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Nutrient content of Bombayduck (*Harpondonnehereus*) of local fish market of Jafarabad, Gujarat

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Abstract

Dry fish is very common and low cost food matter among the South-east Asian people. Dry fish is not only consumed by human but also used in fish and poultry feed formulation. The general purpose of this study is to determine the proximate composition of three Major nutrients like protein, lipid and carbohydrate in marine dry fish Bombay duck (*Harpodonnehereus*). The carbohydrate and lipid content were found relatively higher in amount from the dry fish samples collected from local fish market. However, the findings are showed that marine dry fishes are highly nutritive and could be a substitute of other protein sources such as fresh fish, chicken, beef etc.

Keywords :- Nutrient content, Bombay duck, dried fish, Gujarat

Introduction

The Bombay Duck Harpodon (Ham.) included in family Scopelidae is the only species forming a major fishery along the Gujarat and Maharashtra coasts of India. On an average it forms about 10 % of the total marine fish landings, and of these 98 % comes from the above two states. The remaining 2 % is contributed by Andhra Pradesh, Orissa and West Bengal. In India, among the commercially important fishes, Bombay duck (*Harpodonnehereus*) ranks next only to Oil sardine and Mackerel, the annual average catch of last ten years being about 72,000 tonnes, forming 7% of the total India marine fish landings. The average annual landing of this fish is worth about Rs. 75 million, when value at Rs. 1 per kg. Outside India, Bombay duck forms a fishery on the east coast of Africa, Malaya, Indonesia and China. Maharashtra and Gujarat together contribute 97% of the total Bombay duck catch (average for the period 1968-72, Nair 1978). Recently Bombay duck formed on an average 12.68% of the total marine landings of the state. The Bombay duck production at the Dol net landings centers of Gujarat decreased from 0.65 lakh tons (13.96% of total marine production) in 2002 to 0.475 lakh tons in 2006 (9.58% of total marine production) (Mohanraj et al, 2007). At present the fishery is not found along the coasts of Kamataka, Kerala and Tamil nadu. Thus, it has a discontinuous distribution.

Harpodon neherius is popularly known as Bombay duck, and one of the largely produced and relished dried fish in the coastal and some interior parts of India (A.D. Dholakia 2004). Along the Gujarat and Maharashtra coasts it is caught in the non-selective bag net locally known as “Dol net”; consequently, the Harpendon catch is composed mostly of juveniles. When fresh, the fish is used as food, but being a soft fish it spoils quickly. It is sun-dried on specially built bamboo scaffoldings. When found unfit for human consumption, it is converted into manure. The important fish landing centers in the Maharashtra region are Versova, Satpati, Bassien, Arnala, Uttan, Murbai, Dahanu, etc. and on Gujarat coast, porbandar , Veraval, Navabandar, Jafarabad and Rajpara.

Materials and methods

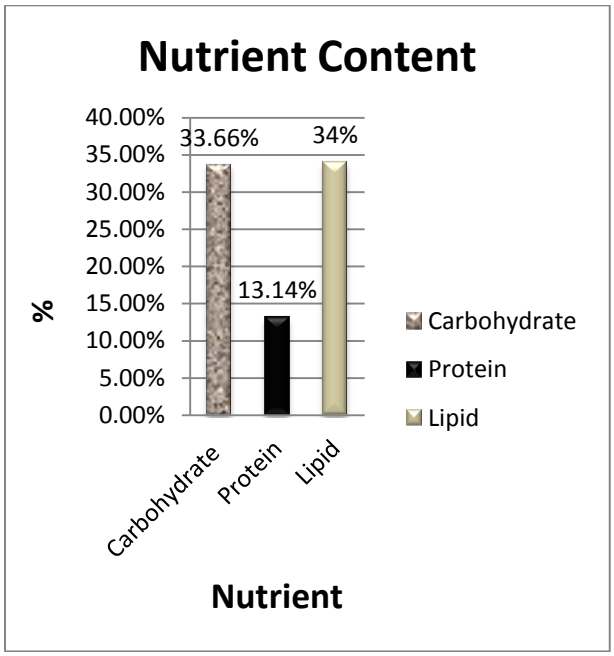
Sampling: Dried Bombay duck (*Harpodonnehereus*) were collected from local fish market of Jafrabad. Samples chosen for this study were sundried and storage period was about six months.

Sample preparation and analysis: - For the analysis sample was crushed by mortar and pestle. The crushed samples were analyzed for protein, lipid and carbohydrate by following standard methods. The total protein content was estimated by Micro-Kjeldahl method, total carbohydrate content was estimated by Anthrone method and lipid estimation was done by Folch method (Sawhney and Singh, 2000, Love 1970).

Result and Discussion

Dried fish- Bombay duck was analyzed for its nutrient content as it widely used in daily food of local people. The total carbohydrate content was found 33.66 %, protein content 13.14 % and lipid content was found 34 %. Thus it was a good source of three main nutritional components. Although the protein content was somewhat law in compare to carbohydrate and lipid but still it can provide higher energy as another two component is in high amount and also they are main energy sources of body.

No	Nutrients	Content %
1	Carbohydrate	33.66 %
2	Protein	13.14 %
3	Lipid	34 %.



The present result shows that lipid content in selected fish was higher than carbohydrate and Protein. So, it can provide a good source of fat. It is also very preferable among local people due to its lower price throughout year in local market. It is affordable price for local human population compare to good nutritive value of daily diet.

The abundance of Bombay duck along the Maharashtra and Gujarat coast seems to have decreased day to day due to irregular and over fishing. As it is main food component and also provide good macro nutrient, we have to reduce over fishing and decide some fixed time period for seasonal fishing of this fish. All the people on coastal areas can't purchase costly fish and they have to depend on lower price fish like Bombay duck. Thus, the present study suggest although the Bombay duck is a low price fish still it provide a good source of macro nutrient like carbohydrate, protein and lipid. High commercial value of Bombay duck (*Harpodon Neherius*) due to sufficient nutrient content for daily diet identified as per the analysis.

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