NEW DATA ON THE SUBFAMILY CLEPTINAE (HYMENOPTERA: CHRYSIDIDAE)

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Two species are described from Mexico: Cleptidea flavisterna Q and C. mexicana d. Lustrina Kurian is revalidated from synonymy as a valid genus. New synonyms of Mesitius neotropicus Brues and Cleptidea propodealis Kimsey are established. Lectotype is designated in C. fasciata. The key for the 19 Cleptidea species is amended. New taxonomic and distributional data, and information concerning the variability are presented. New data of the type materials are given and some data are corrected in the preceding literature.

Key words: taxonomy, distribution of genera *Lustrina* and *Cleptidea*, Hymenoptera, Chrysididae

INTRODUCTION

The specimens of this subfamily are generally rare and represented very infrequently in museums in the Nearctic Region. The first species was described by DALMAN (1823). DUCKE (1902a, 1902b, 1904, 1905 and 1906) published three new species and for the first time a key. The revision of *Cleptidea* was published by KIMSEY (1981, 1986a) with 8 new species and a key. KIMSEY divided the genus into six species groups. KIMSEY and BOHART (1991) listed the publication date and the locations of the type material, the synonyms and the distribution of the 18 known species of Cleptidea of the World in their fundamental work. An updated key of KIMSEY was given by MÓCZÁR (1996) with a new species. It is completed presently with two new species: Cleptidea flavisterna ? and C. mexicana of both from Mexico. Lustrina KURIAN with genotype L. assamensis KU-RIAN is revalidated as a good genus. New synonyms are established: Mesitius neotropicus BRUES = identical with C. dubuyssoni (DUCKE), C. propodealis KIMSEY = identical with C. fasciata (DALMAN). A lectotype is designated for C. fasciata. New taxonomic, distributional data, and information are presented concerning the variability of C. fasciata (DALMAN), C. mutilloides (DUCKE), C. nigrocincta (KIEFFER), C. panamensis KIMSEY and C. xanthomelas (MOCSÁRY). New detailed data of the type materials are given, to clarify the status of the holotypes and lectotypes, and some data of the earlier literature are corrected.

Acronyms of museums, universities, institutions: AEI – The American Entomological Institute, Gainesville, USA; BMNH – The Natural History Museum (formerly British Museum Natural History), London, Great Britain; CNC – Agriculture and Agri-Food (formerly Canadian

National Collection), Research Branch, Ottawa, Canada; FRI – Forest Research Institute, Dehra Dun, India; HNHM – Department of Zoology, Hungarian National History Museum, Budapest, Hungary; MCZ – Museum of Comparative Zoology, Harvard University, Cambridge, USA; MNHN – Museum National d'Histoire Naturelle, Paris, France; NMW – Naturhistorisches Museum, Zoologische Abteilung, Wien, Austria; NRS – Naturhistoriska Riksmuseet, Stockholm, Sweden; UCD – Bohart Museum of Entomology, University of California, Davis, USA; USNM – National Museum of Natural History (formerly United States National Museum), Smithsonian Institution, Washington, D. C., USA; ZMB – Museum für Naturkunde der Humboldt Universität (formerly Zoologisches Museum), Berlin, Deutschland.

Symbols: F-I (-II-III) = flagellomere I (and II, III); MS = malar space; MOD = middle ocellus diameter; POL = postocellar line; OOL = ocular-ocellar line; Ped = pedicellus, PD = puncture

diameter; T-I etc. tergum or tergite (T-I the first segment etc.).

Subfamily Cleptinae

Cleptinae: KIMSEY and BOHART 1991: 52 ♀ ♂

The main differences of the related genera:

1 Claws with one perpendicular submedial tooth. Head as wide as long or longer. Pronotum with or without groove along mid-line

Cleptes LATREILLE

- Claws bifid, with single, large, subparallel subsidiary tooth

2

- 2 Head length somewhat more than half the width. Pronotum without a median longitudinal line
 Lustrina KURIAN
- Head wider than long. Pronotum with deep groove along mid-line
 Cleptidea MOCSÁRY

Lustrina KURIAN

Lustrina Kurian, 1955: 86; Kimsey and Bohart 1991: 53 (syn. of Cleptes)

Lustrina assamensis KURIAN, 1955

Lustrina assamensis Kurian, 1955: 87 ♀ Figs 76–80. Holotype ♀; India: Murphulani T. E. Assam, 1–12–1920 (Dehra Dun) (FRI) ?

Lustrina assamensis: NAGY 1968: 168 \(\text{Fig. 1} \) (Examin. of holotype)

Cleptes assamensis (KURIAN): KIMSEY and BOHART 1991: 53, 59 (Coll. Dehra Dun?)

NAGY (1968) furnished a drawing of the holotype, studied KURIAN's two slides, and after his thorough examination considered it to be a well-defined independent genus. It is necessary to consider also its geographical position.

Albeit Dr. S. SINGH kindly sent KURIAN's large publication to me, he could not find the type species. The search for the other KURIAN types by KROMBEIN (1996:2) was also unsuccessful.

On the other hand I recommend that this strange species be separated from the related *Cleptidea* species by using the 1–11 couplets of the *Cleptidea* key (p.141) and the main characteristics as follows: "Head brown with a violet lustre...; clypeus, mandible..., antennae dark reddish brown. Thorax brown, with reddish metallic blue in some places and green elsewhere; ...tergites with a variety of lustre; first is mostly green; second violet, third blue, green and violet, with a golden-yellow band anteriorly, fourth basally yellowish brown, apically black; ...Eyes bare; pronotum without a median longitudinal impression; ...propodeum laterally ends in two teeth... directed posteriorly..." (According to KURIAN).

Distribution. India, Assam (KURIAN 1955).

Cleptidea Mocsáry

Cleptidea Mocsáry, 1904: 567. Type: Cleptes aurora F. Smith, 1874: 452

Cleptidea aurora (F. SMITH, 1874)

Cleptes aurora F. Sмітн, 1874: 452 Q. Lectotype Q desig. Kімsey 1986b: 106; Brazil: Teffe (Ega) (ВМNН).

Cleptidea aurora: Mocsáry, 1904: 567 ♀ ♂; Ducke 1906: 8, ♀ ♂; Kimsey 1981: 803, ♀ ♂, Figs 1, 3, 5, 7, 9.

Material examined: 2 σ . Brazil: Estado do Pará: Faro II, 1 σ and Obidos XII (DUCKE), 1 σ (HNHM).

Addition to SMITH's diagnosis: T-II-IV with gradually denser and deeper punctures.

Distribution. Northern part of South America (KIMSEY and BOHART 1991).

Cleptidea dubuyssoni (DUCKE)

Cleptes aurora var. buyssoni Ducke, 1904: 29 d. Holotype d; Brazil: Oyapok (MNHN). Cleptes buyssoni Ducke, 1905: 100 \circ d

Cleptes dubuyssoni DUCKE, 1913: 12

Cleptidea dubuyssoni: KIMSEY 1986a: 317

Mesitius neotropicus Brues, 1914: 119 d. Holotype d. Guyana: Bartica (MCZ). New synonymy. *Cleptidea neotropica* (Brues): Kimsey and Bohart 1991: 69 d

Material examined: 2 \, 2 \, \display \, d. Brazil: Brasilia (no more data), 1 \, d (HNHM). Venezuela: Aragua Maracay, El Limón Pozo del Diablo, I 1996 (M. SHARKEY), 1 \, Q (HNHM); Carabobo Canoabo VIII 1992, coffee plant 1000 m (L. MASNER), 1 \, Q (CNC). Guyana: "Br. Guiana Feb. 3. Am", "M. C. Z. holotype 28775", "Mesitius neotropica Brues Type", 1 \, d (MCZ).

The original diagnosis of *neotropicus* corresponds to the holotype and it is identical with *dubuyssoni* both in color and in sculpture. Consequently I consider *neotropicus* to be a synonym.

Distribution. Brazil, Surinam (KIMSEY 1986a), Guyana and Venezuela.

Cleptidea fasciata (DALMAN)

Cleptes fasciata DALMAN, 1823: 90, 2 \, Lectotype \, (designated herein); Brasilia (NRS).

Cleptes fasciata: DAHLBOM 1854: 11-12 9 Tab. I. 1.

Cleptidea fasciata: Kimsey 1981: 802, 805 ♀ σ; 1986a: 316; Kimsey and Bohart 1991: 67–69 Fig. 13 ♀; Móczár 1996: 154.

Cleptidea propodealis KIMSEY, 1986a: 316, 322 1 \, Fig. 5 (not 10). Holotype \, Brazil: Santa Catarina, Nova Teutonia (UCD). New synonymy.

Cleptidea propodealis: MÓCZÁR 1996: 154, 156, 157 Pd Figs 10–12, 21–22.

According to DALMAN's diagnosis: "Logit. lin. 3 vel 4", I designate the first female as lectotype. The second female also with "Schh" label is designated the paralectotype, which is preserved in Budapest. Both of them correspond to the original description. DAHLBOM examined also two specimens from Stockholm and from Berlin. The latter female (Brasil: Virmond) proved to belong to *C. xanthomelas* (MOCSÁRY). Both DAHLBOM's detailed description and KIMSEY (1981) agree with the type material, except KIMSEY's data: 1981: 805, 1986a: 316 and Fig. 13, as well as KIMSEY and BOHART (1991: 65), which is only in part equivalent to the lectotype.

Comparing the listed specimens the colours are variable. Thorax entirely yellowish or orange, paler in old specimens, except metanotum, propodeum and legs with brown last tarsomeres. Metanotum dark reddish brown with blackish deepening on both sides (in lecto- and paralectotypes), metanotum nearly entirely red (in 1 \circ det. KIMSEY), only in front partly red (in 3 \circ , 1 \circ) or entirely black

(in 2 \, \text{?}, 3 \, \text{o}). Propoedum largely yellowish and vertically whitish, except black central area; inner sides of hollows bilaterally black; a small spot brown on propodeum laterally above midcoxae (in lectotype). With same colour, but a spot before base of propodeal spine and a large brownish black spot above midcoxae (in paralectotype). Propodeum entirely black in remaining females and males, except the spines always white, and also black with more or less yellowish spot round base of spine. Antennomeres also orange or partly brownish or blackish to a different degree. The comparison of the proportions shows no essential differences. (The numbers were obtained by dividing the length of the morphological part by its width.)

· · · · · · · · · · · · · · · · · · ·	Ped	F-I	F-II	MS: MOD
fasciata 9 lectotype	2.3	3	1.1	1.5
fasciata ♀ det. Kimsey	2.0	3.1	1.1	1.2
fasciata ♀ (KIMSEY 1981)	_	3	longer than wide	about 1
propodealis ♀ (KIMSEY 1986a)	2.3	2.7	as long as wide	1.0
fasciata of (KIMSEY 1981)	2.0	slightly more than 3	about 1.5	_
propodealis of (Móczár 1996)	1.9	2.7	1.3	1.5 (not 0.7)

These small differences concerning the colour and proportions establish only the variability of one species, and they are not sufficient to distinguish two species. I believe *C. propodealis* KIMSEY, 1986a should be regarded as a synonym.

Further additions to the description of the lectotype:

Length 9.3 mm. Mandible black only basally. Body with long white hairs especially on ventral side; pronotum and mesonotum also with brownish hairs. Mandibles with two normal and a minute third teeth. Posterior margins of hind ocelli connected with a distinct sulcus. Lateral margins of head very strongly convergent behind eyes. Metanotal projection low, its top faintly impressed medially, much wider than high also in lateral view, posterior fovea deep, slightly elliptic horizontally. T-III sparsely and double punctured. Male (Móczár 1996): same as female, but metanotum and propodeum black; spines shorter. Metanotal projection rounded on top. Male genitalia, Figs 21, 22, etc. as in *propodealis* (Móczár 1996: 157–158).

Distribution. Brazil (DALMAN 1823). Panama, Peru, Argentina (KIMSEY 1981).

Cleptidea flavisterna sp. n.

Holotype Q: "Mex. Sin. 15 mi. W El Palmito, 5000' 25 July 1964. W. R. M. Mason" (CNC).

Length Q 7 mm. Head, pronotal disc medially, mesonotum, scutellum and postscutellum largely with bright green highlights, gena partly, rest of pronotum, especially mesonotum and scutellum with violet reflection. Propleuron, collar, both sides of metanotum, disc, posterior face of propodeum, petiolar insertion and a narrow line before hind coxae, brownish black. Mandibles

largely, lateral margin of pronotum, 2 large hollows in front laterally of metanotum yellowish white. Tegula, mesopleuron, side of propodeum and thorax ventrally orange. Last 3 tarsomeres above yellowish brown. Pterostigma, veins brown, nervulus interstitial. Body with long white hairs.

Facial punctation deep, dense and separated by 0–0.5 PD apart. Frontal sulcus distinct, reaching fore ocellus, narrow sulcus connecting small pits outside of hind ocelli. Ocelli in an acute angle, POL: OOL = 7:14. Ped 2.2 times as long as wide, F-I length 2.0 times width, F-II 0.9 times width. MS 0.6 MOD long. Sides of clypeus convergent to apex. Pronotum with deep, coarse punctures 0.5–1.0 PD apart, surface uneven, with large, deep row of pits anteriorly and posteriorly. Mesonotum, postscutellum moderately convex, smooth, shining with only a few smaller punctures laterally. Posterior fovea 8.5 times as wide medially as long. Lateral margin of propodeum hardly convex medially, propodeal teeth 2.8 times as long as wide medially. T-I smooth, shining and nearly impunctate, T-II with dense small punctures, T-III-IV with small double punctures. Hindcoxa with very small tooth basally.

d. Unknown.

Cleptidea magnifica (DUCKE)

Cleptes magnificus Ducke, 1905: 99, 102 d. Holotype d; Brazil: Oyapok (MNHN). Cleptidea magnifica (Ducke): Kimsey 1981: 805 d Fig. 11.

Material examined: 1d. Guyana: Bas Maroni, Charvein IX (Moult), 1d (HNHM).

Distribution. Brazil (DUCKE 1905). First record for Guyana.

Cleptidea mexicana sp. n.

Holotype of: Mexico: "Mex. Sin. 15 mi. W. El Palmito, 5000' 4 Aug. 1964. W. R. M. Mason" (CNC).

Length of 6.5 mm. Head, prothorax, mesothorax, scutellum, postscutellum and central area of propodeum purple with greenish blue reflection. Clypeus, base of mandible, antenna, propodeal teeth and last four tarsomeres brown; rest of propodeum, lower part of mesopleuron bluish black. Tegula, fore and middle legs light yellowish brown, hind legs more brownish. Abdominal segment I, except dark brownish-black posterior streak and blackish petiolar insertion and large lateral spots of segment II yellowish brown; rest of segment II, and segments III-V black. Pterostigma pale brown, veins largely brown, nervulus interstitial. Body with long white, partly with pale brownish hairs.

Facial punctation deep and separated by about 0.5 PD. Frontal sulcus very short, developed only below fore ocellus. A narrow and deep sulcus connecting small pits of hind ocelli. Ocelli in an acute angle, POL: OOL = 6: 14. Lateral margin of clypeus conspicuously convergent to slightly emarginate apex. Ped 1.3 times as long as wide, F-I length 2.8 times width, F-II 1.9 times width. MS 0.4 MOD long. Pronotal punctures coarse and uneven with small and narrow row of pits along posterior margin. Mesonotum and scutellum with large, deep punctures, separated by 13 PD apart. Postscutellum (metanotum) convex, shining, with only some smaller punctures, posterior fossa about 6 times as wide as long medially. Lateral margin of propodeum conspicuously convex medially, teeth slender, 3.3 times as long as wide medially. T-I with very fine punctures, T-II with very dense and fine punctures, T-III-IV with double punctures. Hindcoxa with distinct tooth basally.

Q. Unknown. Additional specimens of both sexes may indicate that *flavisterna* and *mexicana* belong the same species.

Cleptidea mutilloides (DUCKE)

Cleptes mutilloides DUCKE, 1902a: 91, 2d. Lectotype d (desig. KIMSEY 1981: 806 not 1986 by KIMSEY and BOHART 1991: 69); Brazil: Pará (MNHN).

Cleptes mutilloides: DUCKE 1902b: 204 ♀.

Cleptidea mutilloides: Mocsáry 1904: 569; Kimsey 1981: 806 Pơ Fig. 12; Móczár 1996: 153–154 Pơ Figs 4–6.

Material examined: 1 \mathbb{Q} 8 \mathbb{G} . Brazil: "Brasil Pará 20.3.1900 Ducke", "Cleptes mutilloides Ducke \mathbb{G} typ. det. A. Ducke", "Cleptes mutilloides Ducke det. Mocsáry", "Paralectotypus Cleptidea mutilloides Ducke \mathbb{Q} (sic!) desig. LSK" (in fact \mathbb{G} , not \mathbb{Q}), "Cleptidea mutilloides Ducke \mathbb{G} det. Móczár 1994", "Hym. Typ. No. 3836 Mus. Budapest", 1 \mathbb{G} (HNHM); Brasil Pará 8.3.1902 (Ducke), "Cleptes mutilloides Ducke \mathbb{Q} type det. A. Ducke" albeit this specimen was labelled as type by DUCKE, it is not "Paralectotypus Cleptes mutilloides Ducke desig. LS Kimsey", because it was published later (1902 \mathbb{B}) not in the original diagnosis, 1 \mathbb{Q} (HNHM); "Brasil Pará" or "Pará Ducke" labels with III, 3 \mathbb{G} with det DUCKE and 2 \mathbb{G} without date, partly with det. MOCSÁRY labels, 2 \mathbb{G} (HNHM) and (NMW).

Additions to the original description (\$\times\$): Length 6.2 mm. Frons with coarse punctures, punctures larger than PD (Móczár 1996, Fig. 4). Frontal sulcus deep before midocellus. Scutellum with scattered and larger punctures, interspaces polished medially. Metanotal projection short with two fovea posteriorly (1. c. Fig. 5). Posterolateral spine of propodeum white. Postocellar groove connected with a sulcus. Pronotum with deep groove along mid-line and with coarse punctures similar to mesonotum (1. c. Fig. 6).

Distribution. Brazil, North Argentina (KIMSEY and BOHART 1991).

Cleptidea napoana KIMSEY, 1986

Cleptidea napoana KIMSEY, 1986a: 318 of Q. Holotype of. Ecuador: Napo, Limoncocha (CNC).

Material examined: 19. "Ecuador, Napo, Limoncocha, 250 m 18–28. VI. 1976 S. and J. Peck", 19 paratype (CNC).

Addition to the description (of paratype): Pronotal disc largely black, only frontal corners with blue reflection behind the hyaline margin; lateral sides yellowish red. Anterior margin of pronotum medially, tip of pronotal lobe and tegula anteriorly, yellowish; pit row red along posterior margin. Central area of propodeal disc yellowish red, propodeal tooth white.

Distribution. Ecuador (KIMSEY 1986a).

Cleptidea nigrocincta (KIEFFER, 1911)

Godfrinia nigrocincta Kieffer, 1911: 207 Fig. 6. Holotype σ'; Mexico: Tabasco, Teapa (BMNH). Cleptidea nigrocincta: Kimsey 1986a: 319 σ Q.

Material examined: 1 of 1 \circ . Mexico: Chiapas Muste n(ear) Huixtla IX, XI Mal. trap (Welling), 1 of 1 \circ (CNC).

Additions to KIMSEY's description: Vertex with purple reflection behind ocelli and apex of abdomen partly whitish (σ). Simultaneously KIMSEY published *C. janzeni* new species (σ) with the same colour, which reminds one of nigrocincta (B). The following table compares the proportions.

	Ped	F-I	F-II	MS : MOD
nigrocincta of (KIMSEY 1986a)	2.4	2.3	1.7	0.7
nigrocincta of det. Kimsey	1.4	2.7	1.4	0.7
nigrocincta♀(KIMSEY 1986a)	1.7	2.4	1.3	_
nigrocincta 9 det. KIMSEY	2.2	2.3	1.1	0.8
janzeni oʻ (KIMSEY 1986a)	1.6	2.1	1.2	1.0

It is worth mentioning that substantial inequality is present only between the proportions of the pedicellus. Further difference: "Métapleures et haut des mésopleures ridés longitudinalement" (KIEFFER 1911), and not wrinkled but smooth, shining (det. KIMSEY). One may presume that these differences establish only the variability of the species. The examination of more specimens (? d), found in the future may solve these problems.

Distribution. Mexico (KIEFFER 1911, KIMSEY 1986a).

Cleptidea panamensis KIMSEY, 1986

Cleptidea buyssoni: KIMSEY 1981: 807 Fig. 10, not DUCKE 1904.

Cleptidea panamensis KIMSEY, 1986a: 319 ºO Figs 2, 7, 10 (not 4, 9). Holotype o'; Panama: Canal Zone (UCD).

Cleptidea panamensis: Móczár 1996: 154.

Material examined: 3 \, 2 \, 3 \, d. Panama: "Canal Zone, Pan Barro Colorado I V 25 1981 RB and LS Kimsey", "Paratypus Cleptidea panamensis \, Kimsey", 1 \, d and with the same data, except the date VII 1 1977 and \, \, 1 \, 2 \, (UCD); Barro Colorado Id. VI 14 1939 (ZETEK), 1 \, d \, (HNHM). Venezuela: San Esteban, swept XI 1939 (P. ANDUZE), 1 \, d and Trinidad: Rio Pan 16 III 1912 (A. Busck), 1\, (USNM). Costa Rica: Puntarenas Manuel Antonio N. P. VIII 1986 (L. MASNER), 1\, \, (CNC).

The specimens correspond to the original diagnosis and paratypes listed here, except small differences as follows. In all Q: F-I are 2.4–2.5 times (in specimen Puntarenas 2.6 times) (not 3) as long as wide; vertex nearly black (not dark metallic blue) behind ocelli; mesopleuron entirely reddish exceptionally in Puntarenas Q; scape, Ped, F-I partly white partly green and/or dark brown (Puntarenas). T-II of all Q and Q with large whitish spots laterally (not whitish anteriorly), T-III double punctured. The metanotal projection reddish brown, also on paratype in female (not red), brownish black in paratype male, or yellowish red

in all above listed male (not purple). Further data to the original description: white marking along inner ocular margins remarkably narrower in \mathcal{P} than in \mathcal{O} . From with coarse punctures (Trinidad \mathcal{P}) length of body (\mathcal{P} \mathcal{O}): 6–6.7 mm.

Distribution. Panama, Costa Rica (KIMSEY, 1986a). First record for Venezuela and Tridinad.

Cleptidea xanthomelas (MOCSÁRY)

Cleptes xanthomelas Mocsáry, 1889: 36, 2 \, T.1 Fig. 10. Lectotype (desig. KIMSEY 1981: 806 not 1986a) (KIMSEY and BOHART 1991: 707); Brasil: Blumenau (HNHM).

Cleptidea xanthomelas: Mocsáry 1904: 569 Q; Kimsey 1981: 806 Qơ Fig. 13; Kimsey 1986a: 324 (revised distribution); Móczár 1996: 154, figs 13–15.

Material examined: 4\(\text{P}\). Brazil: "Brasilia" "738/67 = Blumenau", "xanthomelas Mocs. typ. det. Mocsáry", "Holotypus \(\text{Q}\) Cleptes xanthomelas Mocsáry LSK", "Lectotypus Cleptes xanthomelas Mocsáry \(\text{Q}\) det. Móczár 1995", 1\(\text{Q}\) (Hym. Typ. No. 3837 Mus. Budapest) (HNHM); "Blumenau Brasil, 1855 I. Hetschko", "Cleptes xanthomelas det. Mocsáry", "Type Paratype" (red label), "Paralectotypus Cleptes xanthomelas Mocsáry \(\text{Q}\) det. Móczár 995", (NMW); Nova Teutonia Sta. Catarina 10 1967 (F. Plaumann), 1\(\text{Q}\) (HNHM); Virmond, Cleptes fasciata Dalm. sec. Dhlb. 1854 det. BISCHOFF, 1\(\text{Q}\) (ZMB).

According to Fig. 10 of (MOCSÁRY 1889), the colour of mesonotum is "testaceous" (= yellowish orange) in the lectotype. KIMSEY stated in her key (1986a: 316): "scutum black", probably on the basis of such a specimen which is similar to the one from Nova Teutonia listed above (MÓCZÁR 1996, Fig. 14). This (Q) is identical with the lectotype in sculpture and in colour, except for the black scutum and the small differences given in the key. I regard these specimens with black scutum as a variety of *xanthomelas*.

Distribution. Brazil (Mocsáry, 1889).

THE REVISED KEY OF CLEPTIDEA

Summarizing the preceding data establishes that the following corrections are needed in the previous key of world species (MóCZÁR 1996). The original couplets 1–12 remain unchanged except that the number 16 should be changed to 15 in the key.

Fore wings with two brown bands subbasally and sublaterally. Propodeum partly or nearly entirely black, except lateral spines white and digitate. T-II-III black with basolateral whitish spots. Both sides of T-III with scattered and remarkably deeper and larger punctures than basally or punctures on T-II. Metanotal projection low, reddish or entirely black

fasciata (DALMAN)

- Fore wings with one subapical brown band. Propoedum orange. T-III black, without lateral spot
- 14 (the preceding key couplet 14 should be omitted and the preceding couplet 15 remains unchanged with *xanthomelas* (MOCSÁRY) and *xantha* KIMSEY
- (in the preceding key couplets 16–18 should be changed to 15–19 as follows): Wings unbanded, evenly slightly brown tinted. Abdomen entirely orange or only segment I except a dark brown streak before posterior margin and segment II laterally light brown. Scape, Ped brown. Thorax with metallic highlights at least dorsally
- Wings partly unstained or with yellow or brown band(s). Abdomen partly white, yellow, orange, black, brown and in some species with light spots.
 Scape, Ped red. Thorax largely reddish orange also dorsally
- F-I-III white. Head, thorax dorsally metallic green, partly with violet reflection. Thorax laterally and ventrally nearly entirely and legs orange. Abdomen entirely orange. Propodeal disc largely and posterior face dark brownish black, lateral teeth white. 7 mm flavisterna sp. n. ?
- All flagellomeres brown. Head, thorax nearly entirely with purple highlights with greenish blue reflections. Abdominal segment II medially, III-V entirely brown to black. Propodeum entirely black-dark brownish black including lateral teeth. 6.5 mm mexicana sp. n. of
- 17 Abdominal segment I and basal half of II white, legs dark brownish black. Metanotal projection wider than high in lateral view. MS 0.7–1.0 MOD long
- Abdomen without white, at most yellow, red or black, legs red. Metanotal projection longer than high. MS 1.2–1.1 MOD long
- Pronotum, mesonotum, scutellum, metanotum, thorax laterally and ventrally red (\$\phi\$); propodeum black, except white lateral teeth, or red to brownish black posteriorly (\$\Phi\$). Mandible, F-I-II (-III) red and venter of first several flagellomeres red, rest of flagellum black. Legs largely dark brown (\$\phi\$) or reddish brown (\$\Phi\$). Head with metallic blue (\$\phi\$) or golden green (\$\Phi\$) highlights. Wings with basal und subapical brown bands. Metanotal posterior fovea 6 (\$\phi\$) or 8 (\$\Phi\$) times as wide as long. Posterior part of segment II and rest of abdomen brownish black, except for large whitish spot laterally

on segment III (o) or segment III medially and IV entirely brownish orange (Q). 58 mm nigrocincta (KIEFFER)

- Thorax yellow, except propleuron, sternum, mesopleuron ventrally and propodeum black, only lateral teeth pale. F-I-III blackish. Flagellomeres, legs dark brown. Head dark metallic blue. Wings brown stained except for unstained medial band. Posterior fovea about 8 times as wide as long. Apical half of segment II brown, segment III brown with small whitish lateral spot, IV-V brown becoming yellower on the V. 4 mm janzeni KIMSEY of
- 19 Segment I and anterior half of II red, rest black. Thorax with propodeum red; tegula, prosternum black. F-I-III red. Forewing with faint yellow medial band. Head black with metallic green highlights. Metanotal fovea 4 (\$\Pi\$) or 2.5–3 (\$\sigma\$) times as wide as long. \$\Pi\$ 7.5, \$\sigma\$ 5.5 mm

viridiceps (KIEFFER)

- Segment I and II anteriorly yellow, posteriorly blackish brown, III-IV orange, only III brown laterally. Thorax, propodeum red, except posterior face of propodeum dark brown. F-I and F-II reddish. Wings with 2 brown bands. Head black with green and brassy highlights. Metanotal fovea 6 times as wide as long. 5 mm balboana KIMSEY ♀

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