

## **HOMOPTERAN FAUNA OF AMBA RESERVE FOREST, WESTERN GHATS, KOLHAPUR, MAHARASHTRA**

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In the present communication, an attempt has been made to study Homopteran fauna of Ambaerve Forest which is part of Western Ghats, one of the hottest hotspots of the world. The surveys and collection was done for three years i. e. 2007-2009. In all, 36 species spread over 23 genera and belonging to 11 families were encountered. Family Aleurodidae was ranked first with 8 species. More or less similar trend of number of species was represented by rest 11 families.

**Key words :** True bugs, fauna, reserve forest, Western Ghats

### **INTRODUCTION**

The class Insecta is the largest of all groups in the Animal Kingdom and major representatives in almost all forest ecosystems (Beeson, 1961). They are now easily found throughout the world in all biogeographical regions and ecological zones (Romoser & Stoffolano, 1998), from the Arctic Circle (Danks, 1981) to Antarctica (Block, 1992) to the tropics. As per Groombridge (1992), the highest species richness of insects is found in the tropics. Faunal Study is important, whether seen from ecological, economic, aesthetic or other perspectives. It is also noticed that loss of biodiversity, due to human influence, is taking place at an alarming rate, even though our knowledge of biodiversity remains inadequate in most parts of the world (Wijesekara & Wijesinghe, 2003). In recent days, no one has much of clear cut idea exactly how many species are present today on the earth. Various estimates of the number of species worldwide range from 3 to 100 million (Erwin, 1982; Stork, 1988; May, 1992). The study of species richness or species composition in between sites or ecosystems is very much essential to estimate global biodiversity scene.

A series of revisionary studies have been subsequently been carried out from different geographical regions, no exhaustive survey has so far been carried out specifically from the various forests. This is particularly true with regard to Western Ghats region which is noted for its richness in biodiversity (Mathew & Rahamathulla, 1995). Incidentally, the region selected for present investigation lies in Western Ghats of Maharashtra State, India. Therefore, in the present paper an attempt has been made to study Homopteran fauna. The revealed data will definitely contribute to our knowledge of insect diversity of Western Ghats, Maharashtra.

Distant (1918) conducted detailed studies on the homoptera describing seventy-four species. Mathur (1975) studied Psyllidae listing out species of economic importance from Indian sub continent. Agarwal & Ghosh (1985) studied oriental Aphodoidea providing key to the genera and synoptic list. Mandal *et al.* (1986) studied Oak inhabiting aphids of Western and North West Himalaya. Ghosh *et al.* (1986) studied on the collection of

membracids from Kolkatta and its surrounding environment. Lahiri & Biswas (1990) made contribution on the Psyllids of Assam and Meghalaya with description of new species. Various workers made emphasis on homopteran species from different regions (Dash & Viraktamath, 1988 & 2001; Viraktamath, 1998; Viraktamath & Wesley, 1988; Maicykutty & Usha, 1995, 1996, 1997 & 2002; Abdulla, 1984).

### MATERIALS AND METHODS

The present study has been carried out in 2007-2009. Intensive and extensive surveys and collection was done at an interval of one month. Most of the collection was done randomly in the morning (08.00 - 11.00 am) and evening (05.00 - 07.30 pm). Standard methodologies suggested by ZSI (1986 & 1992) and Gadagkar *et al.* (1993) were followed. The collected specimens (two representative of each) were stored as per standard methods in the laboratory and identified with available literature Distant (1906; 1908 & Distant 1918). Few specimens were got identified from experts from ZSI and other institutional sources.

### RESULTS AND DISCUSSION

During the present investigation, 36 species spread over 23 genera and belonging to 11 families were collected and identified. Out of those 25 species were common (\* marked) and 11 species were very common (\*\* marked). Family Aleurodidae was ranked first with 8 species followed by families Jassidae, Membracidae, Psyllidae and Aphididae with 4 species each. Remaining 6 families showed more or less same pattern of number of species (Table I).

The results of the present study are more or less similar with Distant (1918) who reported 74 species of homoptera. Santharam *et al.* (1973) recorded one species of lac insect viz. *Kerria lacca* infesting forest tress like *Prosopis spicigera*, *Xylia Dolabriformis*, *Albizia* sp., *Zizyphus* sp. and *Ficus* sp. In the present investigation one species of lac insect is reported on *Buteas* sp. and *Ficus* sp. Mandal *et al.* (1986) reported twenty-five species of Aphids from Western and North Western Himalayas. Sathe (1992) recorded twenty one species of aphids on plants of economic importance found in Western Maharashtra, India whereas in the present study four species of aphids were encountered. Viraktamath & Sohi (1994) recorded three species of cicada from North India. During the present study in all two species of cicada were observed. David & Dubey (2006) reported twenty species of whiteflies from Andaman and Nicobar Islands, India. While in the present study eight species of whiteflies were recorded.

**Table 1 :** List of Homopteran fauna of Amba Reserve Forest, Western Ghats, Kolhapur Maharashtra (2007-2009)

Order : Hemiptera
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Suborder : Homoptera

Family : Fulgoridae

*Pyrilla perpusiella* (Walker)\*

Family : Cereopidae

*Aphrophora* sp. \*

*Machaerota ensifera* (Burmeister) \*

*Ptyleus* sp. \*

Family : Cicadelidae

*Cicada orni* (Linnaeus)\*\*

*Platypleura* sp.\*\*

Family : Jassidae

*Empoasca flavescens* (Fabricius)\*

*Idiocerus atkinsoni* (Lethierry)\*

*Nephotettix apicalis* (Motschulsky)\*

*Nephotettix bipunctatus* (Fabricius)\*

Family : Membracidae

*Leptocentrus taurus* (Fabricius)\*

*Oxyrachis* sp.\*

*Oxyrhachis* sp.\*

*Oxyrhachis tarandus* (Fabricius)\*

Family : Psyllidae

*Pauropsylla depressa* (Crawford)\*

*Pauropsylla* sp.\*

*Trioza fletcheri minor* (Crawford)\*

*Trioza jambolanae* (Crawford)\*

Family : Coccidae

*Aonidiella auranti* (Maskell)\*

*Pesudaulacapsis pentagona* (Targioni-Trosswtt)\*

*Saissetia nigra* (Neitner)\*

Family : Lacciferidae

*Laccifer lacca* (Kerr.)\*

Family : Pseudococcidae

*Pesudococcus* sp.\*

*Pseudococcus* sp.\*

Family : Aphididae

*Aphis brassicae* (Monell)\*\*

*Aphis crassivora* (Koch.):\*\*

*Aphis gossypii* (Glover)\*\*

*Myzodes persica* (Linnaeus)\*\*

Family: Aleurodidae

*Aleurocanthus bombusae* (Peal)\*\*

*Aleurocanthus piperis* (Maskell)\*\*

*Aleurodes bengalensis* (Peal)\*

*Aleurodes eugenie* (Berger)\*\*

*Aleurodes piperis* (Maskell)\*\*

*Aleurodes religiosa* (Peal)\*

*Aleurodes ricini* (Gennadius)\*

*Dialeurodes jambulanae* (Ashmed)\*\*

\* Common species; \*\* Very common species :

In future, concentrated efforts will be made on insect plant interaction and population dynamics related aspects of Homopterans in the region under study.

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