

New Locality Record of *Creobroter Gemmatus* (Indian Flower Mantis / Jeweled Flower Mantis) in the Coastal Region of Contai / Kanthi and its Pattern of Mimicry in Relation to Behaviour

Kallol Hajra¹, Dr. Sumit Giri², Prasanta Mandal³

Approved Part-Time Teacher) P. K. College, Contai, West Bengal, India

Approved Part-Time Teacher) P. K. College, Contai, West Bengal, India

Approved Part-Time Teacher) Ramnagar College, Depal, West Bengal, India

Abstract: Indian flower mantis (*Creobroter gemmatus*) is observed during study period April 2014 to May 2015 from Contai/Kanthi, Purba Medinipur District, W.B. In this article, it is reported that this type of mantis is first time observed in the coastal region of Purba Medinipur district specially to Contai/Kanthi, West Bengal. The wings are green with a yellow eye shaped pattern. The male has a slightly duller coloration on the wings to the female. This type of Mantis also exhibit aggressive type of mimicry and this amazing animal is normally found on top of flowers where they can camouflage themselves and wait for their prey. The host plants of this species are *Calotropis procera* under family *Asclepiadaceae* and *Pluchea indica* under the family *Asteraceae*.

Keyword: *Creobroter gemmatus*, Coastal region, Contai, mimicry, host plant.

1. Introduction

Creobroter gemmatus was first described by Stoll (1813). It is also called Asian Flower Mantis or Indian flower mantis or Jeweled Flower Mantis in India. The Indian flower mantis is also occurring in Vietnam and South and Southeast Asia. There was no record from Purba Medinipur District on this mantis but now it is found in coastal area of Contai/Kanthi. Females can be cannibalistic but males are fairly communal. Cannibalism behavior among *C. gemmatus* is more common than other flower mantis. In this article, we reported the ecology, behavior, and pattern of mimicry of *C. gemmatus*.

2. Materials and Method

Study Site

Kanthi: It is a small town, situated near the coastal area of Purba Medinipur district. The distance from Kolkata to Kanthi is 150km. The latitude and longitude of study site is 21°50'N and 87°048' E. We study at the Soula and Junput coastal region near the Kanthi Town.

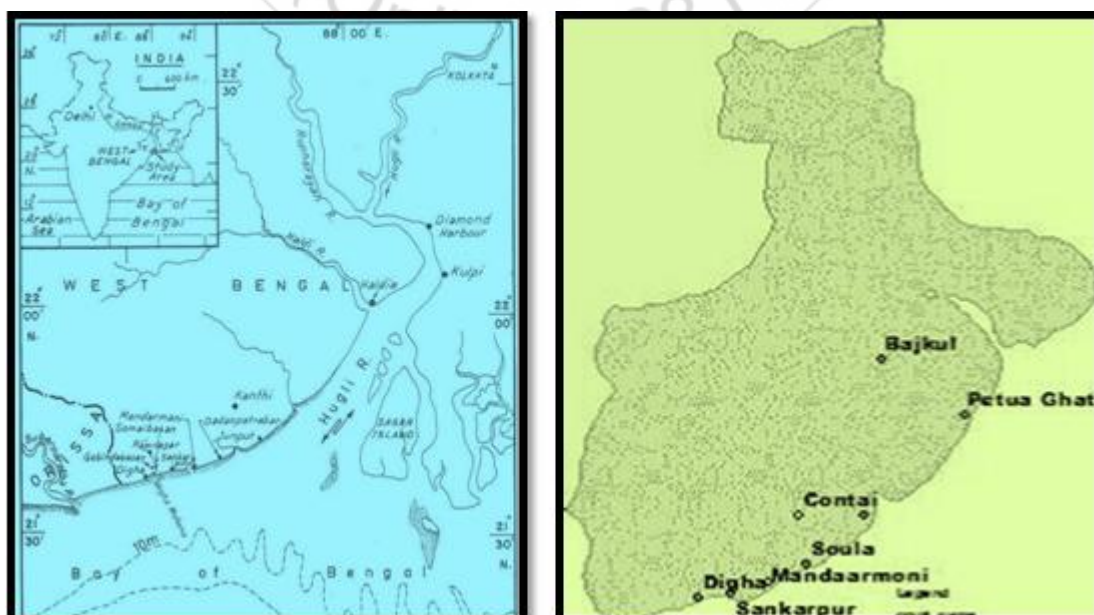


Figure 1: Location of study sites

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Sampling

It is collected by hand picking and preserve in 70% alcohol. This preserved specimen is kept into the museum of Zoology Department, P.K. College, Contai.

Observation

At first we observed this mantis on April 2014 near Soula coastal region and secondly observed on May 2015 near the Junput coastal region during day time simultaneously. Firstly it is found on *Pluchea indica* under the Family Asteraceae and secondly found on *Calotropis procera* (Akanda Plant).

3. Result

Systematic Position

Kingdom-	Animalia
Phylum-	Arthropoda
Class-	Insecta
Order-	Mantodea
Family-	Hymenopodidae
Genus-	<i>Creobroter</i>
Species-	<i>gemmatus</i>
Scientific Name-	<i>Creobroter gemmatus</i>



Creobroter gemmatus on *Pluchea indica* Plant



Creobroter gemmatus on *Calotropis procera* (Akanda Plant)

Conservation Status

Not evaluated/Data deficient.

Identifying Characters

- 1) Eye spot present on fore wing.
- 2) Presence of green and white patches alternately on the abdomen.
- 3) Generally green to brown color.
- 4) Presence of sharp claw at the proximity of first pair of thoracic legs.

Morphological Features

- 1) In male, abdomen is 8 segmented.
- 2) In female, abdomen is 6 segmented.
- 3) In male wings are longer than abdomen but in female it is shorter than abdomen.
- 4) Presence of deimatic display of bright hind wings that means pinkish color at the upper part and blackish color at the lower part are observed.
- 5) The base of the antennas is thicker in male than of the female adult.



Wing Color



Abdominal Portion

Measurement of Morphological Features:

Table 1

No. of Observation	Body Length(inch)	Length of Fore Wing(inch)	Length of hind Wing(inch)	Length of 1st Thoracic Leg(inch)
1ST	1.6	3.0	2.7	2.6
2ND	1.5	2.9	2.5	2.5



4. Discussion

Ecology

This type of mantis is found in tall grasses, dense or low vegetation, bushes, some plants having branches, twigs with bright flowers where different types of prey of it will be found. These are also found in damp areas. Their foods are variable such as *Drosophila*, flies, moths, cockroaches, crickets, butterflies etc.

Camouflage and Mimicry

Camouflage is the use of any combination of materials, coloration, or illumination for concealment, either by making animals or objects hard to see, or by disguising them as something else. So the animals use their colors to blend into the environment. Camouflage is a type of animal adaptation. On the other hand mimicry is related to camouflage, in which a species resembles its surroundings or is otherwise difficult to detect. So it is said that camouflage and mimicry are adaptations which help the *Creobroter gemmatus* for catch their prey as well as avoid and escape from predators. Therefore, this type of adaptation may be morphological, physiological or both. In this respect, it is said that coloration of *Creobroter gammatus* is an example of aggressive mimicry, a form of camouflage in which a predator's colors and patterns lure prey. The predator of flower mantises are bats and other animals, so they are colored to match with parts of plants such as flowers, twigs, leave and even grass to hide .All these phenomenon are also related to their behavioral pattern because their behavior are varies, but typically involves climbing a plant until they reach a suitable flower, and then staying still until a prey insect comes within range. The deimatic behavior is found in this animal which means any pattern of threatening or startling behavior, such as suddenly displaying conspicuous eyespots, so as to scare off or momentarily distract a predator, thus giving the prey animal an opportunity to escape.

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