

# STUDIES ON THE HETEROPTERAN (INSECTA: HETEROPTERA) FAUNA OF AMBA RESERVED FOREST, WESTERN GHATS, MAHARASHTRA

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## ABSTRACT

For the first time Surveys and collection of bugs in Amba Reserved Forest, Western Ghat, Maharashtra was carried out in 2007-2008. During the study period, 44 species of bugs belonging to 36 genera representing 09 families viz. Pentatomidae, Coreidae, Lygaeidae, Pyrrhocoridae, Gerridae, Nepidae, Belostomatidae, Ranatridae and Rhyparochoridae were recorded. Family Pentatomidae represented maximum 22 species. Data revealed that, the fauna of bugs of study region is rich may be because of variety of food plants, varied ecological conditions and rainfall, temperature and topography.

## INTRODUCTION

The Heteropterans or "true bugs" are among the most diverse groups within the Hemiptera, and are commonly identified by the strong odour produced by the metathoracic scent glands (Schuh and Slater, 1995). The Heteroptera being the largest group with more than 35000 species (Slater, 1982). They pierce tissues of plants and feed on their juices (Knight, 1941; McGavin, 1992) live as entomophagous (Hassanzadeh *et al.*, 2009) and many of them are serious plant pests (Safavi, 1973). Many species of bugs catch other insects and Acarina and hence beneficial from an agricultural point of view (Linnavuori and Hosseini, 2000). Roy *et al.*, (1988) studied faunistic composition of aquatic bugs which revealed 22 species from Eastern Bihar, India. Thirumalai and Krishnan (2000) reported 43 species of bugs with special reference to Gerromorpha in Western Ghat States of India. Thirumalai and Ramakrishnan (2002) have recorded 25 species belonging to 16 genera and in 8 families from Rajasthan, India.

Although, a series of revisionary studies have been subsequently carried out from different geographical regions, no exhaustive survey has so far been carried out especially from the various forests. This is particularly true with regard to the Western Ghat region which is noted for its richness in biodiversity (Mathew and Rahamathulla, 1995).

Therefore, for the first time an attempt was made to study fauna of bugs of Amba Reserved Forest, Western Ghat, Maharashtra.

## MATERIALS AND METHODS

Bugs in the present study were collected in 2007–2008 from different localities of Amba Reserved Forest, Western Ghat, Maharashtra. They were collected with the help of sweep net method and some are hand picked. Limited opportunistic collection was also made. Bugs were narcotized by using killing bottle and brought to the laboratory and preserved by dry preservation method and identified.

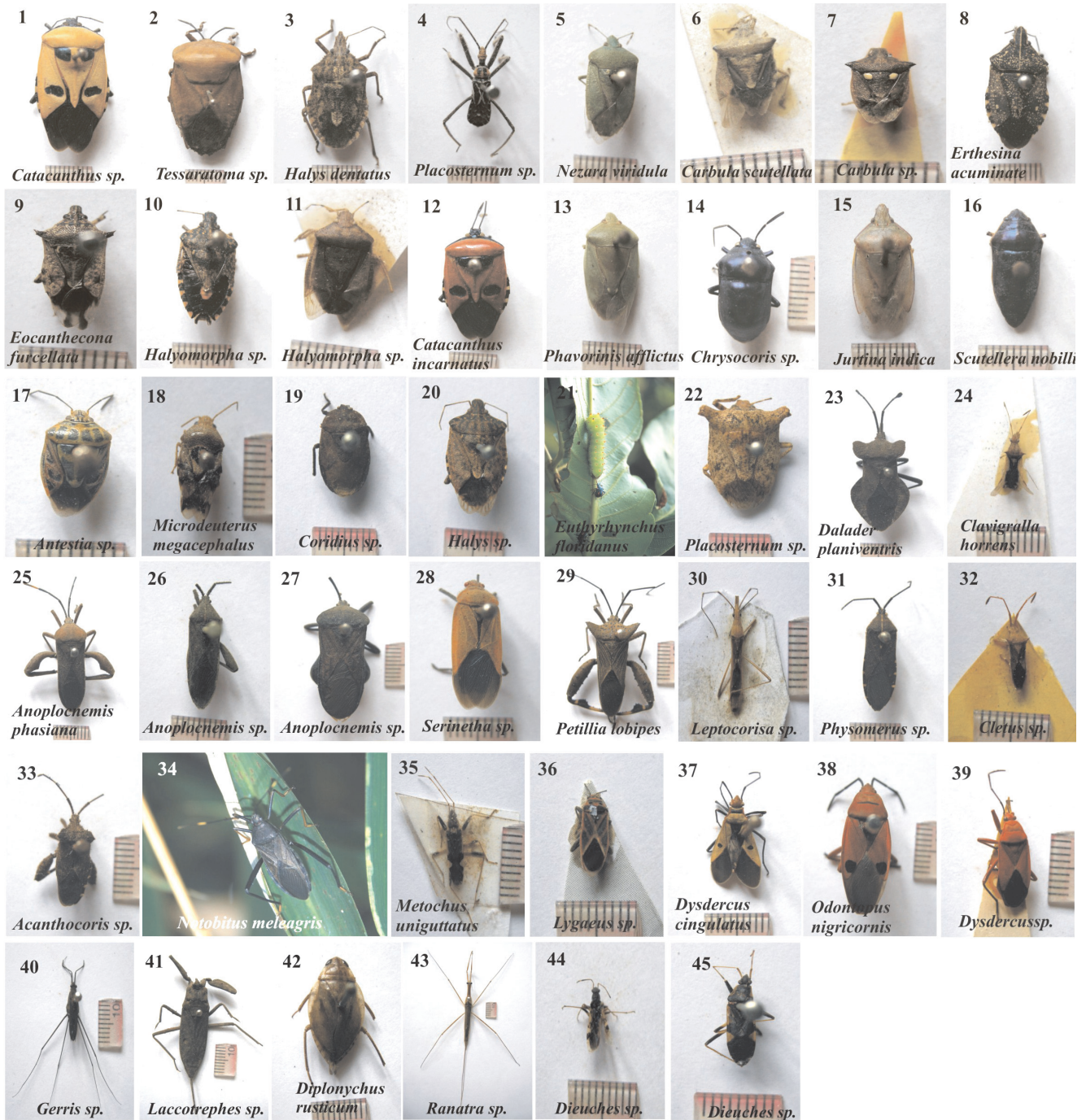
### Study region

Amba Reserved Forest is a tropical semi-evergreen forest area in Kolhapur district, Maharashtra, India. It is situated at 500 m above MSL and covers an area of 318.16 ha. The average rainfall of this region is 2000 mm. Temperature of this forest during summer, winter and rainy season's ranges from 20-38°C, 10-30°C and 15-30°C respectively.

## RESULTS AND DISCUSSION

In the present study, a total of 44 species distributed over 36 genera belonging to 9 families of bugs were reported. The family Pentatomidae was dominant with 22 species followed by families Coreidae, Pyrrhocoridae, Lygaeidae, Nepidae, Gerridae, Belostomatidae, Ranatridae and Rhyparochoridae with 12, 3, 2, 1, 1, 1, 1, and 2 species respectively (Table 1; Fig. 1). Present data revealed that, the heteropteran fauna of study region is rich and diversified may be because of variety of flora and complex ecological conditions, rainfall pattern, temperature and topography.

Tonapi (1959) studied aquatic insect fauna of Poona with reference to Heteroptera which revealed 41 species of bugs. In the present study, 4 species of aquatic bugs were reported



**Figure 1:** Bugs collected from Amba Reserved Forest, Western Ghat, Maharashtra, India; Family: Pentatomidae (No. 1-22); Family: Coreidae (No. 23-34); Family: Lygaeidae (No. 35-36); Family: Pyrrhocoridae (No. 37-39); Family: Gerridae (No. 40); Family: Nepidae (No. 41); Family: Belostomatidae (No. 42); Family: Ranatridae (No. 43); Family: Rhyparochoridae (No. 44-45)

and 39 species of bugs are pests of forest plants. Kolics and Kondorosy (2007) reported twelve species of bugs from *Quercus robur* plantations. Protic et al., (2008) made contribution to the knowledge of the heteropteran of Banat (Vojvodina, Serbia). They reported 35 species of bugs.

Ghahari et al., (2008) made special emphasis on predator species of bugs from rice fields and surrounding grassland ecosystems of Northern Iran and reported 55 species including

26 predatory bugs. In the present study, in all 6 species of predatory bugs were reported. Hassanzadeh et al., (2009) studied Heteroptera fauna of Shed Abad region and reported 38 species belonging to 14 families. Ghahari et al., (2009) catalogued a total of 58 species of five subfamilies from Iran.

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**Table 1: Checklist of bugs collected from Amba Reserved Forest, Western Ghat, Maharashtra, India**

Family: Pentatomidae	
1.	<i>Catacanthus</i> sp.
2.	<i>Tessaratoma</i> sp.
3.	<i>Halys</i> sp.
4.	<i>Placosternum</i> sp.
5.	<i>Nexara viridula</i>
6.	<i>Carbula scutellata</i>
7.	<i>Carbula</i> p.
8.	<i>Erthesina acuminata</i>
9.	<i>Eocanthecona furcellata</i>
10.	<i>Halyomorpha</i> sp.
11.	<i>Halyomorpha</i> sp.
12.	<i>Catacanthus incarnatus</i>
13.	<i>Phavorinis afflicus</i>
14.	<i>Chrysocoris</i> sp.
15.	<i>Jurtina indica</i>
16.	<i>Scutellera nobillis</i>
17.	<i>Antestia</i> sp.
18.	<i>Microdenterus megacephalus</i>
19.	<i>Coridius</i> sp.
20.	<i>Halys</i> sp.
21.	<i>Euthyrhynchus floridanus</i>
22.	<i>Placosternum</i> sp.
Family: Coreidae	
23.	<i>Dalader planiventris</i>
24.	<i>Clavigralla horrens</i>
25.	<i>Anoploenemis phasiana</i>
26.	<i>Anoplocnemis</i> sp.
27.	<i>Anoplocnemis</i> sp.
28.	<i>Serinetha</i> sp.
29.	<i>Petillia lobipes</i>
30.	<i>Leptocoris</i> sp.
31.	<i>Physomerus</i> sp.
32.	<i>Cletus</i> sp.
33.	<i>Acanthocoris</i> sp.
34.	<i>Notobitus meleagris</i>
Family: Lygaeidae	
35.	<i>Metochus uniguttatus</i>
36.	<i>Lygaeus</i> sp.
Family: Pyrrhocoridae	
37.	<i>Dysdercus cingulatus</i>
38.	<i>Odontopus nigricornis</i>
39.	<i>Dysdercus</i> sp.
Family: Gerridae	
40.	<i>Gerris</i> sp.
Family: Nepidae	
41.	<i>Laccotrephes</i> sp.
Family: Belostomatidae	
42.	<i>Diplonychus rusticum</i>
Family: Ranatridae	
43.	<i>Ranatra</i> sp.
Family: Rhyparochoridae	
44.	<i>Dieuches</i> sp.
45.	<i>Dieuches</i> sp.

of Zoology, Modern College, Shivaji Nagar, Pune, Maharashtra, India for identification and confirmation of species of bugs.

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