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5090

The Palaearctic types of Chrysididae (Insecta, Hymenoptera) deposited in the Linsenmaier collection. Part 2. Elampini: genus *Hedychridium* Abeille de Perrin, 1878


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Table of Contents

Abstract	3
Introduction	3
Materials and methods	4
Species and subspecies of <i>Hedychridium</i> described by Linsenmaier	4
Taxonomic part	7
Genus <i>Hedychridium</i> Abeille de Perrin, 1878	7
Catalogue of <i>Hedychridium</i> types described by Linsenmaier and deposited in his collection	7
Subgenus <i>Hedychridium</i> s. str.	7
Subgenus <i>Prochridium</i> Linsenmaier, 1968	76
Type material of <i>Hedychridium</i> housed in the Linsenmaier collection	77
Nomina nuda	78
Specimens without type status	79
Unnecessary replacement names given by Linsenmaier	80
Lapsus calami: dates, localities, and identification of sexes	82
The genus <i>Hedychridium</i> in Linsenmaier's systematics	82
Systematic groups according to Linsenmaier's classification	84
Acknowledgements	90
References	91

Abstract

An illustrated catalogue of the Palaearctic types of species and subspecies described by Walter Linsenmaier in the genus *Hedychridium* Abeille de Perrin, 1878 is given. Linsenmaier described 110 species and subspecies of *Hedychridium*, most of the holotypes are deposited in his collection, at the Natur-Museum (Luzern, Switzerland), with the exception of 25 holotypes which are deposited at the British Museum (London), at the Musée cantonal de zoologie (Lausanne) and in two private collections. *Hedychridium atratum* is here transferred to *Chamaeholopyga* Linsenmaier, 1987. *Hedychridium krajniki turceyense* Linsenmaier, 1968 **stat. nov.** is upgraded to species rank. The holotype of *Hedychridium caireanum* Linsenmaier, 1968 is considered lost. A list of the species described and a syntheses of his classification is given. Pictures of 83 primary and secondary types are presented.

Key words: Chrysidinae, Elampini, subgenera, catalogue, synonym

Introduction

The present article is the third contribution dedicated to the Chrysididae collection of Walter Linsenmaier (1917-2000), currently housed at the Natur-Museum in Luzern (Switzerland, NMLU) (Rosa *et al.* 2015, 2020). This is the second catalogue on the Palaearctic types deposited in his collection and it focuses on the taxa of the genus *Hedychridium* Abeille de Perrin, 1878 (Chrysidinae, Elampini). The first part was focused on the types described by the Swiss author in the subfamily Cleptinae, genus *Cleptes* Latreille, 1802 (Rosa *et al.* 2020).

Walter Linsenmaier described 16 new subgenera (including *Adscitis*, not mentioned in Rosa *et al.* 2015), including *Prochridium* Linsenmaier, 1968 in the genus *Hedychridium*, which is currently considered as a valid genus (Kimsey & Bohart 1991). He described more than 700 new species and subspecies, 110 of which belong to the genus *Hedychridium*.

Linsenmaier's studies were revolutionary, in his day, and his revision of the European and West Palaearctic species published in several parts (Linsenmaier 1959a, b, 1968, 1987, 1994, 1997, 1999) continues to be the most influential reference for all entomologists studying Chrysididae. Linsenmaier (1959a, b, 1968) was the first author to introduce the concept of species groups in the family and in the genus *Hedychridium*; he established thirteen *Hedychridium* species groups for the West Palaearctic fauna, all included in the subgenus *Hedychridium* s. str. In fact, Linsenmaier used a classification based on subgenera, and considered four Palaearctic subgenera: *Hedychridium* s. str., *Acrotoma* Mocsáry, 1902b, *Hexachridium* Bischoff, 1913 and *Prochridium* Linsenmaier, 1968 (see the discussion below).

Materials and methods

The Linsenmaier collection includes about 56,750 specimens, 4,700 of which are *Hedychridium*, and approximately 4,380 types (Rosa *et al.* 2015). 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 (1959a, b, 1968, 1987, 1994, 1997, 1999) in the genus *Hedychridium* Abeille de Perrin, 1878. We here follow the classification proposed by Linsenmaier (1959a and followings), with explanations on unavailable names (e.g., *Acrotoma*) and a final synthesis of his fragmented work. We provide two nomenclatorial changes only, because actually evident; nevertheless, other changes are expected in future revisional works, because a catalogue is not the appropriate publication for further morphological and molecular analyses or new descriptions and comparative diagnoses.

Linsenmaier's descriptions were often incomplete both on information provided on the type localities, 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. We here report all data observed for primary and secondary types deposited in the 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.

As explained in Rosa *et al.* (2015), Linsenmaier often added a colour label (grey or light blue) between the transparent labels bearing the specimens and the locality labels. These labels bear a generic locality only (e.g., Helvetia, Mongolia, etc.) and were added by Linsenmaier for a decorative effect only. They do not provide any relevant information and therefore they are excluded from the list of labels.

We follow Linsenmaier (1968, 1987, 1997, 1999) for the definition of the geographic concept of Palestine, intended as the area currently composed by the modern State of Israel, the West Bank, and the Gaza Strip. In this sense, "Palestine" is considered as the geographical region in Western Asia without any reference to the current land claimed by the State of Palestine.

The type localities reported in the present article are listed without geographic coordinates. Most of the taxa described by Linsenmaier were collected before 1990 and usually report a general locality. These generic localities refer either (i) to the surroundings of a town or to the hills/mountains around it, (ii) a locality where the landscape has changed in the last decades due to urbanisation or agricultural activities. Therefore, we are unable to provide precise collecting coordinates as these may refer to areas with more than several kilometres in radius. The punctuation and dashes (instead of hyphens) of the collecting dates written on the labels are standardised in the text, respecting the historical value of the original labels made by Linsenmaier.

The definitions of holotype, neotype, lectotype, etc. are used according to the International Code for Zoological Nomenclature (ICZN 1999), fourth edition.

The following abbreviations are used: cat. (catalogue), descr. (description), design. (designation), diagn. (diagnosis), distr. (distribution), fig. (figure), pag. (page), s. str. (*sensu strictu*), tax. (taxonomic discussion). Translations from the German text are given in square parentheses [].

Photographs of the types were taken with a Nikon D3400 and D700 connected to the stereomicroscope Total SCZ and stacked with the software Combine ZP. The white calibration of the photocamera was applied to reduce the blue effect of fluorescent light of the microscope.

Species and subspecies of *Hedychridium* described by Linsenmaier

Linsenmaier (1951–1999) described 110 species and subspecies of *Hedychridium*. In his collection there are primary and/or secondary types of almost all taxa described, excluding the holotypes of 25 taxa, which are deposited in the following collections and reported in parentheses in the list:

MCZL	Musée cantonal de zoologie, Lausanne (Switzerland)
IMNS	Museo de Naturaleza y Arqueología de St. Cruz, Tenerife (Spain, Canary Isl.)
MTC	Marc Tussac private coll. (France)
NHMUK	Natural History Museum, London (UK)
UKC	Udo Koschwitz private coll. (Germany)

Hedychridium (Hedychridium) aequabilitum Linsenmaier, 1994: 162 (NHMUK)
Hedychridium (Hedychridium) aheneum feritatum Linsenmaier, 1959b: 235
Hedychridium (Hedychridium) atratum Linsenmaier, 1968: 129
Hedychridium (Hedychridium) bispeculiferum Linsenmaier, 1997: 256 (UKC)
Hedychridium (Hedychridium) biskranum Linsenmaier, 1999: 85
Hedychridium (Hedychridium) brevifronte Linsenmaier, 1968: 30
Hedychridium (Hedychridium) buyssoni interrogatum Linsenmaier, 1959a: 50
Hedychridium (Hedychridium) buyssoni sparsapunctulatum Linsenmaier, 1959a: 50
Hedychridium (Hedychridium) bytinskii Linsenmaier, 1959a: 53
Hedychridium (Hedychridium) caireanum Linsenmaier, 1968: 33
Hedychridium (Hedychridium) canariense Linsenmaier, 1968: 29 (NHMUK)
Hedychridium (Hedychridium) chloropygum berberiacum Linsenmaier, 1959a: 59
Hedychridium (Hedychridium) chloropygum densum Linsenmaier, 1959a: 59
Hedychridium (Hedychridium) chloropygum spatium Linsenmaier, 1959a: 59
Hedychridium (Hedychridium) coriaceum jendoubense Linsenmaier, 1987: 140
Hedychridium (Hedychridium) cupritibiale Linsenmaier, 1987: 139
Hedychridium (Hedychridium) discordum Linsenmaier, 1959a: 50
Hedychridium (Hedychridium) disiunctum Linsenmaier, 1959a: 51 (MCZL)
Hedychridium (Hedychridium) duplicatum Linsenmaier, 1999: 67
Hedychridium (Hedychridium) elegans uniformis Linsenmaier, 1959a: 54
Hedychridium (Hedychridium) elengatulum peloponnense Linsenmaier, 1968: 31
Hedychridium (Hedychridium) elongatum Linsenmaier, 1959a: 57 (MCZL)
Hedychridium (Hedychridium) etnaense Linsenmaier, 1968: 26
Hedychridium (Hedychridium) extraneum Linsenmaier, 1993: 723 (IMNS)
Hedychridium (Hedychridium) flavipes rugulosum Linsenmaier, 1959a: 57
Hedychridium (Hedychridium) flavipes temperatum Linsenmaier, 1959a: 57 (MCZL)
Hedychridium (Hedychridium) flavonigrum Linsenmaier, 1999: 82 (MTC)
Hedychridium (Hedychridium) franciscanum franciscanum Linsenmaier, 1987: 140
Hedychridium (Hedychridium) franciscanum heminigrum Linsenmaier, 1997: 255
Hedychridium (Hedychridium) garianum Linsenmaier, 1968: 24 (NHMUK)
Hedychridium (Hedychridium) guichardi Linsenmaier, 1994: 163 (NHMUK)
Hedychridium (Hedychridium) hauseri Linsenmaier, 1999: 61
Hedychridium (Hedychridium) holopygum Linsenmaier, 1994: 165 (NHMUK)
Hedychridium (Hedychridium) hybridum Linsenmaier, 1959a: 53
Hedychridium (Hedychridium) hybridum creteense Linsenmaier, 1959b: 234
Hedychridium (Hedychridium) ibericum Linsenmaier, 1959a: 52
Hedychridium (Hedychridium) incrassatum subaheneum Linsenmaier, 1959a: 55 (MCZL)
Hedychridium (Hedychridium) infantum Linsenmaier, 1997: 254
Hedychridium (Hedychridium) insequosum Linsenmaier, 1959a: 56
Hedychridium (Hedychridium) integrum asianum Linsenmaier, 1997: 254 (UKC)
Hedychridium (Hedychridium) inusitatum Linsenmaier, 1959a: 56
Hedychridium (Hedychridium) iocosum Linsenmaier, 1959a: 47 (MCZL)
Hedychridium (Hedychridium) iridirufum Linsenmaier, 1994: 166 (NHMUK)
Hedychridium (Hedychridium) irregulare irregulare Linsenmaier, 1959a: 62
Hedychridium (Hedychridium) irregulare insulare Linsenmaier, 1959a: 62
Hedychridium (Hedychridium) israelicum Linsenmaier, 1968: 27
Hedychridium (Hedychridium) jordanense Linsenmaier, 1968: 27
Hedychridium (Hedychridium) kenitranum Linsenmaier, 1999: 64
Hedychridium (Hedychridium) krajniki turceyense Linsenmaier, 1968: 30
Hedychridium (Hedychridium) laetificum Linsenmaier, 1959a: 51 (MCZL)
Hedychridium (Hedychridium) laeviclypeatum Linsenmaier, 1999: 77
Hedychridium (Hedychridium) lampadum austeritatum Linsenmaier, 1997: 258

Hedychridium (Hedychridium) lampadum sorianum Linsenmaier, 1959a: 59
Hedychridium (Hedychridium) luteipenne Linsenmaier, 1968: 22
Hedychridium (Hedychridium) maculiventre raucum Linsenmaier, 1997: 258
Hedychridium (Hedychridium) maculiventre maculiventre Linsenmaier, 1959b: 235
Hedychridium (Hedychridium) maculiventre sculpturatissimus Linsenmaier, 1959a: 63
Hedychridium (Hedychridium) maroccense Linsenmaier, 1959a: 64
Hedychridium (Hedychridium) marteni ruborum Linsenmaier, 1959a: 50
Hedychridium (Hedychridium) mediocre mediocre Linsenmaier, 1959a: 63
Hedychridium (Hedychridium) mediocre sardiniense Linsenmaier, 1959b: 235
Hedychridium (Hedychridium) mediocre tunesiense Linsenmaier, 1959a: 64
Hedychridium (Hedychridium) mediocrum Linsenmaier, 1987: 142
Hedychridium (Hedychridium) moricei chrysurum Linsenmaier, 1969: 373
Hedychridium (Hedychridium) obscurifacies Linsenmaier, 1999: 63
Hedychridium (Hedychridium) parcoarbatum Linsenmaier, 1999: 65 (NHMUK)
Hedychridium (Hedychridium) dimorphum Linsenmaier, 1959a: 52
Hedychridium (Hedychridium) perraudini Linsenmaier, 1968: 126
Hedychridium (Hedychridium) persciturum Linsenmaier, 1959a: 52
Hedychridium (Hedychridium) piligastre Linsenmaier, 1969: 373
Hedychridium (Hedychridium) placare Linsenmaier, 1968: 37
Hedychridium (Hedychridium) postthoracium Linsenmaier, 1959a: 51 (MCZL)
Hedychridium (Hedychridium) projucundum Linsenmaier, 1959a: 49
Hedychridium (Hedychridium) proreticulatum Linsenmaier, 1999: 67
Hedychridium (Hedychridium) pseudincrassatum Linsenmaier, 1968: 34
Hedychridium (Hedychridium) pseudoroseum Linsenmaier, 1959a: 60
Hedychridium (Hedychridium) rectianale Linsenmaier, 1999: 56
Hedychridium (Hedychridium) reticulatum marteni Linsenmaier, 1951: 24
Hedychridium (Hedychridium) rhodojanthinum mutense Linsenmaier, 1968: 130
Hedychridium (Hedychridium) rubescens Linsenmaier, 1999: 76
Hedychridium (Hedychridium) rubrum Linsenmaier, 1968: 128
Hedychridium (Hedychridium) sardinum Linsenmaier, 1997: 258
Hedychridium (Hedychridium) semiluteum Linsenmaier, 1959a: 60
Hedychridium (Hedychridium) sevillanum Linsenmaier, 1968: 28
Hedychridium (Hedychridium) stenodactylum Linsenmaier, 1994: 165 (NHMUK)
Hedychridium (Hedychridium) stoeckherti stoeckherti Linsenmaier, 1959a: 53
Hedychridium (Hedychridium) stoeckherti valesianum Linsenmaier, 1959a: 53
Hedychridium (Hedychridium) subcoriaceum Linsenmaier, 1999: 81
Hedychridium (Hedychridium) subreticulatum Linsenmaier, 1999: 68
Hedychridium (Hedychridium) subroseum subroseum Linsenmaier, 1959a: 60
Hedychridium (Hedychridium) subroseum prochloropygum Linsenmaier, 1959a: 60
Hedychridium (Hedychridium) tenerifense Linsenmaier, 1968: 32
Hedychridium (Hedychridium) tyro viridiluteum Linsenmaier, 1999: 78
Hedychridium (Hedychridium) tricavatium Linsenmaier, 1993: 723 (IMNS)
Hedychridium (Hedychridium) tsunekii Linsenmaier, 1959a: 60
Hedychridium (Hedychridium) tussaci Linsenmaier, 1999: 68 (MTC)
Hedychridium (Hedychridium) unirubrum Linsenmaier, 1999: 65
Hedychridium (Hedychridium) urfanum Linsenmaier, 1968: 128
Hedychridium (Hedychridium) vachali decoloratum Linsenmaier, 1999: 73
Hedychridium (Hedychridium) valesiense Linsenmaier, 1959a: 62
Hedychridium (Hedychridium) verhoeffi verhoeffi Linsenmaier, 1959a: 50
Hedychridium (Hedychridium) verhoeffi libanense Linsenmaier, 1987: 139
Hedychridium (Hedychridium) verhoeffi yermasoyiense Linsenmaier, 1959a: 50
Hedychridium (Hedychridium) viridicupreum Linsenmaier, 1993: 722

Hedychridium (Hedychridium) viridisulcatum Linsenmaier, 1968: 25
Hedychridium (Hedychridium) wolffi Linsenmaier, 1959b: 234
Hedychridium (Hedychridium) zimmermanni feroculum Linsenmaier, 1959a: 56 (MCZL)
Hedychridium (Prochridium) homalosomus Linsenmaier, 1994: 160 (NHMUK)
Hedychridium (Prochridium) punctum Linsenmaier, 1994: 159 (NHMUK)
Hedychridium (Prochridium) sericatum Linsenmaier, 1994: 160 (NHMUK)

Taxonomic part

Genus *Hedychridium* Abeille de Perrin, 1878

Hedychridium Abeille de Perrin, 1878: 3. Type species: *Hedychrum minutum* Lepeletier, 1806 (= *Chrysis ardens* Coquebert, 1801), by subsequent designation of Ashmead 1902.

Hedychridium Abeille de Perrin, 1878 is the second largest genus within the family Chrysididae, after *Chrysis* Linnaeus, 1761, and the largest among the tribe Elampini, including more than 300 valid species. It is a heterogeneous genus of small to medium-sized cuckoo wasps (2.0–7.0 mm), distributed particularly in dry to arid areas of the Holarctic region. Semenov-Tian-Shanskij (1954) and Semenov-Tian-Shanskij & Nikol'skaya (1954) subdivided the genus *Hedychridium* into twelve genera, namely (besides *Hedychridium* s.str.): *Actineuchrum* Semenov-Tian-Shanskij, 1954; *Claudiola* Semenov-Tian-Shanskij, 1954; *Colpopyga* Semenov-Tian-Shanskij, 1954; *Cyrteuchridium* Semenov-Tian-Shanskij, 1954; *Cyrteuchrum* Semenov-Tian-Shanskij, 1954; *Euchridium* Semenov-Tian-Shanskij, 1954; *Euchrum* Semenov-Tian-Shanskij, 1954; *Homaleuchrum* Semenov-Tian-Shanskij, 1954; *Irenula* Semenov-Tian-Shanskij & Nikol'skaya, 1954; *Zarudnidium* Semenov-Tian-Shanskij, 1954; *Zarudnium* Semenov-Tian-Shanskij, 1954. Currently, only *Colpopyga* Semenov-Tian-Shanskij, 1954 is considered as a valid genus (Rosa 2017), as recently confirmed by means of molecular analyses (Pauli *et al.* 2019). All other Semenov-Tian-Shanskij's genera were synonymised with *Hedychridium* and treated as species groups by Linsenmaier (1968). The subgenus *Prochridium* Linsenmaier, 1968 was upgraded to genus rank by Kimsey & Bohart (1991), but we here follow Linsenmaier's (1994, 1999) classification and consider it with subgeneric status only for practical reasons, as already did in Rosa *et al.* (2015).

Catalogue of *Hedychridium* types described by Linsenmaier and deposited in his collection

Subgenus *Hedychridium* s. str.

Hedychridium (Hedychridium) aheneum feritatum Linsenmaier, 1959b
(Fig. 1A–1E)

Hedychridium aheneum feritatum Linsenmaier, 1959b: 235 (descr.); 1969: 352 (cat., *incrassatum* group).
Hedychridium feritatum: Rosa 2020: 462 (elevated to species rank), 473 (figs 1, 3, 5).

Type locality. Palestine: “Palästina, ♂ Type und Paratype Coll. m., Paratypen Coll. Bytinski-Salz (verschiedene Fundorte [=different locations], VII.-VIII.)”.

Holotype, ♂: Ruhama Palestine 29.8.1949 leg. Bytinski-Salz // ♂ Type *Hedychridium* Ab. *aheneum feritatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0010251 (ex type-collection).

Paratype, ♂: Palestine Kfor Ato [locality not found] 8.7. leg. Bytinski-Salz // ♂ Paratype *Hedychridium* Ab. *aheneum feritatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0010243 (ex synoptic collection).

Remarks. In the type-collection, Linsenmaier labelled a female specimen as the allotype bearing the following labels: Israel Haifa 20.6.65 leg. Schlaefle // ♀ Allotype *Hedychridium aheneum feritatum* Lins. det. Linsenmaier 1965. This specimen was collected after the original description and does not belong to the type series. *Hedychridium feritatum* was upgraded to species rank by Rosa (2020).

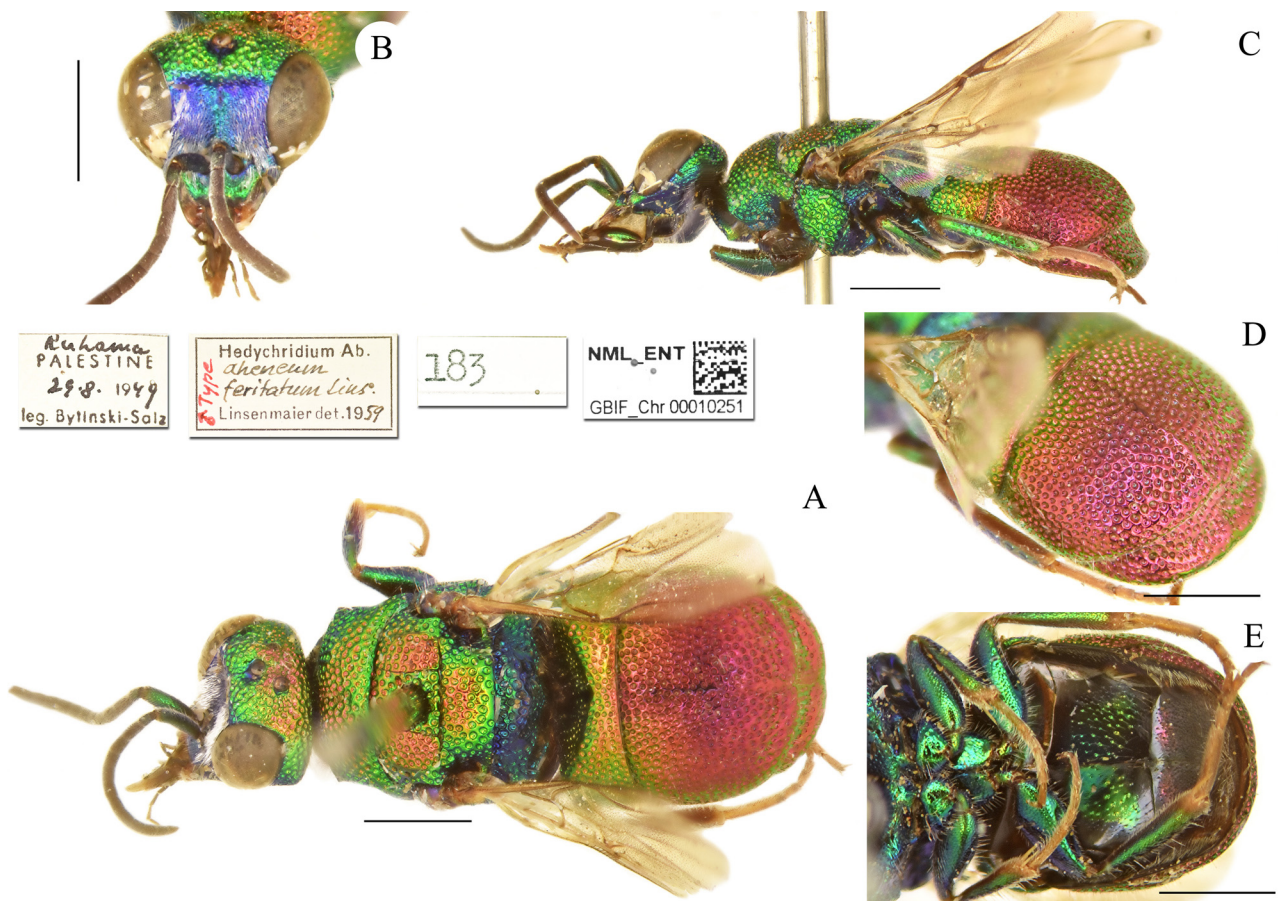


FIGURE 1. *Hedychridium aheneum feritatum* Linsenmaier, 1959b, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium atratum* Linsenmaier, 1968**

(Fig. 2A–2F)

Hedychridium (*Hedychridium*) *atratum* Linsenmaier, 1968: 129 (descr., *monochroum* group); 1987: 141 (allotype desig., descr., diagn.).

Holopyga (*Chamaeholopyga*) *atrata*: present paper.

Type locality. Turkey: “Klein-Asien, Mut, V.67, leg. Schmidt, ♀ Type in Coll. m., ♀ Paratype in Coll. Schmidt”.

Holotype, ♀: Mut Asia minor 27.–30.V.1967 leg. Jos. Schmidt // ♀ Type *Hedychridium* Ab. *atratum* Lins. Linsenmaier det. 1968 // 299 // NML_ENT GBIF_Chr0009747 (ex type-collection).

Remarks. The allotype designation by Linsenmaier (1987) is invalid because it was based on a specimen not included in the original description. Linsenmaier (1968) described this species in the *Hedychridium monochroum* group, nevertheless it belongs to *Chamaeholopyga* Linsenmaier, 1987. This species is strictly related to *Chamaeholopyga rubrinigra* Linsenmaier, 1987 from Israel. It can be separated from the latter by mesosomal punctation largely separated with polished intervals (vs. dense punctation, with contiguous punctures and without interspaces in *C. rubrinigra*). The genus *Chamaeholopyga* deserves the generic status, but this will be discussed in a forthcoming paper focused on Chrysididae genera.

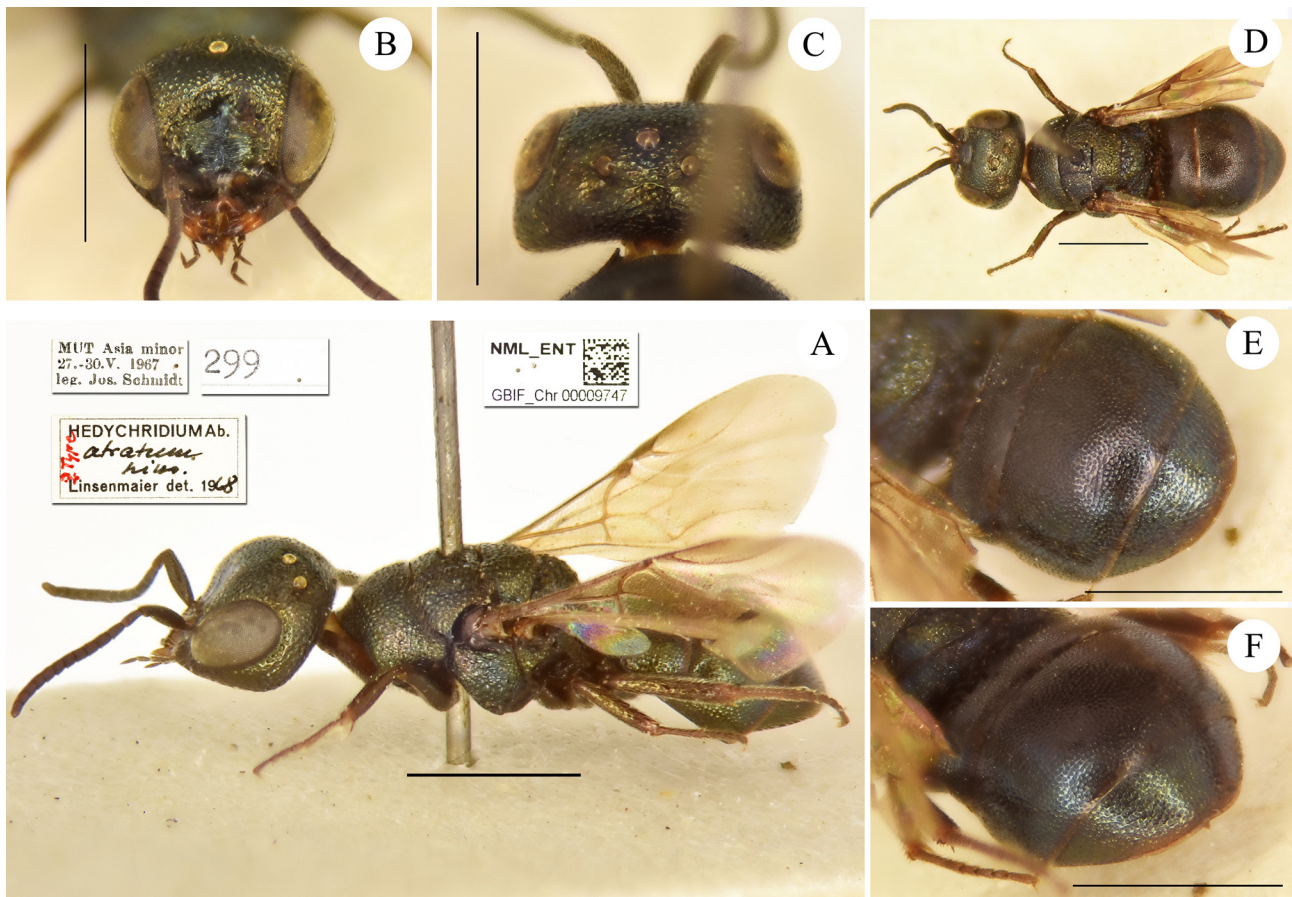


FIGURE 2. *Hedychridium atratum* Linsenmaier, 1968, holotype, female. A) Habitus, lateral view. B) Head, frontal view. C) Head, dorsal view. D) Habitus, dorsal view. E) Metasoma, postero-lateral view. F) Metasoma, postero-lateral view. Scale bar 1 mm.

***Hedychridium biskranum* Linsenmaier, 1999**

(Fig. 3A–3F)

Hedychridium (Hedychridium) biskranum Linsenmaier, 1999: 84 (key, *Hedychridium roseum-sculpturatum* group), 85 (descr.), 88 (fig. 144).

Type locality. Algeria: “Algerien, Biskra 25.V.1948, R.M. Näf, ♀ Type (Holotypus) Coll. m.”.

Holotype, ♀: Biskra, Algerie, 25.V.1948, collect. Naef // ♀ Type *Hedychridium* Ab. *biskranum* Lins. Linsenmaier det. 1998 // 513 // NML_ENT GBIF_Chr0011418 (ex type-collection).

***Hedychridium brevifronte* Linsenmaier, 1968**

(Fig. 4A–4E)

Hedychridium (Hedychridium) brevifronte Linsenmaier, 1968: 30 (descr., *ardens* group); 1969: 351 (cat.).

Type locality. Palestina: “Palästina, ♂ Type Jerusalem, leg. Houska, in Coll. m.”.

Holotype, ♂: Jerusalem 23.IV.44 Palestina Houska lgt. // ♂ Type *Hedychridium* Ab. *brevifronte* Lins. Linsenmaier det. 1963 // 218 // NML_ENT GBIF_Chr0009505 (ex type-collection).

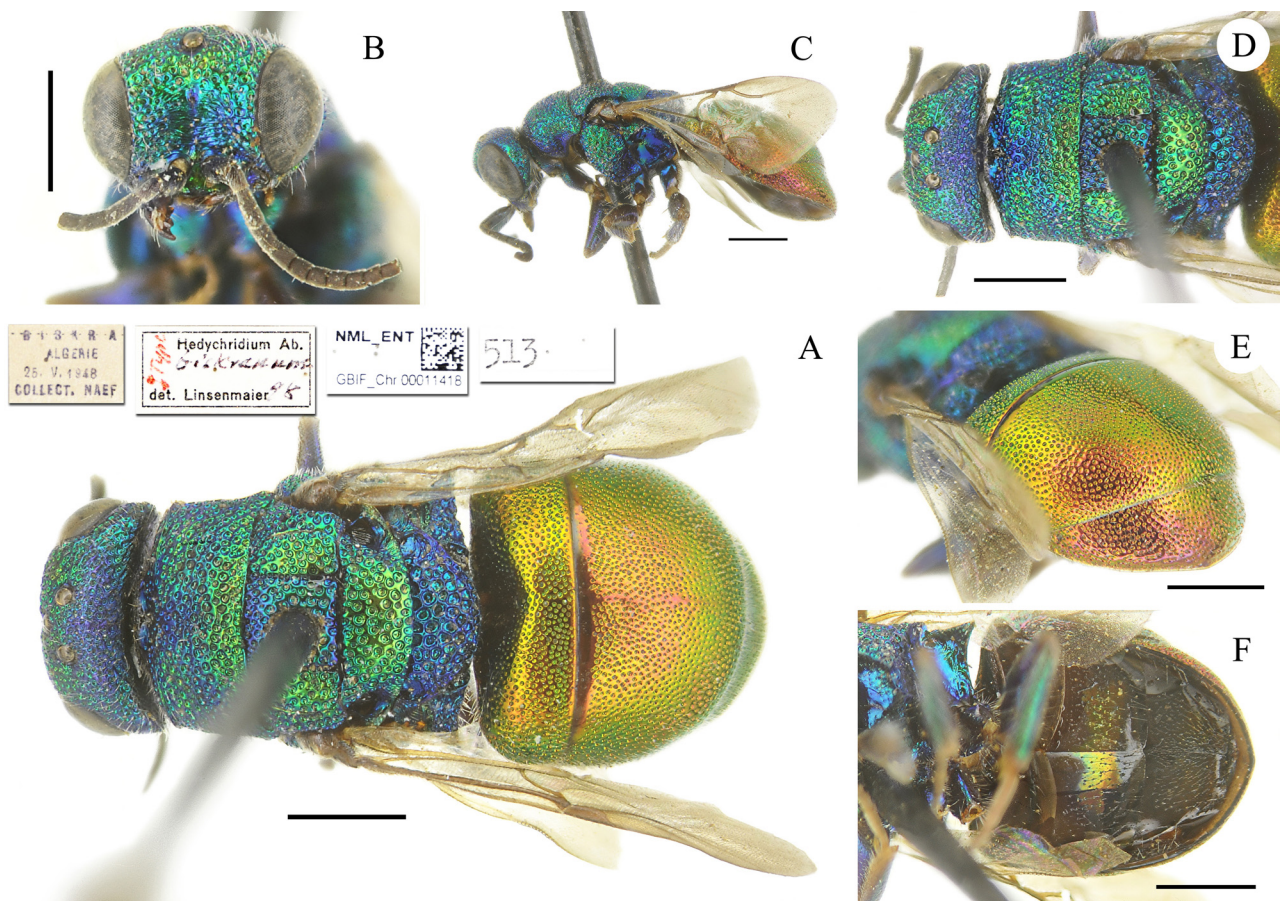


FIGURE 3. *Hedychridium biskranum* Linsenmaier, 1999, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Head and mesosoma, dorsal view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium buyssoni interrogatum* Linsenmaier, 1959a**
(Fig. 5A–5D)

Hedychridium (Hedychridium) buyssoni interrogatum Linsenmaier, 1959a: 50 (descr.), 187 (cat.).
Hedychridium (Hedychridium) interrogatum: Linsenmaier 1968: 26 (raised to species rank, *ardens* group).

Type locality. Cyprus: “Cypern. ♀ Type, ♂ Allotype, ♀ Paratype Coll. m. (Akrotizi-Bay und Limassol, VIII.1951/54)”.

Holotype, ♀: Cypern 2.VIII.51 Akrotizi-Bay leg. Mavromoustakis Coll. Linsenmaier // ♀ Type *Hedychridium Ab. buyssoni ssp. interrogatum* Lins. Linsenmaier det. 1959 // 50 // *Hedychridium Ab. interrogatum* Lins. Linsenmaier det. 1966 // NML_ENT GBIF_Chr0008783 (ex type-collection).

Allotype, ♂: Cyprus nr. Limassol 19.8.1954 Mavromoustakis leg. // ♂ Allotype *Hedychridium Ab. buyssoni Ab. interrogatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0008784 (ex type-collection).

Paratype, 1♀: Yermasoya River Cyprus 5.8.1957 leg. Mavromoustakis // ♀ Paratype *Hedychridium Ab. buyssoni Ab. ssp. interrogatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0008785. // *Hedychridium Ab. interrogatum* Lins. Linsenmaier det. 1966.

Remarks. In the general collection there are other specimens collected by Mavromoustakis at the type locality (near Limassol and along the Yermasoyia river in 1953 and 1957) which we exclude from the type series, because the identification label handwritten by Linsenmaier was placed in 1966 and there are no evidences that he examined other specimens than that cited in the original description.

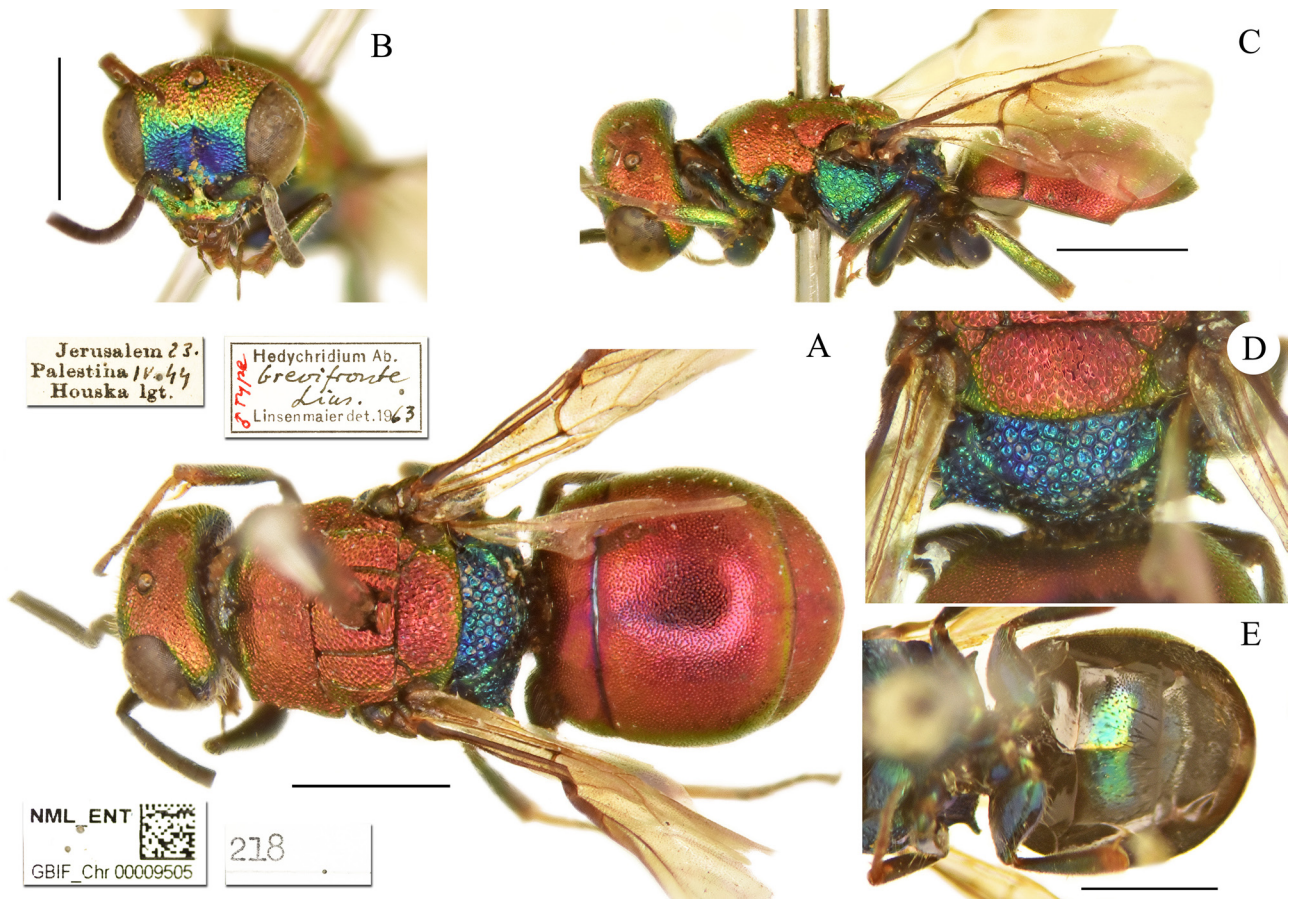


FIGURE 4. *Hedychridium brevifronte* Linsenmaier, 1968, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Scutellum, metanotum and propodeum, posterior view. E) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium buyssoni sparsapunctulatum* Linsenmaier, 1959a**

(Fig. 6A–6F)

Hedychridium (Hedychridium) buyssoni sparsapunctulatum Linsenmaier, 1959a: 50 (descr.), 187 (cat.); 1968: 26 (distr., *ardens* group).

Hedychridium (Hedychridium) algerum (Mocsáry, 1889): Linsenmaier 1999: 62 (synonymised).

Type locality. Algeria, Tunisia: “Algerien, Tunesien. ♀ Type ♂ Allotype (Algerien, El Kantara V.1954) und Paratypen Coll. m.”

Holotype, ♀ and **allotype**, ♂ [glued on the same label]: Algerien El Kantara 15.5.54 leg. Linsenmaier // Type ♀ u. Allotype ♂ *Hedychridium Ab. buyssoni ssp. sparsapunctulatum* Lins. Linsenmaier det. 1959 // 49 // NML_ENT GBIF_Ch0008762 (ex type-collection).

Paratypes, 17♂: Algerien El Kantara 6.54 leg. Mohammed [coll.] Linsenmaier // ♂ *Hedychridium Ab. buyssoni ssp. sparsapunctulatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0008766-8768; 3♂: Algerien 10.5.54 Les Tamarins leg. Linsenmaier // *Hedychridium Ab. buyssoni ssp. sparsapunctulatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0008769-8770; 4 exx.: Tunesien Kairouan Santschi X.16 Coll. Linsenmaier // *Hedychridium Ab. buyssoni ssp. sparsapunctulatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0008764-8765; 1 ex.: Tunesien Gabes IV.30 Dr. Meyer Coll. Linsenmaier // *Hedychridium Ab. buyssoni ssp. sparsapunctulatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0008763.

Remarks. Linsenmaier (1999) synonymised *Hedychridium buyssoni sparsapunctulatum* with *H. algerum* (Mocsáry, 1889).

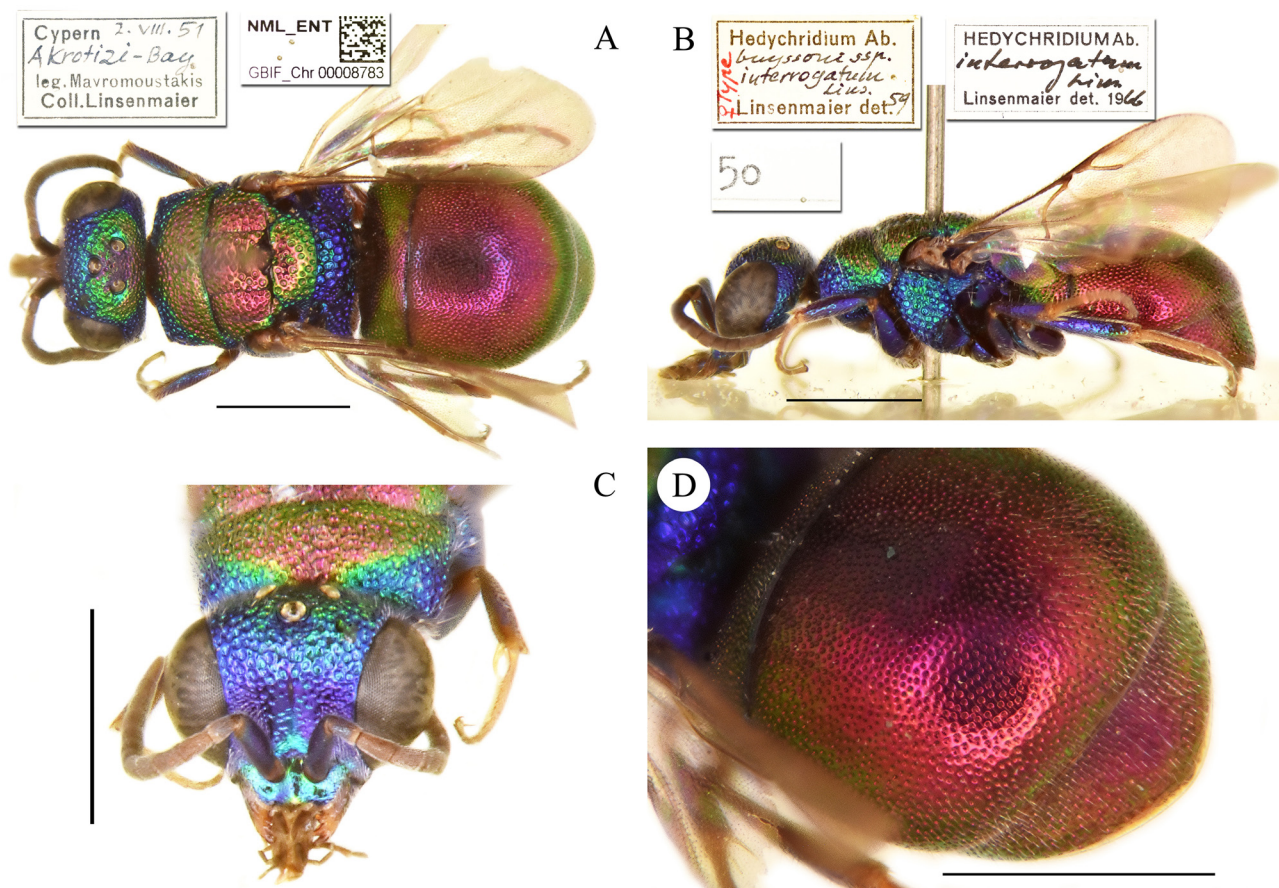


FIGURE 5. *Hedychridium buyssoni interrogatum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Habitus, lateral view. C) Head, frontal view. D) Metasoma, postero-lateral view. Scale bar 1 mm.

Hedychridium bytinskii Linsenmaier, 1959a

(Fig. 7A–7E)

Hedychridium (*Hedychridium*) *bytinskii* Linsenmaier, 1959a: 45 (key), 53 (descr.), 187 (cat.); 1968: 25 (descr., diagn., *ardens* group); 1969: 351 (cat.); 1999: 60 (key), 62 (diag.).

Type locality. Palestine: “Palästina. ♀ Type Coll. m. (Bet Lid, IV., leg. Bytinski-Salz)”.

Holotype, ♀: Palestine Bet Lid 1.IV. leg. Bytinski-Salz // Type ♀ *Hedychridium* Ab. *bitinskii* Lins. Linsenmaier det. 1959 // 48 // NML_ENT GBIF_Chr0008571 (ex type-collection).

Remarks. Linsenmaier (1968: 25) added some diagnostic information, distributional data and synonymised *Hedychridium projucundum* Linsenmaier, 1959a with *Hedychridium bytinskii* Linsenmaier, 1959a.

Hedychridium caireanum Linsenmaier, 1968

Hedychridium (*Hedychridium*) *caireanum* Linsenmaier, 1968: 33 (descr., *incrassatum* group).

Type locality. Egypt: “Ägypten, Kairo, ♂ Type (Dahschour), V.58, leg Pulawski, in Coll. m.”.

Remarks. The type is apparently lost. In the type-collection was found a label printed by Linsenmaier with the information: “*caireanum* verschollen” [=caireanum is lost]. This species was not mentioned in the revision of the northern African species (Linsenmaier 1999).

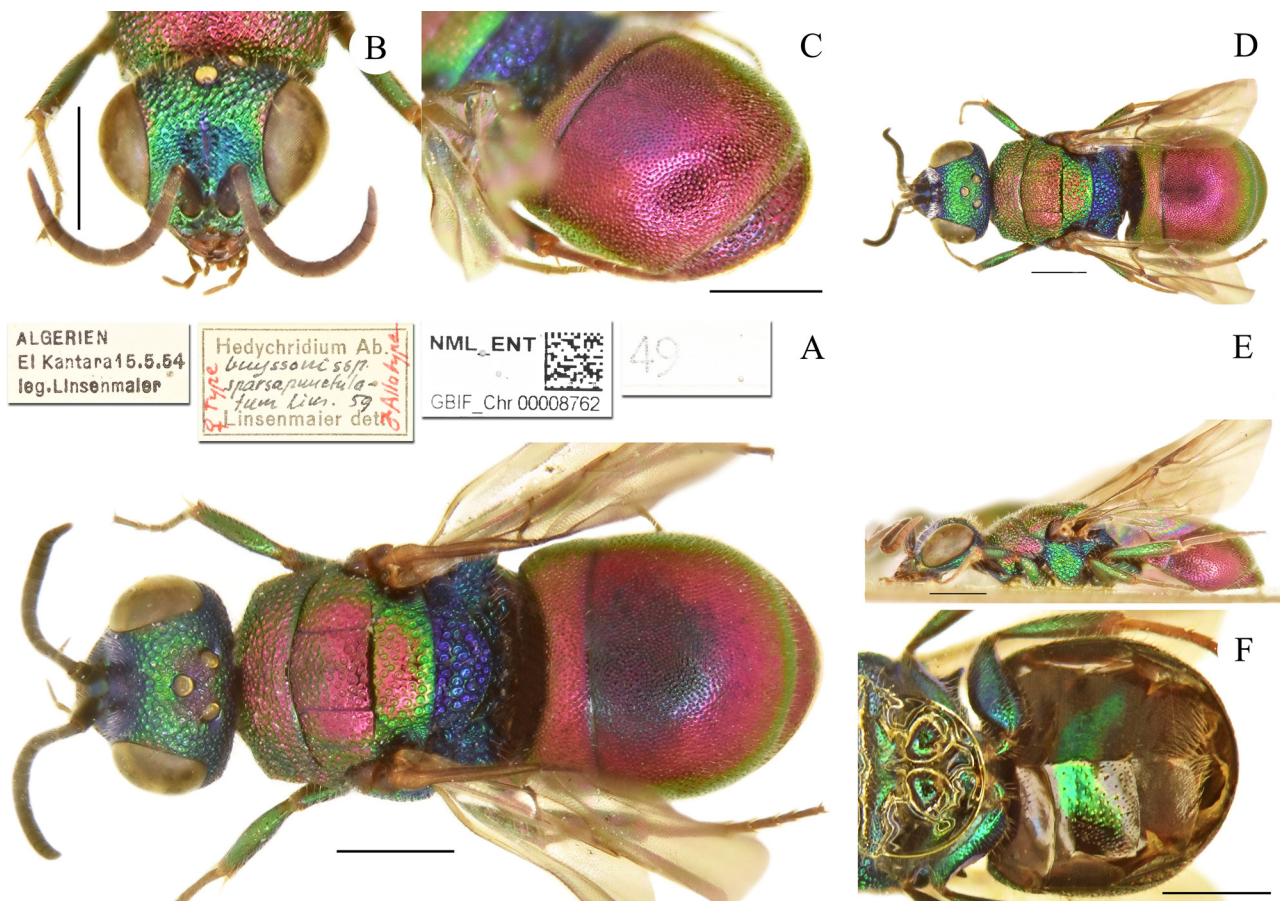


FIGURE 6. *Hedychridium buyssoni sparsapunctulatum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Metasoma, postero-lateral view. Allotype, male D) Habitus, lateral view. E) Habitus, lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium canariense Linsenmaier, 1968

(Fig. 8A–8E)

Hedychridium (*Hedychridium*) *canariense* Linsenmaier, 1968: 29 (descr., *ardens* group), *nec* García Mercet 1915 (García Mercet's species was originally described as *Hedychridium canariensis*, not in accordance with the neuter gender of the genus *Hedychridium* Abeille de Perrin).

Hedychridium (*Hedychridium*) *canarianum* Linsenmaier, 1987: 140 (replacement name for *Hedychridium canariense* Linsenmaier, 1968, *nec* García Mercet 1915); 1993: 722 (diag.).

Type locality. Canary Isl.: “Tenerife, Los Christianos, IV.64, leg. Guichard, ♀ Type in Brit. Mus., ♀ Paratype in Coll. m.”.

Paratype, ♀: Canaries: Tenerife Los Christianos 17.IV.1964 K.M. Guichard B.M. 1965-161 // ♀ Paratype *Hedychridium* Ab. *canariense* Lins. Linsenmaier det. 1966 // *Hedychridium* Ab. *canaricum* [!] nom. nov. det. Linsenmaier 77 // NML_ENT GBIF_Chr0009157 (ex synoptic collection).

Remarks. Linsenmaier (1987) replaced the name *Hedychridium canariense* Linsenmaier, 1968, *nec* García Mercet 1915 into *H. canarianum* Linsenmaier, 1987.

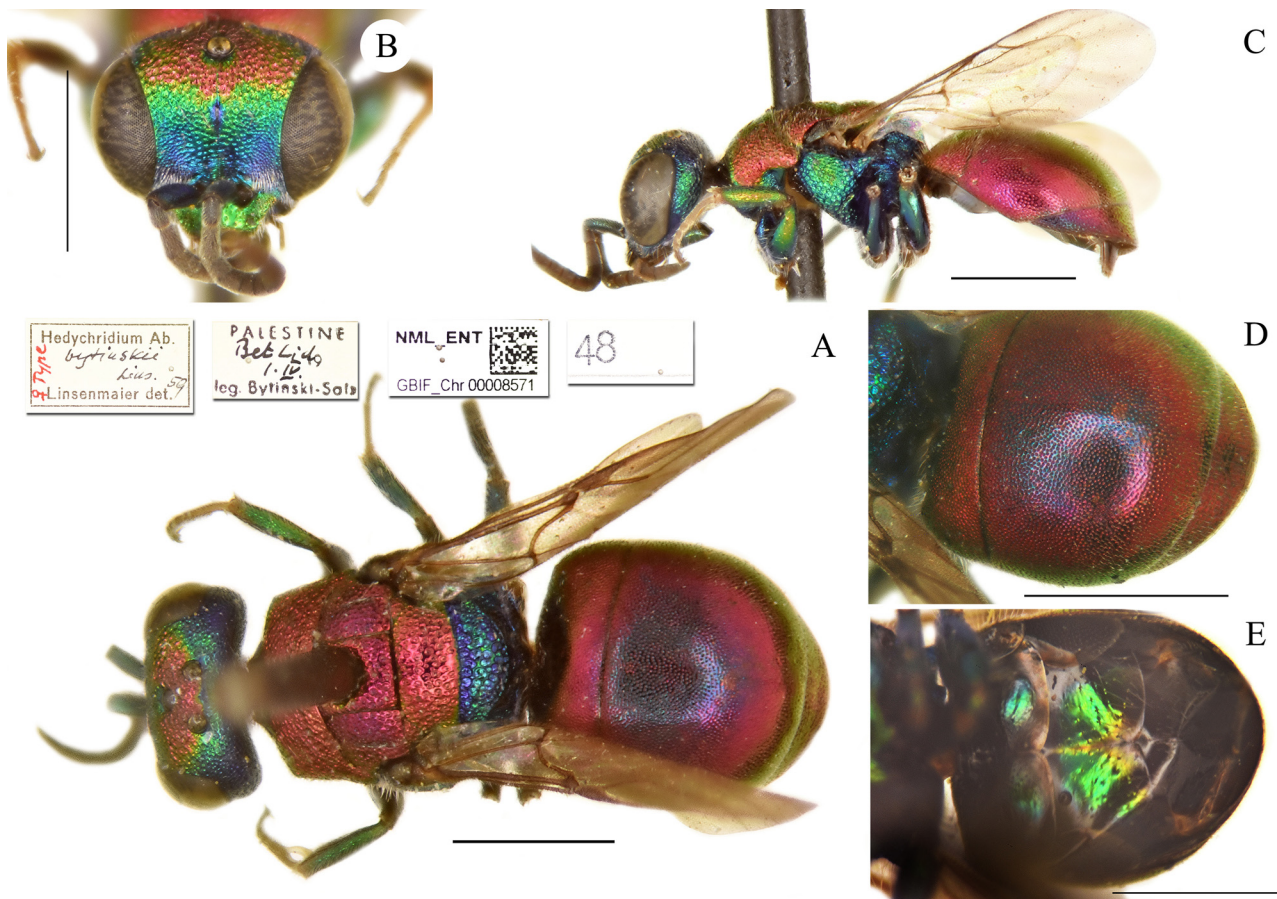


FIGURE 7. *Hedychridium bytinskii* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, dorsal view. E) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium chloropygum berberiacum* Linsenmaier, 1959a**

(Fig. 9A–9B)

Hedychridium (Hedychridium) chloropygum berberiacum Linsenmaier, 1959a: 59 (descr., *roseum* group), 187 (cat.), 198 (fig. 116); 1999: 83 (key, *roseum-sculpturatum* group), 84 (diag.).

Type locality. Algeria, Morocco: “Nord-Afrika. ♂ Type (Algerien) Coll. m., ♀ Allotype (Marocco) Coll. Naef, Paratypen Coll. Naef und Coll. m.”.

Holotype, ♂: Algerien Nemours Coll. Linsenmaier // ♂ Type *Hedychridium* Ab. *chloropygum* B.[Buysson] ssp. *berberiacum* Linsenmaier 1959 // 66 // NML_ENT GBIF_Chr0010982 (ex type-collection).

Allotype, ♀: Ifrane, Moyen Atlas, Maroc, 24.VI.1847[!], Collect. Naef // ♀ Allotype *Hedychridium* Ab. *chloropygum* B. ssp. *berberiacum* Linsenmaier 1957 // NML_ENT GBIF_Chr0010983 (ex type-collection).

Paratypes, 1♂: Ifrane, Moyen Atlas, Maroc, 24.VI.1947, Collect. Naef // ♂ Paratype *Hedychridium* Ab. *chloropygum* B. ssp. *berberiacum* Linsenmaier 1957 // NML_ENT GBIF_Chr0010986; 1♂: Maroc Ifrane VI.1949 Coll. Linsenmaier // ♂ Paratype *Hedychridium* Ab. *chloropygum* B. ssp. *berberiacum* Linsenmaier 1957 // NML_ENT GBIF_Chr0010987.

***Hedychridium chloropygum densum* Linsenmaier, 1959a**

(Fig. 10A–10D)

Hedychridium (Hedychridium) chloropygum densum Linsenmaier, 1959a: 59 (descr., *roseum* group), 187 (cat.).
Hedychridium caputaureum Trautmann & Trautmann, 1919: Arens 2010: 406 (synonymised).

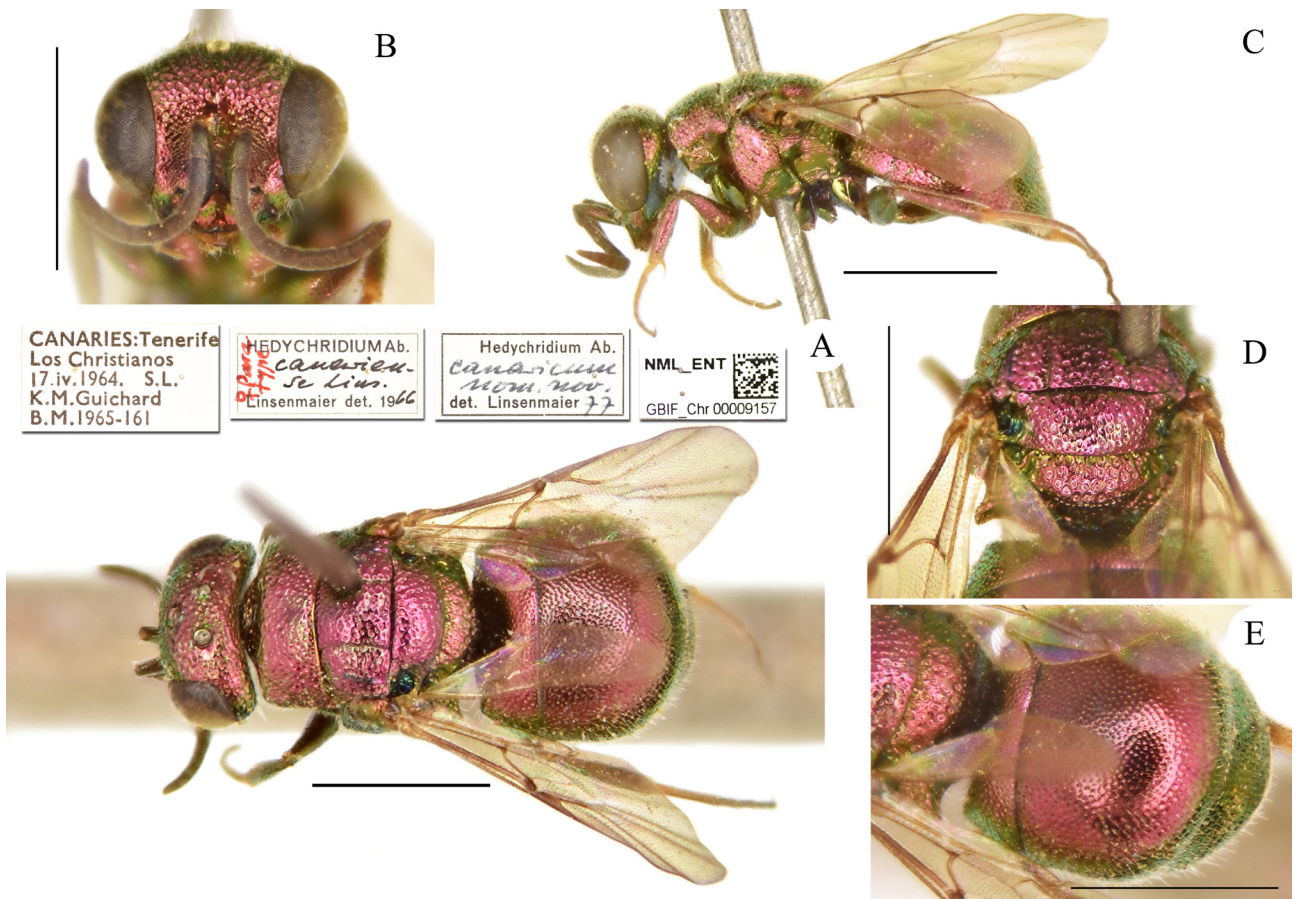


FIGURE 8. *Hedychridium canariense* Linenmaier, 1968, paratype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Mesosoma, posterior view. E) Metasoma, lateral view. Scale bar 1 mm.



FIGURE 9. *Hedychridium chloropygum berberiacum* Linenmaier, 1959a, holotype, male. A) Habitus, lateral view. B) Genital capsule. Scale bar 1 mm.

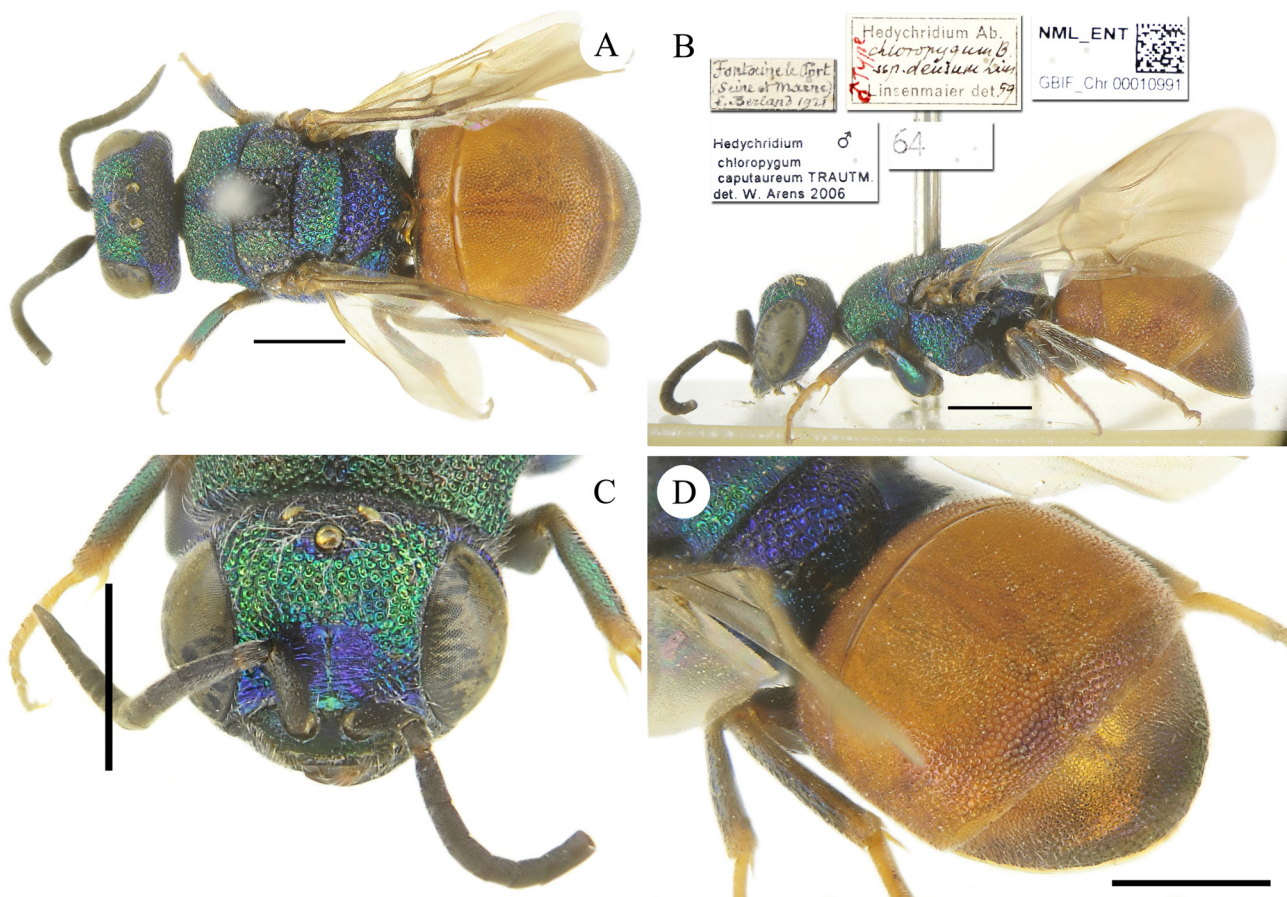


FIGURE 10. *Hedychridium chloropygum densum* Linsenmaier, 1959a, holotype, male. A) Habitus, dorsal view. B) Habitus, lateral view. C) Head, frontal view. D) Metasoma, postero-lateral view. Scale bar 1 mm.

Type locality. France: “Nord-Frankreich, ♂ Type (Seine-Marne) Coll. m.”.

Holotype, ♂: Fontaine le Port (Seine et Marne) F. Berland 1921 // ♂ Type *Hedychridium* Ab. *chloropygum* B. ssp. *densum* Lins. Linsenmaier det. 1959 // 64 // ♂ *Hedychridium chloropygum caputaureum* Traut. det. W. Arens 2006 // NML_ENT GBIF_Ch0010991 (ex type-collection).

Remarks. Arens (2010) synonymised *Hedychridium chloropygum densum* Linsenmaier 1959a and *H. chloropygum spatium* Linsenmaier 1959a with *Hedychridium caputaureum* Trautmann & Trautmann, 1919.

Hedychridium chloropygum spatium Linsenmaier, 1959a

(Fig. 11A–11F)

Hedychridium (*Hedychridium*) *chloropygum spatium* Linsenmaier, 1959a: 59 (descr., *roseum* group), 187 (cat.), 198 (fig. 107); 1968: 36 (diagn., distr.); 1987: 142 (distr.).

Hedychridium chloropygum caputaureum Trautmann & Trautmann, 1919: Arens 2010: 406 (synonymised).

Type locality. Hungary, Rhodes, Sweden: “Ungarn, Rhodos, Schweden. ♂ Type (Simontornya), ♀ Allotype (Rhodos) Coll. m., Paratypen Coll. m. und Museum Lund (Schweden)”.

Holotype, ♂: L. VII.15 Simontornya // 1924 Hung. occ. // ♂ Type *Hedychridium chloropygum* B. ssp. *spatium* Lins. Linsenmaier det. 1959 // 65 // NML_ENT GBIF_Ch0010961 (ex type-collection).

Allotype, ♀: Rodi Egeo Mai 1939 Dr. R. Meyer // ♀ Allotype *Hedychridium chloropygum* B. ssp. *spatium* Lins. Linsenmaier det. // NML_ENT GBIF_Ch0010962 (ex type-collection).

Paratype, 1 ex.: SH-Väster hejde Sigreips 11.8.31 CB Gaunitz // *Hedychridium chloropygum* B. ssp. *spatium* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0010966.

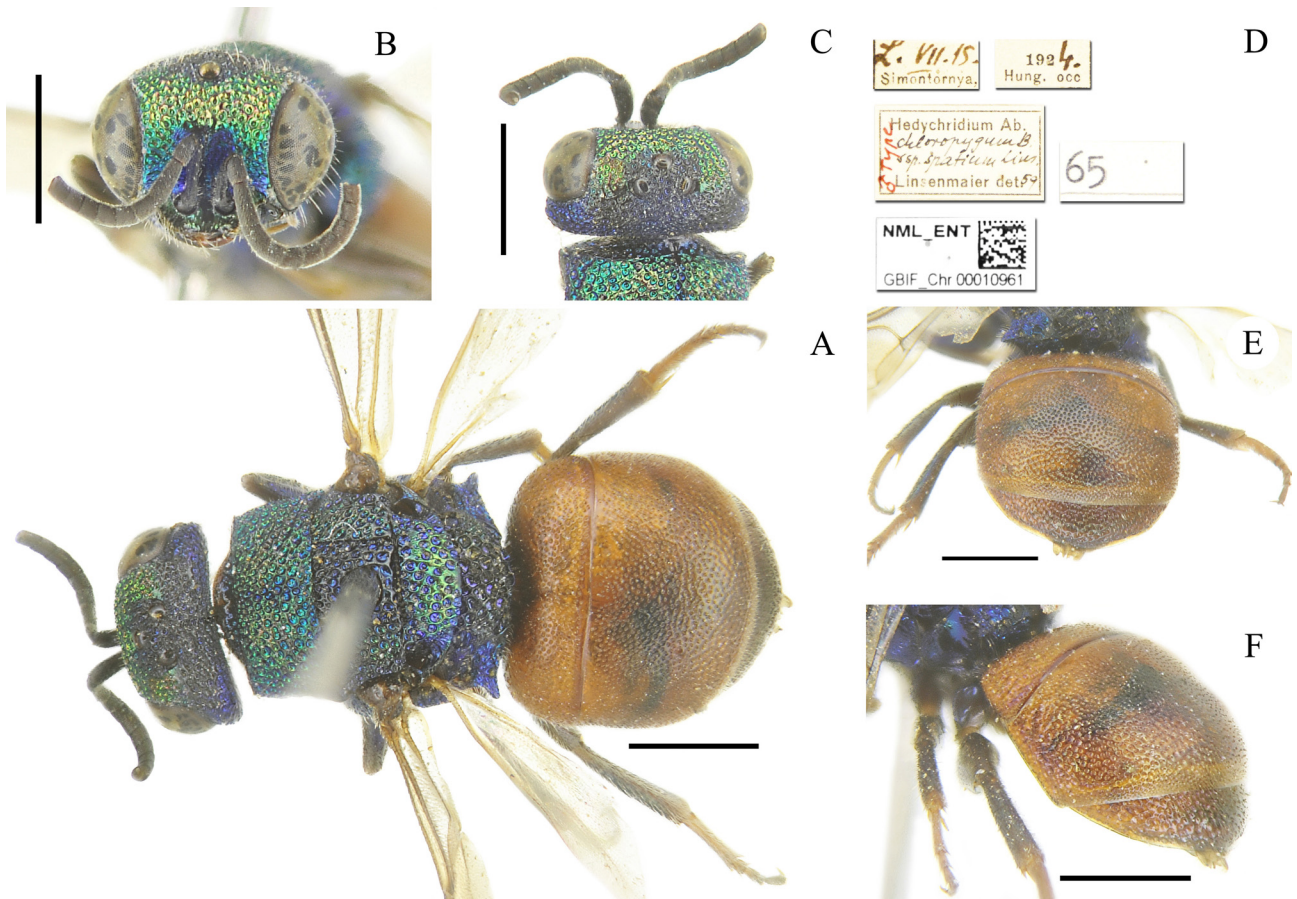


FIGURE 11. *Hedychridium chloropygum spatium* Linsenmaier, 1959a, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Head, dorsal view. D) Labels. E) Metasoma, posterior view. F) Metasoma, postero-lateral view. Scale bar 1 mm.

Remarks. Arens (2010) synonymised *Hedychridium chloropygum spatium* with *Hedychridium caputaureum* Trautmann & Trautmann, 1919.

***Hedychridium coriaceum jendoubense* Linsenmaier, 1987**

(Fig. 12A–12E)

Hedychridium (*Hedychridium*) *coriaceum jendoubense* Linsenmaier, 1987: 140 (descr., *ardens* group); 1999: 80 (key, *coriaceum* group), 88 (fig. 143).

Type locality. Tunisia: “Tunesien, Jendouba, V. 1973 (Gusenleitner und Schmidt), ♀ Type ♂ Allotype Coll. m.”.

Holotype, ♀: Jendouba 10 km Nord Tunesia 15.5.1973 leg. J. Gusenleitner // ♀ Type *Hedychridium* Ab. *coriaceum jendoubense* Lins. Linsenmaier 1977 // 417 // NML_ENT GBIF_Ch0009320 (ex type-collection).

Allotype, ♂: Tunesien Jendouba 10 km n. 15.V.1973 leg. Jos. Schmidt // ♂ Allotype *Hedychridium* Ab. *coriaceum jendoubense* Lins. Linsenmaier 1977 // NML_ENT GBIF_Ch0009321 (ex type-collection).

***Hedychridium cupritibiale* Linsenmaier, 1987**

(Fig. 13A–13E)

Hedychridium (*Hedychridium*) *cupritibiale* Linsenmaier, 1987: 139 (descr., *ardens* group); 1997: 254 (diagn., allotype desig.), 255 (tab.), 288 (figs 27, 28).

Type locality. Spain: “Spanien, Granada, Sierra Chaparral 1100 m, ♀ Type leg. und Coll. Perraudin”.

Holotype, ♀: Carro del Chupa [sic] 14.VI.1986 1100m coll. W. Perraudin Prov Granada coll. W. Perraudin // ♀ Type *Hedychridium* Ab. *cupritibiale* Lins. Linsenmaier det. 1987 // 415 // NML_ENT GBIF_Chr0009006 (ex type-collection)

Remarks. The holotype is described from Cerro del Chupa, a small locality in Sierra del Chaparral, in Granada Province, Spain. Linsenmaier’s (1997) designation of the allotype is invalid, since based on a male collected in 1988, not belonging to the original type series, bearing the following information: Granada Sierra D. Chaparral 1100m 16.6.88 leg. Linsenmaier // ♂ Paratype *Hedychridium* Ab. *cupritibiale* Lins. Linsenmaier 1991.

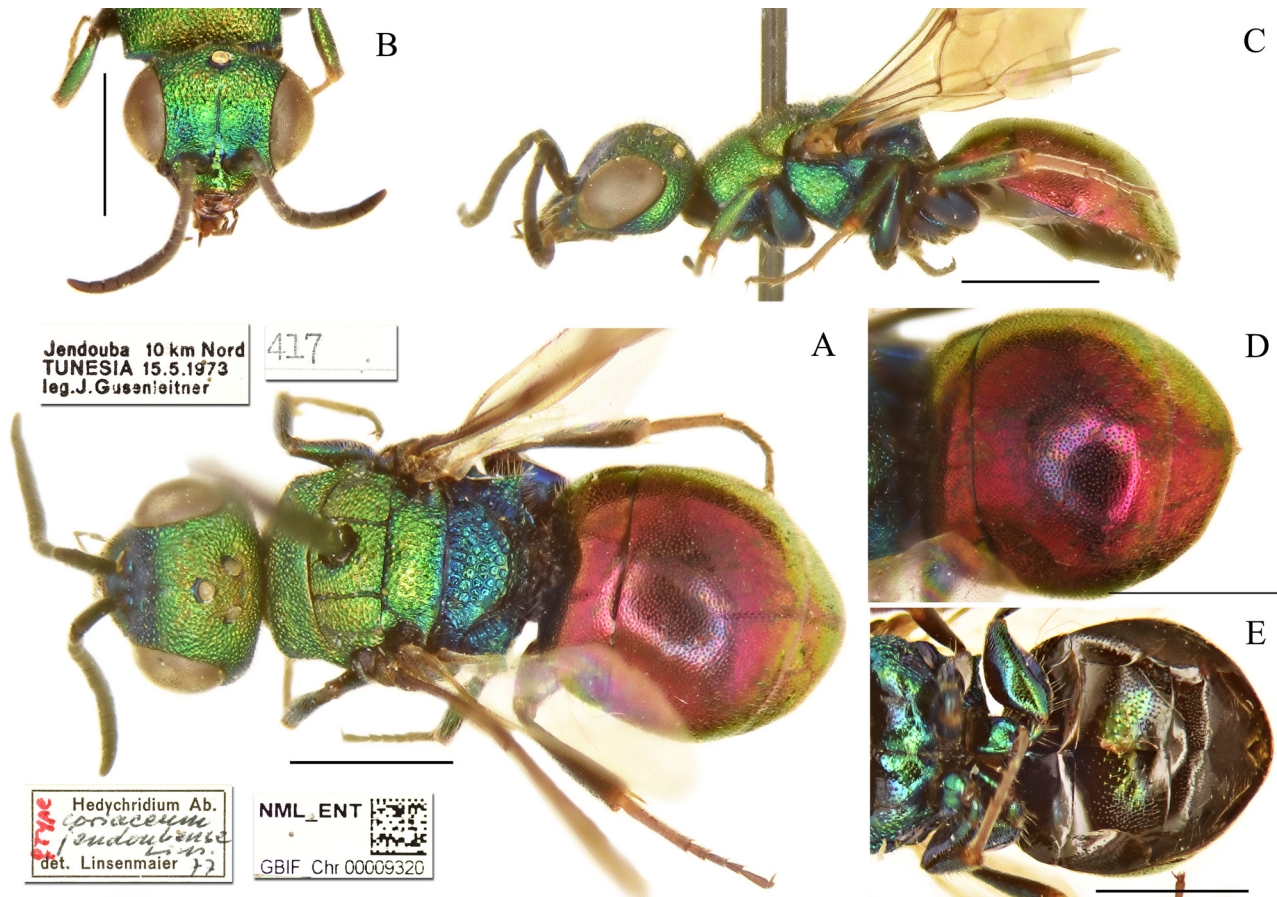


FIGURE 12. *Hedychridium coriaceum jendoubense* Linsenmaier, 1987, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, dorsal view. E) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium discordum Linsenmaier, 1959a

(Fig. 14A–14E)

Hedychridium (*Hedychridium*) *discordum* Linsenmaier, 1959a: 45 (key), 50 (descr.), 187 (cat.); 1968: 26 (distr.); 1999: 60 (key), 62 (diagn.).

Type locality. Morocco: “Marocco, ♀ Type Coll. m. (Plateau de Oukaimeden 2500m, V.1953, leg. Teunissen)”.

Holotype, ♀: Maroc Plateau de Oukaimeden 2500m 29.V.1953 Teunissen // ♀ Type *Hedychridium discordum* Lins. Linsenmaier det. 1959 // 54 // NML_ENT GBIF_Chr0008632 (ex type-collection).

Hedychridium dimorphum Linsenmaier, 1959a

(Fig. 15A–15F)

Hedychridium (*Hedychridium*) *dimorphum* Linsenmaier, 1959a: 44 (key); 52 (descr.); 187 (cat.); 216 (fig. 675); 1968: 33 (diagn., monochroum group).

Hedychridium (Hedychridium) parkanense dismorphum: Linsenmaier 1999: 80 (key, *coriaceum* group); 81 (diagn., distr.).

Type locality. Algeria: “Algerien. ♀ Type (Biskra, III.1931, leg. Meyer) Coll. m.”.

Holotype, ♀: Biskra S Algérie III.1931 Dr. R. Meyer // ♀ Type *Hedychridium* Ab. *dismorphum* Lins. Linsenmaier det. 1959 // 57 // NML_ENT GBIF_Chr0009807 (ex type-collection).

Remarks. Linsenmaier in the type-collection labelled a male specimen as the allotype, with the following labels: Tunesien Jendouba 10 km N. 15.V.1978 leg. Jos. Schmidt // ♂ Allotype *Hedychridium dismorphum* Lins. det. Linsenmaier 1977. This specimen has no type status since it was collected after the description and does not belong to the original type series.

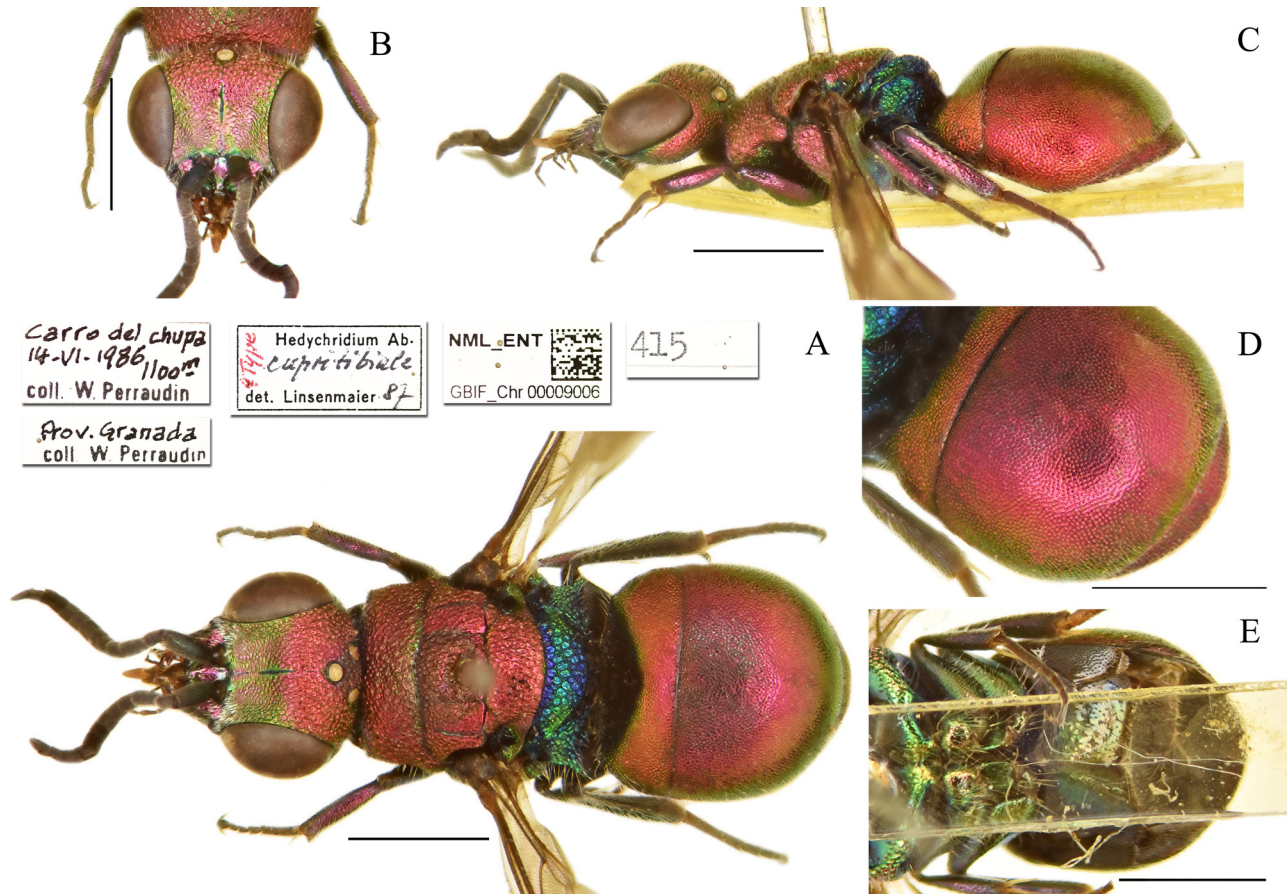


FIGURE 13. *Hedychridium cupritibiale* Linsenmaier, 1987, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium duplicatum* Linsenmaier, 1999**

(Fig. 16A–16E)

Hedychridium (Hedychridium) duplicatum Linsenmaier, 1999: 60 (key, *ardens* group), 67 (descr.).

Type locality. Lybia, Morocco, Tunisia: “Tunesien, Libyen, Marokko. Tunesien Gabes (30 km NW) 4.V.1973 J. Gusenleitner, ♀ Type (Holotypus), und Kasserine 14.V.1973 J. Schmidt; ♂ Allotype Coll. m., Paratype Coll. Schmidt; Paratypen Tunesien: Jendouba 11.IV.1981, leg. u. Coll. M. Schwarz; Bizerte 26.VI.1994, leg. u. Coll. Ch. Schmid-Egger; Djerba 9.II.1994, F. Amiet, Coll. m.; Foum Tatahouine (30 km N) 12.II.1992, K. Warncke, Mus. Linz. - Paratypen Libyen: Tripolitanien Sidi Benur 8.III.1954 und Garian 22.II.1954, leg. u. Coll. K.M. Guichard, Coll. m. - Paratypen Marokko: M-Atlas Col du Zad 25.VI.1988, leg. u. Coll. m.”.

Holotype, ♀: Gabes, 30 km NW, Tunisia, 4.5.1973, leg. Gusenleitner // ♀ Type *Hedychridium* Ab. *duplicatum* Lins. Linsenmaier det. 1977 // 506 // NML_ENT GBIF_Chr0009023 (ex type-collection).

Allotype, ♂: Tunesien, Kasserine 10 km o., 14.V.1973, leg. Jos. Schmidt // ♂ Alloype *Hedychridium* Ab. *duplicatum* Lins. Linsenmaier det. 1977 // NML_ENT GBIF_Chr0009024 (ex type-collection).

Paratypes, 1♂: Lybia, Tripolitania: Sidi Benur 8.III.1954 // K.M. Guichard B.M. 1954-359 // ♂ Paratype *Hedychridium* Ab. *duplicatum* Lins. Linsenmaier det. 1977 // NML_ENT GBIF_Chr0009025; 1♀: Tripolitania: Garian. c. 2,500 feet, 22.II.1954 // K.M. Guichard B.M. 1954-359 // ♀ Paratype *Hedychridium* Ab. *duplicatum* Lins. Linsenmaier det. 1977 // NML_ENT GBIF_Chr0009026; 1♀: Maroc M. Atlas Col du Zad 23.6.88 Linsenmaier // ♀ Paratype *Hedychridium* Ab. *duplicatum* Lins. Linsenmaier det. 1991 // NML_ENT GBIF_Chr0009027; 1♀: Djerba 9.2.1994 TU // P. Amiet // ♀ Paratype *Hedychridium* Ab. *duplicatum* Lins. Linsenmaier det. 1994 // NML_ENT GBIF_Chr0009028; 1♂: Tartzis [= Zarzis] 23.III.1983 H. Wolf leg. // ♂ Paratype *Hedychridium* Ab. *duplicatum* Lins. Linsenmaier det. 1998 (ex synoptic collection) // NML_ENT GBIF_Chr0009029.

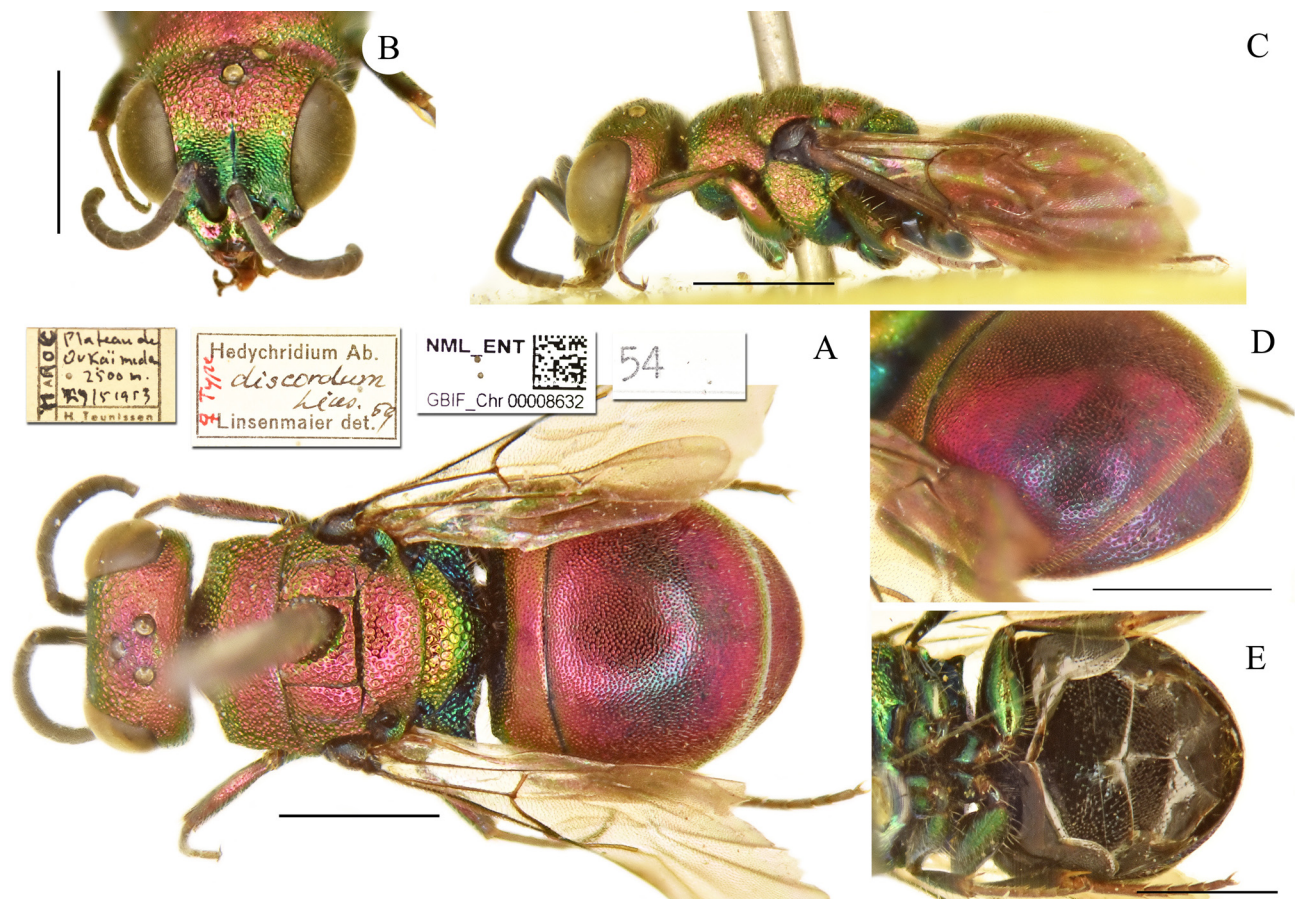


FIGURE 14. *Hedychridium discordum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium elegans uniformis* Linsenmaier, 1959a**
(Fig. 17A–17B)

Hedychridium (*Hedychridium*) *elegans uniformis* Linsenmaier, 1959a: 54 (descr.), 187 (cat.).

Hedychridium (*Hedychridium*) *femoratum uniformis*: Linsenmaier 1968: 30 (tax., *ardens* group).

Hedychridium (*Hedychridium*) *gratosum uniformis* 1997: 256 (diagn., tax.); 1999: 80 (key); 82 (diagn.).

Type locality. Morocco: “Marocco, ♀ Type Coll. Naef. (Marrakech, V.1947)”.

Holotype, ♀: Marrakech Oued Tensift 16.V.47 Collect. Naef // Type ♀ *Hedychridium* Ab. *elegans* Mocs. *uniformis* Lins. Linsenmaier det. 1959 // 59 // *Hedychridium gratiosum* Ab. ssp. *uniformis* Lins. det. Linsenmaier 1994 // NML_ENT GBIF_Chr0009545 (ex type-collection).

Remarks. One specimen, collected by Naef in the same locality and possibly same day, was labelled by Linsenmaier as paratype. It cannot be considered part of the type series because the description is based on the

holotype only. This specimen bears the followings labels: Marrakech Oued Tensift V.47 R.M. Naef Coll. Linsenmaier // Paratype ♀ *Hedychridium* Ab. *femoratum uniformis* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *gratosum uniformis* det. Linsenmaier 1994 // NML_ENT GBIF_Chr0009540 (ex synoptic collection).

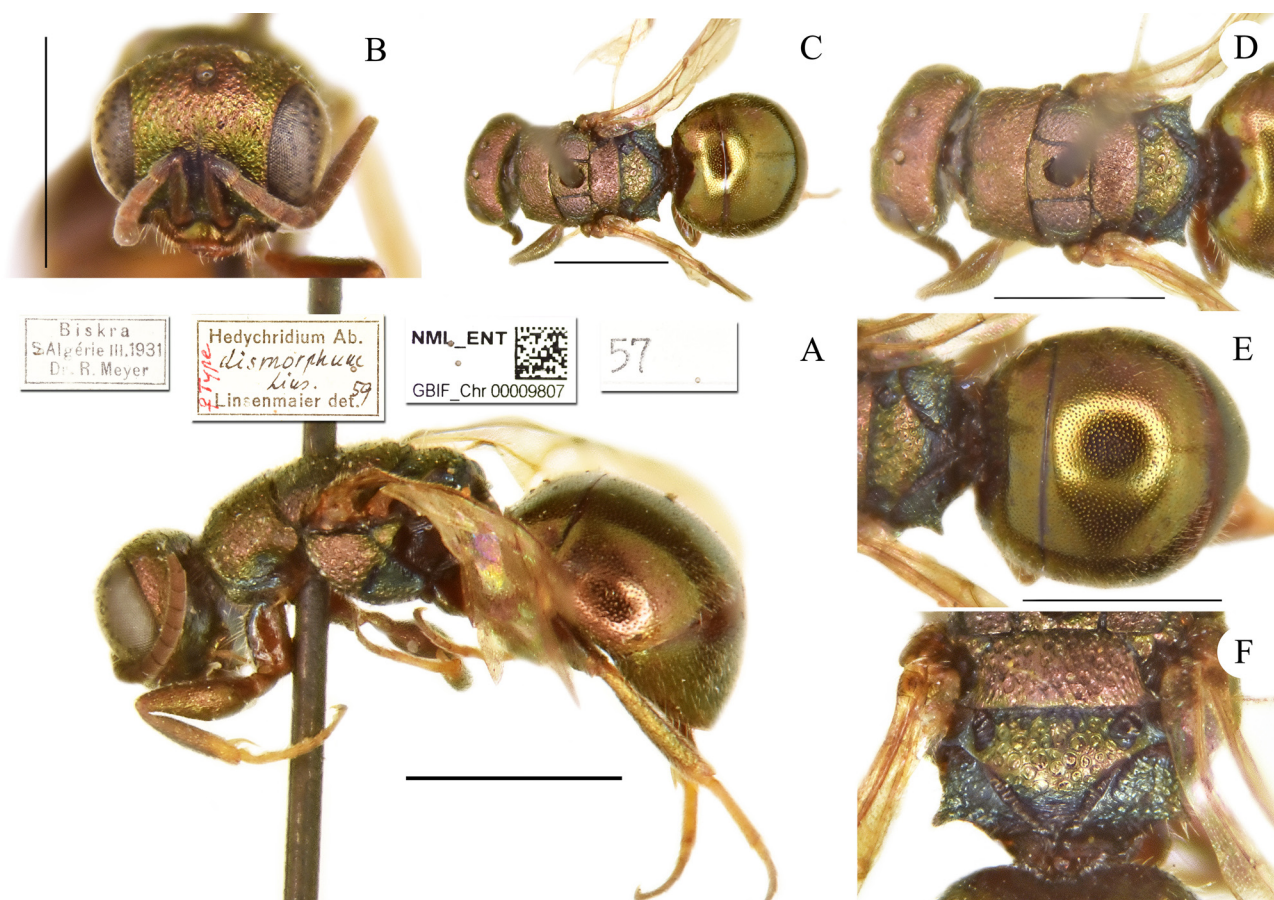


FIGURE 15. *Hedychridium dismorphum* Linsenmaier 1959a, holotype, female. A) Habitus, lateral view. B) Head, frontal view. C) Habitus, dorsal view. D) Head and mesosoma, dorsal view. E) Metasoma, dorsal view. F) Scutellum, metanotum and propodeum, posterior view. Scale bar 1 mm.

Hedychridium elegantulum peloponnense Linsenmaier, 1968

Hedychridium (*Hedychridium*) *elegantulum peloponnense* Linsenmaier, 1968: 31 (descr., *ardens* group); 1997: 255 (diagn., distr.).

Type locality. Greece, Italy: “Griechenland, Italien, Nieder-Österreich, ♀ Type, ♂ Allotype von Olympia, Paratypen diverser griechischer Fundorte in Coll. m., ♀ Paratype von Italien (Marina Pisa) in Coll. Nadig, ♀ Paratype von Burgenland in Coll. Schmidt”.

Holotype, ♀: Graecia, Pelop. Olympia 10.VI.61 leg. Linsenmaier // ♀ Type *Hedychridium* Ab. *elegantulum peloponnense* Lins. Linsenmaier det. 1962 // 219 // NML_ENT GBIF_Chr0009291 (ex type-collection).

Allotype, ♂: Graecia, Pelop. Olympia 10.VI.61 leg. Linsenmaier // ♂ Allotype *Hedychridium* Ab. *elegantulum peloponnense* Lins. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009292 (ex type-collection).

Paratypes, 1♀: Graecia, Pelop. Olympia 10.VI.63 leg. P. Heusi // ♀ Paratype *Hedychridium* Ab. *elegantulum peloponnense* Lins. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009293; 1♀: Graecia Lidhorikion 26.VI.61 leg. Linsenmaier // ♀ Paratype *Hedychridium* Ab. *elegantulum peloponnense* Lins. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009301; 1♀: Graecia, Pelop. Pyrgos 11.VI.61 leg. Linsenmaier // ♀ Paratype *Hedychridium* Ab. *elegantulum peloponnense* Lins. Linsenmaier det. 1963 // NML_ENT GBIF_Chr0009302; 1♀: Graecia, Pelop. Pyrgos 21.V.62 leg. Linsenmaier // ♀ Paratype *Hedychridium* Ab. *elegantulum peloponnense* Lins. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009303.

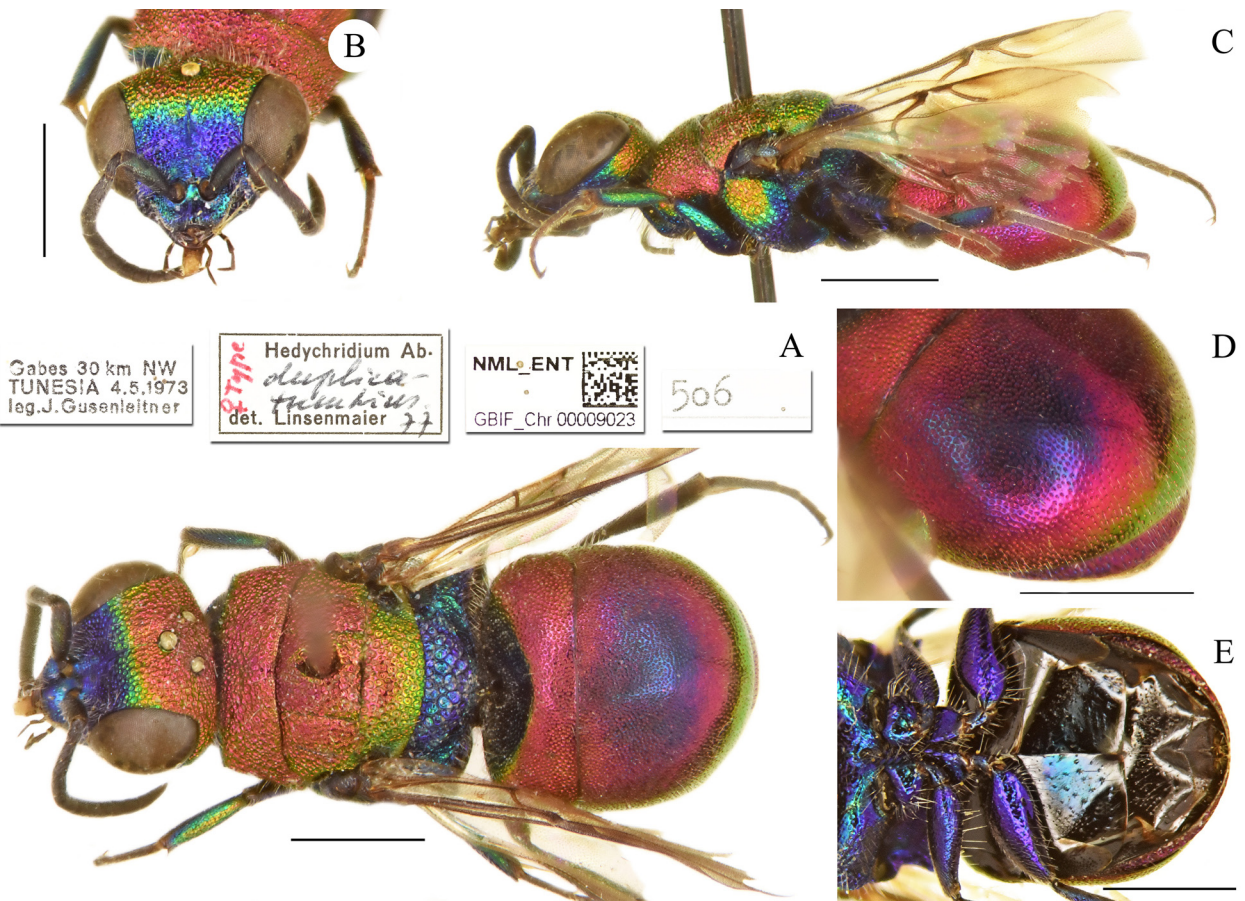


FIGURE 16. *Hedychridium duplicatum* Linsenmaier, 1999, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

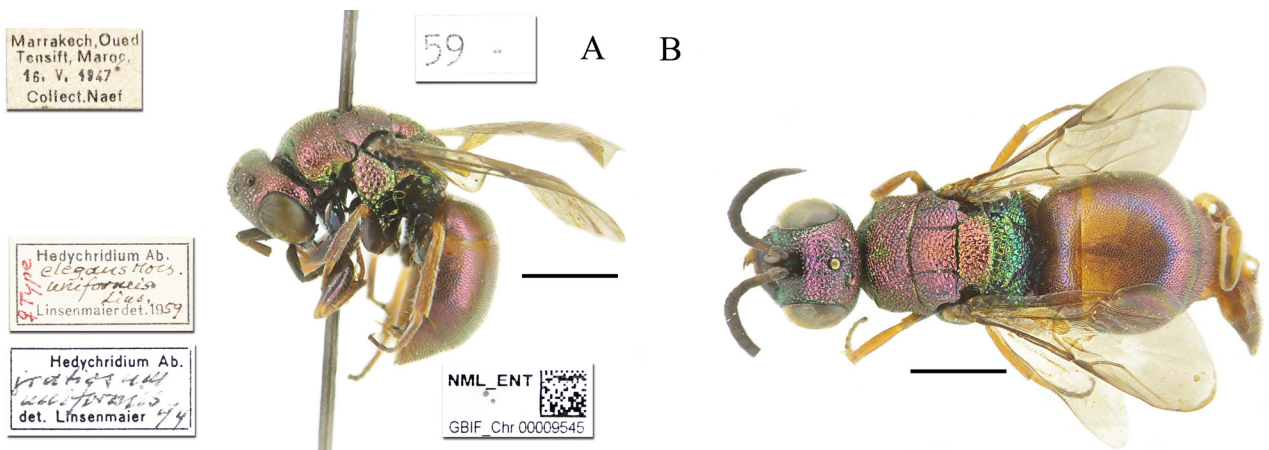


FIGURE 17. *Hedychridium elegans uniformis* Linsenmaier, 1959a, holotype, female. A) Habitus, lateral view. Female from Marrakesh B) Habitus, dorsal view. Scale bar 1 mm.

***Hedychridium etnaense* Linsenmaier, 1968**

(Fig. 18A–18E)

Hedychridium (Hedychridium) etnaense Linsenmaier, 1968: 26 (descr., *ardens* group).

Type locality. Italy, Sicily: “Sizilien, ♂ Type vom Etna, leg. Bytinski-Salz, in Coll. m.”.

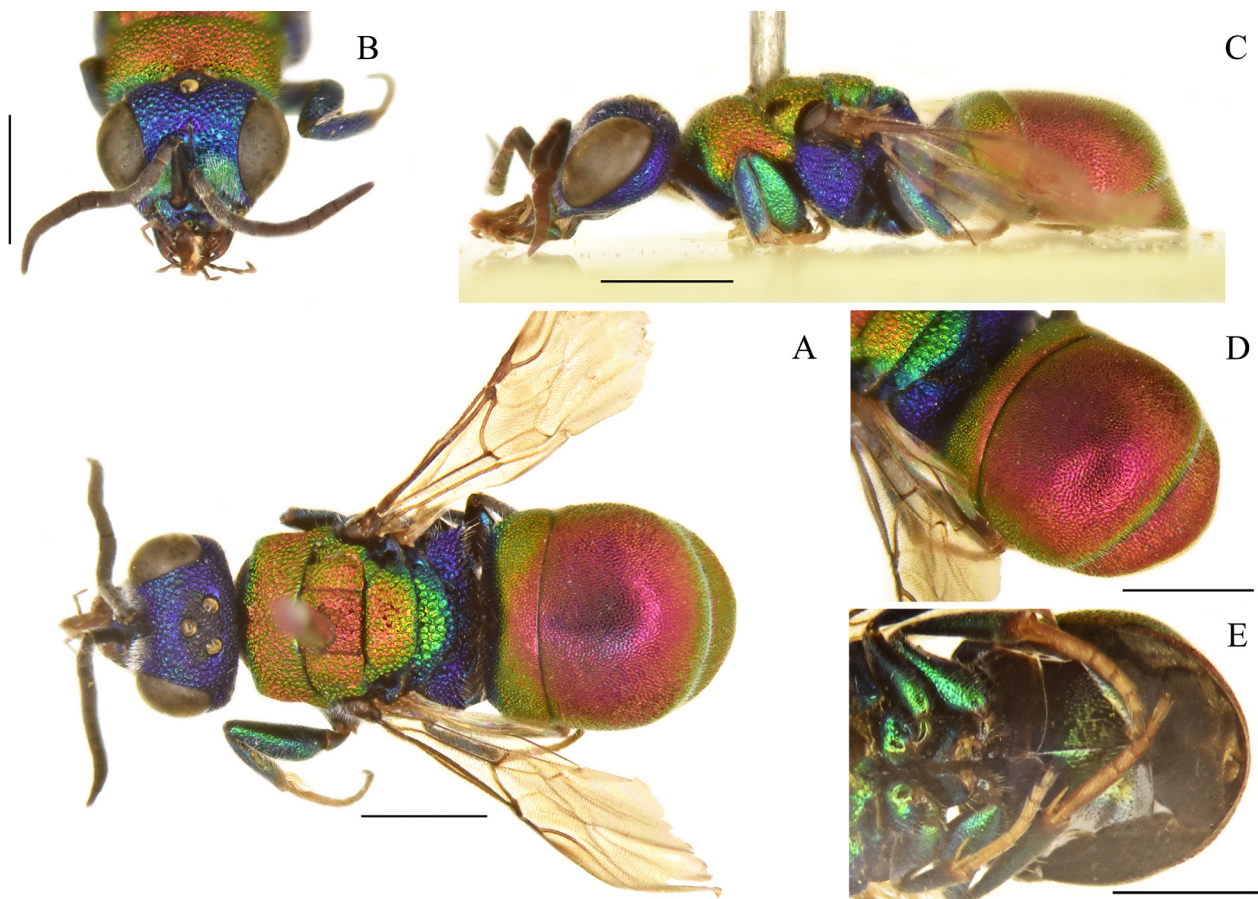


FIGURE 18. *Hedychridium etnaense* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

Holotype, ♂: Sicilia Etna 29.7.1956 1900m leg. Bytinski-Salz // ♂ Type *Hedychridium* Ab. *etnaense* Lins. Linsenmaier det. 1963 // 213 // NML_ENT GBIF_Chr0009032 (ex type-collection).

***Hedychridium flavipes rugulosum* Linsenmaier, 1959a**
(Fig. 19A–19F)

Hedychridium (*Hedychridium*) *flavipes rugulosum* Linsenmaier, 1959a: 57 (descr.), 187 (cat.); 1968: 36 (distr., *flavipes* group); 1969: 353 (cat., *flavipes* group); 1999: 80 (diagn., distr.).
Colpopyga flavipes rugulosa: Rosa 2017: 300.

Type locality. Cyprus, Iran: “Cypern, Iran. ♀ Type ♂ Allotype (Limassol und Eudhimon River, V., leg. Mavromoustakis), und ♂ Paratype (Kamal Abad) Coll. m.”.

Holotype, ♀: Cypern 26.V.49 Limassol leg. Mavromoustakis Coll. Linsenmaier // ♀ Type *Hedychridium flavipes* Ev. *rugulosum* Lins. Linsenmaier det. 1959 (ex type-collection).

Allotype, ♂: Cypern 9.V.51 Eudhimon River leg. Mavromoustakis Coll. Linsenmaier // ♂ Allotype *Hedychridium flavipes* Ev. *rugulosum* Lins. Linsenmaier det. 1959 (ex type-collection).

Paratype, 1♂: Kamal Abad 28.8.55 Coll. Linsenmaier // Paratype *Hedychridium flavipes* Ev. *rugulosum* Lins. Linsenmaier det. 1959.

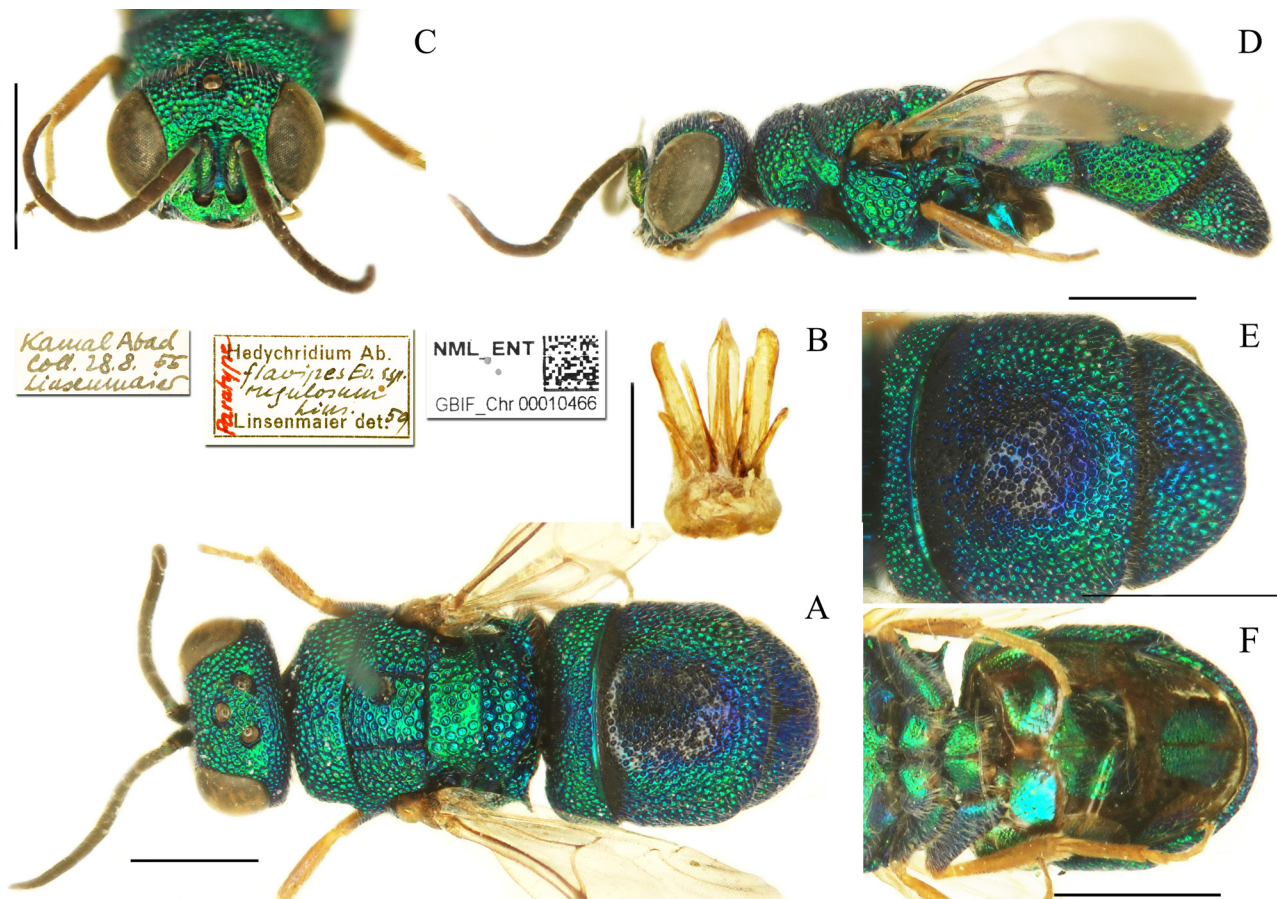


FIGURE 19. *Hedychridium flavipes rugulosum* Linsenmaier, 1959a, paratype, male. A) Habitus, dorsal view. B) Genital capsule. C) Head, frontal view. D) Habitus, lateral view. E) Metasoma, dorsal view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium flavipes temperatum* Linsenmaier, 1959a**

(Fig. 20A–20E)

Hedychridium (Hedychridium) flavipes ssp. *temperatum* Linsenmaier, 1959a: 57 (descr.), 187 (cat.); 1969: 353 (cat., *flavipes* group); 1987: 142 (distr.); 1999: 79 (diagn.).
Colpopyga temperata: Rosa 2017: 300.

Type locality. Morocco, Tunisia, Palestina: “Marocco, Tunesien, Palästina; selten. ♀ Type (Marocco) Coll. de Beaumont, ♂ Allotype (Marocco) Coll. Naef, ♂, ♀ Paratypen Coll. m.”.

Allotype, ♂: Ifrane, Moyen Atlas, Maroc, 24.VI.1947, Collect. Naef // ♂ Allotype *Hedychridium flavipes* Ev. *temperatum* Lins. det. Linsenmaier 1957 // NML_ENT GBIF_Ch0010447 (ex type-collection).

Paratypes, ♂: Maroc Azemmour 28. 30.V.1950 PMF Verhoeff // ♂ Paratype *Hedychridium Ab. flavipes* Ev. ssp. *temperatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0010442 (ex synoptic collection); 1♀: Jericho Palestine 26.4.1942 leg. Bytinski-Salz // ♀ Paratype *Hedychridium Ab. flavipes* Ev. ssp. *temperatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0010443 (ex synoptic collection); 1♀: Kairouan VI.1917 // ♀ Paratype *Hedychridium flavipes* Ev. *temperatum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0010444.

Remarks. Rosa (2017) elevated *Hedychridium flavipes temperatum* to species rank and transferred it to the genus *Colpopyga* Semenov-Tian-Shanskij, 1954.

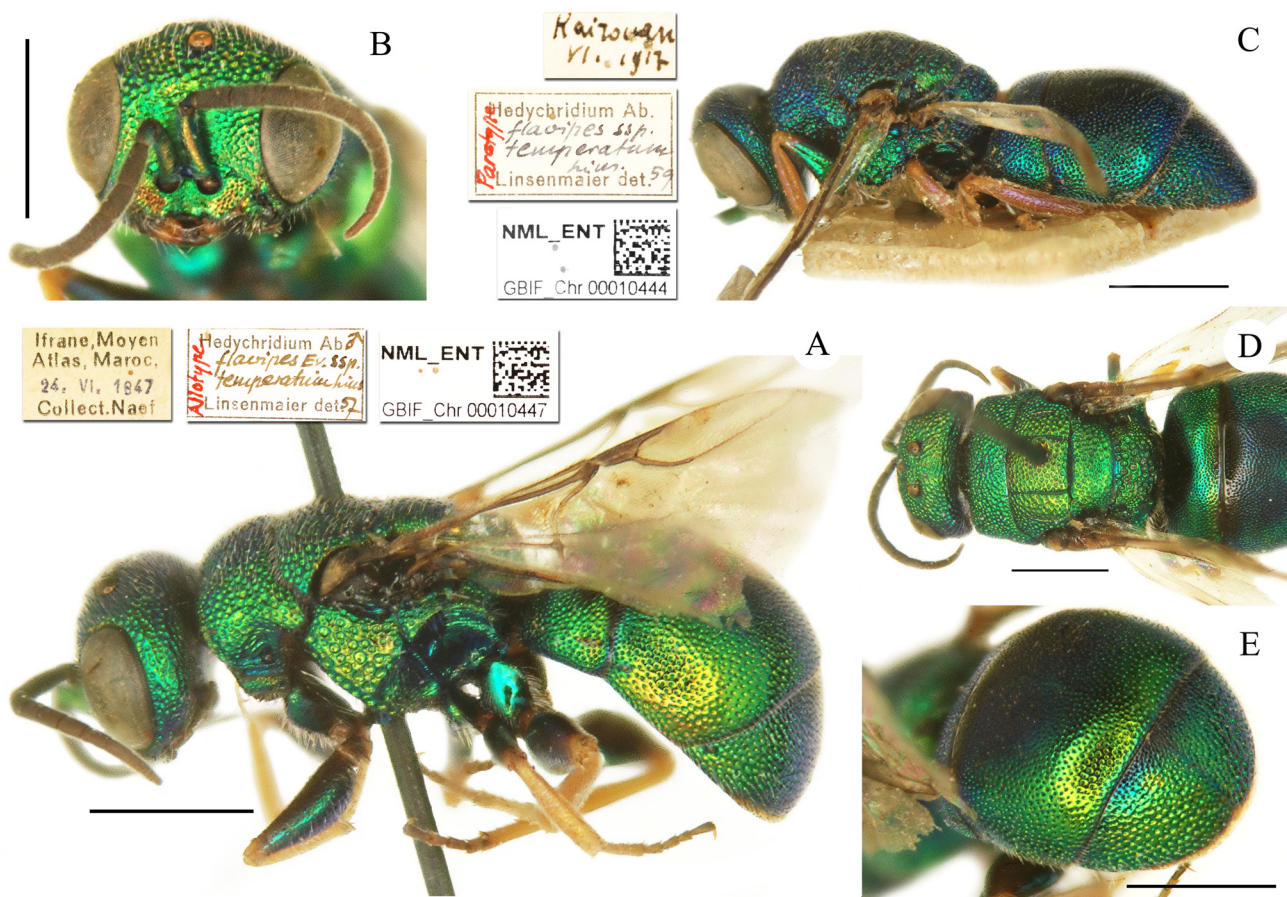


FIGURE 20. *Hedychridium flavipes temperatum* Linsenmaier, 1959a, allotype, male. A) Habitus, lateral view. B) Head, frontal view. D) Habitus, dorsal view. E) Metasoma, postero-lateral view. *Hedychridium flavipes temperatum* Linsenmaier, 1959a, paratype, female. C) Habitus, lateral view. Scale bar 1 mm.

Hedychridium franciscanum Linsenmaier, 1987

(Fig. 21A–21F)

Hedychridium (Hedychridium) franciscanum Linsenmaier, 1987: 138 (figs 2–5), 140 (descr., *ardens* group); 1997: 255 (distr.).

Type locality. Spain: “Spanien, östlich Madrid (Loeches-Campo Real) 15.VI.1985, von meiner Frau gefangen [=collected by my wife], ♀ Type Coll. m.”

Holotype, ♀: Madrid Loeches Campo Real 15.6.85 Linsenmaier // ♀ Type *Hedychridium Ab. franciscanum* Linsenmaier det. 1985 // 416 // NML_ENT GBIF_Chr0009668 (ex type-collection).

Hedychridium franciscanum heminigrum Linsenmaier, 1997

(Fig. 22A–22F)

Hedychridium (Hedychridium) franciscanum heminigrum Linsenmaier, 1997: 255 (descr.).

Type locality. Turkey: “Turkey, ♂ Type (Holotypus) Ürgüp 9.VI.70, Kusdas; ♀ Allotype Van, 2200 m, 23.VII. 86, Ebmer, Coll. m.”

Holotype, ♂: Ürgüp As. Türk. 9.VI.1970 leg. K. Kusdas // ♂ Type *Hedychridium Ab. franciscanum heminigrum* Lins. Linsenmaier det. 1990 // 465 // NML_ENT GBIF_Chr0009671 (ex type-collection).

Allotype, ♀: Türkei, Pass 10 km S Van, Steppe 2200m 23. Juli 1986 leg. A. W. Ebmer // ♀ Allotype *Hedychridium Ab. franciscanum heminigrum* Lins. Linsenmaier det. 1990 // NML_ENT GBIF_Chr0009672 (ex type-collection).

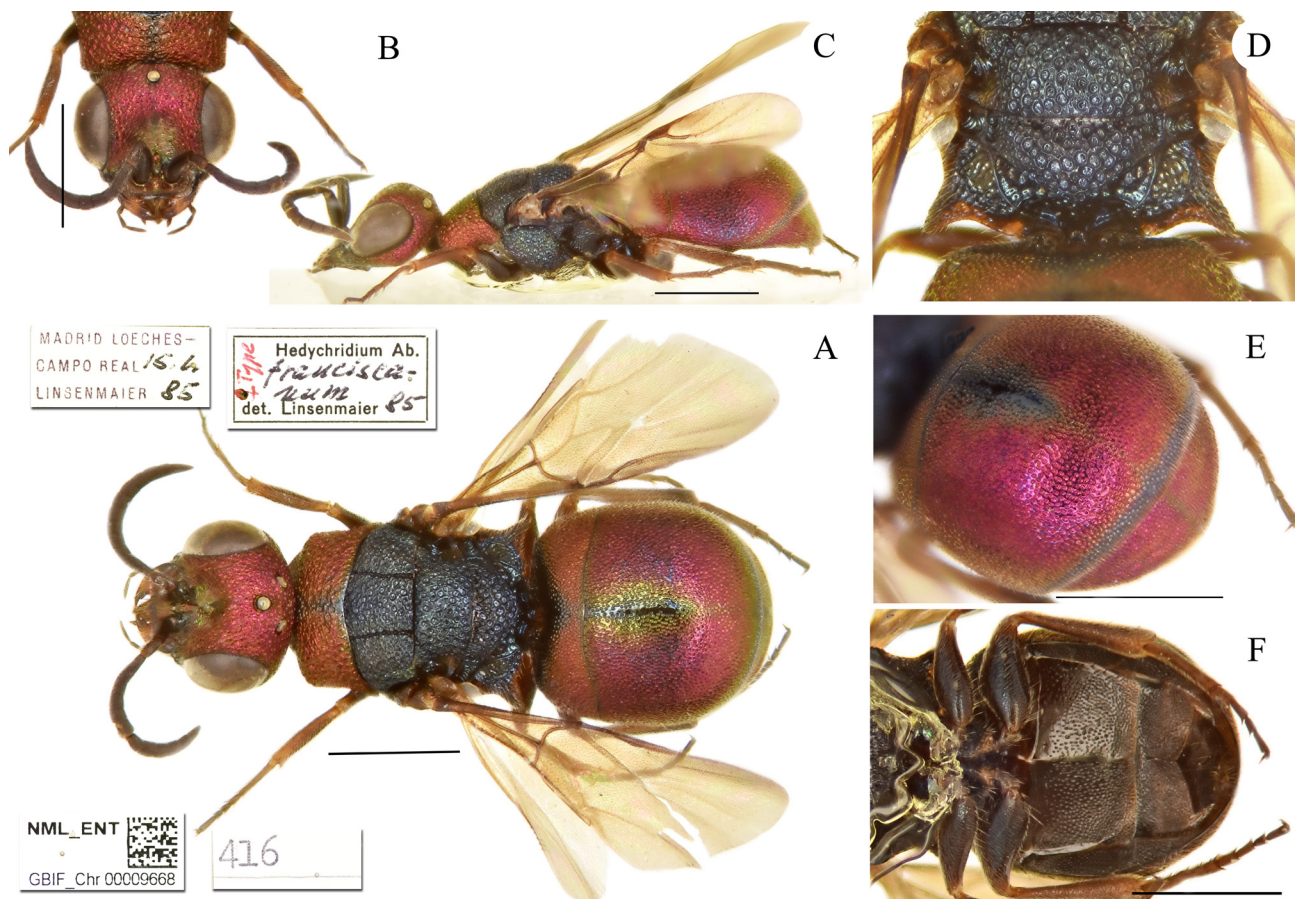


FIGURE 21. *Hedychridium franciscanum* Linsenmaier, 1987, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Scutellum, metanotum and propodeum, posterior view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium garianum Linsenmaier, 1968

Hedychridium (*Hedychridium*) *garianum* Linsenmaier, 1968: 24 (descr., *postthoracicum* group); 1999: 71 (key, *anale* group), 72 (diagn., allotype design.), 88 (fig. 122).

Type locality. Lybia: “Tripolitaniën, bei Garian, V.51, leg. K.M. Guichard, ♀ Type in Brit. Museum”.

Remarks. The holotype is conserved at NHMUK. Linsenmaier (1999) designated a male as the allotype, bearing the following labels: Egypte Dahschour Rég du Cairo 2.V.1958 leg. W.J. Puławski // ♂ Allotype *Hedychridium* Ab. *garianum* Lins. Linsenmaier det. 1991. Although the specimen was collected before the date of the original description, it does not belong to the type series because it was not included in the original description, identified in 1991 and designated in 1999.

Hedychridium hauseri Linsenmaier, 1999

(Fig. 23A–23F)

Hedychridium (*Hedychridium*) *hauseri* Linsenmaier, 1999: 59 (key, *ardens* group), 61 (descr.), 251 (figs 316, 317).

Type locality. Morocco: “Marokko, AntiAtlas, Taliouine (11 km NW) 15.III.1997, M. Hauser, ♀ Type (Holotypus) Coll. m.”.

Holotype, ♀: Marokko, 11 km NW Taliouine, 15.III.97, 30°34' N – 8°00' W, leg. M. Hauser // ♀ Type *Hedychridium* Ab. *hauseri* Lins. Linsenmaier det. 1998 // 500 // NML_ENT GBIF_Chr0008240 (ex type-collection).

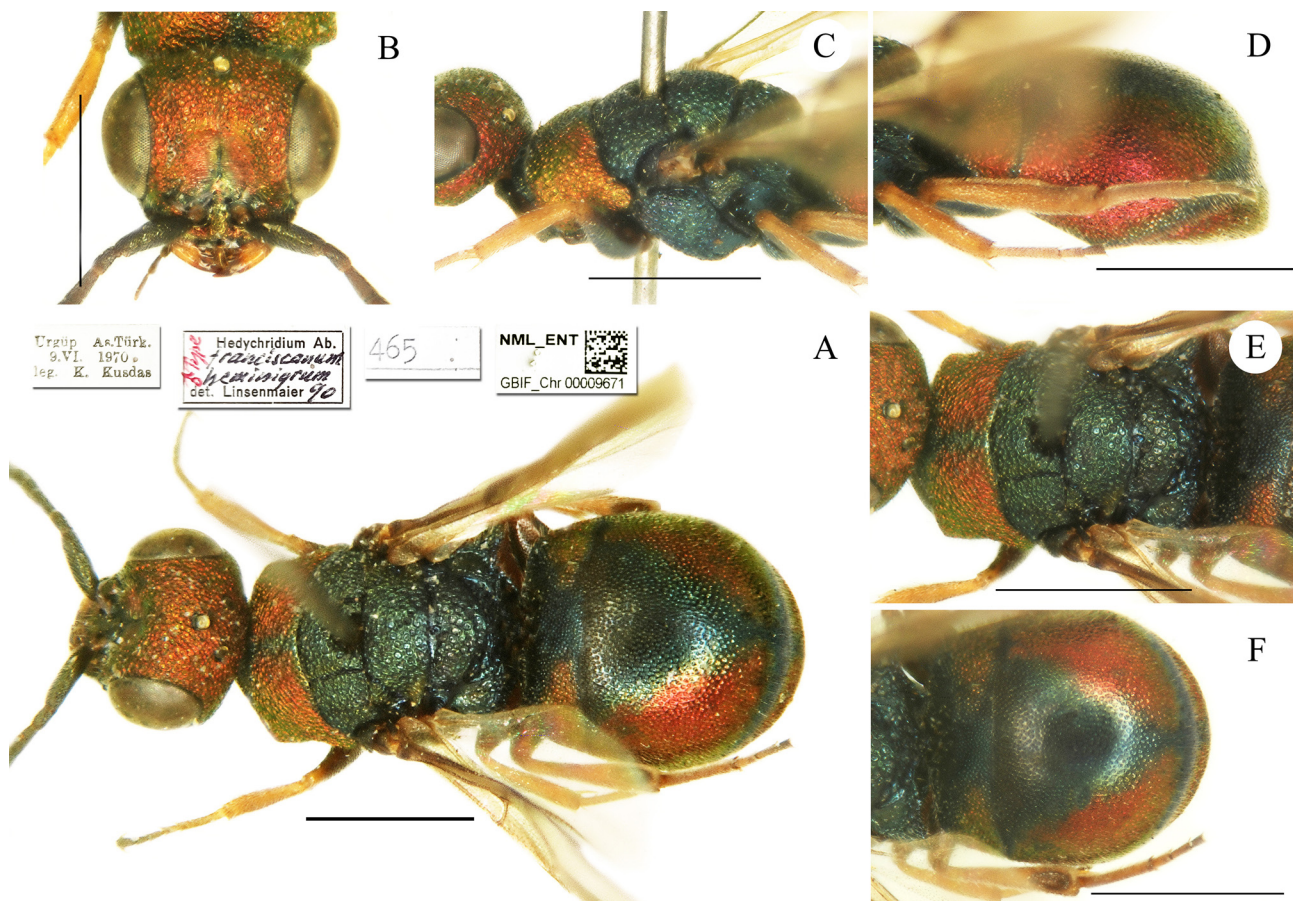


FIGURE 22. *Hedychridium franciscanum heminigrum* Linsenmaier, 1997, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Mesosoma, lateral view. D) Metasoma, lateral view. E) Mesosoma, dorsal view. F) Metasoma, dorsal view. Scale bar 1 mm.

Hedychridium hybridum Linsenmaier, 1959a

(Fig. 24A–24E)

Hedychridium (Hedychridium) hybridum Linsenmaier, 1959a: 44 (key), 53 (descr.), 187 (cat.), 200 (fig. 188); 1968: 30 (cat. *ardens* group); 1997: 255 (diagn.).

Hedychridium hybridum: Kimsey & Bohart 1991: 196 (incorrect subsequent spelling).

Hedychridium elegantulum du Buysson, 1887: Rosa *et al.* 2015: 525 (synonymised).

Type locality. France: “Süd-Frankreich, ♀ Type (Fréjus, VII.1956) und Paratype (Banyuls s.M., VI.1948, leg. Verhoeff) Coll. m., ♀ Paratype Coll. Verhoeff”.

Holotype, ♂ [not ♀]: France Var 56 St. Aygulf A. Juli leg. Linsenmaier // ♀ Type *Hedychridium Ab. hybridum* Lins. Linsenmaier det. 1959 // ♂ *Hedychridium Ab. elegantulum* Buysson det. Linsenmaier 1997 (ex type-collection) // NML_ENT GBIF_Ch0009290.

Paratype, 1♂: France - Pyr. or. Banyuls s. Mer 14. –17.VI.1948 PMF Verhoeff // Paratype ♀ *Hedychridium Ab. hybridum* Lins. Linsenmaier det. 1959 // ♀ *Hedychridium Ab. elegantulum* Buysson det. Linsenmaier 1997.

Remarks. The type is a male, not a female. Based on the information found in his collection, Linsenmaier considered *Hedychridium hybridum* a synonym of *H. elegantulum* du Buysson, but he never published this information. The type locality is not Fréjus, as given in the original description, but Saint-Aygulf, a small village close to Fréjus.

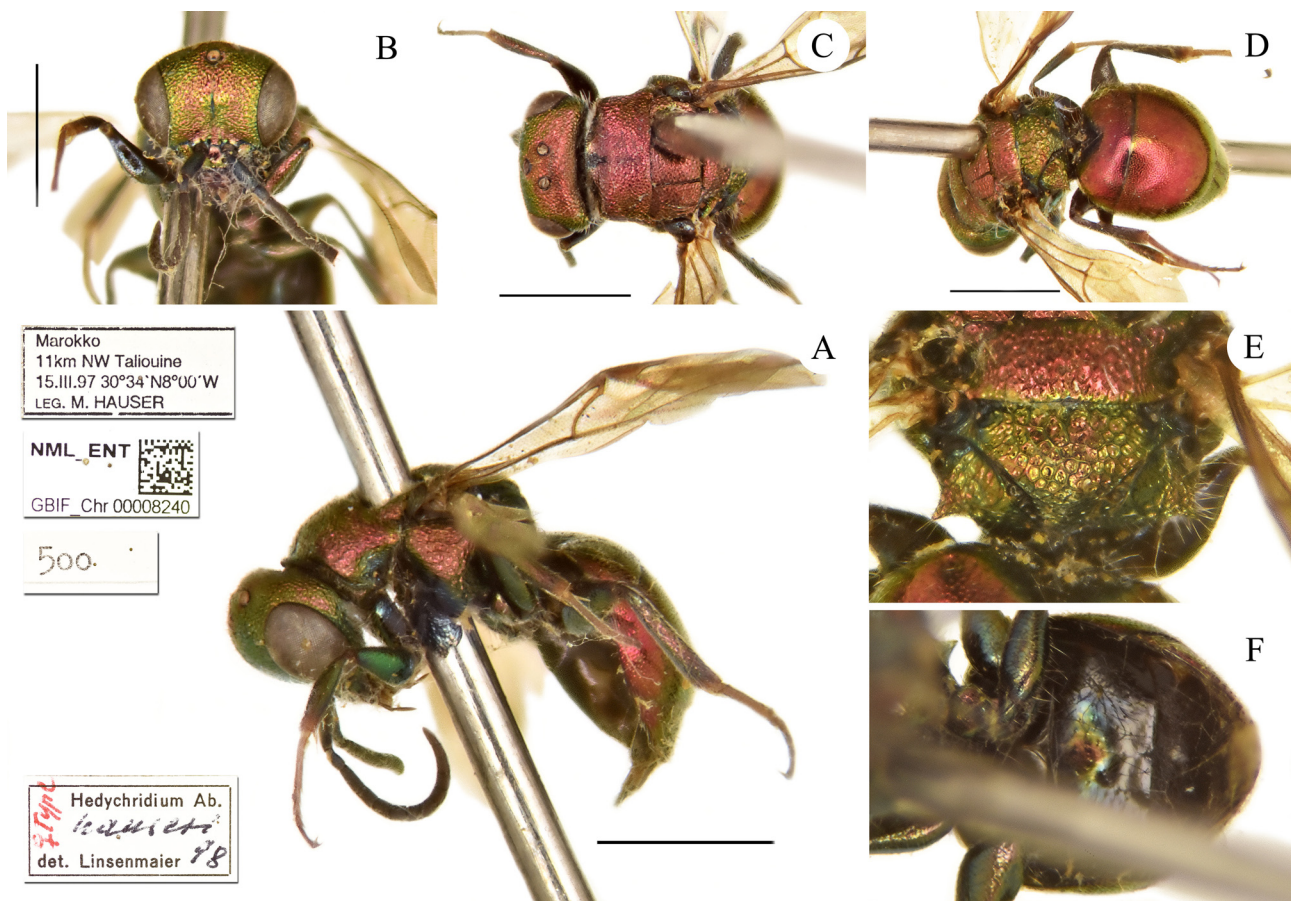


FIGURE 23. *Hedychridium hauseri* Linsenmaier, 1999, holotype, female. A) Habitus, lateral view. B) Head, frontal view. C) Head and mesosoma, dorsal view. D) Habitus, posterior view. E) Scutellum, metanotum and propodeum, posterior view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium hybridum creteense* Linsenmaier, 1959b**

(Fig. 25A–25E)

Hedychridium hybridum creteense Linsenmaier, 1959b: 234 (descr.); 1968: 30 (cat., *ardens* group).

Type locality. Crete: “Kreta, ♀ Type, ♂ Allotype und Paratypen Coll. m. (verschiedene Fundorte [=different locations], leg. Mavromoustakis)”.

Holotype, ♀: Kreta 7.VII.59 near Knossos Mavromoustakis Coll. Linsenmaier // ♀ Type *Hedychridium Ab. hybridum creteense* Lins. Linsenmaier det. 1959 // 181 // NML_ENT GBIF_Chr0009218 (ex type-collection).

Allotype, ♂ and **paratypes** 2♂: Kreta 9.VII.59 near Knossos Mavromoustakis Coll. Linsenmaier // ♂ Allotype vorne Paratypen *Hedychridium hybridum creteense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009219 (ex type-collection).

Paratypes, 2♂: Kreta 26.VI.59 Ayios Gheorghios Mavromoustakis Coll. Linsenmaier // ♂ Paratypen *Hedychridium Ab. hybridum creteense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009209 (ex synoptic collection); 1♀: Kreta 20.VI.59 near Knossos Mavromoustakis Coll. Linsenmaier // ♀ Paratype *Hedychridium Ab. hybridum creteense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009210 (ex synoptic collection); 2♀: Kreta 9.VII.59 near Knossos Mavromoustakis Coll. Linsenmaier // ♀ Paratypen *Hedychridium Ab. hybridum creteense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009211; 3♀: Kreta 16.VI.59 near Knossos Mavromoustakis Coll. Linsenmaier // ♀ Paratypen *Hedychridium Ab. hybridum creteense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009212; 1♀: Kreta 21.VI.59 near Knossos Mavromoustakis Coll. Linsenmaier // ♀ Paratype *Hedychridium Ab. hybridum creteense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009213; 4♀: Kreta 26.VI.59 Ayios Gheorghios Mavromoustakis Coll. Linsenmaier // ♀ Paratypen *Hedychridium Ab. hybridum*

creteense Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009214 (2 ♀) and NML_ENT GBIF_Chr0009215 (2 ♀); 1 ♀: Kreta 15.VI.59 Karteros Mavromoustakis Coll. Linsenmaier // ♀ Paratype *Hedychridium hybridum creteense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009216; 3 ♀: Kreta 4.VII.59 near Knossos Mavromoustakis Coll. Linsenmaier // ♀ Paratypen *Hedychridium Ab. hybridum creteense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009217 (ex Perraudin-collection).

Remarks. *Hedychridium creteense* can be considered as a valid species, recognisable by the elongate last flagellomere of both sexes and the colour of the propodeum, not distinctly contrasting the colour of scutellum and metanotum.

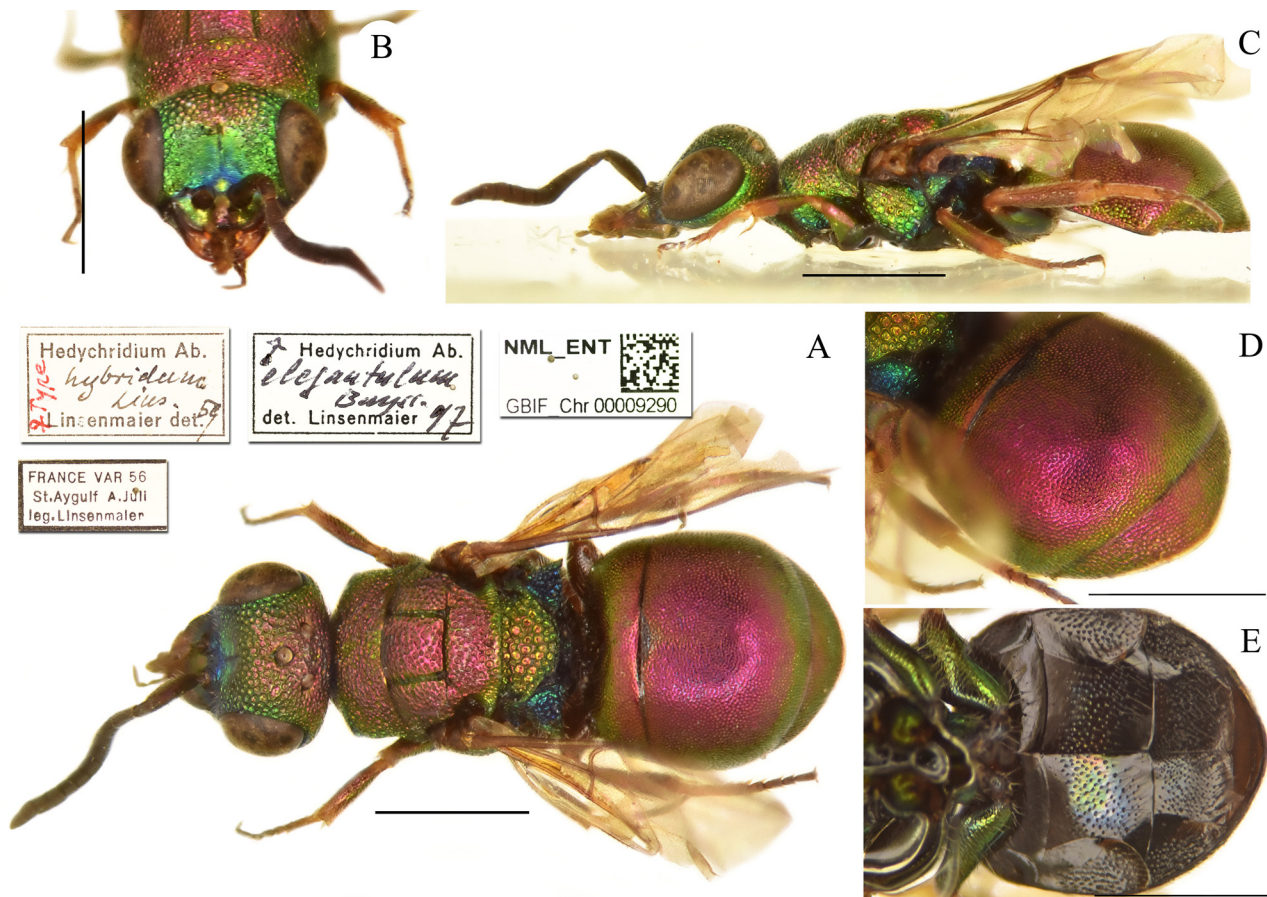


FIGURE 24. *Hedychridium hybridum* Linsenmaier, 1959a, holotype, male (not female). A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium ibericum Linsenmaier, 1959a

(Fig. 26A–26F)

Hedychridium (Hedychridium) ibericum Linsenmaier, 1959a: 45 (key), 52 (descr.), 187 (cat.), 200 (figs 183–186); 1968: 28 (diagn., *ardens* group), 126 (diagn., allotype desig.); 1987: 139 (distr., tax., footnote); 1997: 253 (cat.), 255 (tax.).

Type locality. Portugal, Spain: “Portugal, Spanien. ♂ Type (Spanien, Ronda, VII.1950, leg. Verhoeff) Coll. m., ♂ Paratypen Coll. Verhoeff”.

Holotype, ♂: España Ronda 30.VII.1950 PMF Verhoeff // ♂ Type *Hedychridium Ab. ibericum* Lins. Linsenmaier det. 1959 // 55 // NML_ENT GBIF_Chr0009815 (ex type-collection).

Remarks. Linsenmaier (1968) designated the allotype of *Hedychridium ibericum*, which bears the following labels: España – Toledo Toledo 25.–27.VII.1967 PMF Verhoeff // ♀ Allotype *Hedychridium Ab. ibericum* Lins. det. Linsenmaier 1968. This specimen cannot be considered as the allotype because it was not included in the original type series, and it was collected after the original description. In the same paper, Linsenmaier (1968) designated other paratypes which cannot be considered part of the type series as well.

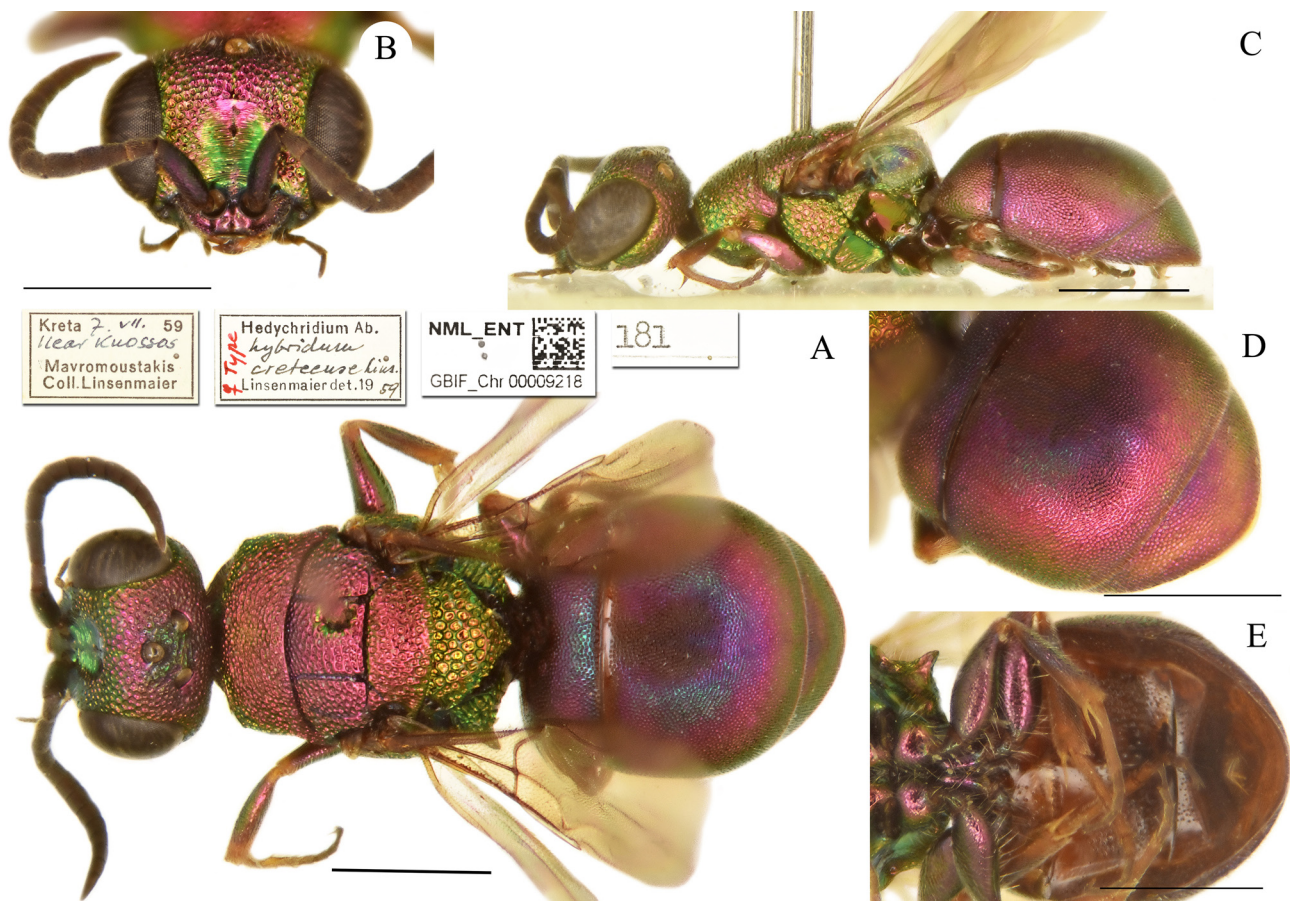


FIGURE 25. *Hedychridium hybridum creteense* Linsenmaier, 1959b, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium incrassatum subaheneum* Linsenmaier, 1959a**

(Fig. 27A–27F)

Hedychridium (Hedychridium) incrassatum subaheneum Linsenmaier, 1959a: 55 (descr.), 187 (cat.).

Hedychridium (Hedychridium) subaheneum: Linsenmaier 1987: 141 (diagn., elevated to species rank, *incrassatum* group); 1999: 75 (key), 76 (diagn.), 88 (figs 129, 130).

Type locality. Morocco: “Marocco, ♀ Type Coll. de Beaumont, ♀ Paratype Coll. m. (Taфраout V.1947, leg. de Beaumont)”.

Paratype, 1♀: Morocco 1.V.47 Ant. Atlas Taфраout de Beaumont Coll. Linsenmaier // ♀ Type *Hedychridium incrassatum* ssp. *subaheneum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chtr0010200.

Remarks. Linsenmaier (1987: 141) elevated *Hedychridium incrassatum subaheneum* to species rank and provided a few more details on its morphological description.

***Hedychridium infantum* Linsenmaier, 1997**

(Fig. 28A–28E)

Hedychridium (Hedychridium) infantum Linsenmaier, 1997: 254 (descr., *ardens* group), 255 (diagn.); 1999: 59 (key, *ardens-monochroum* group), 69 (fig. 117), 70 (diagn., distr.).

Type locality. Portugal, Spain: “Spanien, Portugal. ♂ Type (Holotypus) Granada 1100 m, 28.VI.89, ♀ Allotype Soria, 26.7.63 leg. und Coll. m. Paratypen: Granada, Soria, Segovia VI., VII., Portugal, Lisboa VIII., Verhoeff, Coll. m. (3♂ 3♀).”

Holotype, ♂: Granada Sierra d. Chaparral 1100m Linsenmaier 28.6.89 // ♂ Type *Hedychridium* Ab. *infantum* Linsenmaier det. 1995 // 464 // NML_ENT GBIF_Ch0009143 (ex type-collection).

Allotype, ♀: Spanien, Soria, C, 26.7.63, leg. Linsenmaier // ♀ Allotype *Hedychridium* Ab. *infantum* det. Linsenmaier 1995 // NML_ENT GBIF_Ch0009144 (ex type-collection).

Paratypes, 2♂: Spanien Soria T. 7.7.94 Linsenmaier // ♂ Paratypen *Hedychridium* Ab. *infantum* det. Linsenmaier 1995 // NML_ENT GBIF_Ch0009141 (ex synoptic collection); 1♀: Portugal – Lisboa Lagoa de Albufeira 1.VIII.1967 PMF Verhoeff // ♀ Paratype *Hedychridium* Ab. *infantum* Linsenmaier det. 1995 // NML_ENT GBIF_Ch0009142 (ex synoptic collection); 1♂: Portugal – Lisboa Lagoa de Albufeira 1.VIII.1967 PMF Verhoeff // ♂ Paratype *Hedychridium* Ab. *infantum* Linsenmaier det. 1995 // NML_ENT GBIF_Ch0009145; 1♂: Granada Sierra d. Chaparral 1100m Linsenmaier 27.6.89 // ♂ Paratype *Hedychridium* Ab. *infantum* Linsenmaier det. 1995 // NML_ENT GBIF_Ch0009146.

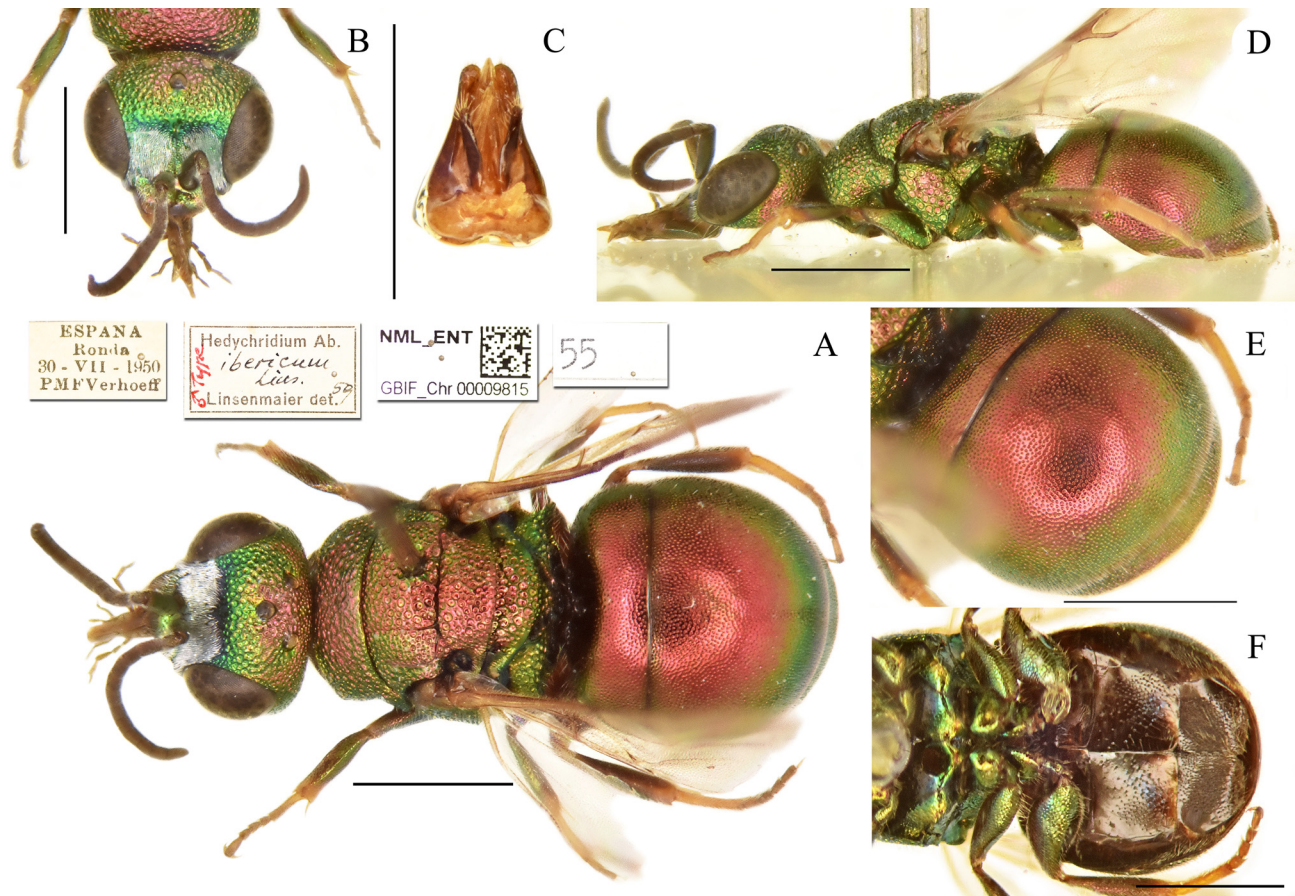


FIGURE 26. *Hedychridium ibericum* Linsenmaier, 1959a, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Genital capsule. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium insequosum* Linsenmaier, 1959a**

(Fig. 29A–29E)

Hedychridium (*Hedychridium*) *insequosum* Linsenmaier, 1959a: 46 (key), 56 (descr.), 187 (cat.); 1968: 35 (diagn., distr., *incrassatum* group).

Hedychridium (*Hedychridium*) *perpunctatum* Balthasar, 1953: Linsenmaier 1969: 352 (synonymised).

Type locality. Palestine: “Palästina. ♀ Type Coll. m. (Jericho, 30.VII.1942, leg. Bytinski-Salz)”.

Holotype, ♀: Jericho Palestine 30.7.1942 leg. Bytinski-Salz // ♀ Type *Hedychridium* Ab. *insequosum* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *perpunctatum* B. det. Linsenmaier 1970 // NML_ENT GBIF_Ch0009976 (ex type-collection).

Remarks. Kimsey & Bohart (1991) overlooked Linsenmaier’s (1969) synonymisation and listed *Hedychridium insequosum* as a valid species.

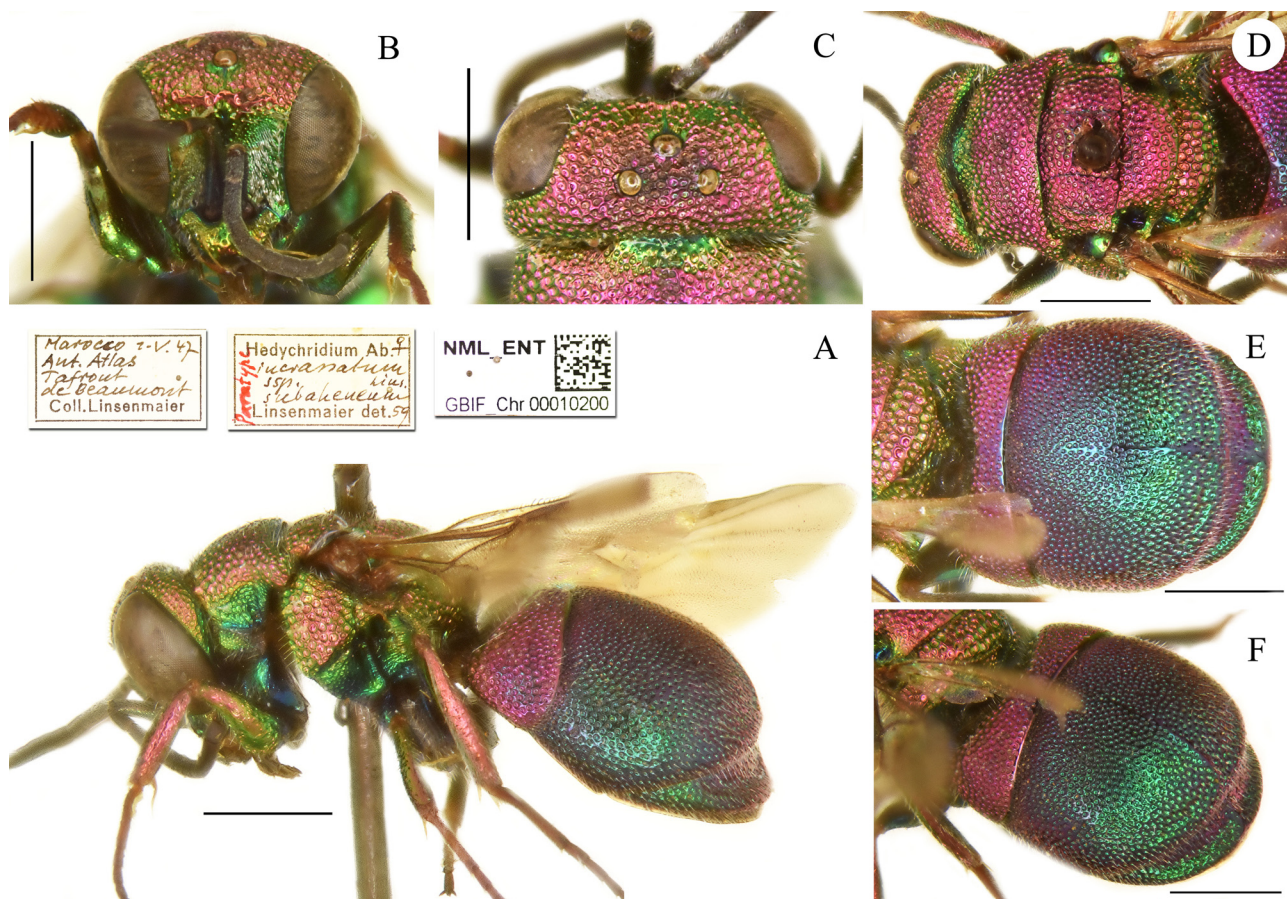


FIGURE 27. *Hedychridium incrassatum subaheneum* Linsenmaier, 1959a, paratype, male. A) Habitus, lateral view. B) Head, frontal view. C) Head, dorsal view. D) Mesosoma, dorsal view. E) Metasoma, dorsal view. F) Metasoma, postero-lateral view. Scale bar 1 mm.

***Hedychridium integrum asianum* Linsenmaier, 1997**
(Fig. 30A–30D)

Hedychridium (Hedychridium) integrum asianum Linsenmaier, 1997: 254 (descr., *ardens* group).
Hedychridium asianum: Rosa *et al.* 2017b: 31 (raised to species rank).

Type locality. China, Mongolia: “Mongolei, China. - Mongolei, Zentral Aimag, Ulan Bator 1900 m, VI. und VII.89, P. Salk, ♂ Type (Holotypus) und ♂ Paratype Coll. Koschwitz. - China, Gansu, Xiahe (Labhran) 3000-3500 m, VII.91, P. Salk, ♀ Allotype Coll. Koschwitz, ♂ Paratype Coll. m.”

Paratypes, 1♂, Asia centr. Mongolische Volksrepublik Zentral – Aimag Ulan Bator 16.07.1989 1900m leg. Peter Salk Berlin // ♂ Paratype *Hedychridium Ab. integrum asianum* Linsenmaier det. 1995 // NML_ENT GBIF_Chr0008172 (ex synoptic collection); 1♀, China – Gansu Xiahe (Labhran) 3000–3500m 13.–23.7.91 P. Salk // ♀ Paratype *Hedychridium Ab. integrum asianum* Linsenmaier det. 1995 // NML_ENT GBIF_Chr0008173 (ex synoptic collection).

Remarks. *Hedychridium integrum asianum* was raised to species rank by Rosa *et al.* (2017b).

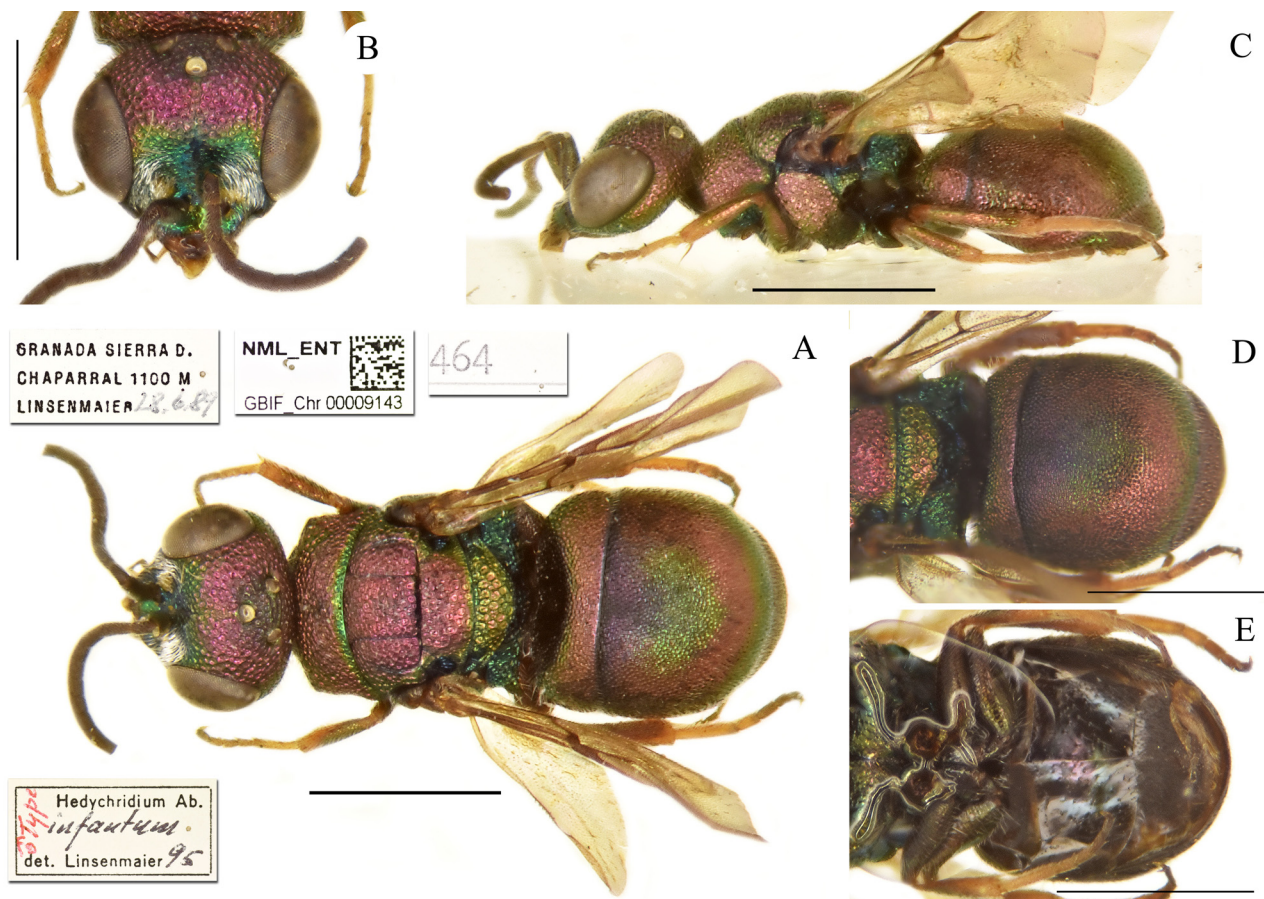


FIGURE 28. *Hedychridium infantum* Linsenmaier, 1997, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, dorsal view. E) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium inusitatum* Linsenmaier, 1959a**

(Fig. 31A–31F)

Hedychridium (Hedychridium) inusitatum Linsenmaier, 1959a: 46 (key), 56 (descr.), 187 (cat.), 216 (fig. 676); 1968: 35 (cat., *incrassatum* group); 1999: 73 (key, *heliophilum* group), 74 (diagn.), 88 (figs 124, 125).

Type locality. Morocco: “Marocco. ♂ Type Coll. m. (Ksar es Souk, V.1949)”.

Holotype, ♂: Marocco Ksar es Souk 5.VI.49 Coll. Linsenmaier // ♂ Type *Hedychridium Ab. inusitatum* Lins. Linsenmaier det. 1959 // 60 // NML_ENT GBIF_Ch00009962 (ex type-collection).

***Hedychridium irregulare* Linsenmaier, 1959a**

(Fig. 32A–32E)

Hedychridium (Hedychridium) irregulare Linsenmaier, 1959a: 62 (key, descr., *sculpturatum* group), 187 (cat.), 198 (figs 124–126); 1968: 37 (tax., *sculpturatum* group); 1969: 353 (cat.).

Hedychridium (Hedychridium) caucasicum irregulare: Linsenmaier 1997: 258 (downgraded to subspecific rank); Arens 2010: 407 (cat., distr.), 415 (diagn., tax.), 452 (cat., distr.).

Type locality. Greece: “Griechenland, ♂ Type Coll. m. (Athen, V.1936, leg. Enslin)”.

Holotype, ♂: Graecia 20.5.1936 dr. Enslin / Athens // ♂ Type *Hedychridium irregulare* Lins., Linsenmaier det. 1959 // *Hedychridium Ab. caucasicum irregulare* det. Linsenmaier 1995 / *Hedychridium* ♂ *caucasicum irregulare* Lins det. W. Arens 2006 // 73 // NML_ENT GBIF_Ch0011551 (ex type-collection).

Remarks. Linsenmaier (1997: 258) considered *Hedychridium irregulare* as a subspecies of *H. caucasicum* Trautmann, 1926 and *H. irregulare insulare* Linsenmaier, 1959 as a synonym of *H. caucasicum* Trautmann, 1926.

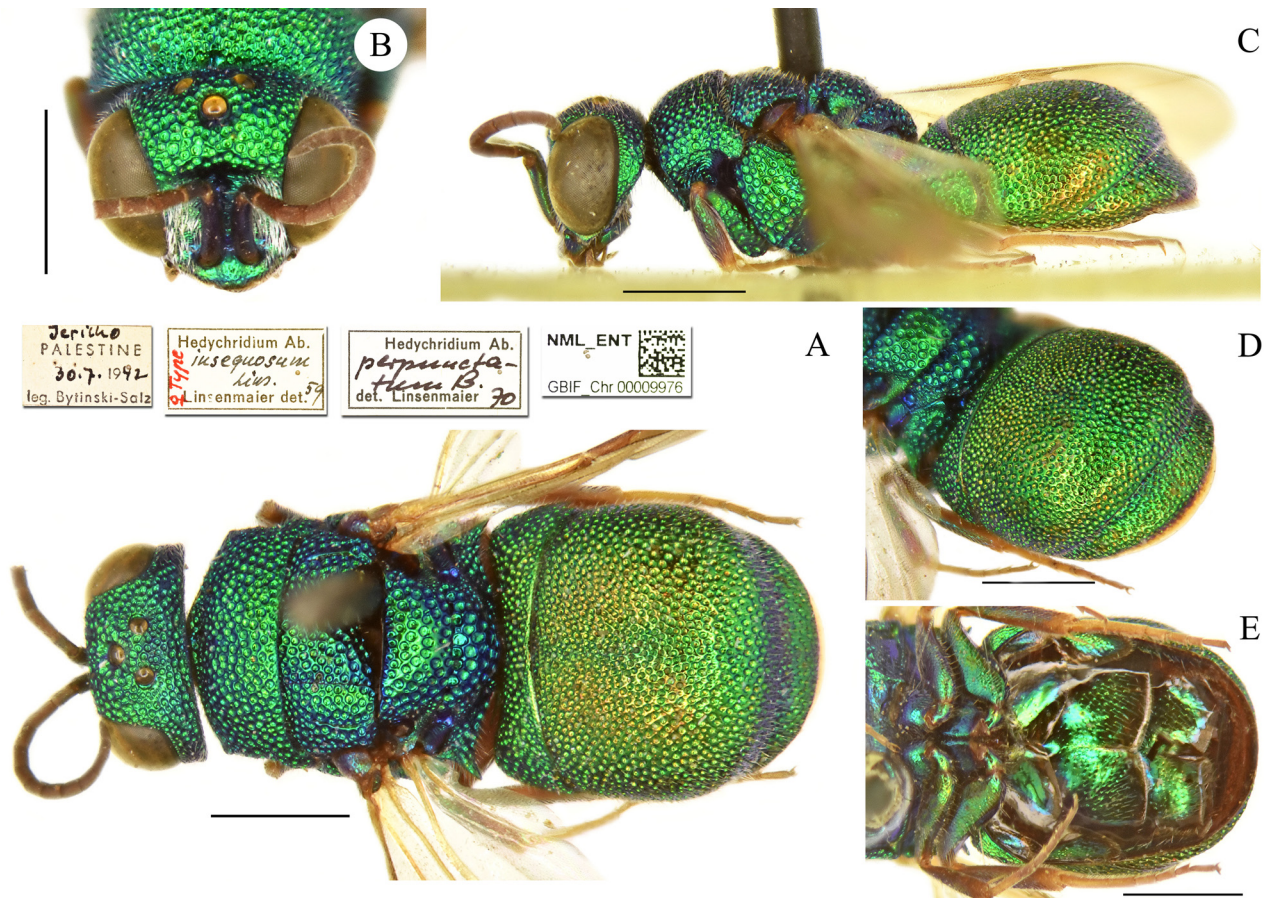


FIGURE 29. *Hedychridium insequosum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium irregulare insulare Linsenmaier, 1959a

Hedychridium (Hedychridium) irregulare insulare Linsenmaier, 1959a: 62 (descr., *sculpturatum* group), 187 (cat.); 1968: 37 (distr.); 1969: 353 (diag.).

Hedychridium (Hedychridium) caucasicum Trautmann, 1926: Linsenmaier 1997: 258 (synonymised).

Hedychridium insulare Balthasar, 1953: Arens 2010: 410 (synonymised).

Type locality. Cyprus, Rhodes: “Cypern, Rhodos. ♂ Type (Cypern, Limassol, V.1949, leg. Mavromoustakisi) und ♂ Paratypen Coll. m.”.

Holotype, ♂: Cypern 14.V.49 Limassol leg. Mavromoustakis coll. Linsenmaier // ♂ Type *Hedychridium irregulare* ssp. *insulare* Lins Linsenmaier 1959 // *Hedychridium* Ab. *caucasicum* Tr. det Linsenmaier 1959 // *Hedychridium* ♂ *insulare insulare* Balth. det. W. Arens 2005 // NML_ENT GBIF_Chr0011515 (ex type-collection).

Paratypes, 16 ♂: Cypern 14.V.49 Limassol leg. Mavromoustakis coll. Linsenmaier // ♂ Paratypen *Hedychridium irregulare* ssp. *insulare* Lins det. Linsenmaier 1959 // *Hedychridium* Ab. *caucasicum* Tr det Linsenmaier 1959 // *Hedychridium insulare insulare* Balth. det. W. Arens 2005 // NML_ENT GBIF_Chr0011490–11493 (4 ♂ glued on four labels).

Possible paratypes, 2 ♂: Rodi, Egeo Mai 1939 Dr. R. Meyer // Rhodos Coll. Enslin Coll. Linsenmaier // *Hedychridium* Ab. Paratype *irregulare* ssp. *insulare* ♂ Lins. Linsenmaier det. 1956 // *Hedychridium* Ab. *caucasicum* Tr. Linsenmaier 1995 // *Hedychridium caucasicum caucasicum* Trautm. det. W. Arens 2005 // NML_ENT GBIF_Chr0011505–11506.

Remarks. Linsenmaier (1997: 258) synonymised *Hedychridium insulare* with *H. caucasicum* Trautmann, 1926. Two males collected by R. Meyer at Rhodes should be the paratypes listed in the original description, yet they bear an identification label handwritten by Linsenmaier in 1995 without any further note on their type status.

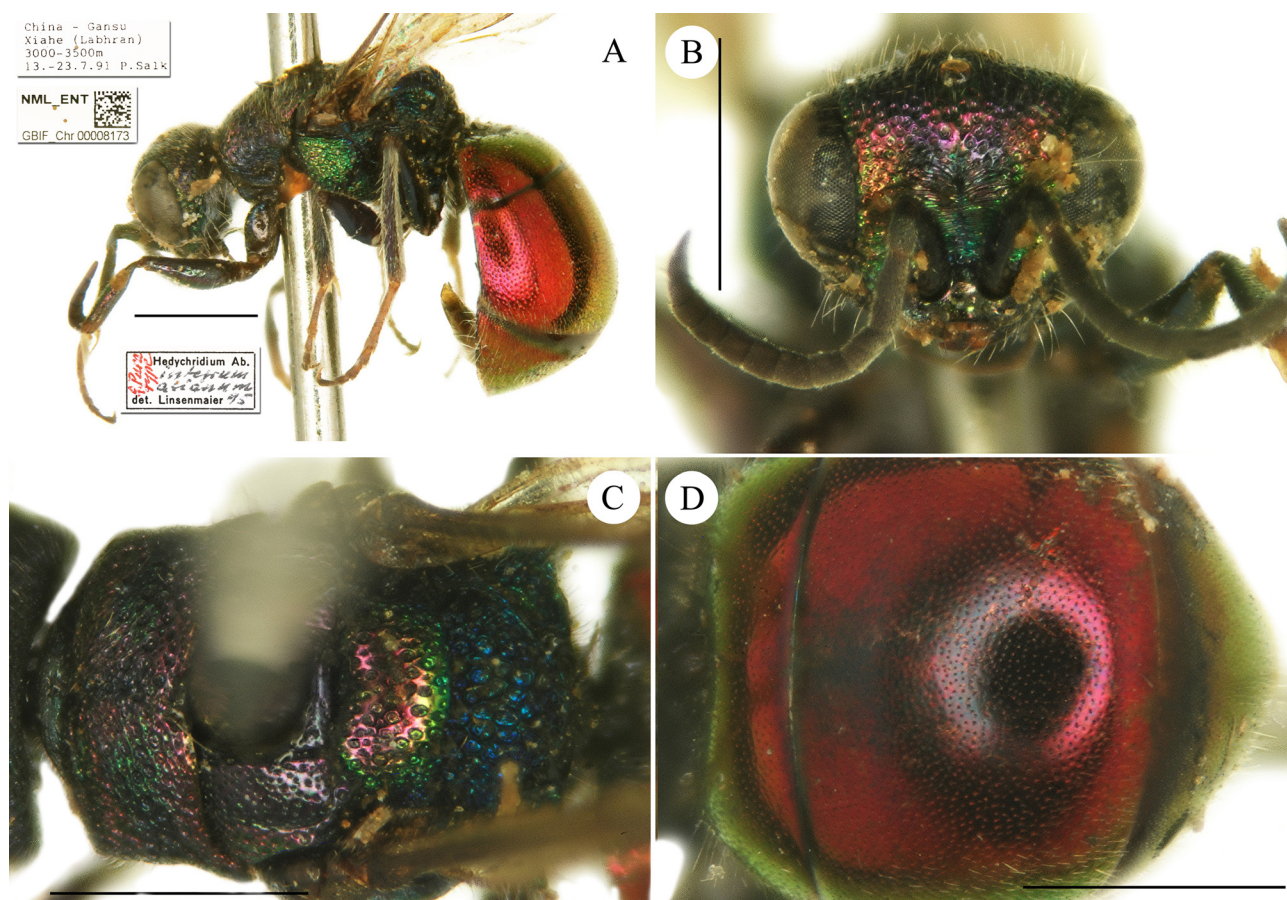


FIGURE 30. *Hedychridium integrum asianum* Linsenmaier, 1997, paratype, female. A) Habitus, lateral view. B) Head, frontal view. C) Mesosoma, dorsal view. D) Metasoma, dorsal view. Scale bar 1 mm.

Hedychridium israelicum Linsenmaier, 1968

(Fig. 33A–33F)

Hedychridium (Hedychridium) israelicum Linsenmaier, 1968: 27 (descr., *ardens* group); 1969: 351 (cat.).

Type locality. Palestine: “Palästina, Khan Chadzur, 18.IV.1943, leg. Bytinski-Salz, ♀ Type in Coll. m.”.

Holotype, ♀: Khan Chadzur Palestine 18.IV.1943 leg. Bytinski-Salz // ♀ Type *Hedychridium Ab. israelicum* Lins. Linsenmaier det. 1967 // 215 // NML_ENT GBIF_Chr0008634 (ex type-collection).

Hedychridium jordanense Linsenmaier, 1968

(Fig. 34A–34D)

Hedychridium (Hedychridium) jordanense Linsenmaier, 1968: 27 (descr., *ardens* group); 1969: 351 (cat.).

Type locality. Palestine: “Palästina, Jericho, 7.IV.1964, leg. Verhoeff, ♀ Type in Coll. m.”.

Holotype, ♀: Jordan Plains betw. Jericho and the Dead Sea 7.IV.1964 PMF Verhoeff // ♀ Type *Hedychridium Ab. jordanense* Lins. Linsenmaier det. 1967 // 214 // NML_ENT GBIF_Chr0009156 (ex type-collection).

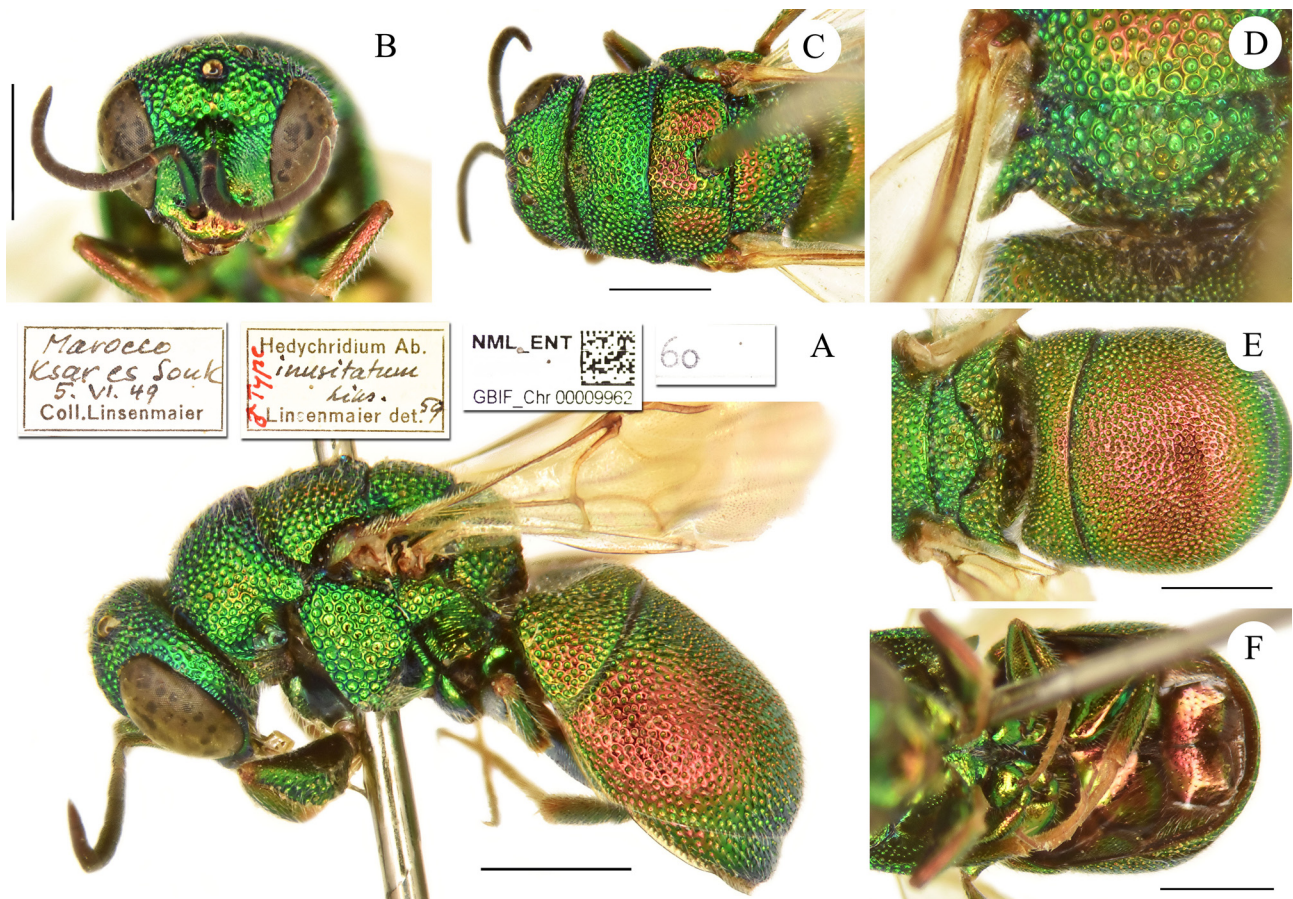


FIGURE 31. *Hedychridium inusitatum* Linsenmaier, 1959a, holotype, male. A) Habitus, lateral view. B) Head, frontal view. C) Head and mesosoma, dorsal view. D) Scutellum, metanotum and propodeum, posterior view. E) Metasoma, dorsal view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium kenitranum* Linsenmaier, 1999**

(Fig. 35A–35D)

Hedychridium (Hedychridium) kenitranum Linsenmaier, 1999: 59 (key, *ardens-monochroum* group), 64 (descr.).

Type locality. Morocco: “Marokko, Kenitra 27.IV.1965, ♀ Type (Holotypus) und Paratype leg. u. Coll. m.; Kenitra 5.V.1981, ♀ Paratype leg. u. Coll. H. Tussac”.

Holotype, ♀: Maroc Kenitra 27.IV.65 leg. Linsenmaier // ♀ Type *Hedychridium* Ab. *kenitranum* Lins. Linsenmaier det. 1990 // 502 // NML_ENT GBIF_Chr0008668 (ex type-collection).

***Hedychridium krajniki turceyense* Linsenmaier, 1968**

(Fig. 36A–36E)

Hedychridium (Hedychridium) krajniki turceyense Linsenmaier, 1968: 30 (descr., *ardens* group).

Hedychridium turceyense Linsenmaier, 1968 **stat. nov.**: here upgraded to species rank.

Type locality. Turkey: “Klein-Asien, Ulu Dag 1500 m, ♀ Type leg. Bytinski-Salz (an *Oxybelus*-Kolonie) in Coll. m.”.

Holotype, ♀: Uludag 1500m Turkey 12.8.1951 leg. Bytinski-Salz // ♀ Type *Hedychridium* Ab. *krajniki turceyanus* Lins. Linsenmaier det. 1963 // 217 // NML_ENT GBIF_Chr0009504 (ex type-collection).

Remarks. *Hedychridium krajniki turceyense* Linsenmaier, 1968 **stat. nov.** is here upgraded to species rank

because the size is constantly larger, the sculpture of mesonotum is distinctly smaller, and the colour pattern is different, with fully red pronotum and scutellum, and golden metanotum. It is a member of a Turanic species distributed from Anatolia to Central Asia (data unpubl.) which only superficially resemble the European *H. krajniki* Balthasar, 1946.

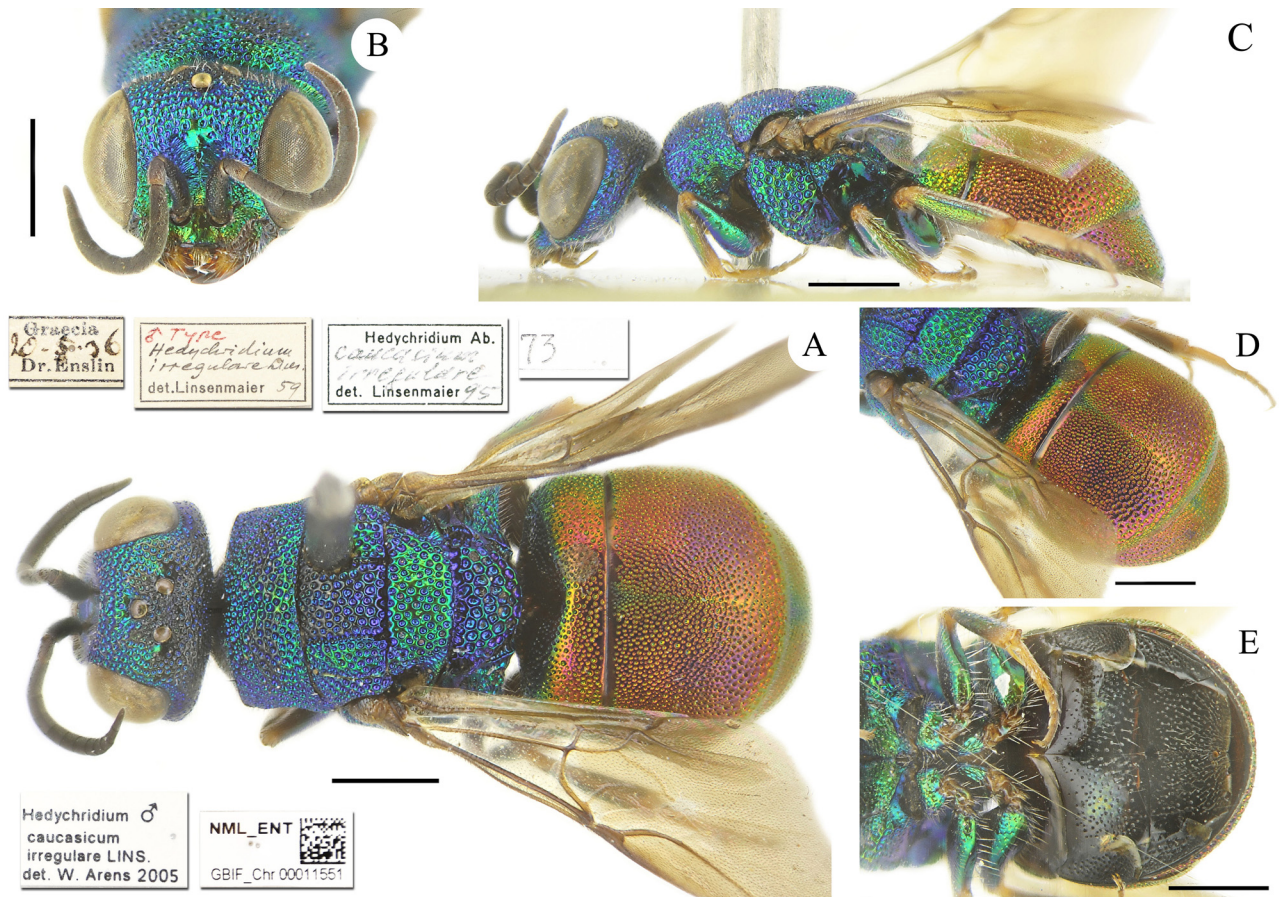


FIGURE 32. *Hedychridium irregulare* Linsenmaier, 1959a, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium laevicypeatum Linsenmaier, 1999

(Fig. 37A–37E)

Hedychridium (Hedychridium) laevicypeatum Linsenmaier, 1999: 75 (key, *incrassatum* group), 77 (descr.), 88 (fig. 133).

Type locality. Tunisia: “Tunesien Kasserine V.1973, J. Gusenleitner, ♀ Type (Holotypus) Coll. m.”

Holotype, ♀: Kasserine 10 km Ost Tunesia 10.5.1973 leg. J. Gusenleitner // ♀ Type *Hedychridium Ab. brevifaciale* Lins. Linsenmaier det. 1977 // 510 // NML_ENT GBIF_Chr0010208.

Remarks. The holotype is still bearing on the identification label the first name chosen by Linsenmaier, yet not published (Rosa *et al.* 2015).

Hedychridium lampadum austeritatum Linsenmaier, 1997

(Fig. 38A–38D)

Hedychridium (Hedychridium) lampadum austeritatum Linsenmaier, 1997: 258 (descr., *roseum* group).

Hedychridium sculpturatum sculpturatum (Abeille de Perrin, 1877): Arens 2010: 407 (synonymised).

Type locality. France, Corsica: “Korsika, Porto Pollo und Aléria, zahlreich [=numerous], Perraudin; ♀ Type (Holotypus), ♂ Allotype Porto Pollo 21.VIII.75, Coll. m., Paratypen Coll. Perraudin und Coll. m.”

Holotype, ♀: Porto Pollo Corse littoral 21.VIII.1975 W. Perraudin // ♀ Type *Hedychridium* *Ab. lampadum austeritatum* Linsenmaier 1991 // *Hedychridium* ♀ *sculpturatum sculpturatum* Ab. det. W. Arens 2006 // 466 // NML_ENT GBIF_Chr0010792 (ex type-collection).

Allotype, ♂: F20 Porto Pollo Corse 21.VIII.1975 W. Perraudin // ♂ Allotype *Hedychridium* *Ab. lampadum austeritatum* Lins. Linsenmaier 1991 // *Hedychridium* ♂ *roseum* (Rossi) det. W. Arens 2006 // NML_ENT GBIF_Chr0010793 (ex type-collection).

Paratypes, 1♀: Porto Pollo Corse 16.VIII.1975 W. Perraudin // ♀ Paratype *Hedychridium* *Ab. lampadum austeritatum* Linsenmaier 1991 // *Hedychridium* ♀ *roseum* (Rossi) det. W. Arens 2006 // NML_ENT GBIF_Chr0010766; 1♂: Porto Pollo Corse 21.VIII.1975 W. Perraudin // ♂ Paratype *Hedychridium* *Ab. lampadum austeritatum* Lins. Linsenmaier 1991 // *Hedychridium* ♂ *roseum* (Rossi) det. W. Arens 2006 // NML_ENT GBIF_Chr0010767; 2♂: Porto Pollo Corse littoral 21.VIII.1975 W. Perraudin // ♂ Paratype *Hedychridium* *Ab. lampadum austeritatum* det. Linsenmaier 1991 // *Hedychridium* ♂ *roseum* (Rossi) det. W. Arens 2006 // NML_ENT GBIF_Chr0010770–Chr0010771 (1♂ ex type-collection and 1♂ Perraudin-collection); 1♀: Aléria Corse 12.VIII.1966 W. Perraudin // ♀ Paratype *Hedychridium* *Ab. lampadum austeritatum* Linsenmaier 1991 // *Hedychridium* ♀ *sculpturatum sculpturatum* Ab. det. W. Arens 2006 // NML_ENT GBIF_Chr0010769 (ex Perraudin-collection).

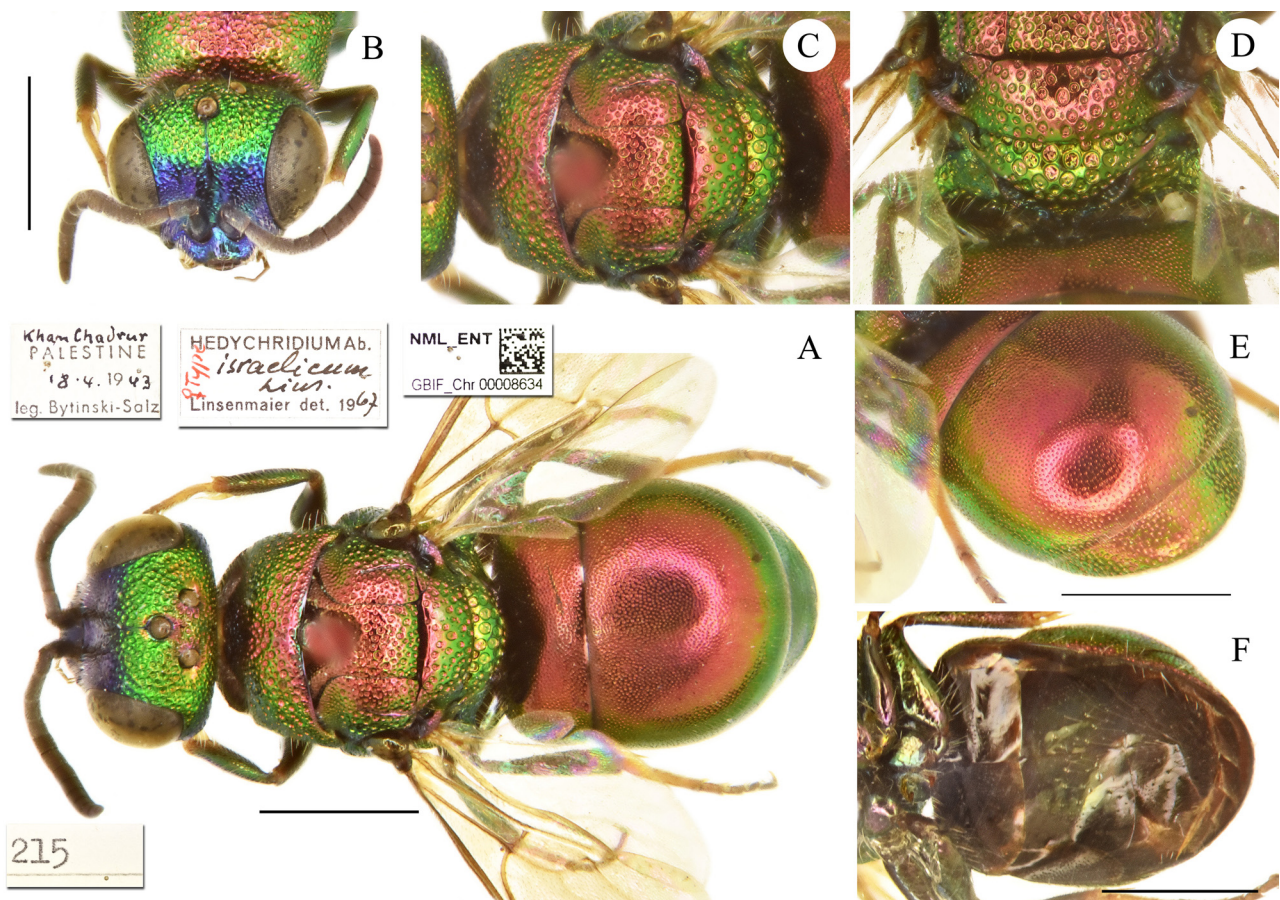


FIGURE 33. *Hedychridium israelicum* Linsenmaier, 1968, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Mesosoma, dorsal view. D) Scutellum, metanotum, propodeum, posterior view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium lampadum sorianum* Linsenmaier, 1959a**
(Fig. 39A–39F)

Hedychridium (*Hedychridium*) *lampadum sorianum* Linsenmaier, 1959a: 59 (descr., *roseum* group); 187 (cat.); 1968: 36 (distr.); 1997: 257 (tax.).

Type locality. Spain: “Spanien, Marocco. ♂ Type (Soria) und ♂ Paratypen Coll. m., ♂ Paratype (Marocco) Coll. Naef”.

Holotype, ♂: Spanien Soria 1100m VII.44 leg Dr. Marten Coll. Linsenmaier // ♂ Type *Hedychridium* Ab. *lampadum sorianum* Lins. Linsenmaier det. 1959 // ♂ *Hedychridium* Ab. *lampadum* Lins. det Linsenmaier 1991 // ♂ *Hedychridium roseum* (Rossi) det. W. Arens 20069 (ex type-collection) // NML_ENT GBIF_Chr0010732.

Paratypes, 1♂: Beni Mellal, Moy. Atlas, Maroc, 26.V.1937 Collect. Naef // ♂ Paratype *Hedychridium* Ab. *lampadum sorianum* Lins Linsenmaier det.1959 // ♂ *Hedychridium* Ab. *lampadum* Lins. det. Linsenmaier 1991 // NML_ENT GBIF_Chr0010645; 1♂: Ifrane, Moyen Atlas, Maroc, 24.VI.1947 Collect. Naef // ♂ Paratype *Hedychridium* Ab. *lampadum* Lins. ssp. *sorianum* Lins. det. Linsenmaier 19579 // ♂ *Hedychridium* Ab. *lampadum* Lins. det. Linsenmaier 1991 // NML_ENT GBIF_Chr0010646.

Remarks. Linsenmaier selected in the type-collection one female specimen from the type locality as the allotype of *H. lampadum sorianum* bearing the following labels: Spanien Soria 15.–20.VII.1979 leg. Linsenmaier // vorne Allotype ♀ *Hedychridium lampadum sorianum* Lins. det. Linsenmaier 1979 // *Hedychridium insulare mediocreum* Lins. det. W. Arens 2009. This specimen cannot be considered as a type, since it was collected after the original description. Linsenmaier (1997: 257) synonymised *sorianum* Linsenmaier with *lampadum* Linsenmaier: “Lässt sich nicht immer begrenzen und wird von mir nicht weiter geführt”.

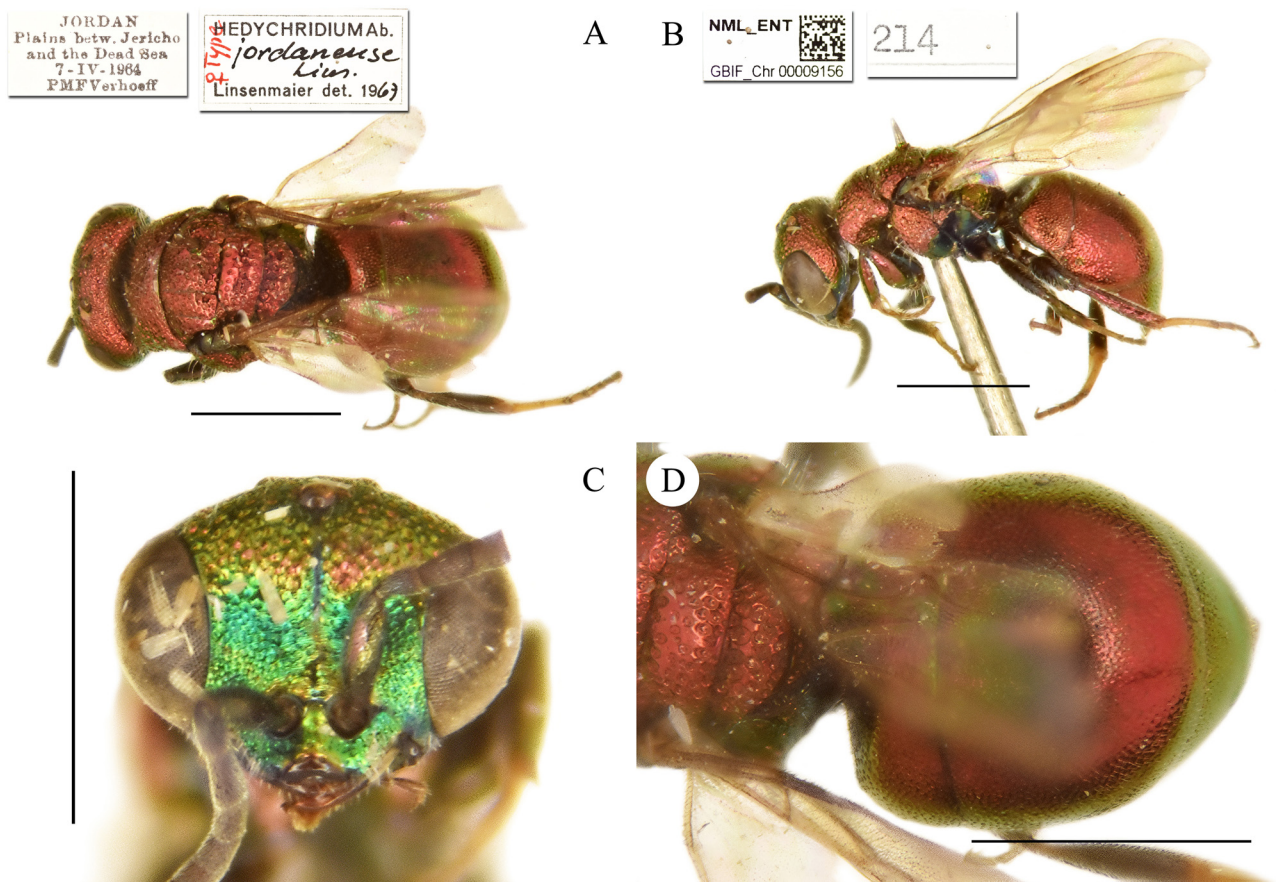


FIGURE 34. *Hedychridium jordanense* Linsenmaier, 1968, holotype, female. A) Habitus, dorsal view. B) Habitus, lateral view. C) Head, frontal view. D) Metasoma, dorsal view. Scale bar 1 mm.

Hedychridium luteipenne Linsenmaier, 1968

(Fig. 40A–40E)

Hedychridium (*Hedychridium*) *luteipenne* Linsenmaier, 1968: 22 (descr., *luteipenne* group); 1999: 55 (key, diagn., *modestum* group), 69 (figs 89, 90).

Type locality. Egypt: “Ägypten, ♂ Type von Kairo (Dahschour), V.58, leg. Pulawski, in Coll. m., ♂ Paratype, Fayum, in Coll Nadig”.

Holotype, ♂: Egypte Dahschour Rég. du Caire 8.V.1958 leg. W.J. Puławski // ♂ Type *Hedychridium* Ab. *luteipenne* Lins. Linsenmaier det. 1963 // 211 // NML_ENT GBIF_Chr0008113 (ex type-collection).

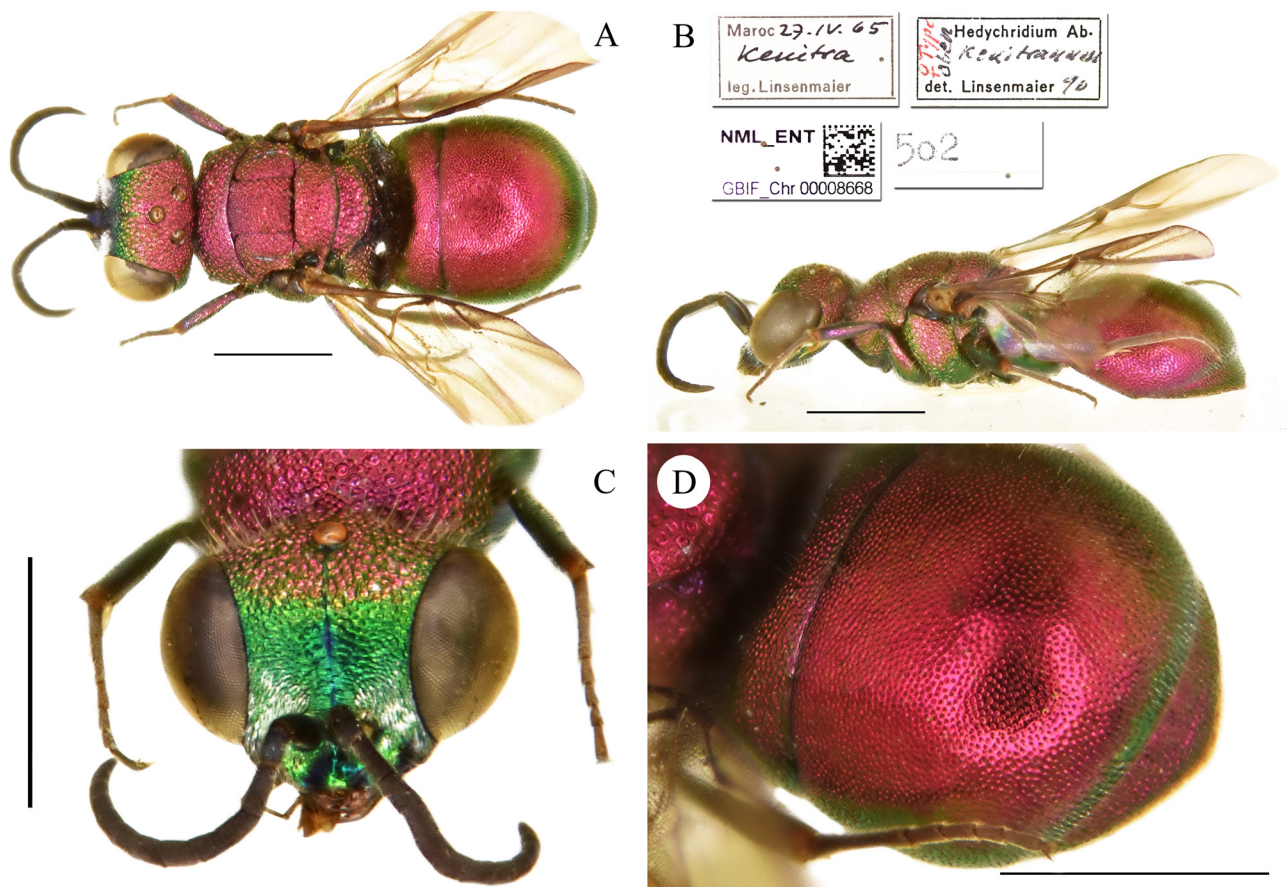


FIGURE 35. *Hedychridium kenitratum* Linsenmaier, 1999, holotype, female. A) Habitus, dorsal view. B) Habitus, lateral view. C) Head, frontal view. D) Metasoma, postero-lateral view. Scale bar 1 mm.

***Hedychridium maculiventre raucum* Linsenmaier, 1997**

(Fig. 41A–41F)

Hedychridium (*Hedychridium*) *maculiventre raucum* Linsenmaier, 1997: 258 (descr., *sculpturatum* group), 289 (fig. 40).
Hedychridium scutellare palestinense Balthasar, 1953: Arens 2010: 407 (synonymised).

Type locality. Turkey: “Turkey, ♂ Type (Holotypus), ♀ Allotype und 2 ♂ Paratypen Konya 22.VI.69, leg. und Coll. m. Paratypen: 2 ♂ Konya, Alti Napa 18.VII.72, Schmidt; 1 ♂ Konya Madensch 23.6.84, Schmidt; 1 ♂ Hakkari Sat Dag 1700 m 8.VII.83, Schacht; - Coll. m.”

Holotype, ♂: Turkey Konya 22.VI.69 leg. Linsenmaier // ♂ Type *Hedychridium* Ab. *maculiventre raucum* Linsenmaier det. 1995 // *Hedychridium* ♂ *scutellare palestinense* Balth. W. Arens 2005 // 467 // NML_ENT GBIF_Chr0011475 (ex type-collection).

Allotype, ♀: Turkey Denizli 3.VII.69 leg. Linsenmaier // ♀ Allotype *Hedychridium* Ab. *maculiventre raucum* Linsenmaier det. 1995 // *Hedychridium* ♀ *scutellare palestinense* W. Arens 2005 // NML_ENT GBIF_Chr0011476 (ex type-collection).

Paratypes, 2♂: Konya As. Türk. Alti Napa Barai 18.VII.1972 leg. Jos. Schmidt // ♂ Paratype *Hedychridium* Ab. *maculiventre raucum* Linsenmaier det. 1995 // *Hedychridium* ♂ *scutellare palestinense* Balth. W. Arens 2005 // NML_ENT GBIF_Chr0011451, Chr0011452; 2♂: Turkey Konya 24.VI.69 leg. Linsenmaier // ♂ Paratypen *Hedychridium* Ab. *maculiventre raucum* Linsenmaier det. 1995 // *Hedychridium* ♂ *scutellare palestinense* W. Arens 2005 // NML_ENT GBIF_Chr0011453; 1♂: Tk Madenşehir Konya 23.VI.84 1300m Warncke // ♂ Paratype *Hedychridium* Ab. *maculiventre raucum* Linsenmaier det. 1995 // *Hedychridium* ♂ *scutellare palestinense* Balth.

W. Arens 2005 // NML_ENT GBIF_Chr0011454; 1♂: Turkey, Pr. Hakkari Sat Dag. Veregös SW Yüksekova 1700m 4.–8.8.1983 leg. W. Schacht // ♂ Paratype *Hedychridium* Ab. *maculiventre raucum* Linsenmaier det. 1995// *Hedychridium* ♂ *scutellare palestinese* Balth. W. Arens 2005 // NML_ENT GBIF_Chr0011455.

Remarks. According to the original description, the allotype locality is Konya and not Denizli. We consider this a case of *lapsus calami*. Arens (2010) synonymised *H. maculiventre raucum* with *H. palestinese* Balthasar, 1953.

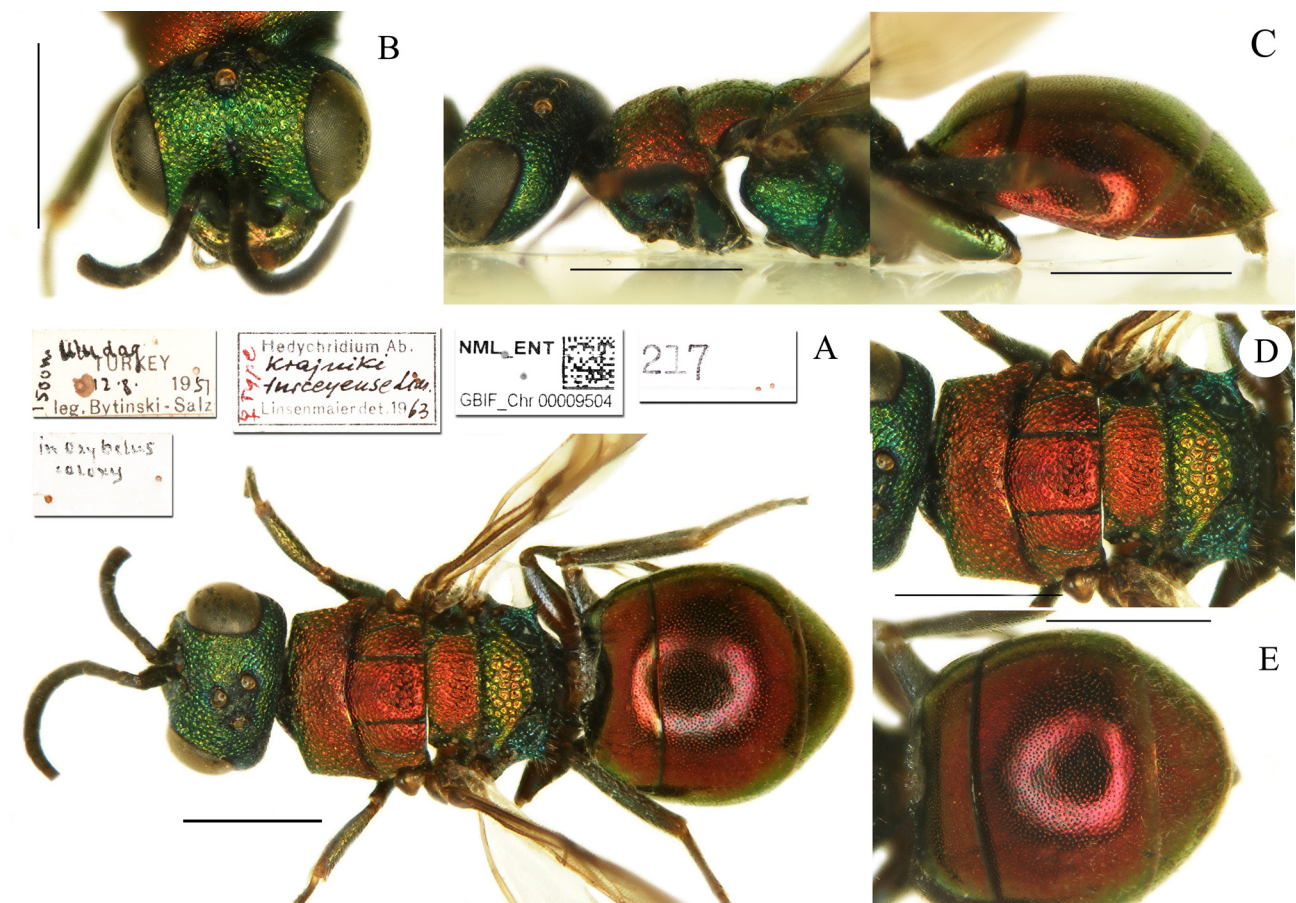


FIGURE 36. *Hedychridium krajniki turceyense* Linsenmaier, 1968, holotype, female. A) Habitus, dorsal view. B) Head frontal view. C) Habitus, lateral view. D) Mesosoma, dorsal view. E) Metasoma, dorsal view. Scale bar 1 mm.

Hedychridium maculiventre maculiventre Linsenmaier, 1959b

Hedychridium (*Hedychridium*) *maculiventre* Linsenmaier, 1959b: 235 (descr., *sculpturatum* group), nec Linsenmaier, 1959a: 63.

Hedychridium scutellare maculisternum Arens, 2011: 316, Replacement name for *Hedychridium maculiventre* Linsenmaier, 1959b, *nom. praeocc.*, nec Linsenmaier, 1959a (*roseum* group).

Type locality. Croatia: “Jugoslawien, ♂ Type, ♀ Allotype Coll. m. (Dalmatien, Omis, VIII. 1952, leg. Verhoeff)”.

Holotype, ♂ and **allotype**, ♀ [glued on the same label]: Yugoslavia Omis (Dalm.) 12.–18.VIII.1952 PMF Verhoeff // *Hedychridium* Ab. *maculiventre* Lins. Linsenmaier det. 1959 // 74 // NML_ENT GBIF_Chr0011450 (ex type-collection).

Remarks. We (Arens and Rosa in Arens 2011) considered *Hedychridium maculiventre* Linsenmaier, 1959b a junior homonym of *H. maculiventre* Linsenmaier, 1959a (unnecessary replacement name for *H. palestinese* Balthasar, 1953) and Arens (2011) proposed the replacement name *H. maculisternum pro H. maculiventre* Linsenmaier, 1959b.

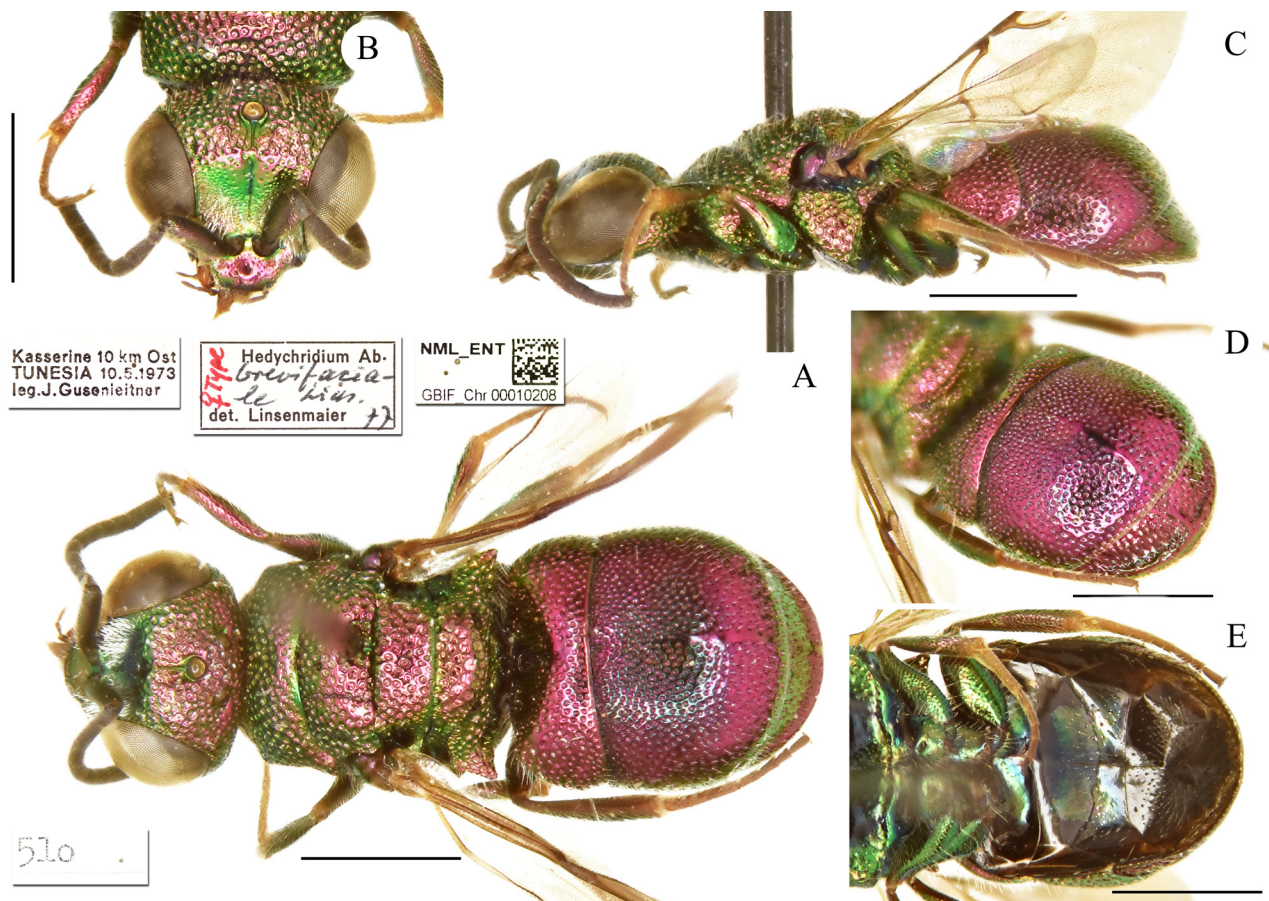


FIGURE 37. *Hedychridium laevichypeatum* Linsenmaier, 1999, holotype, female. A) Habitus, dorsal view. B) Head frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium maculiventre sculpturatissimum* Linsenmaier, 1959a**

(Fig. 42A–42F)

Hedychridium (Hedychridium) maculiventre sculpturatissimum Linsenmaier, 1959a: 63 (descr.), 187 (cat.).

Hedychridium scutellare sculpturatissimum Linsenmaier, 1959a: Arens 2010: 407 (*roseum* group).

Type locality. Cyprus: “Cypern. ♂ Type, ♀ Allotype (Zakaki, VI.1950 und VII.1955, leg. Mavromoustakis) und Paratypen Coll. m.”

Holotype, ♂: Cypern 12.VI.1950 Zakaki leg. Mavromoustakis Coll. Linsenmaier // ♂ Type // *Hedychridium maculiventre sculpturatissimum* Lins. det. Linsenmaier // 75 // NML_ENT GBIF_Chr0011560 (ex type-collection).

Allotype, ♀: Zakaki 25.7.55 [Mavromoustakis] // ♀ Allotype *Hedychridium maculiventre sculpturatissimum* Lins. det. Linsenmaier // NML_ENT GBIF_Chr0011561 (ex type-collection).

Paratypes, ♂: Cypern 1.6.50 near Zakaki Mavromoustakis // ♂ Paratype *Hedychridium maculiventre* Lins. ssp. *sculpturatissimum* Lins. det. Linsenmaier // ♂ *Hedychridium palestinense sculpturatissimum* Lins. det. W. Arens 2005 // NML_ENT GBIF_Chr0011554; 1♂: Zakaki Cyprus 19.6.36 leg. Mavromoustakis // ♂ Paratype *Hedychridium maculiventre* Lins. ssp. *sculpturatissimum* Lins. det. Linsenmaier // NML_ENT GBIF_Chr0011555; 1♂: Cypern 4.8.49 Yermasoyia River Mavromoustakis // ♂ Paratype *Hedychridium maculiventre* Lins. ssp. *sculpturatissimum* Lins. det. Linsenmaier // NML_ENT GBIF_Chr0011557.

Remarks. More specimens labelled as paratypes are found in collection, but to be excluded from the type series because they have been collected by Mavromoustakis in 1961 (Yermasoyia River and Lania) and 1963 (Limassol), after the original description.

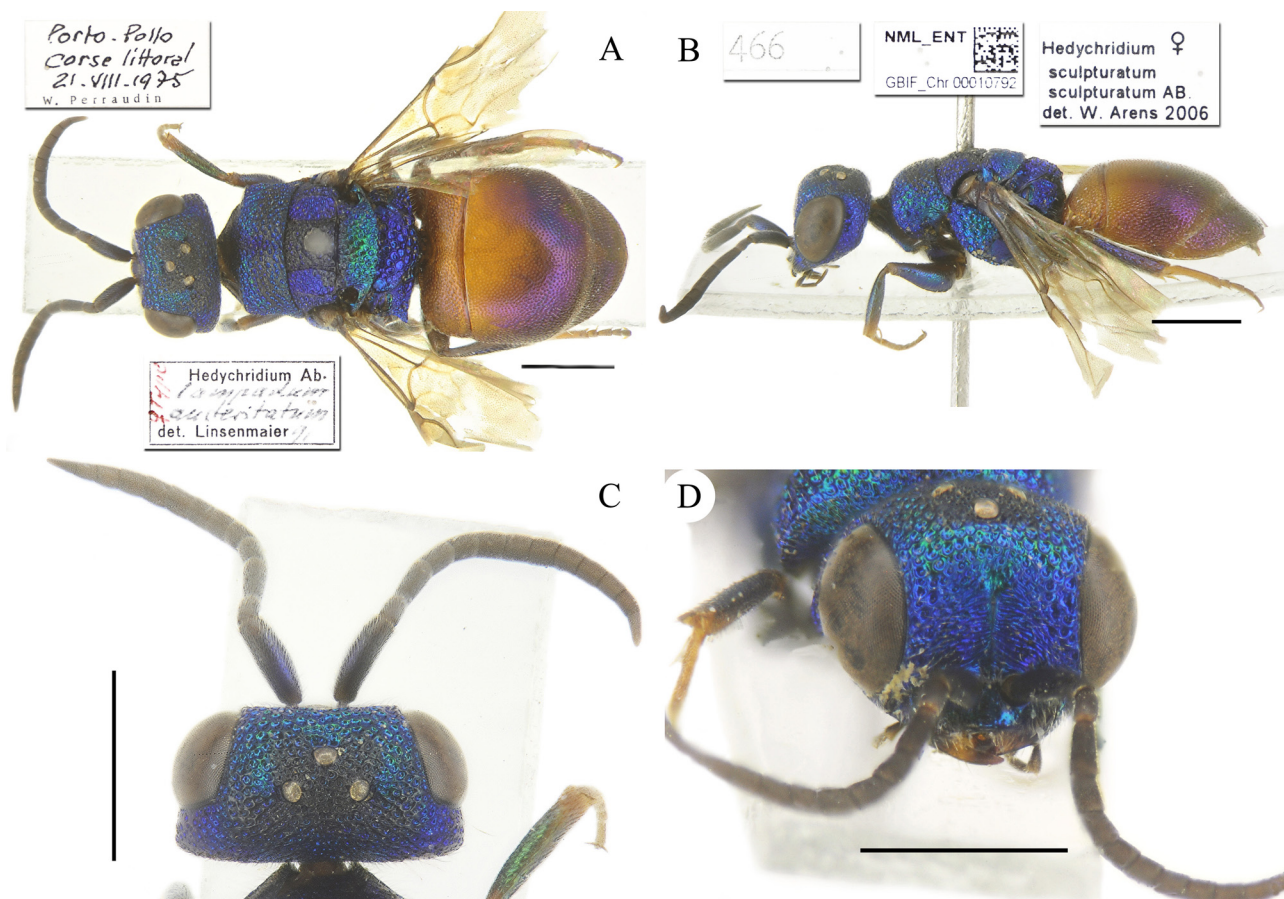


FIGURE 38. *Hedychridium lampadum austeritatum* Linsenmaier, 1997, holotype, female. A) Habitus, dorsal view. B) Habitus, lateral view. C) Head, dorsal view. D) Head, frontal view. Scale bar 1 mm.

Hedychridium maroccense Linsenmaier, 1959a

(Fig. 43A–43F)

Hedychridium (Hedychridium) maroccense Linsenmaier, 1959a: 64 (key, descr., *sculpturatum* group), 187 (cat.), 198 (figs 130, 131); 1969: 353 (cat.); 1999: 84 (key), 85 (diagn.).

Type locality. Morocco, Palestine: “Marocco, Palästina. ♂ Type, ♀ Allotype (Marocco, Agadir), Paratypen Coll. m., Paratypen Coll. de Beaumont und Coll. Naef”.

Holotype, ♂: Morocco Agadir Naef VI.47 // ♂ Type *Hedychridium maroccense* Lins. Linsenmaier det. 1959 // 77 // NML_ENT GBIF_Chr0011415 (ex type-collection).

Allotype, ♀: Morocco Agadir Naef VI.47 // ♀ Allotype *Hedychridium maroccense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0011416 (ex type-collection).

Paratypes, 1♂: Marrakech, Oued Tensift, Maroc, 19.V.1947 Collect. Naef // ♂ Paratype *Hedychridium Ab. maroccense* Lins. det. Linsenmaier 1957 // NML_ENT GBIF_Chr0011387 (ex synoptic collection); 1♀: Marrakech, Oued Tensift de Beaumont 15.V.1947 Coll. Linsenmaier // ♀ Paratype *Hedychridium maroccense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0011388 (ex synoptic collection); 1♀: Marrakech, Oued Tensift, Maroc, 14.V.1947 Collect. Naef // ♀ Paratype *Hedychridium Ab. maroccense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0011389; 1♂, 1♀: Marrakech, Oued Tensift, Maroc, 17.V.1947 Collect. Naef // ♀ Paratype *Hedychridium Ab. maroccense* Lins. Linsenmaier det. 1959 // ♂ Paratype *Hedychridium maroccense* Lins. det. Linsenmaier 1957 // NML_ENT GBIF_Chr0011390, Chr0011391; 1♀: Marrakech, Oued Tensift, Maroc, 19.V.1947 Collect. Naef // ♀ Paratype *Hedychridium Ab. maroccense* Lins. det. Linsenmaier 1957 // NML_ENT GBIF_Chr0011392; 1♀: Amizmiz, Grand Atlas, Maroc, 16.VI.1947 Collect. Naef // ♀ Paratype *Hedychridium Ab. maroccense* Lins. det.

Linsenmaier 1957 // NML_ENT GBIF_Chr0011393; 1 ex.: Beni Mellal, Moy. Atlas, Maroc, 26.V.1937 Collect. Naef // Paratype *Hedychridium maroccense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0011394; 2 exx.: Marrakech, Oued Tensift, Maroc, VI.1947 de Beaumont Coll. Linsenmaier // Paratype *Hedychridium maroccense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0011395; 1 ex.: Palästina 20.–28.IV.27 Dr. Enslin / Jericho // Paratype *Hedychridium maroccense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0011396; 1♀: Fez, Plaine du Sais Maroc 30.VI.1947 Collect. Naef // ♀ Paratype *Hedychridium Ab. maroccense* Lins. det. Linsenmaier 1957 // NML_ENT GBIF_Chr0011401 (ex Naef-collection); 1♀: Inezgane près Agadir Maroc 9.VI.1947 Collect. Naef // ♀ Paratype *Hedychridium Ab. maroccense* Lins. det. Linsenmaier 1957 // NML_ENT GBIF_Chr0011402 (ex Naef-collection).

Remarks. In the Linsenmaier and Naef collection there are other specimens collected in the same type localities and days, but excluded from the type series because identified by Linsenmaier in 1979 only.

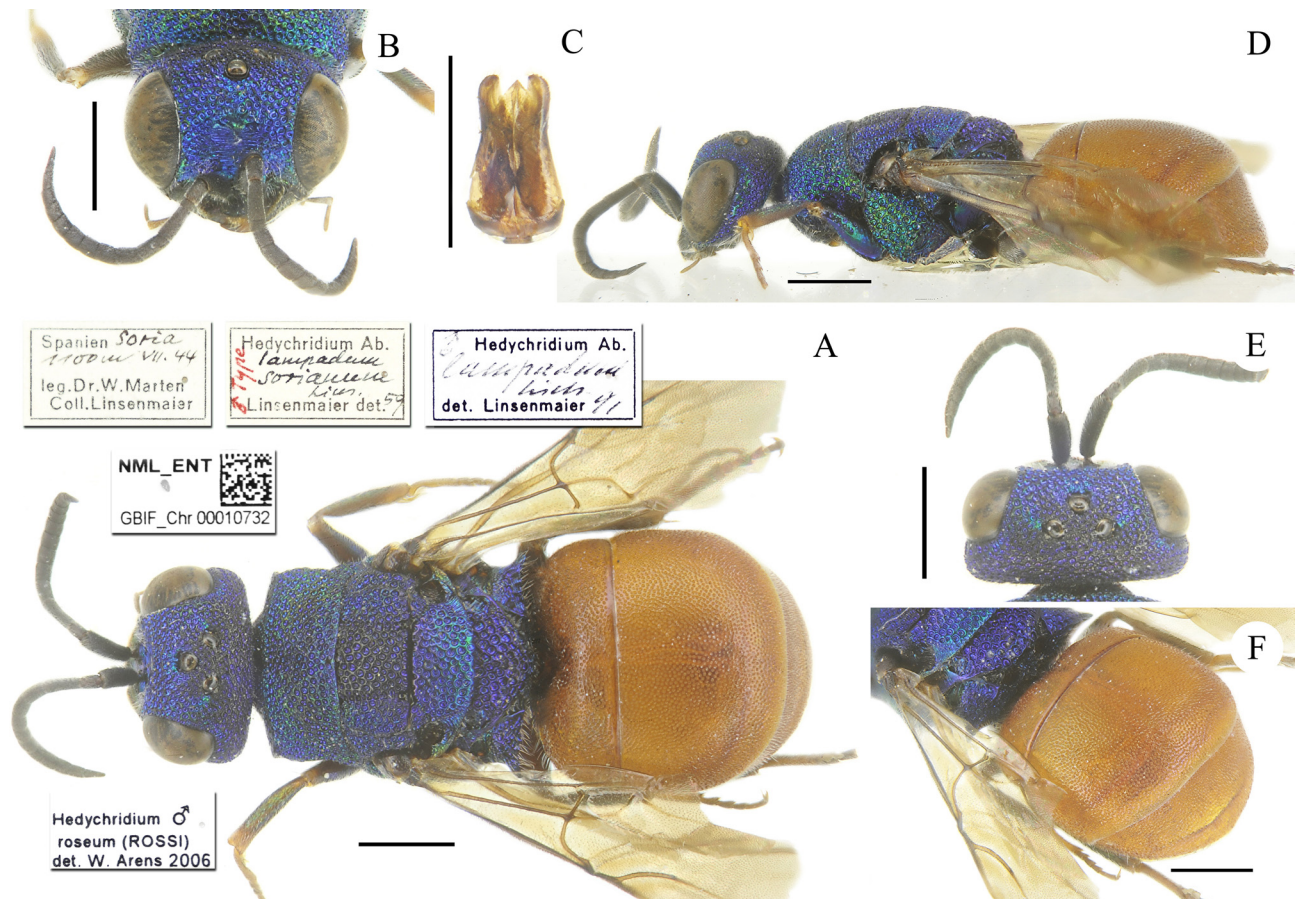


FIGURE 39. *Hedychridium lampadum sorianum* Linsenmaier, 1959a, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Genital capsule. D) Habitus, lateral view. E) Head, dorsal view. F) Metasoma, postero-lateral view. Scale bar 1 mm.

***Hedychridium marteni ruborum* Linsenmaier, 1959a**

(Fig. 44A–44E)

Hedychridium (Hedychridium) marteni ruborum Linsenmaier, 1959a: 50 (descr.), 187 (cat.); 1999: 63 (diag.).

Hedychridium (Hedychridium) ruborum: Linsenmaier 1999: 60 (key, *ardens* group).

Type locality. Morocco: “Marocco, ♀ Type Coll. m. (Plateau de Oukaimeden 2500m, V.1953, leg. Teunissen)“.

Holotype, ♀: Maroc Oukaimeden 29.5.1913 alt. 2500m Teunissen // ♀ Type *Hedychridium Ab. marteni* ssp. *ruborum* Lins. Linsenmaier det. 1959 // 53 // NML_ENT GBIF_Chr0008714 (ex type-collection).

Remarks. Linsenmaier labelled a male specimen in the type-collection as the allotype, bearing the following labels: Maroc 17.6.84 H. Atl. 2500m Oukaimeden leg. Linsenmaier // ♂ Allotype *Hedychridium marteni* Lins. ssp.

ruborum Lins. det. Linsenmaier 1984. It cannot be considered as a type because it was collected after the original description which was based on a single specimen, holotype by monotypy.

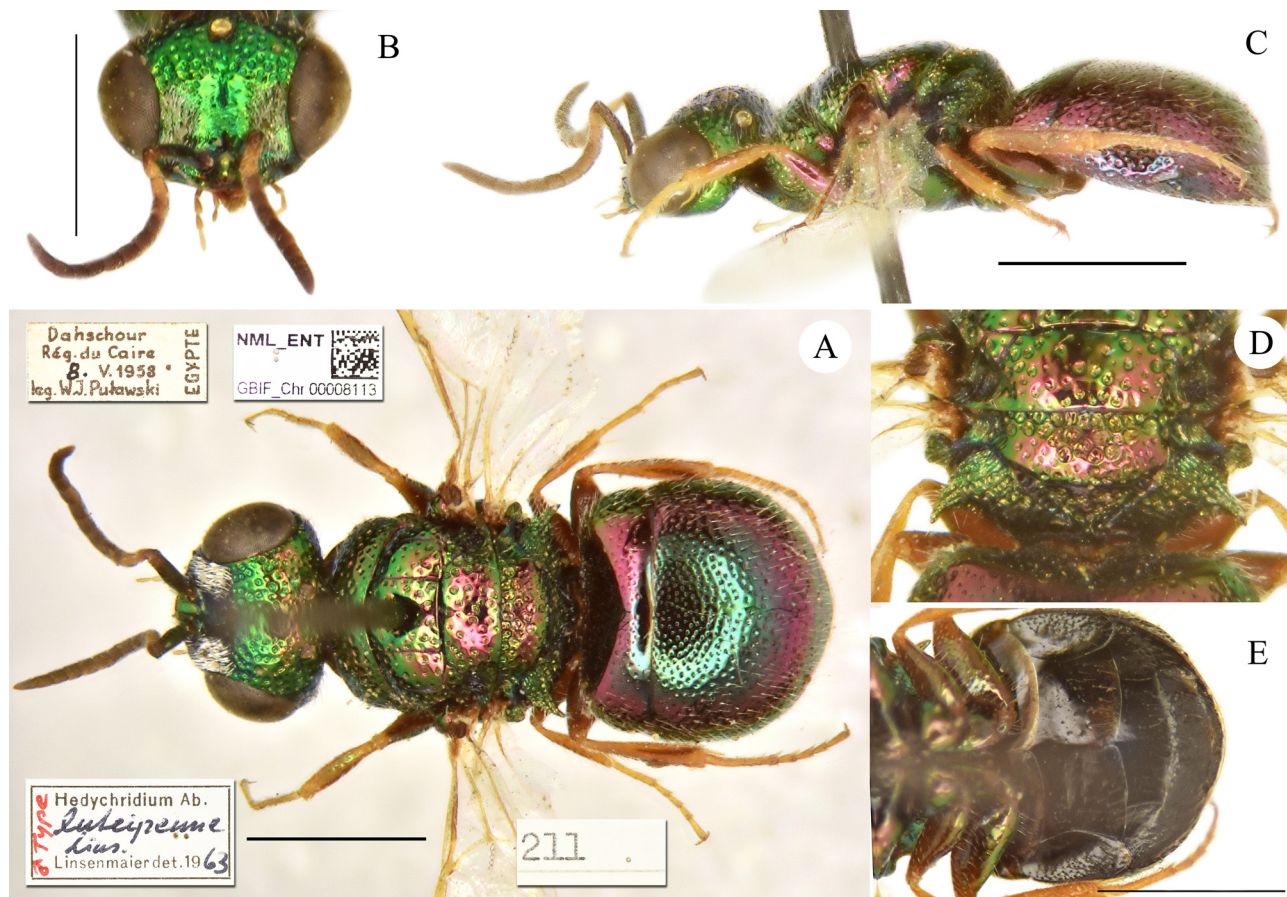


FIGURE 40. *Hedychridium luteipenne* Linsenmaier, 1968, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Scutellum, metanotum, propodeum, posterior view. E) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium mediocre Linsenmaier, 1959a

Hedychridium (*Hedychridium*) *mediocre* Linsenmaier, 1959a: 63 (key, descr.), 187 (cat.), 198 (figs 127–129); 1968: 37 (distr.); 1969: 353 (cat.).

Hedychridium (*Hedychridium*) *scutellare* (Tournier, 1878): Linsenmaier 1987: 142 (synonymised).

Type locality. France, Italy, Sicily, Spain: “Spanien, Süd-Frankreich, Italien (und Sizilien). ♂ Type, ♀ Allotype (Soria) und Paratypen Coll. m.”.

Paratype, ♂: Spanien Zamora Ribadelago 1000 m VII.49 leg. Dr. W. Marten Coll. Linsenmaier // ♂ Paratype *Hedychridium* Ab. *mediocre* Lins. Linsenmaier det. 1959 // ♂ *Hedychridium* Ab. *scutellare* Tourn. det. Linsenmaier 1982 // *Hedychridium sculpturatum sculpturatum* Ab. det. W. Arens 2009 // NML_ENT GBIF_Chr0011272; 1♂, 1♀: Spanien Zamora Ribadelago 2.–14.VII.1948 leg. Dr. W. Marten Coll. Linsenmaier // NML_ENT GBIF_Chr0011337; 4♂: Soria 11.–13.7.57 Almenar Linsenmaier // ♂ Paratypen *Hedychridium* Ab. *mediocre* Lins. Linsenmaier det. 1959 // ♂ *Hedychridium* Ab. *scutellare* Tourn. det. Linsenmaier 1982 // ♂ *Hedychridium sculpturatum sculpturatum* Ab. det. W. Arens 2009 // NML_ENT GBIF_Chr0011273–Chr0011274; 1♀: Granada 2.7.57 30 km östlich Linsenmaier // ♀ Paratype *Hedychridium* Ab. *mediocre* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0011301; 1♀: 12.VI.77 Sicilia // ♀ Paratype *Hedychridium* Ab. *mediocre* Lins. Linsenmaier det. 1959 // ♀ *Hedychridium* Ab. *scutellare* Tourn. det. Linsenmaier 1982 // ♀ *Hedychridium* Ab. *scutellare scutellare* Tourn. det. W. Arens 2009 // NML_ENT GBIF_Chr0011250; 1♀: 19.VI.77 Sicilia // ♀ Paratype *Hedychridium sculpturatum* Ab. Linsenmaier det. 1959 // ♀ *Hedychridium scutellare* Tourn. det. Linsenmaier 1982 // NML_ENT GBIF_Chr0011249; 1♂: Sicilien Syrakus 25.5.22 (Schulth.) // ♂ Paratype *Hedychridium* Ab. *mediocre* Lins. Linsenmaier det. 1959 // ♂ *Hedychridium*

Ab. scutellare Tourn. det. Linsenmaier 1982 // ♂ *Hedychridium scutellare scutellare* Tourn. det. W. Arens 2009 // NML_ENT GBIF_Ch0011251; 1♂, 1♀: dint. di Roma Pantano 10.7.18 Bondimaj Coll. Dr. Enslin Linsenmaier // ♂ ♀ Paratype *Hedychridium Ab. mediocre* Lins. Linsenmaier det. 1959 // ♀ id. // ♂ *Hedychridium Ab. scutellare* Tourn. det. Linsenmaier 1986 // ♂ *Hedychridium scutellare scutellare* Tourn. det. W. Arens 2009 // NML_ENT GBIF_Ch0011252, Chr0011253; 1♂: dint. di Roma Pantano 16.9.17 Bondimaj Coll. Dr. Enslin Linsenmaier // ♂ Paratype *Hedychridium Ab. mediocre* Lins. Linsenmaier det. 1959 // ♂ *Hedychridium Ab. scutellare* Tourn. det. Linsenmaier 1986 // NML_ENT GBIF_Ch0011254; 1♂: dint. di Roma Pantano Bondimaj / 15.8.21 // Coll. Dr. Enslin Linsenmaier // ♂ Paratype *Hedychridium Ab. mediocre* Lins. Linsenmaier det. 1959 // ♂ *Hedychridium Ab. scutellare* Tourn. det. Linsenmaier 1986 // NML_ENT GBIF_Ch0011255; 1♀: dint. di Roma Pantano R. Ist. Anat. Como /17.8.21 // ♀ Paratype *Hedychridium Ab. mediocre* Lins. Linsenmaier det. 1959 // ♀ *Hedychridium Ab. scutellare* Tourn. det. Linsenmaier 1986 // NML_ENT GBIF_Ch0011256; 1♀: France Var Callian 5.VII.29 leg. Naef Coll. Linsenmaier // ♂ Paratype *Hedychridium Ab. mediocre* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0011234; 2♂: France Var 56 Callian E. Juli leg. Linsenmaier // ♂ Paratype *Hedychridium Ab. mediocre* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0011235, Chr0011236; 1♂, 2♀: France Var 56 Callian M. Juli leg. Linsenmaier // ♂ Paratype *Hedychridium Ab. mediocre* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0011237, Chr0011238; ♂: Var 23.6.57 Callian leg. Linsenmaier // ♂ Paratype *Hedychridium Ab. mediocre* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0011239.

Remarks. We could not locate the holotype and the allotype of *Hedychridium mediocre* Linsenmaier, 1959a. Very likely, Linsenmaier removed the types from the type collection when the species was synonymised, removing also the original type label, as he already did in other cases (Rosa *et al.* 2015). However, in collection there are the paratype specimens collected by Linsenmaier at Soria during the same collecting event in 1957. If needed, and in case that the holotype is not found, it will be possible to select a paratype as neotype.

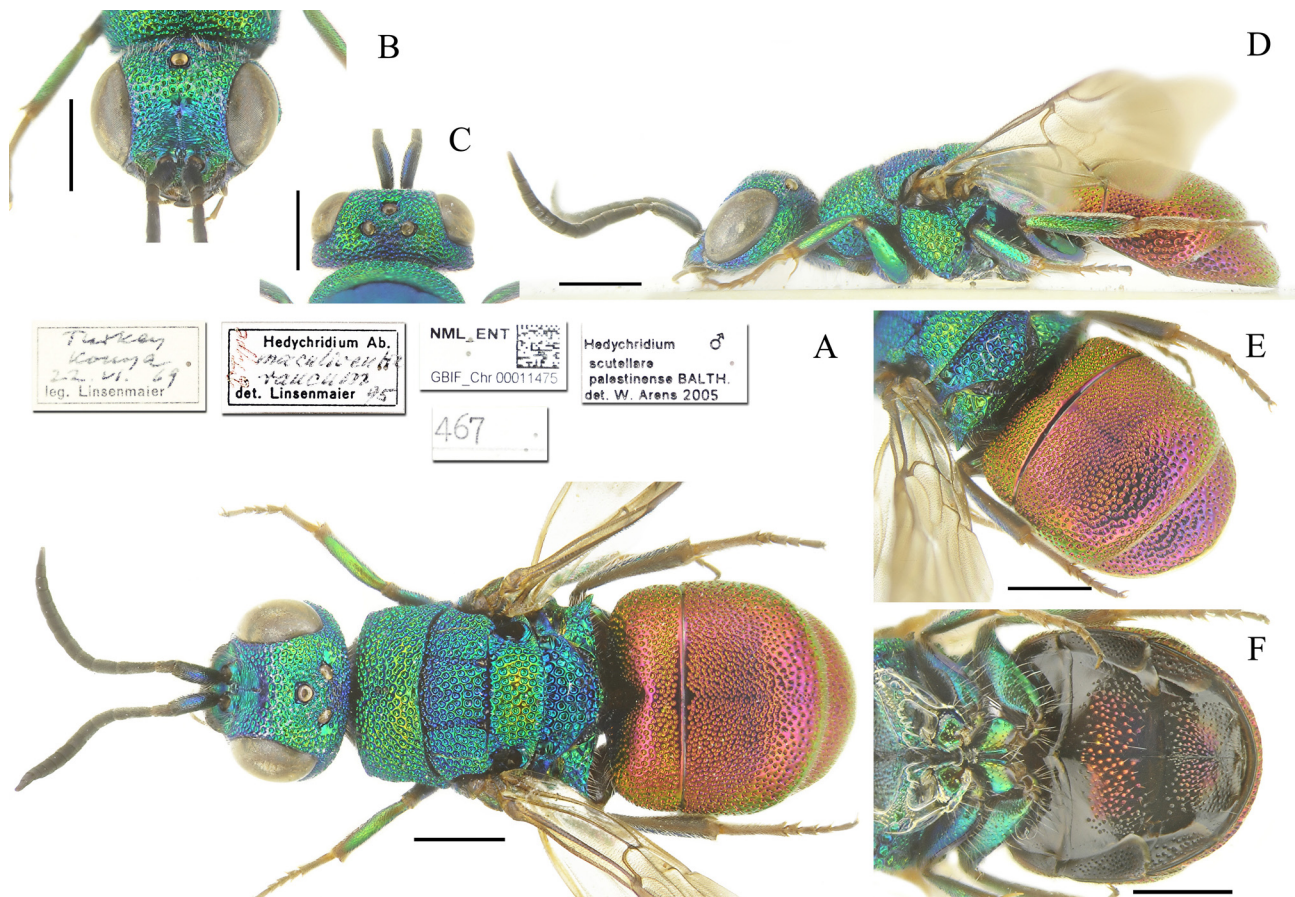


FIGURE 41. *Hedychridium maculiventre raucum* Linsenmaier, 1997, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Head, dorsal view. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

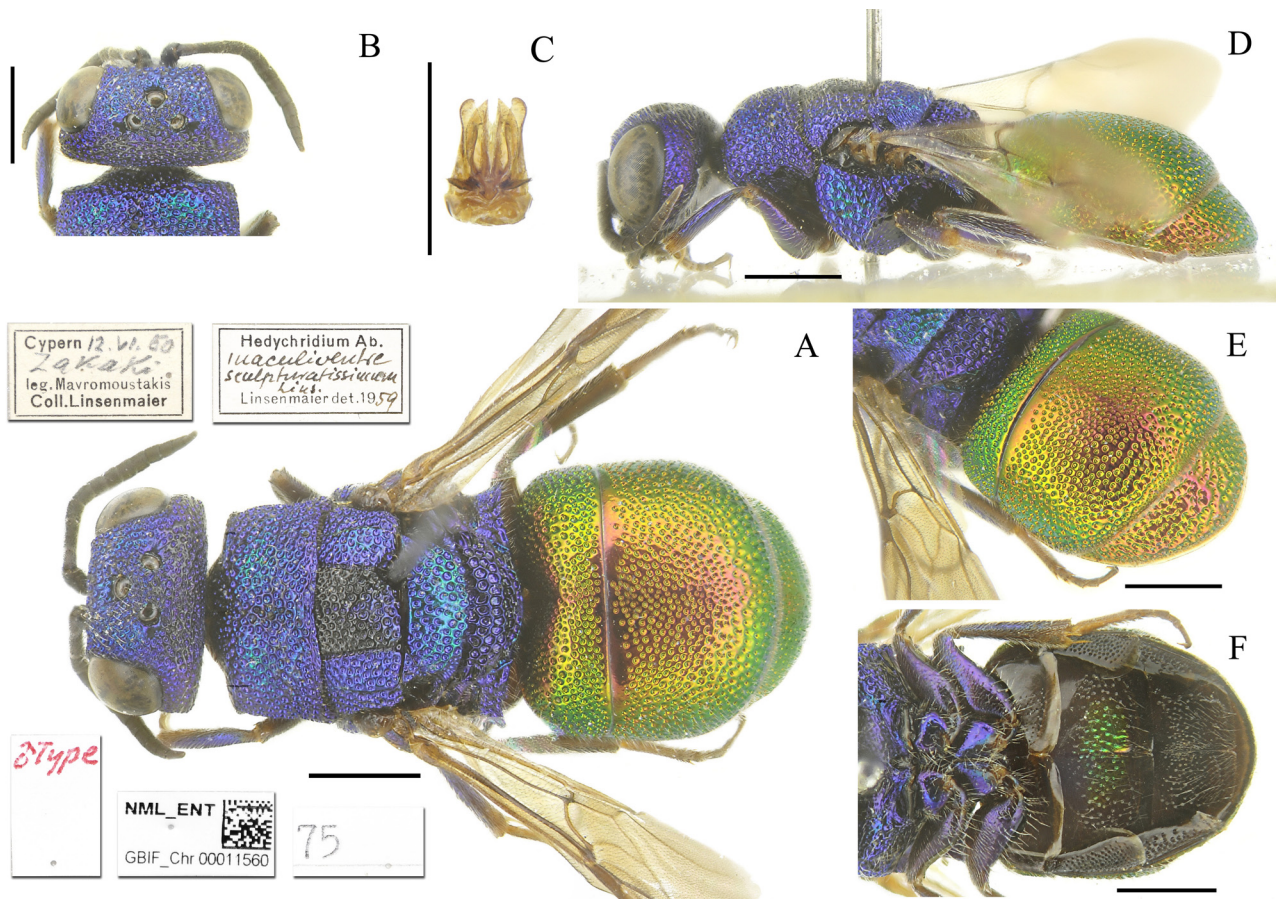


FIGURE 42. *Hedychridium maculiventris sculpturatissimus* Linsenmaier, 1959a, holotype, male. A) Habitus, dorsal view. B) Head frontal view. C) Genital capsule. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium mediocre sardiniense Linsenmaier, 1959b

(Fig. 45A–45F)

Hedychridium (Hedychridium) mediocre sardiniense Linsenmaier, 1959b: 235 (descr.).

Hedychridium (Hedychridium) scutellare sardiniense: Linsenmaier 1987: 142 (tax.).

Hedychridium scutellare scutellare (Tournier, 1878): Arens 2010: 407 (synonymised).

Type locality. Italy, Sardinia: “Sardinien, ♀ Type, ♂ Allotype Coll. m., Paratype Coll. H. Wolf (Cagliari, Poetto, *Daucus*, 21. und 23.VII.1959, leg. H. Wolf)”.

Holotype, ♀: Cagliari 21.VII.1959 H. Wolf / Poetto // ♀ Type *Hedychridium Ab. mediocre sardiniense* Lins. Linsenmaier det. 1959 // 184 // NML_ENT GBIF_Ch0011383 (ex type-collection).

Allotype, ♂: Cagliari 23.VII.1959 H. Wolf / Poetto // ♂ Allotype *Hedychridium Ab. mediocre sardiniense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0011354. // *Hedychridium Ab. scutellare sardiniense* Lins. Linsenmaier det. 1968.

Paratypes, 1 ♂: Cagliari 21.VII.1959 H. Wolf / Poetto // ♂ Paratype *Hedychridium Ab. mediocre sardiniense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0011355; 1 ♀: Cagliari 23.VII.1959 H. Wolf / Poetto // ♀ Paratype *Hedychridium Ab. mediocre sardiniense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0011384.

Remarks. Arens (2010) synonymised *H. mediocre sardiniense* with *H. scutellare scutellare* (Tournier, 1878).

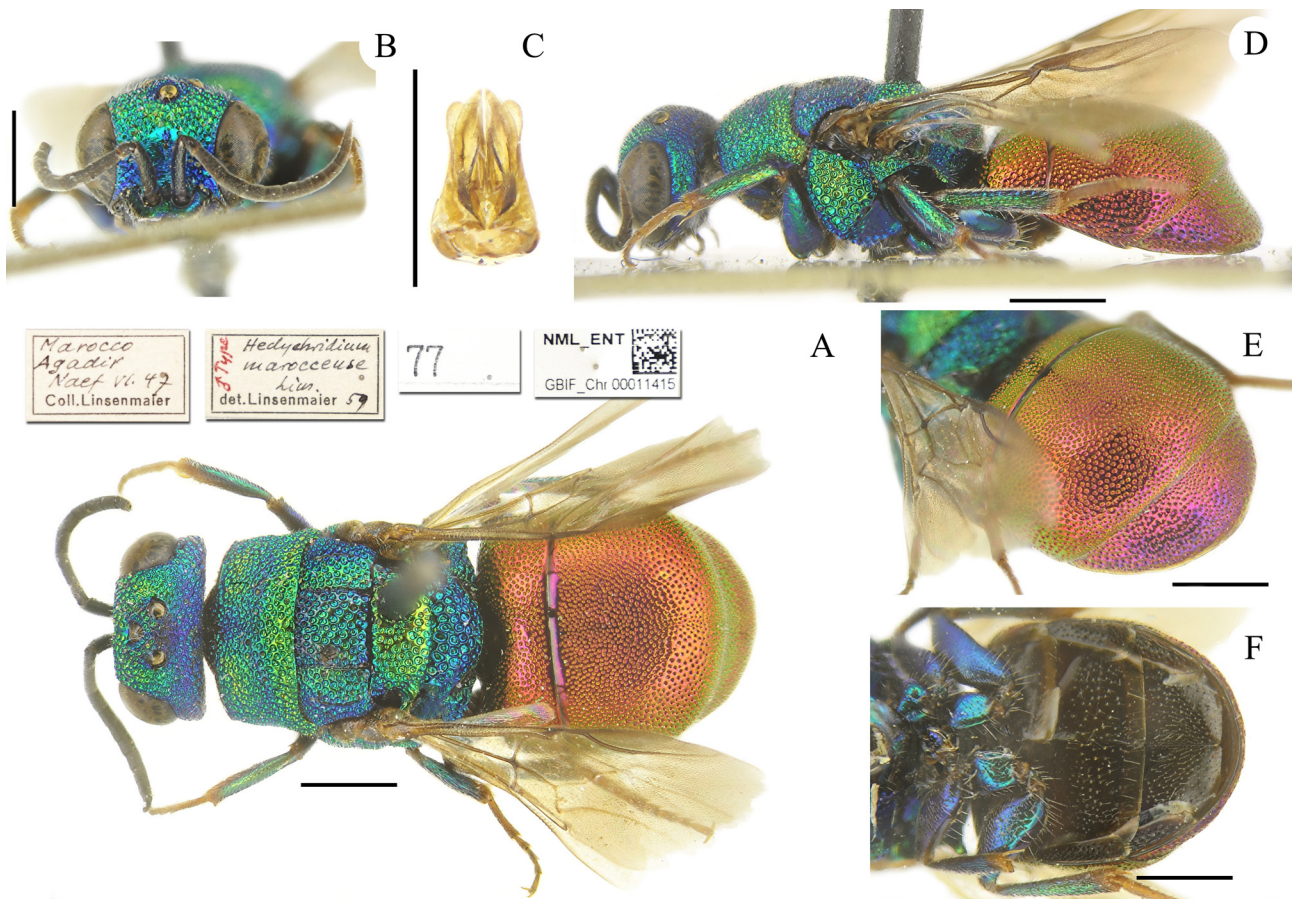


FIGURE 43. *Hedychridium maroccense* Linsenmaier, 1959a, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Genital capsule. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium mediocre tunesiense* Linsenmaier, 1959a**

(Fig. 46A–46B)

Hedychridium (Hedychridium) mediocre tunesiense Linsenmaier, 1959a: 64 (descr., *sculpturatum* group), 187 (cat.); 1969: 353 (cat.).

Hedychridium (Hedychridium) scutellare tunesiense: Linsenmaier 1987: 142 (tax.).

Hedychridium tunesiense: Linsenmaier 1999: 84 (key, upgraded to species rank), 85 (diag.), 88 (fig. 141).

Type locality. Tunisia: “Tunesien. ♂ Type Coll. m. (Kairouan, leg. Santschi)”.

Holotype, ♂: Kairouan 15.VI.17 // ♂ Type *Hedychridium mediocre* Lins. ssp. *tunesiense* Lins. Linsenmaier 1959 // 78 // ♂ *Hedychridium scutellare tunesiense* det. Linsenmaier 1982 // NML_ENT GBIF_Chr0011386 (ex type-collection).

Remarks. Linsenmaier (1999) elevated *Hedychridium mediocre tunesiense* to species rank.

***Hedychridium mediocreum* Linsenmaier, 1987**

(Fig. 47A–47F)

Hedychridium (Hedychridium) mediocreum Linsenmaier, 1987: 142 (descr.).

Hedychridium mediocreum Kimsey in Kimsey & Bohart 1991: 199. Unnecessary replacement name for *Hedychridium mediocreum* Linsenmaier, 1987.

Hedychridium insulare mediocreum: Arens 2010: 407 (*roseum* group).

Type locality. Switzerland: “♂ Type Wallis, Coll. m. - Verbreitung mehr in Mitteleuropa (auch im Osten) [=more spread in Central Europe (also in the East)], im Süden seltener als *scutellare* T, so in Spanien, S. Frankreich, Bulgarien; aus Italien und Sizilien sah ich kein Stück [=in the south less common than *scutellare* Trautmann, so in Spain, S. France, Bulgaria; I did not see any specimen from Italy or Sicily”.

Holotype, ♂: Wallis B 550m 9.6.56 Linsenmaier // ♂ Type *Hedychridium* Ab. *mediocrum* Lins. det. Linsenmaier 86 // *Hedychridium* ♂ *insulare lampadum* Lins. det. W. Arens 2006 // NML_ENT GBIF_Chr0011197.

Remarks. Linsenmaier (1959a) described *Hedychridium mediocre* based on specimens from Spain, southern France, Italy, and Sicily. At the same time, he reported *H. scutellare* from southwestern Switzerland, southern France, Spain and Hungary. Subsequently, Linsenmaier (1987) realised that he inverted the identification of the two species and that *H. mediocre* is the junior synonym of *H. scutellare*. Therefore, he corrected his earlier (1959a) interpretation, and the species previously interpreted as *H. scutellare* turned out to be still undescribed. Linsenmaier (1987), with a choice that is at least questionable, described this species with the name *H. mediocrum*. This name, as it was easy to foresee, proved to be a source of further confusion, as it was mistakenly considered junior homonym of *H. mediocre* by Kimsey & Bohart (1991), who replaced *H. mediocrum* with *H. mediocrate* Kimsey. However, based on the rules of the International Nomenclature Code, the name *H. mediocrum* is valid, as it is evidently not a wrong spelling of *mediocre*, but the explicit intention of providing a new name, a Latin adjective of the first class rather than the second.

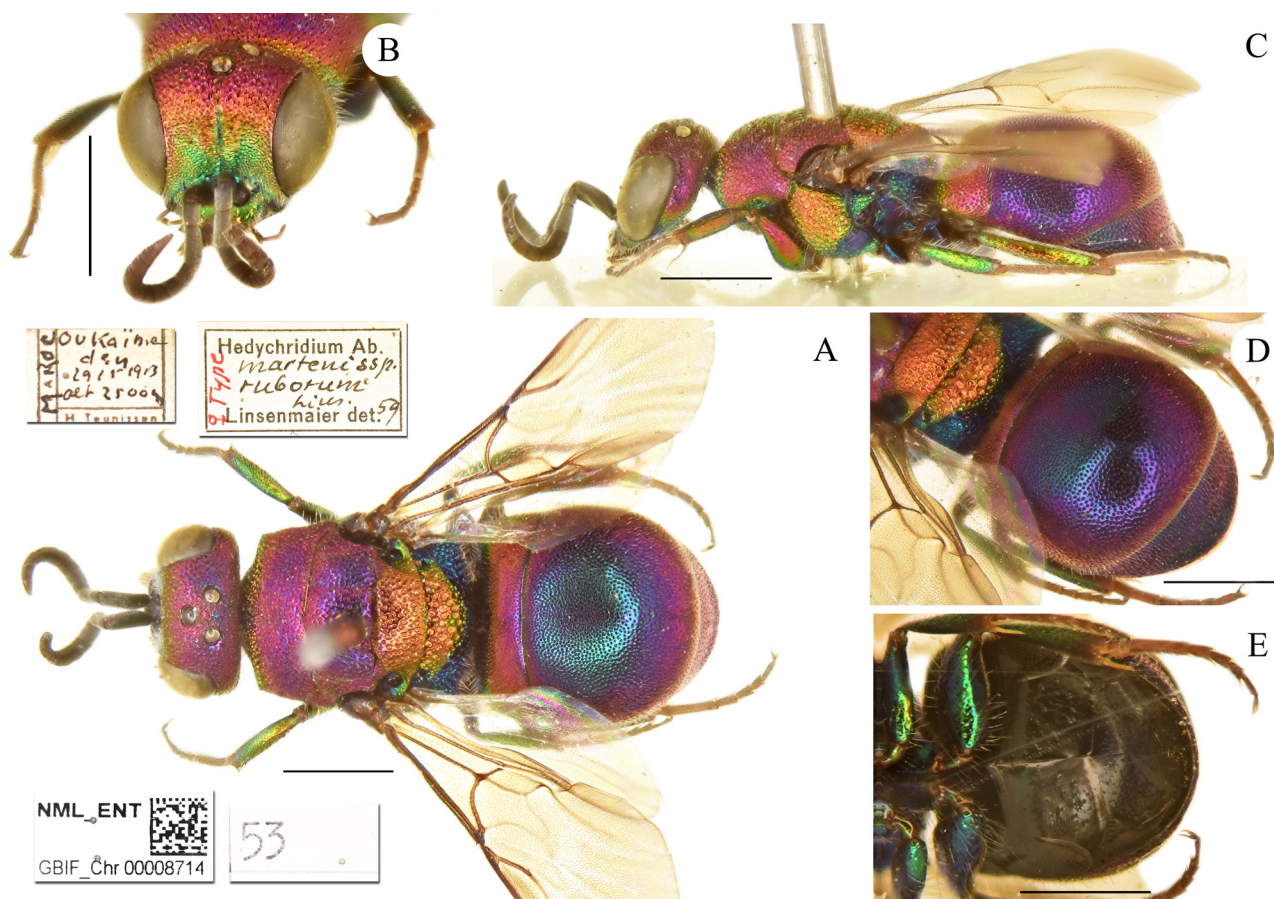


FIGURE 44. *Hedychridium marteni ruborum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium moricei chrysurum Linsenmaier, 1969

(Fig. 48A–48F)

Hedychridium (*Hedychridium*) *moricei chrysurum* Linsenmaier, 1969: 352 (cat., *incrassatum* group), 373 (descr. as *chrysurus*).

Hedychridium moricei chrysurum: Kimsey & Bohart 1991: 200 (cat.).

Hedychridium (Hedychridium) moricei davydovi Semenov-Tian-Shanskij, 1967: Linsenmaier 1997: 257 (synonymised).

Type locality. Palestine: “♂ Type: Jericho 20.VII.46 leg. Bytinski-Salz, ♀ Allotype: Jerusalem 29.V.46, leg. Bytinski-Salz in coll. m.”

Holotype, ♂ and paratype, 1♂ [glued on the same label]: Jericho Palestine 20.7.1946 leg. Bytinski-Salz // Paratype Wadi el Kelt n Jericho Palest. Houska lgt. 31.V.42 // ♂ Type rechts ♂ Paratype links *Hedychridium moricei chrysurum* Lins. det. Linsenmaier 1969 // *Hedychridium* Ab. *moricei davydovi* S. det. Linsenmaier '80 // NML_ENT GBIF_Ch0010358 (ex type-collection).

Allotype, ♀ and paratype, 1♂ [glued on the same label]: Jerusalem Palestine 29.V.1946 Bytinski-Salz // ♀ Allotype rechts. ♂ Paratype *Hedychridium moricei chrysurum* Lins. det. Linsenmaier 1969 // *Hedychridium* Ab. *moricei davydovi* S. det. Linsenmaier 1980 // NML_ENT GBIF_Ch0010359 (ex type-collection).

Paratypes, 1♂: Rechume Palestine 29.8.1949 leg. Bytinski-Salz // ♂ Paratype *Hedychridium moricei chrysurum* Lins. Linsenmaier det. 1969; // NML_ENT GBIF_Ch0010354; 1♀: // Palestine // Palestine Niram 19 10.6. leg. Bytinski-Salz // ♀ Paratype *Hedychridium* Ab. *moricei chrysurum* Lins. det. Linsenmaier '69 // NML_ENT GBIF_Ch0010355; 1♀: Jericho Palestine 7.7.1942 leg. Bytinski-Salz // ♀ Paratype *Hedychridium* Ab. *moricei chrysurum* Lins. Linsenmaier det. 1969 // NML_ENT GBIF_Ch0010356; 2♀: // Iran // Kamal Abad Coll. 28.8.55 Linsenmaier // ♀ Paratype *Hedychridium moricei chrysurum* Lins. det Linsenmaier 69 // *Hedychridium* Ab. *moricei davydovi* Sem. det. Linsenmaier 80 // NML_ENT GBIF_Ch0010357.

Remarks. Linsenmaier (1997: 142) synonymised *Hedychridium moricei chrysurus* with *H. moricei davydovi* (Semenov-Tian-Shanskij, 1967).

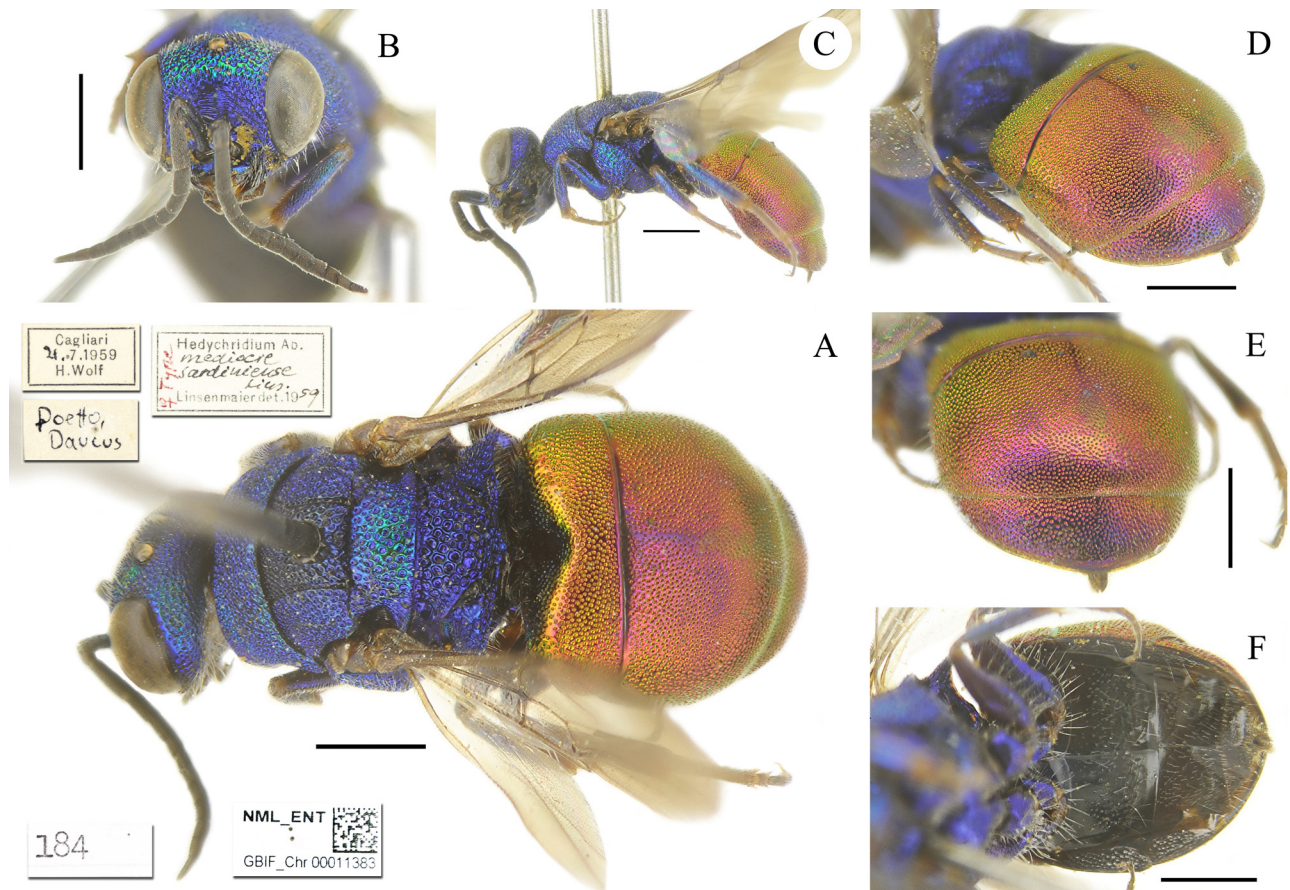


FIGURE 45. *Hedychridium mediocre sardiniense* Linsenmaier, 1959b, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, posterior view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium obscurifacies* Linsenmaier, 1999**

(Fig. 49A–49E)

Hedychridium (Hedychridium) obscurifacies Linsenmaier, 1999: 60 (key, *ardens* group), 63 (descr.), 69 (figs 100–102).

Type locality. Lybia: “Libyen (Tripolitanien), Sidi Benur III.1954, Hartmann, ♂ Type (Holotypus) Coll. m.”.

Holotype, ♂: Tripolitanien Sidi Benur 3.54 leg. Hartmann coll. Linsenmaier // ♂ Type *Hedychridium* Ab. *obscurifacies* Lins. Linsenmaier 1998 // 501 // NML_ENT GBIF_Chr0008667 (ex type-collection).

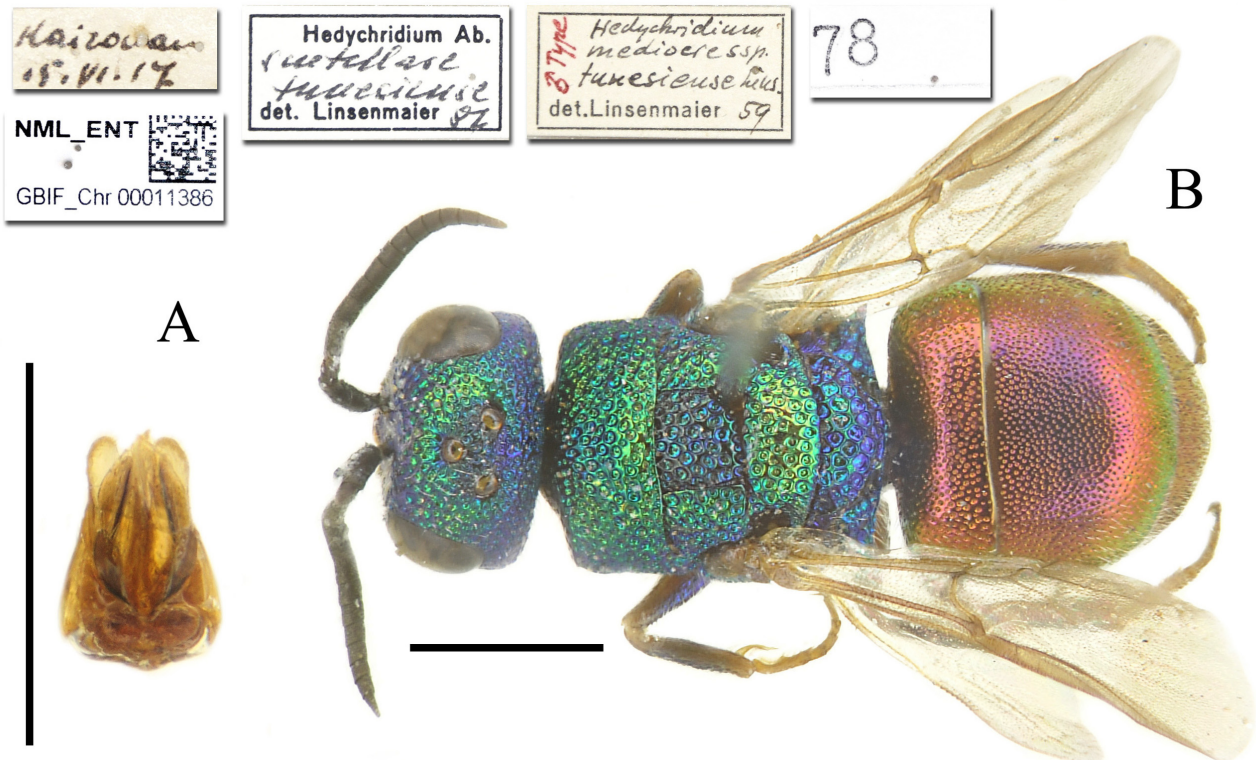


FIGURE 46. *Hedychridium mediocre tunesiense* Linsenmaier, 1959a, holotype, male. A) Genital capsule. B) Habitus, dorsal view. Scale bar 1 mm.

***Hedychridium parcoarbatum* Linsenmaier, 1999**

(Fig. 50A–50F)

Hedychridium (Hedychridium) parcoarbatum Linsenmaier, 1999: 59 (key, *ardens* group), 65 (descr.), 69 (figs 106–108).

Type locality. Morocco: “S-Marokko, Goulimine-Sidni Ifni 29.III.1974, K.M. Guichard, ♀ Type (Holotypus) Coll. Guichard, ♀ Paratype Coll. m.; Agadir 7.II.1988, W. Perraudin, ♂ Allotype Coll. m.; Paratypen: Oued Massa 3.IV.1974 und Sidi Moussa 12.III.1974, 2♀ leg. u. Coll. Guichard; Oued Massa 20.IV.1980, W. Perraudin, 1♀ Coll. m. Tiznit Tadouarte 12. u. 18.IV.1988, J. Gusenleitner, 2♀ Coll. J. Schmidt (Oberösterr. Landesmus. Linz), 2♀ Coll. m.; Agadir 2. V. 1965, 1♀ leg. u. Coll. m.; Agadir 2.V.1980, Perraudin, 1♂ Coll. m.”.

Allotype, ♂: Oued Sousse, 2.V.1980, 30 km Agadir, W. Perraudin // ♂ Allotype *Hedychrum* Ltr. [!] *parcoarbatum* Linsenmaier det. 1998 // 504 // NML_ENT GBIF_Chr0009008 (ex type-collection).

Paratypes, 1♀: // S. Morocco: Sidi-Ifni, Within 100m of sea 31.III.1974 // K.M. Guichard & G.R. Else B.M. 1974-160 // ♀ Paratype *Hedychrum* Ltr. [!] *parcoarbatum* Linsenmaier det. 1998 // NML_ENT GBIF_Chr0009009; 1♀: 15 km nord Agadir Maroc 7.II.1988 Coll. W. Perraudin // ♀ Paratype *Hedychrum* Ltr. *parcoarbatum* Lins. Linsenmaier det. 1998 // NML_ENT GBIF_Chr0009010; 1♀: // Maroc // Massa Maroc 20.IV.1980 sur rocher W. Perraudin // ♀ Paratype *Hedychrum* Ltr. *parcoarbatum* Linsenmaier det. 1998 // NML_ENT GBIF_Chr0009011; 1♀: Maroc 2.V.65 Agadir leg. Linsenmaier // ♀ Paratype *Hedychrum* Ltr. [!] *parcoarbatum* Linsenmaier det. 1998 // NML_ENT GBIF_Chr0009012; 1♀: Marokko Tadouarte 10 km NW Tiznit 18.4.1988 leg. J. Gusenleitner

// ♀ Paratype *Hedychrum* Ltr. [!] *parcobarbatum* Linsenmaier det. 1998 // NML_ENT GBIF_Chr0009013; 1♀:
 // Maroc // Marokko Tadouarte 10 km NW Tiznit 12.4.1988 leg. J. Gusenleitner // ♀ Paratype *Hedychrum* Ltr.
parcobarbatum Linsenmaier det. 1998 // NML_ENT GBIF_Chr0009014.

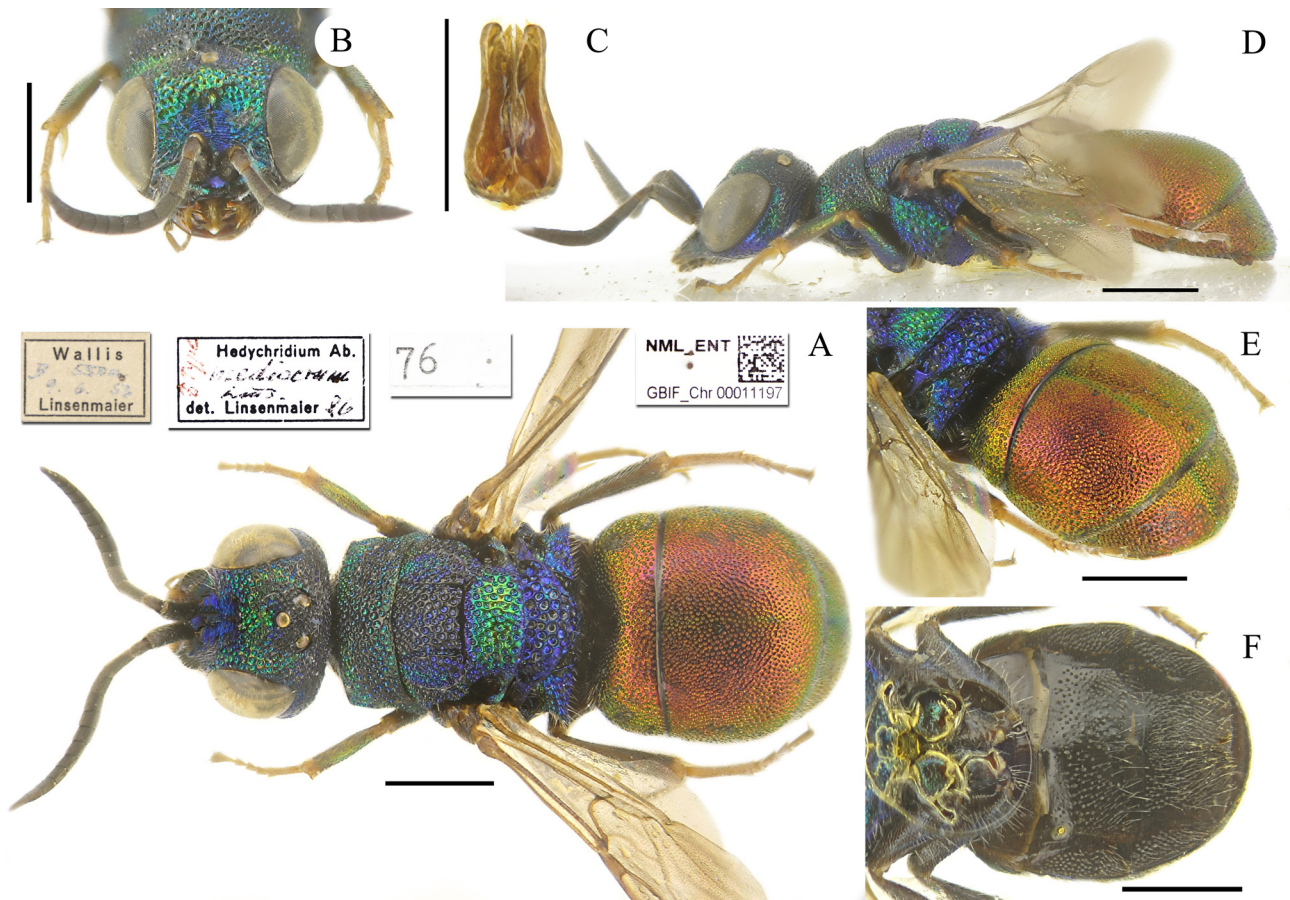


FIGURE 47. *Hedychridium mediocrum* Linsenmaier, 1987, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Genital capsule. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium perraudini Linsenmaier, 1968

(Fig. 51A–51E)

Hedychridium (Hedychridium) perraudini Linsenmaier 1968: 126 (descr., *ardens* group).
Hedychridium wolffi Linsenmaier, 1959b: Strumia 2003: 195 (synonymised).

Type locality. France, Corsica: "Korsika, Ft. l'Ospédale, VIII.67, leg. Perraudin, ♀ Type in Coll. m."

Holotype, ♀: Corse 890m Chemi creux // Ft. l'Ospédale 2.VIII.1967 W. Perraudin // ♀ Type *Hedychridium* Ab. *perraudini* Lins. Linsenmaier det. 1968 // 296 // NML_ENT GBIF_Chr0009225 (ex type-collection).

Remarks. Linsenmaier labelled in the type-collection a male specimen as the allotype, bearing the following labels: Ft. l'Ospédale Corse 600m 14.VIII.1969 W. Perraudin // ♂ Allotype *Hedychridium* Ab. *perraudini* Lins. Linsenmaier 1972. This specimen does not belong to the type series because it was collected after the original description.

Hedychridium perscitum Linsenmaier, 1959a

(Fig. 52A–52F)

Hedychridium (Hedychridium) perscitum Linsenmaier, 1959a: 44 (key), 45 (key), 52 (descr.), 187 (cat.), 216 (figs 670, 671);
 1968: 29 (diagn., *ardens* group).

Type locality. Cyprus: “Cypern. ♀ Type, ♂ Allotype, Paratypen Coll. m. (leg. Mavromoustakis, VII.–X.)”.

Holotype, ♀: Yermasoyia Cyprus 25.9.1951 leg. Mavromoustakis // Type ♀ *Hedychridium* Ab. *perscitum* Lins. Linsenmaier det. 1959 // 56 // NML_ENT GBIF_Chr0009172 (ex type-collection).

Allotype, ♂: Yermasoyia Cyprus 16.8.1951 leg. Mavromoustakis // Type ♂ *Hedychridium* Ab. *perscitum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009173 (ex type-collection).

Paratypes, 1 ex.: Cypern 2.X.37 Kitani leg. Mavromoustakis Coll. Linsenmaier // Paratype *Hedychridium* Ab. *perscitum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009162 (ex synoptic collection); 1♀: near Limassol Cyprus 5.9.1957 leg. Mavromoustakis // Paratype *Hedychridium* Ab. *perscitum* ♀ Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009164; 1♀: nr. Limassol Cyprus 5.9.1957 leg. Mavromoustakis // Paratype *Hedychridium* Ab. *perscitum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009165; 1 ex.: Cypern 21.VII.50 Erimi leg. Mavromoustakis Coll. Linsenmaier // Paratype *Hedychridium* Ab. *perscitum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009166; 3♂ and 3 ♀: Cypern 11.IX.51 Yermasoyia Hills leg. Mavromoustakis Coll. Linsenmaier // Paratypes *Hedychridium* Ab. *perscitum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0009167.

Remarks. Linsenmaier (1968: 29) added some more diagnostic characters to the original short description.

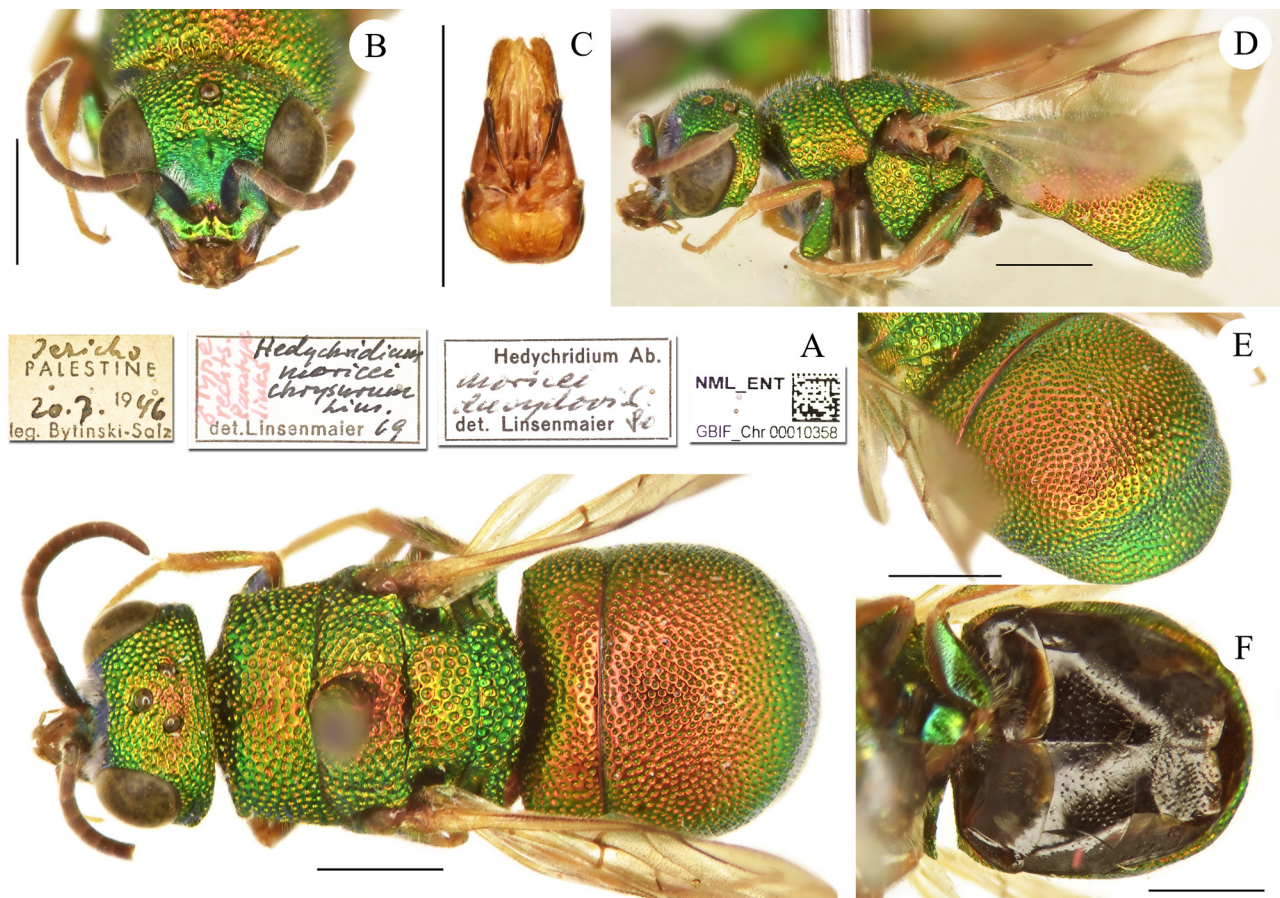


FIGURE 48. *Hedychridium moricei chrysurus* Linsenmaier, 1969, paratype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Genital capsule. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium piligastre Linsenmaier, 1969

(Fig. 53A–53F)

Hedychridium (*Hedychridium*) *piligastre* Linsenmaier, 1969: 352 (cat., *incrassatum* group), 373 (descr.).

Type locality. Palestine: “♂ Type: Tiberias 12.VI.46 leg. Bytinski-Salz in coll. m.”.

Holotype, ♂: Tiberias Israel 12.VI.1946 leg. Bytinski-Salz // ♂ Type *Hedychridium* Ab. *piligaster* Lins. Linsenmaier det. 1969 // 312 // NML_ENT GBIF_Chr0010470 (ex type-collection).

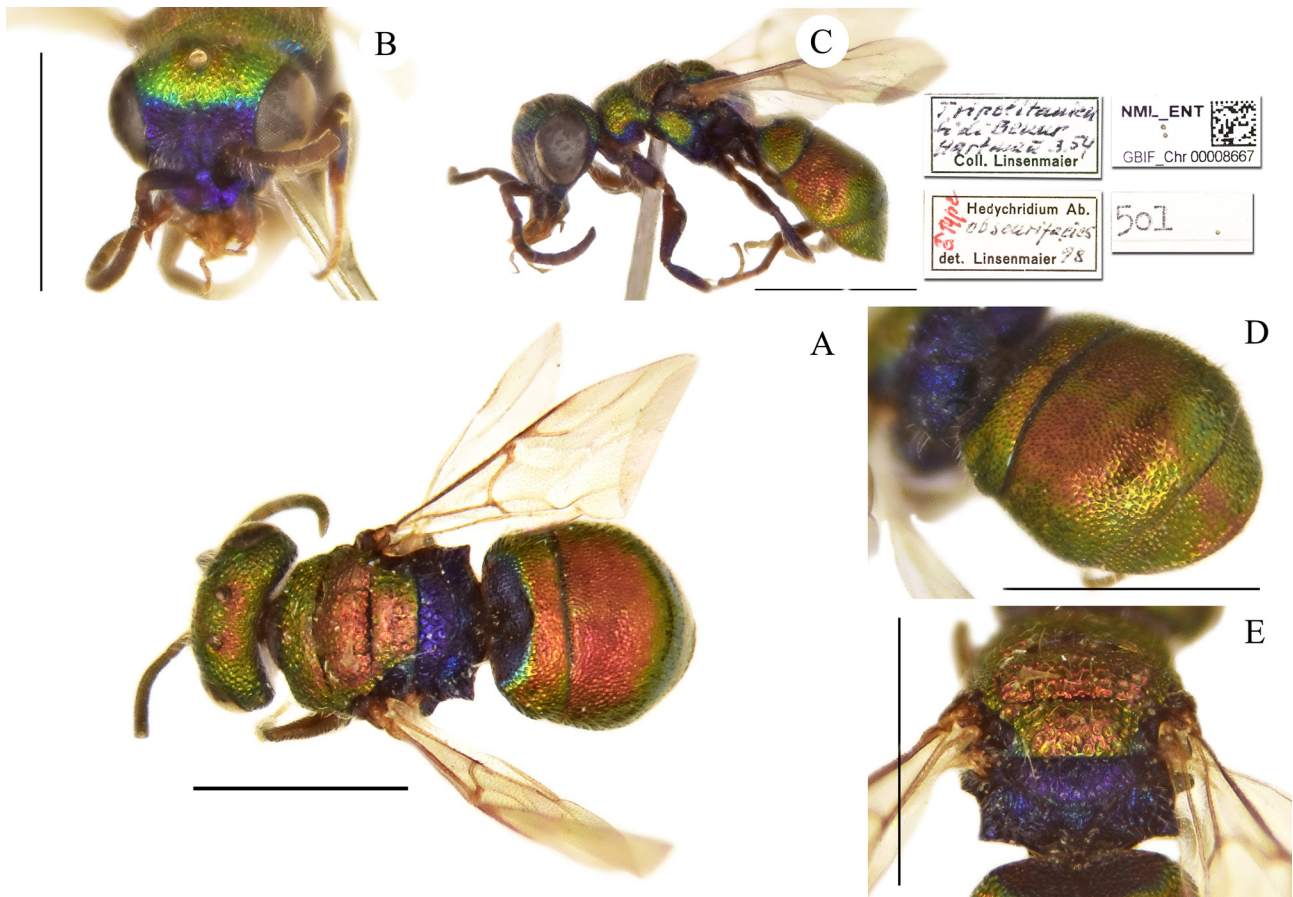


FIGURE 49. *Hedychridium obscurifacies* Linsenmaier, 1999, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Scutellum, metanotum, propodeum, posterior view. Scale bar 1 mm.

Hedychridium placare Linsenmaier, 1968

Hedychridium (Hedychridium) placare Linsenmaier, 1968: 37 (descr., *sculpturatum* group).

Hedychridium sculpturatum pseudoroseum Linsenmaier, 1959a: Arens 2010: 407 (synonymised, *roseum* group).

Type locality. Cyprus: “Cypern, ♂ Type Yermasoyia River, leg. Mavromoustakis, in Coll. m.”.

Holotype, ♂: Cypern 30.VIII.61 Yermasoyia River leg. Mavromoustakis Coll. Linsenmaier // ♂ Type *Hedychridium Ab. placare* Lins. Linsenmaier det. // NML_ENT GBIF_Chr0011419 (ex type-collection).

Remarks. Arens (2010: 407) considered *Hedychridium placare* the male of *H. sculpturatum pseudoroseum* Linsenmaier, 1959 and synonymised it with the latter.

Hedychridium projucundum Linsenmaier, 1959a

(Fig. 54A–54F)

Hedychridium (Hedychridium) projucundum Linsenmaier, 1959a: 44 (key), 45 (key), 49 (descr.), 187 (cat.), 200 (fig. 195).

Hedychridium (Hedychridium) bytinskii Linsenmaier, 1959a: Linsenmaier 1968: 25 (synonymised).

Type locality. Morocco, Palestine: “Nord-Afrika, Palästina. ♂ Type (Marocco, Mehdia V.–VI.1950, leg. Verhoeff) Coll. m., ♀ Allotype (Marocco) Coll. de Beaumont, Paratypen in Coll. Naef, Verhoeff und Coll. m.”.

Holotype, ♂: Maroc Mehdia (Pt Lyautey) 31.V.–1.VI.1950 PMF Verhoeff // ♂ Type *Hedychridium projucundum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0008465 (ex type-collection).

Remarks. Linsenmaier (1968) synonymised *Hedychridium projucundum* with *H. bytinskii* Linsenmaier, 1959a. We could not find paratypes of this taxon under the names of *H. projucundum* nor *H. bytinskii* in the Linsenmaier collection (given as “paratypen in Coll. m.).

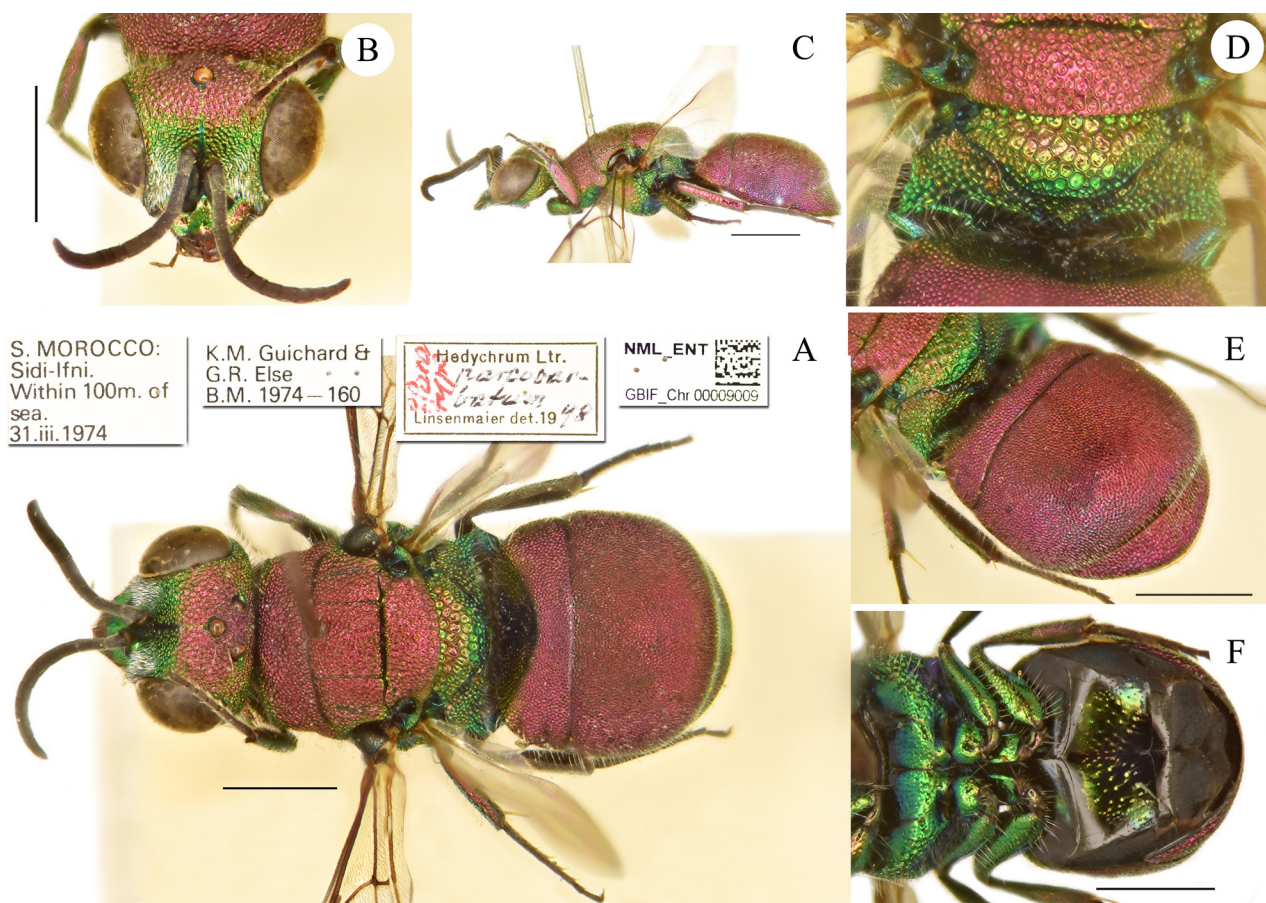


FIGURE 50. *Hedychridium parcombarbatum* Linsenmaier, 1999, paratype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Scutellum, metanotum, propodeum, posterior view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium proreticulatum Linsenmaier, 1999

(Fig. 55A–55E)

Hedychridium (Hedychridium) proreticulatum Linsenmaier, 1999: 60 (key, *ardens* group), 67 (descr.), 69 (figs 111, 112).

Type locality. Tunisia: “Tunesien, Jendouba 14.V.1973 J. Gusenleitner und J. Schmidt, ♀ Type (Holotypus), ♂ Allotype Coll. m.; Paratypen: Jendouba, Fernana, Kasserine 10.–16.V.1973 Gusenleitner u. Schmidt; Jendouba 11.IV.1981 J. Gusenleitner u. M. Schwarz; Teboursouk 16.V.1992 J. Gusenleitner; Afouz 26.IV.1980 H. Tussac. - Coll. Gusenleitner, Schmidt, Schwarz, Tussac und m.”

Holotype, ♀: Jendouba, 15 km Süd, Tunesia, 14.5.1973, leg. J. Gusenleitner // ♀ Type *Hedychridium* Ab. *proreticulatum* Lins. Linsenmaier det. 1977 // 505 // NML_ENT GBIF_Ch0009015 (ex type-collection).

Allotype, ♂: Jendouba, 15 km Süd, Tunesia, 14.V.1973, leg. Jos. Schmidt // ♂ Allotype *Hedychridium* Ab. *proreticulatum* Lins. det. Linsenmaier 1977 // NML_ENT GBIF_Ch0009016 (ex type-collection).

Paratypes, 1♂: Fernana Tunesien 13.V.1973 leg. Jos. Schmidt // ♂ Paratype *Hedychridium* Ab. *proreticulatum* Lins. det. Linsenmaier 1977 // NML_ENT GBIF_Ch0009017 (ex synoptic collection); 1♀: Tunesien Jendouba, 15 km S 11.4.1981 leg. J. Gusenleitner // ♀ Paratype *Hedychrum* Ltr. [!] *proreticulatum* Lins. Linsenmaier det. 1977 // NML_ENT GBIF_Ch0009018 (ex synoptic collection); 1♂: Jendouba, 15 km Süd, Tunesia, 16.5.1973, leg. J. Gusenleitner // ♂ Paratype *Hedychridium* Ab. *proreticulatum* Lins. det. Linsenmaier 1977 // NML_ENT GBIF_Ch0009019; 1♀: Jendouba, 15 km Süd, Tunesia, 14.5.1973, leg. J. Gusenleitner // ♀ Paratype *Hedychridium* Ab.

proreticulatum Lins. Linsenmaier det. 1977 // NML_ENT GBIF_Chr0009020; 1♀: Kasserine Tunisia 10.5.1973 leg. J. Gusenleitner // ♀ Paratype *Hedychridium* Ab. *proreticulatum* Lins. det. Linsenmaier 1977 // NML_ENT GBIF_Chr0009021.

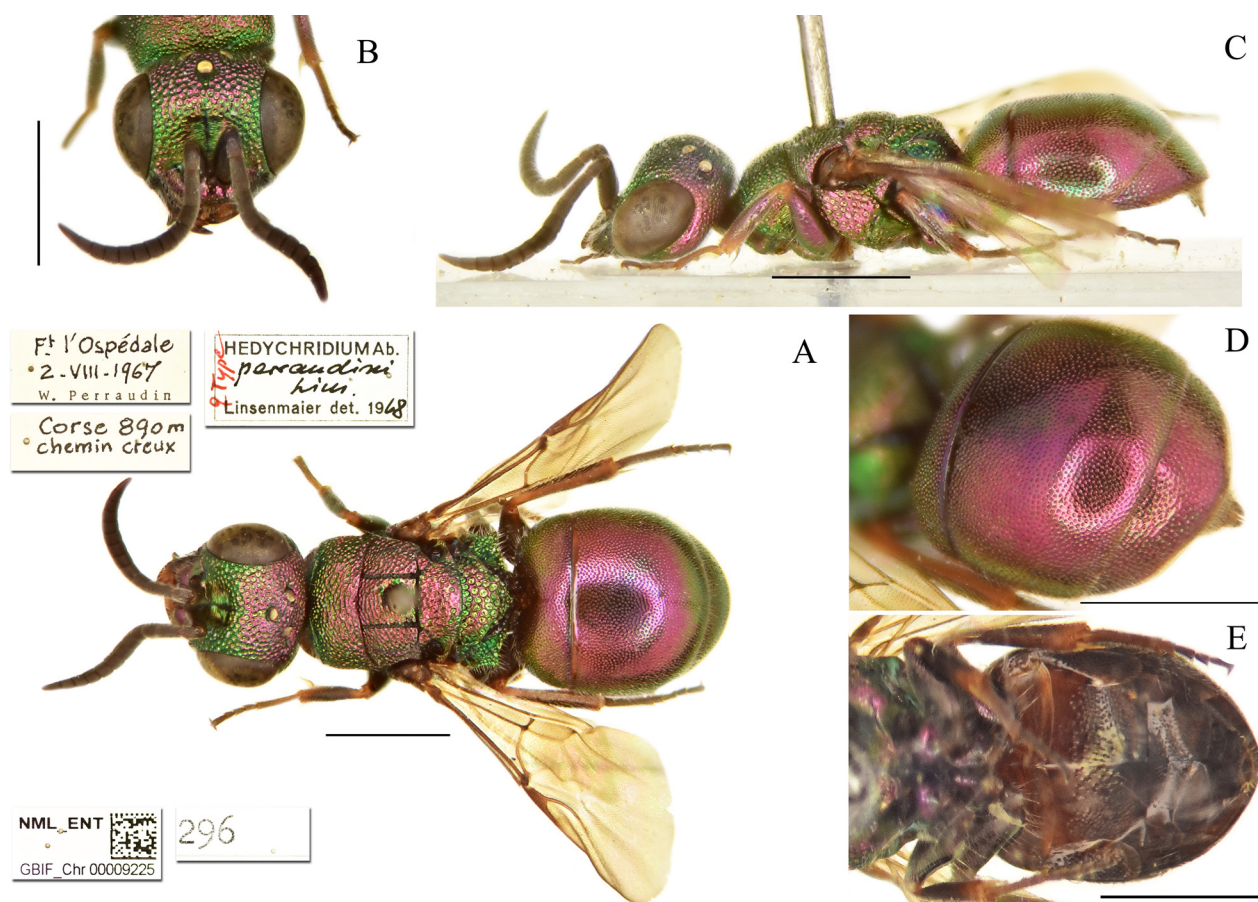


FIGURE 51. *Hedychridium perraudini* Linsenmaier, 1968, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium pseudincrassatum Linsenmaier, 1968

(Fig. 56A–56F)

Hedychridium (*Hedychridium*) *pseudincrassatum* Linsenmaier, 1968: 34 (descr., *incrassatum* group); 1969: 352 (cat.).

Hedychridium sculpturatum pseudoroseum Linsenmaier, 1959a: *Arens* 2010: 407 (synonymised, *roseum* group).

Hedychridium (*Hedychridium*) *pseudoincrassatum*: Kimsey & Bohart 1991: 202 (cat., incorrect subsequent spelling).

Type locality. Palestine: “Palästina, Bat Yam, V.1951, leg. Verhoeff, ♀ Type und ♀ Paratype in Coll. m.”.

Holotype, ♀: Israel Bat Yam 5.–21.V.1951 P.M.F. Verhoeff // ♀ Type *Hedychridium* Ab. *pseudoincrassatum* [!] Lins. Linsenmaier 1967 // 220 // NML_ENT GBIF_Chr0010211 (ex type-collection).

Hedychridium pseudoroseum Linsenmaier, 1959a

(Fig. 57A–57E)

Hedychridium (*Hedychridium*) *pseudoroseum* Linsenmaier, 1959a: 58 (key, *roseum* group), 60 (descr.), 187 (cat.), 199 (figs 135, 136).

Type locality. Cyprus: “Cypern, ♀ Type, ♀ Paratypen Coll. m. (Limassol und Yermasoyia River, leg. Mavromoustakis)”.

Holotype, ♀: Cyprus 12.V.49 Limassol leg. Mavromoustakis Coll. Linsenmaier // ♀ Type *Hedychridium* Ab. *pseudorozeum* Lins. Linsenmaier det. 1959 // ♀ *Hedychridium sculpturatum pseudorozeum* Lins. det. W. Arens 2005 // 70 // NML_ENT GBIF_Ch0011023.

Paratypes, 1♀: Limassol 7.VI.1955 Cyprus leg. Mavromoustakis // Paratype *Hedychridium pseudorozeum* Lins. det. Linsenmaier 1956 // ♀ *Hedychridium sculpturatum* Ab. *pseudorozeum* Lins. det. W. Arens 2005 // NML_ENT GBIF_Ch0011009; 1♀: Limassol Cyprus 24.6.1942 leg. Mavromoustakis // ♀ Paratype *Hedychridium* Ab. *pseudorozeum* Lins. Linsenmaier det. 1959 // ♀ *Hedychridium sculpturatum pseudorozeum* Lins. det. W. Arens 2005 // NML_ENT GBIF_Ch0011010; 1♀: Cyprus 4.VIII.49 Yermasoyia River leg. Mavromoustakis Coll. Linsenmaier // ♀ Paratype *Hedychridium* Ab. *pseudorozeum* Lins. Linsenmaier det. 59 // ♀ *Hedychridium sculpturatum pseudorozeum* Lins. det. W. Arens 2005 // NML_ENT GBIF_Ch0011011.

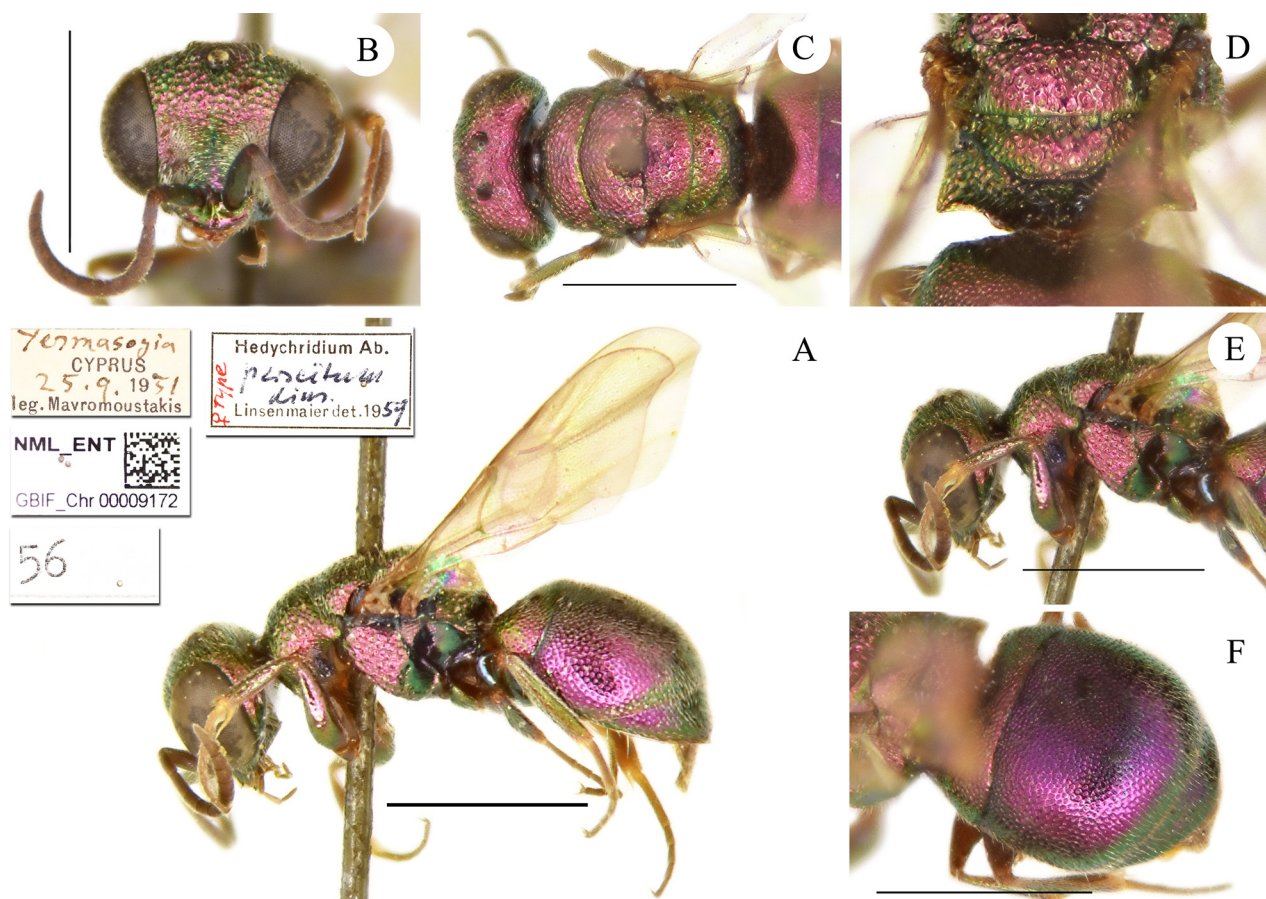


FIGURE 52. *Hedychridium persciturum* Linsenmaier, 1959a, holotype, female. A) Habitus, lateral view. B) Head, frontal view. C) Head and mesosoma, dorsal view. D) Scutellum, metanotum, propodeum, posterior view. E) Head and mesosoma, lateral view. F) Metasoma, postero-lateral view. Scale bar 1 mm.

***Hedychridium rectianale* Linsenmaier, 1999**
(Fig. 58A–58E)

Hedychridium (*Hedychridium*) *rectianale* Linsenmaier, 1999: 55 (key, *modestum* group), 56 (descr.), 69 (figs 93–96).

Type locality. Morocco: “Marokko, Atlas S-Sahara, Agdz 1000 m 14.VII.1975, A.W. Ebmer, ♂ Type (Holotypus) Coll. m.”.

Holotype, ♂: Marokko, Agdz Umg., 1000m, (sudl. Sahara Atlas), 14.7.1975, leg. A.W. Ebmer // ♂ Type *Hedychridium* Ab. *rectianale* Lins. Linsenmaier det. 1998 // 499 // NML_ENT GBIF_Ch0008122 (ex type-collection).

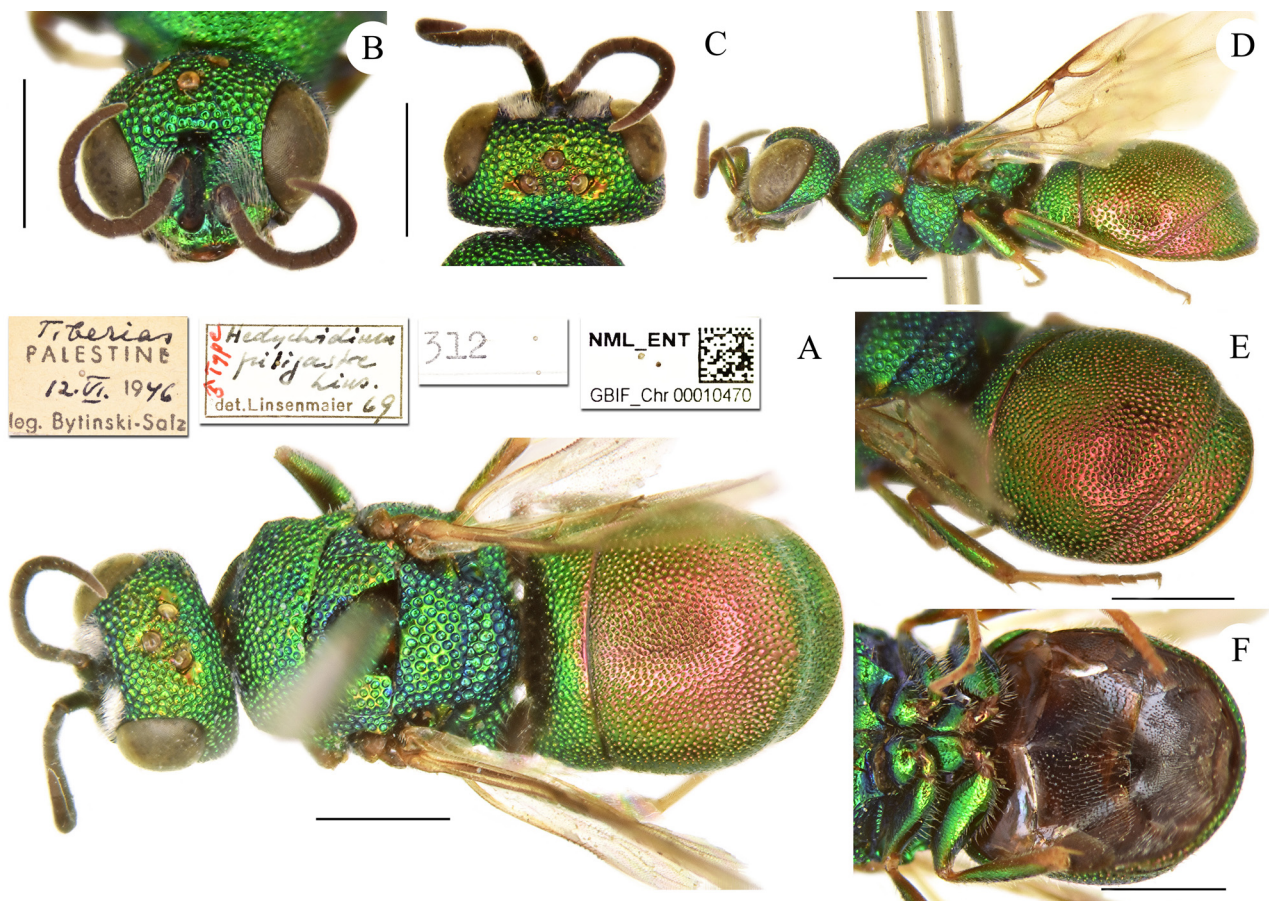


FIGURE 53. *Hedychridium piligaster* Linsenmaier, 1969, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Head, dorsal view. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium reticulatum marteni* Linsenmaier, 1951**

(Fig. 59A–59E)

Hedychridium reticulatum marteni: Linsenmaier, 1951: 24 (descr.), 98 (cat.).

Hedychridium rhodojanthium marteni; Linsenmaier 1959a: 45 (key), 50 (diag., upgraded to species rank), 187 (cat.); 1968: 26 (diag., *ardens* group); 1997: 254 (diag., distr.).

Type locality. Spain: “♀ Type in meiner Sammlung [=in my collection], Spanien (Prov. Soria, leg. Dr. Marten, Juli 1944)”.

Holotype, ♀: Spanien VII.44 Prov. Soria 1100m leg. Dr. W. Marten Coll. Linsenmaier // Type *reticulatum* Ab. var. *marteni* ♀ Linsenmaier // 2 // NML_ENT GBIF_Ch0008693 (ex type-collection).

Remarks. Linsenmaier labelled one male specimen as the allotype, labelled: Spanien Teruel Albarracin 2.7.1994 Linsenmaier. This specimen has no type status because collected after the original description and not included in the original type series. Linsenmaier (1959a: 50) elevated the taxon to species rank.

***Hedychridium (Hedychridium) rhodojanthinum mutense* Linsenmaier, 1968**

(Fig. 60A–60F)

Hedychridium (Hedychridium) rhodojanthinum mutense Linsenmaier, 1968: 130 (descr., *monochroum* group); 1987: 141 (diag., distr.).

Type locality. Turkey: “Klein-Asien, Mut, V.65 und 67, leg. Gusenleitner und Schmidt, ♂ Type, ♀ Allotype und Paratypen in Coll. m., Paratypen in Coll. Gusenleitner und Schmidt”.

Holotype, ♂: Mut 9.6.–13.6.1965 Asia minor leg. J. Gusenleitner // ♂ Type *Hedychridium* Ab. *rhodojanthinum mutense* Lins. Linsenmaier det. 1965 // 300 // NML_ENT GBIF_Chr0009802 (ex type-collection).

Allotype, ♀: Mut 27.5.1967 Türkei leg. J. Gusenleitner // ♀ Allotype *Hedychridium* Ab. *rhodojanthinum mutense* Lins. Linsenmaier det. 1968 // NML_ENT GBIF_Chr0009803 (ex type-collection).

Paratype, 1♂: Mut Asia minor 27.–30.V.1967 leg. Jos. Schmidt // ♂ Paratype *Hedychridium* Ab. *rhodojanthinum mutense* Lins. Linsenmaier det. 1968 // NML_ENT GBIF_Chr0009804.

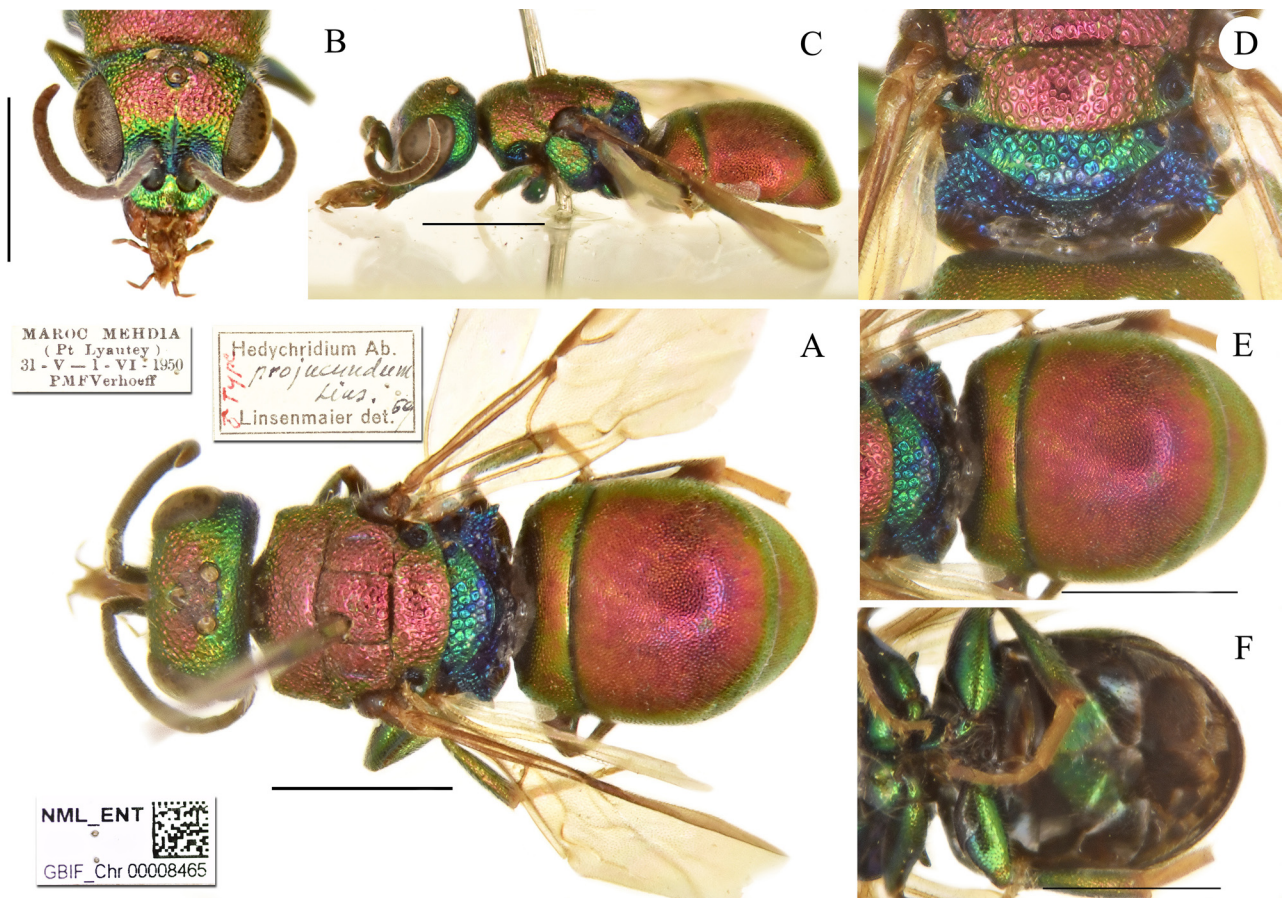


FIGURE 54. *Hedychridium projucundum* Linsenmaier, 1959a, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Scutellum, metanotum, propodeum, posterior view. E) Metasoma, dorsal view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium rubescens Linsenmaier, 1999

(Fig. 61A–61F)

Hedychridium (*Hedychridium*) *rubescens* Linsenmaier, 1999: 75 (key, *incrassatum* group), 76 (descr.), 88 (fig. 132).

Type locality. Morocco: “Marokko, Casablanca Ain Diab 28.IV.1965, ♂ Type (Holotypus) und ♀ Allotype leg. u. Coll. m.; Fedhala 29.V.1937, R.M. Naef, ♂ Paratype Coll. m.”

Holotype, ♂: Maroc, 28.IV.65, Casablanca, Ain Diab, leg. Linsenmaier // ♂ Type *Hedychridium* Ab. *rubescens* Lins. Linsenmaier det. 1965 // 509 // NML_ENT GBIF_Chr0010205 (ex type-collection).

Allotype, ♀: Maroc, 4.VII.63, Casablanca, Ain Diab, leg. Linsenmaier // ♀ Allotype *Hedychridium* Ab. *rubescens* Lins. Linsenmaier det. 1965 // NML_ENT GBIF_Chr0010206 (ex type-collection).

Paratype, 1♂: Fedala (Casab.) Marokko, 29.V.1937 Collect. Naef // ♂ Paratype *Hedychridium* Ab. *rubescens* Lins. Linsenmaier det. 1979 // NML_ENT GBIF_Chr0010207 (ex type-collection).

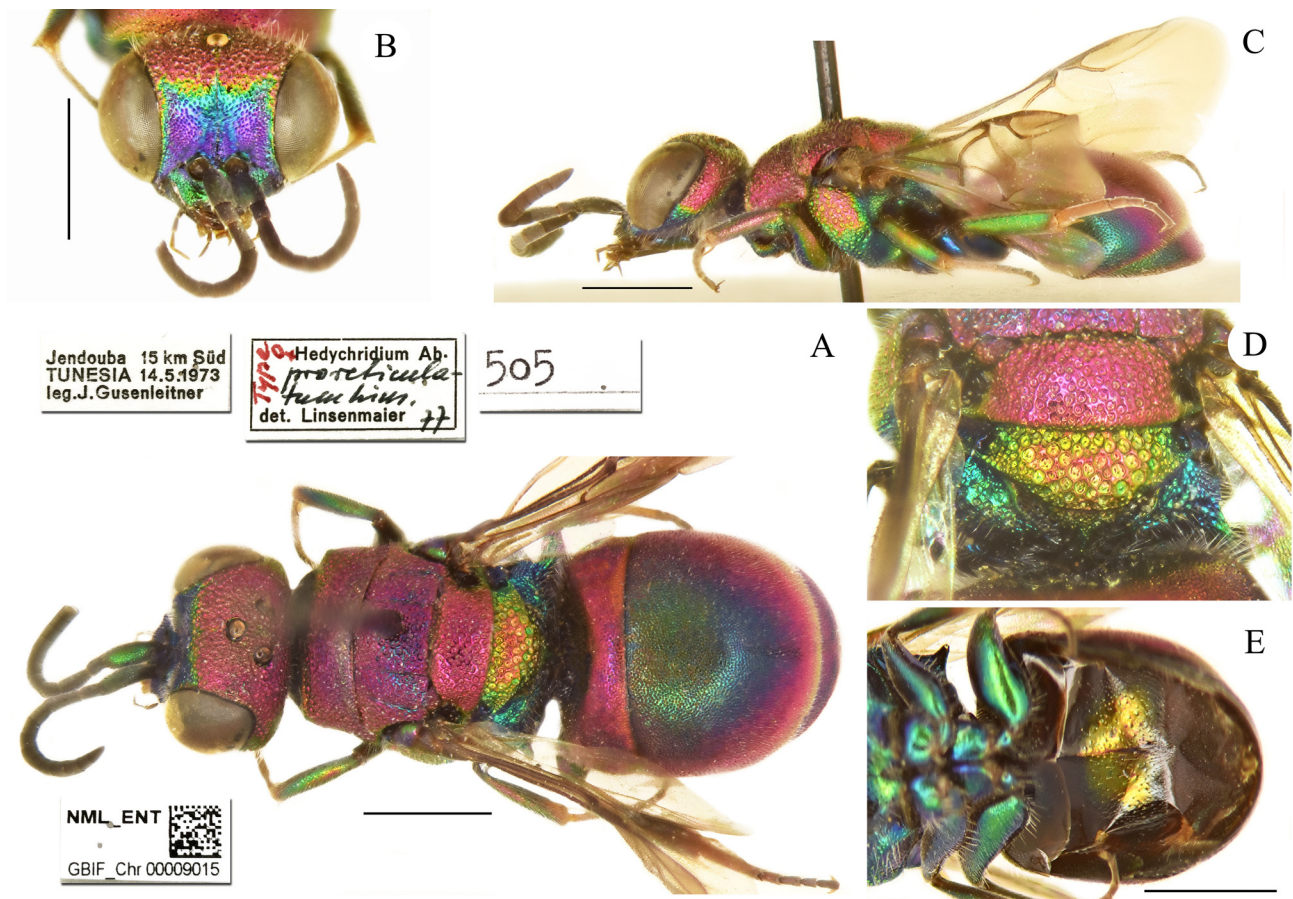


FIGURE 55. *Hedychridium proreticulatum* Linsenmaier, 1999, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Scutellum, metanotum, propodeum, posterior view. E) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium rubrum Linsenmaier, 1968

(Fig. 62A–62E)

Hedychridium (Hedychridium) rubrum Linsenmaier, 1968: 128 (descr., *ardens* group).

Type locality. Turkey: “Klein-Asien, Birecik, V.67, leg. Gusenleitner, ♀ Type in Coll. m.”.

Holotype, ♀: Birecik 18.5.1967 Türkei leg. J. Gusenleitner // ♀ Type *Hedychridium Ab. rubrum* Lins. Linsenmaier det. 1968 (ex type-collection) // 298 // NML_ENT GBIF_Ch0008241.

Remarks. Linsenmaier labelled a male specimen in the type-collection as allotype, bearing the following labels: Gürün As. Türk. 6.VI.1970 leg. J. Schmidt // ♂ Type *Hedychridium Ab. rubrum* Lins. Linsenmaier det. 1973. This specimen was collected after the original description and does not belong to type series.

Hedychridium sardinum Linsenmaier, 1997

(Fig. 63A–63F)

Hedychridium (Hedychridium) sardinum Linsenmaier, 1997: 258 (descr., *sculpturatum* group), 289 (fig. 43).

Hedychridium scutellare (Tournier, 1878): Arens 2010: 407 (synonymised, *roseum* group).

Type locality. Italy, Sardinia: “Sardinien, Alghero Porticciolo VII.91, Schlaefle, ♀ Type (Holotypus) Coll. m.”.

Holotype, ♀: Sardinien Algh. Porticciolo 17.7.91, Schlaefle // ♀ Type *Hedychridium Ab. sardinum* Lins.

Linsenmaier det. 1996 // *Hedychridium* ♀ *scutellare sardiniense* W. Arens 2005 (ex type-collection) // 468 // NML_ENT GBIF_Chr0011417.

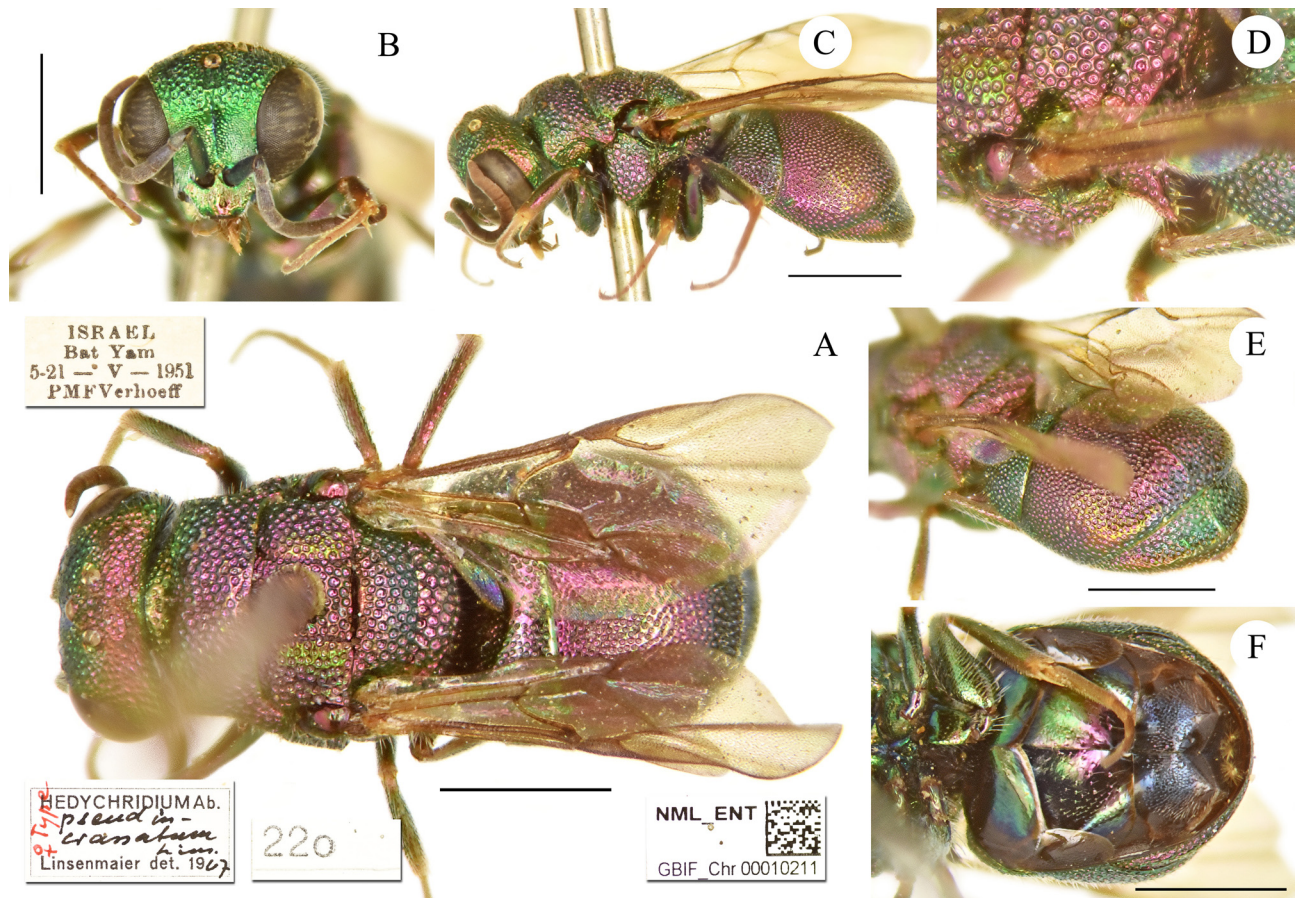


FIGURE 56. *Hedychridium pseudincrassatum* Linsenmaier, 1968, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Posterior propodeal angle, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium semiluteum Linsenmaier, 1959a

(Fig. 64A–64E)

Hedychridium (*Hedychridium*) *semiluteum* Linsenmaier, 1959a: 57 (key, *roseum* group), 60 (descr.), 187 (cat.).

Type locality. Cyprus: “Cypern, ♀ Type (Yermasoyia Hills, IX.1951, leg. Mavromoustakis) und Paratype (Zakaki, VII.1955) in Coll. m.”

Holotype, ♀: Cypern 11.IX.1951 Yermasoyia Hills leg. Mavromoustakis Coll. Linsenmaier // ♀ Type *Hedychridium* Ab. *semiluteum* Lins. Linsenmaier det. 59 // 71 // NML_ENT GBIF_Chr0011569 (ex type-collection).

Paratype, 1♀: Zakaki 29.7.55 [A. Mavromoustakis] // ♀ Paratype *Hedychridium semiluteum* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Chr0011567 (ex synoptic collection).

Hedychridium sevillanum Linsenmaier, 1968

(Fig. 65A–65E)

Hedychridium (*Hedychridium*) *sevillanum* Linsenmaier, 1968: 28 (descr., *ardens* group); 1987: 139 (distr.); 1997: 255 (diag.).

Type locality. Spain: “Spanien, Sevilla, IV.65, ♀ Type, ♀ Paratypen in Coll. m.”.

Holotype, ♀ and **paratypes** 2♀ [glued on the same label]: Spanien 24.IV.65 Östlich Sevilla leg. Linsenmaier // ♀ Type vorn Paratypen *Hedychridium* Ab. *sevillanum* Lins. Linsenmaier det. 1966 (ex type-collection) // 216 // NML_ENT GBIF_Chr0009176.

Remarks. Linsenmaier labelled a male specimen in the type-collection as allotype, bearing the following labels: Spanien 26.6.91 Segovia Coca Linsenmaier // ♂ Allotype *Hedychridium* Ab. *sevillanum* Lins. Linsenmaier det. 1991. This specimen does not belong to the type series because it was collected after the original description.

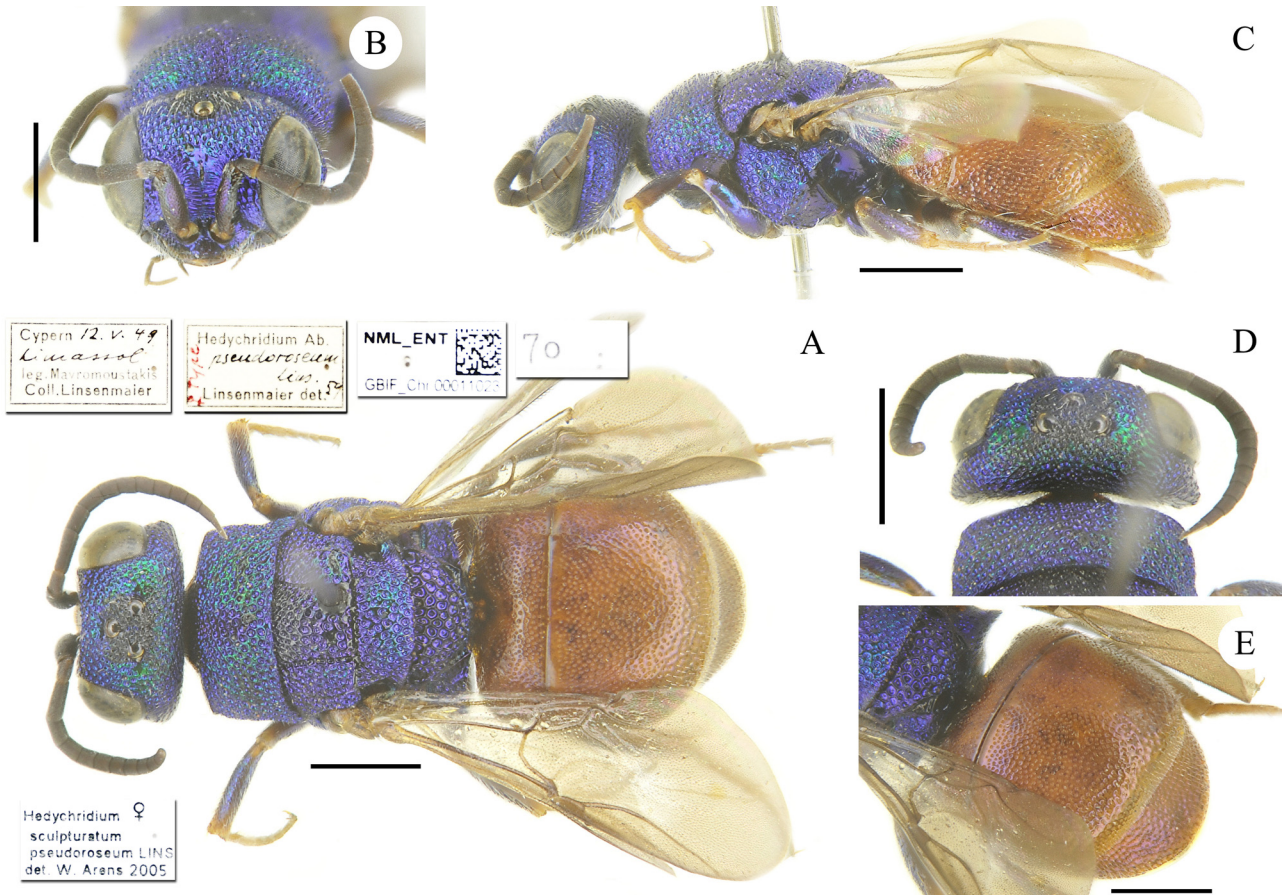


FIGURE 57. *Hedychridium pseudorozeum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Head, dorsal view. E) Metasoma, postero-lateral view. Scale bar 1 mm.

Hedychridium stoeckherti Linsenmaier, 1959a

(Fig. 66A–66D)

Hedychridium (*Hedychridium*) *stoeckherti* Linsenmaier, 1959a: 44 (key), 53 (descr.), 187 (cat.), 200 (figs 191, 192).

Hedychridium (*Hedychridium*) *krajniki* Balthasar, 1946: Linsenmaier 1968: 30 (synonymised).

Type locality. Austria, France, Switzerland: “Schweiz (Wallis), Süd-Deutschland (Stoeckert), Nieder-Österreich, Süd-Frankreich. Lokal nicht selten [=not uncommon locally]. ♀ Type ♂ Allotype, Paratypen Coll. m. (Wallis, 550–900 m, VI.–VII.)”.

Holotype, ♀: Wallis B 550m 16.VI.50 Linsenmaier // Type ♀ *Hedychridium* Ab. *stoeckherti* Lins. Linsenmaier det. 59 // ♀ *Hedychridium* Ab. *krajniki* Balth. det. Linsenmaier 1962 // NML_ENT GBIF_Chr0009457.

Allotype, ♂: Wallis D 510m 17.VI.49 Linsenmaier // Allotype ♂ *Hedychridium* Ab. *stoeckherti* Lins. Linsenmaier det. 59 // ♀ *Hedychridium* Ab. *krajniki* Balth. det. Linsenmaier 1962 // NML_ENT GBIF_Chr0009458.

Paratypes, 1♂: Wallis B 550m 26.VI.52 Linsenmaier // Paratype ♂ *Hedychridium* Ab. *stoeckherti* Lins. Linsenmaier det. 59 // ♂ *Hedychridium* Ab. *krajniki* Balth. det. Linsenmaier 1962 // NML_ENT GBIF_Chr0009437 (ex synoptic collection); 2exx ♀: Wallis C 900m 5.VII.52 Linsenmaier // Paratype *Hedychridium* Ab. *stoeckherti*

Lins. Linsenmaier det. 59 // *Hedychridium krajniki* Balth. det. Linsenmaier 1962 // NML_ENT GBIF_Chr0009438 (ex synoptic collection); 1 ex.: Wallis B 550m 29.V.48 Linsenmaier // Paratype *Hedychridium* Ab. *stoekherti* Lins. Linsenmaier det. 59 // *Hedychridium* Ab. *krajniki* Balth. det. Linsenmaier 1962 // NML_ENT GBIF_Chr0009459; 2 ♂: Wallis C 900m 4.VII.52 Linsenmaier // Paratypen *Hedychridium* Ab. *stoekherti* ssp. *valesianum* Lins. Linsenmaier det. 59 // ♂ *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det 1962 // NML_ENT GBIF_Chr0009460; 1 ex.: Wien // *coriacea* det. Mocsáry // Paratype *Hedychridium* Ab. *stoekherti* Lins. Linsenmaier det. 59 // Paratype *Hedychridium* Ab. *krajniki* Balth. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009461; 1 ♂: Toulouse 13.VII.47 Coll. Ribaut // Paratype *Hedychridium* Ab. *stoekherti* Lins. Linsenmaier det. 59 // *Hedychridium* Ab. *krajniki* Balth. det. Linsenmaier 1962 // NML_ENT GBIF_Chr0009462; 1 ex.: Fontainebleau Dr. Marmottan du 8 au 15.9.1900 // Paratype *Hedychridium* Ab. *stoekherti* Lins. Linsenmaier det. 59 // *Hedychridium* Ab. *krajniki* Balth. det. Linsenmaier 1962 // NML_ENT GBIF_Chr0009463.

Remarks. Linsenmaier (1968) synonymised *Hedychridium stoekherti* with *H. krajniki* Balthasar, 1946. Kimsey & Bohart (1991: 205) overlooked the synonymisation and listed *H. stoekherti* as a valid species.

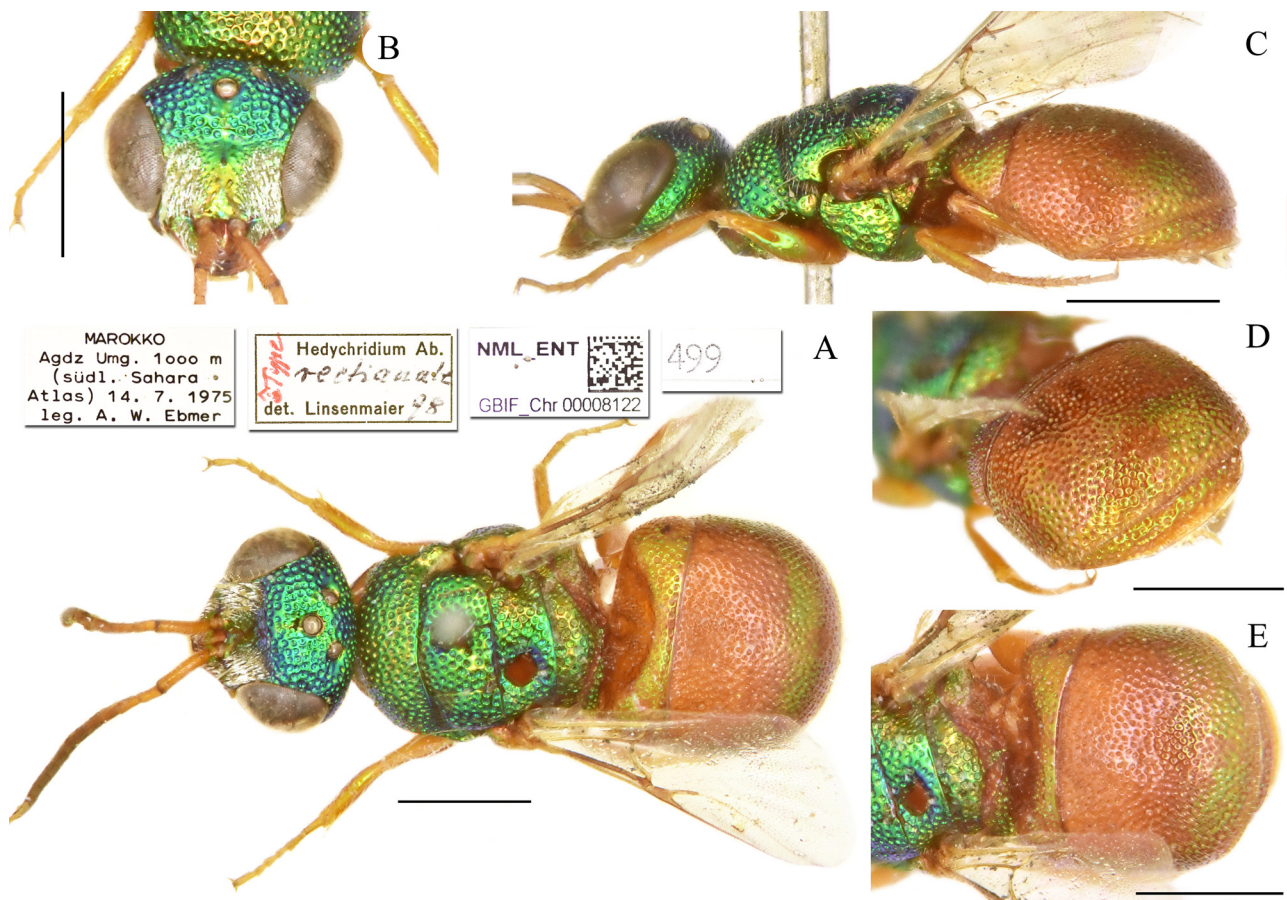


FIGURE 58. *Hedychridium rectianale* Linsenmaier, 1999, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, dorsal view. Scale bar 1 mm.

Hedychridium stoekherti valesianum Linsenmaier, 1959a

(Fig. 67A–67D)

Hedychridium (*Hedychridium*) *krajniki valesianum* Linsenmaier, 1959a: 53 (descr.), 187 (cat.).

Hedychridium valesianum: Rosa 2003: 302.

Type locality. France, Poland, Portugal, Switzerland: “Schweiz (Wallis), Süd-Frankreich (leg. Ribaut), Portugal, Polen; zum Teil an gleichen Lokalitäten wie Nominatform [=partly at the same locations as Nominatform]. ♀ Type ♂ Allotype (Wallis, 500–900 m, VI–VII.), und Paratypen Coll. m.”

Holotype, ♀ and **paratype**, 1 ♀ [glued on the same label]: Wallis B 550m 30.VI.51 Linsenmaier // ♀ Type

rechts u. Paratype *Hedychridium* Ab. *stoeckherti* ssp. *valesianum* Lins. Linsenmaier det. 59 // *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det. 1962 // 58 // NML_ENT GBIF_Chr0009485 (ex type-collection).

Allotype, ♂: Wallis C 900m 2.VII.52 Linsenmaier // ♂ Allotype *Hedychridium* Ab. *stoeckherti* ssp. *valesianum* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009486 (ex type-collection).

Paratypes, 1♂ and 1♀: Wallis C 900m 3.VII.52 Linsenmaier // Paratypen *Hedychridium* Ab. *stoeckherti* ssp. *valesianum* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009484 (ex synoptic collection); 1 ex.: Wallis C 900m 2.VII.52 Linsenmaier // Paratype *Hedychridium* Ab. *stoeckherti* ssp. *valesianum* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009487; 2 exx.: Toulouse 20.VII.47 Coll. Ribaut // Toulouse 5.VIII.51 Coll. Ribaut // Paratype *Hedychridium* Ab. *stoeckherti* ssp. *valesianum* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009488; 1 ex.: Toulouse 18.VII.51 Coll. Ribaut // Paratype *Hedychridium* Ab. *stoeckherti* ssp. *valesianum* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009489; 1 ex.: Toulouse 20.VII.47 Coll. Ribaut // Paratype *Hedychridium* Ab. *stoeckherti* ssp. *valesianum* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009490; 1 ex.: France Var 56 Callian E. Juli leg. Linsenmaier // Paratype *Hedychridium* Ab. *stoeckherti* ssp. *valesianum* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009491; 1 ex.: (Port. S) 24/5 Evora NF d'Andrade. 953 // Paratype *Hedychridium* Ab. *stoeckherti* ssp. *valesianum* Lins. Linsenmaier det. 1959 // *Hedychridium* Ab. *krajniki* B. ssp. Linsenmaier det. 1962 // NML_ENT GBIF_Chr0009492.

Remarks. Rosa (2003: 302) elevated *Hedychridium valesianum* to species rank.

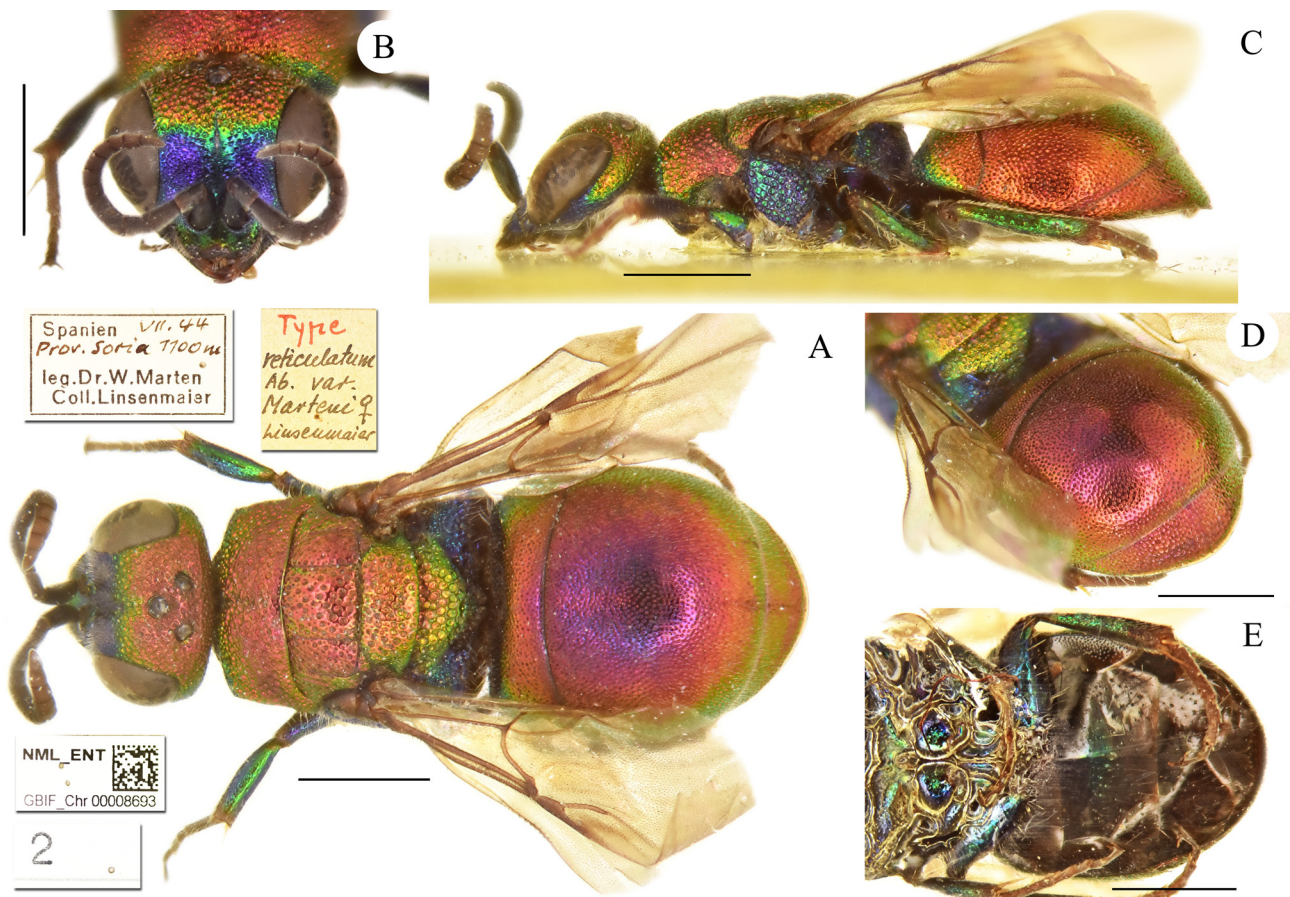


FIGURE 59. *Hedychridium reticulatum marteni* Linsenmaier, 1951, holotype, female. A) Habitus, dorsal view. B) Head frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

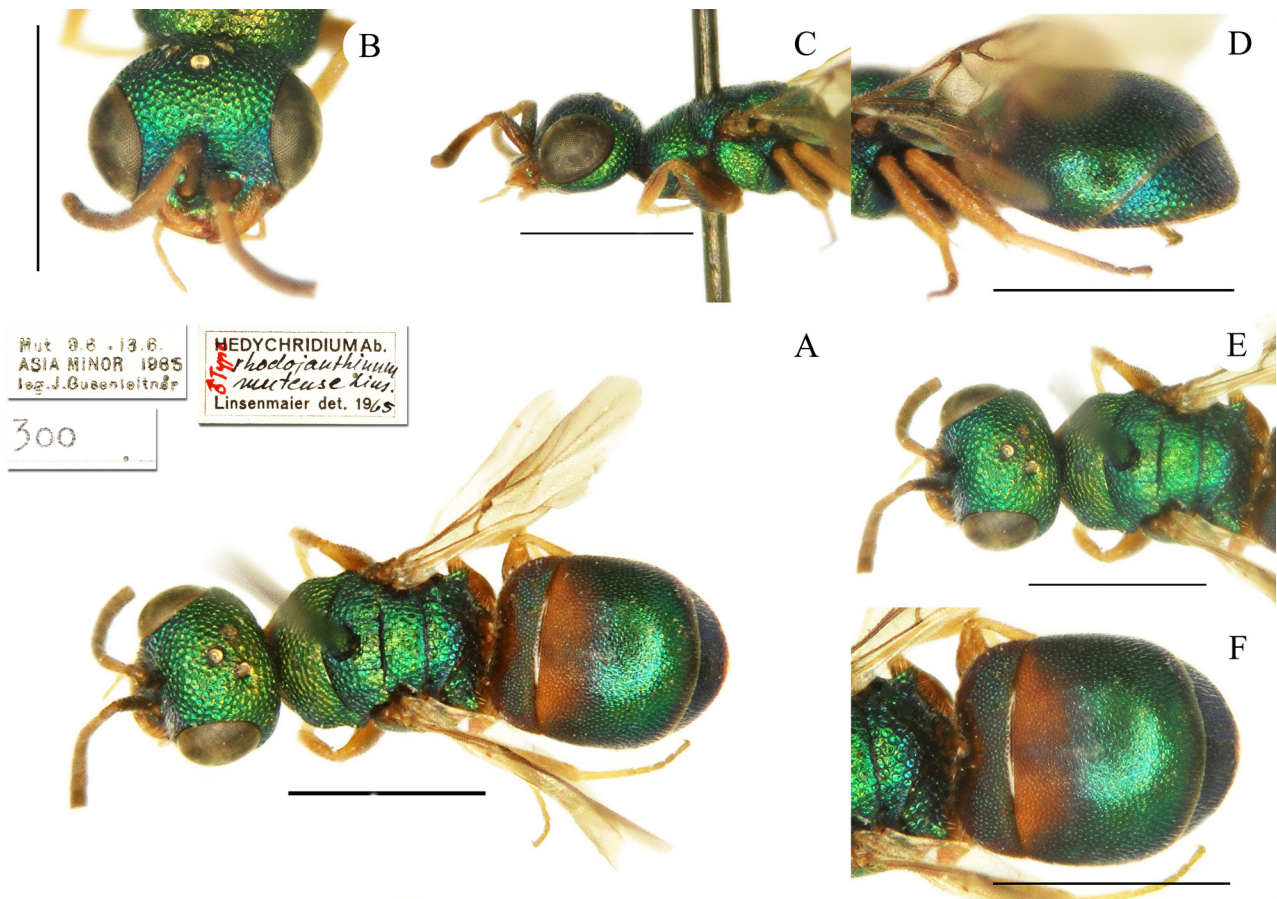


FIGURE 60. *Hedychridium rhodojanthinum mutense* Linsenmaier, 1968, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Head and mesosoma, lateral view. D) Metasoma, lateral view. E) Head and mesosoma, dorsal view. F) Metasoma, dorsal view. Scale bar 1 mm.

***Hedychridium subcoriaceum* Linsenmaier, 1999**

(Fig. 68A–68E)

Hedychridium (Hedychridium) subcoriaceum Linsenmaier, 1999: 80 (key, *coriaceum* group), 81 (descr.), 88 (fig. 142).

Type locality. Morocco: “Marokko, Tiznit-Tadouarte 12.IV.1988, J. Gusenleitner, ♀ Type (Holotypus) Coll. m.”.

Holotype, ♀: Marokko, Tadouarte, 10 km NW Tiznit, 12.4.1988, leg. Gusenleitner // ♀ Type *Hedychridium* Ab. *subcoriaceum* Lins. Linsenmaier det. 1998 // 512 // NML_ENT GBIF_Chr0009322 (ex type-collection).

***Hedychridium subreticulatum* Linsenmaier, 1999**

(Fig. 69A–69F)

Hedychridium (Hedychridium) subreticulatum Linsenmaier, 1999: 60 (key, *ardens* group), 68 (descr.), 69 (figs 113, 114).

Type locality. Tunisia: “Tunesien, Sidi Bon Said 30.IV.1973, J. Gusenleitner. ♂ Type (Holotypus) Coll. m.; Pont da Fahs XI.1956, ♂ Paratype leg. u. Coll. H. Tussac”.

Holotype, ♂: Tunis Sidi Bou Said, Tunisia 30.4.1973, leg. J. Gusenleitner // ♂ Type *Hedychridium* Ab. *subreticulatum* Lins. Linsenmaier det. 1977 // NML_ENT GBIF_Chr0009030 (ex type-collection).

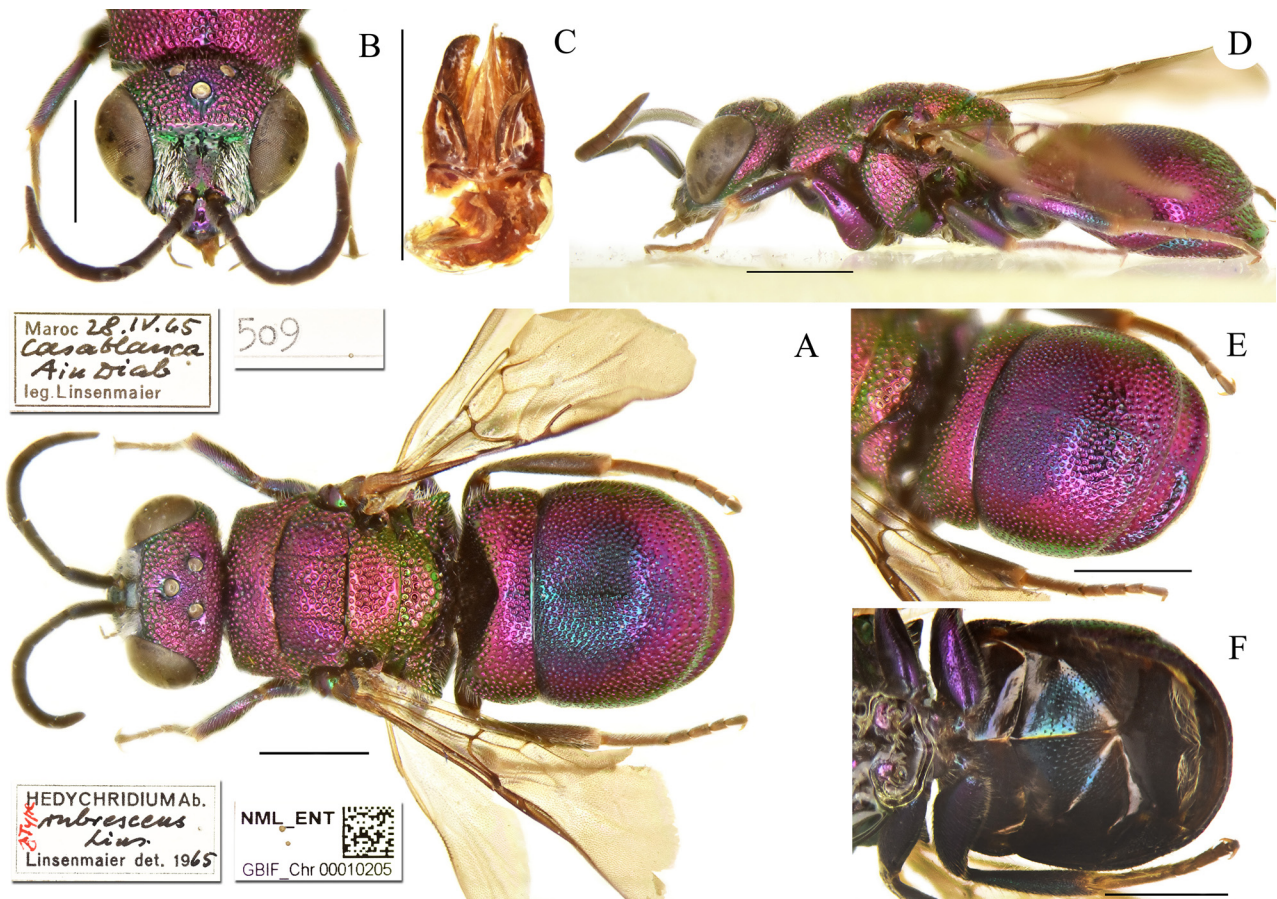


FIGURE 61. *Hedychridium rubescens* Linsenmaier, 1999, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Genital capsule. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium subroseum* Linsenmaier, 1959a**

(Fig. 70A–70F)

Hedychridium (Hedychridium) subroseum Linsenmaier, 1959a: 58 (key), 60 (descr., *roseum* group), 187 (cat.), 198 (fig. 114), 200 (fig. 194); 1999: 83 (key), 84 (diagn.).

Type locality. Morocco: “Nord-Afrika. ♀ Type (Tunesien, Carthago) Coll. m., ♂ Allotype (Marocco) und ♀ Paratype Coll. Naef, ♀ Coll. de Beaumont”.

Holotype, ♀: Tunesien Carthago V.13 // ♀ Type *Hedychridium* Ab. *subroseum* Lins. Linsenmaier det. 1959 // 67 // NML_ENT GBIF_Chr0010994 (ex type-collection).

Allotype, ♂: Marrakech, Oued Tensift, Maroc 15.V.1947, Collect. Naef // ♂ Allotype *Hedychridium subroseum* Linsenmaier 1957 // NML_ENT GBIF_Chr0010995 (ex type-collection).

Paratype, 1♀: Marrakech, Oued Tensift, Maroc 15.V.47, Collect. Naef // ♀ Paratype *Hedychridium subroseum* Linsenmaier 1957 // NML_ENT GBIF_Chr0010993 (ex type-collection).

***Hedychridium subroseum prochloropygum* Linsenmaier, 1959a**

(Fig. 71A–71E)

Hedychridium (Hedychridium) subroseum prochloropygum Linsenmaier, 1959a: 60 (descr., *roseum* group), 187 (cat.); 1968: 36 (distr.).

Type locality. France: “Süd-Frankreich, ♀ Type Coll. m. (Callian, VII.1956)”.

Holotype, ♀: France - Var 56 Callian M. Juli leg. Linsenmaier // ♀ Type *Hedychridium* Ab. *subroseum* ssp. *prochloropygum* Lins. Linsenmaier det. 59 // 68 // NML_ENT GBIF_Chr0010996 (ex type-collection).

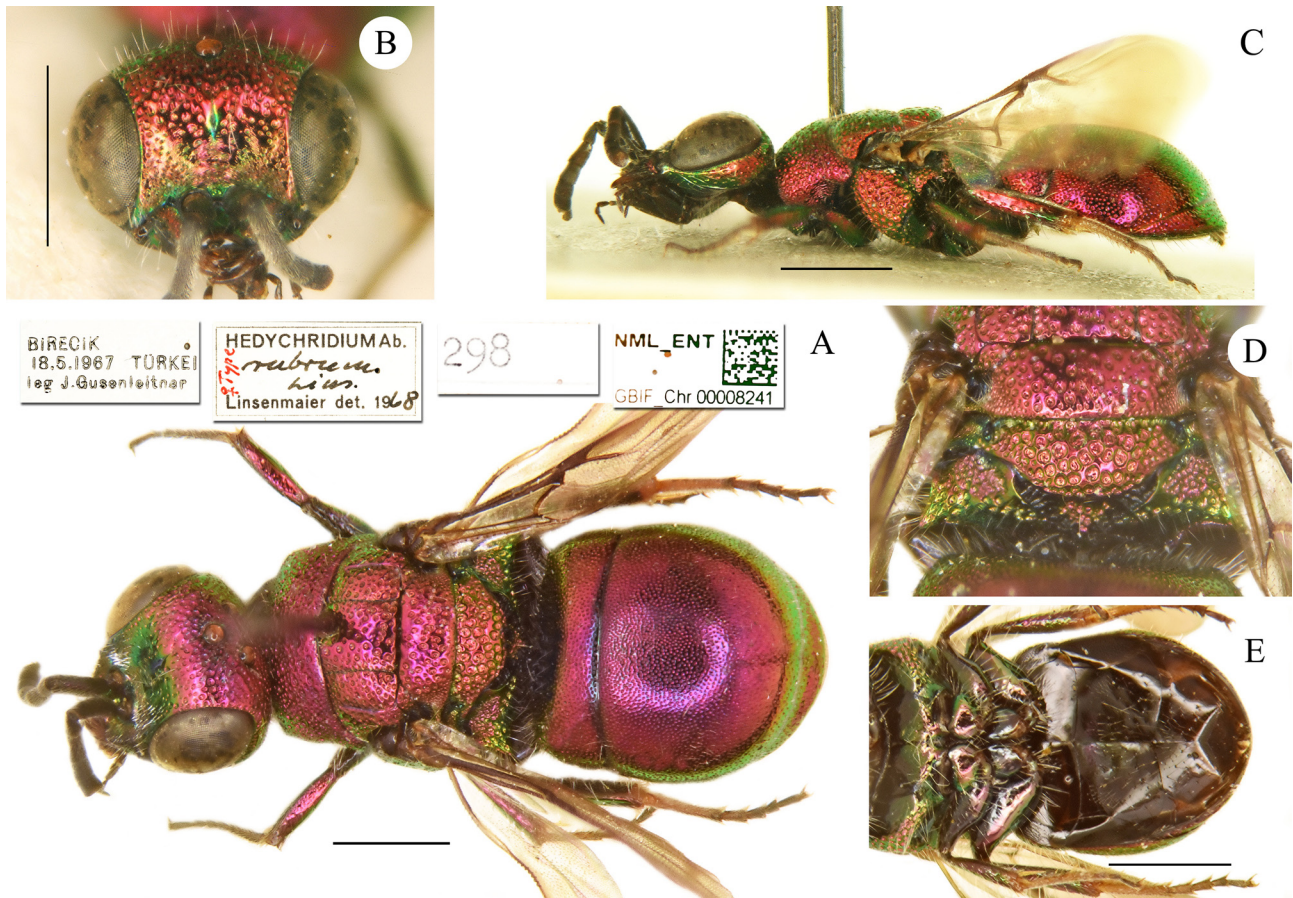


FIGURE 62. *Hedychridium rubrum* Linsenmaier, 1968, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Mesonotum, scutellum, propodeum, posterior view. E) Metasoma, ventral view. Scale bar 1 mm.

***Hedychridium tsunekii* Linsenmaier, 1959a**

(Fig. 72A–72F)

Hedychridium (*Hedychridium*) *tsunekii* Linsenmaier, 1959a: 58 (key, *roseum* group), 60 (descr.); 65 (fig. 105). 187 (cat.), 198 (figs 110, 111).

Type locality. South Korea: “Korea ♂ Type, ♀ Allotype, Paratypen Coll. m.”.

Holotype, ♂ and **paratype**, 1♂ [glued on the same label]: Shoyozan [=Mt. Soyosan], Korea 17.IX.1943 K. Tsuneki // ♂ Type links Paratype *Hedychridium tsunekii* Lins. det. Linsenmaier 59 // 69 // NML_ENT GBIF_Chr0011105 (ex type-collection).

Allotype, ♀ and **paratype**, 1♀ [glued on the same label]: Shoyozan Korea 17.IX.1943 K. Tsuneki // ♀ Allotype rechts Paratype *Hedychridium tsunekii* Lins. det. Linsenmaier 59 // NML_ENT GBIF_Chr0011106 (ex type-collection).

***Hedychridium tyro viridiluteum* Linsenmaier, 1999**

(Fig. 73A–73E)

Hedychridium (*Hedychridium*) *tyro viridiluteum* Linsenmaier, 1999: 78 (descr.).

Type locality. Morocco, Tunisia: “Marokko, Tunesien. Marokko: Agadir 10.VI.1984, ♀ Type (Holotypus) und ♀

Paratypen leg. u. Coll. m.; Tunesien: Touzeur VII.1997, J. Schmidt, ♂ Allotype Coll. m.; Kairouan 15.IX.1982, ♂ Paratype leg. u. Coll. H. Tussac.”

Holotype, ♀: Maroc, 10.VI.84, Tassademt n. östl. Agadir, leg. Linsenmaier // ♀ Type *Hedychridium* Ab. *tyro viridiluteum* det. Linsenmaier (ex type-collection) // 511 // NML_ENT GBIF_Chr0010280.

Allotype, ♂: Touzeur, Tunesia, 13.–16.VII.1979, leg. J. Schmidt // ♂ Allotype *Hedychridium* Ab. *tyro viridiluteum* Lins. Linsenmaier det. 1988 (ex type-collection) // NML_ENT GBIF_Chr0010281.

Paratypes, 2 ♀: Maroc // Maroc 10.VI.84 Tassademt n. östl. Agadir leg. Linsenmaier // ♀ Paratype *Hedychridium* Ab. *tyro viridiluteum* det. Linsenmaier 88 // NML_ENT GBIF_Chr0010282, Chr0010283.

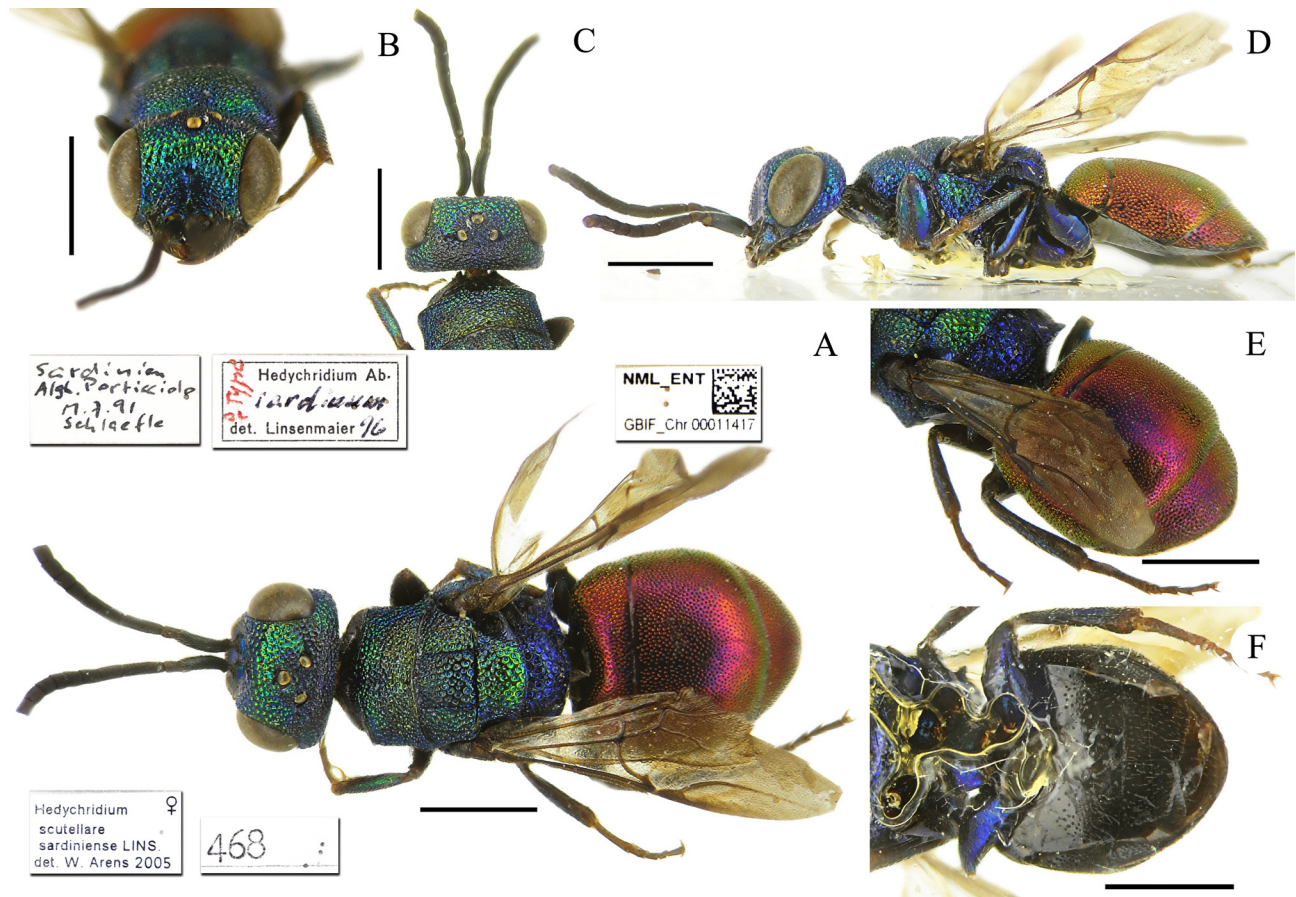


FIGURE 63. *Hedychridium sardinum* Linsenmaier, 1997, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Head, dorsal view. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium unirubrum Linsenmaier, 1999

(Fig. 74A–74E)

Hedychridium (*Hedychridium*) *unirubrum* Linsenmaier, 1999: 59 (key, *ardens* group); 65 (descr.).

Type locality. Tunisia: “Tunesien, Feriana V. 1973, J. Schmidt, ♀ Type (Holotypus); Matmata 15. IV. 1994, M. Schwarz, ♂ Allotype, Coll. m.”

Holotype, ♀: Tunesien, Feriana, 10 km n, 8.V.1973, leg. J. Schmidt // ♀ Type *Hedychridium* Ab. *unirubrum* Lins. det. Linsenmaier 1977 // 503 // NML_ENT GBIF_Chr0008666 (ex type-collection).

Paratype, 1♀: Tunesien 10 km SE Matmata 15.4.1994 leg. M. Schwarz // ♀ Paratype *Hedychridium* Ab. *unirubrum* Lins. Linsenmaier det. 1994 // NML_ENT GBIF_Chr0008665 (ex synoptic collection).

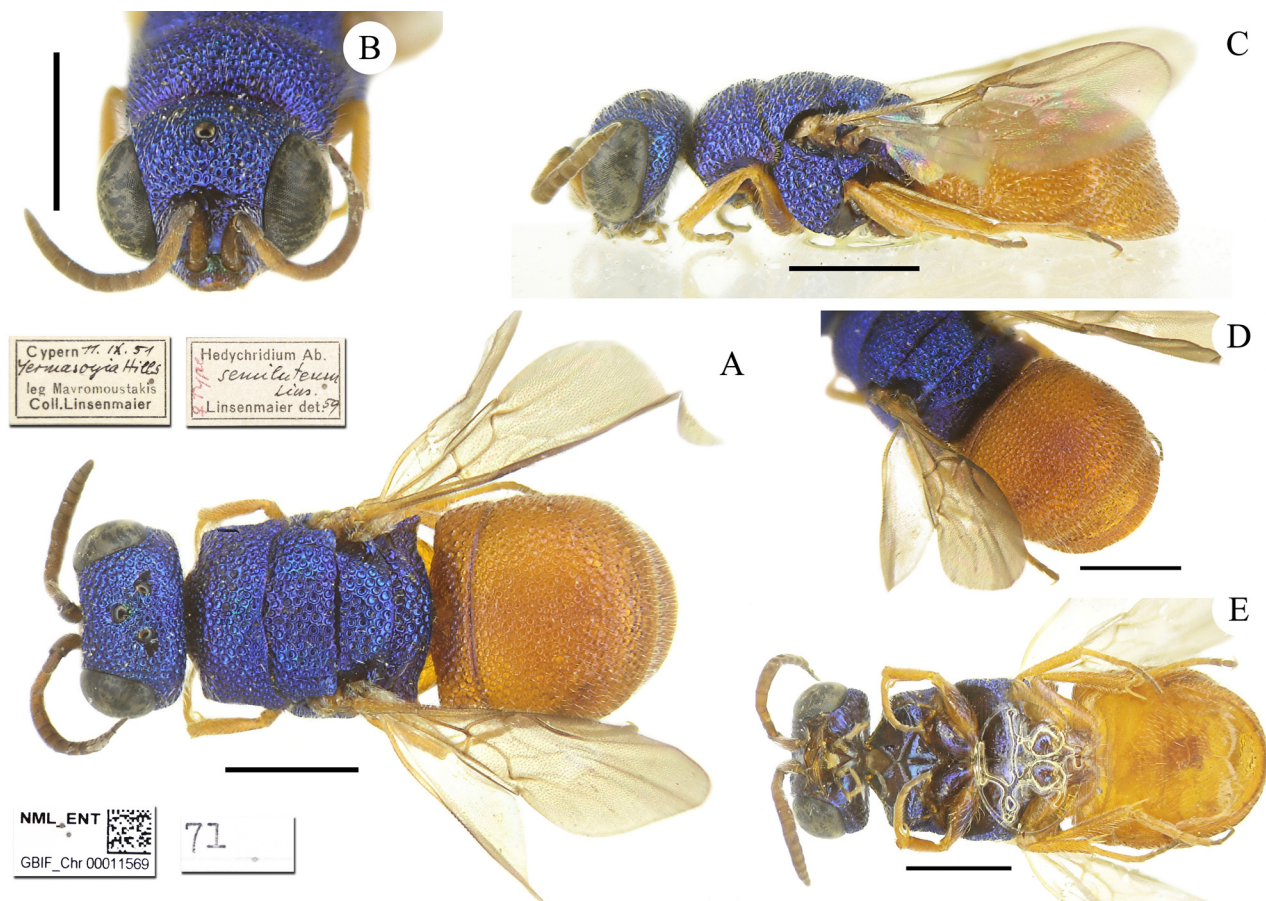


FIGURE 64. *Hedychridium semiluteum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Habitus, ventral view. Scale bar 1 mm.

Hedychridium urfanum Linsenmaier, 1968

(Fig. 75A–75F)

Hedychridium (Hedychridium) urfanum Linsenmaier, 1968: 128 (descr., *ardens* group).

Type locality. Turkey: “Klein-Asien, Urfa, V.67, leg. Gusenleitner und Schmidt, ♀ Type in Coll. m., ♀ Paratype in Coll. Schmidt”.

Holotype, ♀: Urfa 21.5.1967 Türkei leg. J. Gusenleitner // ♀ Type *Hedychridium Ab. urfanum* Lins. Linsenmaier 1968 // 297 // NML_ENT GBIF_Ch0009547 (ex type-collection).

Remarks. Linsenmaier labelled one male specimen in his collection as the allotype, bearing the following labels: Peloponnes, Geraki 2.5.1996 (Casiro) leg. W. Arens // ♂ Type *Hedychridium Ab. urfanum* Lins. Linsenmaier 1997 // NML_ENT GBIF_Ch000954. This specimen is not part of the type series because it was collected after the original description.

Hedychridium vachali decoloratum Linsenmaier, 1999

(Fig. 76A–76E)

Hedychridium (Hedychridium) vachali decoloratum Linsenmaier, 1999: 73 (key, descr., *heliophilum* group).

Type locality. Morocco, Tunisia: “Marokko, Tunesien. - Marokko H. Atlas, Asni 24.V.1964, ♀ Type (Holotypus), M-Atlas, Azrou 20.VII.1963, ♂ Allotype, leg. u. Coll. m.; Paratypen Marokko: Azrou 20.VII.1963, Meknes 31.V.1964 leg. u. Coll. m.; Paratype Tunesien: Bizerte 26.VI.1994, leg. u. Coll. Ch. Schmid-Egger”.

Holotype, ♀: Maroc 24.V.64 Asni H. Atlas, leg. Linsenmaier // ♀ Type *Hedychridium* Ab. *vachali decoloratum* Lins. Linsenmaier det. 1965 // 508 // NML_ENT GBIF_Chr0009957 (ex type-collection).

Allotype, ♂: Maroc 20.VII.63 Azrou M. Atlas, leg. Linsenmaier // ♂ Allotype *Hedychridium* Ab. *vachali decoloratum* Lins. Linsenmaier det. 1964 // NML_ENT GBIF_Chr0009958 (ex type-collection).

Paratypes, ♂: Maroc 21.VII.63 Azrou M. Atlas leg. Linsenmaier // ♂ Paratype *Hedychridium* Ab. *vachali decoloratum* Lins. Linsenmaier det. 1964 // NML_ENT GBIF_Chr0009956 (ex synoptic collection); 1♀: Maroc 31.V.64 A Meknes leg. Linsenmaier // ♀ Paratype *Hedychridium* Ab. *vachali decoloratum* Lins. Linsenmaier det. 1965 // NML_ENT GBIF_Chr0009959; 1♂: Maroc 20.VII.63 Azrou M. Atlas leg. Linsenmaier // ♂ Paratype *Hedychridium* Ab. *vachali decoloratum* Lins. Linsenmaier det. 1964 // NML_ENT GBIF_Chr0009960.

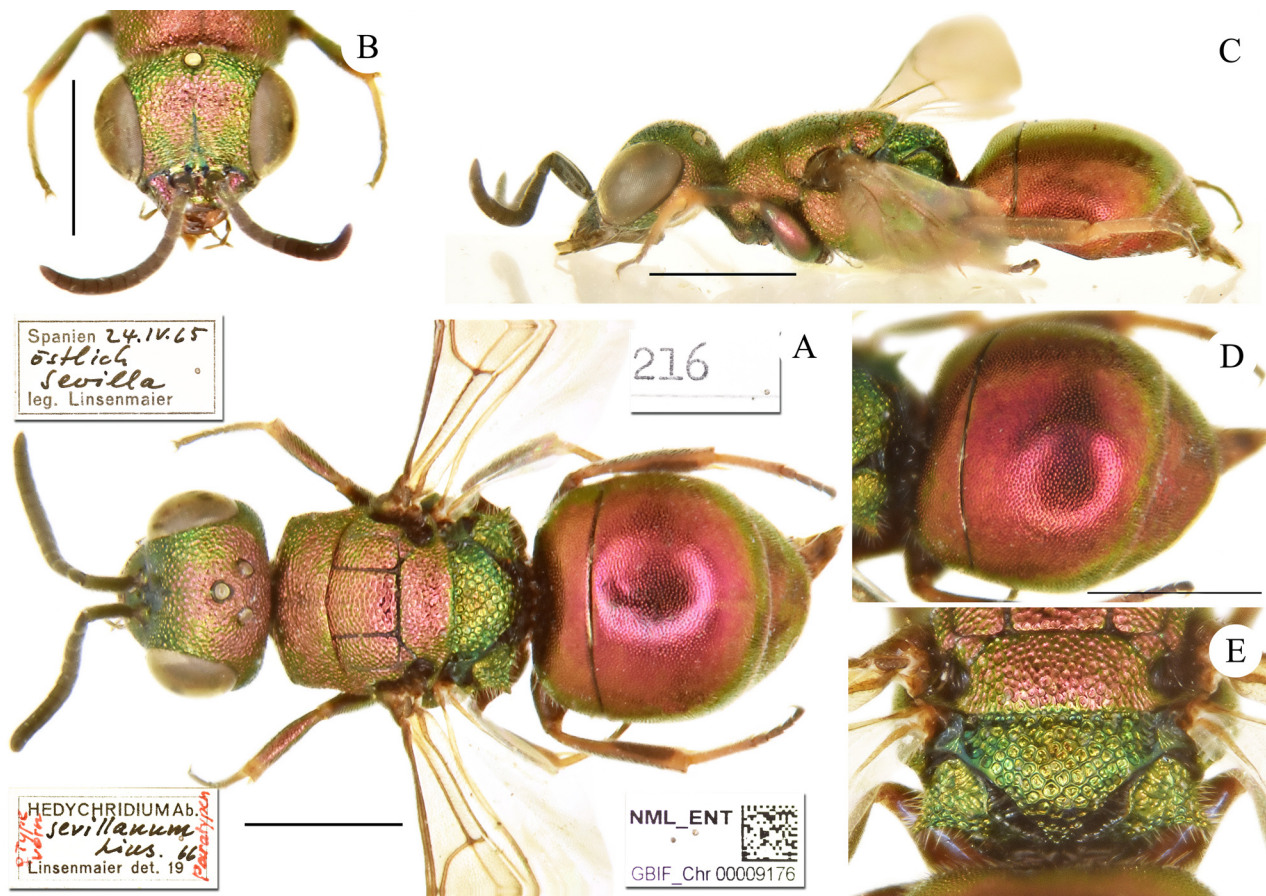


FIGURE 65. *Hedychridium sevilanum* Linsenmaier, 1968, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, dorso-lateral view. E) Mesonotum, scutellum, propodeum, posterior view. Scale bar 1 mm.

Hedychridium valesiense Linsenmaier 1959a

(Fig. 77A–77G)

Hedychridium (*Hedychridium*) *valesiense* Linsenmaier, 1959a: 62 (key, descr.), 187 (cat.), 198 (figs 119, 120); 1968: 37 (distr.).

Hedychridium rossicum Gussakovskij, 1948: Rosa *et al.* 2017a: 7 (synonymised).

Type locality. Austria, Germany, Switzerland, “Schweiz (Wallis), Deutschland, Niedere-Österreich. ♂ Type, ♀ Allotype (Wallis) und Paratypen Coll. m.”

Holotype, ♂: Wallis B 550m 4.VII.46 Linsenmaier // ♂ Type *Hedychridium valesiense* Lins. det. Linsenmaier 1959 (ex type-collection) // 72 // NML_ENT GBIF_Chr0011129.

Allotype, ♂ [not ♀]: Wallis C 900m 28.VIII.48 Linsenmaier // ♀ Allotype *Hedychridium valesiense* Lins. det. Linsenmaier 1959 // *Hedychridium valesiense* ♂ Lins. det. W. Arens 2006 (ex type-collection) // NML_ENT GBIF_Chr0011130.

Paratypes, ♂: Бердицыно, Ярослав[авского] у[езда], [=Yaroslavl' Prov., Berditsino, 57.454N, 40.108E,] 19.VII.[18]92, А. Яковлев [=A. Yakovlev] // ♂ Paratype *Hedychridium* Ab. *valesiense* Lins. Linsenmaier det. 1956 // *rosicum* wurde nicht publiziert // Paratype // *Euchrum rossicum* Sem // *Hedychridium valesiense* ♂ Lins. det. W. Arens 2006 (ex synoptic collection) // NML_ENT GBIF_Chr0011080; 1♂: Wallis A-B 700m 30.VIII.48 Linsenmaier // Paratype *Hedychridium valesiense* Lins. det. Linsenmaier 59 // GBIF_Chr0011081; 1♂: Wallis C 900m 28.VIII.48 Linsenmaier // ♂ Paratype *Hedychridium valesiense* Lins. det. Linsenmaier 59 // NML_ENT GBIF_Chr0011082; 1♂: Wallis C 900m 1.IX.53 Linsenmaier // ♂ Paratype *Hedychridium valesiense* Lins. det. Linsenmaier 59 // NML_ENT GBIF_Chr0011083; 2♂: Wallis B 1300m 8.VIII.54 Linsenmaier // ♂ Paratypen *Hedychridium valesiense* Lins. det. Linsenmaier 59 // NML_ENT GBIF_Chr0011084; 1♂: Wallis A-B 650m VII.1958 Linsenmaier // ♂ Paratype *Hedychridium valesiense* Lins. det. Linsenmaier 59; NML_ENT GBIF_Chr0011085; 1♂: France // Oulx 8.37 // ♂ Paratype *Hedychridium valesiense* Lins. det. Linsenmaier 59 // NML_ENT GBIF_Chr0011086; 3♂: Austria // Weidling, A.i. Wien, Mader // ♂ Paratypen *Hedychridium valesiense* Lins. det. Linsenmaier 59 // NML_ENT GBIF_Chr0011099; 1♂: Austria // Weidling, A.i. Wien, Mader // ♂ Paratype *Hedychridium valesiense* Lins. det. Linsenmaier 59 // NML_ENT GBIF_Chr0011100.

Remarks. Linsenmaier labelled only the holotype and the allotype; all the paratypes were not labelled as such. We selected only those that were known to Linsenmaier in 1959, based on type localities given in the article and collecting dates.

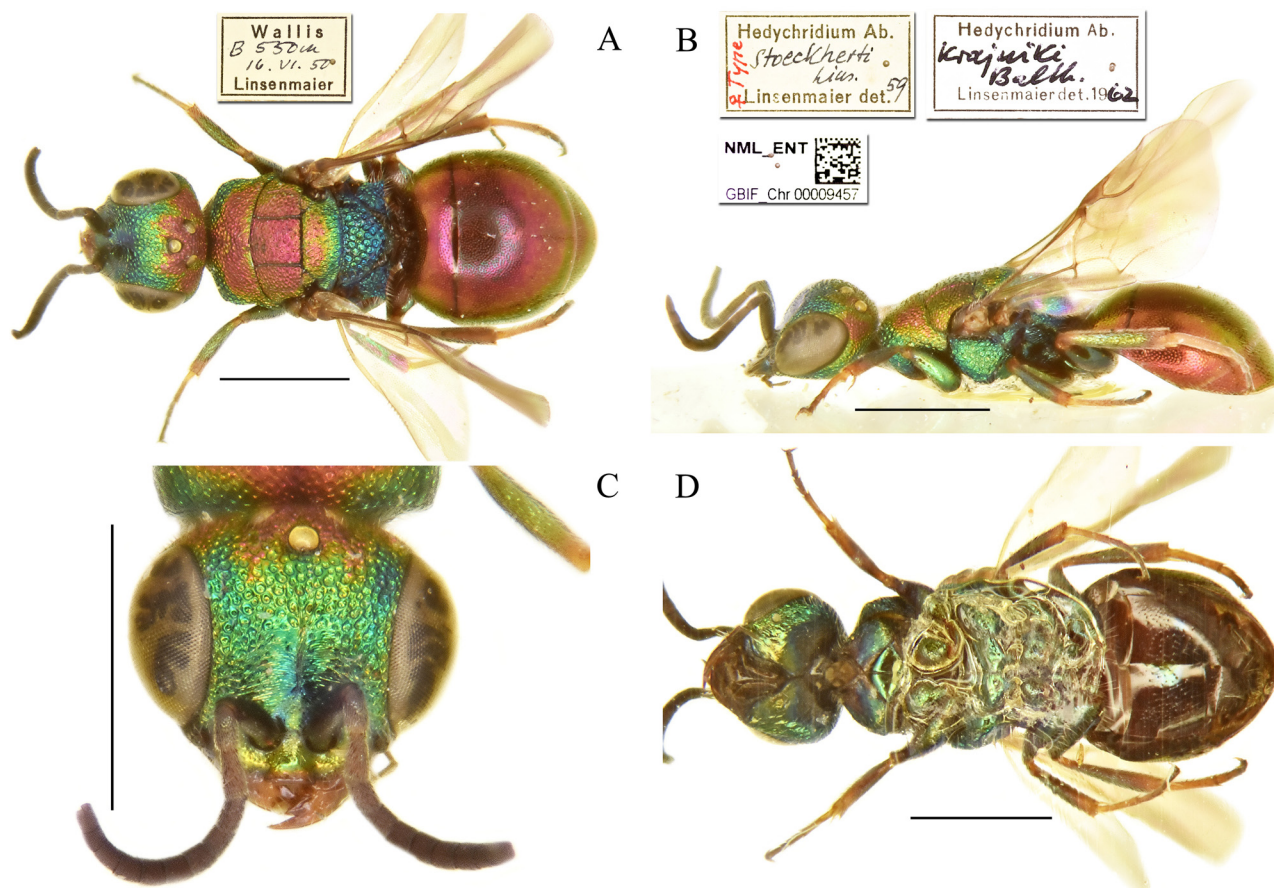


FIGURE 66. *Hedychridium stoekherti* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Habitus, lateral view. C) Head, frontal view. D) Habitus, ventral view. Scale bar 1 mm.

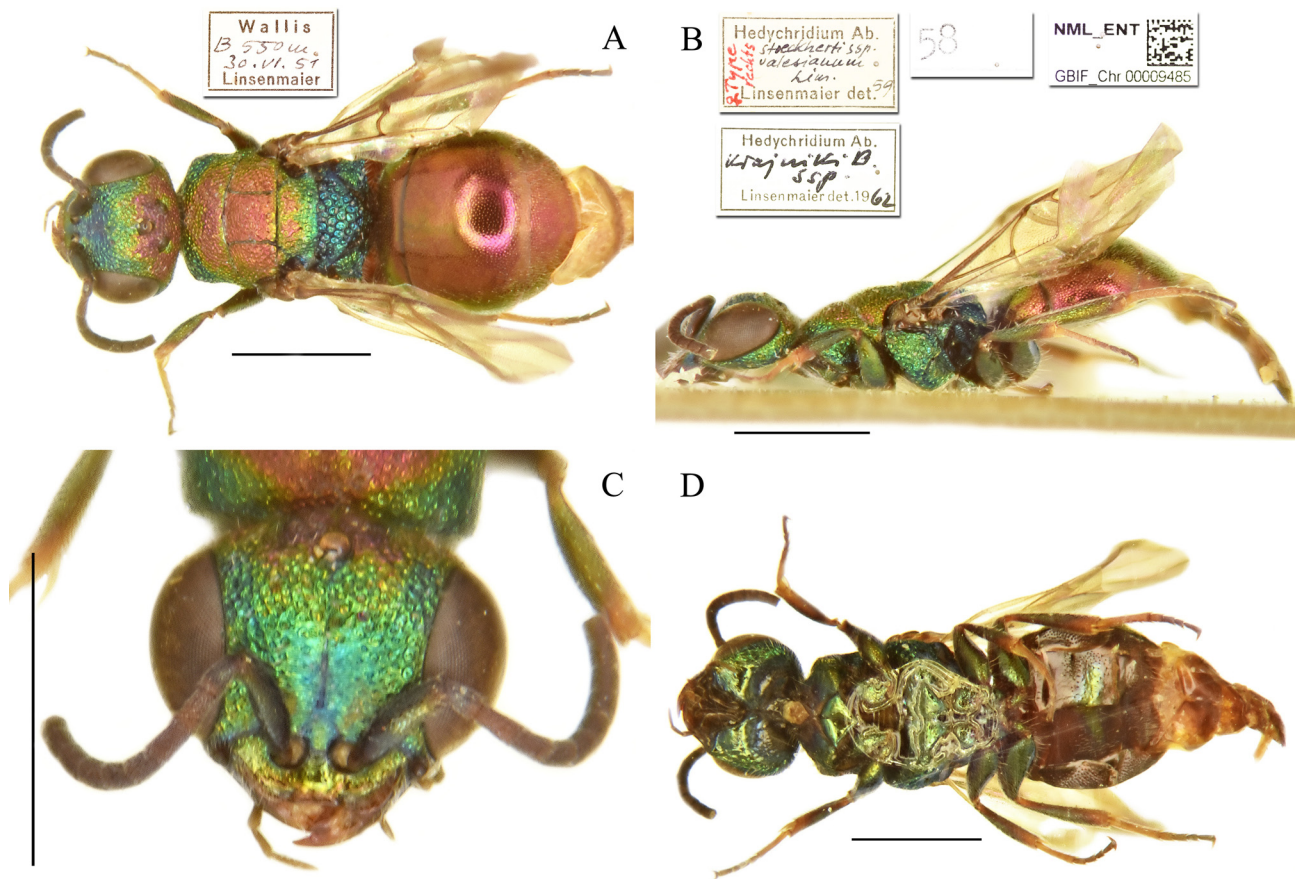


FIGURE 67. *Hedychridium stoeckherti valesianum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Habitus, lateral view. C) Head, frontal view. D) Habitus, ventral view. Scale bar 1 mm.

***Hedychridium verhoeffi* Linsenmaier, 1959a**

(Fig. 78A–78B)

Hedychridium (Hedychridium) verhoeffi Linsenmaier, 1959a: 45 (key), 50 (descr.), 187 (cat.), 200 (figs 178, 179); 1959b: 234 (distr.); 1968: 26 (tax., *ardens* group); 1969: 351 (cat.); 1987: 139 (distr.).

Type locality. Greece, Rhodes, former Yugoslavia [currently Croatia]: “Griechenland (Korfu), Jugoslawien, leg. Verhoeff. ♂ Type ♀ Allotype (Korfu, VII.-VIII.1954) Coll. m., Paratypen Coll. Verhoeff und Coll. m. Auch auf Rhodos.”

Holotype ♂, **allotype** ♀ and **paratype** ♂ [glued on the same label]: Korfu-Grèce 23.VII.–4.VIII.1954 PMFVerhoeff // ♂ Type links ♀ Allotype *Hedychridium Ab. verhoeffi* Lins. Linsenmaier det. 59 // 57 // NML_ENT GBIF_Ch0008659 (ex type-collection).

Paratypes, 2 exx.: Yugoslavia Omis (Dalm.) 12.–18.VIII.1952 PMF Verhoeff // Paratype *Hedychridium Ab. verhoeffi* Lins. Linsenmaier det. 59 // NML_ENT GBIF_Ch0008642 and NML_ENT GBIF_Ch0008643; 1 ex.: Greece – Rhodos Ixia 11.–25.IX.1958 PMF Verhoeff // Paratype *Hedychridium verhoeffi* Lins. det. Linsenmaier 59 // NML_ENT GBIF_Ch0008644; 1 ex.: Corfou – Grèce 23.VII.–4.VIII.1954 PMFVerhoeff // Paratype *Hedychridium Ab. verhoeffi* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0008645; 1 ex.: Grèce N/O ♀ VII // Corfou – Grèce 23.VII.–4.VIII.1954 PMFVerhoeff // Paratype *Hedychridium Ab. verhoeffi* Lins. Linsenmaier det. 59 // NML_ENT GBIF_Ch0008656 (ex Perraudin-collection).

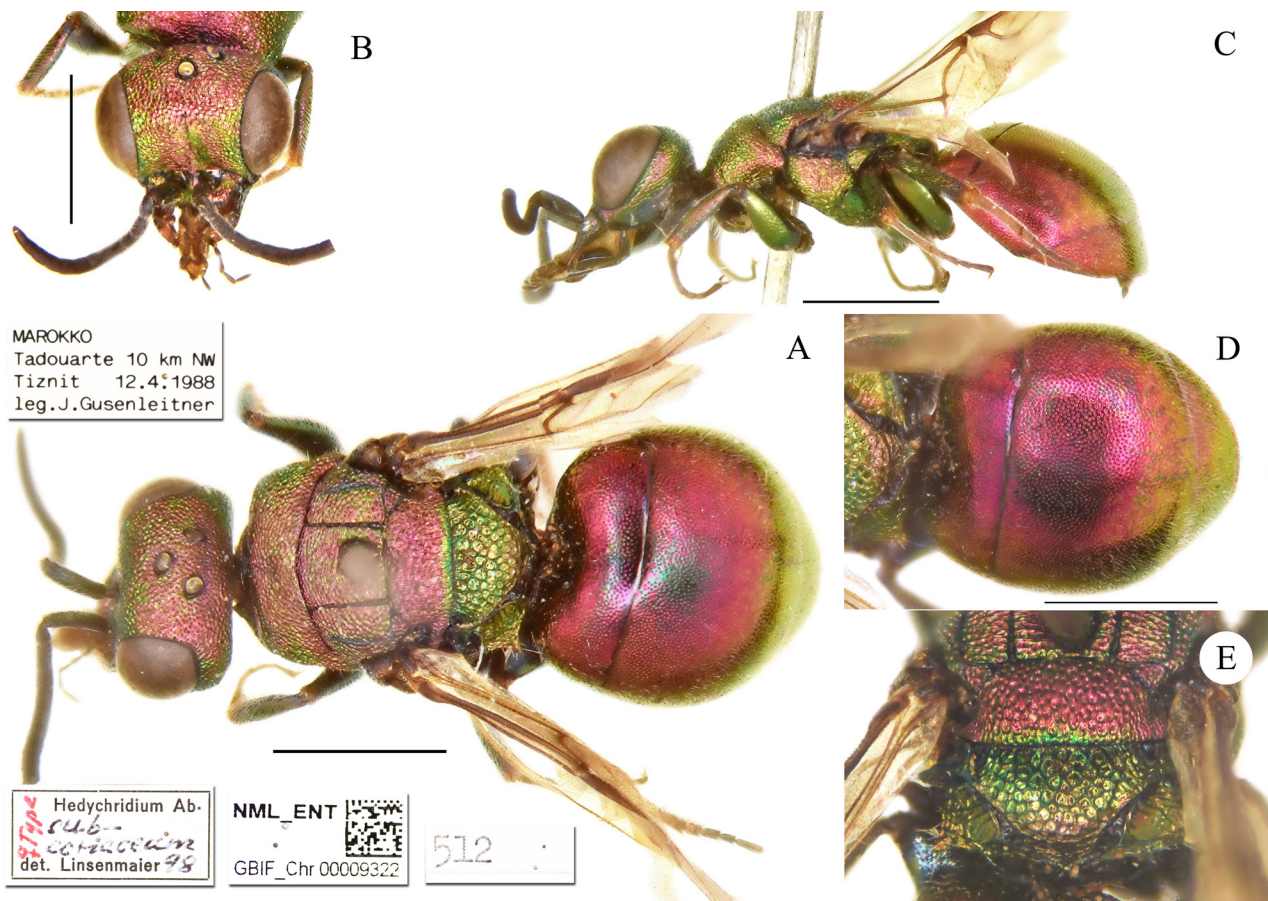


FIGURE 68. *Hedychridium subcoriaceum* Linsenmaier, 1999, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, dorsal view. E) Mesonotum, scutellum, propodeum, posterior view. Scale bar 1 mm.

***Hedychridium verhoeffi libanense* Linsenmaier, 1987**

(Fig. 79A–79E)

Hedychridium (Hedychridium) verhoeffi libanense Linsenmaier, 1987: 139 (descr.).

Type locality. Lebanon: “Libanon, Cedars, ♀ Type Coll. m.”.

Holotype, ♀: Nord Libanon Cedars 6000 ft 4.VII.1960 leg. Mavromoustakis coll. Linsenmaier // ♀ Type *Hedychridium Ab. verhoeffi libanense* Lins. Linsenmaier det. 1963 // 414 // NML_ENT GBIF_Ch0008664 (ex type-collection).

***Hedychridium verhoeffi yermasoyiense* Linsenmaier, 1959a**

(Fig. 80A–80F)

Hedychridium (Hedychridium) verhoeffi yermasoyiense Linsenmaier, 1959a: 50 (descr.), 187 (cat.).

Type locality. Cyprus: “Cypern, ♀ type Coll. m. (Yermasoyia-River, 5.VIII.1957, leg. Mavromoustakis)”.

Holotype, ♀: Yermasoyia River Cyprus 1.9.1956 leg. Mavromoustakis // ♀ Type *Hedychridium Ab. verhoeffi* ssp. *yermasoyiense* Lins. Linsenmaier det. 1959 // NML_ENT GBIF_Ch0008663 (ex type-collection).

Remarks. The specimen labelled as holotype by Linsenmaier was collected by Mavromoustakis on a different day: the 1st of September 1956 instead of the 5th of August 1957, as written in the original description. Since Linsenmaier was not precise in listing the data related to collecting events, we suggest considering this specimen as the true holotype and this discrepancy as *lapsus calami*.

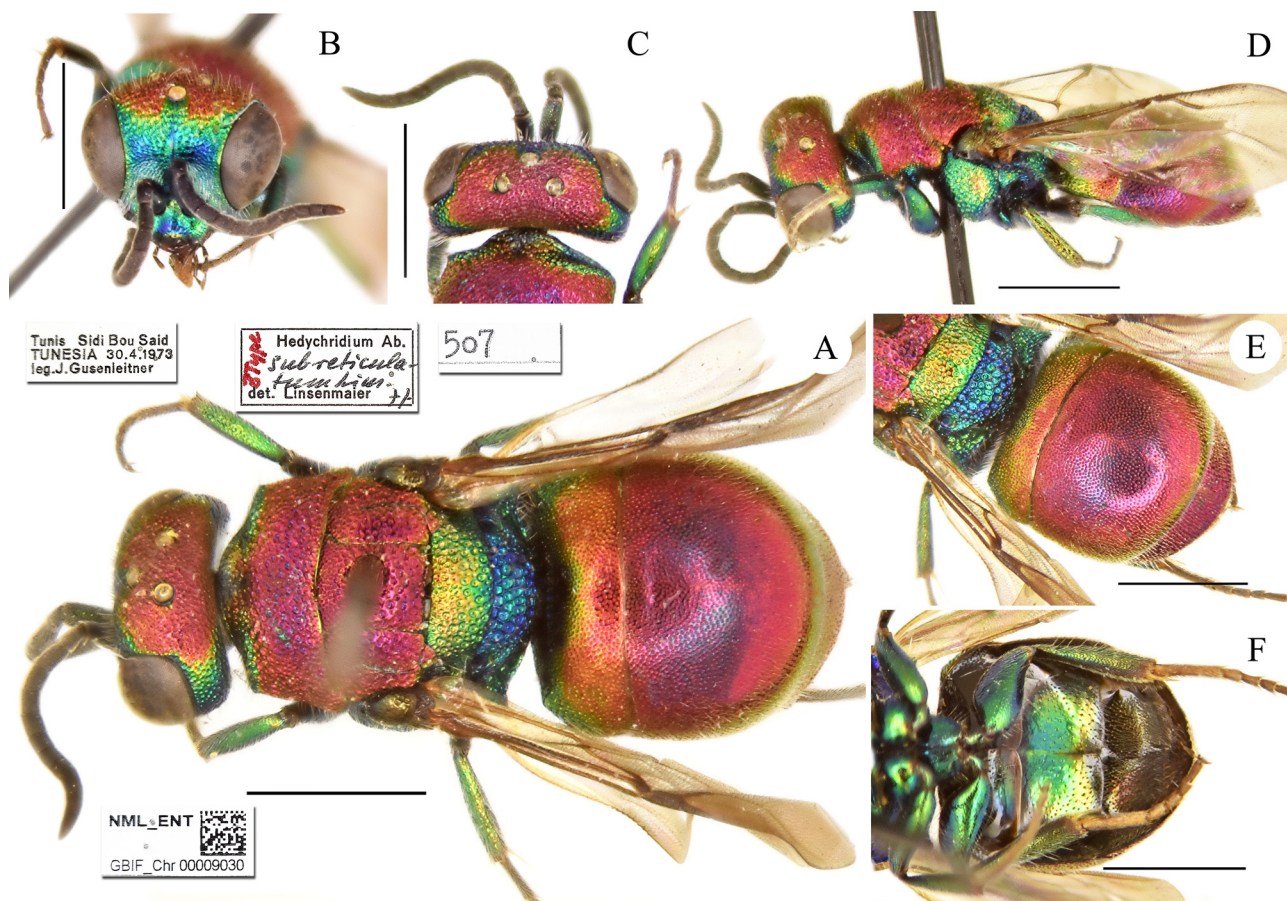


FIGURE 69. *Hedychridium subreticulatum* Linsenmaier, 1999, holotype, male. A) Habitus, dorsal view. B) Head, frontal view. C) Head, dorsal view. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium viridicupreum Linsenmaier, 1993

(Fig. 81A–81F)

Hedychridium (Hedychridium) viridicupreum Linsenmaier, 1993: 722 (descr.), 731 (fig. 1).

Type locality. Canary Is.: “Gran Canaria: Maspalomas 4.1976 leg. W. Perraudin ♀ Type Coll. Linsenmaier, 2 ♀ Paratypen Coll. Perraudin; San Agustín 8.1986 leg. F. La Roche 1♀ Paratype Coll. La Roche Sta. Cruz de Tenerife”.

Holotype, ♀: Gran Canaria Maspalomas 6–18.IV.1976 leg. Wolf W. P. Perraudin // Gr. Canaria, Dünen Maspalomas, 6.–18.IV.1976 H. Wolf // ♀ Type *Hedychridium* Ab. *viridicupreum* det Linsenmaier 89 // 443 // NML_ENT GBIF_Ch0008790 (ex type-collection).

Paratype, 1♀: Gr. Canaria Dünen Maspalomas 6.–18.IV.1976 H. Wolf // *Hedychridium* Ab. *viridicupreum* det Linsenmaier 89 // NML_ENT GBIF_Ch0008789 (ex synoptic collection).

Remarks. Linsenmaier labelled other 2 specimens as “Allotype” and “Paratype” bearing the following label: Maspalomas Gr. Canaria Dünen 14.–18.4.73 H. Wolf, but they cannot be considered as types because they were not listed in the original type series.

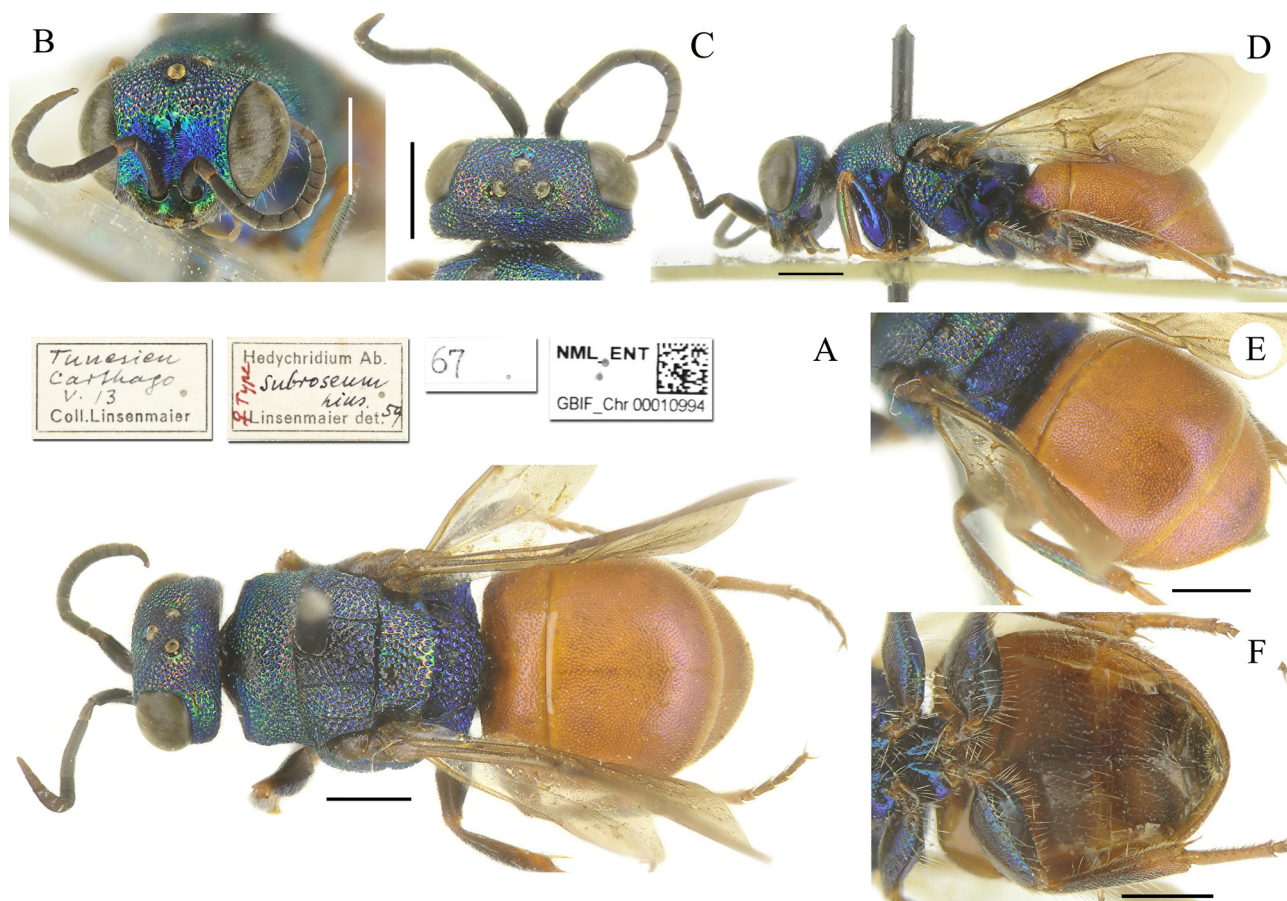


FIGURE 70. *Hedychridium subroseum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Head, dorsal view. D) Habitus, lateral view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

Hedychridium viridisulcatum Linsenmaier, 1968

(Fig. 82A–82E)

Hedychridium (Hedychridium) viridisulcatum Linsenmaier, 1968: 25 (descr., *ardens* group).

Hedychridium adventicium Zimmermann, 1962: Arens 2014: 587 (synonymised).

Type locality. Greece, Turkey: “Griechenland, ♀ Type, ♂ Allotype, ♀ Paratype, von Pyrgos (Peloponnes), in Coll. m.; Klein-Asien, Konya und Mut, leg. Schmidt, ♂ Paratypen in Coll. Schmidt und m.”

Holotype, ♀ and **paratype**, 1 ♀ [glued on the same label]: Graecia, Pelop. Pyrgos 17.VI.1961 leg. Linsenmaier // ♀ Type ♀ Paratype *Hedychridium Ab. viridisulcatum* Lins. Linsenmaier det. 1963 // NML_ENT GBIF_Ch0008626 (ex type-collection).

Allotype, ♂: Graecia, Pelop. Pyrgos 17.VI.1961 leg. Linsenmaier // ♂ Allotype *Hedychridium Ab. viridisulcatum* Lins. Linsenmaier det. 1963 // 212 // NML_ENT GBIF_Ch0008627 (ex type-collection).

Paratypes, 2 ♂: Konya As. Türk. 10.–12.VI.1966 leg. Josef Schmidt // Paratype *Hedychridium Ab. viridisulcatum* Lins. Linsenmaier det. 1966 // NML_ENT GBIF_Ch0008624 and NML_ENT GBIF_Ch0008625.

Remarks. Arens (2014) synonymised *Hedychridium viridisulcatum* with *H. adventicium* Zimmermann, 1961.

Hedychridium wolfi Linsenmaier, 1959b

(Fig. 83A–83E)

Hedychridium (Hedychridium) wolfi Linsenmaier, 1959b: 234 (descr.); 1968: 30 (cat.).

Type locality. Italy, Sardinia: “Sardinien, ♀ Type Coll. m. (Cagliari, Poetto, Daucus, 17.VII.59, leg. H. Wolf)”.

Holotype, ♀: Cagliari 17.VII.1959 H. Wolf / Poetto // ♀ Type *Hedychridium wolffi* Lins. Linsenmaier det. 1959 (ex type-collection).

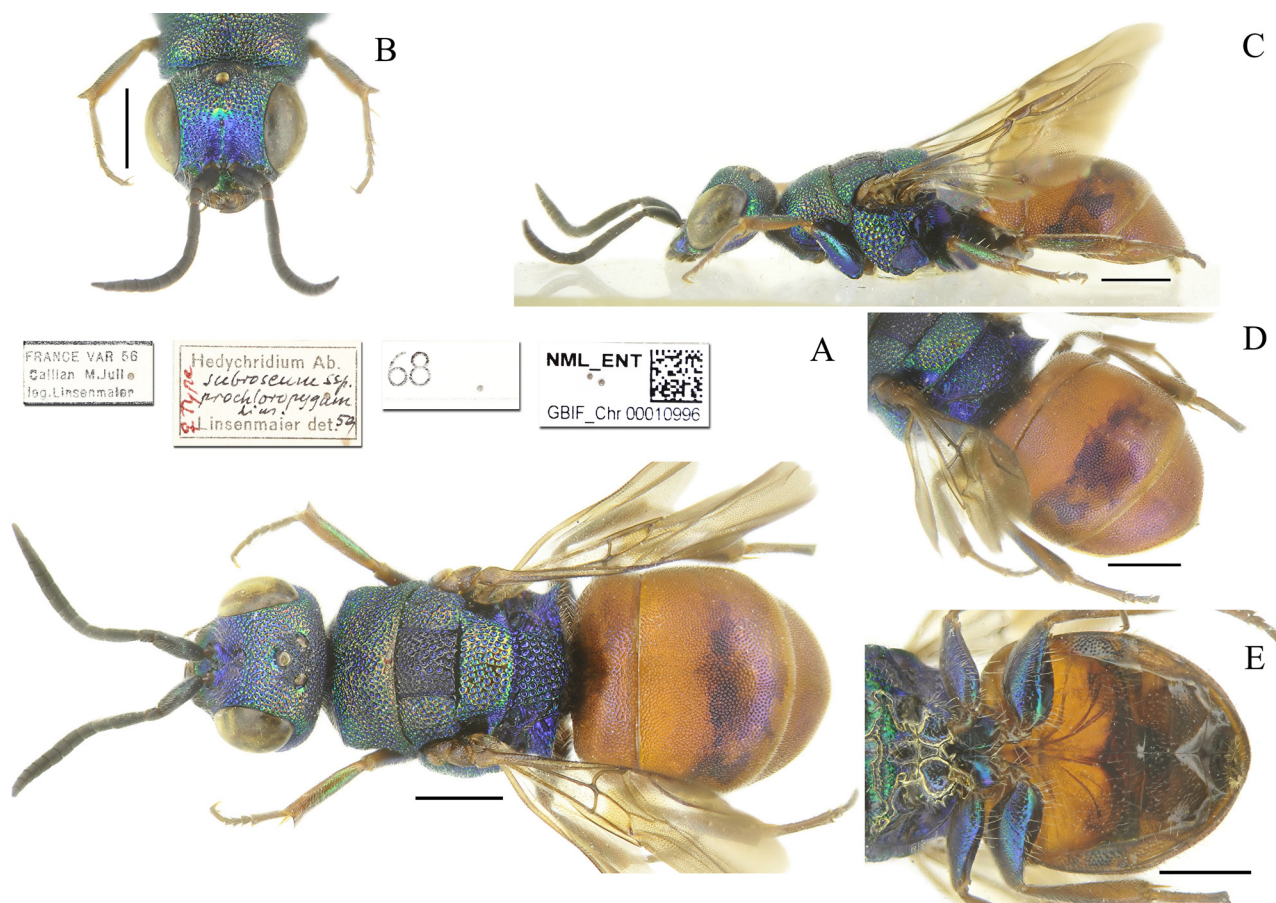


FIGURE 71. *Hedychridium subroseum prochloropygum* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

Subgenus *Prochridium* Linsenmaier, 1968

Prochridium Linsenmaier, 1968: 21 described as subgenus of *Hedychridium* Abeille de Perrin, 1878. Type species: *Holopyga hirtipes* Mocsáry, 1902a: 340, by original designation.

Prochridium: Kimsey & Bohart 1991: 258. Elevated to generic rank.

Hedychridium punctum Linsenmaier, 1994

Hedychridium (Prochridium) punctum Linsenmaier, 1994: 152 (fig. 18), 159 (key, descr., cat.).

Type locality. United Arab Emirates: “Holotype: ♀, U.A.E.: Suweihan Road, 3–4.IV.1987, Hamer, BMNH. - Paratypes: 2♀, same data as holotype, BMNH & WLC; 2♀, same locality, 9.IV.1988, WLC & Guichard Collection”.

Paratypes, ♀: UAE Suweihan Rd 3.–4.IV.1987 I.L. Hamer // ♀ Paratype *Hedychridium* Ab. *Prochridium punctum* det. Linsenmaier 89 // NML_ENT GBIF_Chr0008110 (ex synoptic collection); ♀: UAE Suweihan Rd 9.IV.1988 I.L. Hamer // ♀ Paratype *Hedychridium* Ab. *Prochridium punctum* Lins. Linsenmaier det. 1989 // NML_ENT GBIF_Chr0008111 (ex synoptic collection).

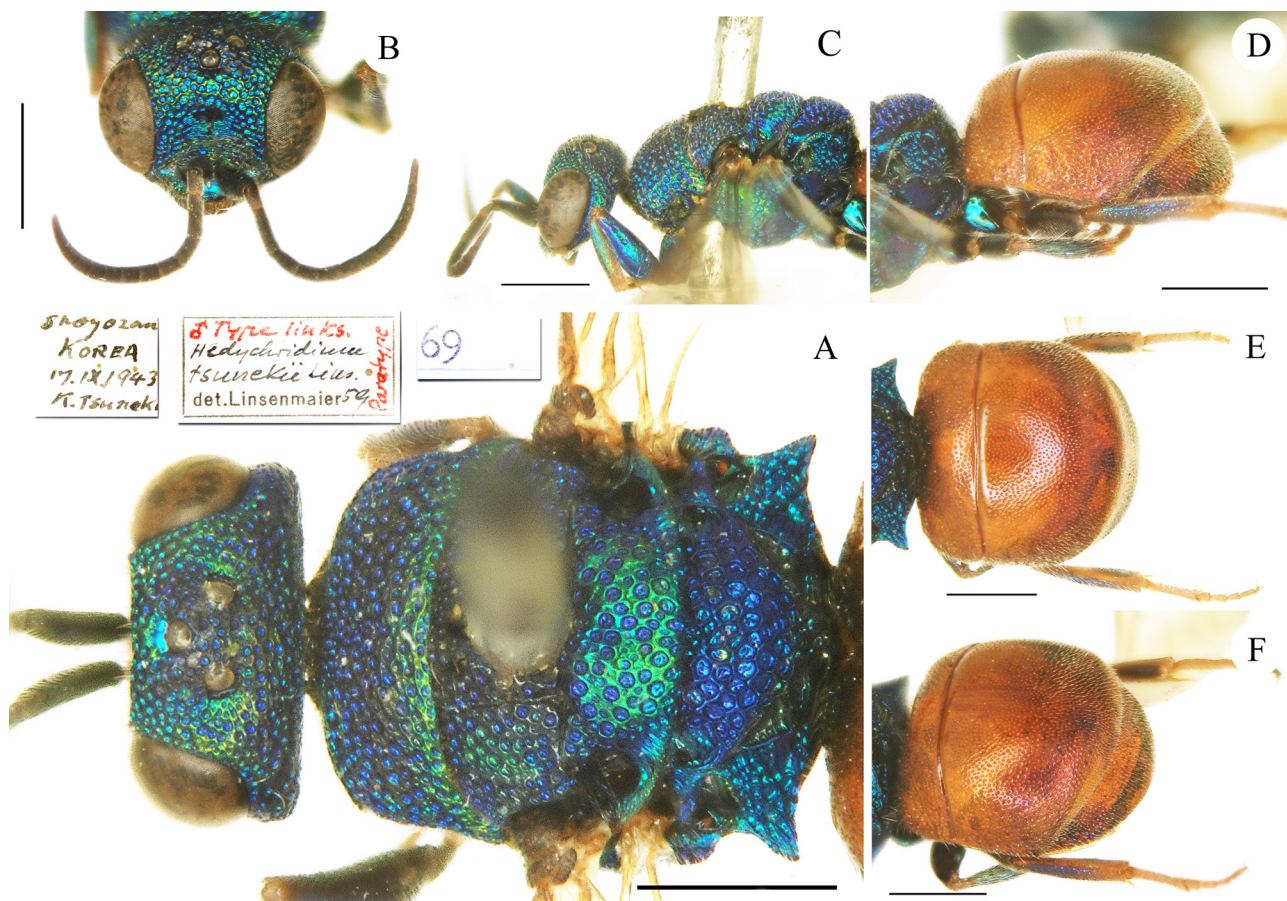


FIGURE 72. *Hedychridium tsunekii* Linsenmaier, 1959a, holotype, male. A) Head and mesosoma, dorsal view. B) Head, frontal view. C) Head and mesosoma, lateral view. D) Metasoma, lateral view. E) Metasoma, dorsal view. F) Metasoma dorso-lateral view. Scale bar 1 mm.

Hedychridium sericatum Linsenmaier, 1994

Hedychridium (Prochridium) sericatum Linsenmaier, 1994: 152 (figs 22, 23), 159 (key), 160 (descr., cat.).

Type locality. United Arab Emirates: “Holotype, ♀, U.A.E.: Suweihan Road, 9.IV.1988, Hamer, BMNH. - Paratypes: 2♀, Remah, 2.IV.1987, Hamer, BMNH & WLC”.

Paratype, 1♀: UAE Remah 2.IV.1987 I.L. Hamer // ♀ Paratype *Hedychridium* Ab. *Prochridium sericatum* Lins. Linsenmaier det. 1989 (ex synoptic collection)

Other Palaearctic types of *Hedychridium* housed in the Linsenmaier collection

Hedychridium roseum anatolicum Arens, 2010 (9 paratypes)

Hedychridium mediocre corsuense Perraudin, 1978 (holotype and 4 paratypes)

Hedychridium roseum cypriacum Balthasar, 1952 (1 paratype)

Hedychridium etruscum Strumia, 2003 (1 paratype)

Hedychridium goloensis Strumia, 2012 (holotype)

Hedychridium houskai Balthasar, 1953 (1 paratype)

Hedychridium reticulatum hyalitarse Perraudin, 1978 (holotype and 3 paratypes)

Hedychridium mavromoustakisi Enslin, 1950 (holotype and 1 paratype)

Hedychridium mosadunense Lefebvre, 1986 (5 paratypes)

Hedychridium chloropygum ottomanum Arens, 2010 (holotype and 3 paratypes)
Hedychridium perpunctatum Balthasar, 1953 (1 paratype)
Hedychridium rhodojanthinum Enslin, 1939 (holotype)
Hedychridium scintilla Semenov in Semenov-Tian-Shanskij & Nikol'skaya, 1954 (1 paralectotype)
Hedychridium valesiense turcicum Arens, 2010 (holotype and 1 paratype)
Hedychridium tyrrhenicum Strumia, 2003 (1 paratype)
Hedychridium viridescutellare Arens, 2004b (holotype and 2 paratypes)
Hedychridium wahisi Niehuis, 1998 (1 paratype)
Hedychridium zimmermanni Balthasar, 1953 (1 paratype)

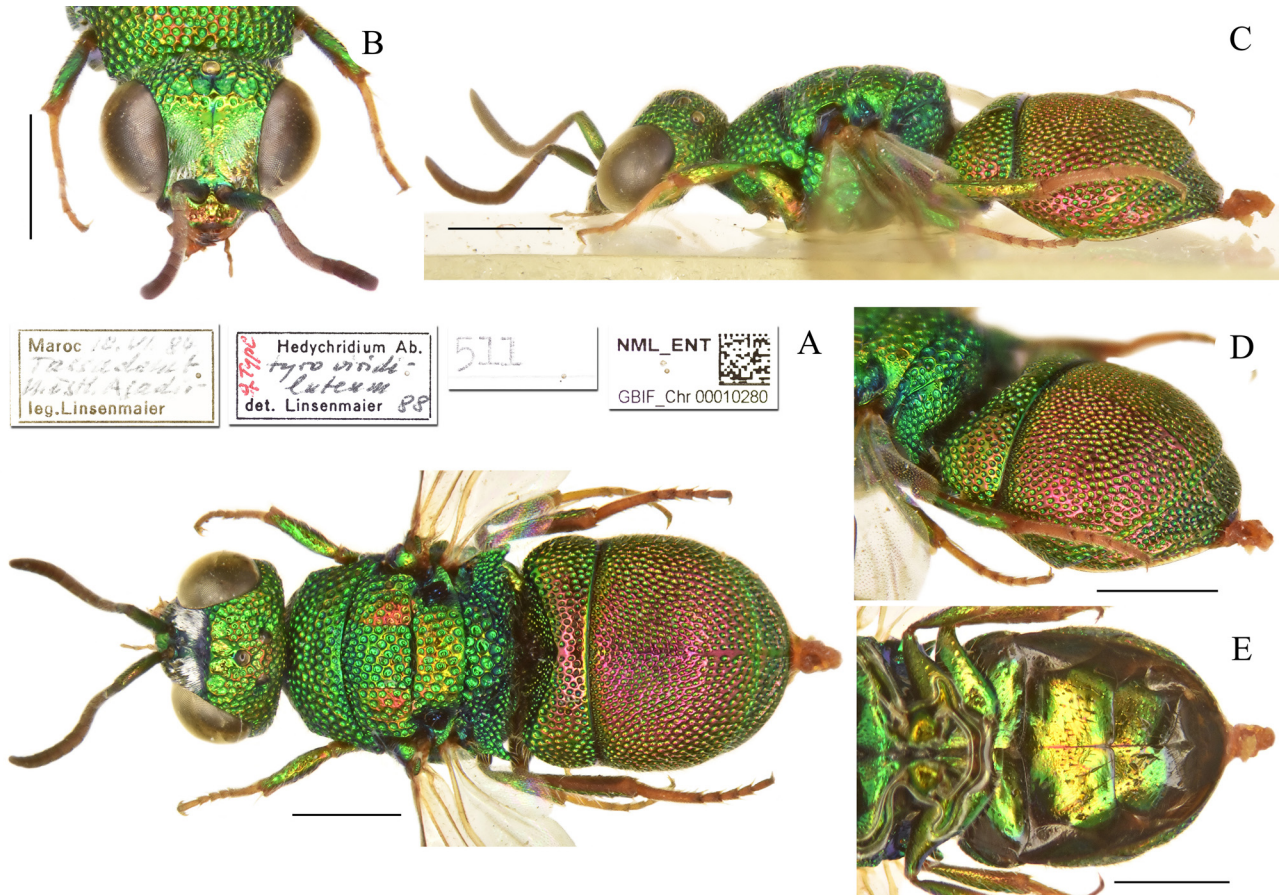


FIGURE 73. *Hedychridium tyro viridiluteum* Linsenmaier, 1999, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

Nomina nuda

Schmidt (1977) published a list of the Chrysididae collected in his journeys in Turkey and identified by Linsenmaier. He listed 25 species not yet described by the Swiss author which are *nomina nuda*. Seven of these *nomina nuda* are *Hedychridium*. Nevertheless, two of them were later described by Linsenmaier (1997) and Arens (2004b): *Hedychridium francescanum heminigrum* Linsenmaier, 1997 and *Hedychridium viridescutellare* Arens, 2004b. The remaining five *nomina nuda* are:

Hedychridium bilimbatum Linsenmaier in Schmidt, 1977: 103.
Hedychridium duplofacialis Linsenmaier in Schmidt, 1977: 103.
Hedychridium duplopunctatum Linsenmaier in Schmidt, 1977: 105.
Hedychridium heraldifacialis Linsenmaier in Schmidt, 1977: 103.
Hedychridium pseudobuyssoni Linsenmaier in Schmidt, 1977: 103.

Interestingly, Kimsey & Bohart (1991: 184) listed another name never described, *Hedychridium linsenmaieri*, which must be considered as *nomen nudum* too.

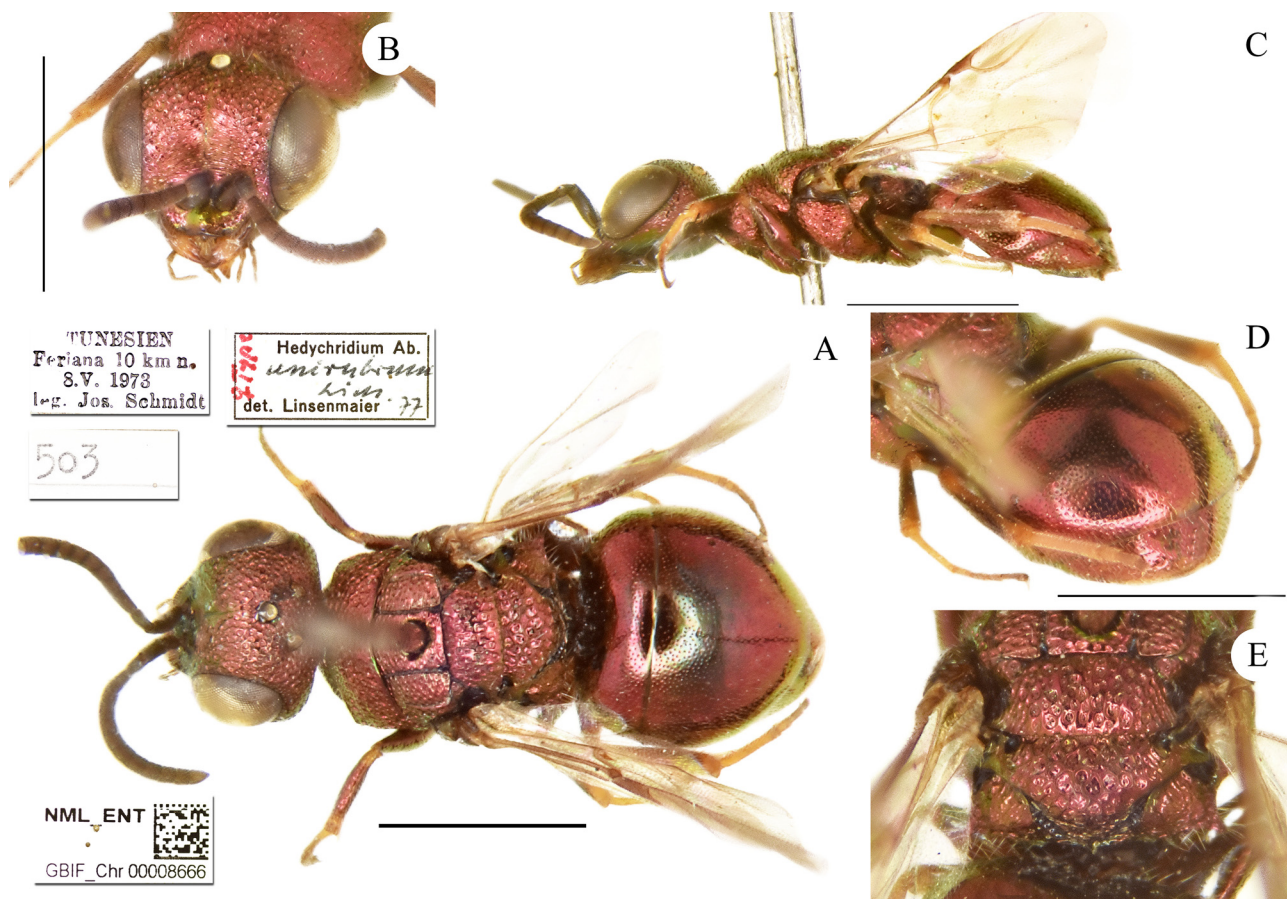


FIGURE 74. *Hedychridium unirubrum* Linsenmaier, 1999, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Scutellum, metanotum, propodeum, posterior view. Scale bar 1 mm.

Specimens without type status

Many specimens were labelled as types by Linsenmaier, but for different reasons they cannot be considered as such, according to ICZN rules. Here some cases: Linsenmaier (1959a) published *Hedychridium lampadum* as *nomen novum pro Hedychridium lampas* (Christ, 1791), which is actually an unnecessary replacement name. Some years later, Linsenmaier (1997) wrote that he had mistakenly published the species as a new name (“*nom. n.*”) instead of “new species”. He then labelled two specimens in his collection as holotype and allotype of *Hedychridium lampadum*. These specimens [considered as valid types by Arens (2010)] cannot be considered as types for two reasons: 1) the name *lampadum* is a replacement name and the only type bearing name is that described by Christ (currently considered lost); 2) a holotype designation assigned 40 years after the description is not valid. After realizing the mistake, Linsenmaier should have described *H. lampadum* as a new species, with a new name.

In the case of *Hedychridium viridiscutellare* Arens, 2004b we found two holotypes and two allotypes. In fact, Linsenmaier labelled the holotype and the allotype, but never described this species. Arens (2004b), who described this species some years later, was unable to find the holotype and allotype selected by Linsenmaier and designated other two specimens as the holotype and the allotype. The holotype and the allotype selected by Linsenmaier have been later found in his collection but they have no type status because they were not included in the original description by Arens (2004b), even if they still bear the type labels handwritten by Linsenmaier himself.

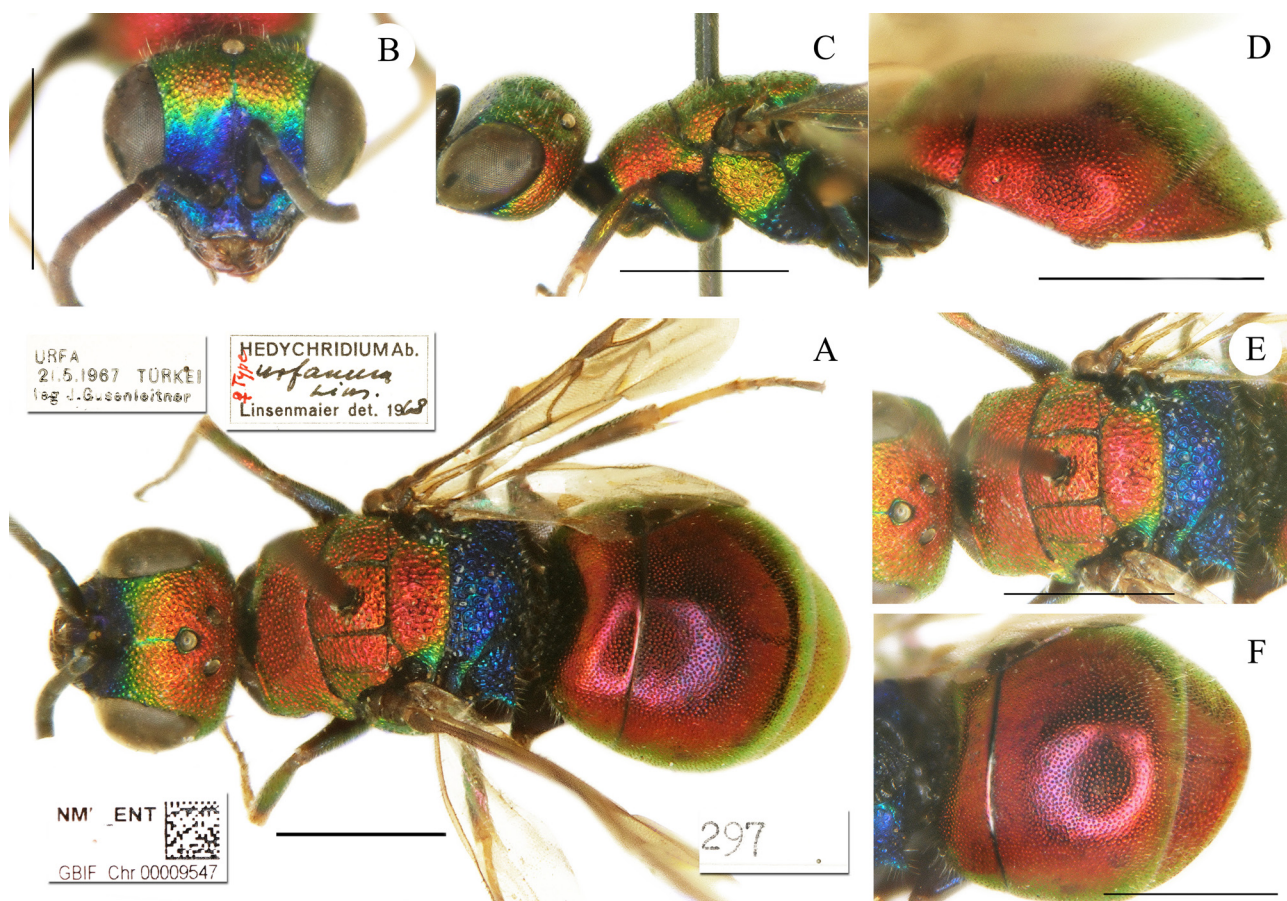


FIGURE 75. *Hedychridium urfanum* Linsenmaier, 1968, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Mesosoma, lateral view. D) Metasoma, lateral view. E) Mesosoma, dorsal view. F) Metasoma, dorsal view. Scale bar 1 mm.

Unnecessary replacement names given by Linsenmaier

Linsenmaier provided some unnecessary replacement names. Here the cases for the genus *Hedychridium*:

- *Hedychridium lampadum* Linsenmaier, 1959a, unnecessary replacement name for *H. lampas* (Christ, 1791) (see above).
- *Hedychridium roseum limassolense* Linsenmaier, 1959a, unnecessary replacement name for *H. roseum cypriacum* Balthasar, 1953. [*H. roseum cypriacum* Balthasar is a valid name].
- *Hedychridium maculiventre* Linsenmaier, 1959a, unnecessary replacement name for *H. sculpturatum palestinense* Balthasar, 1953. [*H. sculpturatum palestinense* Balthasar is a valid name].
- *Hedychridium maculiventre sculpturatissimum* Linsenmaier, 1959b, unnecessary replacement name for *H. sculpturatum palestinense* Balthasar, 1953.
- The case of *Hedychridium maculiventre* Linsenmaier, 1959b. Linsenmaier (1959a: 63) replaced the name *H. palestinense* Balthasar, 1953 with *H. maculiventre* Linsenmaier, 1959a and listed two localities: “Palästina and Jugoslawien”. On the same page he described the subspecies *H. maculiventre sculpturatissimum* Linsenmaier, 1959a based on a type series of specimens from Cyprus. Later, Linsenmaier (1959b: 235) wrote that he had confused the two taxa and described *H. maculiventre* as a new species, with a holotype from Yugoslavia (currently Croatia: Dalmatia, Omis, VIII.1952) and proposed *H. sculpturatissimum* as the replacement name for *H. palestinense* Balthasar, 1953. These taxonomic changes were rather confusing and many authors, from Kimsey & Bohart (1991) to Arens (2010), were disorientated by these changes. In synthesis:
 - *Hedychridium maculiventre* Linsenmaier, 1959a is an unnecessary replacement name for *H. palestinense* Balthasar, which is the valid name for the species found in Palestine.
 - *Hedychridium maculiventre sculpturatissimum* Linsenmaier, 1959a was correctly described and it is the valid name for the Cypriot species.

- *Hedychridium maculiventre* Linsenmaier, 1959b (described as a new species, with type series) has to be considered a junior homonym of *H. maculiventre* Linsenmaier, 1959a.
- *Hedychridium maculiventre sculpturatissimum* Linsenmaier, 1959b is both a junior homonym of *H. maculiventre sculpturatissimum* Linsenmaier, 1959a and an unnecessary replacement name for *H. palestinense* Balthasar, 1953.
- According to Linsenmaier (1959b) there are two valid taxa: *H. maculiventre maculiventre* Linsenmaier, 1959b and *H. maculiventre sculpturatissimum* Linsenmaier, 1959b. After the publication of the world catalogue by Kimsey & Bohart (1991), Linsenmaier (1997: 258) recognised that the name *H. palestinense* Balthasar, 1953 is valid. However, he did not realize that if so, the name *H. maculiventre sculpturatissimum* Linsenmaier, 1959b was unnecessary, and in the same page he considered three valid names (*H. palestinense* Balthasar, 1953, *H. maculiventre maculiventre* Linsenmaier, 1959b; *H. maculiventre sculpturatissimum* Linsenmaier, 1959b). If the latter interpretation with three taxa is correct, then the third taxon is incorrectly named.
- Arens (2010: 407) used Linsenmaier's latest interpretation (1997).
- After a written exchange, Arens and Rosa agreed that the third species needed a new name. Arens (2011: 316) renamed the species from Jugoslavia (currently Croatia) as *H. maculisternum* Arens 2011.
- Arens (2011) considered all these taxa as subspecies of *Hedychridium scutellare* (Tournier, 1878). However, despite the specific or subspecific rank, the final synonymic list of these taxa is:
 - 1) *H. palestinense* Balthasar, 1953 (taxon from Palestine) (= *maculiventre* Linsenmaier, 1959a, unrec. repl. name for *H. palestinense* Balthasar, 1953; *sculpturatissimum* Linsenmaier, 1959b, unrec. repl. name for *H. palestinense* Balthasar, 1953 nec *H. sculpturatissimum* Linsenmaier, 1959a).
 - 2) *H. sculpturatissimum* Linsenmaier, 1959a (taxon from Cyprus),
 - 3) *H. maculisternum* Arens, 2011 (taxon from Croatia) (= *maculiventre* Linsenmaier, 1959b, nec *maculiventre* Linsenmaier, 1959a).

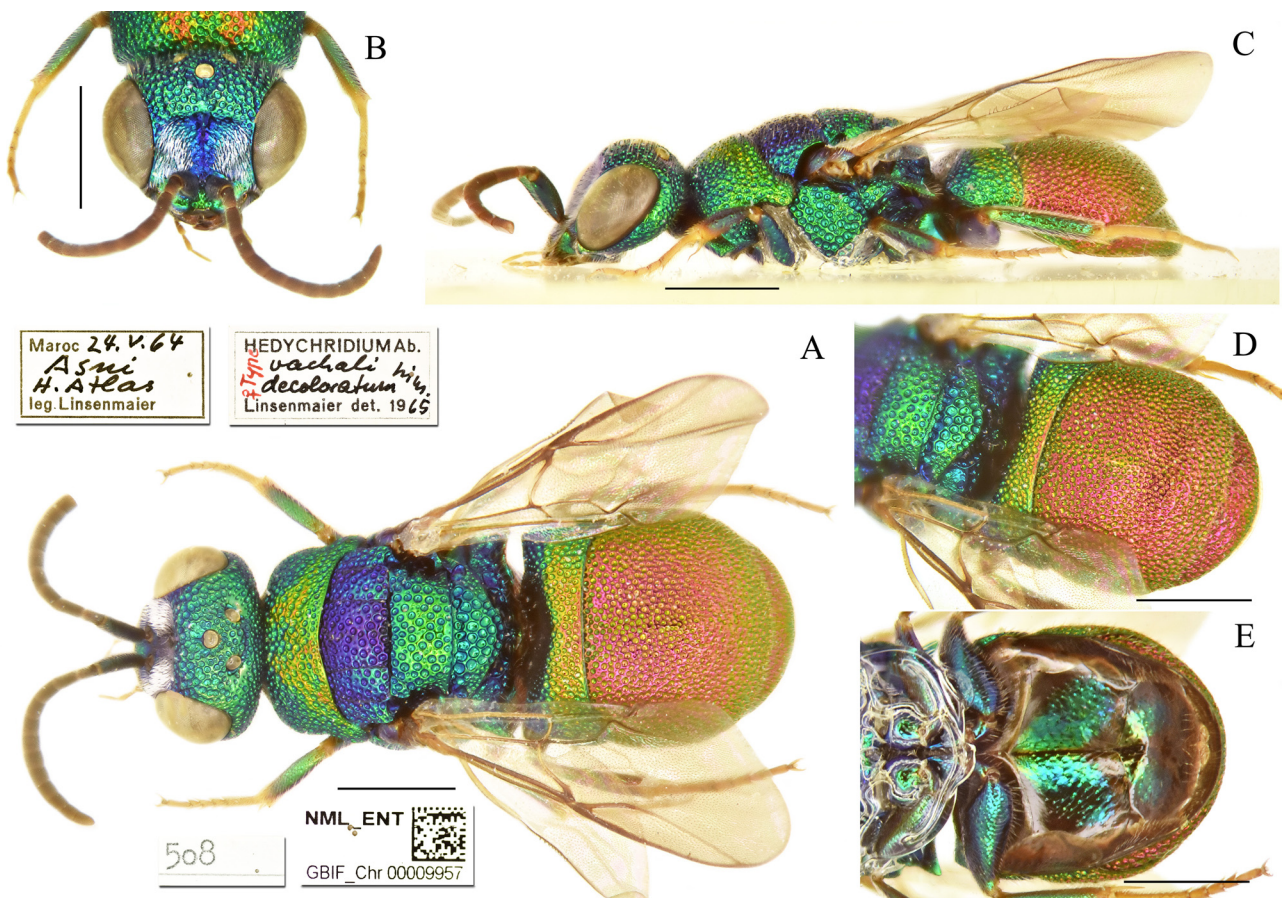


FIGURE 76. *Hedychridium vachali decoloratum* Linsenmaier, 1999, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Metasoma, ventral view. Scale bar 1 mm.

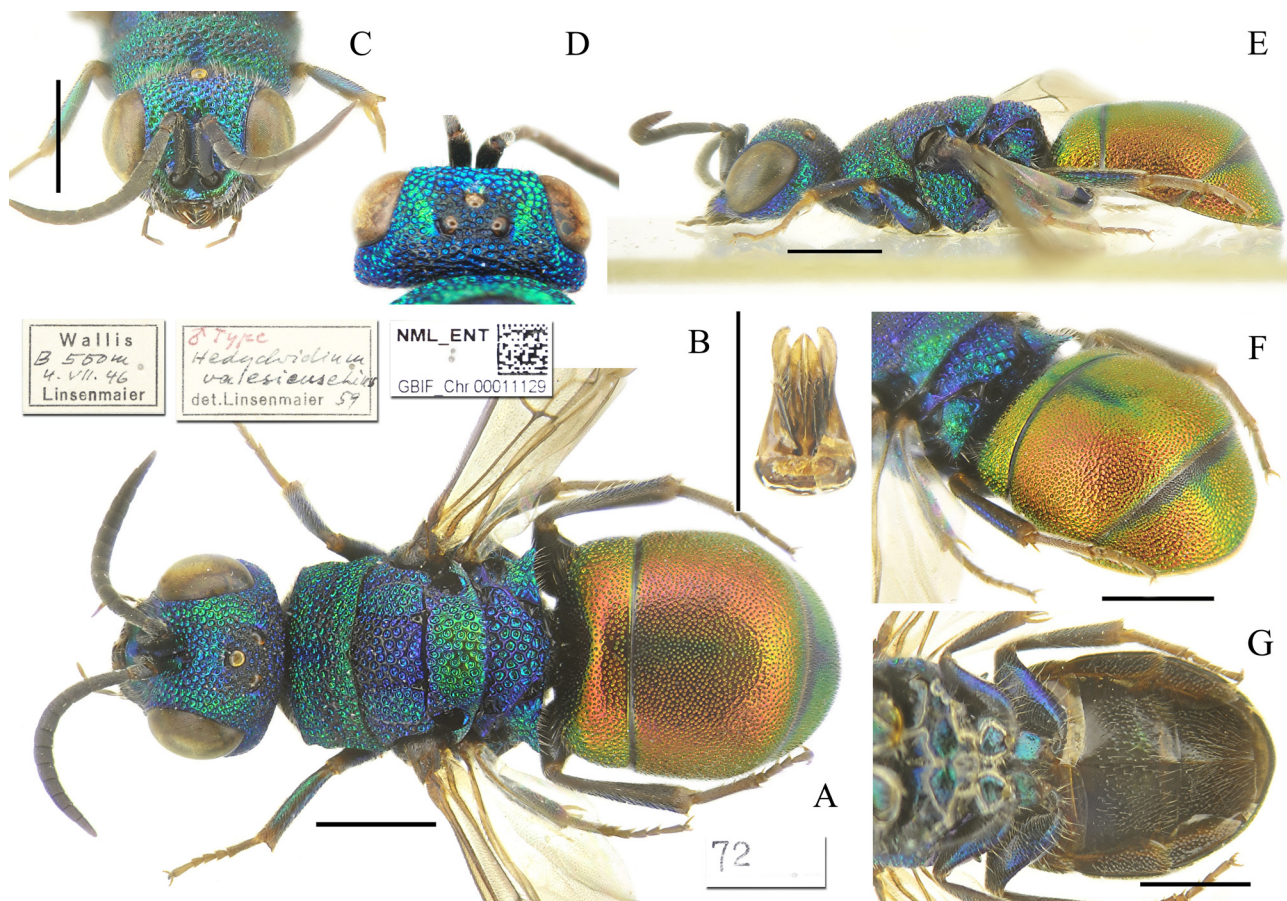


FIGURE 77. *Hedychridium valesiense* Linsenmaier, 1959a, holotype, male. A) Habitus, dorsal view. B) Genital capsule. C) Head, frontal view. D) Head, dorsal view. E) Habitus, lateral view. F) Metasoma, postero-lateral view. G) Mesosoma, ventral view. Scale bar 1 mm.

Lapsus calami: dates, localities, and identification of sexes

In some cases, we found lapsus calami for both collection dates and localities. For example, in the case of *Hedychridium verhoeffi yermasoyiense*, Linsenmaier wrote a different date from that which is pinned to the type specimen (August 5, 1957, rather than September 1, 1957). In other cases, the month of collection (i.e., *Hedychridium inusitatum*) or the year of collection are wrong.

The genus *Hedychridium* in Linsenmaier's systematics

Linsenmaier subdivided the Palearctic species of the genus *Hedychridium* in four subgenera and fifteen species groups. In the first revision of the West Palearctic species, Linsenmaier (1959a) proposed three subgenera: *Hedychridium* s.str., *Acrotoma* Mocsáry, 1902b and *Hexachrydium* Bischoff, 1913 (correct spelling: *Hexachridium*). The name *Acrotoma* Mocsáry, 1902b is objectively unavailable because it is a junior homonym of *Acrotoma* Boettger, 1881 (Mollusca, Clausiliidae) (Kimsey & Bohart 1991). However, Linsenmaier (1999) continued to use it as valid subgeneric name. Linsenmaier (1959a) considered *Buyssonina* Mocsáry, 1902b and *Wollmannia* Mocsáry, 1909 as synonyms of *Acrotoma* and *Tetrachrydium* Zimmermann, 1952 synonym of *Hexachridium*. Only later, Linsenmaier (1968) correctly recognised *Wollmannia* as a subgenus of *Hedychrum* Latreille, 1802, after receiving a specimen in exchange from Nikol'skaya.

Linsenmaier (1959a) firstly established two species groups: *H. roseum* group and *H. sculpturatum* group. Afterward, Linsenmaier (1968) provided the first classification of the species groups and established the following

ones: *H. luteipenne* group, *H. planifrons* group, *H. postthoracicum* group, *H. plagiatum* group, *H. ardens* group, *H. monochroum* group (= *Cyrteuchridium* Semenov-Tian-Shanskij, 1954), *H. incrassatum* group (= *Zarudnium* Semenov-Tian-Shanskij, 1954, *Zarudnidium* Semenov-Tian-Shanskij, 1954, *Cyrteuchrum* Semenov-Tian-Shanskij, 1954), *H. margaritaceum* (= *Irenula* Semenov-Tian-Shanskij & Nikol'skaya, 1954), *H. flavipes* group (= *Colpopyga* Semenov-Tian-Shanskij, 1954), *H. roseum* group (= *Euchrum* Semenov-Tian-Shanskij, 1954), *H. sculpturatum* group (= *Euchrum* Semenov-Tian-Shanskij, 1954). In the same publication, Linsenmaier (1968) described the subgenus *Prochridium*. Some years later, Linsenmaier (1994) established the *H. semenovi* group, and then (1997) the *H. anale* and *H. heliophilum* groups. Finally, some changes were proposed by Linsenmaier (1999), namely the description of the *H. luteum* group and *H. modestum* group, and the union of some groups: *H. ardens-monochroum* group and *H. roseum-sculpturatum* group. If the formation of the first group was unnecessary and not supported by any morphological or molecular analyses, the establishment of the *H. roseum-sculpturatum* group was a new step forward a better classification, since members of the *H. roseum* group subsequently proved to be females (with non-metallic abdomen) and males (with metallic abdomen included in the *H. sculpturatum* group) of the same species (Rosa 2003; Arens 2004a).

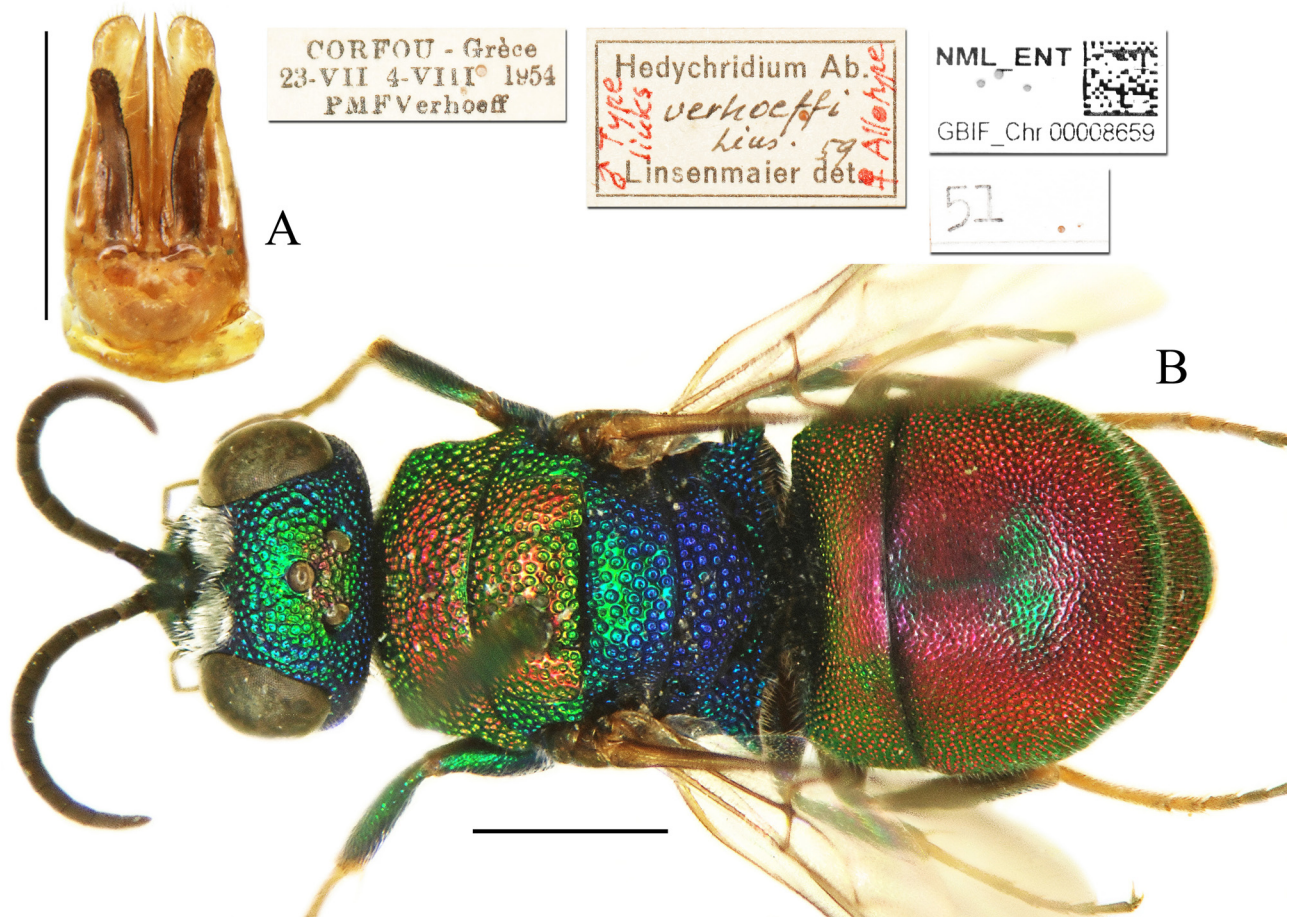


FIGURE 78. *Hedychridium verhoeffi* Linsenmaier, 1959a, holotype, male. A) Genital capsule. B) Habitus, dorsal view. Scale bar 1 mm.

Linsenmaier's classification (1959a, 1959b, 1968, 1969, 1987, 1993, 1994, 1997, 1999) for the Palearctic species is here synthetised.

- Genus *Hedychridium* Abeille de Perrin, 1878
 Subgenus *Prochridium* Linsenmaier, 1968
 Subgenus *Hedychridium* s. str.
 modestum group
 planifrons group
 plagiatum group

luteum group
ardens-monochroum group
coriaceum group
anale group
heliophilum group
incrassatum group
flavipes group
elongatum group
margaritaceum group
roseum-sculpturatum group
 Subgenus *Acrotoma* Mocsáry, 1902b
 Subgenus *Hexachridium* Bischoff, 1913

Remarks. The *H. planifrons* group was renamed *attenuatum* group by Kimsey & Bohart (1991) and later *H. wroughtoni* group by Strumia (1999), because *Hedychridium wroughtoni* du Buysson, 1896 is the first species described in the species group.

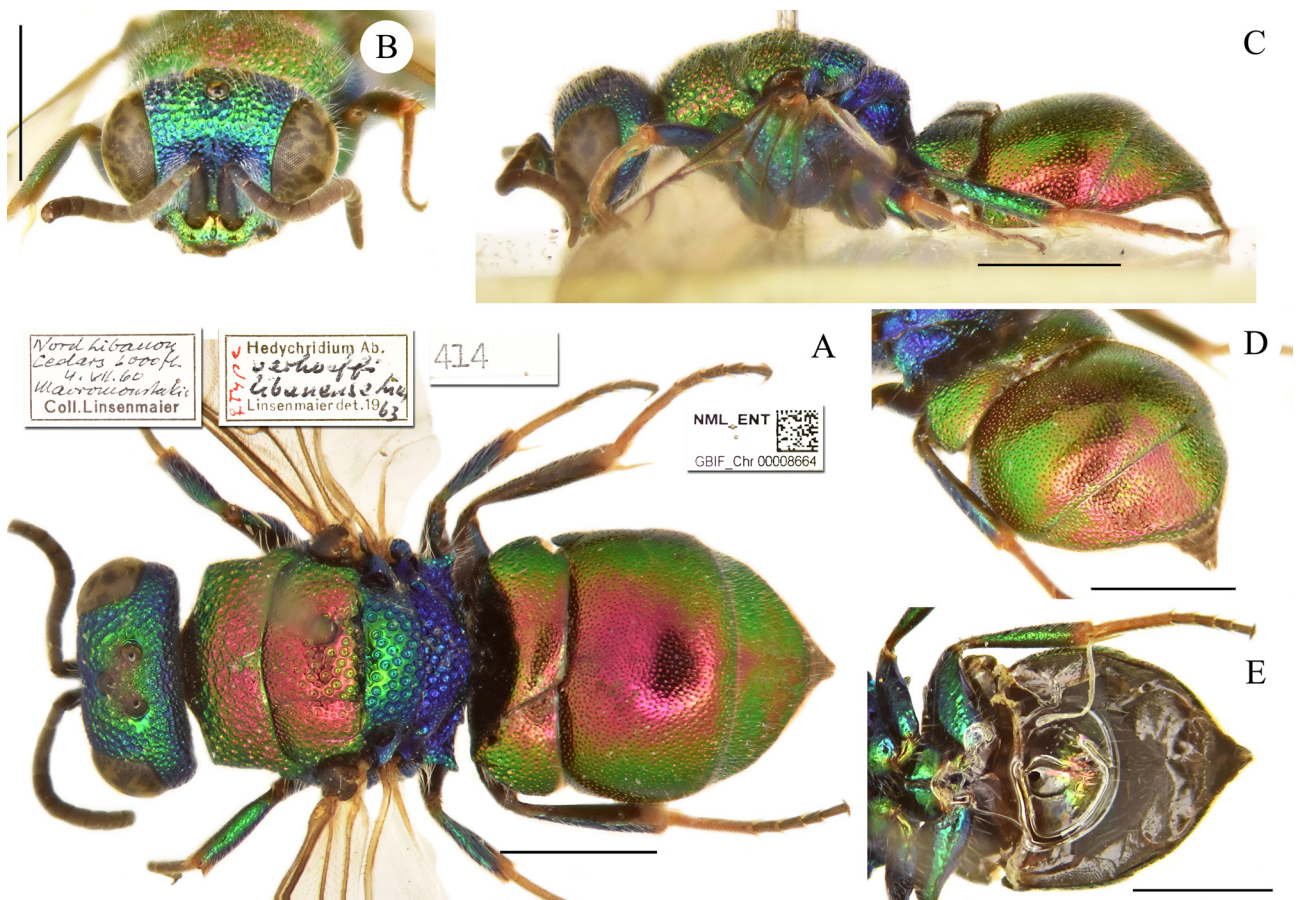


FIGURE 79. *Hedychridium verhoeffi libanense* Linsenmaier, 1987, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Mesosoma, ventral view. Scale bar 1 mm.

Systematic groups according to Linsenmaier's classification

The following list includes West Palearctic *Hedychridium* species according to Linsenmaier's classification. The list is a summary of both bibliographic data and unpublished records as found in his collection.

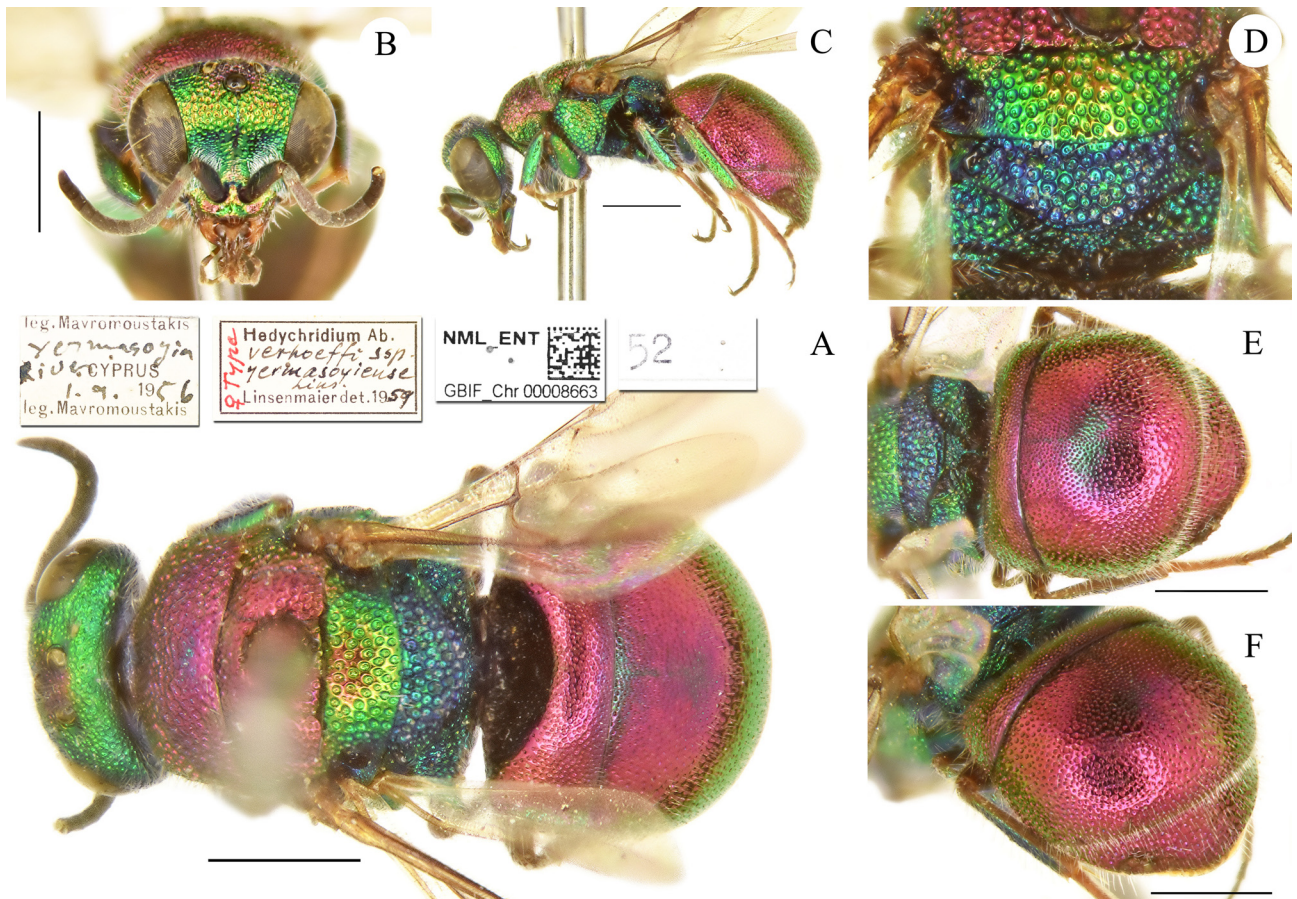


FIGURE 80. *Hedychridium verhoeffi yermasoyiense* Linsenmaier, 1959a, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Scutellum, metanotum, propodeum, posterior view. E) Metasoma, dorsal view. F) Metasoma, postero-lateral view. Scale bar 1 mm.

How to read the catalogue

<i>Taxon name</i> *	taxon present in collection and discussed in literature by Linsenmaier
(= <i>Taxon name</i>)	taxon considered a synonym by Linsenmaier
<i>Taxon name</i> **	taxon present in collection, but never cited by Linsenmaier
<i>Taxon name</i> ***	taxon cited or described by Linsenmaier, but not present in collection.
[<i>Taxon name</i>]	In square brackets: correct spelling, current status, or other remarks

Genus *Hedychridium* Abeille de Perrin, 1878

Subgenus *Prochridium* Linsenmaier, 1968

Hedychridium (*Prochridium*) *hirtipes** du Buysson in Mocsáry, 1902a; *H. punctum** Linsenmaier, 1994; *H. sericatum** Linsenmaier, 1994; *H. homalosomus**** Linsenmaier, 1994.

Subgenus *Hedychridium* s. str.

modestum group

[established by Linsenmaier (1999) previously named *H. luteipenne* group (1968) and *H. semenovi* group (1994)]

Hedychridium (*Hedychridium*) *luteipenne** Linsenmaier, 1968; *H. modestum** du Buysson, 1900; *H. semenovi** Kimsey in Kimsey & Bohart, 1991 [repl. name for *semirufum* Semenov-Tian-Shanskij, 1954]; *H. rectianale** Linsenmaier, 1999; *H. caireanum**** Linsenmaier, 1968; *H. flos** (Semenov-Tian-Shanskij, 1954).

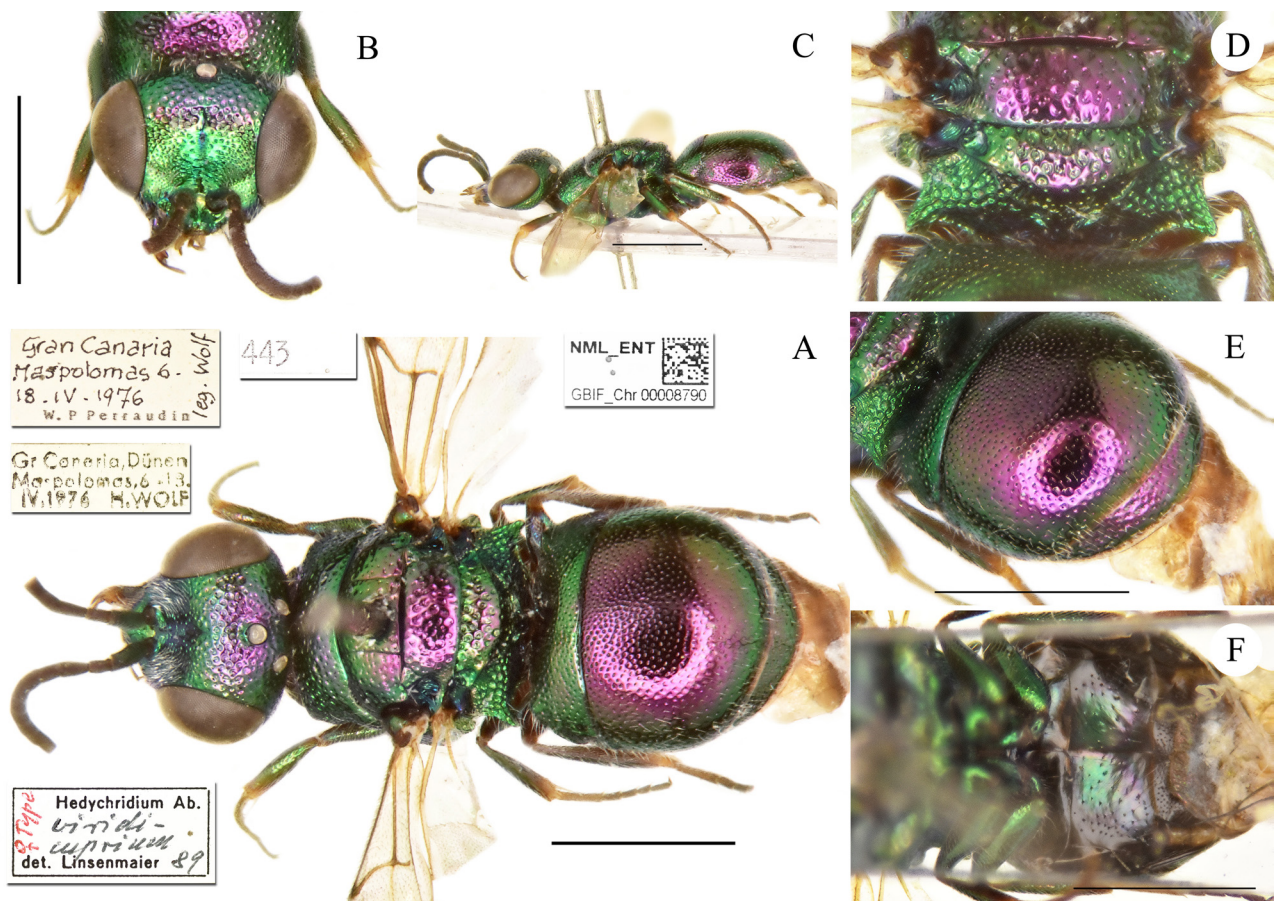


FIGURE 81. *Hedychridium viridicupreum* Linsenmaier, 1993, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Scutellum, metanotum, propodeum, posterior view. E) Metasoma, postero-lateral view. F) Metasoma, ventral view. Scale bar 1 mm.

planifrons group

Hedychridium (*Hedychridium*) *planifrons** du Buysson, 1900; *H. iocosum** Linsenmaier, 1959a [in Linsenmaier (1999) erroneously moved in the *roseum-sculpturatum* group]; *H. aegyptiacum** du Buysson, 1898; *H. aegyptiacum laetificum**** Linsenmaier, 1959a; *H. mysticum**** Semenov-Tian-Shanskij, 1912.

plagiatum group

Hedychridium (*Hedychridium*) *plagiatum** (Mocsáry, 1883) (= *albanicum* Trautmann, 1922); *H. andalusicum**** Trautmann, 1920; *H. wahisi*** Niehuis, 1998.

luteum group

[established by Linsenmaier (1999) based on a species previously included in the *H. roseum* group (Linsenmaier 1999)]

Hedychridium (*Hedychridium*) *luteum** Zimmermann, 1940; *H. planatum**** Bishoff, 1910 [misidentification, *H. planatum* is a member of the genus *Holopyga* Dahlbom, 1845 (Rosa & Pavesi 2020)].

ardens group

Hedychridium (*Hedychridium*) *purpurascens** (Dahlbom, 1854) (= *misdroyensis* Trautmann, 1927; = *maculatum* Trautmann, 1927; = *meyeri* Trautmann, 1916); *H. integrum** (Dahlbom, 1831) (= *aurora* Trautmann &

Trautmann, 1919; = *cupreum* (Dahlbom, 1845)) [currently *H. cupreum* (Dahlbom, 1845)]; *H. integrum asianum** Linsenmaier, 1997 [currently *H. asianum*]; *H. cupratum** (Dahlbom, 1854); *H. hauseri** Linsenmaier, 1999; *H. aereolum** du Buysson, 1892; *H. ardens** (Coquebert, 1801) (= *aeneus* Trautmann & Trautmann, 1919; = *bavaricum* Trautmann & Trautmann, 1919; = *carinulatum* (Schenk, 1861); = *cinctum* du Buysson, 1892; = *homeopathicum* Abeille de Perrin, 1878; = ? *jakovlevi* Semenow, 1892; = *melanogaster* García Mercet, 1904; = *minutum* (Lepeletier, 1806); = *viridimarginale* du Buysson, 1892; = *viridis* Trautmann & Trautmann, 1919); *H. jucundum** (Mocsáry, 1889); *H. bytinskii** Linsenmaier, 1959a (= *projucundum* Linsenmaier, 1959a); *H. viridisulcatum** Linsenmaier, 1968; *H. tricavatum** Linsenmaier, 1993; *H. canariense** García Mercet, 1915; *H. incensa**** [incensum] (Mocsáry, 1914); *H. discordum** Linsenmaier, 1959a; *H. israelicum** Linsenmaier, 1968; *H. hyalitarise** Perraudin, 1978; *H. interrogatum** Linsenmaier, 1959a; *H. verhoeffi** Linsenmaier, 1959a; *H. verhoeffi yermasoyiense** Linsenmaier, 1959a; *H. verhoeffi libanense** Linsenmaier, 1987; *H. pulchellum** (Mocsáry, 1893); *H. marteni** Linsenmaier, 1951; *H. ruborum** Linsenmaier, 1959a; *H. rubrum** Linsenmaier, 1968; *H. buyssoni** Abeille de Perrin in du Buysson, 1887 (= *melanogaster* García Mercet, 1904); *H. etnaense** Linsenmaier, 1968; *H. obscurifacies** Linsenmaier, 1999; *H. parcobarbatum** Linsenmaier, 1999; *H. viridicupreum** Linsenmaier, 1993; *H. reticulatum** Abeille de Perrin, 1878 (= *hispanicum* du Buysson, 1892); *H. cupritibiale** Linsenmaier, 1987; *H. proreticulatum** Linsenmaier, 1999; *H. duplicatum** Linsenmaier, 1999; *H. subreticulatum* Linsenmaier, 1999; *H. tussaci**** Linsenmaier, 1999; *H. scintilla** Semenov-Tian-Shanskij, 1954; *H. algerum** (Mocsáry, 1889) (= *H. sparsapunctulatum* Linsenmaier, 1959); *H. infans** Abeille de Perrin, 1878; *H. infans santschii** Trautmann, 1927; *H. infantum** Linsenmaier, 1997; *H. kenitranum** Linsenmaier, 1999; *H. jordanense* Linsenmaier, 1968; *H. unibrubrum** Linsenmaier, 1999; *H. canarianum** Linsenmaier, 1987 (repl. name for *canariense* Linsenmaier, 1968 nec García Mercet 1915); *H. persciturum** Linsenmaier, 1959a; *H. sevellanum** Linsenmaier, 1968; *H. extraneum** Linsenmaier, 1993; *H. aequabilitum**** Linsenmaier, 1994.

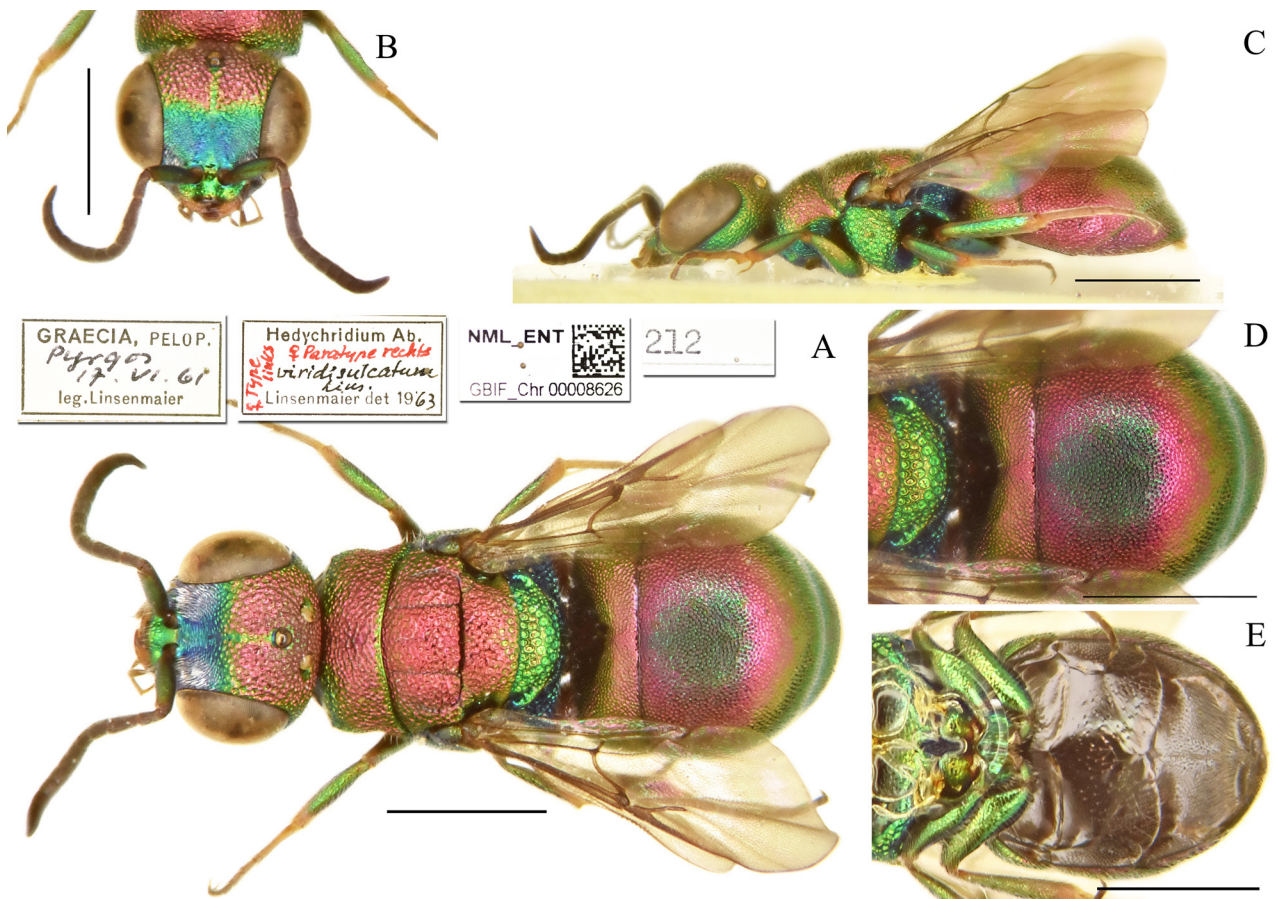


FIGURE 82. *Hedychridium viridisulcatum* Linsenmaier, 1968, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, dorsal view. E) Metasoma, ventral view. Scale bar 1 mm.

coriaceum group

(established by Linsenmaier (1999) based on species previously included in the *ardens* group)

Hedychridium (*Hedychridium*) *elegantulum** du Buysson, 1887 (= *hybridum* Linsenmaier, 1959a); *H. elegantulum peloponnense** Linsenmaier, 1968; *H. creteense** Linsenmaier, 1959b; *H. coriaceum** (Dahlbom, 1854); *H. coriaceum jendoubense** Linsenmaier, 1987; *H. subcoriaceum** Linsenmaier, 1999; *H. krajniki** Balthasar, 1946 (= *stoeckerti* Linsenmaier, 1959a); *H. krajniki valesianum** Linsenmaier, 1959a [currently *H. valesianum*]; *H. krajniki turceyense** Linsenmaier, 1968 [currently *H. turceyense*]; *H. brevifronte** Linsenmaier, 1968; *H. urfanum** Linsenmaier, 1968; *H. mosadunense* Lefebvre, 1986; *H. turanicum** Semenov-Tian-Shanskij, 1954; *H. wolffi** Linsenmaier, 1959b; *H. perraudini** Linsenmaier 1968 [currently *H. wolffi*]; *H. bispeculiferum**** Linsenmaier, 1997; *H. caspicum**** (Mocsáry, 1890); *H. femoratum** (Dahlbom, 1854); *H. gratiosum** Abeille de Perrin, 1878 (= *elegans* (Mocsáry, 1911); = *miricolor* Morice, 1909); *H. gratiosum uniformis** Linsenmaier, 1959a; *H. flavonigrum**** Linsenmaier, 1999; *H. chlorophyllum** Trautmann, 1926; *H. parkanense** Balthasar, 1946; *H. parkanense dimorphum** Linsenmaier, 1959a; *H. franciscanum** Linsenmaier, 1987; *H. franciscanum heminigrum** Linsenmaier, 1997.

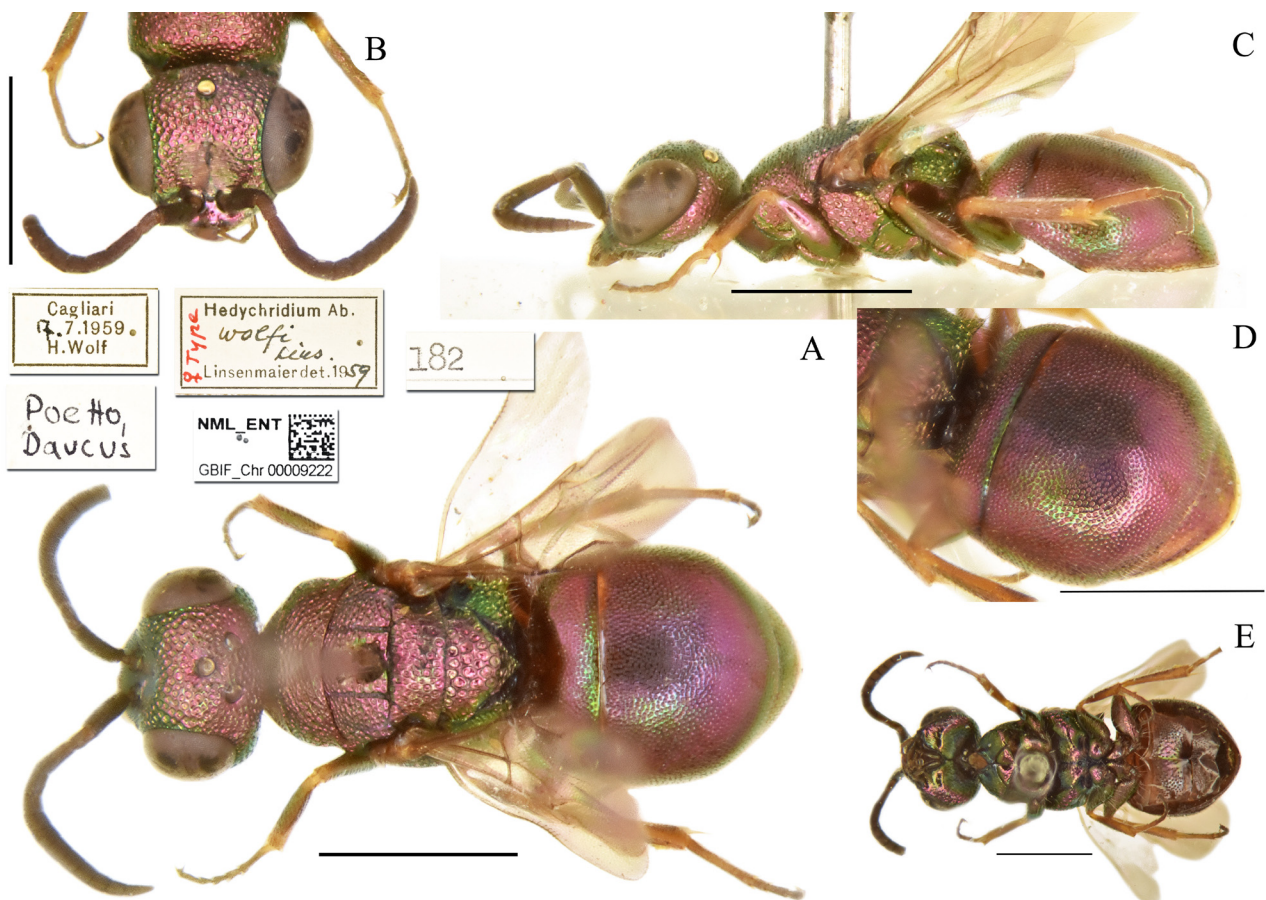


FIGURE 83. *Hedychridium wolffi* Linsenmaier, 1959b, holotype, female. A) Habitus, dorsal view. B) Head, frontal view. C) Habitus, lateral view. D) Metasoma, postero-lateral view. E) Habitus, ventral view. Scale bar 1 mm.

monochroum group

[Linsenmaier (1999) proposed the *ardens-monochroum* group]

Hedychridium (*Hedychridium*) *monochroum** du Buysson, 1888; *H. adventicium** Zimmerman, 1962; *H. jazycicum**** Móczár, 1964 [currently *H. adventicium* Zimmermann, 1962, *ardens* group]; *H. minutissimum**** García Mercet, 1915; *H. zelleri* (Dahlbom, 1845) (= *preciosa* Trautmann, 1926) [currently *ardens* group]; *H. atratum** Linsenmaier, 1968 [currently *Chamaeholopyga*]; *H. carmelitanum* García Mercet, 1915; *H. rhodojantimum** Enslin, 1939; *H. rhodojantimum mutense** Linsenmaier, 1968; *H. tenerifense** Linsenmaier, 1968; *H. pusio****

(Semenov-Tian-Shanskij & Nikol'skaya, 1954) [currently *H. monochroum*]; *H. cyanellum**** (Semenov-Tian-Shanskij & Nikol'skaya, 1954); *H. obscuratum**** (Semenov-Tian-Shanskij & Nikol'skaya, 1954).

anale group

[established by Linsenmaier (1997) with species previously included in the *H. ardens*, *H. incrassatum* and *H. postthoracicum* groups (Linsenmaier 1968)]

*Hedychridium (Hedychridium) ibericum** Linsenmaier, 1959a; *H. anale** (Dahlbom, 1854); *H. dubium** García Mercet, 1904; *H. postthoracicum** Linsenmaier, 1959a; *H. disiunctum** Linsenmaier, 1959a; *H. garianum** Linsenmaier, 1968; *H. holopygum**** Linsenmaier, 1994; *H. stenodactylum**** Linsenmaier, 1994.

heliophilum group

[established by Linsenmaier (1997) with species previously included in the *H. incrassatum* group]

*Hedychridium (Hedychridium) heliophilum** du Buysson, 1887; *H. vachali** García Mercet, 1915; *H. vachali decoloratum** Linsenmaier, 1999; *H. inusitatum** Linsenmaier, 1959a; *H. perpunctatum** Balthasar, 1953 (= *insequosum* Linsenmaier, 1959a).

incrassatum group

*Hedychridium (Hedychridium) incrassatum** (Dahlbom, 1854) (= *callosum* Radoszkovsky, 1877); *H. incrassatum mavromoustakisi** Enslin, 1950; *H. subaheneum** Linsenmaier, 1959a; *H. rubescens** Linsenmaier, 1999; *H. laevicypeatum** Linsenmaier, 1999; *H. pseudincrassatum** Linsenmaier, 1968; *H. aheneum** (Dahlbom, 1854); *H. aheneum feritatum** Linsenmaier, 1959b; *H. virescens** du Buysson, 1908; *H. virescens feroculum**** Linsenmaier, 1959a; *H. tyro** Trautmann, 1926; *H. tyro viridiluteum** Linsenmaier, 1999; *H. amatum** (= *tyro zimmermanni* Balthasar, 1953); *H. guichardi**** Linsenmaier, 1994; *H. piligaster** Linsenmaier, 1969; *H. moricei** du Buysson, 1904 (= *pallipes* (Tournier, 1879); = *sapphirinum* Semenov-Tian-Shanskij, 1954); *H. moricei davydovi** (Semenov-Tian-Shanskij, 1967) (= *moricei chrysurus* Linsenmaier, 1969).

flavipes group

[members of this group are currently included in the genus *Colpopyga* Semenov-Tian-Shanskij, 1954]

*Hedychridium (Hedychridium) flavipes** (Eversmann, 1858) (= *bellipes* (Mocsáry, 1879); = *solandii* (Courtyler, 1859)); *H. flavipes rugulosum** Linsenmaier, 1959a; *H. flavipes temperatum** Linsenmaier, 1959a [currently *C. temperata*]; *H. auriventris** García Mercet, 1904.

elongatum group

[established by Linsenmaier (1999), based on a single species previously included in the *flavipes* group]

*Hedychridium elongatum**** Linsenmaier, 1959.

margaritaceum group

[established by Linsenmaier (1968) based on a single species later moved in the *flavipes* group (1997). This species (group) is anyway well distinct from all other species and placed separately in Linsenmaier's collection. We consider valid the interpretation given by Linsenmaier (1968)]

*Hedychridium (Hedychridium) margaritaceum** (Semenov-Tian-Shanskij, 1954) (= *Irenula margaritacea* Semenov-Tian-Shanskij, 1954).

roseum group

[Linsenmaier (1999) proposed the *roseum-sculpturatum* group]

*Hedychridium (Hedychridium) roseum** (Rossi, 1790) (= *bohemicum* Spaček, 1935; = *erschowi* (Radoszkowski, 1877); = *nanum* (Chevrier, 1870); = *nitens* Hoffer, 1937; = *rosae* (Dahlbom, 1829); = *rufa* (Panzer, 1801); = *spaceki* Hoffer, 1937; = *suave* (Tournier, 1878); = *sudeticum* Spaček, 1935); *H. roseum caputaureum** Trautmann & Trautmann, 1919 [currently *H. caputaureum*]; *H. roseum turanum** Semenov-Tian-Shanskij, 1954; *H. lampadum** Linsenmaier, 1959a (repl. name for *lampas* Christ, 1791); = *lampadum sorianum* Linsenmaier, 1959a; currently *H. roseum* (Rossi, 1790)]; *H. lampadum limassolense** Linsenmaier, 1959a (repl. name for *roseum cyriacum* Balthasar, 1953) [currently *H. insulare* Balthasar, 1952]; *H. lampadum austeritatum** Linsenmaier, 1997 [currently *Hedychridium sculpturatum* (Abeille de Perrin, 1877)]; *H. chloropygum** du Buysson, 1888; *H. chloropygum densus** Linsenmaier, 1959a [currently *H. caputaureum* Trautmann, 1926]; *H. chloropygum spatium** Linsenmaier, 1959a [currently *H. caputaureum* Trautmann, 1926]; *H. chloropygum berberiacum** Linsenmaier, 1959a; *H. subroseum** Linsenmaier, 1959a; *H. subroseum prochloropygum** Linsenmaier, 1959a; *H. tsunekii** Linsenmaier, 1959a; *H. pseudoroseum** Linsenmaier, 1959a; *H. semiluteum** Linsenmaier, 1959a; *H. houskai** Balthasar, 1953; *H. hofferi**** Balthasar, 1953; *H. susterai** Balthasar, 1953; *H. iridirufum**** Linsenmaier, 1994.

sculpturatum group

[Linsenmaier (1999) proposed the *roseum-sculpturatum* group]

*Hedychridium (Hedychridium) hungaricum**** Móczár, 1964; *H. sculpturatum** Abeille de Perrin, 1877; *H. valesiense** Linsenmaier, 1959a [currently *H. rossicum* Gussakowskij, 1948]; *H. caucasicum** Trautmann, 1926 (= *insulare* Linsenmaier, 1959a); *H. caucasicum irregulare** Linsenmaier, 1959a; *H. mediocrum** Linsenmaier, 1987 (= *scutellare sensu* Linsenmaier 1959a; = *H. mediocrate* Kimsey in Kimsey & Bohart, 1991); *H. scutellare** Tournier, 1878 (= *mediocre* Linsenmaier, 1959a); *H. scutellare sardiniense** Linsenmaier, 1959b (= *corsuense* Perraudin, 1978) [currently *H. scutellare* (Tournier, 1877)]; *H. scutellare tunesiense** Linsenmaier, 1959a; *H. maroccense** Linsenmaier, 1959a; *H. placare** Linsenmaier, 1968 [currently *H. pseudoroseum*]; *H. palestinense** Balthasar, 1953; *H. maculiventre** Linsenmaier, 1959a [unnec. repl. name for *palestinense* Balthasar, 1953] [currently *H. maculisternum* Arens, 2011] (= *sculpturatissimum* Linsenmaier, 1959b: 235); *H. maculiventre raucum** Linsenmaier, 1997 [currently *H. maculisternum* Arens, 2011]; *H. maculiventre sculpturatissimum** Linsenmaier, 1959a [(= *maculiventre* Linsenmaier, 1959b); *H. sardinum** Linsenmaier, 1997 [currently *H. scutellare* (Tournier, 1877)]; *H. biskranum** Linsenmaier, 1999.

Conclusions

Linsenmaier's publications (1959a, b, 1968, 1969, 1987, 1993, 1994, 1997, 1999) are the only available tool for the identification of the *Hedychridium* in the West Palaearctic realm. In fact, he was the only author to provide keys to species level at a supra-national scale: Europe and part of western Asia (1959a, 1997), Arabian Peninsula (1994) and northern Africa (1999). Of course, several descriptions and diagnosis are too short, morphological characters may appear sometimes obscure in line drawings (Kimsey & Bohart 1991) and he could not check all type specimens deposited in museums, thus generating new synonymies (Arens 2010). However, although his studies may be hard to understand for beginners, they are useful for advance researchers. Moreover, his descriptions are clear when researchers can examine his collection and personally observe type specimens.

The types described by Linsenmaier, as well as other specimens deposited in this collection still need a revision as explained by Arens (2010, 2011), who studied the *Hedychridium* species of the *roseum* group (*roseum-sculpturatum* group sensu Linsenmaier) deposited at NMLU.

Acknowledgements

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