Survey of *Chrysocharis* Förster and *Neochrysocharis* Kurdjumov (Hymenoptera, Eulophidae) from Mexico, including eight new species

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Survey of *Chrysocharis* Förster and *Neochrysocharis* Kurdjumov (Hymenoptera, Eulophidae) from Mexico, including eight new species. — The Mexican species of *Chrysocharis* Förster (17 species) and *Neochrysocharis* Kurdjumov (eight species) are discussed. Eight species are described: *C. absenteia* (♀), *C. longinerva* (♀), *C. maya* (♀♂), *C. parma* (♀♂), *C. purpurascens* (♀♂), *N. versaiflexa* (♂), *N. convexa* (♀), *N. tumidiscapus* (♂). Five species are recorded as new to Mexico: *C. ainsliei* Crawford, *C. paradox* Hansson, *N. epimeral* Hansson, *N. formosa* (Westwood), *N. hyphantriae* (Yoshimoto). *Chrysocharis* is divided into two subgenera, *Chrysocharis* and *Zaomnomyia* Ashmead, by reviving the latter from synonymy with *Chrysocharis*. The names *Phyomyzophaea albipes* Bréthes and *Chrysocharis brethesi* Schauff & Salvo are regarded as new synonyms of *Chrysocharis vonones* (Walker).

Key words: Taxonomy, *Chrysocharis*, *Neochrysocharis*, Mexico, Hymenoptera, Eulophidae.

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Introduction

The Nearctic species of Chrysocharis and Neochrysocharis have recently been discussed by Hansson (1995a, 1995b) and the concept of the genera used in these papers is followed here.

Little is known about the fauna of Neotropical eulophids (Hansson 1996, 1997), specifically that of Mexico. The fauna of this region is particularly interesting since Mexico is a pathway between two major zoogeographical regions; the Nearctics and Neotropics. The biodiversity in Mexico is expected to be high also due to the great habitat variation, complex topography, heterogeneity of soils and climate, geological history and location (McNeely et al., 1990).

The aims of this paper are to further our knowledge of Mexican eulophids and also of the two genera included here.

Material and methods

The terminology used here follows Goulet & Huber (1993). The term gaster refers to metasoma excluding petiole. The description of each species includes the bulk of specimens examined, not just the primary type, and the observed variation is included in the descriptive text. For descriptions of previously described species see Hansson (1985, 1986, 1987, 1995b).

Results

Abbreviations of terms used in the text are: HE. Height of eye; LG. Length of gaster; LM. Length of marginal vein; LP. Length of postmarginal vein; LS. Length of stigmal vein; MM. Length of mesosoma; MS. Malar space; OOL. Shortest distance between one hind ocellus and adjacent eye; POL. Distance between hind ocelli; POO. Distance between occipital margin and hind ocelli; WH. Width of head; WM. Width of mouth opening; WT. Maximum width of thorax, measured across mesoscutum.

Acronyms of museums and private collections: CNC. Canadian National Collections of Insects and Arachnids, Ottawa; LUZM. Lund University Zoological Museum; TAMU. Texas A&M University, College Station; USNM. United States National Museum of Natural History, Washington, D.C.

Genus Chrysocharis


A complete list of genera synonymized with Chrysocharis is given by Hansson (1987).

Diagnosis

Antennal flagellum with two apical flagellomeres fused, or with all flagellomeres free; postmarginal vein longer than stigmal vein (usually about twice as long); clypeus not delimited; without a sulcus surrounding ocellar triangle. Chrysocharis can be distinguished from other genera of Entedoninae using Hansson (1995a) and keys in Bouček (1988), or Gibson et al. (in press).

Literature

Hansson [1985 (Palearctic species), 1986 (Zaommomyia)], 1987 (Nearctic & Neotropical species), 1995a (revised key to Nearctic species, including descriptions of new species).

Remarks

The monophyly of Chrysocharis has not yet been firmly established. Hansson (1986) suggested the antennal scrobes that join below frontal cross-groove in females might be a possible synapomorphy for Chrysocharis. However, the inclusion of Zaommomyia in Chrysocharis, by Schaff (1991), weakens this argument since in females of Zaommomyia scrobes join at frontal cross-groove, as in the majority of entedonines. Zaommomyia is so different from Chrysocharis that it deserves at least subgeneric status. In this paper Chrysocharis is therefore divided in two subgenera, Chrysocharis s. str. and Zaommomyia. Species of Zaommomyia are found only in the Americas, with the majority of species in the Neotropical region.

Schaff & Salvo (1993) synonymized the genus Phytomyzophaga Brethes with Chrysocharis and gave the type species for that genus (P. albipes Brèthes) a new name (brethesi) since the original name was al-
ready being used. However, material of C. brethesi identified by Schauff & Salvo is identical to Chrysocharis vonones (Walker). Therefore both Phytomyzophaga albipes Bréthes and Chrysocharis brethesi Schauff & Salvo are regarded as new synonyms of C. vonones in this paper.

Subgenus Chrysocharis Förster

Diagnosis
Antennal scrobes of female join below frontal cross-groove (fig. 4), or frontal cross-groove missing; male flagellomeres with scattered setae (fig. 11); frons above frontal cross-groove more or less uniform, no part substantially different or delimited from other parts.

Chrysocharis absentia n. sp. (fig. 10)

Type material

Etymology
Absentia is Latin for missing, referring to the missing frontal cross-groove.

Diagnosis
Petiole 1.0-1.2x as long as wide at base, without dorsal shield anteriorly; frontal cross-groove missing.

Description (female)
Length of body, 1.8-2.3 mm. Colour: scape pale with dorsal edge infuscate, remaining antenna dark. Frons golden-red or golden-green. Vertex metallic bluish-green. Mesoscutum and propodeum golden-green; scutellum purple or golden-green. Coxae dark and metallic; femora dark to pale; tibiae pale; tarsi pale with apical segment infuscate. Wings hyaline, forewing occasionally with a weak infuscate spot in median part. Petiole dark and metallic. Gaster with tergites 1 and 2 metallic bluish-green, remaining tergites golden-purple.

Head: antennae as in fig. 10. HE/MS/WM: 6.2/1.0/3.1. Frons and vertex with strong small-meshed reticulation. Frontal cross-groove missing. Inner orbit of eye with one row of setae. POL/OOL/POO: 3.8/2.6/1.0. Occipital margin with an edge behind ocellar triangle, otherwise rounded. WH/WT= 1.2.

Mesosoma: pronotum with weak transverse carina. Mesoscutum and scutellum with strong reticulation. Dorsellum flat, smooth and shiny, anterolaterally with two pits. Borderline between lower and upper mesepimeron straight. Forewing rounded with speculum closed below; LM/LP/LS: 8.8/2.0/1.0. Propodeum with weak reticulation and with strong complete median carina and plicae; propodeal callus with 5-7 setae. Petiolar foramen quadrangular with upper border curved.

Metasoma: petiole 1.0-1.2x as long as wide at base; surface with strong sculpture. Gaster slightly elongate with apex acuminate; MM/LG= 0.8-1.0.

Remarks
Chrysocharis absentia belongs in species-group walleyi (sensu HANSSON, 1987).

Chrysocharis ainsliei Crawford

Distribution
Michoacan, Puebla, 3 ♀♀ 4♂♂. New record for Mexico.

Chrysocharis clarkae Yoshimoto

Distribution
Baja California (HANSSON, 1987).

Chrysocharis crassiscapus (Thomson)

Distribution
Michoacan, 1♀ (HANSSON, 1987) 1♂.

Chrysocharis flacilla (Walker)

Distribution
Chiapas, Guerrero, Mexico (D. F.) (HANSSON,
Key of Mexican species of Chrysocharis.

*Clave de las especies mejicanas de Chrysocharis.*

1. Antennal scrobes of female reach frontal cross-groove separately or join on cross-groove (fig. 3); male flagellomeres with verticillate setae, i.e. with a basal whorl of setae on each segment (fig. 8) [subgenus *Zaommomyia*] 2  
   Antennal scrobes of female join below frontal cross-groove (fig. 4), or frontal cross-groove missing (fig. 1); male flagellomeres with scattered setae (fig. 6) [subgenus *Chrysocharis*] 4

2. Petiole pale  
   Petiole dark, at least on dorsal surface 3

3. Forewing with speculum open below (fig. 15)  
   *C. vonones* (Walker) (♀♂)  
   Forewing with speculum closed below  
   *C. maya* n. sp. (♀♂)

4. Pronotal collar with transverse carina at least on median pronotum 5  
   Pronotal collar without transverse carina 11

5. Frontal cross-groove missing (figs. 1, 2); propodeum with strong and complete median carina and plicae (fig. 14) 6  
   Frontal cross-groove present (fig. 4); propodeum never with plicae or a complete median carina 9

6. Petiole 2.5x as long as wide at base, with dorsal shield anteriorly (fig. 14) that covers petiolar foramen  
   Petiole shorter and never with dorsal shield 7

7. Flagellum yellow  
   Flagellum brown 8

8. Petiole distinctly wider than long  
   Petiole 1.0-1.2x as long as wide at base  
   C. *absentia* n. sp. (♀)  
   Petiole at least 1.5x as long as wide  
   *C. prodice* (Walker) (♀♂)  
   Petiole at most as long as wide 10

9. Stigmal vein long and slender (fig. 13); malar space distinctly wider than width of scape  
   Stigmal vein shorter; malar space narrower than width of scape  
   *C. longinerva* n. sp. (♀)  
   *C. paradoxa* Hansson (♀♂)

10. Petiole at least 1.4x as long as wide  
    Petiole at most as long as wide 12  
    *C. tristis* Hansson (♀♂)  
    Petiole at most as long as wide 15

11. Frontal cross-groove present (fig. 4) 13  
    Frontal cross-groove absent (as in fig. 1) 14

12. Frontal cross-groove down-curved (fig. 4)  
    Frontal cross-groove curved upwards (as in fig. 3)  
    *C. ignota* Hansson (♀♂)
14. Petiole 1.5-2.0x as long as wide, ratio length of propodeum/length of petiole= 0.7-1.0; malar space 2x as wide as width of scape in female, 1.5x in male

\[ C. \text{ perditor Hansson (♀♂)} \]

Petiole longer, ratio length of propodeum/length of petiole= 0.5-0.6; malar space as wide as width of scape in both sexes

\[ C. \text{ flacilla (Walker) (♀ ♂)} \]

15. Anteromedian part of propodeum with raised carinae; with a fine median groove on posterior part of midlobe of mesoscutum and anterior scutellum

\[ C. \text{ crassiscapus (Thomson) (♀♂)} \]

Anteromedian part of propodeum with a pit; without median groove on mesoscutum and scutellum

16. Borderline between lower and upper mesepimeron straight (as in fig. 20); petiolar foramen with a large membrane in upper part

\[ C. \text{ ainsliei Crawford (♀ ♂)} \]

Borderline between lower and upper mesepimeron curved (as in fig. 19); petiolar foramen with a very small membrane in upper part, or without membrane

17. Petiole transverse and smooth; propodeal callos with two setae

\[ C. \text{ purpurascens n. sp. (♀ ♂)} \]

Petiole as long as wide with very strong sculpture; propodeal callus with 3 (4-5) setae

\[ C. \text{ clarkae Yoshimoto (♀ ♂)} \]

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1987), Michoacan, Oaxaca, Puebla, Tamaulipas, 65♀♀ 53♂♂.

**Chrysocharis ignota** Hansson

**Distribution**


**Chrysocharis longinerva** n. sp. (figs. 12, 13)

**Type material**


**Etymology**

*Longinerva* is Latin for 'long vein', referring to elongate stigmal vein.

**Diagnosis**

Scape wide (fig. 12); stigmal vein long and slender (fig. 13); pronotal collar carinate; anteromedian propodeum with rounded pit.

**Description (female)**

Length of body, 1.2-1.9 mm.
Colour: scape completely pale to completely dark, remaining antenna dark. Frons golden-red or golden-green. Vertex metallic bluish-purple or bluish-green. Mesoscutum metallic bluish-green; scutellum golden-green; propodeum metallic bluish-green. Coxae dark and metallic, fore coxa sometimes pale; femora pale; tibiae pale, fore tibia sometimes infuscate; tarsi pale with apical segment infuscate. Wings hyaline, forewing sometimes with a large infuscate spot below stigmal vein. Petiole dark and metallic. Gaster with first tergite metallic bluish-green, remaining tergites golden-purple.

Head: antenna as in fig. 12. HE/MS/WM: 3.2/1.0/1.9. Frons with strong smallmeshed reticulation. Vertex with strong to weak smallmeshed reticulation. Frontal cross-groove almost straight, only slightly V-shaped. Inner orbit of eye with one row of setae. POL/OOL/POO: 1.8/1.0/1.0. Occipital margin with a weak edge behind ocelli, otherwise rounded. WH/WT 1.1.


Metasoma: petiole as long as wide, dorsally with weak sculpture. Gaster oval-shaped; MM/LG 0.9-1.1.

Remarks
*Chrysocharis longinervia* belongs in species-group assis (sensu HANSSON, 1987).

*Chrysocharis paradoxa* Hansson

Distribution
Michoacan, Oaxaca, $3\varnothing, 1\sigma$. New record for Mexico.

*Chrysocharis parma* n. sp. (figs. 1, 2, 6, 7, 14)

Type material.
Holotype $\varnothing$, "Mexico: Guerrero, 6.6 miles SW Filo de Caballo, 12.vii.1985, J. B. Woolley, 85/051" (USNM). Paratypes: $1\varnothing, 1\sigma$ with same label data as holotype (TAMU).

Etymology
*Parma* is Latin for shield, referring to anterior dorsal shield of petiolus.

Diagnosis
Clypeus pale nonmetallic; pronotal collar with strong transverse carina; propodeum with strong and complete median carina and plicae (fig. 14); petiole 2.5x as long as wide at base, with anterior dorsal shield that covers petiolar foramen (fig. 14).

Description
Length of body: $\varnothing = 2.2-2.3$ mm, $\sigma = 2.3$ mm.


Head: antennae as in figs. 6, 7, i.e female with two-segmented clava on flage-
Ilomere and male with all flagellomeres free. HE/MS/WM ♂: 5.8/1.0/3.2, ♀: 3.2/1.0/1.9. Frons and vertex with weak reticulation. Frontal cross-groove missing. Inner orbit of eye with one row of setae. POL/OOL/POO: 3.3/2.0/1.0. Occipital margin with a carina behind ocelli. WH/WT = 1.1.

Mesosoma: pronotum with strong transverse carina. Mesoscutum and scutellum with strong reticulation. Dorseum slightly concave, smooth and shiny, anterolaterally with two pits. Borderline between lower and upper mesepimeron straight. Forewing rounded with speculum closed below; LM/LP/LS: 10.8/2.6/1.0. Propodeum with weak reticulation and with a strong complete median carina and plicae; propodeal callus with 4-6 setae. Petiolar foramen quadrangular with upper border curved.

Metasoma: petiole long, 2.5x as long as wide at base, apically with dorsal shield that covers petiolar foramen, with complete lateral carinae; surface with weak sculpture. Female gaster oval-shaped; MM/LG ♂ = 1.0-1.2, ♀ = 1.0.

Remarks
Chrysocharis parma belongs in species-group walleyi (sensu Hansson, 1987).

Chrysocharis perditor Hansson

Distribution
Mexico (D. F.) (Hansson, 1987), Morelos (Hansson, 1987).

Chrysocharis prodice (Walker)

Distribution
Chiapas, Guerrero, Oaxaca (Hansson, 1987), Puebla, Tamaulipas, 20♀♂ 12♂♂.

Chrysocharis purpurascens n. sp. (figs. 5, 11)

Type material
Holotype ♀, "Mexico: Michoacan, 6 miles N Cheran, 8.vii.1985, J. B. Woolley 85/034" (USNM). Paratypes: 2♀♂ 3♂♂♂ with same label data as holotype (1♀ 1♂ LUZM, 1♀ 2♂♂ TAMU).

Etymology
Purpurascens is Latin for purple, referring to colour of scutellum.

Diagnosis
Female with all coxae pale. Both sexes: scutellum purple and mesoscutum golden-green; costal cell narrow (11.2x as long as wide at apex); anteromedian part of propodeum with small pit.

Description
Length of body: ♂ = 1.6-1.7 mm, ♀ = 1.3-1.5 mm.

Colour: antenna completely dark, female with ventral half of scape paler than dorsal half. Frons and scutellum purple; vertex, mesoscutum and propodeum golden-green. Female coxae pale, male coxae infuscate; female femora pale with apical 1/3-2/3 infuscate to dark, male femora predominantly dark with base and apex pale; tibiae infuscate except pale hind tibia in female; all tarsi infuscate to dark. Female wings hyaline, male wings weakly infuscate. Petiolar dark. Female gaster golden-green, male gaster dark with weak metallic tinge.

Head: antennae as in figs. 5, 11. HE/MS/WM: 3.6/1.0/2.4. Frons and vertex with fine and smallmeshed reticulation. Frontal cross-groove almost straight. Inner orbit of eye with one row of setae. POL/OOL/POO: 2.0/1.0/1.0. Occipital margin rounded. WH/WT = 1.2.

Mesosoma: pronotum without transverse carina. Mesoscutum and scutellum with fine and smallmeshed reticulation. Dorseum convex and smooth, anterolaterally with two pits. Borderline between lower and upper mesepimeron weakly curved. Forewing rounded with speculum closed below; costal cell narrow, 11.2x as long as wide at apex; LM/LP/LS: 7.3/1.9/1.0. Propodeum smooth, antero-medially with small pit; propodeal callus with two setae. Petiolar foramen triangular.

Metasoma: petiole transverse. Female gaster oval-shaped; MM/LG ♂ = 0.8-0.9, ♀ = 0.8.

Remarks
Chrysocharis purpurascens belongs in species-group mediana (sensu Hansson, 1987).
Chrysocharis tristis Hansson (fig. 4)

Distribution
Guerrero, Mexico (D. F.) (HANSSON, 1987), Michoacan, Morelos (HANSSON, 1987), Oaxaca, Tamaulipas, 7♀ 6♂.

Chrysocharis walleyi Yoshimoto

Distribution

Subgenus Zaomomyzia Ashmead

Diagnosis
Antennal scrobles of female reach frontal cross-groove separately or join on cross-groove; flagellomeres in male with setae arranged in a single basal whorl (fig. 8); lower part of frons above frontal cross-groove flattened and differing from upper part of frons (fig. 3), having different reticulation and/or colour, lower and upper part frequently separated through a rounded edge.

Chrysocharis beckeri (Yoshimoto)

Distribution
Chiapas, Oaxaca, Quintana Roo, Veracruz, 3♀ 2♂. New record for Mexico.

Chrysocharis maya n. sp. (figs. 3, 8, 9)

Type material

Etymology
No specific deduction.

Diagnosis
Petiole dark; forewing with speculum closed below.

Description
Length of body: ♀ 0.9-1.6 mm, ♂ 1.0-1.3 mm.


Head: antennae as in figs. 8, 9. HE/MS/WM ♀: 6.1/1.0/3.3, ♂: 4.2/1.0/2.2. Frons and vertex with weak smallmeshed reticulation, stronger on frons just above frontal cross-groove. Frontal cross-groove V-shaped. Inner orbit of eye with one row of setae. POL/OOL/POO: 2.8/1.0/1.6. Occipital margin rounded. WH/WT = 1.2.

Mesosoma: pronotum without trans-
Key to Mexican species of *Neochrysocharis*.  
*Clave de las especies mejicanas de Neochrysocharis.*

1. All coxae pale (males occasionally with base of coxae infuscate) \hspace{1cm} \textit{N. epimerais} Hansson (♀, ♂)
   - At least hind coxa dark and metallic, usually also fore and mid coxae dark \hspace{1cm} 2

2. Borderline between lower and upper mesepimeron (tps) directed backwards from base of mid coxa (fig. 19) \hspace{1cm} \textit{N. aversiflexa} n. sp. (♂)
   - Tps directed forwards from base of mid coxa (fig. 20) \hspace{1cm} 3

3. Male scape strongly swollen (fig. 22) \hspace{1cm} \textit{N. tumidiscapus} n. sp. (♂)
   - Male scape not strongly swollen \hspace{1cm} 4

4. Occipital margin with sharp carina; scutellum reticulate with elongate meshes \hspace{1cm} \textit{N. convexa} n. sp. (♀)
   - Occipital margin rounded; scutellum reticulate with more or less isodiametric meshes \hspace{1cm} 5

5. First flagellomere only slightly wider than pedicel (fig. 24) \hspace{1cm} 6
   - First flagellomere distinctly wider than pedicel (fig. 25), entire flagellum stout \hspace{1cm} 7

6. Thoracic dorsum with strong and dense reticulation (figs. 6, 9, 13 in Yoshimoto (1978)), and dorsum slightly flattened; mesoscutum with notaular depressions narrow and distinct \hspace{1cm} \textit{N. formosa} (Westwood) (♀, ♂)
   - Thoracic dorsum with finer reticulation, and dorsum more convex; notaular depressions not clearly delimited \hspace{1cm} \textit{N. diastatae} (Howard) (♀, ♂)

7. Forewing wide and truncate apically, length/width of wing = 1.5 (fig. 27); scape completely pale; male pedicel with apical parts pale \hspace{1cm} \textit{N. hyphantriae} (Yoshimoto) (♀, ♂)
   - Forewing narrower, length/width of wing = 1.6-1.7; scape with at least apex infuscate; male pedicel completely dark \hspace{1cm} \textit{N. arizonensis} (Crawford) (♀, ♂)

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verse carina. Mesoscutum and scutellum with strong smallmeshed reticulation, in some specimens with weak reticulation. Dorsellum convex with weak reticulation, anterolaterally with two pits. Borderline between lower and upper mesepimeron curved. Forewing rounded, speculum closed below; costal cell narrow, 22x as long as wide at apex; LM/LP/LS: 9.4/2.2/1.0. Propodeum with strong sculpture, with a narrow groove along anterior border; propodeal callus with two setae. Petiolar foramen semicircular.

Metasoma: petiole as long as wide to transverse. Female gaster slightly elongate; MM/LG ♀=0.7-0.8, ♂=0.8-1.1.

*Chrysocharis vonones* (Walker) (fig. 15)
*Chrysocharis brethesi* Schauff & Salvo, 1993: 587. New
synonym.

Distribution
Jalisco, Guerrero, Tamaulipas, \(5\varpi\). New record for Mexico.

Genus *Neochothrips*

*Neochothrips* Kudreykov, 1912: 234. Type species: *N. immaculata* Kurdjumov (= *N. aratus* (Walker)), by original designation.

A complete list of genera synonymized with *Neochothrips* is given by Hansson (1995b).

Diagnosis
Flagellum with a three-segmented clava (figs. 21-25); antennal scrobes join on frontal cross-groove (fig. 18); clypeus not delimited; borderline between lower and upper mesepimeron straight or weakly curved (figs. 19, 20); postmarginal vein usually about half as long as stigmal vein (occasionally shorter or longer, 0.2-1.6x as long).

*Neochothrips* can be distinguished from other genera of Entedoninae using Hansson (1995b). Using keys prior to this publication (e.g. Bouček (1988), Schaff (1991)), *Neochothrips* species will lead to Chrysonotomia Ashmead, a genus separated from *Neochothrips* by Hansson (1995b).

Literature
Hansson [1990 (Palearctic species), 1995b (Nearctic species)].

*Neochothrips arizonensis* (Crawford) (fig. 25)

Distribution
Chiapas, Oaxaca, \(3\varpi\). Recorded from Mexico by De Santis (1979).

*Neochothrips aversiflexa* n. sp. (figs. 17, 19, 21)

Type material

Etymology
*Aversiflexa* is latin for ‘curved backwards’, referring to borderline between lower and upper mesepimeron which is curved backwards.

Diagnosis
Fore and mid coxae pale; pronotum large (fig. 17); borderline between lower and upper mesepimeron directed backwards from base of mid coxa (fig. 19); male antenna distinctly clavate (fig. 21).

Description (male)
Length of body = 0.9-1.0 mm.


Head: antenna as in fig. 21. HE/MS/WM: 3.9/1.0/2.4. Frons and vertex with weak smallmeshed reticulation. Frontal cross-groove V-shaped. POL/OOL/POO: 4.7/1.0/2.0. Occipital margin rounded. WH/WT: 1.2.

Mesosoma: pronotum large. Mesoscutum and scutellum with weak smallmeshed reticulation, scutellum with elongate meshes. Dorsoellum small, convex and smooth, anterolaterally with two pits. Borderline between lower and upper mesepimeron directed backwards from base of mid coxae. Forewing rounded, speculum closed below; LM/LP/LS: 7.0/1.0/1.3. Propodeum smooth; propodeal callus with two setae.

Metasoma: petiole transverse, short and smooth. MM/LG = 0.8-0.9.

Remarks
*N. aversiflexa* is similar to the Nearctic species *N. chalybea* Hansson, *N. epimerales* Hansson and *N. texensis* Hansson, all of which have a backwards directed borderline between
lower and upper mesepimeron. *N. aversiflexa* differ from the two latter in having a distinct clavate flagellum in male (fig. 21); from *N. chalybea* in having thoracic dorsum reticulate (smooth in *chalybea*).

*Neochrysocharis convexa* n. sp. (figs. 16, 18, 23, 26)

**Type material**

**Etymology**
Referring to conspicuously convex scutellum.

**Diagnosis**
Temple large (fig. 16); scutellum conspicuously convex (fig. 16); eyes large (figs. 16, 18); stigmal vein elongate, 2.6x as long as postmarginal vein; occipital margin with sharp carina.

**Description (female)**
Length of body = 1.4-1.5 mm.
Head: antenna as in fig. 23. HE/MS/WM: 3.5/1.0/1.4. Frons and vertex with weak smallmeshed reticulation. Frontal cross-groove V-shaped. POL/OLL/POL: 5.5/2.0/1.0. Occipital margin with sharp carina. WH/WT = 1.2.
Mesosoma: mesoscutum and scutellum with strong reticulation, scutellum with elongate meshes; scutellum conspicuously convex. Dorsellum concave and smooth, anterolaterally with two pits. Forewing rounded, speculum closed below; LM/LP/LS: 11.8/1.0/2.6. Propodeum smooth; propodeal callus with three setae.
Metasoma: petiole very short, in dorsal view visible as transverse narrow strip. Gaster oval-shaped; MM/LG = 0.8-0.9.

*Neochrysocharis diastatae* (Howard) (figs. 20, 24)

**Distribution**
Chihuahua (HANSSON 1995), Guanajuato, Mexico (D.F.), Oaxaca, 3♀♀.

*Neochrysocharis epimeralis* Hansson

**Distribution**
San Luis Potosi, 1♀. New record for Mexico.

*Neochrysocharis formosa* (Westwood)

**Distribution**
Oaxaca, 1♀. New record for Mexico.

*Neochrysocharis hypanthriae* (Yoshimoto)
(fig. 27)

**Distribution**
Tamaulipas, 3♀♀. New record for Mexico.

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**Neochrysocharis tumidiscapu** n. sp. (fig. 22)

**Type material**

**Etymology**
*Tumidiscapu* is Latin for 'swollen scape', referring to male scape.

**Diagnosis**
Male scape strongly swollen (fig. 22); all femora dark (differentiates *tumidiscapu* from *N. pictipes* (Crawford), a Nearctic species with strongly swollen male scape but with fore and hind femora dark and mid femur pale).

**Description (male)**
Length of body = 0.9 mm.


Head: antenna as in fig. 22. HE/MS = 2.4 (MO not measurable). Frons and vertex with weak smallmeshed reticulation. Frontal cross-groove V-shaped. POL/OOL/POO: 2.0/1.0/1.0. Occipital margin rounded. WH/WT = 1.2.

Mesosoma: mesoscutum and scutellum with weak smallmeshed reticulation. Dorsetum convex with weak reticulation, anterolaterally with two pits. Borderline between lower and upper mesepimeron weakly curved. Forewing rounded, speculum closed below; LM/LP/LS: 6.2/1.0/1.3. Propodeum with weak reticulation; propodeal callus with two setae.

Metasoma: petiolo transverse, short and smooth. MM/LG = 0.9.

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**Resumen**

Revisión de los géneros Chrysocharis Förster y Neochrysocharis Kurdjumov (Hymenoptera, Eulophidae) de México, con descripción de ocho nuevas especies


**References**


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