



## DERMAPTERA FAUNA OF CHHATTISGARH WITH SOME NEW RECORDS

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### INTRODUCTION

Chhattisgarh state is located in the central part of India surrounded by 05 states, viz; Jharkhand, Madhya Pradesh, Maharashtra, Odisha and Andhra Pradesh and occupying an area of about 1,35,000 sq. k. m. A perusal of literature reveals that 103 species of different groups of insects are reported from Chhattisgarh (Ramakrishna *et al.*, 2006). Recent reference (Srivastava, 2014) on Dermaptera of Achanakmar Amarkantak Biosphere Reserve of Chhattisgarh state reveals the record of 05 species only. Hence, an attempt has been made to explore the Dermaptera fauna of this state by studying the collections made during the recent surveys conducted by different survey parties of the Zoological Survey of India.

### METHODOLOGY

The present paper is based on the field work carried out mainly in 09 districts of Chhattisgarh state viz; Raipur, Dhamtari, Durg, Kabirdham, Sarguja, Koriya, Korba, Raigarh and Jagdalpur. The materials collected are sorted out, set- pinned, identified and classified. The identification is mainly based on the differences in the morphological characters and the structure of the male genitalia. The species records, other than India, are also included in the distribution. All the identified collection is deposited in National Zoological Collection of Zoological Survey of India, Kolkata.

### Check List of Dermaptera from Chhattisgarh

\*\*\* Species Reported Earlier

\*\* Species Reported First Time from the Area

Superfamily PYGIDICRANOIDEA

Family PYGIDICRANIDAE

Subfamily DIPLATYINAE

Genus *Haplodiplatys* Hincks, 1955

Species: \*\*1. *H. rufescens* (Kirby, 1886)

Superfamily ANISOLABOIDEA

Family ANISOLABIDIDAE

Subfamily ANISOLABIDINAE

Genus *Euborellia* Burr, 1910

Species : \*\*2. *E. annulipes* (Lucas, 1847)

Species \*\*\*3. *Euborellia femoralis*  
(Dohrn, 1863)

Subfamily NALINAE

Genus *Nala* Zacher, 1910

Species:\*\*\*4. *N. lividipes* (Dufour, 1820)

Family LABIDURIDAE

Subfamily LABIDURINAE

Genus *Labidura* Leach, 1815

Species:\*\*\* 5. *L. riparia* (Pallas, 1773)

Genus *Forcipula* Bolivar, 1897

Species\*\*\*6. *F. quadrispinosa* (Dohrn, 1863)

Superfamily FORFICULOIDEA

Family CHELISOCHIDAE

Subfamily CHELISOCHINAE

Genus *Proreus* Burr, 1907

Species: \*\*7. *P. decipiens* (Kirby, 1891)

Family FORFICULIDAE

Subfamily OPISTHOCOSMIINAE

Genus *Hypergus* Burr, 1907

Species \*\*\*8. *H. humeralis* (Kirby, 1891)

Subfamily FORFICULINAE

Genus *Elaunon* Burr, 1907

Species \*\*9. *E. bipartitus* (Kirby, 1891)

1. *Haplodiplatys rufescens* (Kirby, 1886)

1886. *Cylindrogaster rufescens* Kirby, *J. Linn. Soc. (Zool.)*, **25**: 524, pl. 20, fig. 2 (♂ not ♀; North India).

1904. *Diplatys rufescens*; Kirby, *Syn. Cat. Orth.*, **1**: 2.

1910. *Diplatys falcatus* Burr, *Fauna Brit. India Dermaptera*: 40, 42 (partim), fig. 3A, pl. 1, fig. 4.

1974. *Haplodiplatys rufescens*; Steinmann, *Acta. zool. Acad. Sci. Hung.*, **20**(1-2): 203, fig. 84.

*Material examined*: 1 ♂, Chhattigarh, Raipur, Barnawapara WLS, Dulli Bahal forest, 06.viii.2012, S. Gupta and party.

*Distribution*: INDIA: All along the Himalayas, West Bengal and Chhattisgarh (Raipur). *Elsewhere*: Nepal and Bhutan.

2. *Euborellia annulipes* (Lucas, 1847)

1847. *Forficesila annulipes* Lucas, *Annals. Soc. Ent. Fr.*, (2) **5**: 84 (Type ♀; France).

1853. *Forficula (Labidura) annulipes*; Fischer, *Orthoptera Europa, Leipzig*, **69**, pl. 6, figs. 6a-c.

1863. *Anisolabis annulipes*; Fuentes, *Boln. Mus. nac. Chile*, **7**: 313.

1915. *Euborellia annulipes*; Burr, *J. R. micr. Soc.*, **1915**: 527, 528 and 545.

1936. *Anisolabis (Euborellia) annulipes*; Bey-Bienko, *Fauna de L'URSS, Dermaptera*: 218.

*Material examined*: 1 ♂, Chhattigarh, Surguja, Tamorpingla WLS, Tara rest house, 19.xi.2011, A. Raha and party.

*Distribution*: INDIA: Uttarakhand, West Bengal, Himachal Pradesh, Bihar, Manipur, Tripura, Mizoram, Gujarat, Arunachal Pradesh, Punjab, Rajasthan, Andaman Islands, Assam, Madhya Pradesh, Maharashtra, Odisha, Meghalaya, Tamil Nadu, Chhattisgarh (Surguja) and Uttar Pradesh. *Elsewhere*: Nepal, Bhutan, Bangladesh, Myanmar, Pakistan, Sri Lanka and China.

3. *Euborellia femoralis* (Dohrn, 1863)

1863. *Labidura femoralis* Dohrn, *Stettin. Ent. Ztg.*, **24**: 321 (♀; Ceylon); Scudder, 1876, *Proc. Boston Soc. Nat. Hist.*, **18**: 552 (nec Dubrony).

1915. *Landex femoralis*: Burr, *J. R. micr. Soc.*, **1915**: 446 (partim).

1954. *Euborellia femoralis*: Hincks, *Verh. Naturf. Ges. Basel*, **65**(1): 11, fig. 2 (♂ genitalia).

*Material examined*: 1 ♂, Chhattigarh, Raipur, Barnawapara WLS, Barnawapara camp, 4.iv.2012, 1 female, 14.vi.2012, 1 ♂, Marer forest, 27.vii.2012, 1 ♀, Dullibahal forest, 6.viii.2012, 1 ♂, Dhamtari, Sitanadi WLS, Bhiragaon, 18.x.2012, S. Gupta & party; 1 ♂ Raipur, Barnawapara WLS, 26.ix.2011, Sunil & party.

*Distribution*: INDIA: Arunachal Pradesh, Odisha, Madhya Pradesh, Uttar Pradesh, Tamil Nadu and Chhattisgarh (Raipur, Dhamtari). *Elsewhere*: Sri Lanka, Myanmar, Malaya, Sumatra, Sumba, China and Java.

4. *Nala lividipes* (Dufour, 1829)

1820. *Forficula pallipes* Dufour, *Ann. Gener. des. Phys. de Bruxelles*, **4**: 316, pl. 116, figs. 7, 7a & 7b (♂, ♀; Lower Catalonia, Spain-Location of Type unknown).

1900. *Labidura lividipes*: Bormans and Krauss, *Das Tierreich*, **11**: 36.

1911. *Nala lividipes*: Burr, *Genera Insect.*, **122**: 36.

1829. *Forficula lividipes*, Dufour, *Annl. Sci. Nat.*, **340** (new name proposed).

*Material examined*: 1 ♂ Koriya, GGNP. Kotadol forest, 12.v.2013, 2 ♂ ♂ Kotadol rest house, 10.v.2013, 1 ♂ Kamarjee, Bagridarur 22.ix.2013, A. Raha and party. 2 ♂ ♂ Durg, Gudardehi, 3.i.2013, 1 ♂ Tallpuri, Bhilai, 1.x.2012, 1 ♂ Madiapar, 31.xii.2012, 1 ♂ Balod, 27.xii.2012, 1 ♂ Khuteri, 30.xii.2012, Baratiya Nala, 12.ii.2012, S. Gupta & party. 3 ♂ ♂, Raipur, Barnawapara WLS, Barnawapara camp, 21.v.2013; 1 ♂ Thad ghat 12.ii.2012, 2 ♂ ♂ Domarpani 8.ii.2012, 1 ♂ Aamagaon 25.v.2013, 1 ♂, Dheba, 19.viii.2012, 2 ♂ ♂, Balamdehi river, 20.v.2013, 1 ♂, Mahada, 14.vi.2012, 2 ♂ ♂, Hardipathar, 23.v.2013, 1 ♂, Bar village, 28.v.2013, coll. S. Gupta and party. 1 ♂, 1 ♀, Bar village, 14.vii.2011, 3 ♂ ♂, 2 ♀ ♀, Bar village, 5.vii.2011, 1 ♂, Barnawapara, 10.ix.2011, 1 ♂, 1 ♀, 18.vii.2011, 1 ♂, 24.vii.2011, 4 ♂ ♂, 2 ♀ ♀, 20.vii.2011, 1 ♂, 1 ♀, Lalband nala, 15.vii.2011,

1 ♀, Barnawapara camp, 4.viii.2011, 2 ♂♂, 2 ♀♀, Charida village, 19.viii.2011, 4 ♂♂, 4 ♀♀, Barnawapara camp, 8.viii.2011, 1 ♂, Tartura forest, 24.vii.2011, 2 ♂♂, 1 ♀, Navapara village, 28.vii.2011, 2 ♂♂, 1 ♀, Barnawapara camp, 14.viii.2011, 2 ♀♀, 6.vii.2011, 2 ♀♀, 15.viii.2011, 1 ♂, 3 ♀♀, 10.viii.2011, 1 ♂, 2 ♀♀, 17.vii.2011, 6 ♂♂, 2 ♀♀, 23.vii.2011, 3 ♀♀, 15.vii.2011, 3 ♂♂, 2 ♀♀, 19.vii.2011, 1 ♂, 2 ♀♀, 9.viii.2011, Sunil Kumar and party. 1 ♂, 7 ♀♀, Raipur rest house, 3.vii.2011, K. Chandra and party. 1 ♂, Dhamtari, Sitanadi WLS, Panchpedi nahar, 20.x.2012, 1 ♂ Sankra rest house, 14.x.2011, 2 ♂♂, 22.x.2011, 1 ♂, 12.x.2011, 1 ♂, Barailli, 25.x. 2012, 2 ♂♂, Mechoka, 22.x.2012, 1 ♂, Sheleybhat village, 21.x.2011, 1 ♂, Nawapara, 30.v.2013, S. Gupta and party. 4 ♂♂, Korba, Lemru water fall, 26.ix.2013, 2 ♂♂, Lalpur, Saroda dam, 22.ix.2012, 3 ♀♀, Bhoramdeo WLS, Ragraghat watch tower, 29.ix.2013, 1 ♂, Sakari river, 30.ix.2013, A. Raha and party. 1 ♂, Kabirdham, Chilpi R.H., 28.viii.2011, Sunil and party.

*Distribution:* INDIA: Throughout the country including Chhattisgarh. *Elsewhere:* Worldwide.

##### 5. *Labidura riparia* (Pallas, 1773)

1773. *Forficula riparia* Pallas, *Reise Russ. Reichs*, 2: 727 (Sex ?; Shores of Irtysh River, Western Siberia Location of type unknown).

1863. *Labidura riparia*; Dohrn, *Stettin. Ent. Ztg.*, 24: 313

*Material examined:* 1 ♂, Raipur, Barnawapara WLS, Barnawapara camp. 15.vi.2012; 3 ♀♀, 19.vi.2013; 3 ♂♂, 2 ♀♀, 15.vi.2013; 1 ♂, 17.v.2013; 1 ♂, 06.x.2011; 1 ♀, 13.vi.2012; 1 ♂, 26.iii.2012; 1 ♂, 15.vi.2012 and 1 ♂, 3 ♀♀, Balamdehi river, 15.vi.2013; 1 ♀, Baratiya nala, 15.vi.2013; 1 ♂, Valmiki ashram, 01.vi.2013; 1 ♀, Bar village, 21.i.2013; 2 ♂♂, Parasapani, 16.v.2013; 1 ♀, Dhamtari, Sitanadi WLS, Baraini dam, 23.x.2012; 1 ♂, Bhaisa Sankra, 06.x.2012; 1 ♂, Sankra rest house. 12.x.2011; 1 ♂, Aamagaon, 25.v.2013; 1 ♀, Bar forest, 14.v.2013 all coll. S. Gupta and party. 1 ♂, 1 ♀, Koriya, GGNP, Kotadol R.H. 10.v.2013; 1 ♂, 1 ♀, Beliya forest, 17.v.2013; 3 ♂♂, 1 ♀, Jelhapani forest, 18.v.2012; 1 ♂, 3 ♀♀, Subudu nala, 12.v.2012 all coll. S.Gupta and party. 5 ♂♂, 4 ♀♀, Kabirdham, Bhoramdeo WLS, Lalpur, Saroda dam, 22.ix.2012; 1 ♀,

Sakari river, 30.ix.2013; 1 ♂, Ragra ghat watch tower, 29.ix.2013 all coll. A. Raha and party. 1 ♀, Jagadalpur Bastar, Karpaband vill., 02.viii.2012 A. Raha and party. 1 ♂, Durg, Balod, 27.xii.2012; 2 ♂♂, 24.vi.2012; S. Gupta and party.

*Distribution:* INDIA: Throughout the country including Chhattisgarh (Raipur, Dhamtari, Koriya, Kabirdham, Durg, Jagadalpur). *Elsewhere:* Worldwide.

##### 6. *Forcipula quadrispinosa* (Dohrn, 1863)

1863. *Labidura quadrispinosa* Dohrn, *Stettin. Ent. Ztg.*, 24: 311 (♂; Tranquabar, India and Ceylon).

1897. *Forcipula quadrispinosa*: Bolivar, *Annals. Soc. Ent. Fr.*, 66: 283.

*Material examined:* 2 ♂♂, 1 ♀, Surguja, Mainpat Sankarghat, 12.ix.2012; 3 ♂♂, 1 ♀, Korba, Lemru water fall, 26.ix.2013; 1 ♂, 22.ix.2013; 1 ♀, Surguja, Tamarpingla WLS, Jajawal camp, 17.v.2013; 2 ♂♂, Durg, Balod, 01.ix.2013, all coll. A. Raha and party. 1 ♂, Jagadalpur, Bastar, Karpaband vill. 03.viii.2012, R.P. Gupta and party. 1 ♂, Kabirdham, Grivmar Nala, 29.viii.2011, Sunil and party.

*Distribution:* All over India below 3000 ft. in Himalayas and Chhattisgarh (Surguja, Durg, Korba, Kabirdham). *Elsewhere:* Java, Philippines Island, Nepal, Bhutan, Myanmar, Sri Lanka, South China, Thailand, Indo-China and Mauritius.

##### 7. *Proreus decipiens* (Kirby, 1891)

1910. *Forficula simulans* (nèc Stål, 1860); Burr, *Fauna British India, Dermaptera*: 137 (India: Pusa, Calcutta; excluding Burma fig. 85).

1891. *Labidura decipiens* Kirby, *J. Linn. Soc. (Zool.)*, 23: 511 (♂: Assam)

1987. *Proreus decipiens*; Brindle, *Courier Forsch.-Inst. Senckenberg*, 93: 344, 346 (notes on the Type ♂ of the species).

*Material examined:* 1 ♂, Raipur, Barnawapara WLS, Barnawapara camp, 14.vi.2013, S. Gupta and party.

*Distribution:* INDIA: Himachal Pradesh, Maharashtra, Assam, Tripura, Odisha, Uttar Pradesh, West Bengal, Karnataka, Chhattisgarh (Raipur) and Tamil Nadu. *Elsewhere:* Oriental Region.

### 8. *Hypergus humeralis* (Kirby, 1891)

1891. *Opithocosmia humeralis* Kirby, *J. Linn. Soc. Zool.*, **23**: 523 (♀; Ceylon); Kirby, 1904, *Syn. Cat. Orthoptera*, **1**: 38, pl. B, fig. 9.

1907. *Hypergus humeralis*; Burr, *Trans. ent. Soc. Lond.*, **1907**: 101.

*Material examined*: 2♂♂, 2♀♀, Durg, Umerdah, 20.xii.2012, S. Gupta and party; 3♂♂, Jagadapur, Bastar, Karpavand vill. 03.viii.2012, R.P. Gupta and party; 1♂, Dhamtari, Sitanadi WLS, Pachpedi Nahar, 20.x.2012, S. Gupta and party; 1♂, Kabirdham, Grivmar Nala, 29.viii.2011, Sunil and party; 1♀, Raigarh, Gomarda WLS, Kotal dam, 17.ii.2012, S. Gupta and party.

*Distribution*: INDIA: Karnataka, Assam, Manipur, Meghalaya, West Bengal, Uttarakhand, Madhya Pradesh, Odisha, Kerala, Chhattisgarh (Durg, Jagdalpur, Kabirdham, Raigarh) and Andaman and Nicobar Islands. *Elsewhere*: Nepal, Sri Lanka, Myanmar, China (Yunnan), Thailand, Borneo and Vietnam.

### 9. *Elaunon bipartitus* (Kirby, 1891)

1891. *Sphingolabis bipartita* Kirby, *J. Linn. Soc. Zool.*, **23**: 526 (♂, ♀; India)

1907. *Apterygida bipartita* var. *macrolabia*; Burr, *Rec. Indian Mus.*, **1**: 209 (India: Uttarakhand, Mussoorie).

1910. *Elaunon bipartitus*; Burr, *Fauna British India, Dermaptera*: 163, pl. 6, fig. 53, 53a, pl. 10, fig. 102.

*Material examined*: 1♂, Chhattigarh, Durg, Dhamdha, 20.viii.2011, Sunil and party.

*Distribution*: INDIA: Almost throughout the country including Chhattisgarh (Durg) and in plains and hills. *Elsewhere*: Nepal, Myanmar, China (Yunnan), Sri Lanka, Vietnam, Laos, Philippine Isls, Indonesia (Flores Isl.), New Guinea, Australia and Samoa.

### SUMMARY

This paper deals with nine species of Dermaptera under eight genera pertaining to 05 subfamilies collected from nine districts of Chhattisgarh state. Four species are reported for the first time from this state. During the course of present study, it has been observed that maximum number of species are reported from Raipur district.

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### REFERENCES

- Bharadwaj, R.K. and Kapoor, V.C. 1967. Dermaptera in the National Pusa collection. *Bull. Ent.*, **8**(2): 1-7.
- Burr, M. 1910. *The Fauna of British India including Ceylon and Burma, Dermaptera (Earwigs)*. Taylor and Francis, London, 217 pp.
- Hincks, W.D., 1955. A systematic Monograph of the Dermaptera of the world based on material in the British Museum (Natural History), Part I, Pygidicranidae subfamily Diplatyinae, 132 pp., 167 figs. London British Museum (Natural History).
- Srivastava, G.K. 1988. Fauna of India Dermaptera (Part-I), Superfamily: Pygidicranoidea. Pp. I-xii+ 1-268, Calcutta (Zoological Survey of India).
- Srivastava, G.K. 2003. Fauna of India and the adjacent countries, Dermaptera (Part-II), (Super family: Anisolaboidea) 1-235, Published by the Director, Zoological Survey of India, Kolkata.
- Srivastava, G.K. 2013. Fauna of India and the adjacent countries, Dermaptera (Part-III), (Super families: Apachyoidea and Forficuloidea): 1-469, Published by the Director, Zoological Survey of India, Kolkata.
- Srivastava, G.K. 2014. Insecta: Dermaptera, In: *Fauna of Achanakmar Amarkantak Biosphere Reserve, Conservation Area Series*, **49**: 83-85.