

# Identification of British species of the *Chrysis ignita* group

Juho Paukkunen ©

Finnish Museum of Natural History

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and **Ika Österblad (IÖ)**

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## ***Chrysis* Linnaeus, 1761**

- Largest genus of Chrysididae with >1000 species
- >70 species groups
- 4 species groups and 17 species in the UK
- Polyphyletic in relation to *Chrysura*, *Trichrysis* etc.
- Parasites of Eumeninae, Megachilidae, Sphecidae and Crabronidae

## ***Chrysis ignita* group**

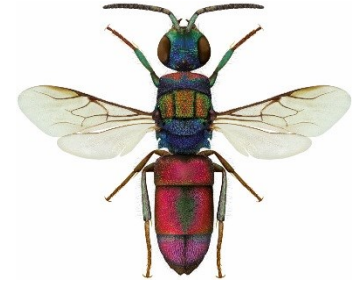
- Largest species group of *Chrysis* with > 100 species worldwide
- 13 species in the UK, which belong to 4 subgroups
- Monophyletic
- Parasites of Eumeninae
- Species morphologically similar

# Chrysis species of the British Isles

Chrysis

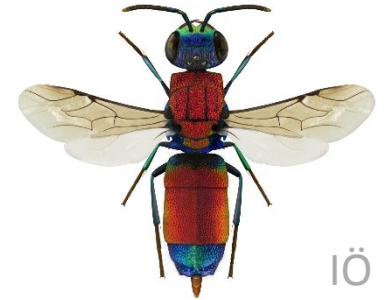
*Chrysis succincta* group

{ *bicolor*  
*illigeri*



*Chrysis varidens-gracillima* group

*gracillima*



IÖ

*Chrysis viridula* group

*viridula*

*angustula*

*corusca*

*fulgida*

*ignita*

*impressa*

*longula*

*mediata*

*pseudobrevitarsis*

*ruddii*

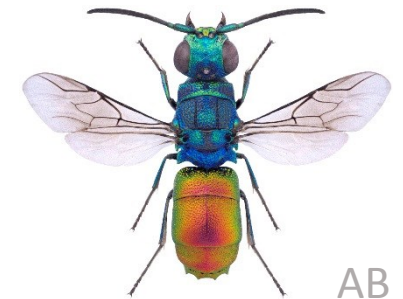
*schencki*

*solida*

*terminata*

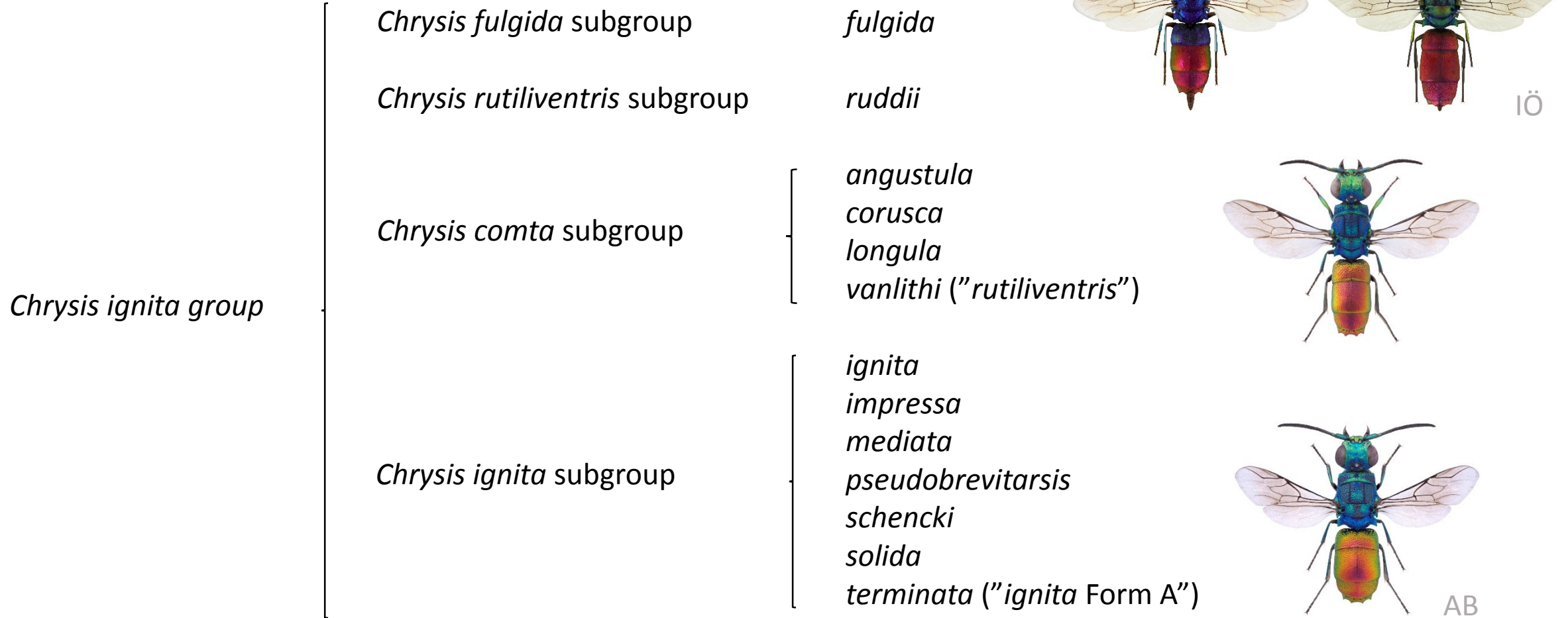
*vanlithi*

*Chrysis ignita* group



AB

# *Chrysis ignita* group in the British Isles





***Chrysis pseudobrevitarsis***

**Other species of the *Chrysis ignita* group**

*Spurs of mesotibia*

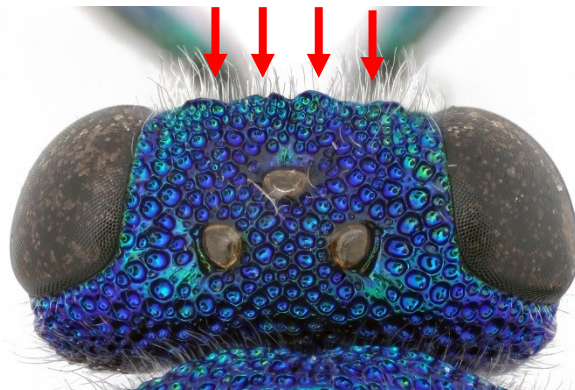


*Length of metatibia vs. metatarsus*



***Chrysis terminata***

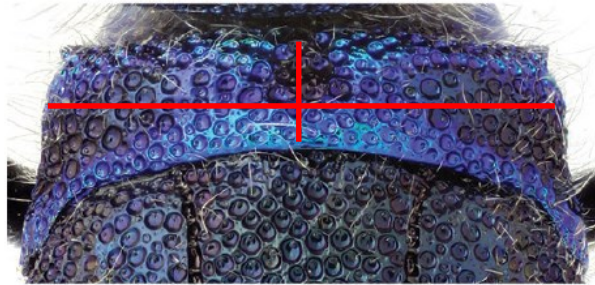
*Structure of frontal carina*



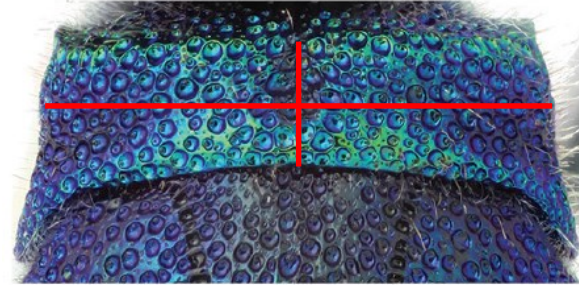
***Chrysis ruddii* and *vanlithi***

**Other species of the *Chrysis ignita* group**

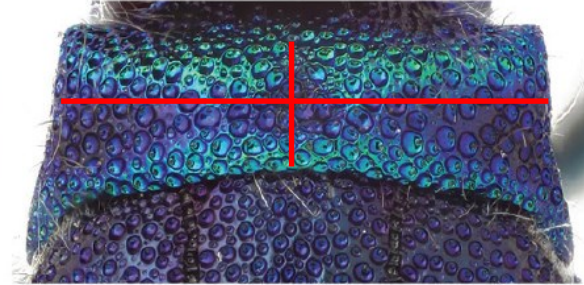
Length of pronotum



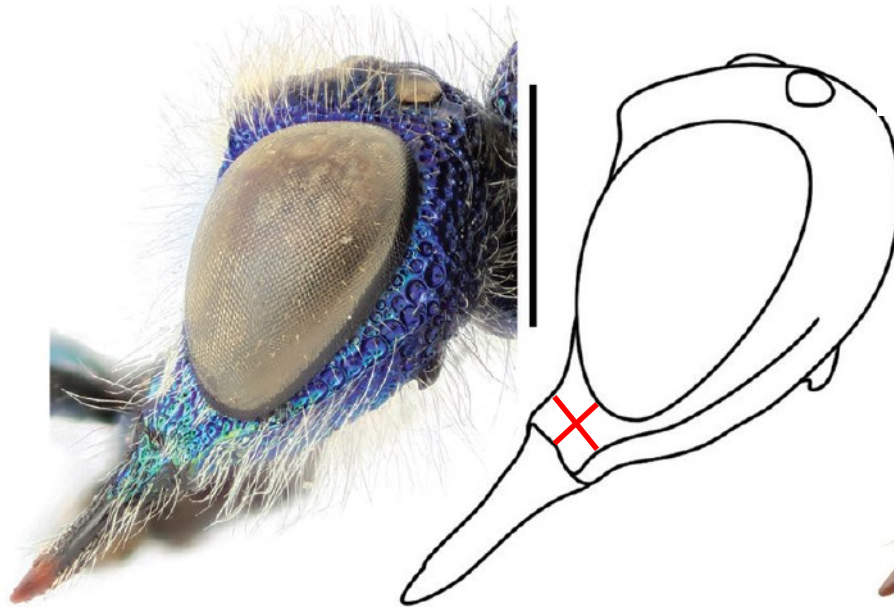
Length < 1/4 of width



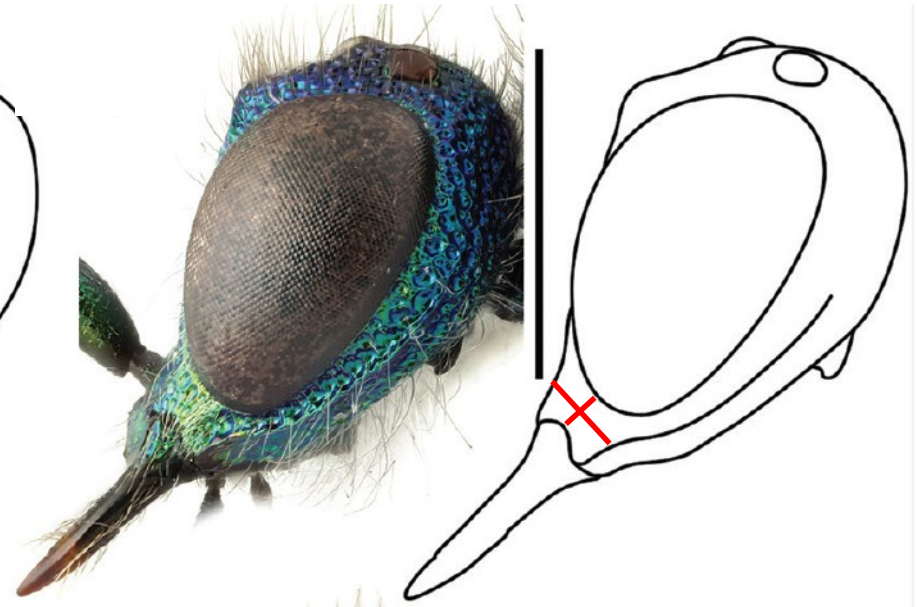
Length ≥ 1/4 of width



Length of malar space of female



Length ≈ width



Length < width

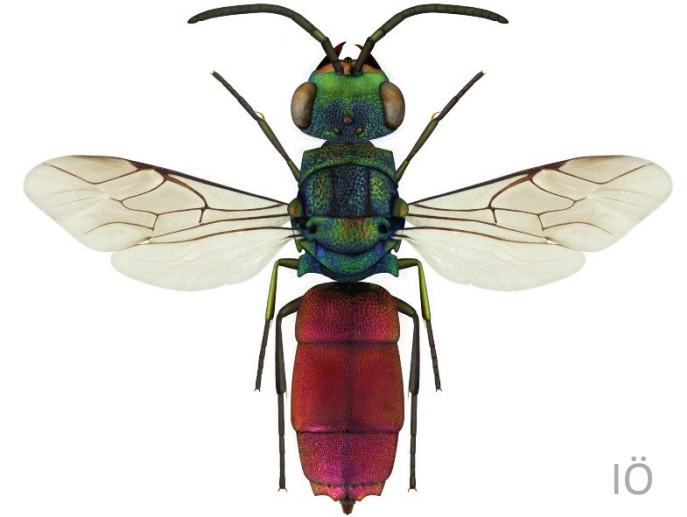
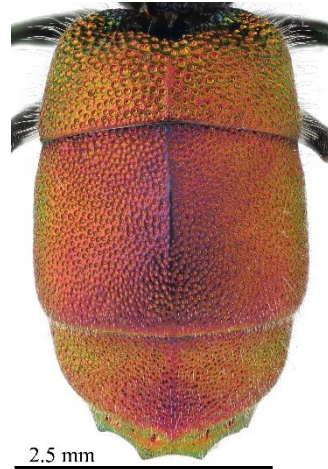


Punctation of tergites

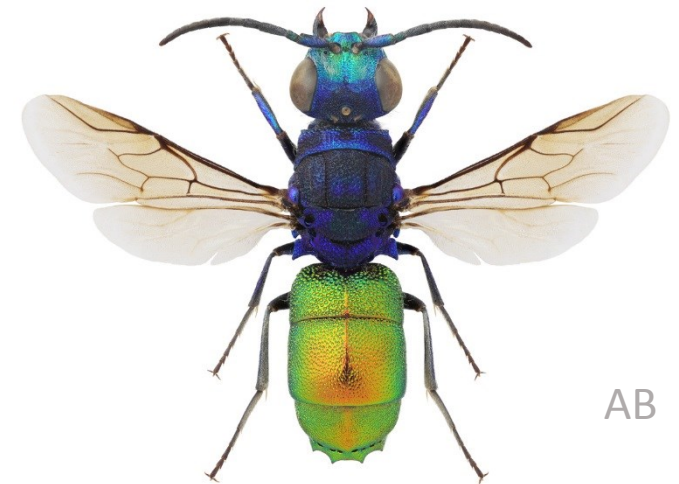
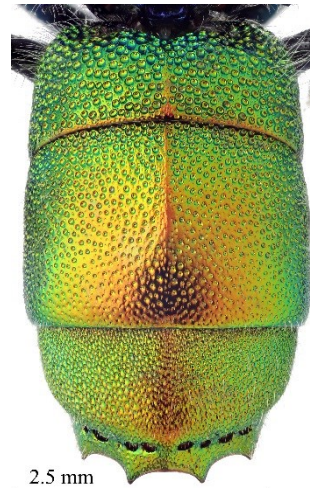
Colour of sternites

Habitus

*Chrysis ruddii*

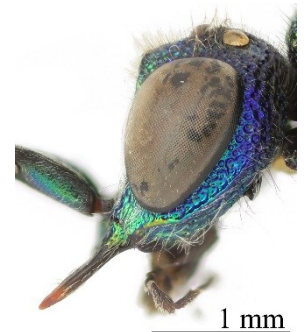
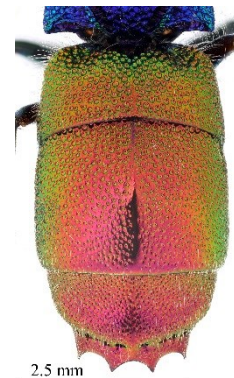


*Chrysis vanlithi*



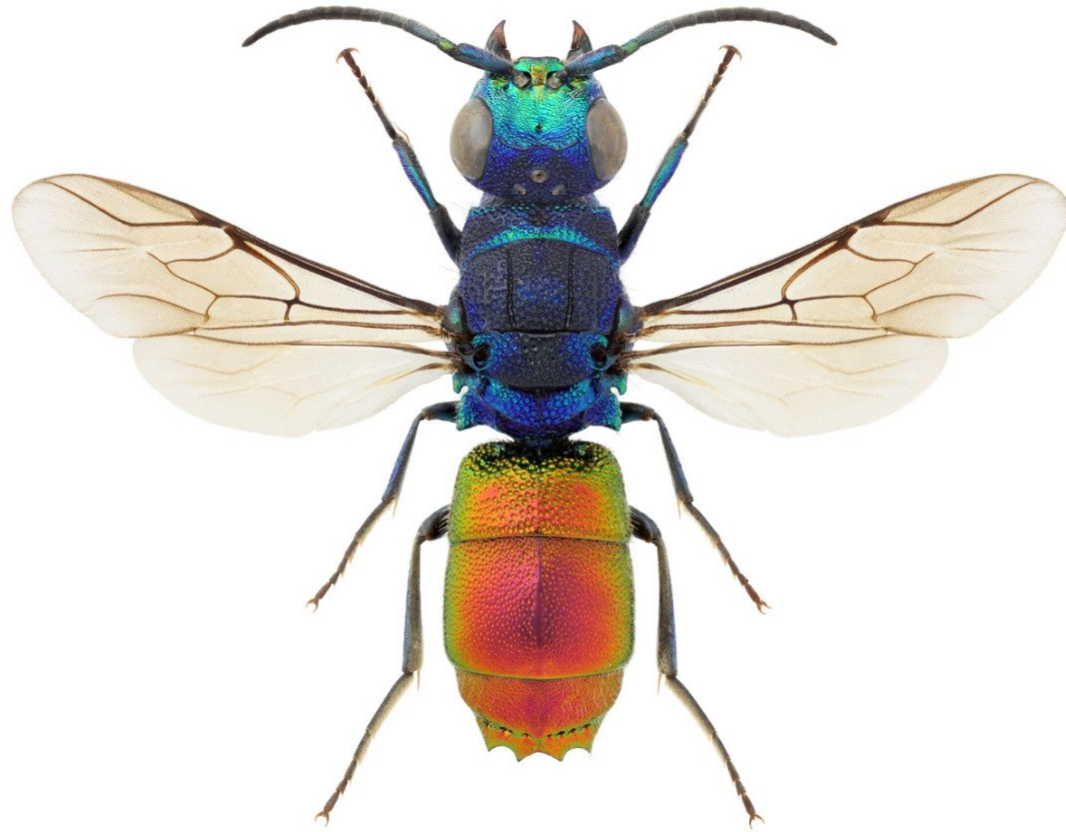
## Remaining species of the *Chrysis ignita* group

	Group 1	Group 2	Group 3
	<i>Chrysis mediata</i> <i>Chrysis solida</i>	<i>Chrysis angustula</i> <i>Chrysis corusca</i> <i>Chrysis longula</i>	<i>Chrysis ignita</i> <i>Chrysis impressa</i> <i>Chrysis schencki</i>
Ovipositor	broad	narrow	narrow
Inner margin of paramere	angled	rounded	rounded
Punctation of T3	dense, ± matte	sparse, shiny	dense, ± matte
Mandible	thick	thick	thin
Sides of metasoma	convex	nearly parallel	convex





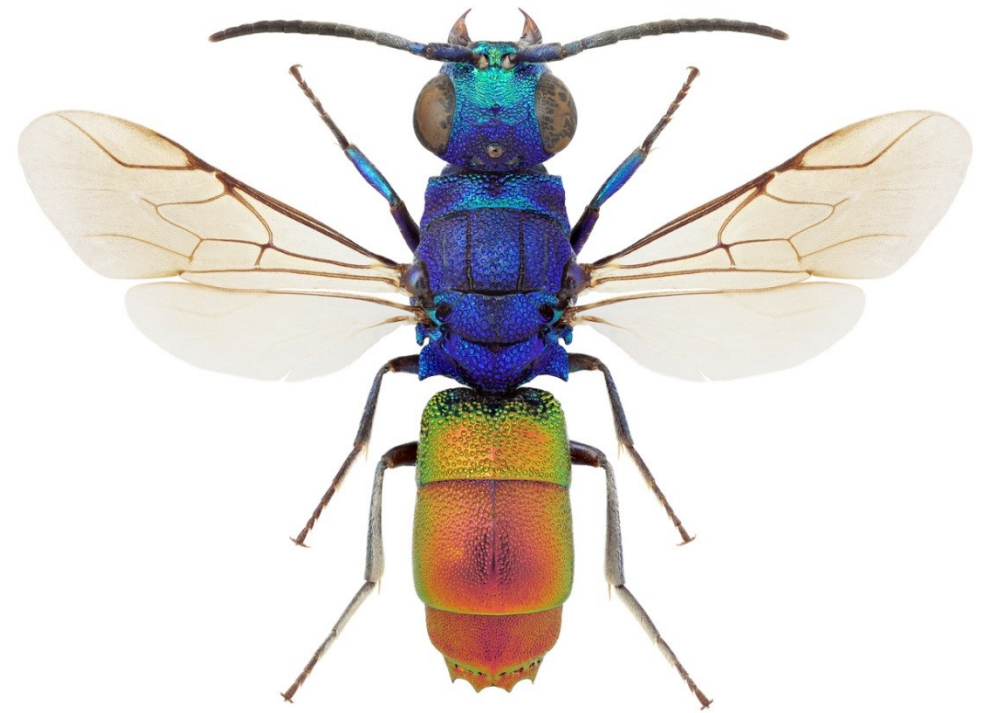
*Chrysis mediata*



Habitus  
of female

Host: *Odynerus*

*Chrysis solida*



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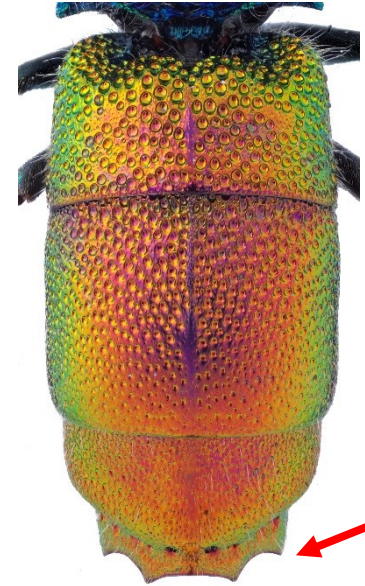
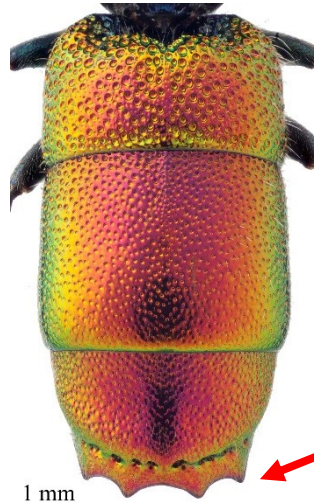
Host: *Ancistrocerus*, *Euodynerus*

*Chrysis angustula*

*Chrysis corusca*

*Chrysis longula*

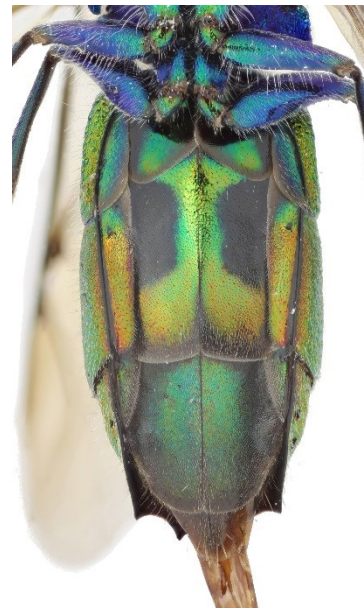
Punctation of tergites



Shape of apical teeth

1 mm

Colour of sternites

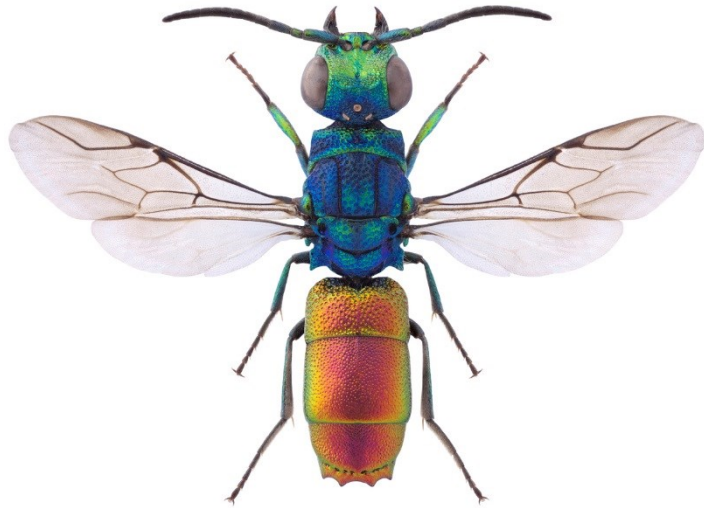


2 mm

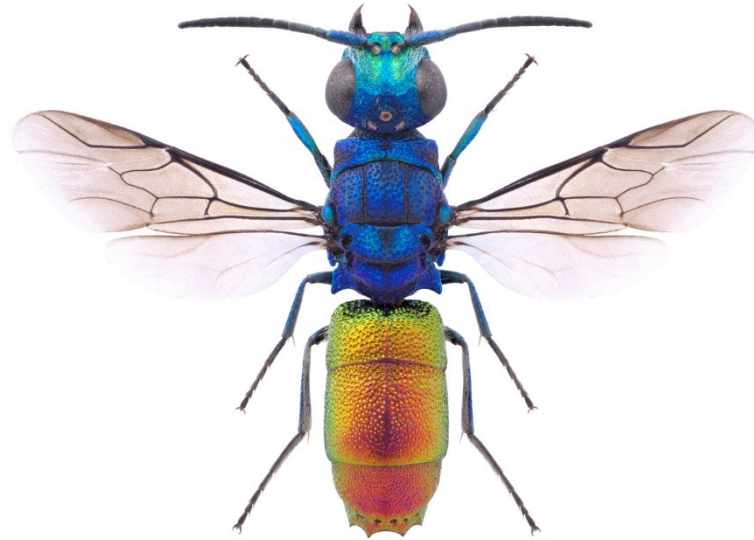
2.5 mm



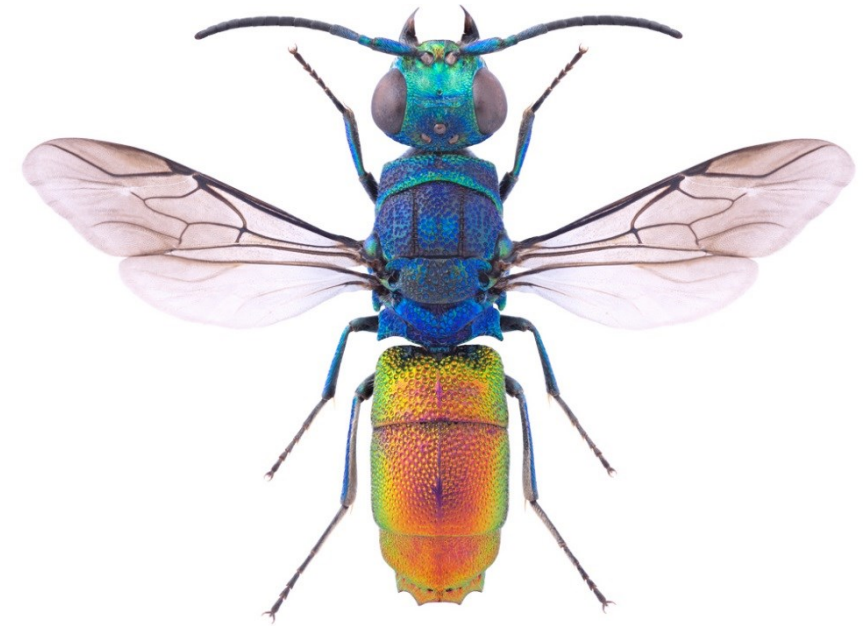
*Chrysis angustula*



*Chrysis corusca*



*Chrysis longula*



*Habitus of female*

AB

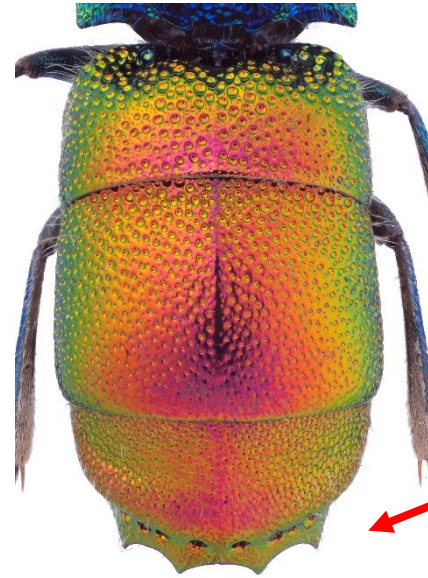
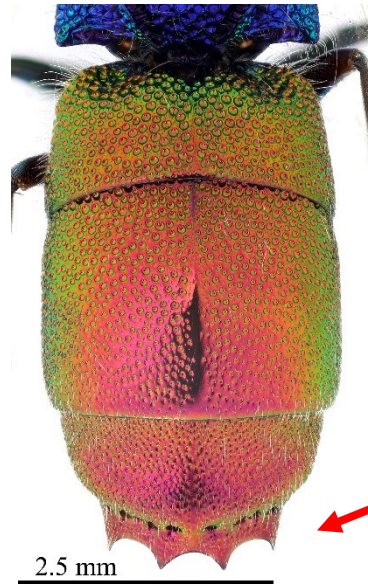


*Chrysis ignita*

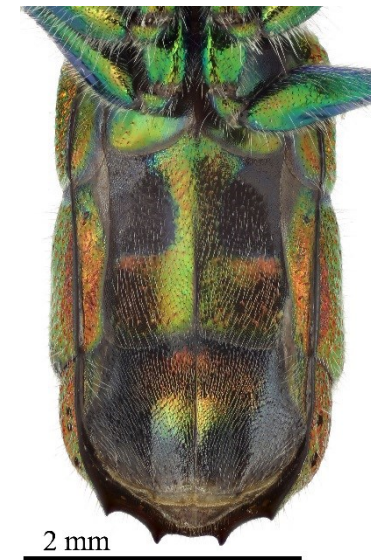
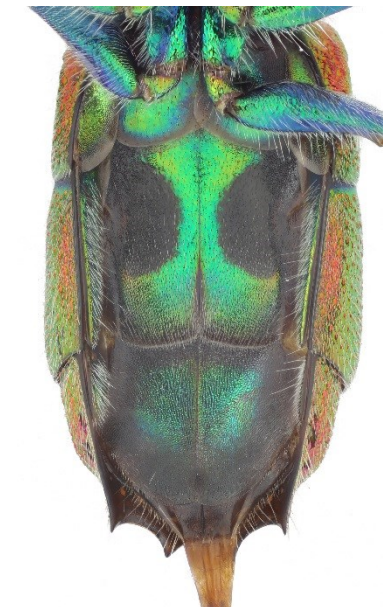
*Chrysis impressa*

*Chrysis schencki*

Punctuation of tergites



Shape of apical teeth



Colour of sternites

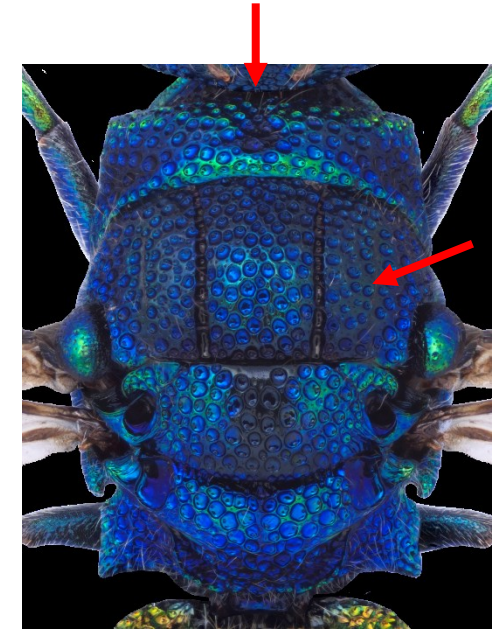
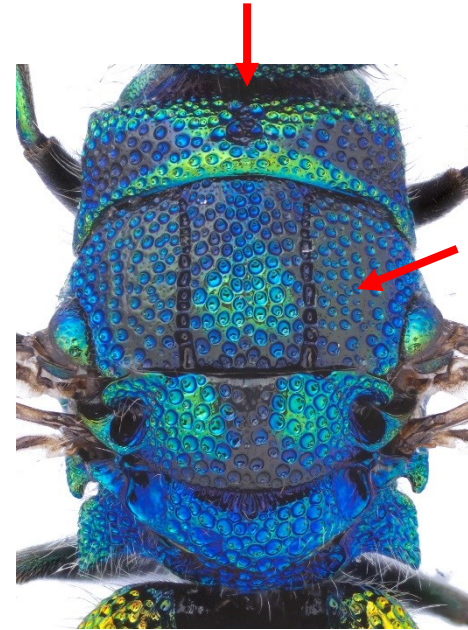
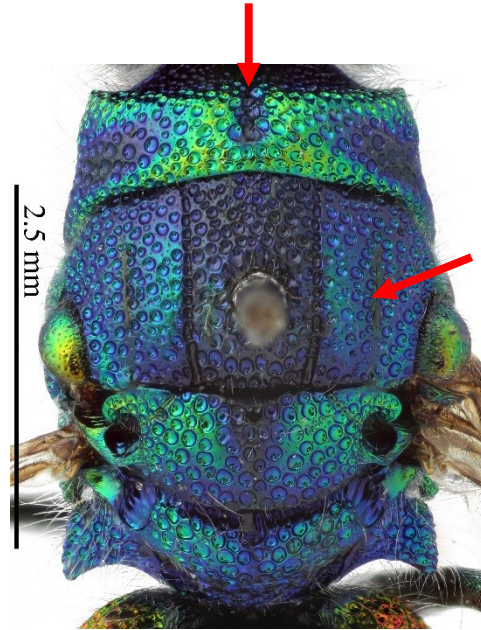
*Chrysis ignita*

*Chrysis impressa*

*Chrysis schencki*

Width of pronotal furrow

Colour of mesoscutum



Length of antennal segments

F1:F2 = 1.1-1.2

F1:F2 = 1.3-1.5

F1:F2 = 1.2-1.4

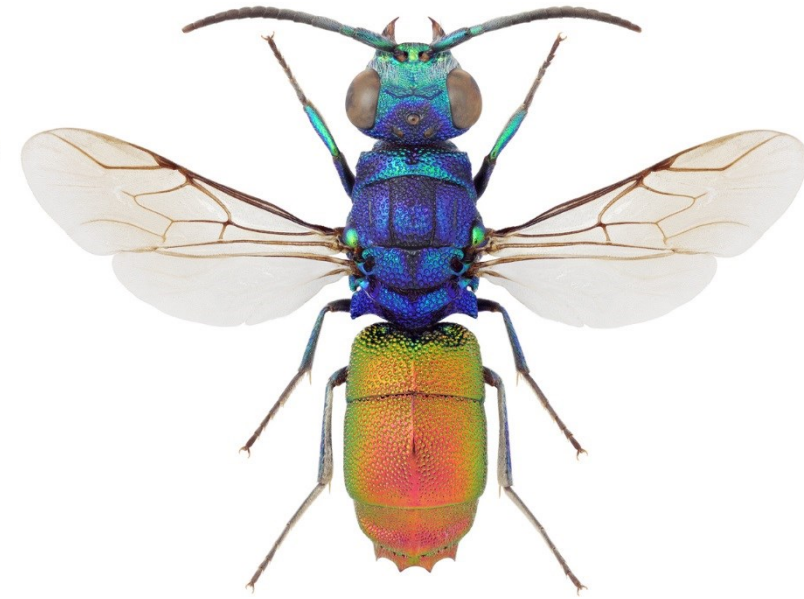
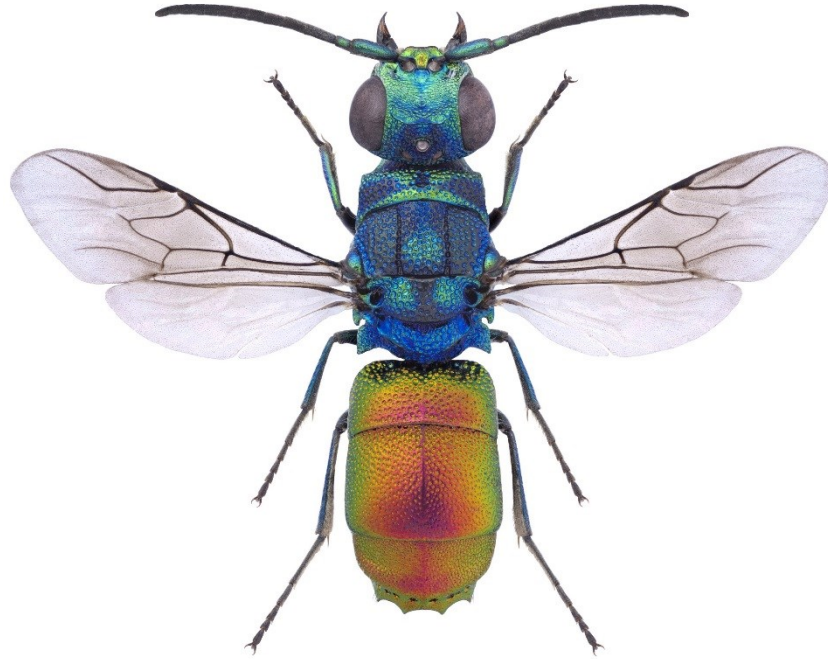
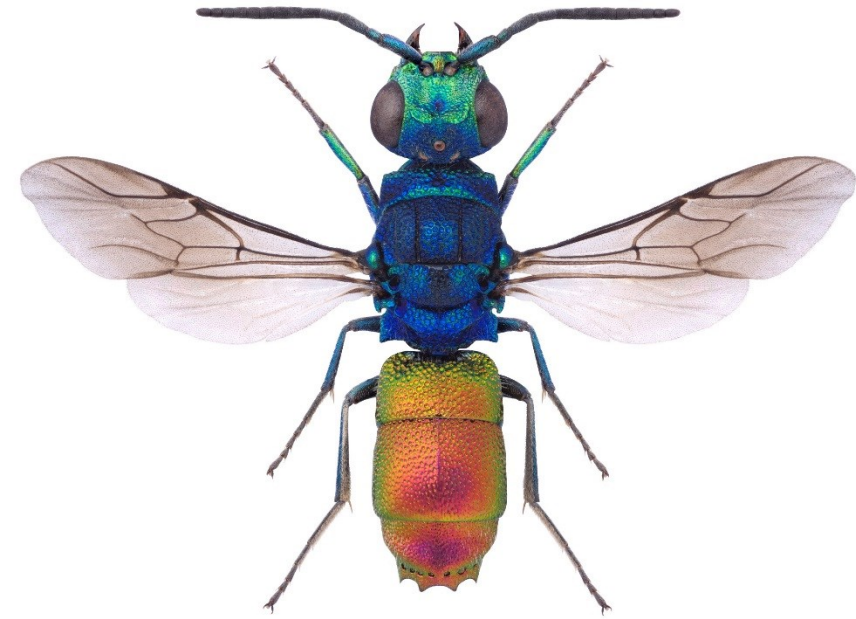




*Chrysis ignita*

*Chrysis impressa*

*Chrysis schencki*



*Habitus of female*

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# Additional species that possibly could be found from the British Isles

*Chrysis borealis* Paukkunen et al., 2015

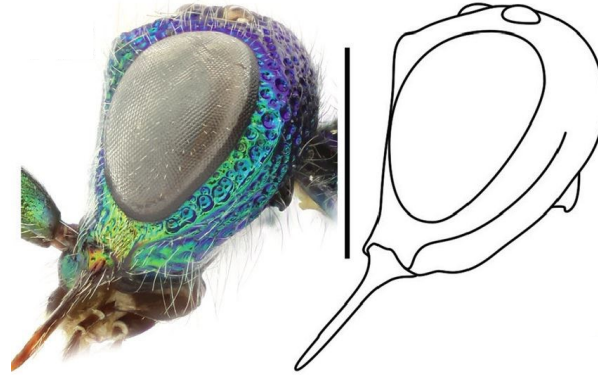
*Chrysis horridula* Orlovskyté, 2016

*Chrysis parietis* Budrys, 2016

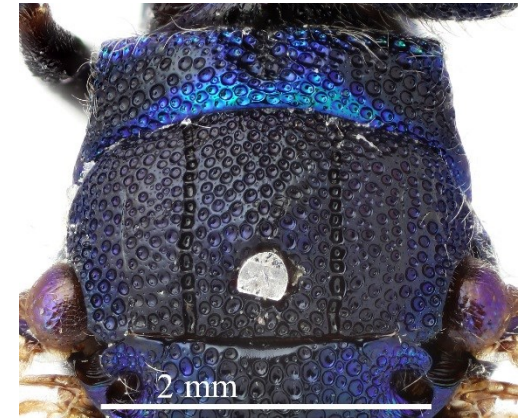
*Chrysis leptomandibularis* Niehuis, 2000

*Chrysis "parabrevitarsis"* undescribed

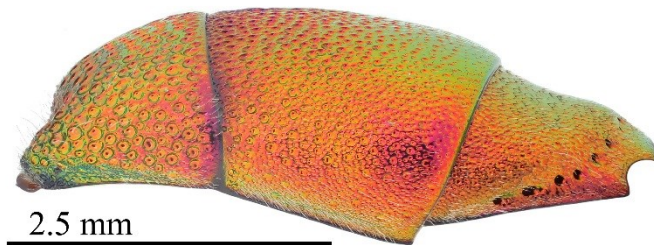
*Chrysis subcoriacea* Linsenmaier, 1959



*Chrysis leptomandibularis*



*Chrysis borealis*



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*Chrysis subcoriacea*

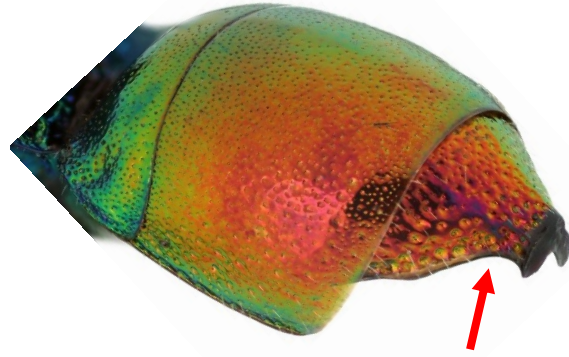


*Chrysis "parabrevitarsis"*

Photo: Villu Soon

*Elampus foveatus*

Lateral margin of T3

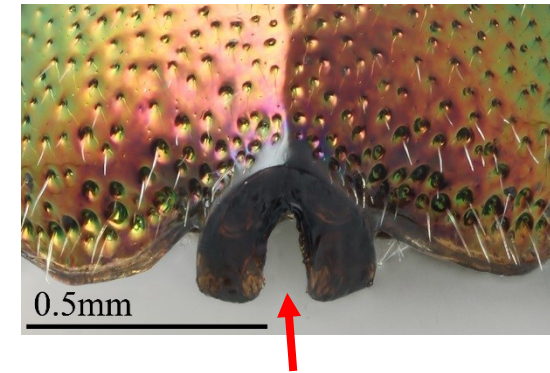
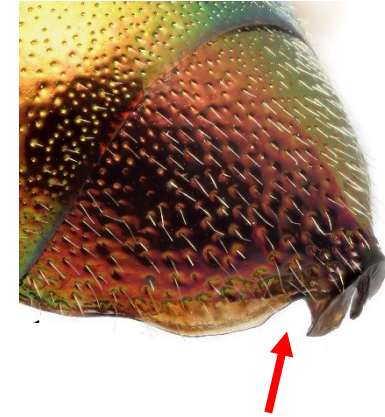


Apical truncation of T3



2 exx. collected from southern Essex in 2018

*Elampus panzeri*



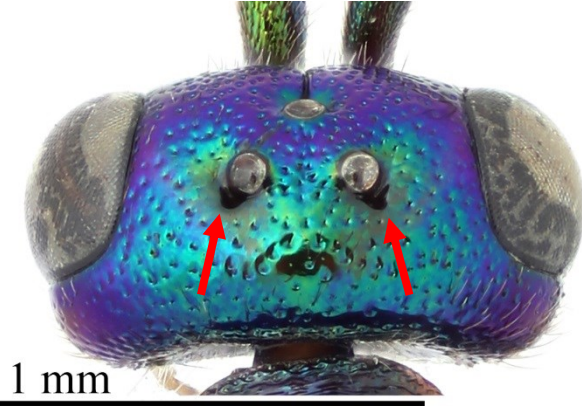
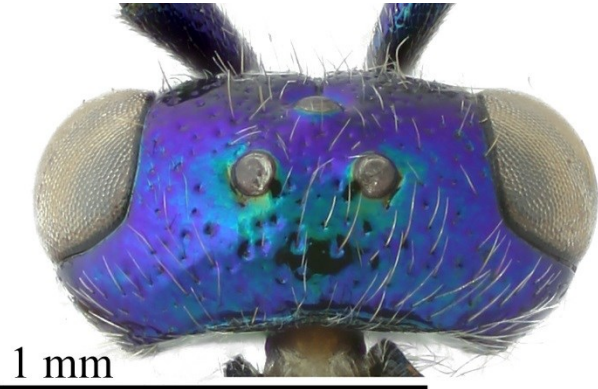
Widespread in England

AB

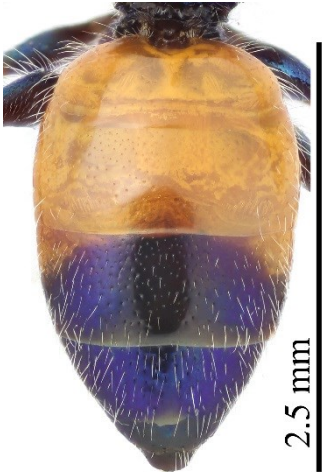
*Cleptes semicyaneus*

*Cleptes nitidulus*

Postocellar foveae



Punctuation and colour of tergites



1 ex. in Coll. Gribodo labelled "dr. Winston (London)"

Widespread in England

AB