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## Hemiptera fauna of Ratapani wildlife sanctuary, Madhya Pradesh, India

**Kailash Chandra, Reeta Bhandari and Sandeep Kushwaha**

### Abstract

Present study deals with the diversity of True bugs (Insecta: Hemiptera) from Ratapani Wildlife sanctuary, Madhya Pradesh India. These papers deals with 30 species from 13 families of order Hemiptera from the sanctuary witch are new record to the sanctuary.

**Keywords:** Ratapani Wildlife Sanctuary, 13 families, New Records.

### 1. Introduction

Ratapani Wildlife sanctuary (RWLS) is located in within Raisen and Sehore district and Obedullaganj of forest division of Madhya Pradesh with headquarter at Obedullaganj, which is situated on NH 12, 55 km away from the Bhopal <sup>[1]</sup>. The study yielded the identification of 30 species belonging to 13 families of the order Hemiptera and all these species are reported first time from this sanctuary. The distribution of the species in the sanctuary is also provided. Hemiptera is a diverse group of true bugs. There are 133 families of Hemiptera found worldwide, consisting about 184000-193000 species <sup>[2]</sup>. A detailed account of Hemiptera fauna of central India had been done by Distant <sup>[3, 4, 5]</sup>. Later on brief account of this order were described by Ghosh & Biswas <sup>[6]</sup>, Ramakrishna *et al.* <sup>[7]</sup> Chandra <sup>[8, 9, 10]</sup>, Roychoudhury & Joshi <sup>[11]</sup>, Chandra and Kushwaha <sup>[12, 13, 14]</sup>, Chandra *et al.* <sup>[15, 16, 17, 18, 19]</sup> respectively from Madhya Pradesh. Photography of specimens was done by Leica M205A microscope (Plate 1, 2 and 3)

### Plate 1



*Polididus armatissimus* Stal, 1859



*Onchocephalus schioedtei* Reuter, 1883

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*Tribelocephala indica* Walker, 1873



*Ectrychotes dispar* Reuter, 1881



*Prostemma carduelis*, Dohrn, 1858



*Scadra annulipes*, Reuter 1881

**Plate 2**



*Callitettix versicolor* Fabricius, 1794



*Spilostethus pandurus militaris* (Fabricius, 1775)



*Spilostethus hospes* (Fabricius, 1794)



*Metochus uniguttatus* (Thunberg, 1822)



*Antilochus coqueberti*, (Fabricius) 1803



*Dysdercus koenigii* (Fabricius, 1775)

**Plate 3**



*Physopelta gutta* (Burmeister) 1834



*Leptocorisa varicornis* (Fabricius, 1803)



*Erthesina fullo* (Thunberg, 1783)



*Nezara viridula* Linnaeus, 1758



*Halys dentatus* (Fabricius, 1775)



*Plautia fimbriata* (Fabricius, 1787)

## 2. Material and Methods

During the survey of the sanctuary by the Zoological Survey of India Jabalpur, altogether 76 bugs were observed from various localities of the RWLS by hand picking, net trap and light tarp methods. The specimens were sorted out and identified with the help of literature available. Morphology of bugs were studied by Leica microscope M 205-A.

## 3. Results

### Systematic Account

#### Order: Hemiptera

#### Suborder: Auchenorrhyncha

#### Infraorder: Cicadomorpha

#### Superfamily: Cercopoidea

#### Family: Cercopidae

##### 3.1. *Callitettix versicolor* Fabricius, 1794

1794. *Callitettix versicolor* Fabricius, *Ent. Syst.* IV: 50.

1908. *Callitettix versicolor*, Distant, *Fauna Br. India*, IV: 113.

2004. *Callitettix versicolor*: Biswas et al., *State Fauna Series 10: Fauna of Manipur*: 244

*Date of observation*: 29.ix.2013; *Locality*: FRH (Forest Rest House) RWLS, District: Sehore.

*Distribution*: India; Madhya Pradesh, Bihar, Kashmir, Maharashtra, Sikkim, Tamil Nadu, Uttar Pradesh and West Bengal. *Elsewhere*: Burma, China and South Eastern Asia.

#### Suborder: Heteropteroidea

#### Infraorder: Cimicomorpha

#### Superfamily: Cimicoidea

#### Family: Reduviidae

##### 3.2. *Tribelocephala indica* Walker, 1873

1873. *Tribelocephala indica* Walker, *Cat. Het.*, VIII: 20.

1902. *Tribelocephala indica* Distant, *Fauna Br. India*, *Heteroptera*, II: 220.

*Date of observation*: 30.ix.2013; *Locality*: Shulka wali Patra Village, District: Sehore.

*Distribution*: Madhya Pradesh, Assam and West Bengal.

##### 3.3. *Scadra annulipes*, Reuter 1881

1881. *Scadra annulipes*, Reuter, *Act. Soc. Sc. Fenn.* XII: 309

1902. *Scadra annulipes* Distant, *Fauna Br. India*, II: 310.

*Date of observation*: 29.ix.2013; *Locality*: FRH RWLS, District: Sehore.

*Distribution*: Madhya Pradesh and West Bengal.

##### 3.4. *Ectrychotes dispar* Reuter, 1881

1881. *Ectrychotes dispar* Reuter, *Act. Soc. Sc. Fenn.*, XII: 304.

1902. *Ectrychotes dispar*, Distant, *Fauna Br. India*, II: 315.

*Date of observation*: 30.ix.2013; *Locality*: Budbuda Village, District: Sehore.

##### 3.5. *Polididus armatissimus* Stal, 1859

1859. *Polididus armatissimus* Stal, *Ofv. Vet.-Ak. Forh.*: 376.

1902. *Polididus armatissimus*, Distant, *Fauna Br. India*, II: 386 - 387.

2007. *Polididus armatissimus*: Biswas and Bal, *Fauna of Andhra Pradesh: State Fauna Series V*:336

*Date of observation*: 04.x.2013; *Locality*: Delhaveri FRH, District: Sehore.

*Distribution*: India; Madhya Pradesh, Maharashtra and West Bengal. *Elsewhere*: China, Japan, Myanmar, Philippines and Sri Lanka.

##### 3.6. *Onchocephalus schioedtei* Reuter, 1883

1830. *Onchocephalus schioedtei* Reuter *Act. Soc. Sc. Fenn.* XII:702.

1902. *Onchocephalus schioedtei* Distant, *Fauna Br. India*, *Heteroptera*, II : 232.

*Date of observation*: 04.x.2013; *Locality*: Delhaveri FRH, District: Sehore.

*Distribution*: India; Madhya Pradesh.

##### 3.7. *Ectomocoris cordiger* Stal, 1855

1855. *Ectomocoris cordiger* Stal, *Ofv. Vet.-Ak. Forh.*, 256.

1995. *Ectomocoris cordiger* Stal, Biswas et al. *Fauna of West Bengal: State Fauna Series 3(V)*:400.

*Date of observation*: 29.ix.2013; *Locality*: FRH RWLS, District: Sehore.

*Distribution*: Madhya Pradesh, Assam, Meghalaya, West Bengal and Uttarakhand. *Elsewhere*: Sri Lanka and Myanmar. FAMILY: NABIDAE

##### 3.8. *Prostemma carduelis*, Dohrn, 1858

1858. *Prostemma carduelis* Dohrn, *Stett. Ent. Zeit.* : 229.

1902. *Prostemma carduelis* Dohrn, Distant, *Fauna Br. India*, *Heteroptera*, II: 223.

*Date of observation*: 30.ix.2013; *Locality*: Shulka wali Patra Village, District: Sehore.

*Distribution*: Throughout India. *Elsewhere*: Sri Lanka and Myanmar.

#### Infraorder: Pentatomorpha

#### Superfamily: Lygaeoidea

#### Family: Lygaeidae

##### 3.9. *Spilostethus hospes* (Fabricius, 1794)

1794. *Lygaeus hospes* Fabricius, *Ent. Syst.*, IV:150.

2009. *Spilostethus hospes* Ghosh, *Handbook on Hemiptera pest in India*: 371. Zoological survey of India.

*Date of observation*: 30.ix.2013; *Locality*: Budbuda Village, District: Sehore.

*Distribution*: India: Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu and West Bengal. *Elsewhere*: Australia, China, Malayan Archipelago, Pakistan, Sri Lanka and New Caledonia.

##### 3.10. *Spilostethus pandurus militaris* (Fabricius, 1775)

1775. *Cimex militaris* Fabricius *Syst. Ent.*: 717.

1988. *Spilostethus pandurus militaris* Mukhopadhaya, *Rec. Zool. Surv. India, Occ. Paper No.* 107:15

*Date of observation*: 04.x.2013; *Locality*: Omkuwala road Village, District: Sehore.

*Distribution*: India: Madhya Pradesh, Karnataka, Maharashtra, Orissa, Punjab, Uttar Pradesh, and West Bengal. *Elsewhere*: Australia, Pakistan.

##### 3.11. *Metochus uniguttatus* (Thunberg, 1822)

1822. *Dieuches uniguttatus* Thunberg, *Hem. Rostr. cap.*, 4: 6.

1902. *Dieuches uniguttatus* Distant, *Fauna Br. India*, *Heteroptera*, II: 82-83.

1988. *Metochus uniguttatus* Mukhopadhaya, *Rec. Zool. Surv. India, Occ. Paper No.* 107:56.

*Date of observation*: 04.x.2013; *Locality*: Delhaveri FRH, District: Sehore.

*Distribution*: India: Madhya Pradesh, Assam and Karnataka. *Elsewhere*: Myanmar, Sri Lanka.

**3.12. *Elasmolomus sordidus*** (Fabricius, 1787)  
1787. *Aphanus sordidus* (Fabricius) *Mant.* II:302  
2010. *Elasmolomus sordidus* (Fabricius) Saha and Bal *State fauna series 2: Fauna of Uttarakhand XVIII*: 221.  
*Date of observation*: 30.ix.2013; *Locality*: Budbuda Village, District: Sehore.

*Distribution*: India: Madhya Pradesh, Uttarakhand, Bihar, Maharashtra and West Bengal. *Elsewhere*: Myanmar, China.

**Superfamily: Pyrrhocoroidea**

**Family: Largidae**

**3.13. *Physopelta gutta*** (Burmeister) 1834  
1902. *Physopelta gutta*: Distant *Fauna Brit India* II: 97  
1927. *Physopelta gutta*: Tacuber, Konowia VI: 174  
*Date of observation*: 30.ix.2013; *Locality*: Shulka wali Patra Village, District: Sehore.  
*Distribution*: India: Madhya Pradesh, Assam and West Bengal. *Elsewhere*: Australia, Borneo, Sri Lanka, China, Japan and Philippines.

**3.14. *Antilochus coqueberti***, (Fabricius) 1803  
1803. *Antilochus coqueberti*, (Fabricius), *Syst. Rhyng.*: 222.  
1902. *Antilochus coqueberti*, Fabricius, *Fauna Br. India*, II: 101.  
*Date of observation*: 30.ix.2013; *Locality*: Budbud Village, District: Sehore.  
*Distribution*: India: Madhya Pradesh, Kashmir, Assam, West Bengal and Andhra Pradesh. *Elsewhere*: Sri Lanka and Myanmar.

**Family: Phyrhocoridae**

**3.15. *Dysdercus koenigii*** (Fabricius, 1775)  
1775. *Dysdercus cingulatus* Fabricius, *Syst. Ent.* : 719.  
1902. *Dysdercus cingulatus*, Distant, *Fauna Br. India*, II: 118.  
1914. *Dysdercus koenigii*, Bergroth, *Ent. Mitt.* III : 335.  
1995. *Dysdercus koenigii*, Sen *et al. Fauna of West Bengal: State Fauna Series 3(V)*:  
*Date of observation*: 03.x.2013; *Locality*: Samrthi rehti Road Village, District: Sehore.  
*Distribution*: India: Assam, Karnataka, Sikkim and West Bengal *Elsewhere*: Pakistan and Sri Lanka.

**Superfamily: Coreoidea**

**Family: Coreidae**

**3.16. *Serinetha abdominalis*** (Fabricius) 1803  
1803. *Serinetha abdominalis* (Fabricius) *Syst. Rhyng.*: 226  
1904. *Serinetha abdominalis* Distant, *Fauna Br. India, Rhynchota* I: 419.  
*Date of observation*: 29.ix.2013; *Locality*: FRH RWLS, District: Sehore.  
*Distribution*: India: Madhya Pradesh, Maharashtra, Assam and West Bengal. *Elsewhere*: Myanmar and Sri Lanka.

**Family: Alydidae**

**3.17. *Riptortus fuscus*** (Fabricius, 1798)  
1798. *Riptortus fuscus* (Fabricius), *Ent. Syst. suppl.*: 539.  
1902. *Riptortus fuscus*, Distant, *Fauna Br. India*, I:414.  
1994. *Riptortus fuscus*, Basu and Mitra, *State Fauna Series 3: Fauna of West Bengal V*: 451.  
*Date of observation*: 03.x.2013; *Locality*: Samrthi rehti Road

Village, District: Sehore.

*Distribution*: India: Madhya Pradesh, Maharashtra, Karnataka and West Bengal. *Elsewhere*: Myanmar, Sri Lanka.

**3.18. *Leptocorisa varicornis*** (Fabricius, 1803)  
1803. *Leptocorisa varicornis* (Fabricius), *Syst. Rhyng.* : 260.  
1902. *Leptocorisa varicornis* Distant, *Fauna Br. India* I: 409.  
*Date of observation*: 02.x.2013; *Locality*: Omkuwala Road Village, District: Sehore.  
*Distribution*: India: Madhya Pradesh, Assam, Kerala, Meghalaya, Nagaland, Sikkim and West Bengal. *Elsewhere*: China, Myanmar.

**Superfamily: Pentatomoidea**

**Family: Pentatomidae**

**3.19. *Antestiopsis cruciata*** (Fabricius, 1775)  
1775. *Antestia cruciata* Fabricius, *Syst. Ent.* : 714  
1902. *Antestia cruciata*, Distant, *Fauna Br. India*, I: 185.  
1995. *Antestia cruciata*, Ghosh *et al.*, *State Fauna Series, 3: Fauna of West Bengal V*: 497.  
*Date of observation*: 30.ix.2013; *Locality*: Budbuda Village, District: Sehore.  
*Distribution*: India: Madhya Pradesh, Maharashtra, Sikkim, Tamil Nadu and West Bengal. *Elsewhere*: Myanmar and Sri Lanka.

**3.20. *Erthesina fullo*** (Thunberg, 1783)  
1783. *Cimex fullo* Thunberg, *Nov. Ins. Spec.* II:42  
1904. *Erthesina fullo*, Distant, *Fauna Brit. India*, I:177  
1998. *Erthesina fullo*, Chakroborty, S.P. & Ghosh, L.K., *State Fauna Series 4: Fauna of Meghalaya, part-IV*:403  
*Date of observation*: 29.ix.2013; *Locality*: FRH RWLS, District: Sehore.  
*Distribution*: India: Madhya Pradesh, Andaman Islands, Andhra Pradesh, Assam, Kerala and West Bengal. *Elsewhere*: Bangladesh, China, Japan and Sri Lanka.

**3.21. *Halys dentatus*** (Fabricius, 1775)  
1775. *Halys dentatus* Fabricius, *Syst. Ent.*:702.  
1904. *Halys dentatus* Fabricius, *Fauna Br. India*, I: 119.  
2010. *Halys dentatus*, Biswas and Bal, *Fauna of Uttarakhand: State Fauna Series XVIII*: 232.  
*Date of observation*: 02.x.2013; *Locality*: Omkuwala Road Village, District: Sehore.  
*Distribution*: India: Madhya Pradesh, Assam, Maharashtra, Sikkim and Uttar Pradesh. *Elsewhere*: Sri Lanka.

**3.22. *Nezara viridula*** Linnaeus, 1758  
1758. *Nezara viridula* (Linnaeus), *Syst. Nat. ed.* X: 444.  
1904. *Nezara viridula* Distant, *Fauna Br. India*, I: 220.  
2010. *Nezara viridula*: Biswas and Bal, *Fauna of Uttarakhand: State Fauna Series 18*: 236.  
*Date of observation*: 30.ix.2013; *Locality*: Budbuda Village, District: Sehore, 29.ix.2013; *Locality*: FRH RWLS, District: Sehore, 02.x.2013; *Locality*: Omkuwala Road Village, District: Sehore.  
*Distribution*: Throughout India.

**3.23. *Plautia fimbriata*** (Fabricius, 1787)  
1787. *Plautia fimbriata* Fabricius, *Mant. Ins.* 295  
1904. *Plautia fimbriata*, Distant, *Fauna Br. India*, I:191  
1989. *Plautia fimbriata* Ghosh, Biswas, Chakaraborty and Sen, *Fauna of Orissa: State Fauna Series I*: 205.

*Date of observation:* 30.ix.2013; *Locality:* Shulka wali Patra Village, District: Sehore.

*Distribution:* India: Madhya Pradesh, Assam, Maharashtra, Nagaland, Orissa, Sikkim, Tamil Nadu and West Bengal.

**3.24. *Eysarcoris ventralis* (Westwood, 1837)**

1837. *Pentatoma ventralis* Westwood, in *Hope cat.*, I:30

1904. *Eysarcoris ventralis* Distant, *Fauna Br. India*, I:167

2010. *Eysarcoris ventralis* Biswas and Bal, *Fauna of Uttarakhand: State Fauna Series* 18: 234.

*Date of observation:* 29.ix.2013; *Locality:* FRH RWLS, District: Sehore.

*Distribution:* Madhya Pradesh, Karnataka, Maharashtra, Bihar and Uttarakhand. *Elsewhere:* Myanmar and Malaya.

**3.25. *Eysarcoris montivagus*, Distant, 1904**

1902. *Eysarcoris montivagus* Distant, *Fauna Brit. India, Rhynchota*, 1: 166.

1999. *Eysarcoris montivagus*: Chakraborty & Ghosh, *Fauna of Meghalaya: State Fauna Series* No. 4: 402.

2002. *Eysarcoris guttiger*: Rider *et al.*, *Zoosyst Rossica*, 2:144.

*Date of observation:* 30.ix.2013; *Locality:* Budbuda Village, District: Sehore.

*Distribution:* Madhya Pradesh, Nagaland and Assam.

**Family: Cydnidae**

**3.26. *Aethus indicus* (Westwood, 1803)**

1803. *Cydnus indicus* Westwood, *Syst. Rhyn.* : 184.

1994. *Cydnus indicus* Chakraborty *et al.*, *State Fauna Series, Fauna of West Bengal*, V: 489.

*Date of observation:* 30.ix.2013; *Locality:* Shulka wali Patra Village, District: Sehore.

*Distribution:* India; Madhya Pradesh, Maharashtra and West Bengal. *Elsewhere:* Australia, South Africa and Southeast Asia.

**Family: Asopinidae**

**3.27. *Amyotea malabaricus* (Fabricius, 1775)**

1775. *Asopus malabaricus* Fabricius, *Syst. Ent.*: 718.

1904. *Asopus malabaricus*, Distant, *Fauna Br. India, Heteroptera*, I: 255

1977. *Amyotea malabarica*: Hsiao *et al.*: *Academia Sinica*:88.

*Date of observation:* 29.ix.2013; *Locality:* FRH RWLS, District: Sehore.

*Distribution:* Assam, Madhya Pradesh, Chhattisgarh, Maharashtra, Karnataka and West Bengal. *Elsewhere:* China, Myanmar and Sri Lanka

**Family: Dinidoridae**

**3.28. *Coridius ianus* (Fabricius, 1775)**

1775. *Aspongopus janus* Fabricius, *Syst. Ent.*: 714.

1902. *Aspongopus janus* Distant, *Fauna Br. India*, I: 281.

1992. *Coridius ianus*: Lis, *Ann. Upper Silesian Mus. Ent.*, III: 38.

*Date of observation:* 02.x.2013; *Locality:* Omkuwala Road Village, District: Sehore.

*Distribution:* India: Madhya Pradesh, Chhattisgarh, Kerala, Uttarakhand, Maharashtra, Karnataka, Tamil Nadu and West Bengal.

*Elsewhere:* Myanmar and Sri Lanka.

**3.29. *Cyclopelta siccifolia* (Westwood, 1837)**

1837. *Cyclopelta siccifolia* Westwood in *Hope cat.* I: 26

1854. *Cyclopelta tartarea*, Stal, *vet.-Ak.Eorh.*: 234

*Date of observation:* 30.ix.2013; *Locality:* Shulka wali Patra Village, District: Sehore.

*Distribution:* Andhra Pradesh, Assam, Madhya Pradesh, Maharashtra, Sikkim, West Bengal, *Elsewhere:* Myanmar and Sri Lanka.

**Family: Scutelleridae**

**3.30. *Poecilocoris interruptus* (Westwood, 1837)**

1837. *Tectocoris interruptus* Westwood., in *Hope Cat.*, I:14

1904. *Poecilocoris interruptus*, Distant *Fauna Brit. India*, I:48

*Date of observation:* 29.ix.2013; *Locality:* FRH RWLS, District: Sehore.

*Distribution:* Himachal Pradesh, Madhya Pradesh, Nagaland, Sikkim and Uttarakhand.

**4. Conclusion**

Bugs mainly occur as a pest on various plants. Hemiptera are usually phytophagous insects cause serious damage to the agricultural crops at the same time some bugs serve as natural enemies of crop pests and they also serve as vectors of plant diseases. So the study of Hemiptera particularly in protected areas is of great importance. Present paper deals with study of 30 species of order Hemiptera. All of them are reported first time from records RWLS, belonging to 13 families of order Hemiptera.

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