

## GROUND BUGS (HEMIPTERA: LYGAEIDAE) OF MADHYA PRADESH, WITH THEIR DISTRIBUTION IN INDIA

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**ABSTRACT:** The present investigation deals with the study of family Lygaeidae of Madhya Pradesh, which includes 18 species belonging to 13 genera representing five subfamilies. Of these, 11 species are new records from Madhya Pradesh.

**KEY WORDS:** Lygaeidae, New record, Madhya Pradesh.

Most species the family Lygaeidae are known as seed bugs and are usually brown to red colour. Members are characterized by the hard, elongated body ranging from 4 to 20 millimeters in length. The forewing's front section is slightly sclerotized and the back section membranous and hind wings always membranous. They are well-known pest species occurring in many parts of the country. These small bugs grow to less than 4 millimeters in length but can build up in such numbers that they cause serious damage to fruit and vegetable crops. They are cosmopolitan in distribution, they usually occur on moist surface, beneath stone or plants.

There is mention of family Lygaeidae from Central India by Distant (1902, 1910 and 1918). Earlier Ramakrishna et al. (2006) reported six species from various protected of Madhya Pradesh and Chhattisgarh. Chandra (2008 and 2009) four species and two species from Jabalpur and Pachmarhi Biosphere Reserve respectively. Chandra et al. (2010, 2011, 2012a, 2012) reported Lygaeidae from various localities. Chandra & Kushwaha (2012, 2013) further reported two species and four species respectively from Madhya Pradesh. Altogether six species of Lygaeidae are reported so far from Madhya Pradesh.

About 4000 species under 500 genera are known from globally (Schuh & Slater) and 250 species belonging to 100 genera was known from the India (Ghosh, 2008). The present investigation focused predominantly on Lygaeidae of Madhya Pradesh. The unidentified collection of family Lygaeidae present was worked out, which revealed the identification of 18 species belonging to 13 genera representing five subfamilies. Of these, eleven species are new addition to the fauna of state of Madhya Pradesh.

### TAXONOMIC ACCOUNT

ORDER: HEMIPTERA  
SUBORDER: HETEROPTEROIDEA  
INFRAORDER: PENTATOMORPHA  
SUPERFAMILY: LYGAEOIDEA  
FAMILY: LYGAEIDAE  
SUBFAMILY: RHYPAROCHROMINAE  
TRIBE: PLINTHISINI

***Metochus uniguttatus* (Thunberg, 1822)**

*Material examined:* SWLS, Bamhori R.H., 31.iii.2011(1 ex), Coll. S. Sambath & Party; Jabalpur, ZSI office, 1.ix.1970(1ex), Coll. H. Khajuria; Hoshangabad, Paraspani, 26.xii.1964(1ex), Coll. H. Khajuria; Damoh, VDWSL, Giri Darsan, 13.iii.2011(1 ex), Coll. D. K. Harshey & Party.

*Distribution:* India: Madhya Pradesh (Jabalpur, Raisen, Damoh and Hoshangabad) (Chandra, 2008), Assam, Karnataka, Maharashtra, Meghalaya, Andaman Islands and West Bengal. *Elsewhere:* Myanmar, China and Sri Lanka.

**\**Metochus (Dieuches) femoralis* Dohrn, 1860**

*Material examined:* Bhind Bus Stand, 28.vi.2011 (1 ex.), Coll. Sandeep and Devanshu.

*Distribution:* India: Madhya Pradesh (Bhind), Uttarakhand, Assam, Kashmir, Nagaland, Sikkim, West Bengal (Saha & Bal, 2010). *Elsewhere:* Myanmar and Sri Lanka.

**\**Paromius pallidus* Montrousier, 1865**

*Material examined:* Sidhi, Mohania, 25.vii. 1999 (1 ex.), Coll. K.Chandra.

*Distribution:* India: Madhya Pradesh (Sidhi), West Bengal and Chhattisgarh (Ramakrishna et al., 2006). *Elsewhere:* Australia.

***Elasmolomus sordidus* (Fabricius, 1787)**

*Material examined:* SWLS, Kartholi, 25.ii.10 (1ex.), Coll. J. Thilak & Party; Jabalpur, ZSI office, 1.ix.1970 (4 ex), Coll. H. Khajuria.

*Distribution:* India: Madhya Pradesh (Raisen and Jabalpur) (Chandra & Kushwaha, 2013), Delhi, Uttarakhand, Bihar, Maharashtra, Andaman Islands Meghalaya, Nagaland and West Bengal. *Elsewhere:* Myanmar, Guiana, Sri Lanka and China.

**\**Stigmatonotum minutum* Malipatil, 1778**

*Material examined:* Gwalior, Gol Pahariya, 23.iv.2011(1 ex.), Coll. Sandeep and Devanshu; Jabalpur, Vijay Nagar, 13.vii.2009 ( 4 exs.), Coll. Rajesh; Raisen, SWLS, Kartholi, 25.ii.10 (1 ex.), Coll. J. Thilak & Party.

*Distribution:* India; Madhya Pradesh (Gwalior, Raisen and Jabalpur), West Bengal and Chhattisgarh (Ghosh & Biswas, 1995). *Elsewhere:* Australia.

**\**Paromius pallidus* Montrousier, 1865**

*Material examined:* Raisen, SWLS, Bhagedi, 9.xii.2010 (1 ex.), Coll. S. S. Talmale and Party; Hoshangabad, PBR, Paras Pani, 25.x.2002 (4 exs.), Coll. Y. N. Gupta.

*Distribution:* India; Madhya Pradesh (Raisen and Hoshangabad), Chhattisgarh and West Bengal (Ghosh & Biswas, 1995). *Elsewhere:* Australia.

**\**Paraecosmetus (Pamera) pallicornis* (Dallas, 1852)**

*Material examined:* Jabalpur, ZSI, Office, 1.iv.1970 (1 ex.), Coll. Y. N. Gupta.

*Distribution:* India: Madhya Pradesh (Jabalpur), Meghalaya and West Bengal (Chakrabarty & Ghosh, 1994). *Elsewhere:* Sri Lanka, Myanmar and Japan.

**\**Paraecosmetus (Eucosmetus) insignis* (Distant, 1901)**

*Material examined:* Chhindiwada, PTR, Totladoh, 1.iv.1970 (1ex.), Coll. H.K. Khajuriya.

*Distribution:* India; Madhya Pradesh (Chhindwada), Assam and West Bengal (Chakrabarty & Ghosh, 1994). *Elsewhere:* Australia.

***Pseudopachybrachius (Rhyparochromus) guttus* (Dallas, 1852)**

*Material examined:* Chhindwada, PTR, Totladoh, 17.viii. 2001 (1 ex.), Coll. Y. N. Gupta.

*Distribution:* India; Madhya Pradesh (Chhindwara), Bihar and West Bengal (Chakrabarty & Ghosh, 1994). *Elsewhere:* Myanmar and South Africa.

SUBFAMILY : LYGAEINAE

TRIBE: LYGAEINI

***Spilostethus hospes* (Fabricius, 1794)**

*Material examined:* Raisen, SWLS, Purulia, 24.xi.11 (1 ex.), Coll. S. Sambath; Damoh, VDWSL, Singorhgarh, 21.xi.09 ( 1ex.), Coll. J. Thilak & party; Jabalpur, ZSI Vijay Nagar Colony, (1 ex), 8.xii.2012 (1 ex.), Coll. Sandeep Kushwaha.

*Distribution:* India: Madhya Pradesh (Raisen, Damoh and Jabalpur), Maharashtra, Orissa, Tamil Nadu and West Bengal (Ghosh, 2008) and (Chandra et al., 2011). *Elsewhere:* Australia, China, Malayan Archipelago, Pakistan, Sri Lanka and New Caledonia.

***Spilostethus pandurus militaris* (Fabricius, 1775)**

*Material examined:* Raisen, SWLS, Purulia, 24.xi.11, (3 exs.) Coll. S. Sambath; Jabalpur, ZSI Vijay Nagar Colony, 27.vi.2010 (1ex.), Coll. Rajesh; Damoh, VDWLS, Danital, 18.vi.2009 (1ex.), Coll. J. Thilak.

*Distribution:* India: Madhya Pradesh (Damoh, Jabalpur and Raisen) (Ramakrishna et al., 2006), (Chandra et al., 2011, 2012) and (Chandra & Kushwaha, 2013). Karnataka, Maharashtra, Orissa, Punjab, Uttar Pradesh, and West Bengal. *Elsewhere:* Australia, Pakistan.

**\**Spilostethus simla* (Distant, 1909)**

*Material examined:* Seoni, PTR, Dudhiya, 8.xi.2002 (1ex.), Coll. M. L. Khosta.

*Distribution:* India; Madhya Pradesh (Seoni), Himachal Pradesh and Punjab (Ghosh et al., 2005). *Elsewhere:* Australia.

***Graptostethus servus* Fabricius, 1868**

*Material examined:* Jabalpur, Katanga Colony, 26.x.1998 (2 exs.), Coll. K. Chandra; Dhar, Sardarpur, 27.ii.1999 (1ex.), Coll. K. Chandra; Hoshangabad, PBR, 5.vi.1999 (1ex.), Coll. K. Chandra.

*Distribution:* India; Madhya Pradesh (Jabalpur, Dhar and Hoshangabad), Delhi, Uttarakhand, Kerala, Maharashtra, Meghalaya and West Bengal (Chandra, 2008). *Elsewhere:* Australia, Myanmar, China, South Africa and Sri Lanka.

**\**Consivius collinus* Distant 1909**

*Material examined:* Jabalpur, ZSI Residential colony, 14.x.2008 (8 exs.), Coll. Rajesh.

*Distribution:* India; Madhya Pradesh (Jabalpur), Himachal Pradesh (Distant, 1910) and Jammu & Kashmir.

## SUBFAMILY: GEOCORINAE

## TRIBE: GEOCORINI

***Geocoris tricolor* Fabricius, 1798**

*Material examined:* Jabalpur, Medical college, 13.ix.1966, (3 exs.), Coll. H. P. Agarawal; Jabalpur, Sehora, Hiran river, 5.viii.1966 (1ex.), Coll. V.V. Rao.

*Distribution:* India: Madhya Pradesh (Jabalpur), Andhra Pradesh, Maharashtra, Karnataka and West Bengal (Chandra, 2008). *Elsewhere:* Myanmar and Sri Lanka.

## SUBFAMILY: ORSILLINAE

## TRIBE: ORSILLINI

**\**Nysius ceylanicus* Motschulsky, 1863**

*Material examined:* Jabalpur, Vijay Nagar, 16.viii.2012 (1ex.), Coll. Rajesh; Bhopal, BWLS, Kolukheddi (1ex.), 18.vi.2006, Coll. Dr. J. Thilak & Party.

*Distribution:* India; Madhya Pradesh (Jabalpur), Sikkim, Jharkhand (Ramakrishna et al., 2006). *Elsewhere:* Sri Lanka and Australia.

**\**Nysius lacustrinus* Distant, 1909**

*Material examined:* Chhindwara, PTR, Parasia, 25.x.2002 (1ex.), Coll. Y. N. Gupta.

*Distribution:* India; Madhya Pradesh (Chhindwara), Uttarakhand, Delhi, Haryana and Himachal Pradesh (Ramakrishna et al., 2006). *Elsewhere:* United Kingdom.

## SUBFAMILY: PACHYGRONTHINAE

## TRIBE: PACHYGRONTHINI

**\**Pachygrontha bipunctata* Stål, 1865**

*Material examined:* Jabalpur, Napier Town, 05.v.2002 (1 ex.), Coll. K. Chandra.

*Distribution:* India; Madhya Pradesh (Jabalpur), West Bengal and Chhattisgarh (Ramakrishna et al., 2006). *Elsewhere:* Australia, Namibia, Senegal, Sri Lanka and Japan, United Kingdom.

**Abbreviation used:** PTR- Pench Tiger Reserve; PBR- Pachmarhi Biosphere Reserve; SWLS- Singhori Wildlife Sanctuary; VDWLS- Veerangana Durgavati Wildlife Sanctuary; BWLS Bhoj Wet Land Sanctuary; ZSI- Zoological Survey of India; \* - New record to state.

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PLATE 1



*Spilostethus hospes* (Fabricius, 1794)



*Spilostethus pandurus militaris* (Fabricius, 1775)



*Spilostethus simla* (Distant, 1909)



*Graptostethus servus* Fabricius, 1868



*Cousinivus collinus* Distant 1909



*Elasmolomus sordidus* (Fabricius, 1787)

PLATE 2



*Geocoris tricolor* Fabricius, 1798



*Pseudopachybrachius (Rhyparochromus) guttas* (Dallas, 1852)



*Metochus (Dieuches) femoralis* Dohrn, 1860



*Metochus uniguttatus* (Thunberg, 1822)



*Paracuosmetus (Pamera) pallicornis* (Dallas, 1852)