 – 99.35
Xanthidae			
Menippe nodifrons (Slipmson)	5	2.00 – 4.00	13.81 – 25.41

Table 4: Fin and shell fish caught from Iponri creek

Family/Species	Number	Total Length Range (cm)	Weight Range (g)
Cichlidae			
Clarias gariepinus (Burchell)	15	15.40 – 32.00	30.00 – 155.22
Clarias agboyiensis (Sydenham)	3	15.0 – 19.5	35.15 – 40.22
Channidae			
Parachanna obscura (Gunther)	30	6.80 – 29.50	10.72 – 121.04
Polypteridae			
Polypterus senegalus (Cuvier)	6	30.8 – 40.9	55.10 – 70.10
Cichlidae			
Sarotherodon melanotheron (Ruppell)	1	10.5	22.31
Hemichromis fasciatus (Peters)	4	11.00 – 14.00	23.20 – 51.93
Mugilidae			
Liza grandisquamis (Valenciemes)	1	9.00	19.10
Gobiidae			
Bathygobius soporator (Valenciennes)	4	17.0 – 17.80	56.68 – 89.99
Notopteridae			
Xenomystus nigri (Gunther)	4	11.20 – 16.80	20.69 – 31.44
Portunidae			
Callinectes amnicola (DeRocheburne)	11	3.50 – 6.50	5.00 – 27.67
*Turtle, *Pelusios castaneus*	17	4.00 – 18.00	40.15 – 120.00
*Water snail	27		5.05 – 32.00

* Bycatch

Table 5: Index of Abundance of Species in Abule - eledu creek

Species	Number	Percentage (%)	Weight (g)	Percentage (%)
S. melanotheron	17	6.37	376.14	5.62
H. fasciatus	13	4.87	294.06	4.39
T. guineensis	10	3.75	266.2	3.97
B. soporator	16	5.99	537.72	8.03
L. dumerilli	3	1.12	43.82	0.65
L. falcipinnis	2	0.75	27.43	0.41
E. vittata	8	3.00	170.28	2.54
C. amnicola	167	62.55	4,058.76	60.60
S. huzardi	7	2.62	235.70	3.52
M. nodifron	5	1.87	78.11	1.17
G. pelii	14	5.24	322.10	4.81
C. armatum	5	1.87	287.51	4.29
TOTAL	**267**	**100**	**6,697.83**	**100**

Monthly variation in fish specimens in Abule - eledu creek and Iponri creek

The monthly variation in fish specimens caught in Abule - eledu creek is shown in Table 7**.** The total numbers of specimens were 49, 44, 31, 38, 43 and 62 for October, November, December, January, February and March respectively. The highest number of specimens were caught in March (62) and the least number were caught in December (31). *C. amnicola* was the most frequent species in all the months.

The monthly variation in fish specimen caught in Iponri creek is shown in Table 8. The total numbers of specimens were 43, 14, 19, 12, 19 and 17 for October, November, December, January, February and March with by-catch respectively. The highest number was recorded in October (43) and the least was recorded for January (12). *C. amnicola* was the most frequent species in October (11), *C. gariepinus* was most frequent in December (61), January (8) and March (8) respectively. The least caught species throughout the study months were *E. vittata* and *L. grandisquamis* with singular occurrence each. The chi-square test of the catch composition indicated that catches in Abule Eledu was significantly more than catches in Iponri Creek at ($P<0.05$).

Table 7: Monthly Variation in Catches from Abule Eledu Creek

Species	October		November		December		January		February		March	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
S. melanotheron	8	193.73	0	0	1	26.69	3	97.62	5	81.78	4	72.82
H. fasciatus	9	193.73	0	0	0	0	1	14.22	3	86.29	0	0
T. guineensis	0	0	8	206.62	0	0	0	0	0	0	2	59.53
B. soporator	4	116.3	4	252.31	0	0	0	0	8	110.81	0	0
L. dumerilli	0	0	1	13.81	0	0	0	0	0	0	2	30.01
L. falcipinnis	0	0	1	13.68	0	0	0	0	0	0	0	0
E. vittata	1	10.01	5	116.88	0	0	0	0	3	43.62	0	0
C. amnicola	19	286.53	19	397.94	27	471.48	28	695.25	23	416.84	45	1841.18
S. huzardi	5	105.9	0	0	0	0	0	0	0	0	3	129.8
M. nodifron	1	6.09	4	72.04	0	0	0	0	0	0	0	0
G. pelii	0	0	2	37.94	0	0	6	158.3	1	29.04	5	97
C. armatum	2	18.68	0	0	3	169.48	0	0	0	0	0	0
TOTAL	**49**		**44**		**31**		**38**		**43**		**62**	

Table 8: Monthly variation in catches from Iponri Creek

Species	October		November		December		January		February		March	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
C. gariepinus	1	62.19	5	211.68	1	135.00	3	194.38	4	301.54	1	110.0
P. Obscura	4	289.2	0	0	6	241.8	8	237.23	3	193.39	8	231.63
P. senegalus	0	0	0	0	188.12	0	0	1	61.23	0	2	136.61
S. melanotheron	1	22.31	0	0	0	0	0	0	0	0	0	0
H. fasciatus	4	133.92	0	0	0	0	0	0	0	0	0	0
E. vittata	1	46.99	0	0	0	0	0	0	0	0	0	0
L. grandisquamis	1	9.08	0	0	0	0	0	0	0	0	0	0
B. soporator	4	277.56	0	0	0	0	0	0	0	0	0	0
X. nigri	4	101.4	0	0	0	0	0	0	0	0	0	0
C. agboyiensis	0	0	2	75.37	0	0	0	0	1	42.35	0	0
C. amnicola	11	157.06	0	0	0	0	0	0	0	0	0	0
Turtle *Pelusios castaneus*	2	198.0	4	296.9	5	461.34	0	0	5	380.5	3	283.1
Water snail	10	223.36	3	52.06	4	59.80	1	11.0	5	73.26	3	46.80
TOTAL	**43**		**14**		**19**		**12**		**19**		**17**	

Traps Life Span in the Creeks

Only one out of the five (5) traps used in Abule - eledu creek rusted and was disposed but all the five used in Iponri creek remain intact throughout the study period.

Catch Per Unit Effort of the Trap

The monthly Catch Per Unit Effort (CPUE) was based on the number of species caught per trip per the number of traps used. The highest average catch per unit effort for Abule - eledu creek was in October (9 fish/trap/day) and the least was in January (2 fish/trap/day) while the highest CPUE for Iponri creek was in March (12 fish/trap/day) and the least was in December (6 fish/trap/day).

DISCUSSION

Creeks differ considerably from one another in size, morphology, degree of isolation, water depth, salinity etc (Barnes, 1980). Such a range of environmental characteristics applies to the two creeks studied here. The observed variations in the physical and chemical features in Abule – eledu creek agreed with earlier observations similarly observed in the adjoining Lagos lagoon. The regime of ecological factors operating in the creek has been documented in the adjacent lagoon by several investigators over the years (Webb, 1958, Hill and Webb, 1958; Emmanuel and Onyema, 2007). Further to this higher salinity in the dry season in Abule – eledu creek is associated to increased tidal seawater incursion coupled with reduced flood inflow from associated rivers and creeks. This was not so with Iponri creek which is totally fresh water creek throughout the year. Nwankwo (1991) reported that the inflow of flood water during the wet season caused sudden drop in salinity whereas cessation of the floods led to increased incursion of tidal seawater. Hence, hydro-meteorological forcing may be implicated in the control of the hydro-climatic conditions of the study creek (Abule Eledu) normally freshwater associated with rains inflows and seawater incursion.

High air and water temperatures recorded during the study are typical for the region (Nwankwo *et al.*, 2003). The high biological oxygen demand value may be a reflection of the amount of decompositional materials within the creek, arising from the surrounding rich riparian mangrove vegetation.

The physico-chemical parameters for Iponri creek gave a typical fresh water environment. The period of low temperature coincided with the rainy period of October. The low temperature could be attributed to the cold rain water, loss of stratification in the creek and the cloud covers which reduced the heating effect of the sun during the rainy period. Olaniyan (1969) and Kusemiju (1981) recorded the same pattern of variation in air and water temperatures during the dry and wet seasons for Badagry, Lagos, Epe and Lekki Lagoon respectively.The monthly variation in water temperature in the creek was quite small and it was unlikely to be an important factor in the distribution of the fish species.

Salinity range in Iponri creek was low (0.03 – 0.21‰). A greater fluctuation in salinity has been obtained by other authors along the lagoon systems in southwestern Nigeria. The reports of Olaniyan (1969) and Kusemiju (1981) for eastern zone around Epe lagoon where the salinity was extremely low and lekki lagoon in which the water was virtually fresh

throughout the year. The pH range of 7.1 – 7.8 in this study revealed that the creek was slightly alkaline. This agreed with the report of Kusemiju (1981) for Lekki lagoon with a pH range of 6.8 – 8.3. The DO level of the creek fall below 5mg/l throughout the study period. Boyd (1998) reported that this range (2 – 5mg/l) will lead to low growth on exposure continuously for long period. This may be as a result of continuous anthropogenic impact on the creek.

The wire basket trap was highly selective for the crab, *Callinectes amnicola* in Abule Eledu Creek. The effectiveness of the trap to catch different species in the two creeks made it a good small-scale fishing gear. This agreed with Von Brandt (1984) and Emmanuel (2004), who jointly reported that good artisanal or small scale fishing gear should be good for catching more than two different species. The soak time of twelve hours was affecting the fishing operation negatively in that it renders the catch value less in terms of market price. Though, the dead fish attracted more crabs which destroy the commercially important fishes in the traps. This agreed with Solarin (1998) and Emmanuel (2008) that soak time of the trap influenced the number of catch caught in a basket trap in Lagos lagoon. Emmanuel (2008) further proposed that the longer the soak time the higher the number of crab caught.

The low species diversity noted in the creeks may be a reflection of fishing gear type used. This agreed with Lagler (1974) and Emmanuel and Kusemiju (2005) that different fishes were known to react differently to different types of fishing gears. Most fish specimens caught in this study from both creeks were juveniles which probably indicated that the creeks served as nursery ground for these species. Species abundance estimate revealed that *C. amnicola* was numerically more abundant in Abule Eledu than Iponri Creeks while *P. obscura* was numerically more abundant in Iponri creek than Abule - eledu.

The occurrence of *S. melanotheron, H. fasciatus, B. soporator, E. vittata* and *C. amnicola* in both creeks indicated that these species can tolerate a wide range of salinity, and that stressful situations have demonstrated that their capacity to adapt is very high. This allows them to grow at the expense of species that are less plastic. A similar finding has been reported by Albaret and Lac (2003) and Emmanuel (2008) for the Ebrie lagoon (West Africa) and Abule Agege creek (Lagos) respectively.

The longevity of the trap was related to the salinity of the area. This agrees with the report of Emmanuel (2008) that salinity fluctuation in the creek and salt content of the water results in oxidation and eventual deterioration of the trap. The CPUE was high in October in Abule Eledu Creek and March in Iponri creek probably due to availability of food in the environment.

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