



Distribution and Diversity of Hemiptera Fauna of Veerangana Durgavati Wildlife Sanctuary, Damoh, Madhya Pradesh (India)

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ABSTRACT : The present paper is based on a collection of Hemiptera from Veerangana Durgavati Wildlife Sanctuary by different tour party of Zoological Survey of India, Jabalpur. It comprises 24 species distributed among 23 genera over 9 families.

Keywords : Veerangana Durgavati Wildlife Sanctuary, Damoh, Hemiptera and Madhya Pradesh.

INTRODUCTION

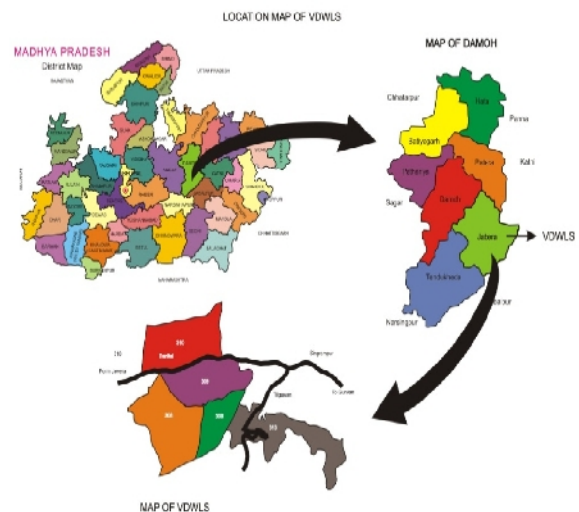
Veerangana Durgavati Wildlife Sanctuary (VDWLS) covering an area of 24 Km² was declared vide Govt. of Madhya Pradesh (Diwedi 2003). The sanctuary is situated on state highway number 36 midway between Jabalpur and Damoh (approximately 50 Km either way) within 23°35' N latitudes and 79°40' and 79°50' E longitudes. The topography of WLS is hilly. The sanctuary presents of mosaic of all kinds of habitat. Some streams have water pool. Ratankund is such important pool. The Sanctuary has a variety of natural assets and wonderful settings of Archeological monuments of Singoragarh. The vegetation of the sanctuary area is mainly tropical mixed dry deciduous forest. The most common species are Bija (*Pterocarpus marsupium*), Saja (*Terminalia alata*), Dhaora (*Anogeisus latifolia*), Mahua (*Madhuca indica*), Palas (*Butea monosperma*) and Lendia, (*Lagerstroemia parviflora*).

Hemipteran insects that are usually called as 'true bugs' are of great economic importance as most of them are pests of various commercial crops. The members of the group show hemimetabolous type of metamorphosis as the nymphal stages having great resemblance in structure with that of adult (Ghosh and Biswas 1995). A detailed account of Hemiptera fauna of central India had been done by Distant (1904a and b). Later on brief account of this order were described by Ghosh and Biswas, 1995, Ramakrishna *et al.* 2006, Chandra 2008 and 2009 respectively.

MATERIAL AND METHODS

During the years 2009-2011, six surveys of VDWLS were undertaken by the scientific team of Zoological Survey of India, Jabalpur. 106 specimens of bugs were collected using light trap and hand picking methods from various localities viz. Giridarshan, Sajtalya, Bhaisaghat, Danital, Tilgua, Sangrampur, Chota Chakkar, Nidankund, Kola-Nala etc., Collection were pinned and identified by with the help of Leica M205-A Stereo zoom microscope. Photographs were taken by Sony DSC-W55 Camera.

STUDY AREA



SYSTEMATIC ACCOUNT

ORDER: HEMIPTERA

INFRAORDER: CICADOMORPHA

SUPERFAMILY: CERCOPOIDEA

FAMILY: CERCOPIDAE

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.

Material examined: Damoh, VDWLS, Sajtaliya, 24.viii.09, (1ex.), Coll. J. Thilak and Party; Bhaisaghat, 8. ix. 10, (1 ex.) Coll. K. Chandra and Party.

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

SUBORDER: HETEROPTERODEA**INFRAORDER: CIMICOMORPHA****SUPERFAMILY: CIMICOIDEA****FAMILY: REDUVIIDAE**2. *Tribelocephala* sp.

Material examined: Damoh, VDWLS, Danital, 25. vi. 2010, (1 ex.), Coll. J. Thilak.

3. *Scadra* sp.

Material examined: Damoh, VDWLS, Giri Darshan, 24. viii. 09, (1 ex.), Coll. J. Thilak.

Distribution: Madhya Pradesh, Assam.

4. *Ectrychotes dispar* Reuter, 1881

1881. *Ectrychotes dispar* Reuter, *Act. Soc. Sc. Fenn.*, 12: 304.

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

Material examined: Damoh, VDWLS, Tiqua Petrol, 28. vi. 2010, (4 ex.), Coll. J. Thilak; Danital, 27. vi. 10; (1 ex.) Coll. J. Thilak; Bhaisa Ghat, 26. vi. 10, (1 ex.) Coll. J. Thilak.

Distribution: India; Madhya Pradesh, Andhra Pradesh, Maharashtra and West Bengal.

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* 5: 336.

Material examined: Damoh, VDWLS, Bada Chakkar, 11. iii. 11; (1 ex) Coll. D.K. Harshey and Party.

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

INFRAORDER: PENTATOMORPHA**SUPERFAMILY: LYGAEOIDEA****FAMILY: LYGAEIDAE**6. *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.

Material examined: Damoh, VDWLS, Singorhgarh, 21. xi. 09, (1 ex.) Coll. J. Thilak.

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

7. *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.

Material examined: Damoh, VDWLS, Danital, 27. vi. 10, (1 ex) Coll. J. Thilak; Giri Darsan, 13. iii. 11, (1 ex), Coll. D.K. Harshey and Party.

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

8. *Metochus uniguttatus* (Thunberg), 1822

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

1902. *Dieuches uniguttatus* Distant, *Fauna Br. India, Heteroptera*, 2: 82-83.

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

Material examined: Damoh, VDWLS, Giri Darsan, 13. iii. 11, (1 ex) Coll. D. K. Harshey and Party.

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

SUPERFAMILY: PYRRHOCOROIDEA**FAMILY: PHYRRHOCORIDAE**9. *Physopelta gutta* (Burmeister), 1834

1834. *Lygaeus (pyrrhocoris) gutta* Burmeister, *Nova Acta Acad. Leop. Carol.* XVI, suppl., 424 Pl. XLI, Fig. 10.

1902. *Physopelta gutta*: Distant *Fauna Brit India II*: 97.

1927. *Physopelta gutta*: Tacuber, *konowia* VI: 174.

Material examined: Damoh, VDLS, Grih Darshan, 13. iii. 11, (1 ex.) Coll. D.K. Harshey and Party.

Distribution: India: Madhya Pradesh, Assam and West Bengal. *Elsewhere:* Australia, Borneo, Burma, Ceylon, China, Japan, Java, Philippines and Sumatra.

10. *Dysdercus koenigii* (Fabricius), 1775

1775. *Dysdercus cingulatus* Fabricius, *Syst. Ent.* : 719.

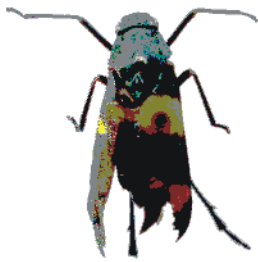
1902. *Dysdercus cingulatus* Distant, *Fauna Br. India*, II: 118.

1914. *Dysdercus koenigii* Bergroth, *Ent. Mitt.* III : 335.

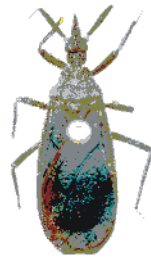
1995. *Dysdercus koenigii*: Sen *et al.* *Fauna of West Bengal: State Fauna Series* 3(5).

Material examined: Damoh, VDLS, Grih Darsan, 13. iii. 11, (1 ex.), Coll. D.K. Harshey and Party; Damoh, VDLS, FRH, 18. xi. 09, (1 ex), Coll. J. Thilak.

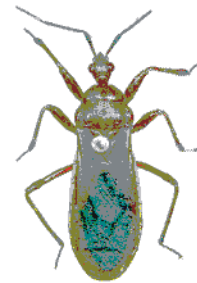
Distribution: India: Assam, Karnataka, Sikkim and West Bengal *Elsewhere:* Pakistan, Sri Lanka.



Calitettix Varsicolor (Fabricius)



Tribelocephala Sp.



Calitettix Varsicolor (Fabricius)



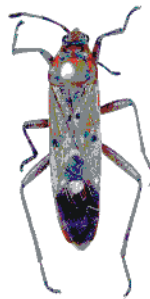
Ectrychotes Disper Reuter



Polididius Armatissimus Stal



Spilostethus Hospes (Fabricius)



Spilostethus Pandurus
Militaris (Fabricius)



Metochus Uniguttatus
(Thunberg)



Physopelta Gutta Burmeister



Dysdercus Koenigii (Fabricius)



Antilochus Coqueberti
(Fabricius)



Notobitus Melagrius
(Fabricius)



Calitettix Varsicolor (Fabricius)



Tribelocephala Sp.



Calitettix Varsicolor (Fabricius)



Ectrychotes Disper Reuter



Poldidius Armatissimus Stal



Spilostethus Hospes (Fabricius)



Liptocorisa Varicornis (Fabricius)



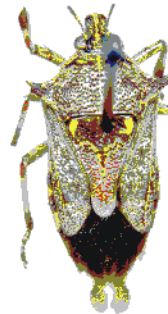
Riptortus Fiscus (Fabricius)



Antestia Cruciata Fabricius



Bagrada Picta Fabricius



Canthecous Frucellala Wolff



Erthesina Fullo (Thunberg)

11. *Antilochus coqueberti* (Fabricius), 1803.
1803. *Antilochus coqueberti* Fabricius, *Syst. Rhyng.*: 222.
1902. *Antilochus coqueberti* Fabricius, *Fauna Br. India, II*: 101.
1995. *Dysdercus koenigii*: Sen *et al. Fauna of West Bengal: State Fauna Series* 3(5).
Material examined: Damoh, VDLS, Sangrampur, 23. vi. 09 (1 ex.) and 26. vi. 09, (1 ex.) Coll. J. Thilak.
Distribution: India: Madhya Pradesh, Kashmir, Assam, West Bengal and Andhra Pradesh. *Elsewhere*: Sri Lanka and Myanmar.
- SUPERFAMILY: COREOIDEA**
- FAMILY: COREIDAE**
12. *Notobitus meleagris* (Fabricius), 1787.
1787. *Cimex meleagris* Fabricius, *Mant.*, II : 297
1995. *Notobitus meleagris*: Basu and Mitra: *Fauna of West Bengal, State Fauna series*, 3: 459. Zoological survey of India.
Material examined: Damoh, VDLS, Ranital, 1. xi. 11, (1 ex) Coll. S. Sambath and party.
Distribution: India: Madhya Pradesh, Maharashtra and Meghalaya. *Elsewhere*: Burma, China.
- FAMILY: ALYDIDAE**
13. *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: 451.
Material examined: Damoh, VDLS, Sajtaliya, 24. viii. 09, (1 ex.), Coll. J. Thilak and party.
Distribution: India: Madhya Pradesh, Maharashtra, Karnataka and West Bengal. *Elsewhere*: Myanmar, Sri Lanka.
14. *Leptocorisa varicornis* (Fabricius), 1803.
1803. *Leptocorisa varicornis* Fabricius, *Syst. Rhyng.*: 260.
1902. *Leptocorisa varicornis* Distant, *Fauna Br. India* I: 409.
Material examined: Damoh, VDLS, Nazara Point, 5. xi. 11, (1 ex.) Coll. S. Sambath and Party.
Distribution: India: Madhya Pradesh, Assam, Kerala, Meghalaya, Nagaland, Sikkim and West Bengal. *Elsewhere*: China, Myanmar.
- SUPERFAMILY: PENTATOMOIDEA**
- FAMILY: PENTATOMIDAE**
15. *Antestia 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: 497.
Material examined: Damoh, VDLS, FRH Sangrampur, 10. iii. 11, (1 ex.) Coll. D.K. Harshey and Party; Nidankund, 14. iii. 11, (2 ex.) Coll. D.K. Harshey and Party; Chota Chakkar, 13. iii. 11, (1 ex.), Coll. D.K. Harshey and Party; FRH 23. vi. 09, (1 ex.), Coll. J. Thilak and Party.
Distribution: India: Madhya Pradesh, Maharashtra, Nilgiri hills, Sikkim and West Bengal. *Elsewhere*: Myanmar, Sri Lanka.
16. *Bagrada picta* (Fabricius), 1775.
1775. *Bagrada picta* Fabricius, *Syst. Ent.* : 715.
1902. *Bagrada picta* Distant, *Fauna Br. India, I*: 193.
Material examined: Damoh, VDLS, Nidankund, 14. iii. 11, (1 ex.), Coll. D.K. Harshey and Party.
Distribution: India: Madhya Pradesh, Maharashtra and West Bengal. *Elsewhere*: Sri Lanka.
17. *Canthecona furcellata* Wolff, 1851.
1851. *Canthecona furcellata* Wolf, *Dall. List. Hem.* 1: 91.
1904. *Canthecona furcellata* Distant, *Fauna. Brit. India, I*: 248.
2010. *Canthecona furcellata*: Biswas and Bal, *Fauna of Uttarakhand: State Fauna Series* 18: 237.
Material examined: Damoh, VDLS, Grih Darsan, 12. vi. 11, (1 ex.), Coll. D.K. Harshey and Party.
Distribution: India: Madhya Pradesh, Jharkhand, Maharashtra, Tamil Nadu and West Bengal. *Elsewhere*: Sri Lanka, Myanmar.
18. *Erthesina fullo* (Thunberg), 1783.
1783. *Cimex fullo* Thunberg, *Nov. Ins. Spec.*: 2:42.
1904. *Erthesina fullo* Distant, *Fauna Brit. India, I*: 177.
1998. *Erthesina fullo* Chakraborty, S.P. and Ghosh, L.K., *State Fauna Series* 4: Fauna of Meghalaya part-4: 403.
Material examined: Damoh, VDLS, Grih Darsan, 13. vi. 11, (1 ex.), Coll. D. K. Harshey and Party.
Distribution: India: Madhya Pradesh, Andaman Islands, Andhra Pradesh, Assam, Kerala and West Bengal. *Elsewhere*: Bangladesh, China, Japan and Sri Lanka.
19. *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* 18: 232.

Material examined: Damoh, VDLS, Kola Nala 25. vi. 10, (2 ex.), Coll. J. Thilak; Sangrampur, 24. vi. 10, (1 ex.), Coll. J. Thilak.

Distribution: India; Madhya Pradesh, Assam, Maharashtra, Sikkim and Uttar Pradesh. *Elsewhere:* Sri Lanka.

20. *Nezara viridula* (Linnaeus) 1758.

1758. *Nezara viridula* Linnaeus, *Syst. Nat. ed.* 10 : 444.

1904. *Nezara viridula* Distant, *Fauna Br. India, I:* 220.

2010. *Nezara viridula:* Biswas and Bal, *Fauna of Uttarakhand: State Fauna Series* 18: 236.

Material examined: Damoh; VDLS, FRH Sangrampur, 10. iii. 11 (1 ex.), Coll. D.K. Harshey and Party.

Distribution: Throughout India.

21. *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* 1: 205.

Material examined: Damoh, VDLS, FRH, 10. iii. 2011, (1 ex.), Coll. D.K. Harshey and Party.

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

22. *Degonetus serratus* (Distant), 1904.

1887. *Abeona serratus* Distant, *Tr. E.S.:* 350.

2010. *Degonetus serratus* Biswas and Bal, *State Fauna Series, 18: Fauna of Uttarakhand, part-2:* 335.

Material examined: Damoh, VDLS, Danital, 3. iii. 11, (1 ex.), Coll. S. Sambath and Party.

Distribution: India: Madhya Pradesh, Maharashtra and Uttarakhand.

FAMILY: CYDNIDAE

23. *Cydnus indicus* Westwood, 1803.

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

1994. *Cydnus indicus* Chakaraborty *et al.*, *State Fauna Series, Fauna of West Bengal, 5:* 489.

Material examined: Damoh, VDLS, Nidankund, 14. iii. 11, (1 ex.), Coll. D.K. Harshey and Party.

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

FAMILY: DINIDORIDAE

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

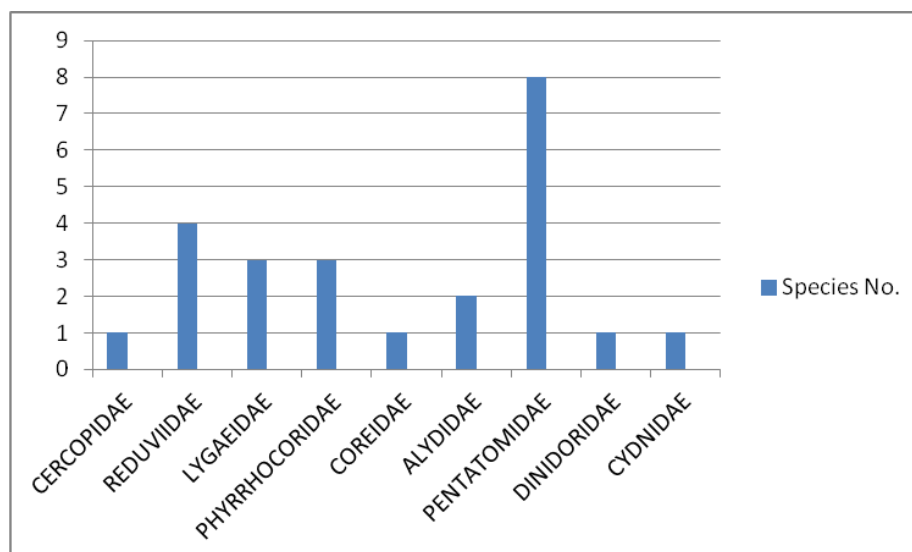
1775. *Aspongopus janus* Fabricius, *Syst. Ent.:* 714.

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

1992. *Coridius ianus:* Lis, *Ann. Upper Silesian Mus. Ent., 3:* 38.

Material examined: Damoh, VDLS, Giridarshan, 24. viii. 09, (1 ex.), Coll. J. Thilak.

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



RESULTS AND DISCUSSION

The present paper deals with an account of Hemipteran bugs of Veerangana Durgavati Wildlife Sanctuary Madhya Pradesh. Total 136 specimens are collected in which 24 species under 23 genera were identified under 9 families. Suborder Homoptera is represented by 1 species and sub order Heteroptera is represented by 23 species under 22 genera of 8 families. All species are new record from VDLS Madhya Pradesh, among them *Physopelta gutta* (Burmeister) and *Plautia fimbriata* Fabricius are new addition to the fauna of Madhya Pradesh.

ACKNOWLEDGEMENT

Graph showing Specie distribution among different families of order Hemiptera In VDLS Damoh

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