



# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

## Comparative Study of the Protein Content of selected fresh water Fishes and crab from Girna dam, Nashik, Maharashtra

Dr.Kapil T. Patil, M.Sc,Ph.D.,

Assistant professor Department of Zoology

M.S.G.College, Malegaon camp

Dist-Nashik (M.S.)

### Abstract

In the present investigation, comparative study protein content of selected fresh water fishes and crab *Barytelphusa cunicularis*. Fishes and crabs were collected from Girna dam. Crabs *Barytelphusa cunicularis* is widely available in Nashik region. The nutritive value of fish is more recognized in our society compare to crab meat. But crab meat is better than fish because crab meat comprises essential amino acid, minerals which are essential for human growth. Consumers have no idea about nutritive value of crab. The present work attempt to provide details about crab meal and suggested crab meal better than fish meal

Key words- *Barytelphusa cunicularis*, nutritive value, protein

### Introduction

Malegaon is very densely populated city located in Nasik district, in Malegaon Most of people engaged in textile business and others are in farming. In Malegaon high demand of fish meat, it's very popular food in Malegaon region along with fish crab meat also popular in tribal people in Malegaon region. Fishes and crabs were collected from Girna dam. Which is located at latitude 20°28' and 70°43' of Malegaon Taluka, Dist-Nashik. Girna dam mainly constructed for irrigation & agricultural purpose. Girna dam harbor & support huge biodiversity of flora and fauna. Variety of fishes & crabs species abundantly available in Girna dam mostly crab species *Barytelphusa cunicularis* is very dominated than *B.guerini*. *Barytelphusa cunicularis* is large, strong, dark in color compare to *B.guerini* and its widely available in Nashik region but many people unaware the importance of nutritive value of crab flesh only poor and tribal people consuming crab meat because it's

cheaper than fish meat. The nutritive value of fish is more recognized in our society compare to crab meat. But crab meat is better than fish because crab meat comprises essential amino acid, minerals which are essential for human growth. Consumer have no idea about nutritive value of crab. Many consumers only prefer fish meal than crab meal due to lack of awareness about crab flesh. Sara Barrento et al.,(2009 ) reported crustacean food is rich source of protein and amino acid and low fat better for human diet. Manisseri and Radhakrishnan et al., (2003) reported that in international & national market high demand of cructacean food and crustacean export market growing very fast now and its economically important for India . Premarathna A.D. et al., (2015) suggested that Crab meal is very useful for pregnant women, child and also helpful as supplement for bone fracture patient due to high calcium content. Hence necessary to know nutritive value of crab. In present work compare protein content of selected fresh water fishes and crab.

## Materials and Methods

The healthy and adult fishes & crab used for study, collected from Girna dam,Nashik (M.S.). fish and crabs dissected out in laboratory & edible parts separated for experiment total protein was estimated by the method of Lowry *et al.*, (1951)

## Results & Discussion

Table 1: Protein content of selected fresh water fishes and crab

Selected species	Amount of protein mg/g wet wt tissue
Crab ( <i>Barytelphusa cunicularis</i> )	26.3%
<i>Catla catla</i>	23.6 %
<i>Labeo rohita</i>	26.2%
<i>Tilapia mossebia</i>	22.2%
<i>Channa guchua</i>	23.1%

The above result showed no major difference between fish and crab protein content, crab also provide more amount of protein than fish and crab protein easily digestible. M.K Mukundan.et al., (1981) comparatively studied quality of the fish, crab and prawn they founded crab is better than fish due to higher amounts of moisture, carbohydrate, iron, calcium and less of fat. Merline, X. et al., (2020) founded that prawn and puffer fish content higher protein as compare to lobster while lobsters were high content of lipid. Another

author sheikh A., et al.,(2011) investigated protein content of fresh water fishes from Godavari river , they noticed highest values of protein observed in *Labeo rohita* compared to other fishes

N. Ramamoorthy et al., (2015) investigated nutritional quality of edible Brachyuran crabs from the Southeast Coast of India, they noticed *C. lucifera* is good nutritional value for healthy diet compare to other species. They also suggested *C. lucifera* excellent food for human consumption.

Premarathna A.D. et al., (2015) studied nutritional values of fish and crab meat they reported same result , crab is rich protein and low fat food along with essential amino acid. They further reported that crab meat is good diet for pregnant women. further Author stated many fishes contaminated by mercury chloride due to this crab meal is healthy for human consumption Another author Yuan *et al.*, (2001) Noticed that those people consume crustacean food reduce 50 % chances of heart attack compare to other

The above observation showed that crab meal is better alternative for fish meal but consumer unaware about crab nutritional value due to lack of sufficient knowledge about crab meal. The present work attempt to provide details about crab meal and suggested crab meal better than fish meal its reduces heart related problems and suggested to young fishermen focus on crab fishery excellent business in future .

## References

1. A.D Premarathna, R.P.V.J Rajapakse, E Pathirana, V.P Senaratne, S.C Karunarathna , A.P Jayasooriya (2015) Nutritional analysis of some selected fish and crab meats and fatty acid analysis of oil extracted from portunus pelagicus, International Journal of Scientific & Technology Research volume 4, issue 07, july 2015 ISSN 2277-8616
2. Lowry, O.H., Rosenbrough, N.J., Farr, A.L. and Randall, R.J. 1951. Protein measurement with Folin PhenolReagent. Journal of Biological Chemistry, 193: 265 - 275.
3. M. K. Mukundan, A. G. Radhakrishnan, M. A. James and M. R. Nair (1981) Comparative Study of the Nutrient Content of Fish and Shell Fish, *Fish. Technol.* (1981) 118, 129-132
4. Manisseri, MK and Radhakrishnan, EV(2003) Status of exploited Marine fishery Resources of India. CMFRI. 188.
5. Merline, X. and \*Dr. Chitra, G. (2020)comparative study on the proximate composition of prawn, lobster and puffer fish from pamban, rameswaram isalnd, south east coast of india www.ijcrt.org 2020 IJCRT | Volume 8, Issue 5 | ISSN: 2320-2882

6. N. Ramamoorthy, R. Sri Sakthi Priyadarshini and P.K. Karuppasamy(2015) Nutritional Quality of the edible Brachyuran crabs from theSoutheast Coast of India, Journal of Marine Biosciences Vol. 2 (1), 90–101, 2015 90 Print ISSN 2454–3519 Online ISSN 2454–3527
7. Sara Barrento., Antonio Marques., Barbara Teixeira., Paulo Vaz-Pires and Maria Leonor Nunes. 2009a. Nutritional Quality of edible tissue of European lobster *Homarus gammarus* and American lobster *Homarus americanus*. J. Agri. Food chem. 57, 3645-3652.
8. Shaikh Afsar, R.P.Mali (2011) protein content of selected fresh water fishes from Godavari river, Nanded,Maharastra,J.Ecotoxicol,Environ.Monit.21(2) 121-124
9. Yuan, J. M., Ross, R. K., Gao, Y. T. and Yu, M.C. 2001. Fish and shellfish consumption in relation to death from myocardial infarction among men in Shanghai, China. American Journal of Epidemiology, 154(9): 809 - 816.

