

## SUPERFAMILY PENTATOMOIDEA (HEMIPTERA: HETEROPTERA) OF MADHYA PRADESH, INDIA

**Kailash Chandra\*, B. Biswas\* and Sandeep Kushwaha\*\***

\* Zoological Survey of India, M Block, New Alipore Kolkata, West Bengal, INDIA. E-mail: kailash611@rediffmail.com

\*\* Zoological Survey of India, Central Zone Regional Centre, Scheme No. 5, Plot No. 168-169, Vijay Nagar, Jabalpur-482 002 Madhya Pradesh, INDIA.

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**ABSTRACT:** The paper deals with the study of 57 species of true bugs belonging to 41 genera and 7 families of the superfamily Pentatomoidea (Hemiptera: Heteroptera) from Madhya Pradesh. Of these 23 species are new additions to the fauna of the state.

**KEY WORDS:** Pentatomoidea, Heteroptera, Madhya Pradesh, New Record.

The true bugs representing the superfamily Pentatomoidea are commonly referred to as shield bugs and stink bugs. These bugs are mostly phytophagous in nature, and the species belonging to subfamily Amyotinae are predaceous (Schaefer & Panizzi, 2000). These bugs are characterized by large scutellum either covering the whole abdomen or occupying a large portion of base of abdomen between the hemelytra. Presently around 7000 species under 1300 genera of Pentatomoidea are reported throughout the world (Henry, 2009). A little over 590 species (Distant 1902, 1907, 1918; Ahmad & Afzal, 1989) are known to occur in India. About 4700 species classified in 900 genera of family Pentatomidae are known globally (Henry, 2009). Information on Pentatomoidea of central India was included in '*Fauna of British India*' by Distant (1902, 1907, 1918). Altogether, 34 species of shield bugs are known through the publications of Ramakrishna et al. (2006), Chandra (2008, 2009), Chandra et al. (2010, 2012), and Roychoudhury & Joshi (2011). Presently, 57 species belonging to 41 genera under 7 families of the Pentatomoidea are reported from the Madhya Pradesh.

### MATERIALS AND METHODS

The shield bugs were collected in the field with killing jars, pinned and labeled in the lab. The bugs were sorted out and identified with the help of literature present in ZSI Jabalpur and *Fauna of British India* by Distant (1902, 1907 and 1918) and (Lis, 1990 and 1999). Identified specimens were confirmed with the help of reference collection available in ZSI Kolkata. The microscopy was done by Leica M205-A stereo zoom microscope and photographs were taken by Sony DSC-W55 Camera.

### RESULT AND DISCUSSION

Present investigation deals with the study of superfamily Pentatomoidea of Madhya Pradesh, which includes 57 species under 39 genera belonging to 7 families (Table 1). Of these, 23 species of stink bugs are new additions to the fauna of Madhya Pradesh. Among the families, Pentatomidae was found to be dominant with 32 species followed by the 9 species of Plataspididae. This study will be help in the preparing the base line information on stink bugs and their host

plant information in Madhya Pradesh. Distribution list of species in each family was given in Graph 1. Photographs were given in plates 1, 2, 3 and 4.

### ACKNOWLEDGEMENT

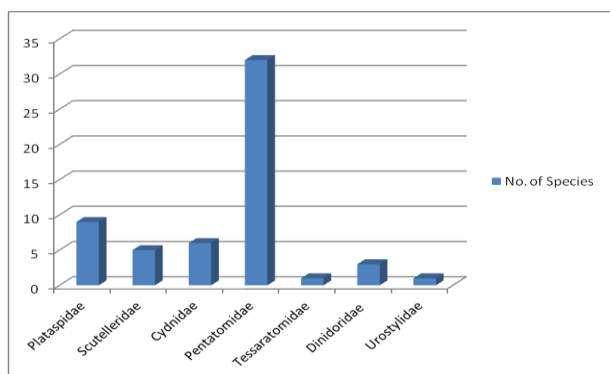
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### LITERATURE CITED

- Ahmed, I. & Afzal, M.** 1989. A revision of Myrocheini (Pentatomidae: Pentatominae) from Indo-Pakistan area. *Oriental Ins.*, 22: 185-240.
- Chandra, K.** 2008. Insecta: Hemiptera, Faunal Diversity of Jabalpur District, M. P. (Published by Zoological Survey of India, Kolkata): 141-157.
- Chandra, K.** 2009. Insecta: Hemiptera. Fauna of Pachmarhi Biosphere Reserve, Conservation Area Series, 39: 247-257.
- Chandra, K., Sharma, R. M. & Ojha, P.** 2010. A compendium on the faunal resources of Narmada river basin in Madhya Pradesh. *Rec. zool. Surv. India, Occ. Paper No.*, 310: 42-43.
- Chandra, K., Kushwaha, S., Sambath, S. & Biswas, B.** 2012. Distribution and diversity of Hemiptera fauna of Veerangana Durgavati Wildlife Sanctuary, Damoh, Madhya Pradesh (India). *Biological Forum-An International Journal*, 4 (1): 68-74.
- Distant, W. L.** 1902. The Fauna of British India including Ceylon and Burma, Rhynchota, I: 1-330 (Published by Taylor & Francis, London).
- Distant, W. L.** 1907. The Fauna of British India including Ceylon and Burma, Rhynchota, IV: 420-466 (Published by Taylor & Francis, London).
- Distant, W. L.** 1918. The Fauna of British India including Ceylon and Burma, Rhynchota, VII: 110-151 (Published by Taylor & Francis, London).
- Henry, T. J.** 2009. Biodiversity of Heteroptera, in *Insect Biodiversity: Science and Society*: 223-263. 1<sup>st</sup> edition. Edited by R. Footitt and P. Alder. Blackwell Publishing.
- Lis, J. A.** 1990. New genera, new species, new records and checklist of the Old World Dinidoridae (Heteroptera: Pentatomoidea). *Ann. Upper Silesian Mus. Ent.*, 3: 103-148.
- Lis, J. A.** 1999. Burrower bugs of the Old World- a catalogue (Hemiptera: Heteroptera: Cydnidae), Genus, Wroclaw, 10 (2): 165-249.
- Ramakrishna, Chandra, K., Nema, D., Ahirwar, S. & Alfred, J. R. B.** 2006. Faunal Recourses of National parks of Madhya Pradesh and Chhattisgarh, Conservation Area Series, 30: 1-123+27.
- Rider, D. A.** 2013. Catalogue of the Pentatomoidea of the World, <http://www.ndsu.nodak.edu/ndsu/rider/Pentatomoidea/Catalogs/catalogs.htm> ; assess on July 2013.
- Roychoudhury, N. & Joshi, C.** 2011. New record of pentatomid bugs, *Erthesina fullo* Thunberg and *Halys dentatus* Fabricius (Heteroptera: Pentatomidae), feeding on teak in Madhya Pradesh. *Indian Journal of Forestry*, 34 (1): 117-120.
- Schaefer, C. W. & Panizzi, A. R.** 2000. Heteroptera of Economic Importance. CRC Press, Boca Raton, FL., USA, 828 pp.
- Table 1. List of superfamily Pentatomoidea reported from Madhya Pradesh. Classification of Pentatomoidea is followed after Rider (2013). Abbreviations used: PTR-Pench Tiger Reserve; PNP-Panna National Park; MNP-Madhav National Park; PBR-Pachmarhi Biosphere Reserve; SWLS-Singhori Wildlife Sanctuary; VDWLS-Veerangana Durgavati Wildlife Sanctuary; VVNP-Van Vihar National Park; FRH-Forest Rest house; RH- Rest House ; ZSI-Zoological Survey of India; TFRI- Tropical Forest Research Institute; \* -New record to state.

S. No.	Suborder / Infraorder / Superfamily / Family / Subfamily / Division / Genus / Species	No. of exp.	Collection localities in districts / WLS / National Park / Biosphere Reserve)	District of Madhya Pradesh	Date of Collection
	<b>Order: HEMIPTERA</b>				
	<b>Suborder: Heteroptera</b>				
	<b>Superfamily: Pentatomoidea</b>				
	<b>Family: Plataspidae</b>				
1	<i>Coptosoma abbreviatum</i> Montand.	1	Napier town	Jabalpur	22.iv.1970
2	<i>Coptosoma biosculatum</i> Montand.	1	Katangi	Jabalpur	22.vi.2000
3	<i>Coptosoma cardoni</i> Distant	1	Bhavartal garden	Jabalpur	16.i.1999
4	<i>Coptosoma libidinosum</i> Montand.	1	Dumna Nature Park	Jabalpur	15.ix.2009
5	<i>Coptosoma noualhieri</i> Montand.	1	Bargi Dam	Jabalpur	24.viii.2001
6	<i>Coptosoma siamicum</i> Walker	1	Gwarighat	Jabalpur	11.xi.2010
7	<i>Coptosoma sparsum</i> Montand.	1	SBI Chowk	Jabalpur	32.ix.1965
8	<i>Coptosoma sphaerula</i> Germar	1	Wright town	Jabalpur	18.iii.1981
9	<i>Megacopta cribraria</i> Hsiao and Ren	24	ZSI Colony	Jabalpur	12.vi.2012
	<b>II Family: Scutelleridae</b>				
10	* <i>Chrysocoris patricius</i> Fabricius	1	Karmajhiri, PTR	Seoni	22.vi.2001
11	<i>Chrysocoris purpureus</i> Westwood	6	Garadvara	Narsinghpur	22.vi.2000
12	<i>Chrysocoris stollii</i> Wolff	3	Paruliya, SWLS	Raisen	10.xii.2010
13	* <i>Poecilocoris interruptus</i> Westwood	2	Bhagdehi, SWLS	Raisen	9.xii.2010
		1	Badalpur, PTR	Seoni	16.vi.2001
		2	Pulpuldoh, PTR	Chhindwara	14.viii.2001
14	<i>Scutellera perplexa</i> (Westwood)	15	Silviculture nursery, TFR1	Jabalpur	26.ix.2000
	<b>III Family: Cydnidae</b>				
15	* <i>Adrisa magna</i> Uhler	1	Pulpuldoh, PTR	Chhindwara	24.viii.2001
16	<i>Aethus indicus</i> (Westwood)	4	ZSI Colony	Jabalpur	24.vi.2011
		2	Jaitgarh forest, SWLS	Raisen	13.iv.2011
		1	Nidankund, VDWLS	Damoh	14.iii.2011
		1			
17	<i>Byrsinus varians</i> (Fabricius)	2	ChurnaBori, PBR	Hoshangabad	10.06.1999
18	* <i>Fromundus pygmaeus</i> (Dallas)	1	FRH, PNP	Panna	18.xi.2000
19	* <i>Macroscytus brunneus</i> (Fabricius)	2	Totladoh, PTR	Chhindwara	20.viii.2001
20	* <i>Macroscytus subaeneus</i> (Dallas)	1	Karmajhiri, PTR	Seoni	23.vi.2001
	<b>IV Family: Pentatomidae</b>				
	<b>Subfamily: Pentatominae</b>				
	<b>Tribe: Halyini</b>				
21	<i>Halya dentatus</i> Fabricius	19	Damoh Naka	Jabalpur	24.iv.2012
		1	Bamhori, SWLS	Raisen	17.ix.2011
		1	Kola Nala, VDWLS	Damoh	25.vi.2010
		2	Sangrampur, VDWLS	Damoh	24.vi.2010
		1	Golpahariya	Gwalior	29.iv.2011
		6	Singanama, PBR	Hoshangabad	30.x.2002
22	<i>Erthesina fullo</i> (Thunberg)	25	ZSI Colony	Jabalpur	30.v.2011
		3	Ekeyavanriver, SWLS	Raisen	03.xii.2010
		3	Giridarshan, VDWLS	Damoh	13.iii.2011
		9	Churna, Bori	Hoshangabad	30.x.2002
		3	Samarbh, PTR	Chhindwara	10.xi.2001
		5	MNP	Shivpuri	17.ix.1975
		2	Panna, PNP	Panna	19.xi.2001
	<b>Tribe: Myrocheini</b>				
23	* <i>Dorpius indicus</i> Distant	1	Hinaulta RH, PNP	Panna	19.xi.2000
24	<i>Laprius varicornis</i> Dallas	1	Bus stand	Bhind	24.iv.2011
	<b>Tribe: Carpocorini</b>				
25	* <i>Gulielmus laterarius</i> Distant	1	Jhiriya, PNP	Panna	14.xi.2000
26	* <i>Aelhomorpha lineaticollis</i> (Westwood)				
27	<i>Dolychoris indicus</i> Stal	1	SindhyaVihar	Gwalior	23.iv.2011
28	* <i>Dolychoris baccarum</i> (Linnaeus)	2	Totladoh, PTR	Chhindwara	5.xi.2001
	<b>Tribe: Cappaeini</b>				
29	* <i>Halyomorpha picus</i> (Fabricius)	1	Hinaulta RH, PNP	Panna	18.xi.2000
	<b>Tribe: Eysarcorini</b>				
30	* <i>Adria parvula</i> (Dallas)	1	Narnagar	Khargon	3.x.2007
31	<i>Eysarcoris ventralis</i> (Westwood)	1	Matkulli, PBR	Hoshangabad	27.viii.2000
		2	Sukad River, SWLS	Raisen	15.ix.2009
32	* <i>Eysarcoris guttiger</i> (Thunberg)	1	GandadevNala, PTR	Seoni	10.xi.2001
33	* <i>Eysarcoris montivagus</i> Distant	1	Bamhori, SWLS	Raisen	9.iv.2011
34	* <i>Carbula biguttata</i> (Fabricius)	01	Totladoh, PTR	Chhindwara	3.xi.2001
	<b>Tribe: Antestiini</b>				
35	<i>Plautia fimbriata</i> (Fabricius)	01	Singrampur FRH, VDWLS	Damoh	10.iii.2011
		01	ZSI Colony	Jabalpur	28.iv.2012

		01	Lamandoti, PTR	Seoni	12.11.2001
		01	Tikoni, PTR	Seoni	09.11.2001
		01	Lamandoti, PTR	Seoni	24.07.2001
36	<i>Antestiopsis cruciata</i> (Fabricius)	01	Panchmarhi, Mahadev R.H.	Hoshangabad	13.vi.1999
		03	ZSI Colony	Jabalpur	12.vi.2008
		08	Sitapur, SWLS	Raisen	10.iv.2011
		02	ChotaChakkar, VDWS	Damoh	14.iii.2011
	<b>Tribe: Agonoscelidini</b>				
37	<i>Agonoscelis nubila</i> (Fabricius)	01	Vijay Nagar	Jabalpur	11.vii.2010
	<b>Tribe:Strachiini</b>				
38	<i>Bagrada picta</i> (Fabricius)	02	Karmajhiri, PTR	Seoni	11.vi.2001
		01	ZSI Colony	Jabalpur	24.vii.2011
		06	Bamhori RH, SWLS	Raisen	3.iv.2011
		03	Nidankund, VDWS	Damoh	14.iii.2011
		04	,Neanjudi, PNP	Panna	16.vi.2001
		01	Nidankund, VDWS	Damoh	14.iii.2011
39	<i>*Stenozygum speciosum</i> (Dallas)	01	Totladoh, PTR	Chhindwara	26.viii.2001
	<b>Tribe: Degonetini</b>				
40	<i>Degonetis serratus</i> Distant	02	VDLS, Nazara Point	Damoh	11.iii.2011
		03	Singhanama, PBR	Hoshangabad	31.xii.2002
		01	Singhanama, PBR	Hoshangabad	30.xii.2002
		01	Singhanama, PBR	Hoshangabad	29.xii.2002
		01	Rajola, PTR	Seoni	7.xi.2001
		01	Dudhya, PTR	Seoni	8.xi.2001
	<b>Tribe :Pentatomini</b>				
41	<i>*Placosternum taurus</i> (Fabricius)	01	BadaChakkar, VDWS	Damoh	4.xi.2011
42	<i>Placosternum dama</i> (Fabricius)	01	Napier Town	Jabalpur	8.v.2000
	<b>Tribe: Nezarini</b>				
43	<i>Nezara viridula</i> (Linnaeus)		Widely distributed		
44	<i>Acrosternum gramineum</i> (Fabricius)		ZSI Colony	Jabalpur	24.xii.2011
	<b>Tribe: Piezodoriini</b>				
45	<i>*Piezodorus rubrofasciatus</i> (Fabricius)	1	SSS Club, MNP	Shivpuri	17.ix.1975
		1	ZSI Colony	Jabalpur	24.vii.2011
	<b>Tribe: Menidini</b>				
46	<i>*Menida formosa</i> (Westwood)	1	SSS Club, MNP	Shivpuri	17.ix.1975
	<b>Tribe: Saphelini</b>				
47	<i>*Ochrophara montana</i> Distant	1	Vijay Nagar	Jabalpur	11.vi.2011
	<b>Subfamily:Phyllocephalinae</b>				
48	<i>Tetradia histeroides</i> (Fabricius)	1	SSS Club, MNP	Shivpuri	17.ix.1975
	<b>Subfamily: Asopinae</b>				
49	<i>Canthecona furcellata</i> (Wolff)	2	Belgaon, SWLS	Raisen	15.ix.09
		1	Vijay Nagar	Jabalpur	11.vi.2011
		2	Baghdev, PTR	Chhindwara	27.vii.2001
		1	Pulpuldoh, PTR	Chhindwara	14.vii.2001
		3	Totladoh, PTR	Chhindwara	23.viii.2001
		5	Thumdagadi, PTR	Chhindwara	22.ix.2001
		2	Delakharri, PTR	Chhindwara	7.vii.2001
		1	Delakharri, PTR	Chhindwara	14.vii.2001
		1	Kheda	Morena	27.iv.2011
		3	Giridarsan,VDWS	Damoh	12.vi.2011
50	<i>Andrallus spinidens</i> (Fabricius)	1	Mohania	Sidhi	22.vii.1999
51	<i>Amyotea malabarica</i> (Fabricius)	2	SWLS	Raisen	03.iv.2011
52	<i>*Zicrona caerulea</i> Linnaeus	1	VVNP	Bhopal	13.xii.2012
V	<b>Family:Tessaratomidae</b>				
53	<i>*Tessaratomia javanica</i> (Thunberg)	1	ZSI Office	Jabalpur	1.v.2012
VI	<b>Family: Dinidoridae</b>				
54	<i>Cyclopelta siccifolia</i> (Westwood)	12	ZSI Colony	Jabalpur	5.vii.2011
		2	SBI Chowk, Vijay Nagar	Jabalpur	04.vi.2011
		2	Gaganwada, SWLS	Raisen	02.iv.2011
55	<i>Coridius brunneus</i> (Thunberg)	2	Napier town	Jabalpur	23.vii.1960
			ZSI Office	Jabalpur	28.viii.1970
56	<i>Coridius ianus</i> (Fabricius)	1	ZSI Colony	Jabalpur	02.i.1966
		2	Barha RH, SWLS	Raisen	15.ii.2010
		1	Singhanama, PBR	Hoshangabad	32.ix.1965
VII	<b>Family: Urostylidae</b>				
57	<i>*Urochela bimaculata</i> Dallas	1	Vijay Nagar	Jabalpur	11.vii.2012



Graph 1. Showing number of species in different families of superfamily Pentatomoidea.

## Plate 1



*Coridius ianus* (Fabricius)



*Canthecona furcellata* (Wolff)



*Halys dentatus* Fabricius



*Nezara viridula* (Linnaeus)



*Chrysocoris purpureus* Westwood



*Antestiopsis cruciata* (Fabricius)

## Plate 2



*Erthesina fullo* (Thunberg)



*Degonetus serratus* Distant



*Plautia fimbriata* (Fabricius)



*Aethus indicus* (Westwood)



*Adria parvula* (Dallas)



*Amyotea malabarica* (Fabricius)

## Plate 3

*Bagrada picta* (Fabricius)*Gulielmus lalterarius* Distant*Macroscytus brunneus* (Fabricius)*Megacopta cribraria* Hsiao and Ren*Tessaratoma javanica* (Thunberg)*Scutellera perplexa* (Westwood)

## Plate 4



*Coridius brunneus* (Thunberg)



*Byrsinus varians* (Fabricius)



*Agonoscelis nubila* (Fabricius)



*Dorpius indicus* Distant



*Eysarcoris guttiger* (Thunberg)



*Menida formosa* (Westwood)