

Grassflies of the genus *Merochlorops* (Diptera: Chloropidae) from South-East Asia with description of a new species

Злаковые мухи рода *Merochlorops* (Diptera: Chloropidae) Юго-Восточной Азии с описанием нового вида

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Chloropid flies of the genus *Merochlorops* Howlett, 1909 (Diptera: Chloropidae) from the mainland part of South-East Asia are reviewed. A key to determination of nine species is proposed. A new species, *M. punctifrons*, is described from Thailand. The new data on the distribution and life mode of larvae are given for other species.

Выполнен обзор злаковых мух рода *Merochlorops* Howlett, 1909 (Diptera: Chloropidae) материковой части Юго-Восточной Азии и составлен ключ для их определения, включающий 9 видов. Описан новый вид *M. punctifrons* из Таиланда; для остальных видов приведены новые данные по распространению и образу жизни личинок.

Key words: chloropid flies, South-East Asia, Diptera, Chloropidae, *Merochlorops*, new species, new records

Ключевые слова: злаковые мухи, Юго-Восточная Азия, Diptera, Chloropidae, *Merochlorops*, новый вид, новые находки

INTRODUCTION

Merochlorops Howlett, 1909 is a large genus distributed in the Oriental and Australian regions. Two species were recently found on the Arabian Peninsula (Deeming, 2011; Deeming & Al-Dhafer, 2012). Only one species is known from the South-East Palaearctic (China, Sichuan) and a few species occur near the southern border of the Palaearctic Region, in China (in Yunnan) and in Japan (on the Amami Islands). Sarnosky (1977) listed 18 species from the

Oriental Region. He ignored the synonymisation proposed by Duda (1934), probably as it was done only in the key without discussion. Four species are known from Australia (Spencer, 1986). In our paper, nine species from South-East Asia are considered including a new species.

MATERIAL

The specimens from Vietnam are kept in the collection of the Zoological Institute, St Petersburg. Those from Thailand, except one female, have been collected in the scope of the “Tiger” project and sent to E.P. Nar-

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tshuk by Brian Brown (Natural History Museum of Los Angeles County). The labels of Thailand specimens include sample codes ("T" and a number). The material from Thailand will be deposited at the Entomological Section of Quin Sirikit Botanical Garden (PO Box 7, Mae Rim, Chiang Mai, 50180 Thailand). One female from Thailand is kept at the Zoological Museum of the Moscow State University. Other specimens including the types are kept in the European museums visited by the first author in different years. The type specimens were examined but not in detail (e.g., in most cases the genitalia of types were not examined).

Abbreviations: DEI – Deutsche Entomologische Institut, Mecklenburg; BMNH – Natural History Museum, London; NBC – Natural Biodiversity Centre, Leiden; RM – Ricksmuseum, Stockholm; ZISP – Zoological Institute of Russian Academy of Sciences, St Petersburg; ZMB – Zoologisches Museum, Berlin, ZMMU – Zoological Museum of the Moscow University.

Morphological terminology follows Andersson (1977).

TAXONOMIC PART

Order DIPTERA

Family CHLOROPIDAE

Subfamily CHLOROPINAE

Genus *Merochlorops* Howlett, 1909

Merochlorops Howlett, 1909: 627.

Type species: *Formosina ceylanica* Duda, 1930 (designated by Sabrosky, 1984: 713).

= *Formosina* Becker, 1911: 78.

Type species: *Chloropisca lucens* de Meijere, 1908 (designated by Malloch, 1931: 76).

= *Coomanimyia* Séguéy, 1938: 102.

Type species: *Coomanimyia ops* Séguéy, 1938: 102 (by monotypy).

Diagnosis. Body stout, with scutum convex. Head as wide as thorax or wider. Eye large, upright, bare; gena narrow. Scutum black with yellow marks or yellow with black or orange stripes, densely covered

with fine setulae or bare; scutellum flattened on disk. Chaetotaxy reduced on head and thorax. Hind tibia with tibial organ.

Males and females of some species differing in width of frons and in colouration of thorax: females darker, with wider frons. Male genitalia with short surstylus and small mesolobus; postgonites usually with two long setae. Some species with membranous vesicles in pregenital area.

Distribution. The South-East Palaearctic, Oriental Region, Australia and the Arabian Peninsula.

Bionomics. Life mode of larvae is known only for *M. flavipes*, larvae of which are stem-borers of ginger plant and *Cardamon* (Malloch, 1927; Duda, 1935). Specimens of *M. ceylanica* and *M. lucens* bred from plants are probably secondary invaders.

A KEY TO SPECIES OF *MEROCHLOROPS* FROM MAINLAND OF SOUTH-EAST ASIA

Several keys to species of *Merochlorops* were published earlier: Becker (1911) included four species and Duda (1934), 12 Oriental species. Spencer (1986) noted that the Duda's key was of limited value as the couplets were "inaccurately dichotomic". Cherian (1991) provided a key to six Indian species, Kanmiya (1978), to three species occurring in Japan, and Liu et al. (2015), to five Chinese species.

The proposed key includes the species distributed in mainland China and Taiwan (*M. campanulatus* Liu, Nartshuk et Yang, 2015, *M. ceylanicus* (Duda, 1930), *M. cinctus* (de Meijere, 1916), *M. dimorphus* Cherian, 1991, *M. flavipes* (Malloch, 1927), *M. gigas* (Becker, 1911), *M. lucens* (de Meijere, 1908), *M. nigritibius* Cherian, 1991 and *M. punctifrons* sp. nov.) but does not include species distributed in the Philippines and Indonesia. *M. ops* Séguéy, 1938 from Vietnam is not included because its description is incomplete.

1. Transverse vein *r-m* situated at the base of discal cell 2
- Transverse vein *r-m* situated at about the middle of discal cell or more distally 4

2. Scutum covered with dense fine setulae. Ocellar triangle partly or entirely black with shallow longitudinal depressions. Abdomen mostly black except for yellow base 3
- Scutum entirely smooth, shiny, mostly bare. Ocellar triangle reddish or yellowish brown, with obtuse apex. Abdomen yellow with black tergum 4. Male genitalia as in Figs 6 and 7 *M. cinctus*
3. Scutellum triangular, as long as wide. Second sector of costa 1.5 times as long as third sector. All femora and tibiae almost entirely black. Male genitalia as in Fig. 8 *M. nigrifrons*
- Scutellum semicircular, shorter than wide at base. Second sector of costa twice or more than twice as long as third sector. All femora and tibiae entirely yellow. Male genitalia as in Fig. 5 *M. dimorphus*
4. Scutum entirely smooth, mostly bare, without fine setulae 5
- Scutum densely covered with fine setulae 7
5. Scutum yellow, bearing five yellowish orange longitudinal stripes, three middle ones broad and coalescent. Male genitalia as in Figs 3 and 4 *M. campanulatus*
- Scutum predominantly black 6
6. Terminal sector of vein R_{4+5} distinctly bent towards costal vein; vein M_{1+2} bent towards R_{4+5} . Sides of frons reddish yellow. All tibiae broadly yellowish brown *M. ceylanicus*
- Terminal sector of vein R_{4+5} not bent towards costal vein; vein M_{1+2} only slightly bent towards R_{4+5} apically. Sides of frons mostly black, yellow only anteriorly. All tibiae black. Male genitalia as in Fig. 1 *M. lucens*
7. Ocellar triangle entirely smooth. Costal vein thickened 8
- Ocellar triangle with numerous shallow depressions. Costal vein not thickened *M. punctifrons* sp. nov.
8. Scutellum with two approximate apical setae. Scutum yellow with five black stripes (male) or scutum black with a large triangular yellow spot on area between postpronotum and wing base (female). Pleura with a large triangular yellow spot on anepisternum. Postpedicel no longer than wide. Legs yellow except for femora black (female) or legs entirely yellow (male) *M. gigas*
- Scutellum with 3–6 marginal setae on fine tubercles. Scutum yellow with five fused indistinct black stripes and pleura yellow with four black marks (male) or black with a large

triangular yellow spot on area between postpronotum and wing base (female). Postpedicel longer than wide. Legs yellow except for femora black (female) or legs entirely yellow (male) *M. flavipes*

REVIEW OF SPECIES

Merochlorops campanulatus Liu, Nartshuk et Yang, 2015 (Figs 3, 4)

Liu et al., 2015: 286 – southern China (Yunnan).

Material examined. **Thailand**, T491, *Loei Prov.*, Kradueng National Park, Huay Ta Hack, 16°51.958'N 101°50.668'E, 280 m, Malaise trap, 30 Aug. – 6 Sept. 2006, one male (Sutin Khonglasae leg.).

Diagnosis. Ocellar triangle yellow, shiny, with obtuse apex. Scutum yellow, bearing five yellowish orange longitudinal stripes, three middle ones broad and coalescent. Scutellum yellow. Legs entirely yellow.

Distribution. China (Yunnan), Thailand.

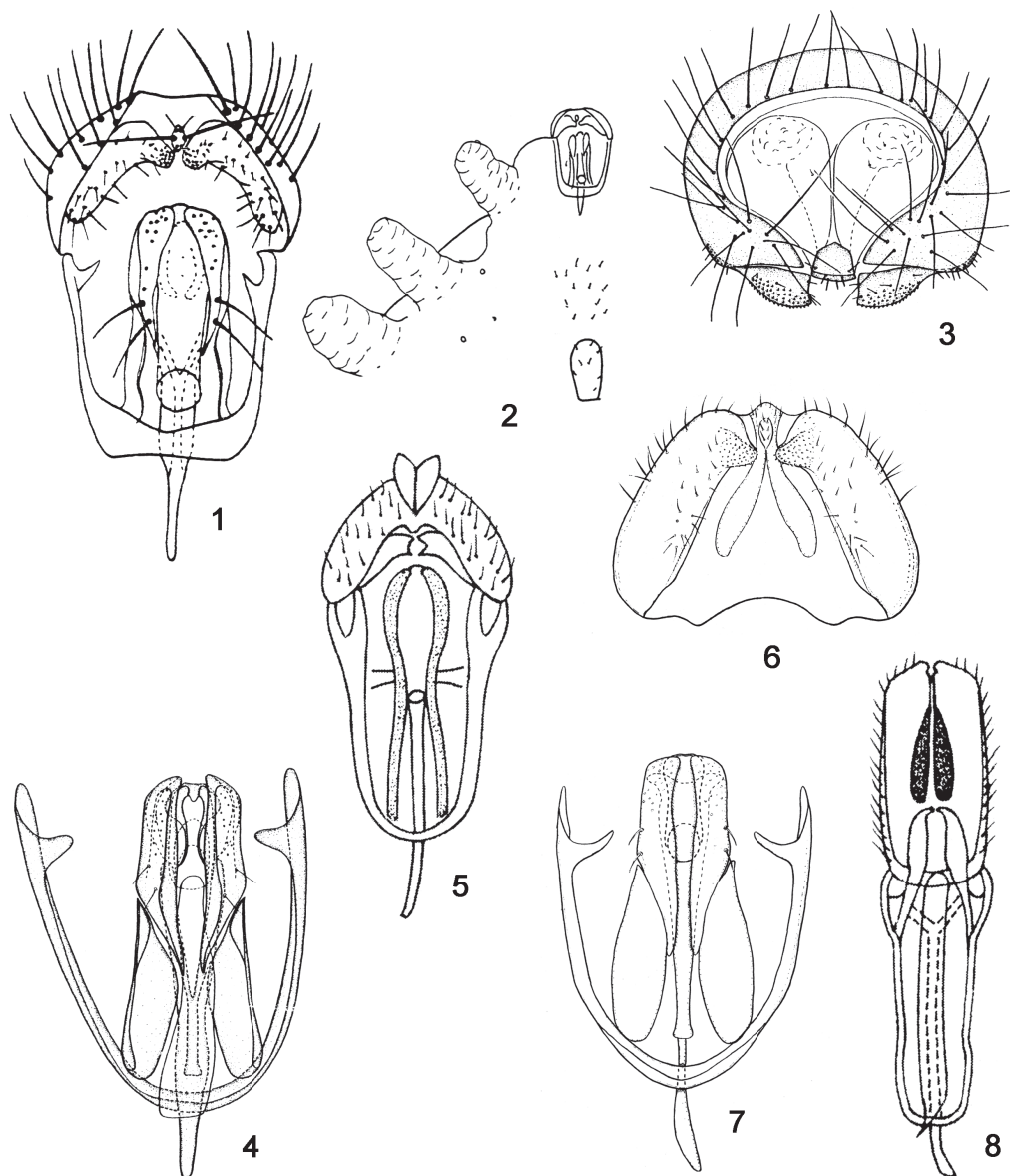
Merochlorops ceylanicus (Duda, 1930)

Duda, 1930: 300 (*Formosina*) – Ceylon; Duda, 1934: 151 (*Formosina*) – Ceylon; Sabrosky, 1977: 309 (*Formosina*) – Ceylon, India, Malaysia; Sabrosky, 1984: 713 (*Merochlorops*); Cherian, 1991: 56 (*Merochlorops*) – Sri Lanka.

Syntypes. One female and one specimen without abdomen with label “Typ”, **Sri Lanka** [“Ceylon”], 1899, W. Horn leg. DEI.

Other material examined (BMNH). **India**, Coimbatore, bred from larvae boring plant, one specimen [det. Sabrosky]. **China**, *SE Tibet*, Zayut, 7–12000 f, summer 1932, one specimen (R.J.H. Kaubach). **Malaysia**, *Selangor*, Sinling Simpek, 1 Jan. 1933, ex “FMS museum”, one specimen; PeRak FMS Larut Hills, 3700–4500 f, 15 Feb. 1933, one specimen (H.M. Pendlebury). **Indonesia**, *Sulawesi*, Utara Dumogs Bone National Park, low forest, c. 200 m, Malaise trap, 1985, one specimen (Rothamsted). **Papua New Guinea**, *Moribe Prov.*, Bululo, at light, 27 Sept. 1980, two specimens (R.I. Van-Wright); Kokoda, 300–1200 f, Aug. 1933, one specimen (L.E. Cheesman).

Diagnosis. Ocellar triangle black. Frons narrow, yellow or reddish yellow. Postpedi-



Figs 1–8. Male genitalia of *Merochlorops*. 1–2, *M. lucens*: 1, ventral view; 2, vesicles in pregenital part (after Andersson, 1977); 3–4, *M. campanulatus*: 3, epandrium; 4, hypandrium (after Liu et al., 2015); 5, *M. dimorphus*, ventral view (after Cherian, 1991); 6–7, *M. cinctus*: 6, epandrium; 7, hypandrium (after Kanmiya, 1978); 8, *M. nigritibius*, ventral view (after Cherian, 1991).

cel longer than wide, yellow. Scutum with yellow mark on sides and pleura with a yellow mark on anepisternum. Scutellum yellow. All femora black, tibiae broadly yellowish brown, tarsi yellow with dark 2 terminal tarsomeres. Terminal sector of vein R_{4+5} dis-

tinctly bent towards costal vein; vein M_{1+2} bent towards R_{4+5} .

Distribution. China, India, Malaysia, Sri Lanka, Papua New Guinea and Indonesia. Recently the species was recorded from the United Arab Emirates (Deeming, 2011).

Note. The species is recorded for the first time from China, Papua New Guinea and Indonesia.

Merochlorops cinctus (de Meijere, 1916)
(Figs 6, 7)

= *Formosina tumida* Becker, 1916: 441 (synonymised by Duda, 1934: 149).
de Meijere, 1916: 54 (*Formosina*) – Sumatra; de Meijere, 1918: 338 (*Formosina*) – Indonesia (Simalur); Duda, 1934: 149 (*Formosina*) – Taiwan; Sabrosky, 1977: 309 (*Formosina*) – India, Philippines, Indonesia (Simeulue Island); Kanmiya, 1978: 196 (*Formosina*) – Japan (Amami Islands) (drawing of male genitalia); Kanmiya, 1983: 233 (*Formosina*) – Japan (Amami Islands); Sabrosky, 1984: 713 (*Merochlorops*); Cherian, 1991: 56 (*Merochlorops*) – India.

Material examined. Vietnam, Ha Son Binh Prov., Da Bac Tuly, 19 Oct. 1990, one female (Nartshuk leg.).

Diagnosis. Ocellar triangle large, yellowish brown, with obtuse apex, extending to anterior margin of frons. Postpedicel reddish yellow. Scutum shining, bare, black to reddish brown; postpronotum, notopleural and postalar regions yellow. Scutellum triangular, yellow. Legs entirely yellow or blackish brown. Transverse vein *r-m* proximal of the middle of discal cell; second sector of costa 2–2.5 times the third sector. Abdomen yellow except for tergite 3 with a black band.

Distribution. China (Yunnan, Taiwan), Japan (Amami Islands), Vietnam, India, Indonesia (Sumatra, Simeulue Island), Philippines.

Note. The species is recorded for the first time from Vietnam.

Merochlorops dimorphus Cherian, 1991
(Fig. 5)

Diagnosis (according to Cherian, 1991). Ocellar triangle reaching anterior margin of frons and ending almost obtusely; its surface with five shallow longitudinal depressions. Postpedicel as long as wide. Arista slender, with fine dense pubescence. Palpus

yellow. Scutum shiny black but for yellow area anterior to transverse suture and posterior to postpronotum and a narrow area at posterolateral margin. Basal part of scutellum yellow or in some females scutellum entirely yellow. Pleura pale yellow with four shiny black marking. Femora and tibiae entirely yellow.

Distribution. India.

Merochlorops flavipes (Malloch, 1927)

= *Formosina cardami* Duda, 1935 (synonymised by Cherian, 1991: 55).
Malloch, 1927: 579 (*Formosina*) – India; Duda, 1934: 151 (*Formosina*) – India; Sabrosky, 1977: 310 (*Formosina*) – India; Cherian, 1991: 55 (*Merochlorops*) – India.

Holotype, male and two *paratypes*, India, on *Cardamom*, reared from larvae boring in ginger plant, 16, 18 and 19 Sept. 1926 (Y. Pamachandra Rao), BMNH.

Additional material (syntypes of *M. cardami*). Two females, India, Valparai, from *Cardamom* stems, 6 and 7 March 1932, No 208, BMNH; one female, same label, ZMB.

Diagnosis. Frons black with two yellow spots at sides or yellow with a black median stripe. Scutum black with yellow spots on sides or yellow on postpronotum and in anterior part, densely covered with fine setulae. Scutellum triangular, yellow, darkened at apex and with 5–10 short black marginal setae on small tubercles. Pleura black with yellow markings or yellow with black marking. Costal vein thickened distal of apex of R_1 . Legs entirely yellow or femora and hind tibia darkened. Females usually darker than males.

Distribution. India.

Note. Duda described *Formosina cardami* as a new species twice on the same material (Duda, 1935: 239; Duda, 1936: 345), from the specimens reared from stems of *Cardamom*.

Merochlorops gigas (Becker, 1911)

= *Formosina ochracea* Becker, 1911 (synonymised by Duda, 1934: 151).

Becker, 1911: 79 (*Formosina*) – Taiwan; Duda, 1934: 151 – Taiwan; Hennig, 1941: 164 (*Formosina*) – Taiwan; Sabrosky, 1977: 310 (*Formosina*); Sabrosky, 1984: 713 (*Merochlorops*); Yang & Yang, 1996: 554 (*Formosina ochracea*) – Taiwan; Liu et al., 2015 (*Merochlorops*) – Taiwan.

Syntypes. One male, **Taiwan** (Takao, Sauter leg.), and two specimens, **Taiwan** [determined by O. Duda as *Formosina gigas* (female) and *F. ochracea* (male)], BZM.

Other syntypes are kept in Hungarian National Museum in Budapest.

Diagnosis. Ocellar triangle reddish yellow, broad with a shallow median sulcus extending to anterior margin of frons. Postpedicel reddish yellow. Palpus darkened. In female, scutum black with a large triangular yellow spot in area between postpronotum and wing base. Pleura with a yellow spot on anepisternum. In male, scutum black with a large triangular yellow spot in area between postpronotum and wing base or scutum yellow with five black fused stripes. Thoracic pleura yellow with usual black spots. Scutellum yellow. Abdomen in male yellow with tergites 3 and 4 black, in female dark brown except for sides of tergite 1 and distal margin of tergite 5 yellow.

Distribution. China (Taiwan).

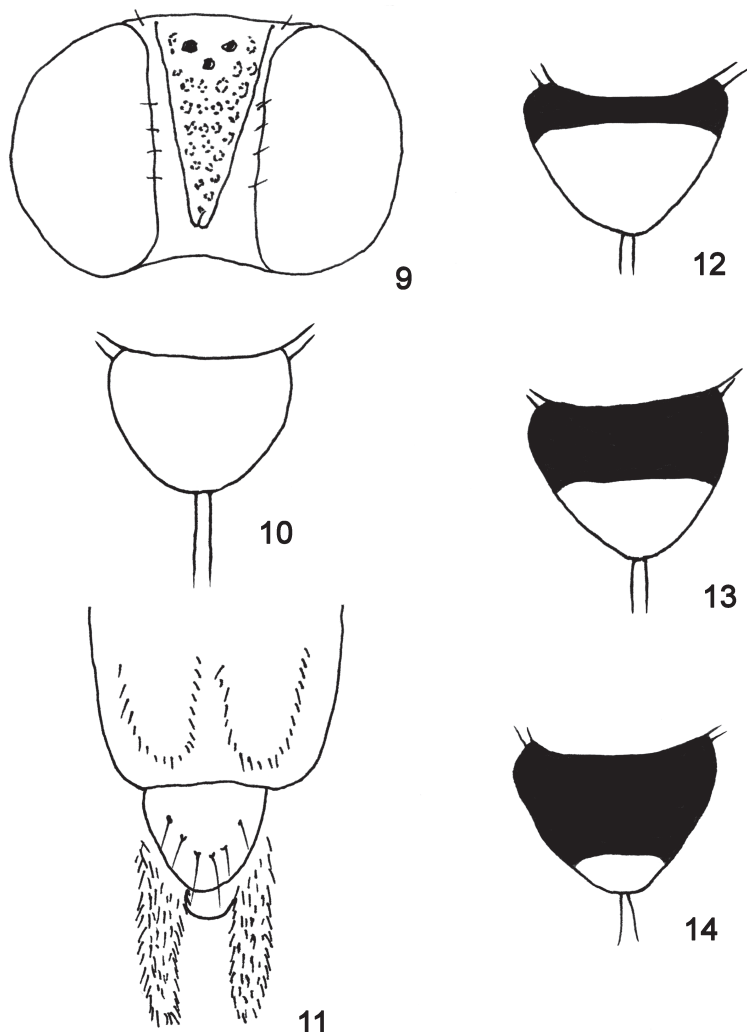
Merochlorops lucens (de Meijere, 1908) (Figs 1–2, 12–14)

= *Formosina adolescens* Becker, 1916: 441 – Taiwan (synonymised by Duda, 1934: 151).
de Meijere, 1908: 169 (*Chloropisca*) – Java; Becker, 1911: 80 (*Formosina*) – Java; Becker & de Meijere, 1913: 284 (*Formosina*) – Java; de Meijere, 1916: 95 (*Formosina*) – Sumatra; de Meijere, 1918: 357 (*Formosina*) – Sumatra; Frey, 1923: 78 (*Formosina*) – Philippines; Bezzi & Lamb, 1926: 560 (*Formosina*) – Rodriguez Island; Duda, 1930: 297 (*Formosina*) – Taiwan, Sumatra; Duda, 1934: 151 (*Formosina*) – Java, Taiwan; Hendel, 1934: 17 – China (NE Sichuan); Hennig, 1941: 164 (*Formosina*) – Taiwan; Andersson, 1977: 155 (*Formosina*) (drawing of male genitalia); Sabrosky, 1977: 310 (*Formosina*) – Taiwan, India, Java, Malaysia, Philippines, Sumatra, Rodriguez Island; Kanmiya, 1978: 196

(*Formosina*) – NW China, Taiwan, Java, Sumatra, Philippines; Nartshuk, 1984: 289 (*Formosina*) – China (NE Sichuan); Sabrosky, 1984: 713 (*Merochlorops*); Cherian, 1991: 56 (*Merochlorops*) – India; Nartshuk, 1991: 111 (*Merochlorops*) – Vietnam; Yang & Yang, 1996: 554 (*Formosina*) – China (Sichuan); Liu et al., 2015 (*Merochlorops*) – China (Yunnan).

Syntypes. Two females, **Indonesia**, Java, Semarang, Januar (Jacobson leg.), now in ZML; two females, **Taiwan** [det. O. Duda], ZMB; two females, **China**, “Kwangtsch, Fukien 24.9.1937 J. Klapperich” and “Kina, Szechuan”, RM; several specimens, **Mauritius**, bred from banana plants, BMNH.

Additional material. **Vietnam**, Shonla Prov., vicinity of Shongma, 400–600 m, 3–14 May 1991, two females (Gorokhov leg.). **Thailand**: Thai Rayong, Khao Chamau, 11 Dec. 2007, one female (N. Vikhrev leg.), ZMMU; T 165, Phetchabun Prov., Khao Kho National Park, office, 16°39.550'N 101°08.123'E, Malaise trap, 5–12 July 2006, one female (Somchai Chatchumnan & Sa-ink Singtong leg.); T184, Chiang Mai Doi Prov., Inthanon National Park, summit marsh, 18°35.361'N 98°29.157'E, 2500 m, Malaise trap, 16–24 Aug. 2006, one male (Y. Areeluck leg.); T449, Chaiyaphum Prov., Pa Hin Ngam national park, ecotone between mixed deciduous/dry dipterocarp forest, 15°38.01'N 101°23.857'E, 700 m, Malaise trap, 24–30 Aug. 2006, one male (Katae Sa-nog & Buakaw Adnafa leg.); T587, Phetchabun Prov., Khao Kho National Park, mixed deciduous forest at Klump stream, 16°39.257'N 101°07.945'E, 186 m, Malaise trap, 5–12 Sept. 2006, one female (Somchai Chachumnan & Saink Singtong leg.); T589, Phetchabun Prov., Khao Kho National Park, Thanthip, waterfall, 16°39.087'N 101°07.777'E, 210 m, Malaise trap, 5–12 Sept. 2006, one male (Somchai Chachumnan & Saink Singtong leg.); T825, Loei Prov., Phu Ruea National Park, nature trail, 17°30.74'N 101°20.65'E, 1353 m, Malaise trap, 5–12 Sept. 2006, two males, two females (Nukoonchai Jaroenchai leg.); T826, Loei Prov., Phu Ruea National Park, Sa Sawan, 17°30.735'N 101°20.601'E, 1352 m, Malaise trap, 5–12 Sept. 2006, one female (Nukoonchai Jaroenchai leg.). **Malaysia**: Kuala Lumpur, ex decaying stem of *Musa* sp., 1 Feb. 1928, two specimens (G.H. Corbeth), BMNH; [no locality], rotting *Garana* slump, 1 Aug. 1936, one specimen, BMNH; Penin Pera KFMS, camp,



Figs 9–14. Some structures of *Merochlorops*. **9–11**, *M. punctifrons*: **9**, head in anteriodorsal view; **10**, scutellum; **11**, apex of ovipositor; **12–14**, *M. lucens*, variations in colour of scutellum.

2000 f, 20 Aug. 1922, one specimen, BMNH; Panang FMS, Cameron Highlands, 5000 f, 30 July 1938, one specimen, BMNH; near Pigsty, 12 Dec. 1954, M.H. Chen, one specimen, BMNH; Sarawak, foot of Mt. Dulit, junction of river, 22 Aug. 1932, three specimens (Tinjar et Lejok, Oxford University expedition), BMNH. **Myanmar**, "Upper Burma", Nam Tamai valley, 27°42'N 97°54'E, 3000 f, 8 Aug. 1938, one specimen (R. Kaueback; BMNH). **India**, Assam, Pabhamukh, 18 Apr. 1971, one specimen (D.J. Lewis), BMNH.

Diagnosis. Frons yellow, darkened along sides of ocellar triangle. Ocellar triangle

black, very narrow, with a broad median sulcus, with pointed apex, extending to anterior margin of frons. Postpedicel yellow except for dorsodistal margin yellowish brown. Gena narrow, yellow with black on lower margin. Palpus black. Width of frons different in male and female: ratio of width of frons to width of head in male 0.22–0.23, in female 0.32–0.35. Thorax black except for scutum; notopleuron and anepisternum with wide oblique yellow stripe. Scutellum yellow with smaller or larger basal part black. Legs black except for knees yellow

and tarsi yellow except two or three distal tarsomeres black. Abdomen black except for yellow sides of tergite 1 and distal margin of tergite 5.

Distribution. The most common species of the genus, widely distributed in the Oriental Region, and recorded also from the Seychelles, Rodriguez and Mauritius islands (Sabrosky, 1980; Deeming & Al-Dhafer, 2012). It is also found in the Palaearctic China (NE Sichuan).

Notes. The species is recorded for the first time from Thailand.

A syntype (female) from Java, Semarang, bears a label "lectotype des. Andersson, 1972"; another syntype female from the same locality bears a label "paratype". However, we failed to find a publication by H. Andersson with the designation of the lectotype.

Merochlorops nigriritibus Cherian, 1991 (Fig. 8)

Diagnosis (according to Cherian, 1991). Ocellar triangle glossy, reaching anterior margin of frons and ending in nearly pointed apex; its surface with five shallow longitudinal depressions. Antenna yellowish brown with dark tinge on upper and anterior margins. Postpedicel longer than wide. Arista with fine conspicuous pubescence. Palpus brownish black. Scutum and scutellum with dense setulae. Scutum shiny black but for yellow area extending from behind of postpronotum to transverse suture at the sides and also at posterior lateral margin. Scutellum as long as wide, basal part yellow, distal half and sides black. Pleura shiny yellow with four large black markings. Femora and tibia almost entirely black.

Distribution. India.

Merochlorops punctifrons sp. nov. (Figs 9–11)

Holotype. Female, **Thailand**, T316, *Loei Prov.*, Phu Ruea National Park, Subhnonghin, 17°28.772' N, 101°21.308' E, 860 m, Malaise trap, 19–26 July 2006 (Nukoonchai Jaroenchai leg.).

Paratypes. **Thailand**, T275, *Phetchabun Prov.*, Nam Nao National Park, helicopter landing ground, 16°43.156' N 101°35.118' E, 890 m, Malaise trap, 17–24 July 2006, one female (Noopean Hongyothi leg.); T310, *Loei Prov.*, Phu Ruea National Park, Subhnonghin, 17°28.772' N 101°21.308' E, 860 m, Malaise trap, 5–12 July 2006, five females (one female dissected) (Patikhom Tamtip leg.); T332, *Chaiyaphum Prov.*, Pa Hin Ngam National Park, creek at Tung Dok Grajeaw, 15°38.391' N 101°23.609' E, 750 m, Malaise trap, 12–18 July 2006, one female (Kratay Sa-nog & Buakaw Adnafai leg.).

All specimens kept in ethanol. The holotype and four paratypes are deposited at the Entomological Section of Quin Sirikit Botanical Garden (Thailand), three paratypes are deposited in ZISP.

Diagnosis. Body black with yellow triangular spots on sides of scutum and anepisternum. Scutum punctate and densely pubescent. Ocellar triangle black, shiny, with acute apex, its surface with numerous shallow depressions. Scutellum yellow, with two black approximate setae. Femora black, tibiae and tarsi yellow.

Description. Female. Head yellow, higher than long, 1.1 times as wide as thorax. Occiput black. Frons yellow, 1.5 times as long as wide, projecting slightly anteriorly of eye. Ocellar triangle black, shiny, nearly reaching anterior margin of frons, with acute apex. Surface of ocellar triangle with numerous shallow depressions. Eye large with long vertical axis. Gena linear, yellow, with ventral margin black; parafacialia indistinct. Cephalic setae indistinct. Postpedicel yellow, as wide as long; arista brown, naked. Palpus black.

Thorax black, scutum convex, punctate, covered with pale setulae. Scutum slightly longer than wide, with a yellow triangular spot on sides between postpronotum and base of wing. Postpronotum yellow with a black spot. Propleura yellow. Other thoracic pleura black, shiny, without microtomentum and with a yellow triangular spot on anepisternum. Scutellum yellow, semicircular, covered with pale setulae, apical scutellar setae black, approximate, longer than scutellum. Legs: fore and middle coxae black,

hind coxa yellow; all femora black; fore and middle tibia yellow, hind tibia with a black band; all tarsi yellow. Setulae on legs brown. Wing hyaline, veins brown. Relative lengths of costal sectors 2 and 3 as 4.5 : 1.9; *r-m* near the middle of discal cell. Halter pale yellow.

Abdomen narrow, shiny, black with yellow base. Tergites bent to ventral side, dorsally black, ventrally black or with yellow triangular spots. Setulae on abdomen black. Female genitalia with soft narrow cerci.

Distribution. Thailand.

Notes. The new species is somewhat similar to *M. gigas* (Becker, 1911). Both the species have the black pubescent scutum, triangular spots on sides of the scutum and anepisternum, yellow scutellum and black abdomen. It can be separated from the latter by the following features: ocellar triangle black with acute apex and its surface not smooth but with numerous depressions, costal vein not thickened, transverse vein *r-m* situated nearly in the middle of discal cell. Presence of small, shallow depressions on ocellar triangle distinguish the new species from all known species of the genus.

Etymology. The species name refers to the structure of surface of the ocellar triangle.

ACKNOWLEDGEMENTS

The first author thanks all the colleagues who helped her during the visits to the European museums, Brian Brown for the material from Thailand and the Thailand Inventory Group for Entomological Research (TIGER) project, which was funded by the U. S. National Science Foundation grant DEB-0542864 to M. Sharkey and B. Brown. The project was supported by the National Research Council of Thailand and the Department of National Parks, Wildlife and Plant Conservation, Thailand, which gave permission for research and collection of specimens. Financial support from the Russian Foundation for Basic Research (grant 15-54-53038) is also gratefully acknowledged.

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Received 31 August 2015 / Accepted 12 October 2015
 Editorial responsibility: A.A. Przhiboro