



## The Palaearctic types of Chrysididae (Insecta, Hymenoptera) deposited in the Linsenmaier collection. Part 1. *Cleptes* Latreille

PAOLO ROSA<sup>1,2\*</sup>, RENÉ HEIM<sup>1,3</sup> & MARCO VALERIO BERNASCONI<sup>1,4</sup>

<sup>1</sup>Natur-Museum Luzern, Kasernenplatz 6, CH-6003 Luzern, Switzerland.

<sup>2</sup>Via Belvedere 8/d I-20881 Bernareggio (MB), Italy.

<sup>3</sup>St.-Karli-Strasse 32c, CH-6004 Luzern, Switzerland.

✉ [rene.heim@bluewin.ch](mailto:rene.heim@bluewin.ch); <https://orcid.org/0000-0002-6011-5200>

<sup>4</sup>✉ [Marco.Bernasconi@lu.ch](mailto:Marco.Bernasconi@lu.ch); <https://orcid.org/0000-0003-0993-8049>

\*Corresponding author. ✉ [rosa@chrysis.net](mailto:rosa@chrysis.net); <https://orcid.org/0000-0003-2919-5297>

### Abstract

An illustrated catalogue of the Palaearctic types of *Cleptes* species and subspecies described by Walter Linsenmaier is given. All types are currently housed at the Natur-Museum, Luzern, Switzerland. *Cleptes laevifacies* Linsenmaier, 1999 is confirmed as a member of the *nitidulus* species group.

**Key words:** Cleptinae, catalogue, synonym

### Introduction

Walter Linsenmaier was one of the most important entomologists working on Chrysididae (Rosa *et al.* 2015). He published more than twenty publications, described 16 new subgenera, some of which were later upgraded to generic level, and more than 700 new species and subspecies. More information about Walter Linsenmaier's life can be found in various articles (Bolli 2000; Corti 1973; Herger 1995, 2000; Lannetta 1986; Niehuis 1995, 2001; Rosa *et al.* 2015a). In 2000, the Natur-Museum Luzern (NMLU) acquired Walter Linsenmaier's insect collection, consisting of approximately 250,000 specimens as well as the entire Chrysididae collection. The collection was transferred to the museum after Linsenmaier's death in 2001, and the Chrysididae collection reorganized in new boxes between 2010 and 2013, when all specimens were finally catalogued (Rosa *et al.* 2015a).

Linsenmaier's studies were revolutionary, in his day, and his revision of the European species (Linsenmaier 1959) continues to be the most influential reference for all European entomologists studying Chrysididae. However, Linsenmaier's descriptions were often incomplete both on information provided on the type localities and type series, and on species diagnoses. In several cases, only the country of origin was provided, and the complete type series was not clearly mentioned. At the same time, diagnoses and descriptions were too short and synthetic, thus generating confusion and insecurity in the identification of his new species. Waiting for a new, modern revision of the European and Palaearctic Chrysididae, we begin a revision work of his type material, providing all data observed in his collection and pictures of primary types here deposited.

### Materials and methods

The Linsenmaier collection includes about 56,750 specimens and approximately 4,380 types (Rosa *et al.* 2015b). It consists of specimens collected from all over the World, in more than 150 countries. The present catalogue is focused on the species described by Linsenmaier (1959, 1968, 1987, 1994, 1999) in the subfamily Cleptinae and it is the first part of a series of articles dealing with Palaearctic taxa described by the Swiss author and deposited in his collection.

Species are listed alphabetically and the following data are given: type locality; category of the type; number and sex of specimens; complete label data, a single slash reveals the information handwritten on the reverse side of the label and labels are separated from each other by double slash; remarks and current systematic placement. In the remarks, the current status for each species is given according to Móczár's (1997a, 1997b, 1998a, 1998b, 1998c, 2000a, 2000b, 2001) catalogue for the Cleptinae of the world.

The definitions of holotype, neotype, lectotype etc. are used according to the International Code for Zoological Nomenclature (ICZN 1999), fourth edition. Photographs of the types were taken with a Nikon D-3400 connected to the stereomicroscope Togonal SCZ and stacked with the software Combine ZP. The white calibration of the photo-camera was applied to reduce the blue effect of fluorescent light of the microscope.

## Taxonomic part

### Genus *Cleptes* Latreille, 1802

Although Mocsáry (1889) considered the genus *Cleptes* in Chrysididae, Cleptinae, all the following European authors of the XX century treated members of this genus in a separated family, Cleptidae (Bischoff 1913; Trautmann 1927; Richards 1935; Berland & Bernard 1938; Móczár 1949, 1951, Benno 1950; Beaumont 1955; Linsenmaier 1951; Kusdas 1956). Linsenmaier (1959) was the first European entomologist to consider Cleptinae as a subfamily of Chrysididae. Linsenmaier (1959) included in this subfamily the genus *Heterocoelia* Dahlbom, 1854, later transferred to the Bethylidae, subfamily Mesitiinae, by Móczár (1971); Walter Linsenmaier never faced with the American and Oriental Cleptinae genera *Cleptidea* Mocsáry, 1904 and *Lustrina* Kurian, 1955.

Linsenmaier (1959, 1968, 1987, 1994, 1999) described 16 species and two subspecies of *Cleptes* Latreille. All species are still considered valid (Kimsey & Bohart 1991; Móczár 1997a, 1997b, 1998a, 1998b, 1998c, 2000a, 2000b, 2001), with the exception of *Cleptes antakyensis* Linsenmaier, 1968, which was synonymised by Móczár (1997a) with *Cleptes femoralis* Mocsáry, 1890. The status of *Cleptes scutellaris gurunensis* Linsenmaier, 1987 is doubtful (Móczár 1997a).

### Species and subspecies of *Cleptes* described by Linsenmaier

- Cleptes aerosus franciscaae* Linsenmaier, 1987: 133
- Cleptes affulgens* Linsenmaier, 1994: 515
- Cleptes antakyensis* Linsenmaier, 1968: 7
- Cleptes collaris* Linsenmaier, 1959: 9
- Cleptes jordanicus* Linsenmaier, 1968: 4
- Cleptes juengeri* Linsenmaier, 1994: 514
- Cleptes laevifacies* Linsenmaier, 1999: 12
- Cleptes libanoticus* Linsenmaier, 1959: 9
- Cleptes maculatus* Linsenmaier, 1968: 6
- Cleptes maroccanus* Linsenmaier, 1987: 134
- Cleptes moczari* Linsenmaier, 1968: 4
- Cleptes pronigratus* Linsenmaier, 1968: 6
- Cleptes rugulosus* Linsenmaier, 1968: 8
- Cleptes schmidti* Linsenmaier, 1968: 8
- Cleptes scutellaris gurunensis* Linsenmaier, 1987: 134
- Cleptes seidenstueckeri* Linsenmaier, 1959: 10
- Cleptes semiatrus* Linsenmaier, 1968: 7
- Cleptes turceyanus* Linsenmaier, 1968: 5

## Catalogue of *Cleptes* types

### *Cleptes aerosus franciscae* Linsenmaier, 1987

(Fig. 1A–1D)

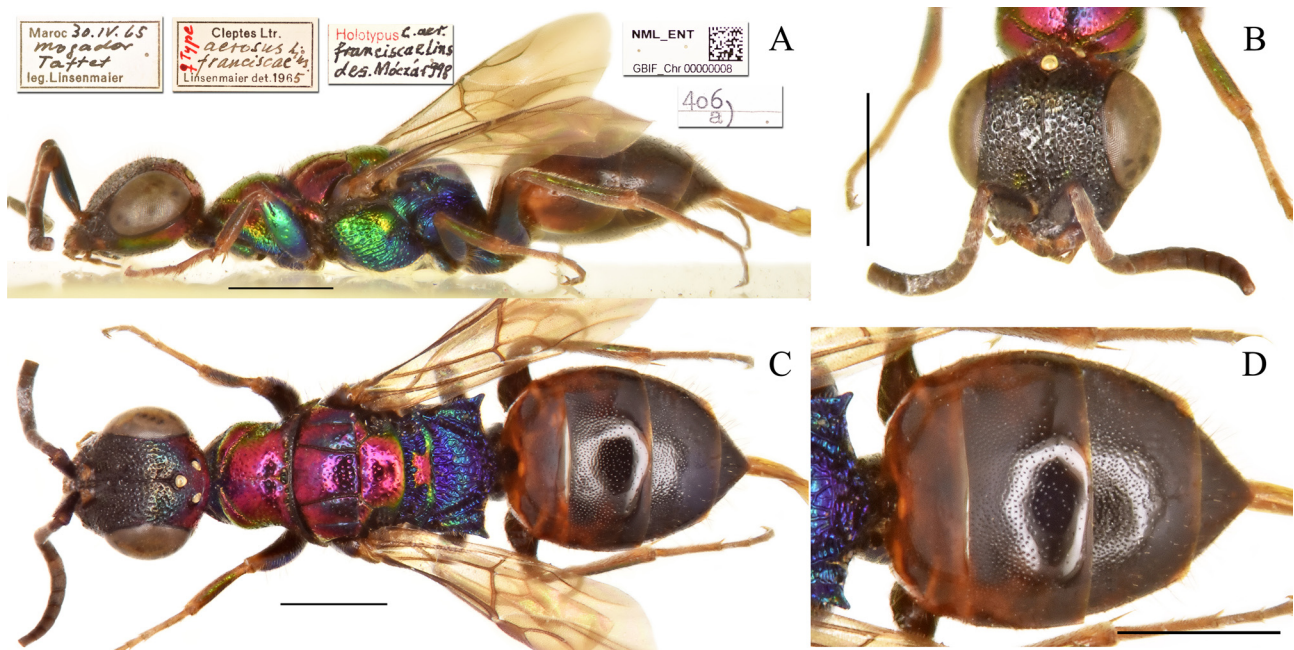
*Cleptes aerosus* ssp. *franciscae* Linsenmaier, 1987: 133. Holotype ♀; Morocco: Mogador [= Essaouira] (NMLU). Kimsey & Bohart 1991: 58 (cat., *aerosus* group); Linsenmaier 1999: 7 (key), 8 (descr., *aerosus* group).

*Cleptes (Holcocleptes) aerosus franciscae*: Móczár 1998a: 325 (cat., *aerosus* group), 326 (key), 334 (tax.).

**Type locality.** Morocco: “Maroc, ♀ Type Mogador IV.1965 Coll. m.”.

**Holotype**, ♀: Maroc 30.IV.65 Mogador Taftet leg. Linsenmaier // ♀ Type *Cleptes* Ltr. *aerosus franciscae* Lins. Linsenmaier det. 1965 // 406 a // Holotypus *C. aer. franciscae* des. Móczár 998 // NML\_ENT GBIF\_Chr 00000008.

**Remarks.** *Cleptes aerosus franciscae* is considered as a valid subspecies (Móczár 1998a). It is clearly separated from the European subspecies by entirely dark colouration of metasoma (vs. light orange colouration on the first, second and basal third metasoma segments). Morphological characters are the reduced pits of the transversal pronotal line and of the longitudinal posterior row.



**FIGURE 1.** *Cleptes aerosus franciscae* Linsenmaier, 1987, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

### *Cleptes affulgens* Linsenmaier, 1994

(Fig. 2A–2D)

*Cleptes affulgens* Linsenmaier, 1994: 515. Holotype ♂; Israel: Tivon [= Kiryat Tivon] (*orientalis* group) (NMLU).

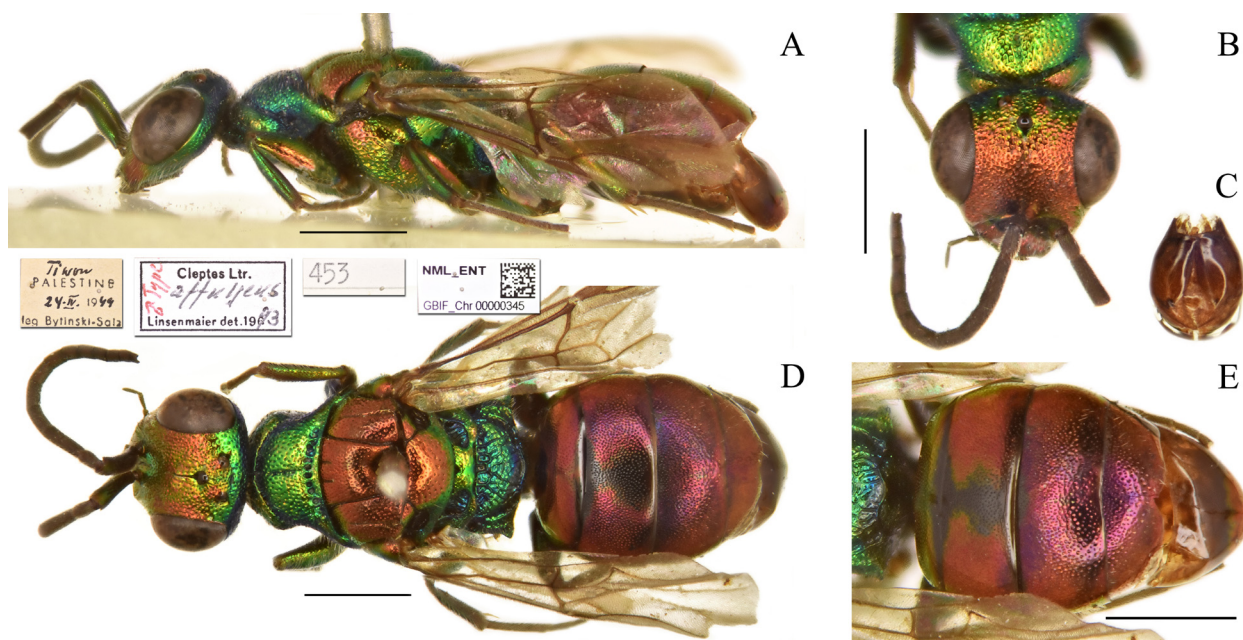
*Cleptes (Maculosicleptes) affulgens*: Móczár 1998c: 511 (cat., key, descr., *dahlbomi* group).

**Type locality.** Israel, Jordan: “Type (Holotypus) ♂, Palästina, Jordanien, Tivon, 24.4.1944, leg. Bytinski-Salz;—Allotypus ♀, Umgeb.[ung] Amman, 26.4.1963, leg. J. Klapperich, in Coll. m.; Paratypus ♀ Tivon in Coll. Bytinski-Salz, Tel Aviv (In Linsenmaier 1959 u. 1969 bisher irrtümlich als *auratus* Dahlbom, 1845 aufgeführt)”.

**Holotype**, ♂: Tivon Palestine [currently Kiryat Tivon, Israel] 24.IV.1944 leg. Bytinski-Salz // ♂ Type *Cleptes* Ltr. *affulgens* Lins. Linsenmaier det. 1993 (ex type-collection) // 453 // NML\_ENT GBIF\_Chr 00000345.

**Allotype**, ♀: Jordanien 26.IV.63 bei Amman leg. Klapperich // ♀ *Cleptes auratus* det. Lins. 64 // ♀ Allotype *Cleptes* Ltr. *affulgens* Lins. Linsenmaier det. 1993 (ex type-collection) // NML\_ENT GBIF\_Chr 00000346.

**Remarks.** Linsenmaier (1994) described *Cleptes affulgens* in the *orientalis* species group. Móczár (1998c: 511) transferred *Cleptes affulgens* to the subgenus *Maculosicleptes* Móczár, 1998a, *Cleptes dahlbomi* species group. Móczár (1998c) added erroneously Turkey to the distribution of the species.



**FIGURE 2.** *Cleptes affulgens* Linsenmaier, 1994, holotype. A) Habitus, lateral view. B) Head, frontal view. Scale bar 1 mm. C) Genital capsule, scale bar 0.5 mm. D) Habitus, dorsal view. E) Metasoma, dorsal view. Scale bar 1 mm.

### *Cleptes antakyensis* Linsenmaier, 1968

(Fig. 3A–3D)

*Cleptes antakyensis* Linsenmaier, 1968: 7. Holotype ♀; Turkey: Antakya (NMLU). Kimsey & Bohart 1991: 59 (cat., *nitidulus* group); Móczár 1997a: 31 (key, syn. of *Cleptes femoralis* Mocsáry, 1890); 37 (descr., syn. of *Cleptes femoralis* Mocsáry, 1890).

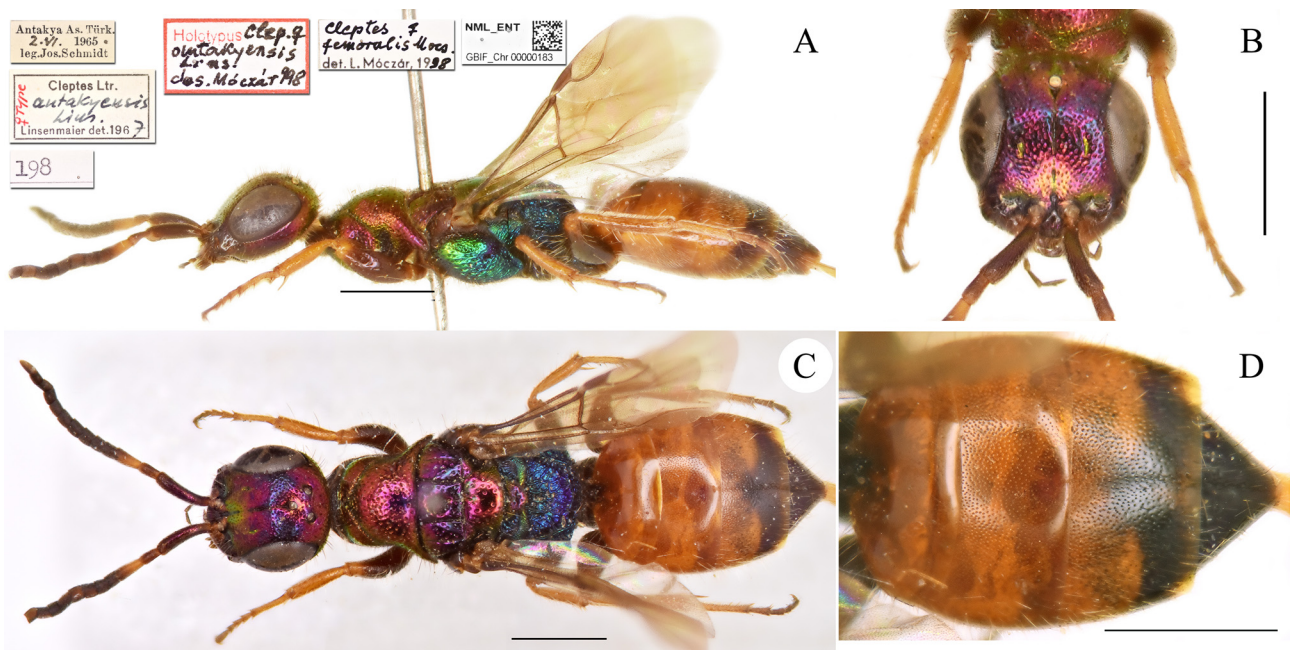
*Cleptes (Leiocleptes) antakyensis*: Móczár 1997b: 91 (cat., syn. of *Cleptes femoralis* Mocsáry, 1890).

**Type locality.** Turkey: “Klein-Asien, Antakya, VI.65, leg. Schmidt und Schwarz. ♀ Type, ♂ Allotype, Coll. m.”.

**Holotype,** ♀: Antakya As. Türk. 2.VI.1965 leg. J. Schmidt // ♀ Type *Cleptes* Ltr. *antakyensis* Lins. Linsenmaier det. 1967 // 347 // Holotypus *C. antakyensis* Lins. des. Móczár 998 // *Cleptes* ♀ *femoralis* Mocs. det. L. Móczár 998 // NML\_ENT GBIF\_Ch 00000183 (ex type-collection).

**Paratypes,** 1♂: Türkei Antakya 4.VI.1965 leg. Jos. Schmidt // ♂ Paratype *Cleptes* Ltr. *antakyensis* Lins. Linsenmaier det. 1967 // NML\_ENT GBIF\_Ch 00000181 (ex synoptic-collection); 1♂: Türkei Antakya 6.VI.1965 leg. Jos. Schmidt // ♂ Paratype *Cleptes* Ltr. *antakyensis* Lins. Linsenmaier det. 1967 // NML\_ENT GBIF\_Ch 00000182; 1♂: Türkei Antakya 6.VI.1965 leg. M. Schwarz // ♂ Paratype *Cleptes* Ltr. *antakyensis* Lins. Linsenmaier det. 1967 // *Cleptes* ♂ *femoralis* Mocs. det. L. Móczár 998 // compared with *femoralis* holotype det. L. Móczár 998 // NML\_ENT GBIF\_Ch 00000180.

**Remarks.** The allotype is currently preserved at the Hungarian Museum of Natural History in Budapest, after Móczár examination. Móczár (1997a) synonymized *Cleptes antakyensis* based on a paratype and other topotypical specimens collected by J. Schmidt and deposited in Linz. However, he later received Linsenmaier’s holotype and allotype in 1998 for further examination (see identification labels). Kimsey & Bohart (1991) included *Cleptes antakiensis* Linsenmaier in the *nitidulus* species group. Móczár (1997a: 37) synonymized *Cleptes antakyensis* with *Cleptes (Leiocleptes) femoralis* Mocsáry, 1890.



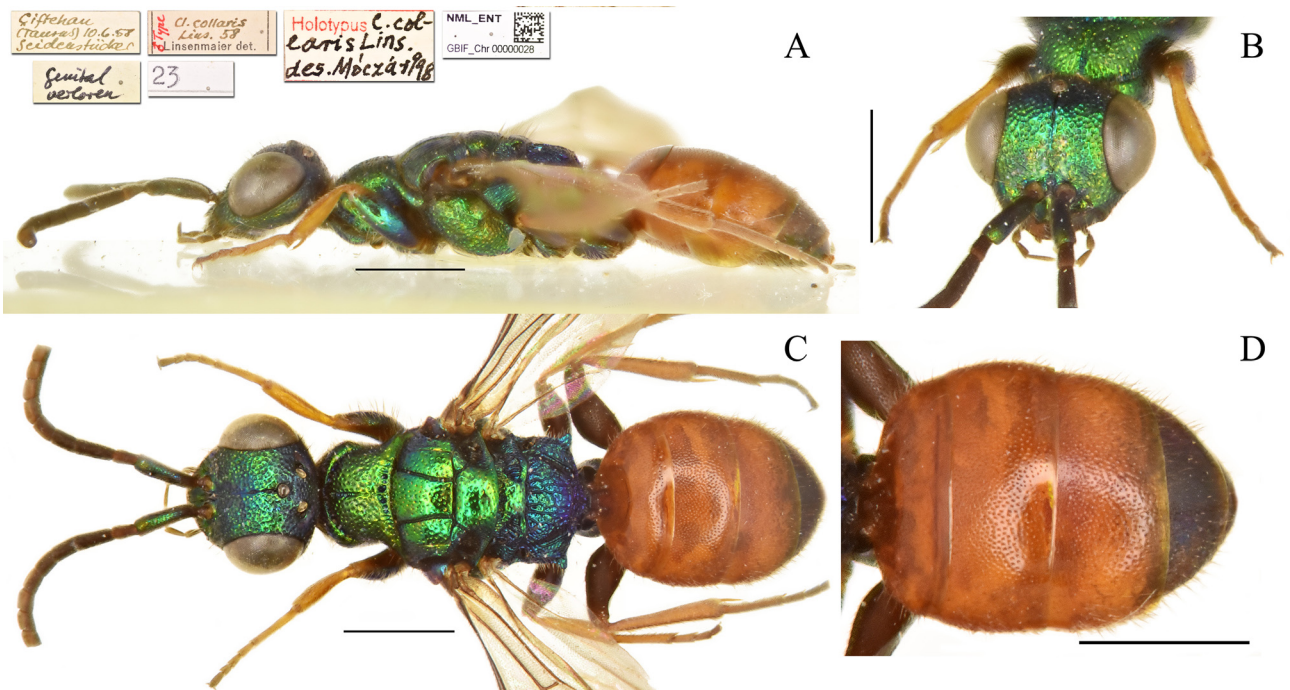
**FIGURE 3.** *Cleptes antakyensis* Linsenmaier, 1968, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

### *Cleptes collaris* Linsenmaier, 1959

(Fig. 4A–4D)

*Cleptes collaris* Linsenmaier, 1959: 9. Holotype ♂; Turkey: Çiftelhan (NMLU). Kimsey & Bohart 1991: 59 (cat., *aerosus* group).

*Cleptes (Holcocleptes) collaris*: Móczár 1998a: 325 (cat.); 331 (key); 334 (cat., *aerosus* group).



**FIGURE 4.** *Cleptes collaris* Linsenmaier, 1959, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

**Type locality.** “Klein-Asien, ♂ Type Coll. m. (Tarsus, Ciftehan, 10.VI.1958, leg. Seidenstücker)”.

**Holotype,** ♂: Çiftehan (Taurus) 10.6.58 Seidenstücker // *Cleptes* Ltr. *collaris* Lins. Linsenmaier det. 1959 // 23 // Holotypus *C. collaris* Lins. des. Móczár 998 // genital verloren <handwritten by Linsenmaier> // NML\_ENT GBIF\_Chr0000028 (ex type-collection).

**Remarks.** *Cleptes collaris* belongs to the *aerosus* group (Kimsey & Bohart 1991: 59; Móczár 1998a). The genital capsule was lost during dissection (Móczár label).

### *Cleptes jordanicus* Linsenmaier, 1968

(Fig. 5A–5D)

*Cleptes jordanicus* Linsenmaier, 1968: 4. Holotype ♂; Jordan (NMLU). Linsenmaier 1969: 346 (cat., *semiauratus* group); Kimsey & Bohart 1991: 61 (cat., *semiauratus* group).

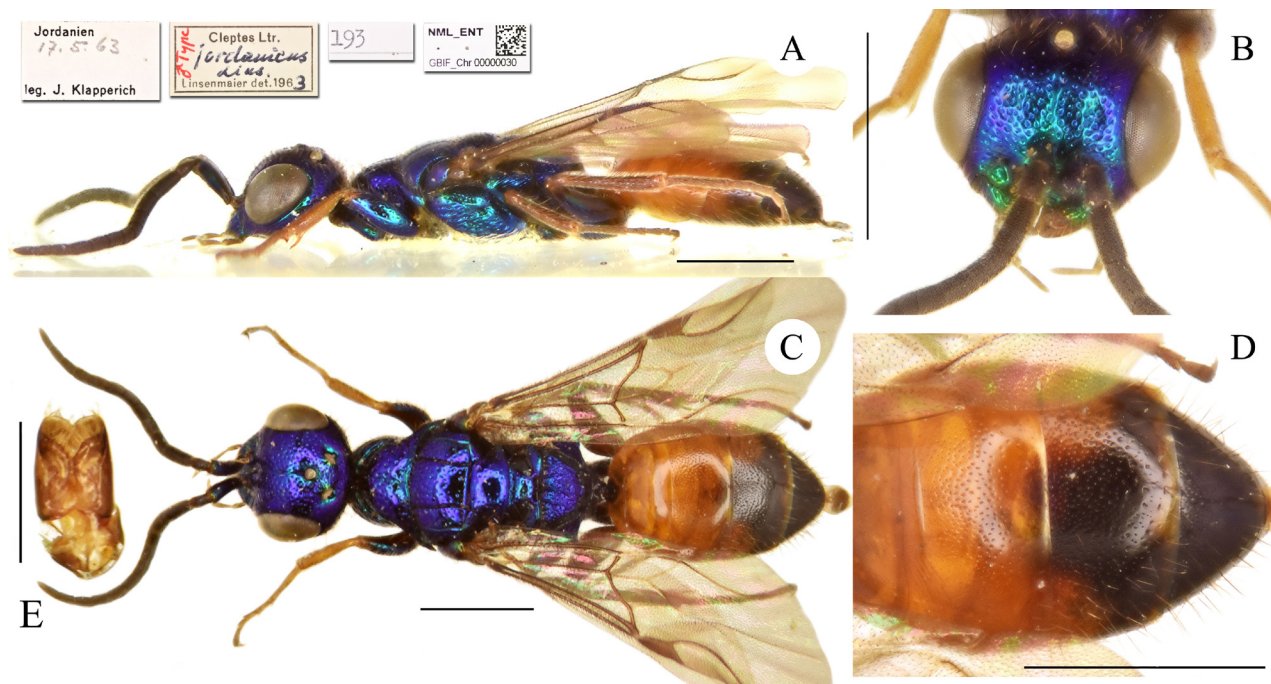
*Cleptes (Cleptes) jordanicus*: Móczár 2001: 907 (cat., *semiauratus* group), 912 (fig. 18, genital capsule), 913 (key), 916 (cat., descr.).

**Type locality.** Jordan, Turkey: “Jordanien, ♂ Type, leg. Klapperich V.63 in Coll. m.—Kleinasien, Antakya, ♂♂ Paratypen in Coll. Gusenleitner, Schmidt, Schwarz und m.”.

**Holotype,** ♂: Jordanien 17.5.63, leg. J. Klapperich // ♂ Type *Cleptes* Ltr. *jordanicus* Lins. det. Linsenmaier 1963 // 193 // NML\_ENT GBIF\_Chr0000030 (ex type-collection).

**Paratype,** ♂: Antakya 1.-7.6.1965 Anatolia leg. J. Gusenleitner // ♂ Paratype *Cleptes* Ltr. *jordanicus* Lins. det. Linsenmaier 1965 (ex synoptic-collection).

**Remarks.** Kimsey & Bohart (1991) placed *Cleptes jordanicus* in the *semiauratus* species group. Móczár (2001) provided additional morphological descriptions and added Spain to the distribution previously given by Linsenmaier (1968). The female is still unknown.



**FIGURE 5.** *Cleptes jordanicus* Linsenmaier, 1968, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm. E) Genital capsule, scale bar 0.5 mm.

### *Cleptes juengeri* Linsenmaier, 1994

(Fig. 6A–6D)

*Cleptes juengeri* Linsenmaier, 1994: 514. Holotype ♀; Spain: Soria (NMLU). Strumia 2004: 476 (description of the male).

*Cleptes (Holcocleptes) juengeri*: Móczár 1998a: 325 (cat., *juengeri* group), 326 (key), 336 (descr.).

**Type locality.** Spain: “Type (Holotypus) ♀, Spanien, Soria, am Duero auf Ferula, 9.7.1991;—Paratypen: 4 ♀♀ wie Holotypus, 2 ♀♀ 19.6.1994 derselben Lokalität.—Typen leg. und Coll. m., 1 Paratypus in Coll. Ernst Jünger, Schriftsteller und Coleopterologe, Wilflingen”.

**Holotype,** ♀: Spanien Soria T. 9.7.91 Linsenmaier // ♀ Type *Cleptes* Ltr. *juengeri* Linsenmaier det. 1993 // 452 // NML\_ENT GBIF\_Ch0000014 (ex type-collection).

**Paratypes,** 1 ♀: Spanien Soria 19.6.94 Linsenmaier // ♀ Paratype *Cleptes* Ltr. *juengeri* Lins. Linsenmaier det. 1994 // NML\_ENT GBIF\_Ch0000009 (ex synoptic-collection); 3 ♀♀: Spanien Soria 9.7.91 Linsenmaier // ♀ Paratype *Cleptes* Ltr. *juengeri* Lins. Linsenmaier det. 1993 // NML\_ENT GBIF\_Ch00000010-12.

**Remarks.** Móczár (1998a) included *Cleptes juengeri* Linsenmaier in the subgenus *Holcocleptes* Móczár, in the *juengeri* species group, established for this species only; Móczár (1998a) also added new diagnostic characters to the original description. Strumia (2004) described the male, which is unusually similar to the female in colouration, overall, with small sexual dimorphism.



**FIGURE 6.** *Cleptes juengeri* Linsenmaier, 1994, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

### *Cleptes laevifacies* Linsenmaier, 1999

(Fig. 7A–7D)

*Cleptes laevifacies* Linsenmaier, 1999: 12. Holotype ♂; Morocco: Ouarzazate (8 (key), 12 (descr., *nitidulus* group), 23 (Figs 3, 4)) (NMLU).

**Type locality.** Morocco: “Marokko, Ouarzazate 7.IV.1980, K. Warncke, ♂ Type (Holotypus) Coll. m.”.

**Holotype,** ♂: Marokko – 30 km W Ouarzazate 7.IV.1980 K. Warncke // ♂ Type *Cleptes* Ltr. *laevifacies* Lins. det. Linsenmaier 1997 // 486 // NML\_ENT GBIF\_Ch0000185 (ex type-collection).

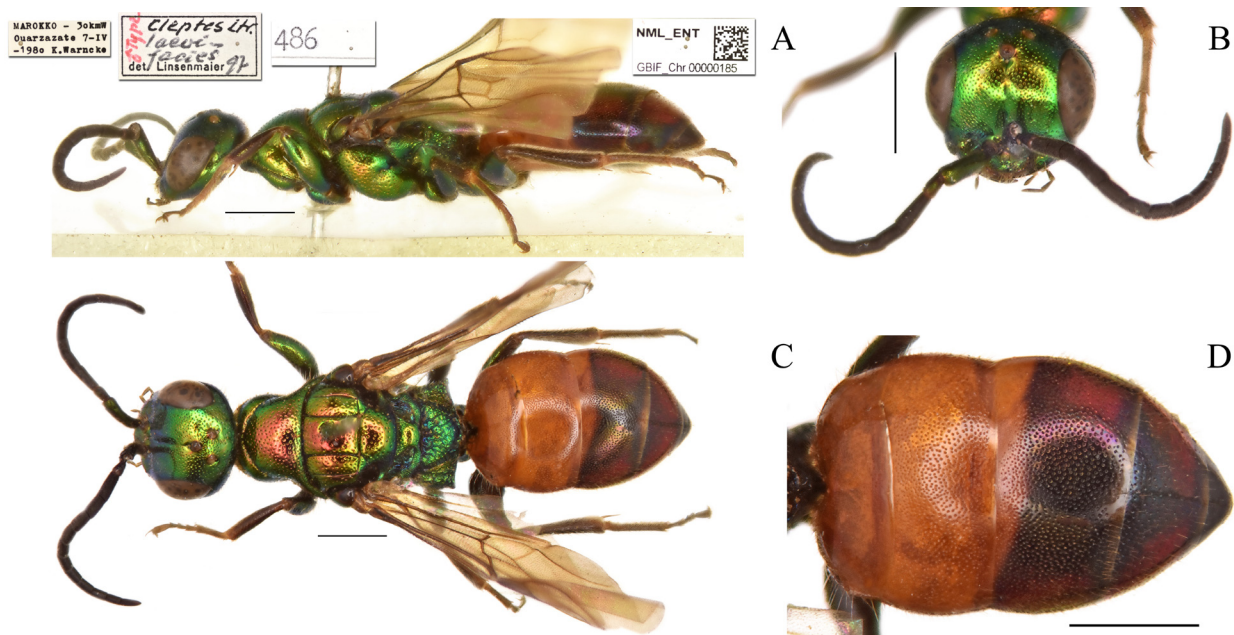
**Remarks.** *Cleptes laevifacies* Linsenmaier was not included in Móczár’s revisions; it belongs to the *nitidulus* species group (subgenus *Leiocleptes* according the division proposed by Móczár).

### *Cleptes libanoticus* Linsenmaier, 1959

(Fig. 8A–8D)

*Cleptes libanoticus* Linsenmaier, 1959: 9. Holotype ♂; Lebanon: Mt. Barouk (NMLU). Kimsey & Bohart 1991: 61 (cat., *aerosus* group).

*Cleptes (Holcocleptes) libanoticus*: Móczár 1998a: 325 (cat., *aerosus* group), 326 (key), 336 (cat.).

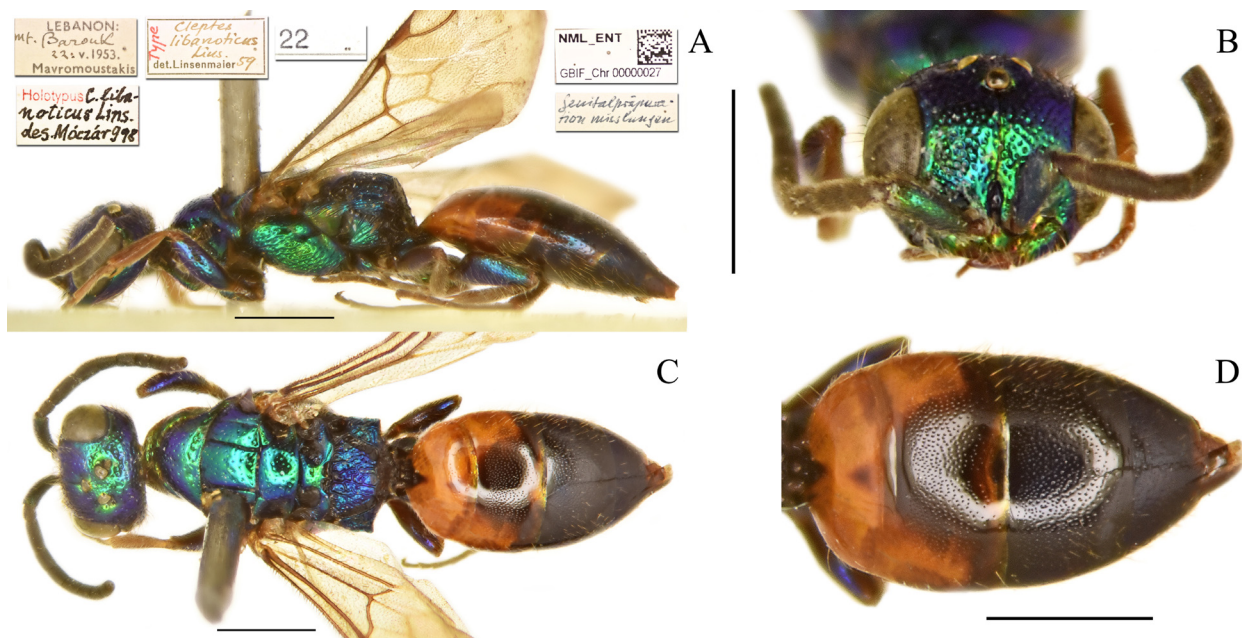


**FIGURE 7.** *Cleptes laevifacies* Linsenmaier, 1999, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view.

**Type locality.** Lebanon: “Libanon. ♂ Type Coll. m. (Mt. Barouk, 22.V.1953, leg. Mavromoustakis)”.

**Holotype**, ♂: Lebanon: Mt. Barouk 22.v.1953 Mavromoustakis // genitalpräparation misslungen <handwritten by Linsenmaier> // Type *Cleptes libanoticus* Lins. det. Linsenmaier 59 // 22 // NML\_ENT GBIF\_Chr0000027 // Holotypus *C. libanoticus* Lins. des. Móczár 998 (ex type-collection).

**Remarks.** The genital capsule of the holotype was lost by Linsenmaier.



**FIGURE 8.** *Cleptes libanoticus* Linsenmaier, 1959, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

***Cleptes maculatus* Linsenmaier, 1968**  
(Fig. 9A–9D)



*Cleptes maculatus* Linsenmaier, 1968: 6. Holotype ♀; Cyprus: Pyrgos (NMLU). Kimsey & Bohart 1991: 61 (cat., *semiauratus* group).

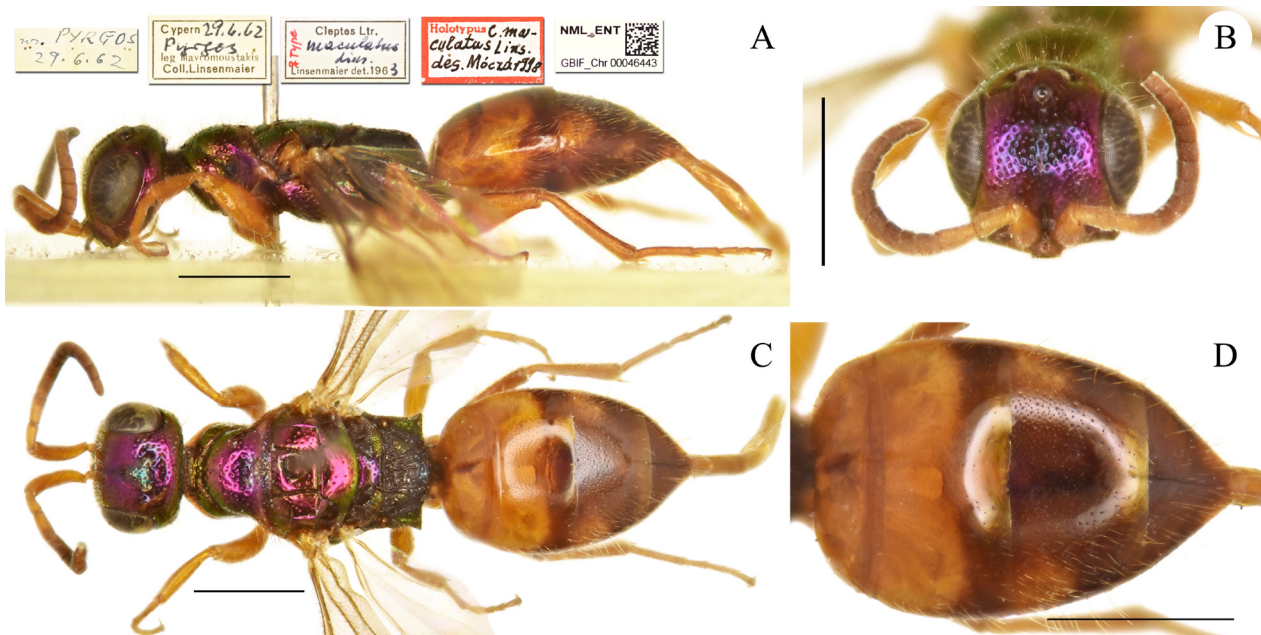
*Cleptes (Cleptes) maculatus*: Móczár 2001: 907 (cat., *semiauratus* group), 909 (key), 917 (cat., descr.).

**Type locality.** Cyprus: “Cypern. ♀ Pyrgos, VI.62, leg. Mavromoustakis, in Coll. m.”.

**Holotype**, ♀: Pyrgos 29.6.62 // Cypern 29.6.62 Pyrgos leg. Mavromoustakis Coll. Linsenmaier // ♀ Type *Cleptes* Ltr. *maculatus* Lins. Linsenmaier det. 1963 // Holotypus *C. maculatus* Lins. des. Móczár 998 // Hym. Typ. No. 3864 Mus. Budapest // NML\_ENT GBIF\_Chr00046443.

**Remarks.** Kimsey & Bohart (1991) placed *Cleptes maculatus* in the *semiauratus* species group. Móczár (2001) provided additional morphological descriptions. The male is still unknown.

Móczár (2001) reported that the Budapest museum is the type depository of the holotype. However, Linsenmaier (1968) stated that the type depository was his private collection, and for or this reason, Zoltán Vas, the curator of the Budapest museum, kindly sent back the holotype to the Natur-Museum Luzern.



**FIGURE 9.** *Cleptes maculatus* Linsenmaier, 1959, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

### *Cleptes maroccanus* Linsenmaier, 1987

(Fig. 10A–10D)

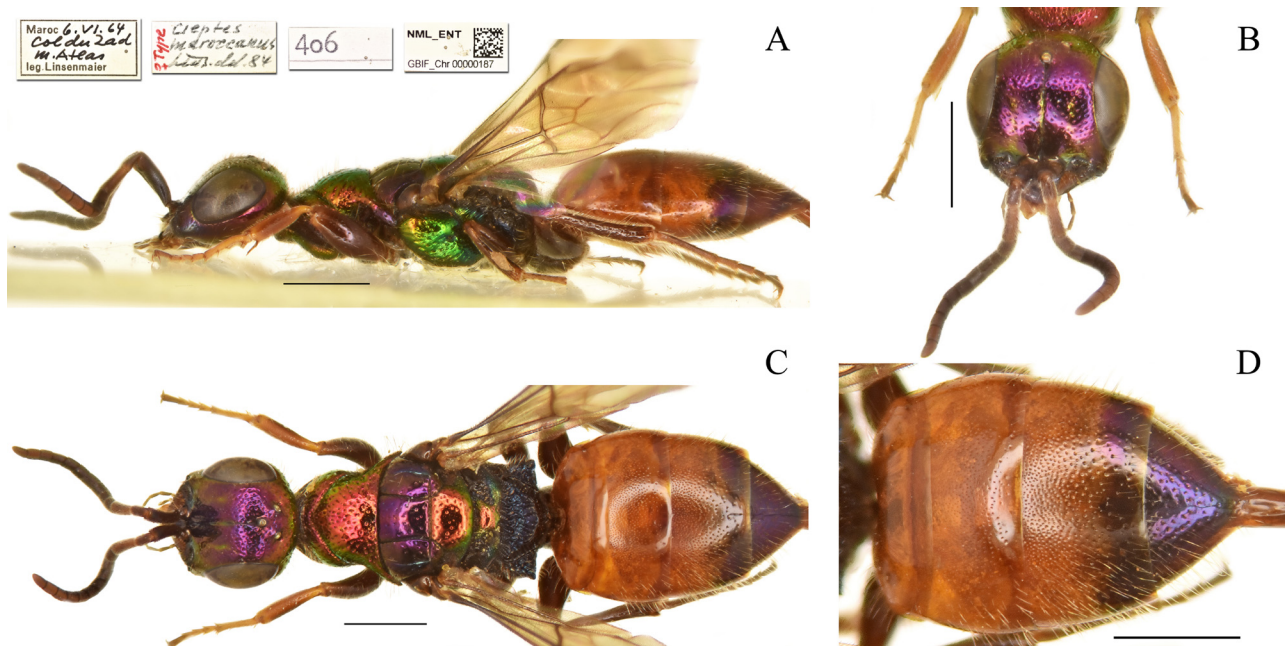
*Cleptes maroccanus* Linsenmaier, 1987: 134. Holotype ♀; Morocco: Col du Zad, Mt. Atlas (NMLU); Kimsey & Bohart 1991: 61 (cat.); Móczár 1997a: 31 (key), 38 (cat., *nitidulus* group); Linsenmaier 1999: 8 (key), 10 (descr., *nitidulus* group).

*Cleptes (Leiocleptes) maroccanus*: Móczár 1997b: 91 (cat., *nitidulus* group).

**Type locality.** Morocco: “Maroc, M. Atlas, ♀ Type Col du Zad, 2000 m, VI. 1964, ♀ Paratype Ifrane VI. 1984 Coll. m.”.

**Holotype**, ♀: Maroc 6.VI.64 Col du Zad M. Atlas leg. Linsenmaier // ♀ Type *Cleptes maroccanus* Lins. det. [19]84 // 406 // NML\_ENT GBIF\_Chr0000187 (ex type-collection).

**Paratype**, 1♀: Maroc 19.6.84 M. Atlas Ifrane leg. Linsenmaier // ♀ Paratype *Cleptes maroccanus* Lins. det. 84 // NML\_ENT GBIF\_Chr0000186 (ex type-collection).



**FIGURE 10.** *Cleptes maroccanus* Linsenmaier, 1987, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

### *Cleptes moczari* Linsenmaier, 1968

(Fig. 11A–11D)

*Cleptes moczari* Linsenmaier, 1968: 4. Holotype ♀; Greece: Corinth (NMLU). Kimsey & Bohart 1991: 61 (cat., *semiauratus* group); Arens 2014: 565 (cat., distr., variability, *aerosus* group).

*Cleptes (Holcocleptes) moczari*: Móczár 1998a: 325 (cat., *aerosus* group), 329 (key), 337 (descr.).

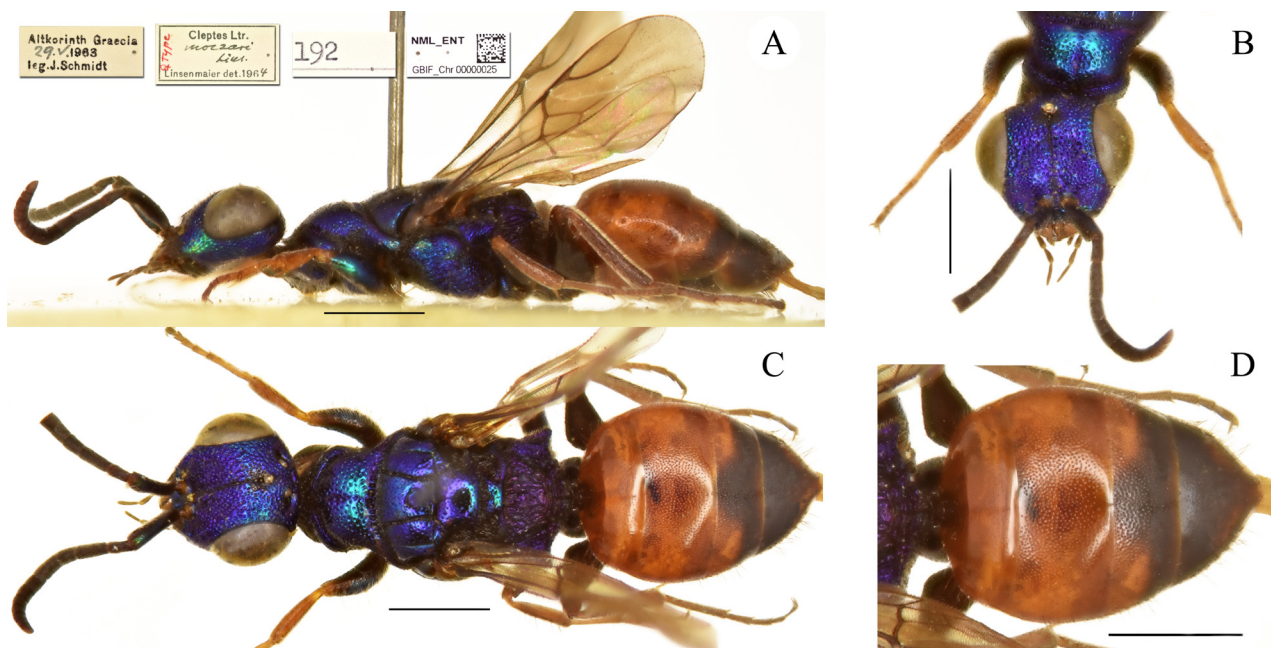
**Type locality.** Greece: “Griechenland, Alt-Korinth. ♀ Type, ♂ Allotype, leg. Schmidt V.63 in Coll. m.—Paratypen Museum Budapest, Coll. Schmidt und Coll. m.—Auch bei Tripolis”.

**Holotype,** ♀: Altkorinth Graecia 29.V.1963 leg. J. Schmidt // ♀ Type *Cleptes* Ltr. *moczari* Lins. Linsenmaier det. 1964 // 192 // NML\_ENT GBIF\_Chr0000025 (ex type-collection).

**Allotype,** ♂: Altkorinth Graecia 5.VI.1963 leg. J. Schmidt // ♂ Allotype *Cleptes* Ltr. *moczari* Lins. det. Linsenmaier 1964 // NML\_ENT GBIF\_Chr0000026 (ex type-collection).

**Paratypes,** ♂: Graecia Pelop. Korinthos 27.V.66 leg. Linsenmaier // ♂ Paratype *Cleptes* Ltr. *moczari* Lins. det. Linsenmaier 1966 // NML\_ENT GBIF\_Chr0000015 (ex synoptic-collection); 2♀♀: Graecia Alt-Korinth, Pelopon. 1.VI.64 leg. Schmidt // ♀♀ Paratypen *Cleptes* Ltr. *moczari* Lins. det. Linsenmaier 1965 // NML\_ENT GBIF\_Chr0000016 (ex synoptic-collection); 4♂♂: Graecia Alt-Korinth, Pelopon. 19.V.64 leg. Schmidt // ♂♂ Paratypen *Cleptes* Ltr. *moczari* Lins. det. Linsenmaier 1965 // NML\_ENT GBIF\_Chr0000017–18 // 2♂♂: Graecia Alt-Korinth, Pelopon. 20.V.64 leg. Schmidt // ♂♂ Paratypen *Cleptes* Ltr. *moczari* Lins. det. Linsenmaier 1965 // NML\_ENT GBIF\_Chr0000019; 2♀♀: Graecia Alt-Korinth, Pelopon. 22.V.64 leg. Schmidt // ♀♀ Paratypen *Cleptes* Ltr. *moczari* Lins. det. Linsenmaier 1965 // NML\_ENT GBIF\_Chr0000020; ♂: Graecia, Pelop. 18 km west. Tripolis 10.VI.66 leg. Linsenmaier // ♂ Paratype *Cleptes* Ltr. *moczari* Lins. det. Linsenmaier 1966 // NML\_ENT GBIF\_Chr0000021; ♂: Alt-Korinth, Pelopon. 22.V.1964 leg. J. Schmidt // ♂ Paratype *Cleptes* Ltr. *moczari* Lins. det. Linsenmaier 1965 // NML\_ENT GBIF\_Chr0000022.

**Remarks.** Kimsey & Bohart (1991) placed *Cleptes moczari* Linsenmaier in the *semiauratus* species group. Móczár (1998a) transferred *Cleptes moczari* to the subgenus *Holcocleptes*, *aerosus* species group, and added new data on morphological variability.



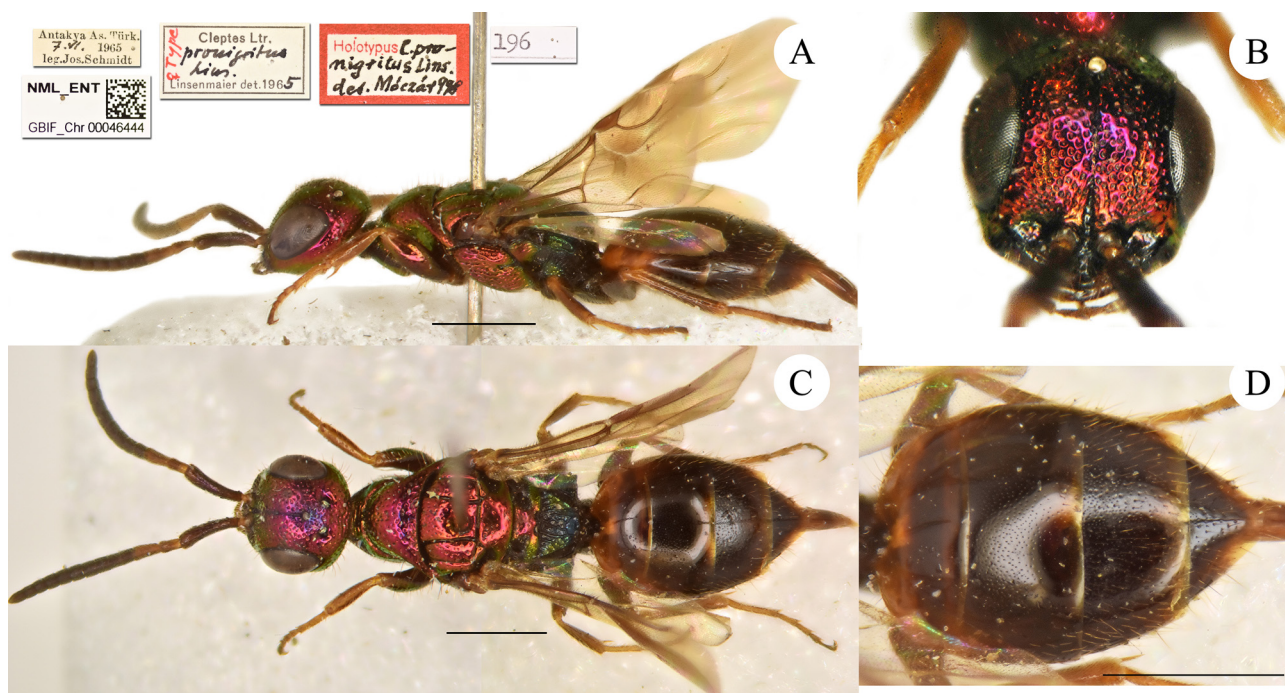
**FIGURE 11.** *Cleptes moczari* Linsenmaier, 1968, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

***Cleptes pronigrinus* Linsenmaier, 1968**

(Fig. 12A–12D)

*Cleptes pronigrinus* Linsenmaier, 1968: 6. Holotype ♀; Turkey: Antakya (NMLU). Kimsey & Bohart 1991: 62 (cat., *semiauratus* group).

*Cleptes (Cleptes) pronigrinus*: Móczár 2000b: 299 (cat., *satoi* group), 305 (key, fig. 15, clypeus), 319 (descr.).



**FIGURE 12.** *Cleptes pronigrinus* Linsenmaier, 1968, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

**Type locality.** Turkey: “Klein-Asien, ♀ Type von Antakya, VI.65 leg. Schmidt, in Coll. m.—♀♀ Paratypes in Coll. Schmidt, Schwarz, Gusenleitner und m.”.

**Holotype**, ♀: Antakya As. Türk. 7.VI.1965 leg. Jos. Schmidt // ♀ Type *Cleptes* Ltr. *pronigratus* Lins. Linsenmaier det. 1965 // Holotypus *C. pronigratus* Lins. det. Móczár 998

**Paratypes**, ♀: Osmanyie [Osmaniye] 5.-6.5.1955 Seidenstücker // ♀ Paratype *Cleptes* Ltr. *pronigratus* Lins. Linsenmaier det. 1965.

**Paratype**, ♀: Türkei Antakya 6.VI.65 leg. M. Schwarz // ♀ Paratype *Cleptes* Ltr. *pronigratus* Lins. Linsenmaier det. 1965.

**Remarks.** Kimsey & Bohart (1991) placed *Cleptes pronigratus* Linsenmaier in the *semiauratus* species group. Móczár (2000b) transferred *C. pronigratus* to the *satoi* species group and added new diagnostic features to the description of the female. The male is still unknown.

### *Cleptes rugulosus* Linsenmaier, 1968

(Fig. 13A–13D)

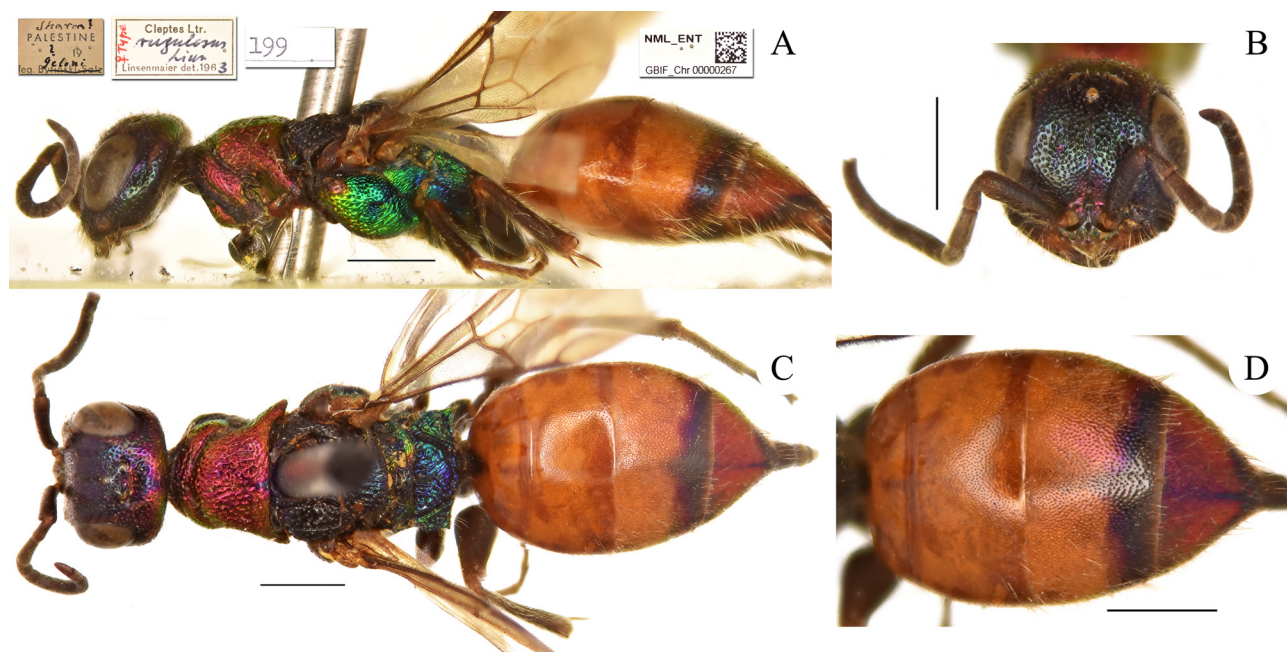
*Cleptes rugulosus* Linsenmaier, 1968: 8. Holotype ♀; Israel (NMLU). Linsenmaier 1969: 346 (cat., Israel: Sharon, *semiauratus* group); Kimsey & Bohart 1991: 63 (cat., *nitidulus* group). Móczár 1997a: 30 (key), 41 (cat., description of the male).

*Cleptes (Leiocleptes) rugulosus*: Móczár 1997b: 91 (cat., *rugulosus* group), 93 (fig. 6, pronotum, mesonotum and partly scutellum).

**Type locality.** Israel: “Palästina, ♀ Type, leg. Geloni, in Coll. m.”.

**Holotype**, ♀: Sharon ? <handwritten by Bytinski-Salz> Palestine ? 19. leg. Geloni <handwritten by Bytinski-Salz> leg. Bytinski-Salz // ♀ Type *Cleptes* Ltr. *rugulosus* Lins. Linsenmaier det. 1963 // 199 // NML\_ENT GBIF\_Chr0000267 (ex type-collection).

**Remarks.** The type locality “Sharon?” and the collector were handwritten by Bytinski-Salz. Although the type locality is unclear, the species is distributed in the Near East and Middle East, as reported by Móczár (1997a) with new records for Israel (Degania Alef) and Syria (without further data). Kimsey & Bohart (1991) included *Cleptes rugulosus* in the *nitidulus* species group. Móczár (1997a) provided the description of the male and later Móczár (1997b) transferred this species to the newly established *rugulosus* group.



**FIGURE 13.** *Cleptes rugulosus* Linsenmaier, 1968, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

### *Cleptes schmidti* Linsenmaier, 1968

(Fig. 14A–14D)

*Cleptes schmidti* Linsenmaier, 1968: 8. Holotype ♀; Greece: Corinth (NMLU). Kimsey & Bohart 1991: 63 (cat.); Arens 2014: 564 (cat., distr., *dahlbomi* group).

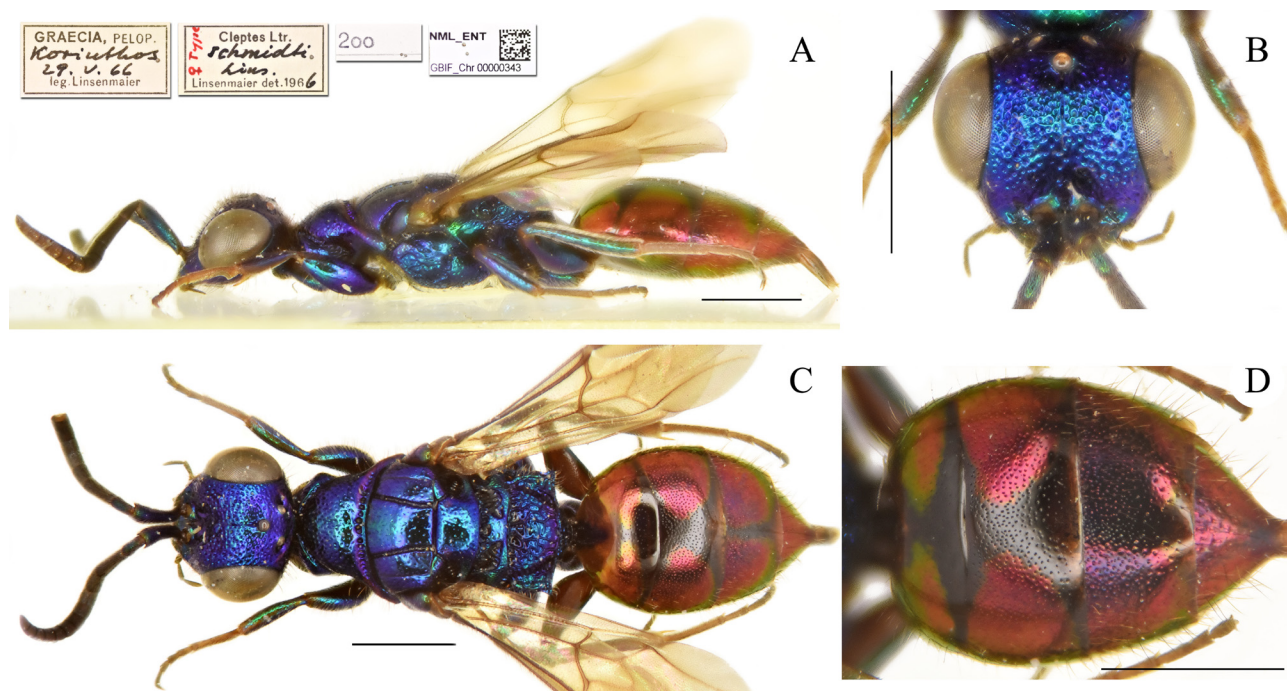
*Cleptes (Maculosicleptes) schmidti*: Móczár 1998c: 511 (cat., key, *dahlbomi* group), 512 (descr.).

**Type locality.** Greece: “Griechenland, Alt Korinth, Ende Mai bei Blattläusen, leg Schmidt und m.—♀ Type, ♂ Allotype Coll. m., ♂♂ Paratypen Coll. Schmidt”.

**Holotype**, ♀: Graecia, Pelop. Korinthos 29.V.66 leg. Linsenmaier // ♀ Type *Cleptes* Ltr. *schmidti* Lins. Linsenmaier det. 1966 // 200 // NML\_ENT GBIF\_Chr0000343 (ex type-collection).

**Allotype**, ♂: Graecia, Pelop. Korinthos 27.V.66 leg. Linsenmaier // ♂ Allotype *Cleptes* Ltr. *schmidti* Lins. Linsenmaier det. 1966 // NML\_ENT GBIF\_Chr0000344 (ex type-collection).

**Remarks.** Móczár (1998c) included *Cleptes schmidti* Linsenmaier in the subgenus *Maculosicleptes*, *dahlbomi* group, and added some supplementary features to the description of the male.



**FIGURE 14.** *Cleptes schmidti* Linsenmaier, 1968, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

### *Cleptis scutellaris gurunensis* Linsenmaier, 1987

(Fig. 15A–15D)

*Cleptes scutellaris* ssp. *gürünensis* Linsenmaier, 1987: 134. Holotype ♀; Turkey: Gürün (NMLU).

*Cleptes scutellaris* ssp. *gurunensis*: Kimsey & Bohart 1991: 63 (cat.).

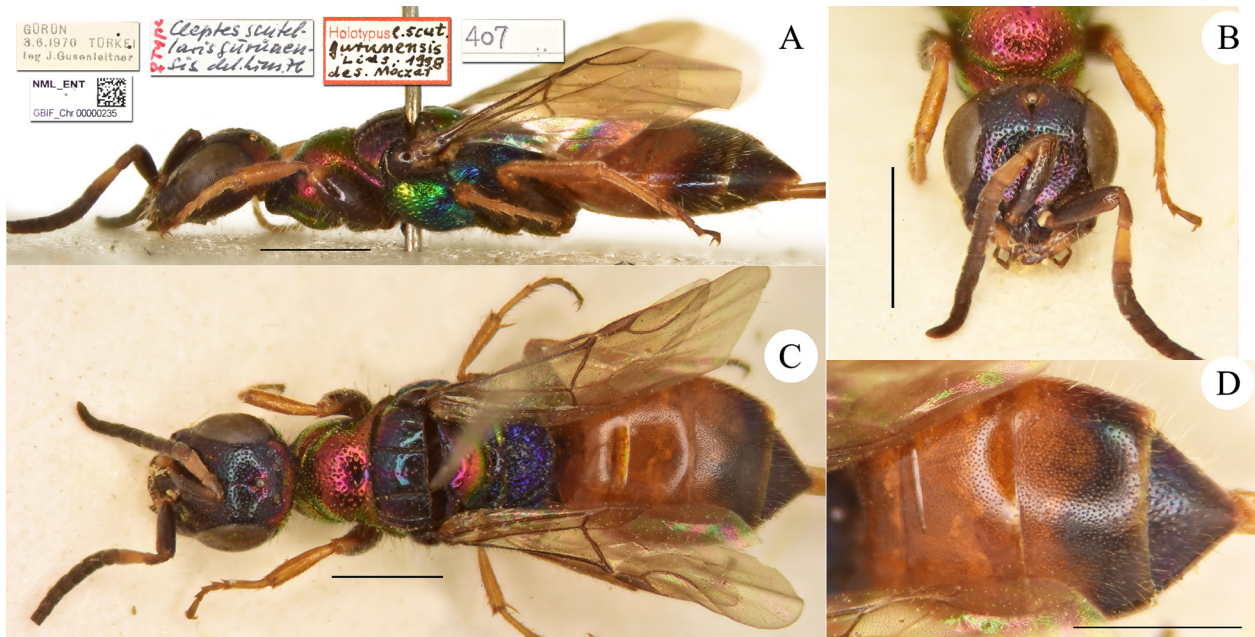
*Cleptes (Leiocleptes) scutellaris gurunensis*: Móczár 1997a: 33 (possible syn. of *Cleptes ancey*); Móczár 1997b: 91 (cat., possible synonym of *Cleptes ancey* du Buysson, 1891).

**Type locality.** Turkey: “Turkey, ♀ Type Gürün, leg. Gusenleitner in Coll. m., ♀ Paratype Mut, Coll. Schmidt”.

**Holotype**, ♀: Gürün 3.6.1970 Türki leg. J. Gusenleitner // 407 // NML\_ENT GBIF\_Chr0000235 // ♀ Type *Cleptes* Ltr. *scutellaris gürünensis* Lins. det. [19]76 // Holotypus *C. scut. gurunensis* Lins. des. Móczár 1998 (ex type-collection).

**Remarks.** In collection there are other four female specimens labelled: TK – Kars: 20 km W Sarikamiş 2200m 6.8.1979, leg. Warncke. One of them was labelled as paratype by Linsenmaier in 1989, the other three were identi-

fied by Linsenmaier in 1991. None of these specimens has a type status, because they were not listed in the type series and the locality Kars was not mentioned, moreover these specimens were identified after the original description. The correct writing of the name is *gurunensis* and not *gürinensis* as originally written by Linsenmaier (1968). The synonymy supposed by Móczár (1997a) is still unproved.



**FIGURE 15.** *Cleptes scutellaris gurunensis* Linsenmaier, 1987, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

***Cleptes seidenstueckeri* Linsenmaier, 1959**  
(Fig. 16A–16D)

*Cleptes Seidenstückeri* Linsenmaier, 1959a: 10. Holotype ♀; Turkey: Akschehir [=Akşehir] (NMLU).

*Cleptes seidensteuckeri* (sic): Kimsey & Bohart 1991: 63 (cat., *semiauratus* group).

*Cleptes (Cleptes) seidenstueckeri*: Móczár 2000b: 299 (cat., *satoi* group), 306 (key), 309 (fig. 23), 321 (cat., descr.).



**FIGURE 16.** *Cleptes seidenstueckeri* Linsenmaier, 1959, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

**Type locality.** Turkey: “Klein-Asien, ♀ Type Coll. m. (Akschehir, VI.1955, leg. Seidenstücker)”.

**Holotype,** ♀: Akschehir 1.-12.6.1955 *seidenstueckeri* // ♀ Type *seidenstueckeri* Lins. 58 Linsenmaier det. // 24 // Holotypus *seidenstueckeri* Lins. des. Móczár 998 // Hym. Typ. No. Mus. Budapest 3876 // NML\_ENT GBIF\_Chr00046442.

**Remarks.** Kimsey & Bohart (1991: 63) placed *Cleptes seidenstueckeri* Linsenmaier in the *semiauratus* species group; Móczár (2000b) transferred *Cleptes seidenstueckeri* to the *satoi* species group, he also added some diagnostic feature and line-drawings to the original description given by Linsenmaier (1959). The type was erroneously labelled as a type of the Hungarian Natural History Museum in Budapest.

### *Cleptes semiatrus* Linsenmaier, 1968

(Fig. 17A–17D)

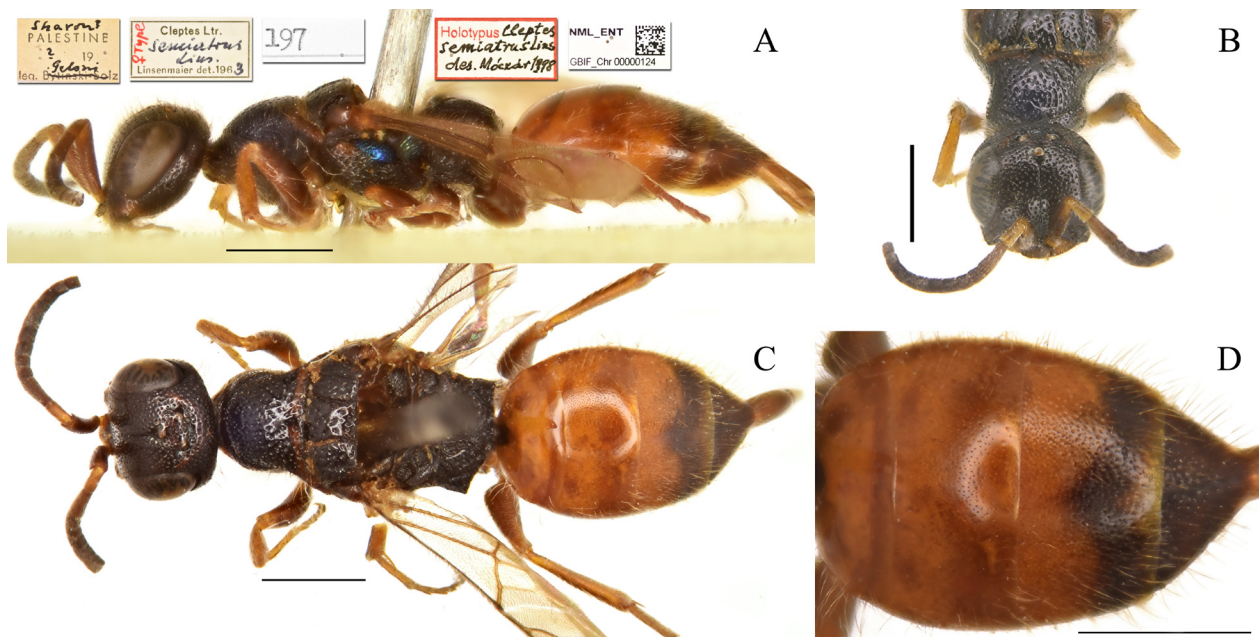
*Cleptes semiatrus* Linsenmaier, 1968: 7. Holotype ♀; Israel (NMLU). Linsenmaier 1969: 346 (cat., Israel: Sharon, *semiauratus* group); Kimsey & Bohart 1991: 63 (cat., *nitidulus* group).

*Cleptes semiatrus*: Móczár 1997a: 28 (key), 42 (cat., *nitidulus* group).

**Type locality.** “Palästina, ♀ Type, leg. Geloni, in Coll. m.”.

**Holotype,** ♀: Sharon ? <handwritten by Bytinski-Salz> Palestine ? 19. leg. Geloni <handwritten by Bytinski-Salz> leg. Bytinski-Salz // ♀ Type *Cleptes* Ltr. *semiatrus* Lins. Linsenmaier det. 1963 // 197 // Holotypus *C. semiatrus* Lins. det. Móczár 1998 // NML\_ENT GBIF\_Chr00000124 (ex type-collection).

**Remarks.** As for the case of *Cleptes rugulosus* Linsenmaier, the type locality of *C. semiatrus* Linsenmaier and the name of the collector were written by Bytinski-Salz. Kimsey & Bohart (1991) included *C. semiatrus* in the *nitidulus* species group. Móczár (1997a) keyed *Cleptes semiatrus* based on the original description provided by Linsenmaier (1968). He received Linsenmaier’s holotype for examination in 1998.



**FIGURE 17.** *Cleptes semiatrus* Linsenmaier, 1968, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

### *Cleptes turceyanus* Linsenmaier, 1968

(Fig. 18A–18D)

*Cleptes turceyanus* Linsenmaier, 1968: 5. Holotype ♂; Turkey: Tarus (NMLU).

*Cleptes turceyanus*: Kimsey & Bohart 1991: 64 (cat., *semiauratus* group).

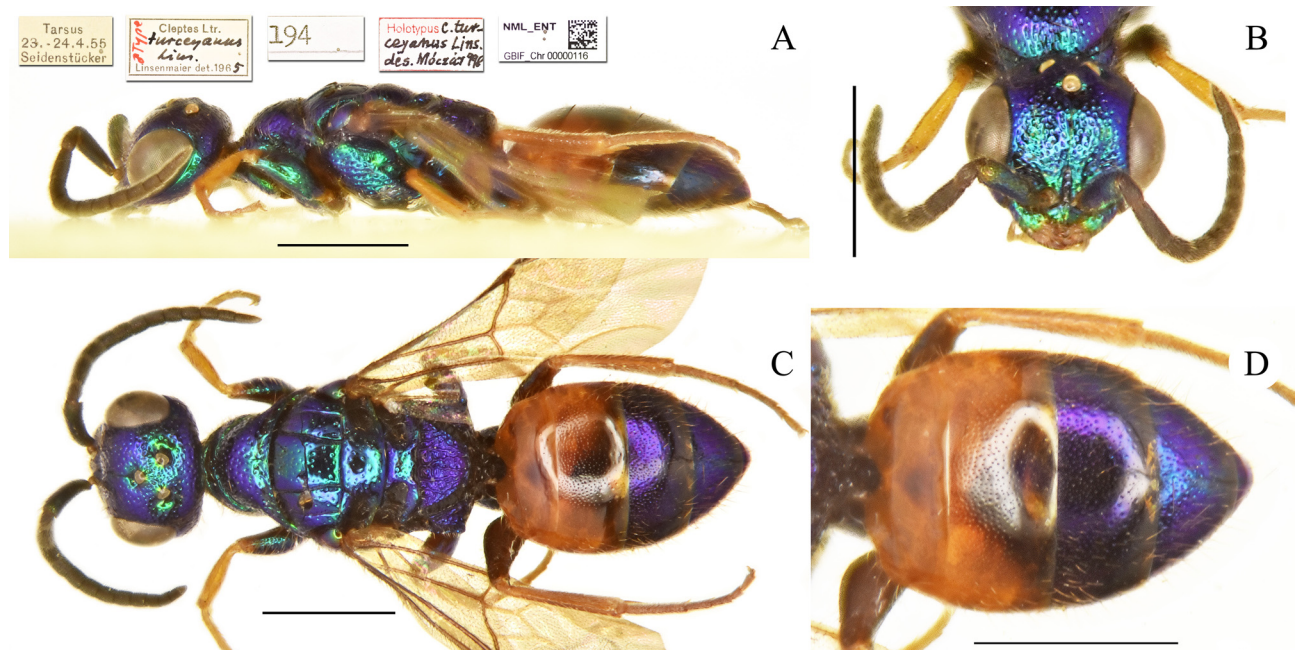
*Cleptes (Cleptes) turceyanus*: Móczár 2001: 908 (cat., *semiauratus* group), 913 (key), 928 (cat., descr.).

**Type locality.** “Klein-Asien, ♂ Type von Tarsus, leg. Seidenstücker IV.55 in Coll. m.—♂ Paratype, Antakya VI.65, leg. und Coll. Gusenleitner”.

**Holotype,** ♂: Tarsus 23.-24.4.55 Seidenstücker // ♂ Type *Cleptes* Ltr. *turceyanus* Lins. Linsenmaier det. 1965 // 194 // Holotypus *C. turceyanus* Lins. des. Móczár 1998 // NML\_ENT GBIF\_Chr00000116 (ex type-collection).

**Remarks.** Kimsey & Bohart (1991) placed *Cleptes turceyanus* Linsenmaier in the *semiauratus* species group. Móczár (2001) added some diagnostic features to the description of the male. The female is still unknown.

Móczár (2001) reported that the Budapest museum is the type depository of the holotype. However, Linsenmaier (1968) stated that the type depository was his private collection and paratypes were deposited in Linz, and for this reason Zoltán Vas, the curator of the Budapest museum, kindly sent back the holotype to the Natur-Museum Luzern.



**FIGURE 18.** *Cleptes turceyanus* Linsenmaier, 1968, holotype. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

## Discussion

The Palearctic *Cleptes* were accurately revised by Móczár (1997a, 1997b, 1998a, 1998b, 1998c, 2000a, 2000b, 2001) and almost all Linsenmaier’s species proved to be valid, with the only exception of *Cleptes antakyensis* Linsenmaier, 1968, synonym of *Cleptes femoralis* Mocsáry, 1890 (Móczár 1997a). The current number of known *Cleptes* species is 95, seventy of which are endemic from the Palearctic region (Móczár (1997a, 1997b, 1998a, 1998b, 1998c, 2000a, 2000b, 2001, 2009; Linsenmaier 1999; Rosa 2003, 2018; Ha *et al.* 2011; Wei *et al.* 2013; Rosa *et al.* 2015b). The Cleptinae also include the genera *Cleptidea* Mocsáry, 1904 and *Lustrinia* Kurian, 1955, for a total of 115 known species (Móczár 1996a, 1996b; Rosa *et al.* 2020).

The study of the type material described by Linsenmaier is fundamental in the study of the Palearctic Chrysididae. Most of the *Cleptes* described by the Swiss author are known on the type series only as reported, for example, in the materials examined by Móczár (1997a, 1997b, 1998a, 1998b, 1998c, 2000a, 2000b, 2001) in his revision of the *Cleptes* of the world. Only three species are known on additional non-type specimens in Linz (*C. jordanicus*, *C. pronigratus* and *C. schmidtii*) and two species in Budapest (*C. moczari* and *C. rugulosus*). This illustrated catalogue of the *Cleptes* types described by Linsenmaier may help researchers in the correct identification of these uncommon wasps.

The present article is the first part of a planned revision of Linsenmaier’s types. The next articles will illustrate the Palearctic types of the subfamily Chrysidinae, tribes Elampini and Chrysidini. Moreover, the study of the Linsenmaier’s types and other Palearctic species deposited at the Natur-Museum Luzern is at the base of the



forthcoming revision of the West Palaearctic species. Indeed, a modern revision of the Palaearctic cuckoo wasps is needed, more than sixty years after the fundamental revision published by the Swiss author (Linsenmaier 1959).

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