

PATTERNS OF MUDSKIPPER CONSUMPTION IN SELECTED FISHING COMMUNITIES OF RIVERS STATE

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ABSTRACT

A study on patterns of mudskipper consumption in selected fishing communities of Rivers State, was carried out, to determine the consumption rate, size preference, price mechanism and preparation methods of this species among the people living in these areas. A structured questionnaire was administered to 120 randomly selected respondents' communities across 3 LGA of the state. The results obtained from the study indicated that consumption of mudskipper was more acceptable among the old than the young people. Mudskippers are being sold more in fresh form (70.83%), rather than smoked ones (20.87%). On the mode of utilization of Mudskippers, it was discovered that it is more used in preparation of native soup (45.83%), than other consumption variables such as stew, condiment and pepper soup. The price of mudskippers varies from one, community to another and ranges between N20/kg to N200/kg, with the average price of N50/kg (35.83%) and N100/kg (30.83%) making it one of the cheapest fishery products. This makes it accessible and affordable to most people in these communities.

Key words: Mudskippers, fish, consumption, food, communities

INTRODUCTION

Food consumption pattern, as defined by Aromolaran (2006), refers to eating habits of people, preferences, rate and constitution of food basket of an individual or household in a particular location. In Nigeria, fish is an essential component in the diet of the people living in the rural areas and are considered to be essential protein foods sources, in many families (Elliot and Ezenwa, 1988, Akinrotimi *et al.*, 1997). The relative contribution of fish as a major protein sources, varies depending on the livelihood activities of the various families, their income and fish availability (Gomma and Rana, 2007). In most rural areas, especially, fishing communities in Rivers State, fish is known to play a crucial role in their diet, providing up to 75% of the total animal protein intake (Akinrotimi *et al.*, 2009).

In many developing countries, the dependence on fish remains very high in many communities. A small amount of fish is an important dietary supplement for people who can not afford animal protein and rely mainly on starchy foods for their daily meal (Ojo, 2008). The range of species utilized by fishing and rural communities is also largely unknown, although it is commonly accepted that Tilapia species are consumed in many rural communities because of its relative cheap price and its early accessibility in many water bodies. Addis (2004), reported that availability and access to fish within a household is an important determinant of its members well being. In most fishing communities in Rivers State, the consumption pattern depends on the income of the people because of the harsh economic realities that is prevalent in the region. In view of this, because of its abundance and relatively low cost, mudskippers are being consumed in many communities in the coastal areas of Niger Delta.

Mudskippers are amphibious, fish that are highly active during low tides and spend most of their time out of water in mangrove habitats (Khairunizam *et al.*, 2002). In many parts of the world mudskippers are a delicacy among the people living in the coastal regions.

They are highly valuable with the price varying from one community to another. Mudskippers have a high density on tidal mudflats that are found in creeks, estuaries, and on mangrove forest zone. Vegetation enhances this fish population because they provide organic matter and detritus as food sources (Sasekumar and Chong, 1998).

The aim of this study therefore, was to investigate the pattern of mudskipper consumption in some fishing communities, by examining the consumption rate, methods of preparation and size preference of this fish species among the people living in these communities. As information regarding these aspects of mudskipper consumption are scarce thus necessitating the need to carry out this work.

MATERIALS AND METHODS

Area of Study

The study was carried out in 10 communities, namely, Buguma, Ido, Asalama, Tema, Okpo and Ilelema (Asaritoru local government area; Obuama and Degema (Degema local government area), Abonnema, and (Akukutoru local government area) all in Rivers State of Nigeria.

These areas are surrounded by large water bodies and the natural vegetation in this area varies from the mangrove to the freshwater swamp forests. The prevailing climate hydrographic conditions thus favour a thriving fishery and aqua cultural activities.

Sampling Procedure and Data Collection

The sample for the study was drawn by using random sampling from the ten communities in three local government areas. Twelve respondents were randomly selected from each community to give a total sample size of 120. Data for the study were collected through a structured questionnaire administered in these areas. These data included socio economic characteristics such as sex, age, occupation, consumption patterns such as method of preparation, preference, cost and rate of consumption.

Analytical Technique

Descriptive statistics involving the use of measures of central tendency such as frequency, percentage and chart were used to analyse the data

Results and Discussion

The socio-economic characteristic of the mudskipper consumer which include their age, gender and occupation are shown in Table 1. The data obtained on age category indicated that the highest percentage (33.33%) was observed in the age bracket of 25-40 years, while those in 10-15 years had the lowest (5.0%). This trend indicates that consumption of mudskipper is more popular among the older people than the younger ones. This is in line with the report of Ravi (2005), who reported same in the consumption of mudskippers in Tamil Nadu, South east coast of India. He observed that mudskipper consumption was more pronounced among the older people than the young ones.

The result further revealed that male respondents (55.83%) form the greater proportion of the consumers compared with female respondents (44.17%). This implies that both male and female consume mudskippers, male being dominant, with a little margin. This is further supported by Roos (2001), who reported similar findings in distribution of the traditional fish dish in Bangladesh. This form of food consumption probably reflects the greater energy demands of men who engage in manual and rigorous labour in many fishing communities.

The various occupation engaged by respondents are illustrated in Table 1. The data indicated that, those who engage in fish and fishing activities had the highest percentage (20.0%), while the retirees had the lowest (9%). This substantiated the findings of Alli *et al.* (2008), who observed that fishermen in the rural communities are the highest consumers of various fish species. This high consumption among fisher folks and others with low

purchasing power probably occurred because these people acquired mudskippers at no monetary cost.

The information on packaging of mudskippers for sale revealed that mudskippers in fresh form accounts for 70.83%, smoked (20.83%) while 8.3% of the respondents accounts for both fresh and smoked packaging methods (Table 2). The high percentage of mudskipper being sold in fresh form as obtained in this study concurs with the findings of Adeniyi (1987), who observed same in the fish consumption in the coastal areas of south Nigeria. This may be as a result of importance attached to consumption of fresh fish: Liyaba *et al.*, (1993), observed that processing reduces its nutritional quality, although AlBehbehani and Ebrahim (2010), suggests that processing of fish has relatively little effects on its overall nutritive value.

The consumption rate of mudskippers indicated those who consume this specie very often accounts for the highest percentage of 61.06%, while the lowest (14.17%) were observed among those who consumed it occasionally (Figure 1). This higher consumption trend was probably as a result of the free access of people in these communities to mudskipper, at any time of the year especially during low tides. The size preference of mudskippers for consumption among the respondents, indicated that most people prefer both sizes (64.16%), big size (26.67%) and the small size has the lowest (9.17%). This is in line with the report of Dreschl *et al.*, (1995), who observed similar result in fish consumption patterns in fishing communities around Lake Kainji, but contradict that of Ironi and Oyaide (2007), in some fishing communities of Delta State. These authors reported that most of the inhabitant of these communities prefers big fish to small ones.

Data on preparation of mudskipper for consumption indicated that its utilization in soup preparation accounts for the highest (45.83%), closely followed by stew preparation (32.50%), and peppersoup (14.17%), while its utilization as condiment recorded the lowest (7.50%) percentage. Similar observation was made by Williams (2002), in the eastern part of Nigeria, but contradicts that of Gomna and Rana (2007), who noted that fresh fish were often used in preparation of stew. The results obtained in this study suggest that utilization of mudskipper in soup preparation may be due to its small size when compared to fish. As smaller size fish have been reported to be used mostly for soup preparation in riverine communities (Essuman, 1992. Jolly and Clounts, 1993 Zhai *et al*; 1996 and Townsley, 1998).

The price of mudskippers varies from one community to another, with the highest price of N200/kg, while the lowest price is N20/kg. The average price in most communities ranges between N50 to N100/kg (Table 3). The prices observed in this study made this species one of the cheapest fish products in most fishing communities of Rivers State. According to Lawal and Omotesho (2001), the price of fish commodity will determine its consumption pattern, especially in the rural communities. If the price is too high, it will be out up reach of the poor who are the majority in these areas. Therefore, because of relatively low price of mudskipper when compared to other fish species, it is relatively acceptable and affordable to the majority of the populace living in the coastal areas.

CONCLUSION

The present study assessed the consumption patterns of mudskipper, which is a common fish species in the coastal areas of Nigeria. The consumption is more popular among the older people than younger ones, mudskipper is relatively cheaper and readily available all year round. Hence, priority should be given to promoting the sustainability of these ecosystems and enhancing the availability of mudskippers in aquatic systems through good environmental policies and improved productively of traditional aquaculture farming system.

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Table 1: Distribution of socio-economic characteristics of respondents (n = 120).

Socio-economic Variable	Frequency	Percentage (%)
Age (years)		
10 – 15	6	5.00
15 – 25	26	21.67
25 – 40	40	33.33
40 – 60	35	29.17
60 and above	13	10.83
Total	120	100
Gender		
Male	67	55.83
Female	53	44.17
Total	120	100
Occupation		
Petty trader	15	12.50
Student	16	13.33
Applicant	7	5.83
Civil servant	16	13.33
Retires	5	4.17
Craftsman	14	11.67
Fish files	24	20.00
Business man	14	11.67
House wife	9	7.50
Total	120	100

Table 2: The Distribution of Respondents on Packaging of Mudskipper for Sale in Various Communities

Variable	Frequency	Percentage (%)
Fresh	85	70.83
Smoked	25	20.87
Both	10	8.30
Total	120	100

Table 3: Distribution of respondents on the price of mudskipper in various communities

Price (₦/kg)	Frequency	Percentage (%)
20	10	8.33
40	11	9.16
50	43	35.83
100	37	30.83
150	13	10.83
200	6	3.00
Total	120	100

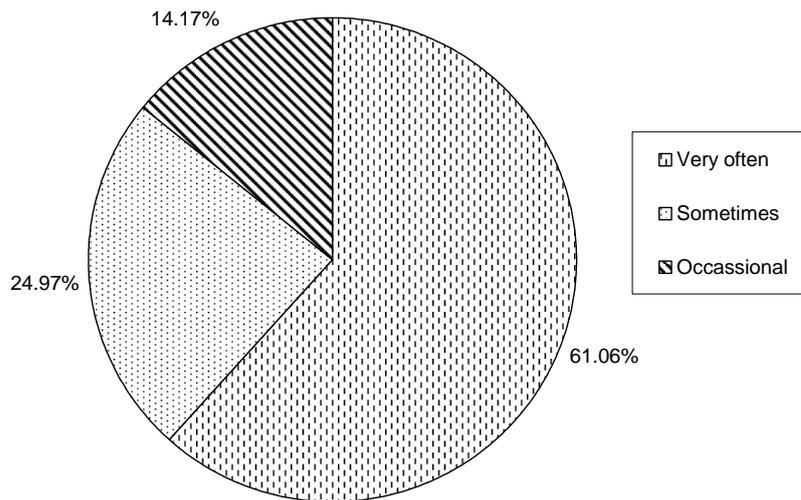


Figure 1: Distribution of Mudskipper Consumption Rate by the Respondents

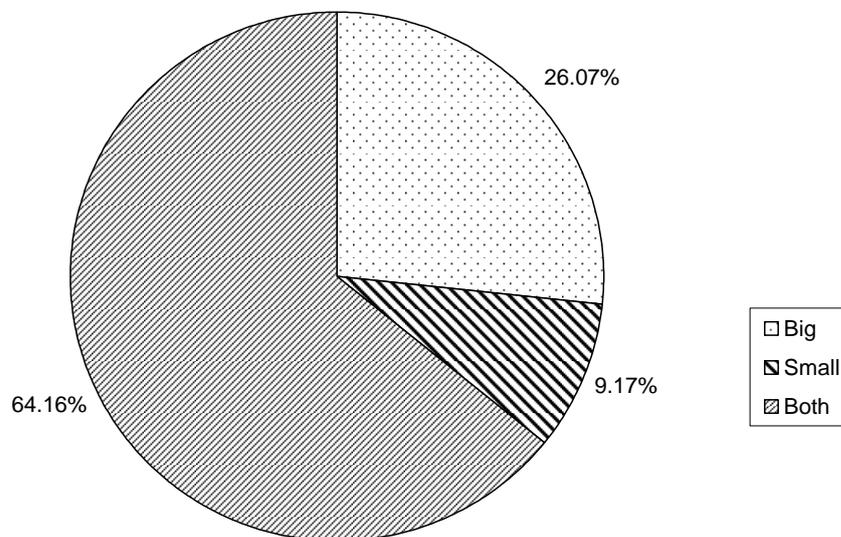


Figure 2: Size Preference of Mudskipper Consumption by the Respondents

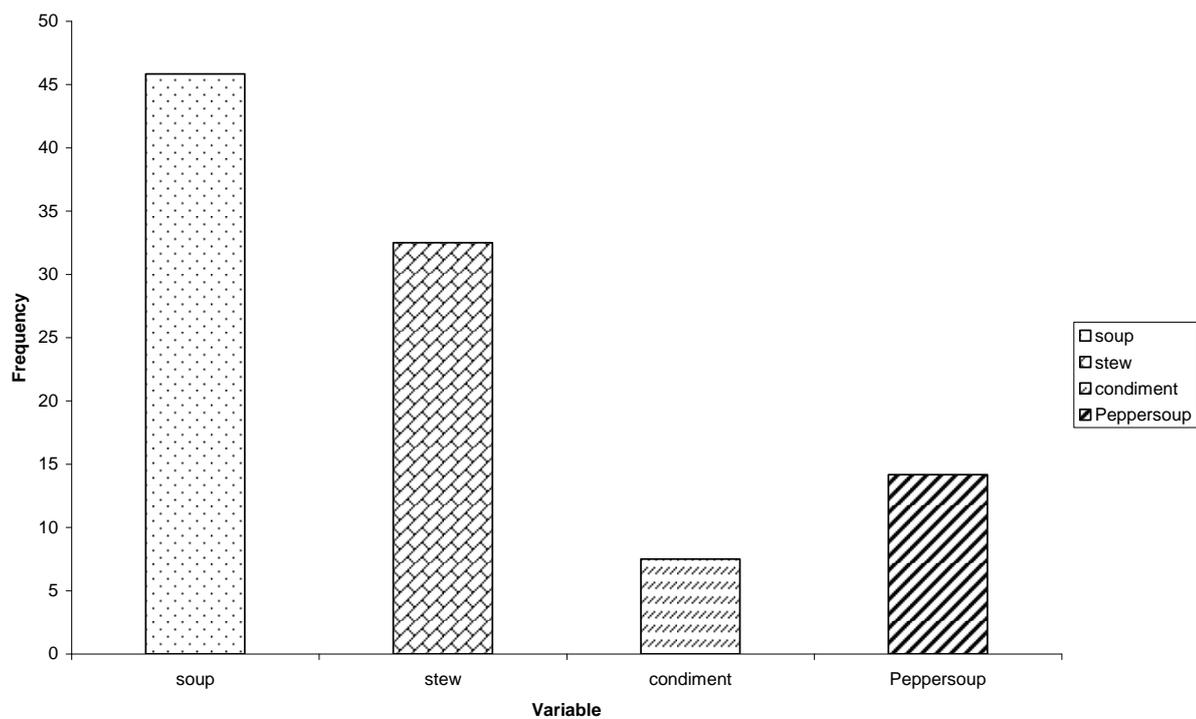


Figure 3: Preparation of Mudskipper by the Respondent

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