

DIVERSITY OF FAMILY PENTATOMIDAE (HEMIPTERA – HETEROPTERA) FROM NASHIK REGION, MAHARASHTRA INDIA.

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ABSTRACT:

The taxonomic study and collection of pentatomid bugs were carried out from Nashik region during year 2018-2019. Stink bugs are phytophagous and feed on diverse group of plants. They commonly were feeding upon seeds, stems, foliage and flowers of plants. In the present study we report 6 species from 5 genera.

KEYWORDS: Pentatomidae, Diversity, bugs, Nashik.

INTRODUCTION:

Hemiptera is one of the diverse order among the class insecta. About 19300 species belonging to 133 families reported throughout the world (Hodkinson ID 1991). Hemiptera order of India has been studied by many workers but the important contribution given by Distant. The family pentatomidae often called as a stink bugs or shield bugs. It is the largest heteropteran family (Henry 2009). These bugs are having antennae with 5 or less often 4 segments, piercing and sucking type of mouth parts and scutellum usually covering only about half of the abdomen.

The diversity of family pentatomidae was poorly reported from Nashik region. The present study was undertaken to record the diversity of family pentatomidae in Nashik.

MATERIALS AND METHODS

STUDY AREA:

Nashik is situated in the north west of Maharashtra, India. Nashik locale is the third biggest region in Maharashtra as far as region. It involves a zone of around 15582 squares kilometer. The climate of Nashik is reasonable for the development of vegetation.

COLLECTION:

The bugs were gathered from various territories of Nashik for the time of July 2018 to January 2019. The bugs were gathered from various territories of Nashik, for example Gangapur street, Pandavleni, Goda park, Nashikroad, Bhujbal farm, Pawan Nagar, Nashik Road etc.

Bugs were gathered by straightforward hand picking method. They were gathered from grass, bushes and ground.

The bugs were conveyed to the research center and anesthetized by chloroform and preserved by the dry preservation technique and identified.

IDENTIFICATION:

The bugs were identified with the assistance of keys accessible in the fauna of British India, including Ceylon and Burma by Distant W.L. (1902 & 1904), and a taxonomic Survey of Pentatomidae of India by Nayyar Azim (2011).

RESULT AND DISCUSSION:

The pentatomid bugs are economically important; they act as pest as most of the species are phytophagous. In the present study total 6 species belongs 5 genera were recorded.

R.C. Bhagat (2015) recorded *Halyomorpha picus*, *Nezara viridula* from Jammu, Kashmir and Ladakh.

Kailash Chandra et al. (2015) recorded *Nezara viridula* from Ratapani wildlife sanctuary Madhya Pradesh.

B.Biswas et al. (2014) recorded *Carbula insocia*, *carbula scutellata*, *Nezara viridula*, *Tesseratoma sp.* from Chhattisgarh. Dolly Kumar et al. (2010) reported *Halyomorpha picus* from Vadodara, Gujarat. Debdas et al. (2014) reported *Nezara viridula* from West Bengal.

Hemant Ghate et al. reported two pentatomid bugs from chandoli area, Kolhapur, Maharashtra (2010). Aland et al. recorded *Tesseratoma sp.*, and *Carbula scutellata* and *Halyomorpha sp.* from Amba reserved forest, Western ghat, Maharashtra.

Table No.1. List of Pentatomids observed during present study

SR.NO.	GENUS	SPECIES	DATE & PLACE
1	<i>Halyomorpha</i>	<i>picus</i>	28/8/18 - Pandavleni 30/9/18 – Gangapur Road
2	<i>Degonatus</i>	<i>serratus</i>	29/7/18 – Bhujbal farm 19/8/18 - Pandavleni
3	<i>Nezara</i>	<i>viridula</i>	30/9/18 – Gangapur Road 28/10/18 – Gangapur Road 11/11 18 – Goda Park
4	<i>Carbula</i>	<i>scutellata</i>	28/8/18 – Pandavleni 11/11/18 – Goda Park
5	<i>Carbula</i>	<i>insocia</i>	28/8/18 – Pandavleni 11/10/18 – Goda Park
6	<i>Tesseratoma</i>	<i>Sp.</i>	23/9/18 – Gangapur Road 30/9/18 – Gangapur Road 28/10/18 – Gangapur Road

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REFERENCES:

- 1] Aland S.R., Mamalayya A.B., Koli Y.J., Bharmal D.L., & Bhawane G.P., (2010). Studies on the heteropteran (Insecta: Heteroptera) fauna of AMBA RESERVED FOREST, Western ghats, Maharashtra. The Bioscan 5(3) :461-463.
- 2] Azim Nayyar (2011). Taxonomic survey of stink bugs (Heteroptera : Pentatomidae) of India Halteres, vol.3
- 3] Bhagat R. C. (2015). An updated annotated checklist & biodiversity of Pentatomoidea bugs (Heteroptera : Pentatomomorpha) of Jammu, Kashmir & Ladakh Himalayas (India). International Research Journal of Natural & Applied Science Volume – 2, Issue-4 : pp-125-139.
- 4] Biswas B., Hassan M. E., Kailash Chandra, Sandeep Kushwaha & Paramita Mukherjee (2014). On an account of Pentatomidae (Heteroptera : Hemiptera) from Chhattisgarh, India. Rec. Zool. Surv. India : 114 (part-2) : 211-231.
- 5] Debdas Jana, Tamili Dipak & Chakraborty Susanta (2014). Diversity of Hemipteran insects in the coastal & non coastal environment of Midnapore (East) West Bengal, India. Sci & Cult. 80 (5-6) 173-178.
- 6] Distant W.L. (1902). The fauna of British India including Ceylon and Burma. I: 36-421.
- 7] Distant W.L. (1904). The fauna of British India including Ceylon and Burma. I: 26-416.
- 8] Distant W.L. (1906). The fauna of British India including Ceylon and Burma, Rhynchota. III: 1-502.
- 9] Dolly Kumar and Bhumika Naidu (2010) A contribution towards the insect fauna of Vadodara, Gujarat (India) : The Order Hemiptera. Halteres, Vol. 1, No.2.
- 10] Ghate H., Pathak G., Bhawane G. (2012) First record of two Pentatomidae bugs from Chandoli area, Kolhapur, Maharashtra, India. Threaten taxa, 0974-7893
- 11] Hodkinson I.D., Casson D. (1991). A lesser predilection for bugs: Hemiptera (Insecta) diversity in tropical rain forests. Biological Journal of the Linnean Society. 43:101-109.
- 12] Kailash Chandra, Reeta Bhandari & Sandeep Kushwaha (2015). Hemiptera Fauna of Ratapani Wildlife Sanctuary, Madhya Pradesh, India International Journal of Fauna & Biological studies 2(2) : 20 – 26.
- 13] Richards O. W. & Davies R. G., (1997). Imms' General Textbook of Entomology. 10th Edition, Volume 2. Pp-679-780.

Plate 1



Halyomorpha picus

Plate 2



Degonatus serratus

Plate 3



Nezara viridula

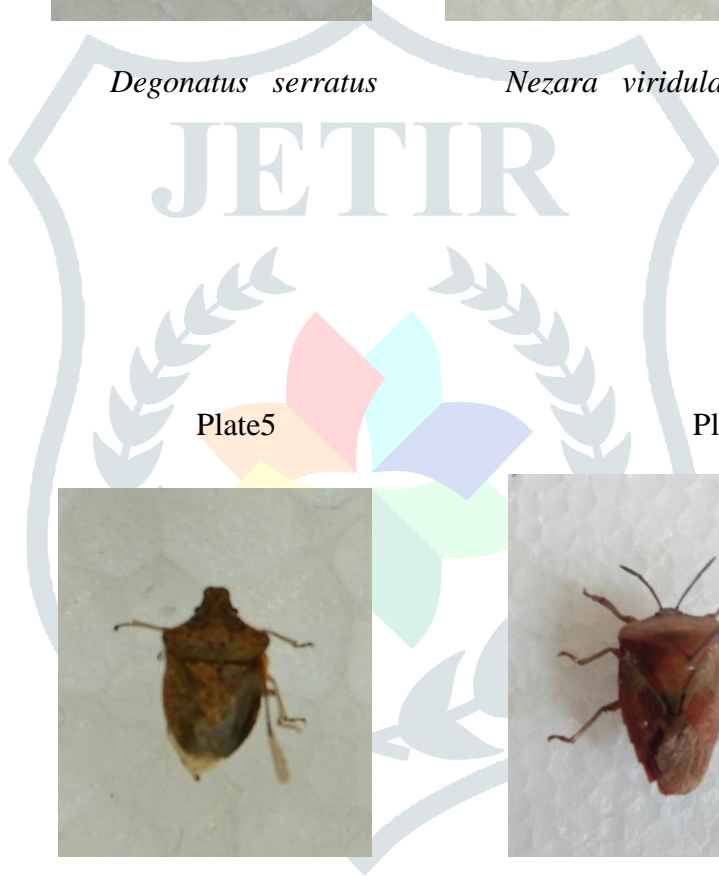


Plate 4



Carbula scutellata

Plate 5



Carbula insocia

Plate 6



Tesseratoma sp.