

A Taxonomic study of the Pygmygrasshopper (Orthoptera Tetrigidae) from India with description of a new species

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ABSTRACT

A new species of genus *Coptotettix* Bolivar, 1887, *C. magedhensis* n. sp. (Orthoptera Tetrigidae), is described from Jagdalpur, Chhattisgarh, India. Also studied with 19 species belonging to 7 genera under two subfamilies Scelimeninae and Tetriginae under family Tetrigidae.

KEY WORDS

Orthoptera; Tetriginae; new species; Scelimeninae; Barnawapara; Durg; Kabirdham.

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INTRODUCTION

Scattered information about the occurrence of Orthoptera fauna from India had been reported by several scientists: Kirby (1914) described 5 new genera and 10 new species, besides the already known 23 genera and 73 species. Hancock (1912, 1915) studied the Indian Tetrigidae. Fletcher (1921) gave a full list of synonyms and references along with the distribution for the Tetrigidae of India and the adjacent countries. Hebard (1929) studied the South Indian Tetrigids. Günther (1935-1941) revised the subfamilies of Tetrigidae with the exception of Batrachidinae and Tetriginae. Steinmann (1964-1971a, b) compiled the taxonomical work of the family Tetrigidae in the form of Checklist to give a zoogeographical picture of the species of the world. Grant (1966) studied the genera of Batrachideinae. Shishodia (1991a) studied 'Taxonomy and zoogeography of the Tetrigidae of North eastern India' and 77 species were dealt with, of which 13 species were new, 6 were new records for India, one new genus was proposed and two new synonyms were established. Shishodia (1984, 1987 a,b, 1991a,b,c, 1993, 1995, 2000a, 2007a), Paranjape &

Bhalerao (1986), Paranjape et al. (1987), Wagan & Kevan (1992) mainly worked on the taxonomy of Tetrigoidea in India.

A little work has been done about pigmy grasshopper fauna from Chhattisgarh state i.e. Shishodia (2000b) reported 77 species of crickets and grasshoppers from Bastar, of which 13 species of Tetrigidae family. Recently Skejo & Gupta (2015) gave a specific status of *Hedotettix cristatus* Karny, 1915. Gupta (2016 a, b) worked on Orthoptera fauna of Chhattisgarh and described two species of Family Tetrigidae: *Euparatettix dandakaranyensis* Gupta, 2016, *Ergatettix subtruncatus* Gupta, 2016; Gupta et al. (2016) described also *Hedotettix angulatus* Gupta, Shi et Chandra, 2016.

The genus *Coptotettix* Bolivar, 1887 is the most diverse genus of Tetrigidae erected by Bolivar (1887). This genus includes 79 species and subspecies (Eades et al., 2017), of which, 12 species reported from India (Shishodia et al., 2010).

During the extensive and intensive survey of these areas from 2011 to 2014, a total of 20 species belonging to 7 genera under 2 subfamilies Scelimeninae and Tetriginae under family Tetrigidae with a new species were collected from different

localities from Chhattisgarh and the results are shown below.

MATERIAL AND METHODS

The survey was carried out in Chhattisgarh state, covering four districts Durg, Jagdalpur, Korba and Surgaja and seven Protected areas i.e. Sitanadi Wildlife Sanctuary, Udanti Wildlife Sanctuary, Achana-kmar Wildlife Sanctuary, Gurughasidas National Park, Badalkhol Wildlife Sanctuary, Barnawapara Wildlife Sanctuary and Borhamdev Wildlife Sanctuary.

The specimens were collected by sweeping over pebbles on the banks of rivers, by using an insect net and killed by benzene vapor in killing jar. The specimens were preserved dry and pinned and they were studied under a Leica stereozoom Microscope (Leica M205 A) and photographs were taken using the software Leica Application Suite (LAS V3.8). All the measurements are given in millimetres. The type specimens were deposited in the Central Entomological Laboratory (CEL) of the Zoological Survey of India in Kolkata while the other specimens in the National Zoological Collection of the Zoological Survey of India, Kolkata.

All the specimens was collected by S.K. Gupta and colleagues.

ABBREVIATIONS. DC: Day collection; FRH: Forest Rest House; NC: Night collection; NP: National Park; WLS: Wildlife Sanctuary.

RESULTS

Systematics

Order ORTHOPTERA Olivier, 1789
Suborder CAELIFERA Ander, 1939
Superfamily TETRIGOIDEA Ramber, 1838
Family TETRIGIDAE Ramber, 1838
Subfamily SCHELMENINAE Ramber, 1838
Genus *Thoradonta* Hancock, 1909

1. *Thoradonta apiculata* Hancock, 1915

Thoradonta apiculata - Hancock, 1915: 8
Thoradonta apiculata - Shishodia, 2000a: 233

EXAMINED MATERIAL. Chhattisgarh, Dhamtari, Sitanadi WLS, Sankra FRH, 01.VII.2012, 1 female, NC; Durg, Badbhum FRH, 28.III.2014, 1 male, NC; Bilaspur, Achana-kmar WLS, Chhapparwa FRH, 10.VI.2012, 1 female, NC.

DISTRIBUTION. India: Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Chhattisgarh, Manipur, Meghalaya, Orissa, Tamil Nadu and West Bengal. Elsewhere: Myanmar.

2. *Thoradonta spiculoba* Hancock, 1912

Thoradonta spiculoba - Hancock, 1912: 138
Thoradonta pruthii - Shishodia, 2000b: 27-80.

EXAMINED MATERIAL. Chhattisgarh, Korba, Telimnala, 03.VI.2012, 1 male, DC, Jashpur, Badalkhol WLS; Bachhram beat, 25.V.2012, 9 females, DC; Dhamtari, Sitanadi WLS; Gidhava, 21.X.2012, 1 female, DC; Koriya, Gurughasidas NP, Sonhut FRH, 19.III.2014, 1 male, NC; Durg, Badbhum FRH, 28.III.2014, 1 male, DC; Surguja, Taravayaya Nala, 17.IX.2012, 1 female.

DISTRIBUTION. India: Chhattisgarh, Karnataka, Madhya Pradesh, Maharashtra, Orissa and West Bengal.

3. *Thoradonta nodulosa* (Stål, 1861)

Tetrix nodulosa - Stål, 1861: 346
Thoradonta nodulosa - Shishodia, 2000a: 233

EXAMINED MATERIAL. Chhattisgarh, Jashpur, Badalkhol WLS; Bachhram beat, 25.V.2012, 1 male, DC; Koriya, Gurughasidas NP, Sonhut FRH, 19.III.2014, 1 male, NC.

DISTRIBUTION. India: Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Sikkim, Tamil Nadu, Tripura and West Bengal. Elsewhere : Borneo, China, Hainan, Java, Malaysia, Myanmar, Perak, Pinang, Singapore, Sri Lanka, Sumba and Sumatra.

4. *Thoradonta bengalensis* Shishodia, 1991

Thoradonta bengalensis - Shishodia, 1991a: 34
Thoradonta bengalensis - Shishodia, 2003: 82.

EXAMINED MATERIAL. Chhattisgarh, Raipur, Barnawapara WLS; Gabod, 08.X.2011, 1 male, DC; Parbatiya Nala, 04.VI.2012, 1 male, NC; Domar pani, 24.IV.2012, 1 female, DC; Jagdalpur, Sonarpal beat, 17.X.2011, 3 males, DC; Dhamtari, Sitanadi WLS; Sitanadi river, 1 female, DC, 17.X.2011, 1 female, DC; Kabirdham, Bhoramdev WLS; Rajadhar Forest, 01.XII.2011, 1 female, DC; Jashpur, Badalkhol WLS; Bachhram beat, 25.V.2012, 11 females, DC; Korba, Kudmura nala, 31.V.2012, 1 male, DC; Bilaspur, Achanakmar WLS, Karidongri FRH, 19.IX.2012, 1 female, DC; Gariyaband, Udanti WLS; Kulhadighat, 28.VI.2014, 1 male, DC.

DISTRIBUTION. India: Chhattisgarh and West Bengal.

Genus *Euscelimena* Günther, 1938

5. *Euscelimena harpago* (Serville, 1838)

Tetrix harpago - Serville, 1838: 763

Scelimena uncinata - Shishodia, 1991b: 34

Euscelimena harpago - Kulkarni & Shishodia, 2005: 326.

EXAMINED MATERIAL. Chhattisgarh, Raigarh, Gomerda WLS; Kanakabira, 19.II.2012, 2 males, 3 females, DC; Gariyaband, Udanti WLS; Jhariya bahara, 24.VI.2014, 3 males, 5 females, DC; 29.VI.2014, 1 female, DC.

DISTRIBUTION. India: Andhra Pradesh, Bihar, Karnataka, Gujarat, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu and Uttar Pradesh. Elsewhere: Sri Lanka.

Subfamily TETRIGINAE Serville, 1838

Genus *Paratettix* Bolivar, 1887

6. *Paratettix histricus* (Stål, 1861)

Tetrix histricus - Stål, 1861: 347

Euparatettix histricus - Shishodia, 1987b: 93

Paratettix histricus - Storozhenko & Dawwrueng, 2015: 530.

EXAMINED MATERIAL. Durg, Durg camp, 23.VIII.2011, 1 male, DC; Rampur, 24.VIII.2011,

6 females, DC; Raipur, Barnawapara WLS; Domarpani, 28.VI.2012, 1 female, DC; Nawapara, 19.VII.2013, 1 female, DC; Dhamtari, Sitanadi WLS; Gidhava, 21.X.2012, 2 females, DC; Gahnasiyar, 20.VIII.2013, 1 male, DC.

DISTRIBUTION. India: Andaman and Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Himachal Pradesh, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Tripura and West Bengal. Elsewhere: Australia, Borneo, Caledonia, Celebes, East Africa, East Afghanistan, Holland, Indonesia, Iran, Java, Malaysia, Myanmar, Nepal, New Ireland, Pakistan, Philippines, Queensland, Saudi Arabia, Solomon Islands, South China, Sumatra, Sri Lanka and Taiwan.

7. *Paratettix cingalensis* (Walker, 1871)

Tettix cingalensis - Walker, 1871: 827

Paratettix variegatus - Bolivar, 1887: 280

Paratettix cingalensis - Chandra et al., 2007: 2686

EXAMINED MATERIAL. Chhattisgarh, Raipur, Barnawapara WLS; Barnawapara, 04.IX.2011, 1 female, NC; 06.VII.2011, 1 male, NC.

DISTRIBUTION. India: Arunachal Pradesh, Assam, Chhattisgarh, Goa, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Manipur, Orissa, Sikkim, Tamil Nadu and Tripura. Elsewhere: Borneo, Hainan, Malaysia, Java, Philippines, Sri Lanka, Sumatra and Taiwan.

Genus *Euparatettix* Hancock, 1904

8. *Euparatettix nodulosus* Hancock, 1912

Euparatettix nodulosus - Hancock, 1912: 154

Ergatettix nodulosus - Hebard, 1929: 587

Ergatettix guentheri - Steinmann, 1970a: 234

Euparatettix nodulosus - Gupta, 2016a: 121

EXAMINED MATERIAL. Chhattisgarh, Koriya Gurughasidas NP; 28.IX.2011, 1 male, DC; Uravpara, 24.X.2011, 1 male, DC; Raipur, Barnawapara WLS; Gabod, 08.X.2011, 1 male, DC; Latadadar, 01.VII.2013, 1 male, DC; Durg, Badbhum FRH, 28.III.2014, 1 male, 1 female, NC; Saldevi mandir, 25.IX.2012, 1 male, DC.

DISTRIBUTION. India: Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram, Orissa, Tripura, Uttar Pradesh and West Bengal. Elsewhere: Bangladesh, Nepal and Sri Lanka.

Genus *Ergatettix* Kirby, 1914

9. *Ergatettix callosus* (Hancock, 1915)

Indatettix callosus - Hancock, 1915: 130
Indatettix callosus - Fletcher, 1921: 35
Ergatettix callosus - Shishodia, 1993: 205

EXAMINED MATERIAL. Chhattisgarh, Jagdalpur, Bhanpuri Forest, 20.X.2011, 1 male, DC; Ulnar vilage, 16.III.2012, 1 male, DC; Raipur, Barnawapara WLS; Hardi Nala, 29.VI.2013, 1 male, DC; Lalbandh Pond, 13.VII.2013, 1 male, DC.

DISTRIBUTION. India: Chhattisgarh and West Bengal.

10. *Ergatettix interruptus* (Brunner von Wattenwyl, 1893)

Paratettix interruptus - Brunner von Wattenwyl, 1893: 104
Euparatettix interruptus - Kirby, 1910: 31
Indatettix interruptus - Hancock, 1915: 130
Ergatettix interruptus - Blackith, 1992: 54

EXAMINED MATERIAL. Chhattisgarh, Raipur, Barnawapara WLS; Bar forest, 29.V.2013, 1 male, DC; Dhamtari, Sitanadi WLS; Bhainsa sankra, 30.VIII.2013, 1 male, DC.

DISTRIBUTION. India: Chhattisgarh. Elsewhere: Laos, Myanmar and Thailand.

11. *Ergatettix dorsifera* (Walker, 1871)

Tettix dorsifera - Walker, 1871: 825
Ergatettix dorsiferus - Shishodia, 2000: 21

EXAMINED MATERIAL. Chhattisgarh, Raipur, Barnawapara WLS; Gabod, 08.X.2011, 1 male, DC; Hardi Pathar, 29.III.2012, 1 male, DC; 30.III.2012, 1 male, DC; Keduva Nala, 03.VI.2013, 1 male, DC; Hardi Nala, 26.VI.2013, 1 male, DC;

Latadadar, 28.VI.2013, 1 male, DC; Durg; Rampur, 24.VIII.2011, 1 female, DC; Jagdalpur, Magrapara, 06.I.2012, 1 female, DC; Belguda, 18.I.2012, 1 female, DC; Malgaon, 09.III.2012, 1 female, DC; Surguja, Tara Rest House, 16.IX.2012, 1 male, DC; Koriya; Gurughasidas NP; Uravpara, 24.X.2011, 1 male, DC.

DISTRIBUTION. India: Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Orissa, Rajasthan, Sikkim, Tripura, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal. Elsewhere: Afghanistan, Bangladesh, China, Central Asia, Java, Greater Sunda Islands, Iran, Indonesia, Myanmar, Nepal, Sri Lanka, Sumatra, Taiwan and Turkmenistan.

Genus *Coptotettix* Bolivar, 1887

12. *Coptotettix tricarinatus* Shishodia, 1991

Coptotettix tricarinatus - Shishodia, 1991a: 169
Coptotettix tricarinatus - Shishodia, 2003: 83

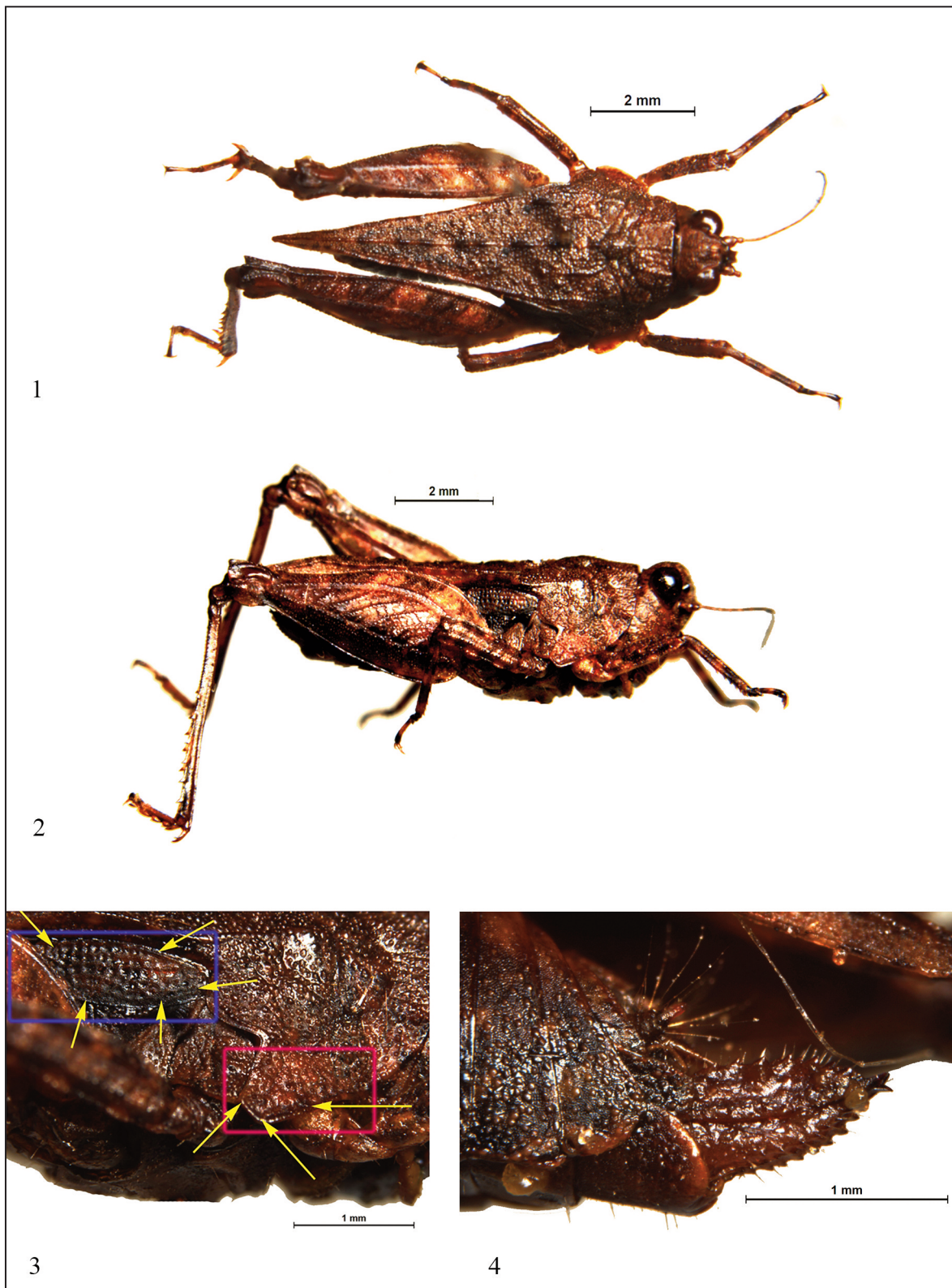
EXAMINED MATERIAL. Chhattisgarh, Jagdalpur, Malgaon, 09.III.2012, 1 male, DC; Koriya Gurughasidas NP; Sonhut FRH, 05.V.2013, 1 male, NC.

DISTRIBUTION. India: Chhattisgarh and West Bengal.

13. *Coptotettix magedhensis* n. sp. (Figs. 1–4)

EXAMINED MATERIAL. Holotype, female, DC. India, Chhattisgarh, Jagdalpur, Makdi, Magedha, 09.XI.2011, 19°05'45.6"N, 82°03'9.3"E, 592 m, legit S.K. Gupta and colleagues, Registration no. 18713/H5. Paratypes: 1 female, same data as holotype. Registration no. 187714/H5. 1 female, Jagdalpur, Hathguda, 29.III.2012, 19°05'45.6N, 82°03'9.3E, 561 m. Registration no. 187715/H5.

DESCRIPTION OF HOLOTYPE. Female. Vertex narrower than a compound eye, little elevated, median carina of the vertex present in the distal half of the length of vertex, elevated, fossulae present. Lateral carinae of the vertex present, strongly elevated, with tubercles. Median ocellus situated below the level of the lower margin of the compound eyes, in the place where facial carina ends. Lateral ocelli situ-



Figures 1–4. *Coptotettix magedhensis* n. sp., holotype female. Fig. 1: dorsal view. Fig. 2: lateral view. Fig. 3: Paranota and Tegmen. Fig. 4: Ovipositor.

ated in the level of the distal margin of the compound eyes. Frontal costa bifurcation starts in about upper $\frac{1}{4}$ of the compound eye height and runs parallel to the median ocelli forming a wider scutellum. Antennal grooves are situated at the level of the lower margin of compound eyes or slightly below it. Eyes in frontal view sub-globular, in lateral view sub-globular. Eyes can be not close to the pronotum so the occipital area is visible.

Pronotum. Pronotum granulated with fine, medium sized and large granules, wrinkled. Anterior margin truncate, extended upto the last abdominal segment, acute at apex. Median carina is continuous towards the whole length of pronotum bearing 6–7 small projections of variable height and size. External carinae fused to humero-apical carinae. Humero-apical carinae forming with external lateral carinae obtuse angle, two lateral lobes present. Posterior margin of lateral lobe truncated.

Wings. Tegmina elongated, wings present, visible under pronotum extend up to 4th or 5th abdominal segments.

Fore legs: femora 3 times as long as wide, Upper and lower margins of femora straight; serration on external face indistinct; tibia clothed with 7 spines and some small hairs; tibial serration on external face distinct, second tarsal segments 5 times longer than first.

Mid legs: femora 3.6 times as long as wide, serrated carina on external face distinct, Upper and lower margins of femora slightly undulate, upper and lower mid carinae with several black warts, tibiae clothed with 4 spines and some hairs; second tarsal segments 2.9 times longer than first.

Hind legs: Hind femora robust 2.6 times as long as wide, upper margins serrated, tibiae with 8 outer and 5 inner spines. first tarsal segments 1.5 times longer than third; tip of pulvilli I and II spinulately produced and pulvilli III obtusely, pulvilli II distinctly longer than length of I and also II pulvilli. Subgenital plate in ventral view square shaped; Ovipositor elongated. Epiproct as long as wide near the base, with obtuse apex. Cerci cylindrical, wide near the base with obtuse tip.

Coloration. Body color from brown to dark blackish. Pronotal tubercles usually dark black. Fore tibiae, mid tibiae and hind tibiae with two dark brown hues, genicular lobe of hind femora dark brown; fore legs of III tarsal segment with dark

black brown hue. Ventral region of hind femora dark black color. Tip of spines dark blackish.

Measurements (all in millimeters). Body length Female. (from the tip of the vertex to the end of the abdomen): 8.959; head length: 0.944; Vertex: 0.582. compound eye length: 0.659, width: 0.391. Antenna length: 2.994. Antenna groove length: 0.145, width: 0.223, scapes length: 0.219, pedicel length: 0.177, scutellum width: 0.212. Pronotum length: 7.691, shoulder width: 2.383. Fore leg: femur length: 1.535, width: 0.501; tibia length: 1.760, width: 0.214; tarsus length (by segments): I: 0.114, II: 0.577; claw length: 0.192. Mid leg: femur length 1.776, width 0.482; tibial length 1.692, width 0.262; tarsus length: I: 0.184, II: 0.538; claw length 0.287. Hind leg: femur length: 4.856, width: 1.807; tibia length: 3.808, width: 0.236; tarsus length: I: 0.712, II: 0.132, III: 0.465; pulvilli length: I: 0.245, II: 0.226, III: 0.312; claw length 0.226. Abdomen length: 4.886. Wings: tegmen length: 1.393, width: 0.450; Dorsal ovipositor valves length: 1.252, height: 0.302; ventral ovipositor valves length: 1.048, height: 0.149; cerci length: 0.310, width: 0.125.

VARIABILITY. The paratypes female have no substantial morphological differences from the holotype described. Male unknown.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. *Coptotettix magedhensis* n. sp. is known actually from the type locality only: India, Chhattisgarh.

Genus *Criotettix* Bolivar, 1887

14. *Criotettix bispinosus* (Dalman, 1818)

Acrydium bispinosum - Dalman, 1818: 77

Criotettix bispinosus - Günther, 1937: 123

Criotettix bispinosus - Shishodia, 2000a: 232

EXAMINED MATERIAL. Chhattisgarh, Koriya, Gurughasidas NP, Ghatoriya Pahad, 28.XI.2013, 1 male, DC; Thitima Pahar, 24.X.2013, 1 male, 1 female, DC.

DISTRIBUTION. India: Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Madhya Pradesh, Manipur, Meghalaya, Tripura and West Bengal. Else-

where: Borneo, Celebes, China, Hainan, Hong kong, Java, Luzon, Malaysia, Myanmar, Sulawesi, Sumatra, Taiwan, Thailand and Vietnam.

Genus *Hedotettix* Bolivar, 1887

15. *Hedotettix attenuatus* Hancock, 1904

Hedotettix attenuatus - Hancock, 1904: 151

Hedotettix attenuates - Kirby, 1914: 73

Hedotettix attenuatus - Chandra et al., 2007: 2687

EXAMINED MATERIAL. Chhattisgarh, Raipur, Barnawapara WLS; Barnawapara, 24.VII.2011, 1 male, 1 female, NC; Raigarh, Gomerda WLS; Naresh Nagar, 24.VIII.2011, 1 male, NC; Surguja, Anjani Beat, 10.XI.2011, 1 female, DC; Korba, Paharjamri Beat, 24.XI.2011, 1 female, DC; Bijakhara, 01.VI.2012, 1 male, DC; Koriya, Gurughasidas NP; Sonhut Forest Rest House, 21.IV.2013, 1 male, 2 females, NC; 05.V.2013, 1 female, NC; 19.III.2014, 1 female, NC; Kamarjee, Bagridanar, 22.IX.2013, 1 male, DC; Thitima Pahar, 24.X.2013, 1 male, DC; Berdev Nala, 17.XI.2013, 1 male, DC; Ghatoriya Pahar, 28.XI.2013, 1 male, DC; Rewala, 09.XII.2013, 1 male, 2 females, DC; Durg, Badbhum FRH, 08.II.2014, 1 female, NC; 31.III.2014, 1 female, NC; Gariyaband, Udanti WLS; Ganga Jamuna village, 28.VI.2014, 1 male, 2 females, NC.

DISTRIBUTION. India: Andaman and Nicobar Islands, Arunachal Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Manipur, Meghalaya, Orissa, Sikkim, Tripura and West Bengal. Elsewhere: Sri Lanka.

16. *Hedotettix gracilis* (Haan, 1842)

Acridium gracile - Haan, 1842: 169

Hedotettix gracilis - Hancock, 1915: 123.

Hedotettix gracilis - Chandra et al., 2007: 2687

EXAMINED MATERIAL. Chhattisgarh, Raipur, Barnawapara WLS; Barnawapara, 10.VII.2011, 1 male, DC; 14.VII.2011, 2 females, NC; 20.VII.2011, 1 female, NC; 24.VII.2011, 1 female, NC; 09.XI.2011, 1 male, DC; 03.II.2012, 1 female, NC; Keduva Nala, 09.VII.2011, 1 female, DC; Dullibahal, Forest, 10.IX.2011, 1 male, DC; Latadadar,

02.I.2012, 1 female, DC; Surguja, Benghehi Pahar, 10.XI.2011, 1 male, DC; Kabirdham, Bhoramdev WLS; Sitalpani, 19.XI.2011, 1 male, DC; Sankri River, 30.IX.2013, 1 male, DC; Raigarh, Gomerda WLS; Gomerda village, 28.V.2013, 1 male, DC; Koriya, Gurughasidas NP; Rawanpat, 23.X.2013, 1 male, DC.

DISTRIBUTION. India: Andaman and Nicobar Islands, Arunachal Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Orissa, Rajasthan, Sikkim, Tripura, Uttarakhand, Uttar Pradesh and West Bengal. Elsewhere: Bangladesh, Celebes, China, Java, Myanmar, Pakistan, Sri Lanka, Sulawesi, Sumatra, Taiwan, Thailand and Vietnam.

17. *Hedotettix costatus* Hancock, 1912

Hedotettix costatus - Hancock, 1912: 147

Hedotettix costatus - Shishodia & Tandon, 2000: 221

EXAMINED MATERIAL. Chhattisgarh, Raipur, Barnawapara WLS; Latadadar, 27.IX.2011, 1 female, NC.

DISTRIBUTION. India: Assam, Bihar, Himachal Pradesh, Meghalaya, Sikkim, Tripura, Uttar Pradesh and West Bengal. Elsewhere: Bangladesh, Nepal and Sulawesi.

18. *Hedotettix punctatus* Hancock, 1909

Hedotettix punctatus - Hancock, 1909: 422

Hedotettix punctatus - Shishodia, 2007: 89

EXAMINED MATERIAL. Chhattisgarh, Raipur, Barnawapara WLS; Gabod, 08.X.2011, 1 male, DC; Koriya; Gurughasidas NP; Dev Nala, 09.III.2013, 1 male, DC; Durg, Badbhum FRH, 30.III.2014, 1 male, DC; Kabirdham, Bhoramdev WLS; Sankri River, 30.IX.2013, 2 females, DC; Gariyaband, Udanti WLS; Jhariyabahara, 22.II.2014, 1 male, DC.

DISTRIBUTION. India: Chhattisgarh, Karnataka, Madhya Pradesh, Maharashtra and Rajasthan. Elsewhere: Borneo and Himalayan region.

19. *Hedotettix grossus* Hancock, 1915

Hedotettix grossus - Hancock, 1915: 124

Hedotettix grossus - Shishodia, 2000: 243

EXAMINED MATERIAL. Chhattisgarh, Raipur, Barnawapara WLS; Nawapara, 23.VII.2011, 1 female, NC; Kabirdham, Bhoramdev WLS; Kherpani Forest, 16.XI.2011, 1 female, NC; Sankri river, 30.IX.2013, 1 female, NC; Dhamtari, Sitanadi WLS; Bhainsa Sankra, 04.IX.2013, 1 female, DC; Sankra FRH, 24.II.2014, 1 female, NC.

DISTRIBUTION. India: Arunachal Pradesh, Assam, Chhattisgarh, Manipur, Meghalaya, Tripura and West Bengal.

20. *Hedotettix quadriplagiatus* (Walker, 1871)

Tettix quadriplagiatus - Walker, 1871: 828

Hedotettix quadriplagiatus - Blackith, 1992: 88

EXAMINED MATERIAL. Chhattisgarh, Kabirdham, Bhoramdev WLS; Sitalpani, 19.XI.2011, 1 male, DC; Rajadhar Forest, 01.XII.2011, 1 female, DC; Gariyaband, Udanti WLS; Jhariyabahara, 24.IV.2014, 1 male, 3 females, DC; Durg, Badhum FRH, 31.III.2014, 2 females, DC.

DISTRIBUTION. India: Chhattisgarh and North India.

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