



**Some Insects Species Consumed by the People of Majuli District, Assam
with Special Reference to Mishing Community of North East India**

Dr. Anup Kumar Doley

Assistant Prof.

Department of Zoology, Majuli College, Kamalabari

Corresponding Author - Dr. Anup Kumar Doley

DOI - 10.5281/zenodo.20825706

Abstract:

Some insects constitute a very important food source in many developing countries. They are good source of high content of proteins, fats, carbohydrates, minerals and vitamins. An estimated 2000 insects species are consumed around the world and people do not just eat insects, they relish them as delicacies. The Mishings are plain tribes and second largest tribe in the plains of Assam. As per census report 2011 total population of Mishings in Assam was 680,424. Majuli the largest riverine island in the world, occupies an area of about 880 kms. Majuli is situated between 26°45' N to 27°12' N latitude and 93°39' E and 94°35' E longitude at an altitude 84.5 m above mean sea level. Majuli district has a population of 1,67,304, entirely rural. Scheduled Castes and Scheduled Tribes make up 14.27% and 46.38% of population. The main industry is agriculture, with paddy being the chief crop. Fishing, dairying, pottery, handloom and boat making are other important economic activities. Besides fishing the Mishing people consumed different species of insects. The present paper reveals 15 nos. of insects consume by Mishing people.

Keywords: *Edible insects, Mishing Community, Majuli, North East India.*

Introduction:

A large number of insects species are readily consumed in most parts of the world. At least 1000 species of insects are eaten worldwide, mainly in developing countries. They would form a whole new class of foods made to order for –input small-business and small -farm production. International trade in edible insects would almost certainly increase (DeFoliart,1992). The ethnic communities of India consumed insects such as caterpillars, pupae, termites, grasshoppers, eri silkworms red ants, gryllotalpa, honeybee etc.(Borkakati

et.al.,2004).Giant water bug (jewankori),immature instars of ant and vespa(borol),locust(kakoti foring), grasshopper (foring), cricket(uisiringa), silkworm larvae (polu) and termite (uipukh) are commonly used as traditional food by various tribes of North East(Borkakati,2007). A wetland, Majuli is a hotspot for flora and fauna, harbouring many rare and endangered avifauna species including migratory birds and different species of insects. There are 248 villages are there in the Majuli District. There are 12 registered and 144 unregistered beels covering an area of 937

ha and 300 ha, respectively (*Barik, 2006*). At present there are 155 wetlands but only 106 wetlands are in recognized state and remaining wetlands has no recorded data due to decreases large area of the wetlands (*District Fishery Department, Majuli*). Mishing people collected different varieties of insects from paddy field, forest, grassland ecosystem, beels, ponds, rivers (wetlands) etc. for food. There are 15 nos. of species of insects were consumed as food by Mishing tribe.

Materials and Methods:

Study Area: Majuli the largest riverine island in the world, occupies an area of about 880 kms. Majuli is situated between 26°45' N to 27°12'N latitude and 93°39' E and 94°35' E longitude at an altitude 84.5 m above mean sea level. Majuli district has a population of 1,67,304, entirely rural. Scheduled Castes and Scheduled Tribes make up 14.27% and 46.38% of population. There are 248 villages in Majuli District.

Survey: Survey was conducted in 12 nos. tribal villages within 2 revenue circle. The villages are Namoni Jokaibowa, Malapindha Chilakola Miri, KarkiChuk, Dhowachala, Natun besa mara, Bhogpur Miri, Borgoya no.1, Barun Chitadar Chuk, Chikari Gaon, Ratanpur Miri Gaon, Sumoi Miri, Jengrai Chapori.

Collection: Insects were collected from 6 nos. of wetlands during fishing and recorded. The wetlands studied are- Baruk beel (Jengrai Chapori), Shaomari (Sumoimari), Bugoripara Beel (Ratanpur Miri), Deori Beel (Borpomua), Gotonga

Beel (KarkiChuk) Kharjan Beel (Dhekiajuli). Insects were collected from paddy field by traditional collecting devices used by ethnic communities. Some insects were collected by insect net, light trapping, pond net, sweeping etc. The insects were preserved and identified with the help of published standard keys.

Results and Discussions:

From the survey and interview with the members of the Mishing people total 15 nos. of insects were consumed as food. Edible insects are generally occur throughout the year, their densities and diversities are determined by their food as well as by seasonal conditions. Many insects occur in the whole year but some are available only on particular seasons. The edible insects are collected using different traditional methods such as- filling methods, digging methods, sieving methods, catching, light trapping, rearing and culturing methods. The ethnic Mishing people using different tools and devices for aquatic insects are- jakoi (triangular basket trap), saloni (sieve rounded), sepa (tubular trap), dingora (conical trap), kharahi (small sieve), cast net (khewali jal), spade for digging, plastic jar, aquatic insect net etc. Members of the Mishing people ate immature as well as adult stages of insects. Adults, eggs, immature larvae, pupa and honey stages of insects are used as food. The present study revealed that 15 species belonging to 13 families and six orders of insects, Hymenoptera 4 species, Lepidoptera 3 species, Orthoptera 3 species, Hemiptera 2 species, Coleoerptera

2 species and Isoptera 1 species are being consumed as food by Mishing people of Majuli.

Insects used as Food by Mishing Community of Majuli

Sl.no.	Insects used as food	English name	Family	Stages
1.	<i>Apis indica</i>	India Honeybee	Apidae	Honey, eggs
2.	<i>Lethocercus indicus</i>	Giant water bug	Belostomatidae	Adults
3.	<i>Dytiscus marginalis</i>	Predaceous diving beetle	Dytiscidae	Adults
4.	<i>Acheta domesticus</i>	House cricket	Gryllidae	Adults, wingless
5.	<i>Oecophylla smaragdina</i>	Red ant	Formicidae	Eggs
6.	<i>Vespa orientalis</i>	Yellow wasp	Vespidae	Eggs
7.	<i>Samia ricini</i>	Eri Silkworm	Saturniidae	Pupa, larvae
8.	<i>Antheraea assamensis</i>	Muga Silkworm	Saturniidae	Pupa, larvae
9.	<i>Bombyx mori</i>	Mulberry Silkworm	Bombycidae	Pupa, larvae
10.	<i>Odontotermes obesus</i>	Termite	Termitidae	Macropterous and brachypterous forms
11.	<i>Heiroglyphus bannian</i>	Rice grasshopper	Acrididae	Adults
12.	<i>Schistocerca gregaria</i>	Desert locusts	Acrididae	Adults
13.	<i>Pomponia imperatoria</i>	Cicada	Cicadidae	Adult
14.	<i>Eumenes petiolata</i>	Potter wasps	Eumenidae	Eggs, immature
15.	<i>Hydrophilus piceus</i>	Water scavenger beetle	Hydrophilidae	Adults

Meyer-Rochow and Changkija (1997) reported 42 species of insects used as food by Ao-Nagas in Northeastern India. DeFoliart (2002) reported at least 66 species belonging to 47 genera, 38 families and 13 orders are consumed in Eastern Asia. The insects are prepared for consumption through roasting, boiling and frying. Some stages of insects are being consumed both raw and roasted (honey). According to Chakrovorthy et.al.(2011), all stages (egg, larva, nymph, pupa and

adult) of insects are utilized as food by tribes of Arunachal Pradesh. The species belonging to cicadidae, gryllidae and belostomatidae were eaten as fry or roast or make chutneys by the Mishing people of Majuli. Jolivet (1971) states that the giant water bug, *Lethocercus indicus* is made into a much prized sauce to accompany meat and fish, particularly in the Northern region of Chiang Mai. According to DeFoliart (2002), roasting is the most common method of cooking for

all insects except bees and wasps which are automatically smoked during collection.

From the study it is concluded that the consumption of insects more advantages because insects are rich in most of the nutrients essentials for human proteins, amino acids, fats, minerals, vitamins in quantities fairly comparable to animal meat. There are enormous opportunities to develop and expand entomophagy in Majuli, Assam human consumption, nutritive supplement and as food for fish, poultry and other animals.

References:

1. Barik, N. and Sarma, K.(2006): Beel Fisheries Resource Management and Impact on Livelihood Status of People in Majuli Island of Assam. *Journal of Inland Fishery Society of India*.38(1):35-42.
2. Borkakati, R. N. and Chayengia, B. (2004): Manab Khadya Rupat Patang, Purbanchal, 26th September, pp-23-27.
3. Borkakati, R. N. (2007): Insects as Food, Saturday, September,8, 2007, pp-12.
4. Chakravorthy, J., Ghosh, S. and Meyer-Rochow, V. B., (2011): Practices of Entomology and entomotherapy by members of the Nyashi and Galo tribes, two ethnic groups of the state of Arunachal Pradesh, *Journal of Ethnobiology and Ethnomedicine*,7(5), pp-1-14.
5. DeFoliart, G. R. (1992): Traditional use and economic importance in non-European Cultures, *Insects as Human Food, Crop Protection*,11, pp-395-399.
6. DeFoliart, G. R. (2002): The Human Use of Insects as a Food Resource: A Bibliographic Accounts in Progress, Chapter22, Professor of Emeritus, Department of Entomology, University of Wisconsin-Madison, pp-1-24.
7. District Fishery Office, Majuli, Jorhat, Assam (2023).
8. Jolivet, P.(1971): A propos des insects 'a boissons' et des insects "a souce". *Entomologiste* 27:3-9 (Belostomatide, Phasmida).
9. Meyer-Rochow, W. B. & Changkija, S. (1997): Uses of insects as human food in Papua New Guenia, Australia and North-East India: cross cultural considerations and cautious conclusion. *Ecol. Food Nutr.*36(2-4):159-185.