



ON AN ACCOUNT OF PENTATOMOIDEA (HETEROPTERA: HEMIPTERA) FROM CHHATTISGARH, INDIA

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INTRODUCTION

The pentatomids are commonly known as “shield bugs” or “stink bugs” as their bodies are usually covered by a shield shaped scutellum covering more than half of the abdomen, tibia with weak or no spine, 5 segmented antennae which gives its family name and most of them emit an unpleasant odour, offensive in nature, produced by a pair of glands in the thorax and is released through openings in the metathorax. Although majority of these bugs are plant sucking, the members belonging to the family Asopinae are wholly or partially predaceous. Pentatomoidea is one of the largest superfamilies of Heteroptera comprising of 1301 genera and 7182 species distributed in sixteen families all over the world (Henry, 2009). Of these, family Pentatomidae alone represents 896 genera and 4722 species distributed in eight subfamilies (Pentatominae, Asopinae, Podopinae, Edessinae, Phyllocephalinae, Discocephalinae, Cyrtocorinae and Serbaninae).

A little over 590 species of the Pentatomoidea are known to occur in India through the publication of Distant (1902, 1907, 1918), Ahmad and Afzal (1989), Azim and Nayyar (2011) and Durai (1987). The eight species of Pentatomidae marked with (*) are reported through publication of Biswas and Ghosh (1995) and Chandra and Kushwaha (2012) from Chhattisgarh. The present paper deals with 38 species under 27 genera belonging to 5 families of the superfamily Pentatomoidea studied from Chhattisgarh. Of these, 30 species under 24 genera are reported for the first time from this state. The classification is followed after the Rider (2012).

SYSTEMATIC ACCOUNT

Family I PENTATOMIDAE

Subfamily PENTATOMINAE

Tribe ANTESTINI

Genus 1. *Antestia* Stal, 1864

1. *Antestia anchora* (Thunberg)

*2. *Antestia cruciata* (Fabricius)

Genus 2. *Plautia* Stal, 1867

*3. *Plautia crossota* (Fabricius)

Tribe AGONOSCELIDINI

Genus 3. *Agonoscelis* Spin, 1837

4. *Agonoscelis nubilis* (Fabricius)

Tribe CARPOCORINI

Genus 4. *Gulielmus* Distant, 1901

5. *Gulielmus laterarius* Distant

Tribe EYSARCORINI

Genus 5. *Adria* Stal, 1876

6. *Adria parvula* Dallas

Genus 6. *Carbula* Stal, 1864

7. *Carbula insocia* Walker

8. *Carbula aspavia* Distant

9. *Carbula scutellata* Distant

Genus 7. *Eysarcoris* Hahn, 1834

*10. *Eysarcoris guttiger* (Thunberg)

11. *Eysarcoris montivagus* Distant

12. *Eysarcoris ventralis* (Walker)

Tribe HALYINI

Genus 8. *Halys* Fabricius, 1803*13. *Halys dentatus* FabriciusGenus 9. *Erthesina* Spin., 183714. *Erthesina fullo* Thunberg

Tribe MENIDINI

Genus 10. *Apines* Dall. 185115. *Apines concinna* Dall.Genus 11. *Menida* Motsch., 186116. *Menida formosa* (Westwood)17. *Menida apicalis* (Dallas)

Tribe NEZARINI

Genus 12. *Acrosternum* Fieber, 186018. *Acrosternum graminea* KirkaldyGenus 13. *Nezara* Amy. & Serv. 1843*19. *Nezara viridula* (Linnaeus)

Tribe PENTATOMINI

Genus 14. *Placosternum* Amy & Serv., 184320. *Placosternum dama* (Fabricius)

Tribe PIEZODORINI

Genus 15. *Piezodorus* Fieber, 186121. *Piezodorus hybneri* Gmelin, 1790

Tribe SCIOCORINI

Genus 16. *Menedemus* Distant, 189922. *Menedemus hieroglyphicus* DistantGenus 17. *Sciocoris* Fallen, 182923. *Sciocoris indicus* Dallas

Tribe SEPHELINI

Genus 18. *Niphe* Stal, 186724. *Niphe subferruginea* (Westwood)

Tribe STRACHIINI

Genus 19. *Bagrada* Stal, 1862*25. *Bagrada hilaris* Burmeister, 1835

Subfamily ASOPINAE

Genus 20. *Amyotea* Ellenr., 186226. *Amyotea malabarica* (Fabricius)Genus 21. *Andrallus* Ellenr. 186227. *Andrallus spinidens* (Fabricius.)Genus 22. *Eocanthecona* Amy. & Serv. 184328. *Eocanthecona furcellata* (Wolff.)

Family II CYDNIDAE

Genus 23. *Adrisa* Amyt & Serv., 184329. *Adrisa magna* (Uhler.)Genus 24. *Macroscytus* Fieber, 186130. *Macroscytus brunneus* (Fabricius)31. *Macroscytus foveolus* (Dallas)

Family III DINIDORIDAE

Genus 25. *Coridius* Illiger 1807*32. *Coridius brunneus* (Thunberg)33. *Coridius ianus* Lis34. *Coridius obscurus* (Fabricius)

Family IV SCUTELLERIDAE

Genus 26. *Chrysocoris* Hahn, 184335. *Chrysocoris perpureus* (Westwood)36. *Chrysocoris stollii* (Wolff.)

Family V TESSARATOMIDAE

Genus 27. *Tessaratomya* Lep. & Serv., 1825*37. *Tessaratomya javanica* (Thunberg)38. *Tessaratomya papillosa* (Drury)

Superfamily PENTATOMOIDEA

Key to the families of the Superfamily Pentatomoidea

1. Primary and subcostal veins of the wings remote, including a central broad area; humus present 2
- Primary and subcostal veins of the wings usually conterminal and diverging at apex, somewhat parallel: humus usually absent..... 3
2. Scutellum covering the whole of the hemelytra, excepting the extreme base of outer margin SCUTELLERIDAE
- Scutellum of moderate size, corium always exposed, basal ventral segment almost completely covered by the metasternum; scutellum variable in size and shape CYDNIDAE

3. Spiracle of basal ventral segment hidden by posterior margin of metasternum 4
- Spiracle of basal ventral segment not hidden by metasternum TESSARATOMIDAE
- 4 Scutellum extending to about or beyond middle of the abdomen, rarely shorter, if shorter the apex narrowed and only slightly produced behind the frena, membrane moderate or small.....PENTATOMIDAE
- Scutellum never extending beyond middle of the abdomen, its apex broad, membrane very large DINIDORIDAE

Family I PENTATOMIDAE

Key to the subfamilies of the family Pentatomidae

1. Rostrum slender; basal joint not incrassated, nor inserted at labrum..... PENTATOMINAE
- Rostrum robust; basal joint incrassated, inserted at labrumASOPINAE

Subfamily PENTATOMINAE

Tribe ANTESTINI

Key to the genera of the tribe Antestini

1. Anterior and anterior lateral margin of pronotum elevated and callous.....*Antestia*
- Anterior lateral margin of pronotum entire, not collously elevated*Plautia*

Genus 1. *Antestia* Stal, 1864

1864. *Antestia* Stal, *Hem. Afr.* 1: 200.

Key to the species of the genus *Antestia*

1. Pronotum with six black spots, one transverse black spots on each side of anterior margin and four discal spots; corium with three discal black spots.; antennae black..... *anchora*
- Pronotum with ten black spots four on anterior margin and six across disk ; corium with discal black spots and a costal black streak ; Antennae greenish or orochraceous *cruciata*

1. *Antestia anchora* (Thunberg, 1783)

(Fig.1)

1783. *Cimex anchora* Thunb., *Nov. Inc. Sp.*, 2: 47

1902. *Antestia anchora*: Distant, *Fauna Brit. India, Rhynchota*, 1: 183.

Material examined: 1ex., Bar Forest, Dist. Raipur, 25.ix.2011, coll. Sunil and party.

Diagnostic character: Body yellow orange; head beneath and legs orange-yellow; apex of rostrum black; antennae black, first and second joints and base of third joint rufous; head with the basal margin, a lineate spot before each eye; pronotum with the anterior, anterior lateral, and central basal margins, and two lateral discal luteous, a transverse black spot on each side of anterior margin and four discal spots of the same colour; corium with three discal black spots; counexivum luteous with black spots. *Length*: 10-12 m.m.

Distribution: India: Chhattisgarh (Raipur Dist.), Meghalaya, Nagaland, Sikkim, *Elsewhere*: Java, Myanmar, Sumatra.

2. *Antestia cruciata* (Fabricius, 1775)* (Fig.2)

1775. *Cimex cruciata* Fabr., *Syst. Ent.*: 714.

1902. *Antestia cruciata*: Distant, *Fauna Brit. India, Rhynchota*, 1: 185.

Material examined: 2 exs., Barnawapara, Dist. Raipur, 9.vii. 2011, 11.vii. 2011, coll. Sunil and party. 1ex., Gurgaon, Dist. Raipur, 23.vii. 2011, coll. Sunil and party.

Diagnostic character: Body orange yellow with black spots; head with two central lines and a spot before each eye black; antennae greenish or yellowish brown; pronotum with ten black spots, four on anterior margin, and six across disk; Maximum width of Pronotum 2.26 X as long as maximum width of head, and 2.71 X as long as length of pronotum, scutellum with four black spots; corium with three discal black spots and a costal black streak, Length of scutellum 1.47X as long as maximum width of head, Maximum width of Pronotum 1.53 X as long as length of scutellum; membrane dark smoky brown; body beneath and legs pale greenish yellow; sternum and abdomen with two sub-lateral series of black spots. *Length*: 7-9 m.m.

Distribution: India: Chhattisgarh (Raipur), Maharashtra, Sikkim, Tamil Nadu, West Bengal. *Elsewhere*: Sri Lanka

Genus 2. *Plautia* Stal, 18671867. *Plautia*, Stal, *Ofv. Vet.-Ak. Forh.*,: 514.3. *Plautia crossota* (Fabricius, 1787)*

(Fig. 3)

1787. *Cimex fimbriata* Fabr., *Mant. Ins.*, 2: 295.1902. *Plautia fimbriata*: Distant, *Fauna Brit. India, Rhynchota*, 1: 181.2002. *Plautia crossota*: Rider *et al.*, *ZOOSYST ROSSICA*, 2: 144.

Material examined: 1ex., Chipli Camp, Dist. Kabirdham, 29.viii.2011. Coll. Sunil and party; 1 ex., Barnawapara, Dist. Raipur, 18.vii.2011, Coll. Sunil and party; 1 ex., Barnawapara, Raipur Dist., 9.ix.2011. Coll. Sunil and party; 1 ex., Amajheria, Dist. serguja, 9.xi.2011, Coll. Raha and party; 1 ex., Hardinala, Dist., Raipur, 8.xi.2011. coll. anil and party.

Diagnostic character: Head, pronotum, and scutellum pale olivaceous-green; Maximum width of Pronotum 2.3 X as long as maximum width of head, 2.86 X as long as length of pronotum, 1.52 X as long as length of scutellum, Length of scutellum 1.51 X as long as maximum width of head, corium purplish red, membrane fuliginous, darker at base; abdomen above red; body beneath and legs pale greenish; abdomen with the central disk greenish-ochraceous, and with lateral marginal black; rostrum greenish-ochraceous with the apex piceous; antennae greenish-ochraceous, with the apices of the fourth and fifth joints infuscated; pronotum and scutellum are finely and somewhat sparingly punctate, the corium more thickly punctate. *Length*: 10-11 mm.

Distribution: India: Chhattisgarh (Kabirdham, Raipur), Sikkim, Himachal Pradesh, Maharashtra, West Bengal. *Elsewhere*: Sri Lanka, Myanmar, Bhamo, Teinzo, Karennee, Malay Peninsula and Malayan Archipelago, Madagascar.

Tribe AGONOSCELIDINI

Genus 3. *Agonoscelis* Spin., 18371837. *Agonoscelis* Spin., *Ess.*: 327.4. *Agonoscelis nubilis* (Fabricius, 1775)

(Fig. 4)

1775. *Cimex nubila* Fabr., *Syst. Ent.*: 712.1851. *Agonoscelis nubila*: Dall., *List. Hem.*, 1: 179.1902. *Agonoscelis nubila*: Distant, *Fauna Brit. India, Rhynchota*, 1: 189.2002. *Agonoscelis nubilis*: Rider *et al.*, Rider *et al.*, *Zoosyst Rossica*, 2: 136.

Material examined: 7exs., Hardi Nala, Dist. Raipur, 8.xi.2011, coll. Anil and party.; 1 ex., Barnawapara, Dist. Raipur, 27.vii.2011, Sunil and party Coll.

Diagnostic character: Body yellowish brown, thickly covered with black punctures, lateral and anterior margins and a central fascia to pronotum, posterior central fascia, apex of scutellum and basal lateral margin of corium smooth orange yellow; connexivum orange yellow with minute black spots at the apices of the incisures; lateral margins of sternum and abdomen orange yellow. Maximum width of Pronotum 2.4 X as long as maximum width of head, and 2.45 X as long as length of pronotum, Length of scutellum 1.97X as long as maximum width of head, Maximum width of Pronotum 1.22 X as long as length of scutellum. *Length*: 10-11 m.m.

Distribution: India: Chhattisgarh (Raipur), Jammu & Kashmir, Karnataka, Maharashtra, Meghalaya, Nagaland, Tamil Nadu, Uttar Pradesh, West Bengal; *Elsewhere*: China, Japan, Malayan Peninsula, Myanmar, Pakistan, Sri Lanka.

Tribe CARPOCORINI

Genus 4. *Gulielmus* Dist., 19011901. *Gulielmus* Dist., *Entomologist*: 347.5. *Gulielmus laterarius* Distant, 1901

(Fig. 5)

1901. *Gulielmus laterarius* Distant, *Entomologist*: 347.1904. *Gulielmus laterarius*: Distant, *Fauna Brit. India, Rhynchota*, 1: 137.

Material examined: 2 exs., Ramgarh, Dist. Korea, 3.viii.2011, Coll. Angshuman and party; 1ex., Dongpahari, Dist. Raipur, 16.vii.2011; coll. Sunil and party; 1ex., Bar village, Dist. Raipur, 14.vii.2011; coll. Sunil and party; 1ex., Dondnala, Dist. Raipur, 10.vii.2011; coll. Sunil and party.

Diagnostic character: Body yellowish brown and thickly punctate; Maximum width of Pronotum 1.93 X as long as maximum width of head, 2.38 X as long as length of pronotum,

1.24 X as long as length of scutellum, Length of scutellum 1.55 X as long as maximum width of head, corium tinged with carmine red; extreme margin of head and a small spot at apex of the scutellum black; two small obscure fuscous spots on anterior area of pronotum; membrane pale greyish; a longitudinal black punctate fascia on each lateral area of abdomen; body beneath yellowish brown. *Length*: 9-10 m.m.

Distribution: India: Chhattisgarh (Korea and Raipur), Maharashtra, Uttar Pradesh.

Tribe EYSARCORINI

Key to the genera of the Tribe Eysarcorini

1. Head more or less acuminate, antennae 5-jointed, alike in both sexes *Adria*
- Head broad, not acuminate..... 2
2. Scutellum little narrowed on posterior half, almost as long as corium *Eysarcocoris*
- Scutellum distinctly apically narrowed and shorter than corium..... *Carbula*.

Genus 5. *Adria* Stal, 1876

1876. *Adria* Stal, *En. Hem.*, 5: 58.

6. *Adria parvula* Dallas, 1851 (Fig.6)

1851. *Pentatoma parvula* Dallas, *List. Hem.*, 1: 248.

1902. *Adria parvula* : Distant, *Fauna Brit. India, Rhynchota*, 1: 139.

Material examined: 1ex, Barnawapara, Dist. Raipur, 5.vii.2011, coll. Sunil Kumar and party; 1ex, Barnawapara, Dist. Raipur, 11.viii.2011, coll. Anil Kumar and party; 1ex, Dong nala, Dist. Raipur, 16.vii.2011, coll. Sunil Kumar and party; 1 ex. Notadol Forest, Dist. Korea, 4.viii.2011, coll. Angshuman and party; 1ex, Latadadar, Dist. Raipur, 27.ix.2011, coll. Sunil Kumar and party; 1ex, Barnawapara, Dist. Raipur, 11.ix.2011, coll. Sunil Kumar and party; 1ex, Barnawapara, Dist. Raipur, 19.vii.2011, coll. Sunil Kumar and party; 1ex, Durg camp, Dist. Durg, 24.viii.2011, coll. Sunil Kumar and party; 1ex, Sankara R.H., Dist. Dhamtari, 13.x.2011, coll. Sunil Kumar and party; 1ex, Nakati pond, Dist. Raipur, 13.vii.2011, coll. Sunil Kumar and party.

Diagnostic character: Body brown, somewhat thickly and coarsely punctuate; scutellum with a

spot near each basal angle, and a small darker spot at apex; body beneath more darkly punctuate on the lateral areas; antennae with the fourth and fifth joints dark gray. Maximum width of Pronotum 2X as long as maximum width of head, and 2.29 X as long as length of pronotum, Length of scutellum 1.46X as long as maximum width of head, Maximum width of Pronotum 1.35 X as long as length of scutellum. *Length*: 9-10 m.m.

Distribution: India: Chhattisgarh (Dhamtari, Durg, Korea, Raipur), Jharkhand, Maharashtra, West Bengal. *Elsewhere*: Myanmar.

Genus 6. *Carbula* Stal, 1864

1864. *Carbula* Stal, *Hem. Afr.*, 1: 140.

Key to the species of the genus *Carbula*

1. Lateral angles of pronotum sub-prominent, rounded, scutellum punctuate not transeversly wrinkled *insocia*
- Lateral angles of pronotum strongly spinously produced 2
2. Scutellum with a small spot near each basal angle and the apical margin ochraceous
..... *aspavia*
- Scutellum with a large spot at each basal angle and the apex impunctate..... *scutellata*

7. *Carbula insocia* (Walker, 1807) (Fig. 7)

1808. *Eysarcocoris insocia* Walker, *Cat. Het.*, 3: 556.

1902. *Carbula insocia* Distant, *Fauna Brit. India, Rhynchota*, 1: 173.

Material examined: 1ex., Ghui Range, Dist. Surguja, 12.xi. 2011, coll. Raha and party. 1ex., Dong nala, Dist. Raipur, 16.x. 2011, coll. Raha and party. 1ex., Dong Pahari, Dist. Raipur, 12xi. 2011, coll. Raha and party.

Diagnostic character: Brownish pale brown, thickly, and darkly punctate; a small yellow brown and smooth spot at each basal angle of the scutellum; antennae, anterior lateral margins of the pronotum, basal lateral margins of the corium, connexivum, body beneath, and legs, light brown; rostrum reaching posterior coxae, its apex black; connexivum spotted with black; body beneath blackly punctuate; abdomen with a more or less

continuous broad black fascia which narrows posteriorly; lateral margins of abdomen with a series of small black spots at apices of incisures. *Length*: 8 m.m.

Distribution: India: Chhattisgarh (Raipur, Surguja), Karnataka, Maharashtra, North West Himalayas.

8. *Carbula aspavia* Distant, 1907
(Fig. 8)

1907. *Carbula aspavia* Distant, *Fauna Brit. India*, Rhynchota, 4: 440.

Material examined: 1ex., Chipli Camp, Dist. Kabirdham, 25.viii.2011. Coll. Sunil and party.

Diagnostic character: Body dark brown, coarsely punctuate, head black with reddish tinge centrally longitudinally ridge; pronotum with lateral angles strongly produced, black robust, their apices acute, slightly up-tern; scutellum transversely wrinkled, coarsely punctuate, small spot near each basal angles and the apical margin light brown, abdomen above black. *Length*: 9 m.m.

Distribution: India: Chhattisgarh (Kabirdham), Uttarakhand.

9. *Carbula scutellata* Distant

1887. *Carbula scutellata* Distant, *Tr. E.S.*: 347.

1902. *Carbula scutellata* Distant, *Fauna Brit. India*, Rhynchota, 1: 172.

2002. 1909. *Plautia crossota*: Rider *et al.*, *ZOOSYST ROSSICA*, 2: 138.

Material examined: 1ex., Manparat, Dist. Surguja, 22xi.2011, coll. Raha and party.

Diagnostic character: Body brownish yellow, brownly punctuate, lateral pronotal angles produced into long acute black spines, scutellum brownish yellow, darkly punctuate, thickest at lateral margins, a large spot at each basal angle of scutellum and apex impunctate, body beneath with scattered black punctures on disk and femora, the margins and under surface of pronotal angles black. Maximum width of Pronotum 3.58X as long as maximum width of head, and 3.34X as long as length of pronotum, 2X as long as scutellum. Length of scutellum 1.79X as long as maximum width of head. *Length*: 8 m.m.

Distribution: India: Chhattisgarh (Surguja), Maharashtra, Meghalaya; *Elsewhere*: Myanmar.

Genus 7. *Eysarcoris* Hahn, 1834

1834. *Eysarcoris* Hahn, *Wanz.*, 11: 66.

Key to the species of the genus *Eysarcoris*

1. Ventral disc of the abdomen completely black..... 2
- Ventral disc with its central angulated fascia black; apical joint of antennae brownish yellow; lateral angles of pronotum acutely prominent..... *montivagus*
2. Pronotum with its anterior area without any spot; apical joint of antennae shiningly black; lateral angles of pronotum obtusely prominent..... *guttiger*
- Pronotum with its anterior area with two large brassy black spots, pronotal angles normal..
..... *ventralis*

10. *Eysarcoris guttiger* (Thunberg, 1783)*
(Fig. 9)

1783. *Cimex guttiger* Thunb., *Nov. Ins. Sp.*, 2: 32.

1902. *Eusarcocoris guttiger*: Distant, *Fauna Brit. India*, Rhynchota, 1: 165

1999. *Eysarcocoris guttiger*: Chakraborty & Ghosh, *Fauna of Meghalaya: State Fauna Series* 4: 402.

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

Material examined: 1ex., Hardinala, Dist. Raipur, 8.xi.2011, coll. Anil and party.

Diagnostic character: Body clay in color, thickly punctured with bronzy black, mainly confluent on head, anterior area of pronotum, and lateral angles of pronotum, lateral angles of the pronotum obtusely prominent; a large spot near each basal angle and apical margin of scutellum smooth and clay colour; body beneath and legs brown and blackly punctuate. *Length*: 5.25-5.50 m.m.

Distribution: India: Chhattisgarh (Raipur), Maharashtra, Nagaland, Sikkim, Uttar Pradesh West Bengal; *Elsewhere*: China, Japan, Myanmar, Sri Lanka.

11. *Eysarcoris montivagus* (Distant, 1902)
(Fig. 10)

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.

Material examined: 1ex., Ghui, Dist. Surguja, 12.xi.2011, Coll. Raha & party; 1ex., Dardipathar, Dist. Raipur, 12.viii.2011, Coll. Anil & party.

Diagnostic character: Differs from *guttiger* by less produced pronotal angles; the narrower and more laterally sinuate scutellum; the abdomen beneath with a central brassy black angulate fascia; the lateral margin of scutellum brassy black. Maximum width of Pronotum 2.47 X as long as maximum width of head, 1.17 X as long as maximum width of head, 2.11 X as long as length of scutellum, Length of scutellum 1.17 X as long as maximum width of head. *Length*: 5-5.5 m.m.

Distribution: India: Chhattisgarh (Surguja, Raipur), Assam, Meghalaya, Nagaland, Sikkim, Uttar Pradesh.

12. *Eysarcoris ventralis* (Westwood, 1837)
(Fig. 11)

1837. *Pentatoma ventralis* Westwood, *In Hope Cat.*, 1: 36.

1902. *Eysarcoris ventralis*: Distant, *Fauna Brit. India, Rhynchota*, 1: 167.

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

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

Material examined: 1ex., Mendra beat, Dist. Surguja, 19.xi.2011, Coll. Raha and party; 1ex., Barnawapara, Dist. Raipur, 5.vii.2011, Coll. Sunil and party; 1ex., Barnawapara, Dist. Raipur, 10.xi.2011, Coll. Sunil and party; 1ex., Hardinala, Dist. Raipur, 8.xi.2011, Coll. Anil and party; 1ex. Hardipatha, Dist. Korea, 12.viii.2011, Coll. Anil and party; 1ex., Daldhawa Beat, Dist. Surguja, 14.xi.2011, Coll. Raha and party; 1ex. Banjarahill, Dist. Kabirdham, 25.xi.2011, Coll. Anil and party.

Diagnostic character: Body brownish yellow thickly punctuate; anterior area of pronotum clay colour with two large transverse brassy black spots;

head brassy black lateral margin of pronotum and a large rounded spot near each basal angle of scutellum, smooth and clay colour, Maximum width of Pronotum 2 X as long as maximum width of head, 1.29 X as long as maximum width of head, 1.55 X as long as length of scutellum, Length of scutellum 1.29 X as long as maximum width of head; central disk of abdomen brassy black; body beneath, legs and antennae yellowish brown. *Length*: 5.5-6.5 m.m.

Distribution: India: Chhattisgarh (Kabirdham, Korea, Raipur and Surguja), Jaharkhand, Karnataka, Maharashtra, Uttar Pradesh, West Bengal. *Elsewhere*: Myanmar.

Tribe HALYINI

Key to the genera of the Tribe Halyini

1. Posterior tibiae simple sometimes dilated, head longer than pronotum..... *Halys*
- Anterior and posterior tibiae dilated
..... *Erthesina*

Genus 8. *Halys* Fabr., 1803

1803. *Halys* Fabr., *Syst. Rhyng.*,: 180.

13. *Halys dentatus* (Fabricius, 1775)*
(Fig. 12)

1775. *Cimex dentatus* Fabr., *Syst. Ent.*, : 702.

1902. *Halys dentatus*: Distant, *Fauna Brit. India, Rhynchota*, 1: 119.

Material examined: 1ex., Devpur, Dist. Raipur, 1.viii.2011, Sunil and party Coll.; 1ex., Barnawapara, Dist. Raipur, 6.ix.2011, Sunil and party Coll.; 1ex, Sankara R.H. Dist. Dhamtari, 27.xi.2011, Sunil & Party Coll.

Diagnostic character: Body dull brown, darkly punctate, pronotum with obscure oblique fasciae, scutellum with small basal and central discal and two marginal spots before apex, corium with discal patches, black; membrane grayish brown; body beneath and legs yellowish brown; head beneath and abdomen thickly punctuate; rostrum extending as long as 5th abdominal segment. *Length*: 17-23 m.m.

Distribution: India: Chhattisgarh (Dhamtari, Raipur), Assam, Andaman & Nicobar Islands, Andhra Pradesh, Kerala, Meghalaya, Sikkim, Uttar

Pradesh, West Bengal; *Elsewhere*: Bangladesh, China, Japan, Sri Lanka.

Genus 9. *Erthesina* Spin., 1837

1837. *Erthesina* Spin., *Ess.*, 291.

14. *Erthesina fullo* (Thunberg, 1783)
(Fig. 13)

1783. *Cimex fullo* Thunberg, *Nov. Ins. Spec.*, 2: 42.

1904. *Erthesina fullo*: *Distant, Fauna Brit. India, Rhynchota*, 1: 117.

Material examined: 1ex. Kudmuran R.H. Dist. Korba, 27.xi.2011, Raha and party coll., 1ex., Stapoamber, Dist. Raipur, 7.viii. 2011, Sunil and party coll., 1ex., Devpur, Raipur, 1.viii. 2011, Sunil and party coll.; 1ex., Luha beat, Dist. Jagdalpur, 4.xi. 2011, Gupta and party coll.

Diagnostic character: Head black thickly punctuate, a central longitudinal line, lateral margins, inner margins of eyes and ocelli yellowish brown; pronotum and scutellum black thickly punctuate; corium purplish brown connexivum alternately clay colour and yellowish brown; four longitudinal fasciae to head beneath, sternal and abdominal incisures, marginal spots and sub apical spots to the abdomen black. *Length*: 20 to 25 m.m.

Distribution: India: Chhattisgarh (Korba and Raipur), Assam, Andhra Pradesh, Andaman & Nicobar Islands, Kerala, Meghalaya, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal. *Elsewhere*: China, Japan.

Tribe MENIDINI

Key to the genera of the Tribe Menidini.

1. Body ovulate, more or less convex above ...
..... *Apines*
- Body more or less flattened, abdomen always distinctly spined at base..... *Menida*

Genus 10. *Apines* Dall., 1851

1851. *Apines* Dall., *List. Hem.*, 1: 232.

15. *Apines concinna* Dall., 1851
(Fig. 15)

1851. *Apines concinna* Dall. *List. Hem.*, 1: 232.

1902. *Apines concinna*: *Distant, Fauna Brit. India, Rhynchota*, 1: 186.

Material examined: 1ex., Orissa road, Dist.

Jagdalpur, 18.vii.2011, coll. Rajendra Gupta and party.

Diagnostic character: Body shiny black, thickly punctuate, body beneath black; pronotum with a central elongate light yellow brown spot; antenna; black, with the second joint bright red brown, Maximum width of pronotum 3.26 X as long as maximum width of head, and 2.62 X as long as length of pronotum, Maximum width of Pronotum 1.78 X as long as length of scutellum; scutellum with three basal spots, a transverse arcuate spot, sometimes linearly extending posteriorly and the apex light yellow brown, Length of scutellum 1.82 as long as maximum width of head; corium with the basal lateral margin and a transverse fasciate spot on apical area light yellow brown; a few elongated lateral marginal abdominal spots, coxae, bases of femora, and the tibiae, creamy white; bases and apices of tibiae more or less black. *Length*: 6.5 m.m.

Distribution: India: Chhattisgarh (Jagdalpur), Maharashtra, Uttarakhand.

Genus 11. *Menida* Motsch., 1861

1861. *Menida* Motsch, *Et. Ent.*, 10: 23

Key to the species of the genus *Menida*

1. Head with three pale brownish yellow lines and a spot of same colour before the eyes, scutellum with a large spot at each basal angle and large anchor shaped yellowish brown apical spot.....*formosa*
- Head with six black punctured lines, scutellum with a small orange spot in each basal angle, a large round black spot in the middle and a black spot on each lateral margin near apex
.....*apicalis*

16. *Menida formosa* (Westwood, 1837)
(Fig. 16)

1837. *Pentatoma formosa* Westwood, in *Hope Cat.*, 1: 34.

1902. *Menida formosa*: *Distant, Fauna Brit. India, Rhynchota*, 1: 226.

Material examined: 1ex., Sarodadadar, Dist. Kabirdham, 27.viii.2011, coll. Sunil and party, 1ex., Sankara R.H., Dist. Dhamtari, 12.x.2011, coll. Sunil and party,

Diagnostic character: Body Shiny dark bright

red brown, thickly punctate; head with three pale light brown lines and a small spot of the same colour before the eyes, antennae light brown, apex of third joint, and fourth and fifth joints excluding bases, fuscous; Maximum width of Pronotum 2.19 X as long as maximum width of head, 2.73 X as long as length of pronotum, 1.56 X as long as length of scutellum, scutellum with a large spot at each basal angle, sometimes connected at basal margin, and a large anchor-shaped apical spot, sometimes connected with the basal spots, light brown, Length of scutellum 1.48 X as long as maximum width of head; corium with the basal lateral margin and a discal spot light brown; membrane colourless; body beneath and legs light brown; the whole disk of sternum; ventral spine long and slender, just passing the intermediate coxae. *Length*: 6.5 m.m.

Distribution: India: Chhattisgarh (Dhamtari, Kabirdham), Maharashtra, Uttarakhand.

17. *Menida apicalis* (Dallas, 1837)
(Fig. 17)

1837. *Rhaphigaster apicalis* Dallas, *List. Hem.*: 285.

1902. *Menida apicalis*: Distant, *Fauna Brit. India, Rhynchota*, 1: 228.

Material examined: 1ex., Sarodadadar, Dist. Kabirdham, 27.viii.2011, coll. Sunil and party, 1ex., Sankara R.H., Dist.Dhamtari, 12.x.2011, coll. Sunil and party,

Diagnostic character: Body pale greyish olive; head with six black punctured lines on the anterior portion, Antennae with the three basal joints brownish yellow; fourth and fifth black. Pronotum thickly punctured with black, the anterior and lateral margins with a narrow whitish edge, Maximum width of Pronotum 2.18 X as long as maximum width of head, 2.52 X as long as length of pronotum, 2.11 X as long as length of scutellum. Scutellum thickly punctured with black, with a small orange spot in each basal angle, a large round black spot in the middle of the base, and a black spot on each lateral margin near the apex, Length of scutellum 1.39 X as long as maximum width of head. Legs brownish yellow, thickly punctured with black; tarsi with the apical joint brown. Rostrum brownish yellow with the tip black. *Length*: 9 m.m.

Distribution: India: Chhattisgarh (Dhamtari, Kabirdham), North India.

Tribe NEZARINI

Key to the genera of the Tribe Nezarini

1. Antennae with the 2nd segment longer than 3rd, metathoracic scent gland peritreme short and wide*Nezara*
- Antennae with 2nd segment shorter than the 3rd, metathoracic scent gland peritreme long and acuminate.....*Acrosternum*

Genus 12. *Acrosternum* Fieber, 1860

1860. *Acrosternum* Fieber, *Eur. Hem.*: 79.

18. *Acrosternum graminea* (Dist.)

1787. *Cimex graminea*: Fabricius, *Mant. Ins.* 2: 295.

1904. *Nezara graminea*: Distant, *Fauna Brit. India*, 1: 221.

1909. *Acrosternum graminea*: Kirkaldy, *Cat. Hem.*, 1: 115.

Material examined: 1ex., Budhadev colony, Dist. Jagdalpur, 16.xi.2011, coll. Gupta and party; 1ex., Bakavand, Dist. Jagdalpur, 16.xi.2011, coll. Gupta and party.

Diagnostic characters: Body above green or yellowish-green, thickly punctate; Maximum width of Pronotum 2.22 X as long as maximum width of head, 2.8 X as long as length of pronotum, 1.48 X as long as length of scutellum, apex of scutellum with two small sub-callous whitish spots, body beneath and legs pale greenish, legs more or less streaked and suffused with yellowish-green, Length of scutellum 1.49 as long as maximum width of head, disk of abdomen brownish yellow; antennae pale fuscous, bases of first, second, and third joints more or less distinctly pale greenish. *Length*: 7-9 m.m.

Distribution: India: Chhattisgarh (Jagdalpur), Tamil Nadu, West Bengal, *Elsewhere*: Sri Lanka.

Genus 13. *Nezara* Amy. & Serv., 1843

1843. *Nezara* Amy & Serv., *Hem.*: 143.

19. *Nezara viridula* (Linnaeus, 1758)*
(Fig. 19)

1758. *Cimex viridula* Linn., *Syst. Ent. Nat.* ed 10: 444.

1902. *Nezara viridula*: Distant, *Fauna Brit. India*, 1: 220.

Material examined: 1ex., Chipli Camp, Dist. Kabirdham, 20.xi.2011. Coll. Anil and party;

7exs., Barnawapara, Dist. Raipur, 6.vii.2011, 10.vii.2011, 13.vii.2011, 18.vii.2011. 1.viii. 2011, coll. Sunil and party; 1ex., Kund pani, Dist. Kabirdham, 21.xi.2011. coll. Anil and party; 1ex., Pipar tala forest, Dist. Kabirdham, 17.xi. 2011, coll. Sunil and party; 1ex., Thalara Forest, Dist. Kabirdham, 23.xi.2011. coll. Anil and party; 1ex., Dongpahari, Dist. Raipur, 4.viii. 2011, coll. Sunil and party; 1ex., Hardinala, Dist. Raipur, 4.viii. 2011, coll. Sunil and party; 1ex., Achanik Pur, Dist. Raipur, 9.viii. 2011, coll. Sunil and party; 1ex., Gabod, Dist. Raipur, 8.x. 2011, coll. Sunil and party; 1ex., K.riv.P., Dist. Jagdalpur, 27.vii. 2011, coll. Gupta and party; 1ex., Makdi ring, Dist. Jagdalpur, 8.xi. 2011, coll. Renu and party; 1ex., Karampani, Dist. Surguja, 15.xi. 2011, coll. Raha and party; 1ex., Ghuirng, Dist. Surguja, 21.xi. 2011, coll. Raha and party.

Diagnostic character: Body pale to dark green, thickly punctuate; extremities of segmental angles of abdomen black; antennae green, apices of the 3rd, 4th and 5th joints purplish brown. Maximum width of Pronotum 2.4 X as long as maximum width of head, 2.72 X as long as length of pronotum, 1.44 X as long as length of scutellum, Length of scutellum 1.66 X as long as maximum width of head. *Length:* 12-16 m.m.

Distribution: India: Chhattisgarh (Jagdalpur, Kabirdham, Raipur, Surguja), Throughout whole of British India; *Elsewhere:* Australasian, Ethiopian, Nearctic, Neotropical, Palearctic.

Tribe PENTATOMINI

Genus 14. *Placosternum* Amy & Serv., 1843

1843. *Placosternum* Amy & Serv., *Hem.*: 174.

20. *Placosternum dama* (Fabricius, 1794)

(Fig. 20)

1794. *Cimex dama* Fabr., *Ent. Syst.*, 4: 92.

1902. *Placosternum dama* Distant, *Fauna Brit. India, Rhynchota*, 1: 211.

Material examined: 1ex., Bar forest, Dist. Raipur, 6.8.2011, coll. Sunil and party; 1ex., Barnawapara, Dist. Raipur, 31.2.2011, coll. Sunil and party; 1ex., Kudmura R.H., Dist. Korba, 27.xi.2011, Coll. Raha and party.

Diagnostic character: Body elongate and the much less produced pronotal angles, which are

sinuate near the anterior angle and then lobately rounded posteriorly; the lateral margins, are simply crenulate; the antennal joints are piceous. *Length:* 18-20 m.m.

Distribution: India: Chhattisgarh (Korba and Raipur), Assam, Kerala, Tamil Nadu.

Tribe PIEZODORINI

Genus 15. *Piezodorus* Fieber, 1861

1861. *Piezodorus* Fieb, *Eur. Hem.*: 78 & 329.

21. *Piezodorus hybneri* (Gmelin), 1790

(Fig. 21)

1790. *Cimex hybneri* Gmelin, *Linn. Syst.Nat.*, 1(4): 1517-2224.

2002. *Piezodorus hybneri*: Rider *et.al. Zoosyst Rossica*, 2: 144.

Material examined: 1ex., Janakpur, Dist. Korba, 14.8.2011, Coll. Angshuman and party; 1ex., Bakabandh, Dist. Jagdalpur, 22.xi.2011, Coll. R.P.Gupta and party; 1ex., Anjani beat, Dist. Surguja, 10.xi.2011, Coll. Raha and party; 1ex., Barnawapara, Dist. Raipur, 24.ix.2011, coll. Sunil and party; 2exs., Hardipathar Dist. Raipur, 5.xi.2011, coll. Sunil and party; 1ex., Devgaon forest, Dist. Raipur, 12.ix.2011, coll. Sunil and party; 1ex., Latadar, Dist. Raipur, 9.xi.2011, coll. Sunil and party; 1ex., Hardinala, Dist. Raipur, 8.xi.2011, coll. Anil and party; 1ex., Barnawapara, Dist. Raipur, 6.x.2011, coll. Sunil and party; 1ex., Barnawapara, Dist. Raipur, 11.xi.2011, coll. Sunil and party; 13exs., Kundpani, Dist. Kabirdham, 21.xi.2011, coll. Anil and party; 11exs., Pipartala forest, Dist. Kabirdham, 17.xi.2011, coll. Sunil and party; 2exs., Sital pani Forest, Dist. Kabirdham, 19.xi.2011, coll. Anil and party; 5exs., Banjari, Dist. Kabirdham, 25.xi.2011, coll. Anil and party; 14exs., Loop Forest, Dist. Kabirdham, 25.xi.2011, coll. Anil and party; 1ex., Chipli Forest, Dist. Kabirdham, 14.xi.2011, coll. Anil and party; 13exs., Thalara forest, Dist. Kabirdham, 23.xi.2011, coll. Anil and party; 1ex., Kharapani Forest, Dist. Kabirdham, 16.xi.2011, coll. Sunil and party; 1ex., Boudha Forest, Dist. Kabirdham, 24.xi.2011, coll. Anil and party; 2 exs., Kudadhura Forest, Dist. Kabirdham, 154.xi.2011, coll. Sunil and party.

Diagnostic character: Body pale greenish,

thickly punctuate; pronotum with a purplish fascia between the angles, Maximum width of Pronotum 2.19 X as long as maximum width of head, Pronotum 2.67 X as long as length of pronotum, 1.35 X as long as length of scutellum; Length of scutellum 1.62 X as long as maximum width of head, clavus with a small black apical spot; basal lateral margin of corium and connexivum pale purplish or reddish; body beneath and legs pale clay colour. *Length*: 8-10 m.m.

Distribution: India: (Jagdalpur, Korba, Raipur, Surguja), Assam, Maharashtra, Sikkim, Uttar Pradesh, West Bengal. *Elsewhere*: Australasia, Japan, Malay peninsula, Myanmar, Sri Lanka.

Tribe SCIOCORINI

Genus 16. *Menedemus* Distant, 1899

1899. *Menedemus* Distant, *A.M.N.H.* (7)4: 430

22. *Menedemus hieroglyphicus* Distant, 1899 (Fig. 22)

1899. *Menedemus hieroglyphicus* Distant, *A.M.N.H.* (7)4: 430.

1902. *Menedemus hieroglyphicus*: Distant, *Fauna Brit. India, Rhynchota*, 1: 127

2011. *Menedemus hieroglyphicus*: Azim, *Halteres*, 3: 2.

Material examined: 1ex., Khar Village, Dist. Surguja, 10.xi.2011, coll. Raha and party.

Diagnostic characters: Body brown, thickly and darkly punctate; head with three discal levigate, linear, light brown fasciae; pronotum with five similar fasciae, and between the two outermost on each side a short basal fascia, and the lateral margins light brown, Maximum width of Pronotum 1.77 X as long as maximum width of head, 2.17 X as long as length of pronotum, 1.32 X as long as length of scutellum; scutellum with an elongate spot near each basal angle, the lateral and apical margins, a central longitudinal fascia, and a transverse central sinuate fascia crossing disk smooth, light brown, Length of scutellum 1.33 X as long as maximum width of head; membrane piceous; connexivum alternately ochraceous and black: body beneath black with reddish tinge; abdomen with the posterior segmental margins, and a series of marginal spots light brown; antennae dull dark brownish, first and third and fourth and fifth joints sub-equal in length. *Length*: 7-8 m.m.

Distribution: India: Chhattisgarh (Surguja), Maharashtra.

Genus 17. *Sciocoris* Fallen, 1829

1829. *Sciocoris* Fallen, *Hem. Suec.*: 20.

23. *Sciocoris indicus* Dallas, 1851 (Fig. 23)

1851. *Sciocoris indicus* Dallas. *List. Hem.*, 1: 132.

2011. *Sciocoris indicus*: Azim, *Halteres*, 3: 2.

Material examined: 1ex., Khar Village, Dist. Surguja, 10.xi.2011, coll. Raha and party.

Diagnostic characters: Body light brown, thickly, coarsely, darkly punctate; antennae with the 1st and 2nd joints light brown, the remainder black with reddish tinge; pronotum with a central smooth line extending through the scutellum, Maximum width of Pronotum 1.78 X as long as maximum width of head, 2.56 X as long as length of pronotum, 1.39 X as long as length of scutellum; apex of scutellum pale greyish, Length of scutellum 1.27 X as long as maximum width of head; connexivum light brown, spotted with reddish black; membrane fuliginous, hyaline; sternum with a narrow pale fascia on each lateral area; abdomen with the disk reddish black, gradually narrowing towards apex, where it contains a central pale line, and with a sub-apical black spot. *Length*: 5.5-6 m.m.

Distribution: India: Chhattisgarh (Surguja), Kerala.

Tribe SEPHELINI

Genus 18. *Niphe* Stal, 1867

1867. *Niphe* Stal, *Ofv. Vet. – Ak. Forh.*, 516.

24. *Niphe subferruginea* (Westwood, 1837) (Fig. 24)

1837. *Pentatoma subferruginea* Westwood, *In Hope Cat.* 1: 35.

1902. *Niphe subferruginea*: Distant, *Fauna Brit. India, Rhynchota*, 1: 151.

Material examined: 1ex., Chipli R.H., Dist. Kabirdham, 28.vii.2011. Coll. Sunil and party; 1ex., Chipli Camp, Dist. Kabirdham, 25.vii.2011. Coll. Sunil and party; 8exs., Barnawapara, Dist. Raipur, 2.viii.2011, Sunil and party Coll. 3exs., Barnawapara, Dist. Raipur, 6.ix.2011, Sunil and party Coll. 2exs., Barnawapara, Dist.

Raipur, 27.vii.2011, Sunil and party Coll. 1ex., Barnawapara, Dist. Raipur, 24.ix.2011, Sunil and party Coll. 10exs., Barnawapara, Dist. Raipur, 4.ix.2011, Sunil and party Coll. 5 exs., Barnawapara, Dist. Raipur, 4.viii.2011, Sunil and party Coll. 1ex., Barnawapara, Dist. Raipur, 27.vii.2011, Sunil and party Coll. 1ex., Barnawapara, Dist. Raipur, 27.vii.2011, Sunil and party Coll. 5exs., Barnawapara, Dist. Raipur, 3.viii.2011, Sunil and party Coll. 3exs., Barnawapara, Dist. Raipur, 16.viii.2011, Sunil and party Coll. 1ex., Latadar, Dist. Raipur, 23.ix.2011, Sunil and party Coll. 1ex., Ahanakpur, Dist. Raipur, 9.viii.2011, Sunil and party Coll. 1ex., Dongpahari, Dist. Raipur, 4.viii.2011, Sunil and party Coll.

Diagnostic character: Body reddish brown, thickly and darkly punctate; lateral margins of the pronotum, basal lateral margins of corium, apex of scutellum, connexivum, body beneath, and legs brown; Maximum width of Pronotum 2.33 X as long as maximum width of head, 2.75 X as long as length of pronotum, 1.33 X as long as length of scutellum, Length of scutellum 1.75 X as long as maximum width of head, antennae with the apex of the third and apical halves of fourth and fifth joints black; sternum coarsely but palely punctate and with about two small black spots on the lateral areas of each segment; lateral areas of abdomen with scattered small spots and the stigmata black. *Length:* 12-14 m.m.

Distribution: India: Chhattisgarh (Kabirdham and Raipur), Kerala, Maharashtra, Meghalaya. *Elsewhere:* Myanmar.

Tribe STRACHIINI

Genus 19: *Bagrada* Stal, 1862

1862. *Bagrada* Stal, *Stett. Ent. Ziet.*, **23**: 105.

25. *Bagrada hilaris* Burmister, 1835* (Fig. 25)

1835. *Bagrada hilaris* Burmister, *Hand de Ent.*, **2**:

2002. *Bagrada hilaris*: Rider, *Zoosyst. Rossica*, **2**: 137.

Material examined: 1ex., Akaltara, Dist, Riapur, 17.vii.2011, Coll. Sunil and party.

Diagnostic character: Body black; anterior and lateral margins and a central fascia to pronotum, a spot near each basal angle and a spot on each

margin before apex of scutellum, a marginal fascia to corium becoming sub marginal a little beyond base and terminating in a rounded discal spot before apex yellowish brown, connexivum yellowish brown spotted with black; streaks to head, lateral marginal spots to sternum and abdomen and segmental spots, black. *Length:* 5-7 m.m.

Distribution: India: Chhattisgarh (Raipur), Uttarakhand, Uttar Pradesh, Maharashtra, Manipur, West Bengal; *Elsewhere:* Sri Lanka.

Subfamily ASOPINAE

Key to the genera of the Subfamily Asopiniae

1. Anterior femora with a prominent spine, lateral pronotum margin crenulated or dentate.....
.....*Eocanthecona*
- Anterior femora unarmed 2
2. lateral pronotal angles more or less produced, head longer than broad*Andrallus*
- lateral pronotal angles rounded, not produced, 2nd joint of antennae more than twice as long as 3rd *Amyotea*

Genus 20. *Amyotea* Ellenreider, 1862

1862. *Amyotea* Ellenreider, *Nat. Tijds. Nederlandsche Indie*. **24**: 137.

26. *Amyotea malabarica* (Fabricius, 1775) (Fig. 26)

1775. *Cimex malabarica* Fabricius, *Syst. Ent. Sis. insect*: 718.

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

Material examined: 1ex., Hardinala, Dist. Raipur, 8.xi.2011, coll. Anil and party.

Diagnostic character: Body pale reddish, above thickly and very finely punctate, beneath yellow brown; antennae, eyes, basal spot to head, two spots to pronotum, a large spot near each basal angle of scutellum, and membrane black; head beneath, lateral margins of sternum and abdomen, rostrum, coxae, and femora pale reddish; tibiae, tarsi, and anterior margins of sternal and abdominal segments black or bluish-black. *Length:* 12-14 m.m.

Distribution: India: Chhattisgarh (Raipur),

Assam, Karnataka, Maharashtra, West Bengal, *Elsewhwre*: Borneo, Java, Sumatra, Myanmar, Philippines.

Genus 21. *Andrallus* Bergroth, 1905

1905. *Andrallus* Bergroth, *Ann. Soc. Ent. Belg.*, **49**: 370.

27. *Andrallus spinidens* (Fabricius, 1787)
(Fig. 27)

1787. *Cimex spinidens* Fabr., *Mant. Ins.*, **2**: 285.

1902. *Audentia spinidens*: Distant, *Fauna Brit India, Rhynchota*, **1**: 253.

1905. *Andrallus spinidens*: Bergroth, *Ann. Soc. Ent. Belg.*, **49**: 370.

Material examined: 1ex., Barnawapara, Dist. Raipur, 7.vii.2011, coll. Sunil and party; 1ex., Bakabandh, Dist. Jagdalpur, 22.xi.2011, coll. Gupta and party.

Diagnostic character: Body pale brownish to yellowish brown; head with blackish punctate fascia on each side of the central lobe; pronotum with pale central smooth line extending between the pronotal angles which are black and emarginated with the posterior spine being very small. *Length*: 13-16 m.m.

Distribution: India: Chhattisgarh (Jagdalpur, Raipur), Assam, Jharkhand, Karnataka, Meghalaya, Sikkim, Uttar Pradesh, West Bengal. *Elsewhere*: Africa, Fiji Island, Malayan archipelago, Mexico, Tahiti Island.

Genus 22: *Eocanthecona* Bergroth, 1915

1915. *Eocanthecona* Bergroth, *Ann. Mag. Nat. Hist.* **8(15)**: 481.

28. *Eocanthecona furcellata* (Wolff, 1801)
(Fig. 28)

1801. *Cimex furcellata* Wolff., *IC.*: 182.

1902. *Canthecona furcellata*: Distant, *Fauna Brit. India, Rhynchota*, **1**: 248.

1994. *Eocanthecona furcellata*: Thomas, *Insect Mundi*, **8(3-4)**: 176.

Material examined: 1ex., Loop forest, Dist. Kabidham, 20.xi.2011, Anil and party; 1ex., Hardi Pather, Dist. Raipur, 5.xi.2011, coll. Sunil and party; 1ex., Kontarali baeat, dist. Sarguja, 19.xi.2011., coll. Raha and party; 1ex., Karmpani, dist. Sarguja, 15.xi.2011., coll. Raha and party.

Diagnostic character: Body yellowish brown, thickly punctate with bronzy punctures; head with a central fascia; pronotum with broken transverse fascia on anterior area with the lateral angle bronzy black, pronotal margin anteriorly finely dentate and apices of the pronotal angles bifid; connexivum punctate with sub quadrate bronzy black spots; scutellum bronzy black at base with a smooth spot at each basal angle. *Length*: 15-16m.m.

Distribution: India: Chhattisgarh (Kabirdham, Raipur and Surguja), Jharkhand, Maharashtra, Tamil Nadu, Uttar Pradesh, West Bengal; *Elsewhere*: Japan, Myanmar, Sri Lanka.

Family II CYDNIDAE

Key to the genera of the Family Cydnidae

1. Antennae four jointed; Posterior femora not spined.....*Adrisa*
- Antennae five jointed; Posterior femora generally spined.....*Macroscytus*

Genus 23. *Adrisa* Amyt & Serv., 1843

1843. *Adrisa*, Amt. & Serv., *Hem.*, : 89.

29. *Adrisa magna* (Uhler, 1843)
(Fig. 29)

1830. *Acatalectus magna* Uhler., *Proc. Ac. X. S. Phil.*, : 222

1902. *Adrisa magna*: Distant, *Fauna Brit. India, Rhynchota*, **1**:89.

Material examined: 1ex., Barnawapara, Raipur Dist., 15.vii.2011, Sunil and party.

Diagnostic characters: Body black, punctured; head rounded in front, the lateral margins wrinkled, strongly punctate, and very finely and obscurely meeting in front of the median lobe; pronotum subquadrate, the anterior angles rounded, the pronotal disk punctured excepting a smooth space on the anterior area; scutellum wrinkled and punctate, with a more or less distinct central carinate line; corium thickly punctate; membrane smoky brown. *Length*: 13-19 m.m.

Distribution: India: Chhattisgarh (Raipur), Nagaland; *Elsewhere*: Hong Kong, Myanmar

Genus 24. *Macroscytus* Fieber, 1861

1861. *Macroscytus*, Fieber, *Eur. Hem.*: 83, 362.

Key to species of the genus *Macroscytus*

1. Body deep brown, pronotum convex in front, transversely flattened without any impression, head rounded, tarsi yellow, membrane hyaline.....*brunneus*
- Body pitchy brown, pronotum and scutellum at apex deeply foveate, ocelli very large and red, tarsi ochraceous, membrane brownish and semitransparent.....*foveolus*

30. ***Macroscytus brunneus*** (Fabricius, 1803)
(Fig. 30)

1803. *Cydnus brunneus*, Fabr., *Syst. Rhyng.*: 18.

1902. *Macroscytus brunneus*: Distant, *Fauna Brit. India, Rhynchota*, 1: 95.

Material examined: 1ex., Barnawapara, Raipur Dist., 9.vii.2011, Sunil and party; 1ex., Barnawapara, Raipur Dist., 14.viii.2011, Sunil and party.

Diagnostic characters: Body oval, deep brown; corium glossy; rostrum, base of antennae, and the tarsi light brown. Head rounded in front, central lobe as long as the lateral lobes, with 5-6 hairs along the margin; first and second joints of the antennae light brown, the third shorter than the second; pronotum convex in front, transversely flattened, without an impression; finely punctured on the disk; corium almost flat, finely punctate; membrane hyaline, veins infuscated; tarsi yellow, all the femora spinose beneath, posterior femora with two stout spines at apex. *Length* : 8 m.m.

Distribution: India: Chhattisgarh (Raipur), All over India, *Elsewhere*: Africa, China, Myanmar, Sri Lanka and Europe.

31. ***Macroscytus foveolus*** (Dallas, 1851)
(Fig. 31)

1851. *Aethyssa foveolus* Dall., *List. Hem.*, 1: 113.

1902. *Macroscytus foveolus*: Distant, *Fauna Brit. India, Rhynchota*, 1: 97.

Material examined: 1ex., Bridulaw colony, Jagdalpur Dist. 16.vii.2011, 1ex., Barnawapara, Raipur Dist., 15.viii.2011, Sunil and party.

Diagnostic characters: Body pitchy brown, head relatively small, with the anterior margin rounded, Ocelli very large, red. Antennae rusty red brown, dusky towards the base. Thorax pitchy-

brown, with the posterior margin chestnut; anterior margin with a faint, finely punctured, transverse fovea; Scutellum pitchy-brown at the base, chestnut-brown towards the apex and strongly but sparingly punctured; the tip with a distinct fovea; membrane brownish, semitransparent. Abdomen beneath pitchy, very smooth and shiny; the sides thickly and finely punctured. Anterior legs pitchy-red with the coxae reddish; all the tarsi rusty red brown. Rostrum pitchy-red, with the apex pitchy. *Length*: 8.5-11 m.m.

Distribution: India: Chhattisgarh (Jagdalpur and Raipur), North India, Sikkim.

Family III DINIDORIDAE

Genus 25. ***Coridius*** Illiger, 1807

1807. *Coridius* Illiger, *Fauna Etrusca.*, 2: 361.

Key to the species of the genus *Coridius*

1. Antennae black, body beneath and legs black.....*ianus*
- Antennae fuscous, body beneath and legs more or less infuscated..... 2
2. Abdomen above red, third joint of antennae longer than the second.....*brunneus*
- Abdomen above black, third joint of antennae never longer than second.....*obscurus*

32. ***Coridius brunneus*** (Thunberg, 1783)*
(Fig. 32)

1783. *Cimex brunneus* Thunberg, *Nov. Ins. Sp.*, 2: 45.

1902. *Aspongopus brunneus*: Distant, *Fauna Brit. India, Rhynchota*, 1: 281

1992. *Coridius brunneus*: Lis., *Ann. Upper Silesian Mus. Ent.*, 3: 38(R).

Material examined: 1ex., Baranwapara, Dist. Raipur, 10.vii.2011, coll. Sunil and party; 1ex., Kontarali beat, Dist. Surguja, 19.xi.2011, coll. Raha and party; 1ex., Makdirno, Dist. Jagdalpur, 10. ix.2011, coll. R.P. Gupta and party; 1ex., Jamunapani F, Dist. Kabirdham, 22.xi.2011, coll. Anil and party; 1ex., Sitalpani F, Dist. Kabirdham, 19.xi.2011, coll. Anil and party;

Diagnostic characters: Body yellowish brown, beneath and legs more or less smoky gray brown with blackish tinge; antennae dark brown near to black, apical joint brownish yellow, sometimes

with its apex narrowly black; abdomen above red; third joint of the antennae a little longer than the second, shorter than the fourth or fifth joints. *Length*: 17-20 m.m.

Distribution: India: Chhattisgarh (Jagdalpur, Kabirdham, Raipur, Surguja), Assam, Jharkhand, Maharashtra, Meghalaya, Nagaland, West Bengal. *Elsewhere*: Myanmar

33. *Coridius ianus* (Fabricius, 1775)
(Fig. 33)

1775. *Cimex ianus* Fabr., *Syst. Ent.*: 714.

1902. *Aspongopus janus*: Distant, *Fauna Brit. India, Rhynchota*, 1: 281.

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

Material examined: 1ex., Barnawapara, Dist. Raipur, 7.vii.2011, coll. Sunil and party, 1ex., Guragaon, Dist. Raipur, 23.vii.2011, coll. Sunil and party.

Diagnostic character: Body yellowish brown or blood reddish; antennae, head, subanterior transverse fascia to pronotum, basal half of scutellum black or greenish black; antennae with the 3rd joint a little longer than first, shorter than remaining joints. *Length*: 16 to 20 m.m.

Distribution: India: Chhattisgarh (Raipur), Karnataka, Kerala, Maharashtra, Meghalaya, Tamil Nadu, Uttarakhand, West Bengal. *Elsewhere*: Myanmar, Sri Lanka.

34. *Coridius obscurus* (Fabricius, 1794)
(Fig. 34)

1794. *Cimex obscurus* Fabr., *Ent. Syst.*, 4: 107.

1902. *Aspongopus obscurus*: Distant, *Fauna Brit. India, Rhynchota*, 1: 281

1992. *Coridius obscurus*: Lis., *Ann. Upper Silesian Mus. Ent.*, 3: 38(R).

Material examined: 1ex., Barnawapara, Dist. Raipur, 10.vii.2011, coll. Sunil and party.

Diagnostic characters: This species is very similar to *C. brunneus*, in general body colour and size, but differ for *C. brunneus* by having the abdomen above black, and the second and third joints of the antennae sub-equal in length, not third joint longer than second. *Length*: 17-20 m.m.

Distribution: India: Chhattisgarh (Raipur), Assam, Karnataka, Maharashtra, West Bengal.

Family IV SCUTELLERIDAE

Genus 26. *Chrysocoris* Hahn, 1843

1843. *Chrysocoris*, Hahn, *Wanz. Ins.*: 38.

Key to the species of the genus *Chrysocoris*

1. Pronotum with five spots on, two anterior and three on posterior disk, seven spots on scutellum, six arranged in pairs and one elongate spot on anterior disk..... *perpureus*
- Pronotum with eight spots, three near anterior margin, three larger on posterior disk, and one on each lateral angle *stollii*

35. *Chrysocoris perpureus* (Westwood, 1837)
(Fig. 35)

1837. *Callidea purpureus*, Westw. in *Hope Cat.*, 1: 15

1902. *Chrysocoris perpureus*: Distant, *Fauna Brit. India, Rhynchota*, 1: 58.

Material examined: 1ex., Bakavand, Dist. Jagdalpur, 16.xi.2011, coll. Gupta and party; 1ex., Balamdehi riv., Dist. Raipur, 1.x.2011, coll. Sunil and party;

Diagnostic characters: Above bluish or purplish-green; five spots on pronotum, two anterior and three on posterior disk, seven spots on scutellum, six arranged in pairs and one on anterior disk; antenna black; Body beneath, base of first joint of antennae, and femora ochraceous, lateral margins of the abdomen purplish; head beneath, marginal spots on sternal segments, stigmatal spots, apices of femora, the tibiae and tarsi, and third and fourth joints of rostrum bluish-black; a central spot to sternum, and sometimes one at base and apex of abdomen, piceous. *Length*: 15-17 m.m.

Distribution: India: Chhattisgarh (Jagdalpur and Raipur), Andhra Pradesh, Himachal Pradesh, Karnataka, Maharashtra, Tamil Nadu,

36. *Chrysocoris stollii* (Wolff., 1801)
(Fig. 36)

1801. *Cimex stollii* Wolff., *IC.*, 2: 48, 45.

1902. *Chrysocoris stollii*: Distant, *Fauna Brit. India, Rhynchota*, 1: 58

Material examined: 5exs., Rampur, dist. Durg, 24.viii.2011, Sunil and party; 8exs., Bhilai, dist.

Durg, 21.viii.2011, 19.viii.2011, Sunil and party; 1ex., Balamdehi riv., Dist. Raipur, 1.x.2011, coll. Sunil and party; 1ex., Bakavand, Dist. Jagdalpur, 16.xi.2011, coll. Gupta and party; 4exs., Saja, Dist. Durg, 23.viii.2011. coll. Sunil and party.

Diagnostic characters: Body above bluish or purplish green; pronotum with eight spots, three near anterior margin, three larger and basal on posterior margin and on each lateral angles; scutellum with 7 spots, six of which arrange in pairs and a central one large sub-ovate. *Length:* 13-14.5 m.m.

Distribution: India: Chhattisgarh (Durg, Jagdalpur and Raipur), Andaman & Nicobar islands, Assam, Delhi, Meghalaya, Nagaland, Sikkim, West Bengal. *Elsewhere:* China, Pakistan, Myanmar.

Family V TESSARATOMIDAE

Genus 27. *Tessaratoma* Lep. & Serv., 1825

Key to species of the genus *Tessaratoma*

1. Male with the anal appendage is truncate at its apex.....*javanica*
- Male with the anal appendage is sinuate at the apex, the apical angles acute
.....*papillosa*

37. *Tessaratoma javanica* (Thunberg, 1783)*
(Fig. 37)

1783. *Cimex javanica* Thunb., *Nov. Ins. Spec.*, 2: 45.

1902. *Tessaratoma javanica*: Distant, *Fauna Brit. India, Rhynchota*, 1: 259.

Material examined: 23exs., Kartala Rest House, Dist. Korba. 5.vi.2012, Coll. Kailash Chandra and party.

Diagnostic characters: Body yellowish brown; antennae black, apical joint brownish-yellowish brown; margins of head and pronotum very narrowly black; pronotum with the lateral margins moderately amplified and reflexed, apex of scutellum more or less dull black; body beneath generally covered with a white powdery substance; legs and tarsi dark bright red brown; body above

very finely and obscurely punctuate. *Length:* 25-31 m.m.

Distribution: India: Chhattisgarh (Korba), Andhra Pradesh, Assam, Maharashtra, Sikkim. *Elsewhere:* Myanmar.

38. *Tessaratoma papillosa* (Drury, 1770)
(Fig. 38)

1770. *Cimex papillosa* Drury, *Ill* 1: 96.

1902. *Tessaratoma papillosa*: Distant, *Fauna Brit. India, Rhynchota*, 1: 259.

Material examined: 1ex., Ramgarh, Korea Dist., 3.viii.2011, coll. Angshuman and party; 1ex., Raipur, Raipur Dist., Teak plantation, 3.viii.2011, coll. Anil and party.

Diagnostic characters: This species is alike to *T. javanica*, in general body colours, but it can easily be separated from *T. javanica* by having narrower and more elongated body; the antennae are altogether black. Male with the anal appendage sinuate at the apex, the apical angles acute. *Length:* 25-28 m.m.

Distribution: India: Chhattisgarh (Korea and Raipur), Assam, Tamil Nadu, West Bengal. *Elsewhere:* China

SUMMARY

This paper deals with 38 species of Pentatomid bugs belonging to 27 genera under 5 families from the state of Chhattisgarh. Of these 30 species belonging to 24 genera constitute new record from this state. The diagnostic character of each species, keys to various taxa, distributions of each species in various districts of Chhattisgarh, other states and countries have been incorporated. The study is based on the collections made by different survey parties in recent years.

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PLATE I



Figs. 1. *Antestia anchora* (Thunb.)



Figs. 2. *Antestia cruciata* (Fabr.)



Figs. 3. *Plautia crossota* Krik



Figs. 4. *Agonoscelis nubilis* (Fabr.)



Figs. 5. *Gulielmus laterarius* Distant



Figs. 6. *Adria parvula* Dallas



Figs. 7. *Carbula insocia* Walker



Figs. 8. *Carbula aspavia* Distant



Figs. 9. *Carbula scutellata* Dist.

PLATE II

Figs. 10. *Eysarcoris guttiger* (Thunb.)Figs. 11. *Eysarcoris montivagus* Dist.Figs. 12. *Eysarcoris ventralis* (Walker)Figs. 13. *Halys dentatus* Fabr.Figs. 14. *Erthesina fullo* Thunb.Figs. 15. *Apines concinna* Dall.Figs. 16. *Menida formosa* (Westw.)Figs. 17. *Menida apicalis* (Dall.)Figs. 18. *Acostermum grami* Dist.

PLATE III



Figs. 19. *Nezara viridula* (Linn.)



Figs. 20. *Placosternum dama* (Fabr.)



Figs. 21. *Piezodorus rubrofasciatus* (Fabr.)



Figs. 22. *Menedemus hieroglyphicus* Dist.



Figs. 23. *Sciocoris indicus* Dall.



Figs. 24. *Niphe subferruginea* (Westw.)



Figs. 25. *Bagrada hilaris* (Burmeister)



Figs. 26. *Amyotea malabaricus* (Fabr.)

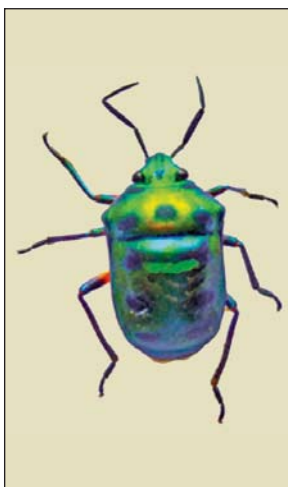


Figs. 27. *Andrallus spinidens* (Fabr.)



Figs. 28. *Eocanthecona furcellata* (Wolff)

PLATE IV

Figs. 29. *Adrisa magna* (Uhler)Figs. 30. *Macroscyrtus brunneus* (Fabr.)Figs. 31. *Macroscyrtus foveolus* (Dall.)Figs. 32. *Coridius brunneus* (Thunb.)Figs. 33. *Coridius ianus* (Fabr.)Figs. 34. *Coridius obscurus* (Fabr.)Figs. 35. *Chrysocoris perpureus* (Westw.)Figs. 36. *Chrysocoris stollii* (Wolff)Figs. 37. *Tessaratomia javanica* (Thunb.)Figs. 38. *Tessaratomia papillosa* (Drury)

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