INTRODUCTION

Grasshoppers are insects of the order Orthoptera, and having suborder Caelifera and Ensifera. They are sometimes referred to as short-horned grasshoppers (Caelifera), to distinguish them from the katydids which have much longer antennae (Ensifera). They are hemimetabolous insects. The life cycle is completed with three stages viz. egg, nymph and adult. Nymph moulted five times, becoming more similar to the adult insect at each developmental stage. At high population densities and under certain environmental conditions, some grasshopper species can change colour and behavior and form swarms. Under these circumstances they are known as locusts. Grasshoppers are plant-eaters, sometimes becoming serious pests of cereals, vegetables and pasture, especially when they swarm in their millions as locusts and destroy crops over wide areas. Hence they are included in Oligophagous and mixed feeders (Mulkern 1967). They are functionally very important ground invertebrates in grassland ecosystem (Scott 1979 and Risser 1981). They are often the main invertebrate in grassland ecosystem for consumers (Curry 1994) and are an important food source for many groups of predator e.g. birds (Joern 1986 and Samways 1997). There almost 20,000 species of orthoptera from the world among them 1,750 species known from India (Tandon and Hazra 1998). Maximum species are tropical but are also well recorded in temperate areas. Kirby 1994 and Chopard (1969) are the major work on Orthoptera in India which is published in Orthoptera fauna of India but so far less literature and data available about Orthoptera of Maharashtra state is available only the scattered information on faunal diversity of Orthoptera of this states has been published by some workers, and number worker including Hancock (1915), Bhowmik (1985a,b), Shishodia and Hazra (1986), Shishodia and Tandon (1987), Day and Hazra (2003), Shishodia and Barman (2004) and Chandra (2010) have also worked on the fauna of other state and including the distribution of some species in Maharashtra. There is no any published work or report from Tilari forest. Therefore, for the first time an attempt was made to study fauna of insects of Tilari Maharastra.

MATERIALS AND METHODS

Grasshoppers were collected from Tilari forest of Maharashtra in the year 2014 and 2015 by sweep net method in the morning and evening time. Then collected specimens were transferred in bottles for killing that contains cotton soaked with ethyl acetate covered with paper. The collected specimens were preserved by both dry and wet preservation methods. Identification was

*Corresponding author: More S. V
Department of Zoology, R.B. Madkholkar Mahavidyalaya, Chandgad, Maharashtra, India
done with the help of Orthoptera fauna of India Kirby (1994) and webography.

**Study Region**

The survey of grasshoppers among different habitat types of Tilari forest and surrounding area is covered with dense lush green forest and semi evergreen mixed forest. This place is located in Kolhapur district of Maharashtra, India. Tilari (Latitude 15° 45’ to 16° 3’ N & Longitude 74° 1’ to 74° 27’ E) is located around 762 m above sea level and temperature ranging from (14.75°C to 36.10°C). This forest average rainfall is between 3000 to 4000 mm/year. Water is available in all season’s number of small and large ponds, dam and river. In Tilari forest so Variety of animals living in the forest covered areas and near the Border of Karnataka and Goa State.

**RESULTS AND DISCUSSION**

There were 17 species of grasshoppers collected from different habitats and different localities of Tilari forest. During the course of study, 17 species of grasshoppers belonging to 17 genera, 3 families viz. Acrididae, Tettigoniidae and Pygromphidae, (with 8, 6, and 3 species respectively (Table 1). Present data revealed that, the grasshoppers of study regions is rich and diversified may be because of variety of flora and complex ecological conditions, rainfall pattern, temperature. Senthikumar et al (2006) studied on Orthopteran fauna of Gibbon wildlife sanctuary in Assam and recorded 25 species. Chandra and Gupta (2007) have reported 139 species of Orthoptera belonging to 12 families in Madhya Pradesh and Chattisgarh. Shishodia and Gupta (2009) have recorded 165 species of grasshoppers under 16 families in Himachal Pradesh. Koli et al (2010) studied on Orthoptera fauna in Chandoli National park, and reported 62 species belonging to 8 families. Akhtar et al (2012) have recorded 26 species of grasshoppers belonging to 2 families in Uttar Pradesh. Usmani et al (2012) studied on taxonomy and distribution of Acridoidea (Orthoptera) of Bihar, India and recorded 37 species. Waghmare et al (2013) studied on species diversity of short horned grasshopper in selected grasslands of Solapur district of Maharashtra and recorded 7 species. Prabhakar (2015) provided an updated checklist of Insecta: Orthoptera of Tamil Nadu with new distributional records which revealed 384 species in the order Orthoptera. Kumar, et al (2015) studied on (Acrididae: Acridoidea) from Haryana, India and recorded 36 species.
Acknowledgements

Authors are thankful to Prof. Dr. P. R. Patil, Principal R.B. Madkholkar Mahavidyalaya, Chandgad, Kolhapur for providing necessary facilities and financial assistance for this work.

Table 1 Checklist of Grasshoppers from Tilari forest

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Family</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acrididae</td>
<td>Trilophidia sp</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acrida conica</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Catantopes sp</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gastrimargus aicanus africanus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teratodes monticollis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schistocera americana</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oxya sp</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phlaeoba infumata</td>
</tr>
<tr>
<td>2</td>
<td>Tettigoniidae</td>
<td>Ducetia japonica</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mecopoda elongata</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phyllozetus siccus siccus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sathrophyllia rugosa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trigonocorypha unicolor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Latania meagastridula ingrissch</td>
</tr>
<tr>
<td>3</td>
<td>Pyrgomorphidae</td>
<td>Atractomorpha sp</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aularches sp</td>
</tr>
</tbody>
</table>

C. trachypterus trachypterus
References


Kirby, W.F. (1994). The fauna of British India, including Ceylon and Burma, Orthoptera (Acrididae). Landon IX + 276PP.


How to cite this article: