



Ecology Of Giant Water Bugs Hemiptera: Heteroptera: Belostomatidae

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Abstract

Present paper is based on understanding the over view of study on ecological diversity on giant water bugs in Daha river. The present paper 09 different species of water bug belonging to order 'Hemiptera' orders 2 families, 'Belostomatidae', 'Napidae' were recorded due to its imperative to make continuous investigation. Census and research activities on the taxonomy and diversity of aquatic insects.

keyword: - Ecology, Hemiptera Heteroptera Belostomatidae.

Introduction

Giant water bugs (Hemiptera: Heteroptera: Belostomatidae) Consider as an aquatic predators of fresh water. It includes more than 170speies distributed throughout the world. the characteristic features of giant water bug include, "parental care", where in males attends eggs laid by the females. Other unique features include unique mating pattern, prey- predation- migration. belostomatidae are easily recognized by their large size and pair of short strap posterior respiratory appendages. Most of them are the predates which feed on captured prey by piercing and sucking body fluid from them. Their mouth parts are correspondingly beak or rostrum in from and they display various forms of raptorial forelegs for grasping prey, they are found in both lentic and lotic water mediums. They spend much time having from the water surface by the air straps and frequently fly to the electric light, to which they attracted. Thus, they are commonly known as "electric light bugs". They are predator of small insect such as mosquito tadpole larva, dragon fly larval, Damsel larval etc. they are economically important insect for local people.

Feeding ecology: - Belostomatid bugs are good swimmers, able to chase after their prey over a short distance although they spend most of their time hanging in the water column waiting for an opportunity to catch prey. They are voracious predators, becoming a nuisance in fish farms and can inflict a painful bite upon humans. Their large size means Belostomatid bugs are often at the top of the food chain and are one of the few invertebrates that can readily feed on small fish as well as other invertebrates including their own species. (shows in fig. below)

Fig: Some common species giant water bug.1. *Diplonychus annlatus*2. *Lithocerus indicus*3. *Laccotrephes griseus*4. *Ranatra filiformis*

Materials and methods.

Study area: - The district siwan is located in the north western part of Bihar in interfluvial regions of river Ghaghara and Gandak. This district extends from 25°22' N to 26°22' latitude and 84° to 84° E longitudes. It has got a maximum length of 85 km from east and width of 52 km from north to south.

Sampling sites and identification of insect: - A study survey was conducted in different stretches during pre-monsoon, monsoon and post monsoon. The insects were collected by using long-handled water net of 1 mm mesh size and preserved in plastic bottle containing 90% ethanol. The insect was identified up to species level with the aid of keys of distance (1903, 1906 and 1911) Metacalf and Flint (1939) and Richards and Davies (1988).

Result and Discussions

Table List of Aquatic Insects recorded from lentic and lotic water Daha river Siwan.

<u>S.no.</u>	<u>Order</u>	<u>Family</u>	<u>Species</u>
1	Hemiptera	<i>Belostomatidae</i>	<i>Belostmo</i>
2	”	”	<i>Diplonychus annulatus</i>
3	”	”	<i>Diplonychus rusticus</i>
4	”	”	<i>Lacotrephes indicus</i>
5	”	<i>Napidae</i>	<i>Laccotrephes griseus</i>
6	”	”	<i>Laccotrephes ruber</i>
7	”	”	<i>Ranatra elongate</i>
8	”	”	<i>Ranatra filiformis</i>
9	”	”	<i>Ranatra varipes</i>

This research is based on understanding the over view of study on Ecological diversity of giant water bugs in Daha river, Siwan The aquatic bugs plays major role as a biological control agent in natural habitat, as a part of food chain as a food supplies to higher tropical level. The present study total of 09 species the Heteroptera are a group of about 40,000 species of insects in the order Hemiptera belonging to 2 family Belostomatidae and Napidae were recorded. The standard works the fauna of British India series on bugs by Distant (1902,1903,1907,1911,1916,1918) has become antique. This study was conducted to increase knowledge on the feeding ecology of water bugs in different lentic and lotic water bodies of various size in Daha river, siwan. (Shows table-1)

Conclusion.

The particular study the research presented ecological feeding diversity of the aquatic giant water bug in different stretches of Daha river, siwan. The present study offers baseline information about the feeding diversity in an aquatic ecosystem. This study considerably contributed in the taxonomy of water bugs in Daha river but further detailed studies are required to carry out continuous censuses to monitor the Hemiptera in all water bodies.

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CONCLUSION

In the present time the ecology of Daha river have abundant varieties of Giant water bugs among all the sampling sites. The ecology of the sites is not very well. However, more awareness and motivation is required on the value of the indigenous insect's diversity and on their habitats. Conservation of aquatic resources ensures the sharing of benefits of its utilization in ecosystem, gets adequate of time to recover its natural community structure.

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