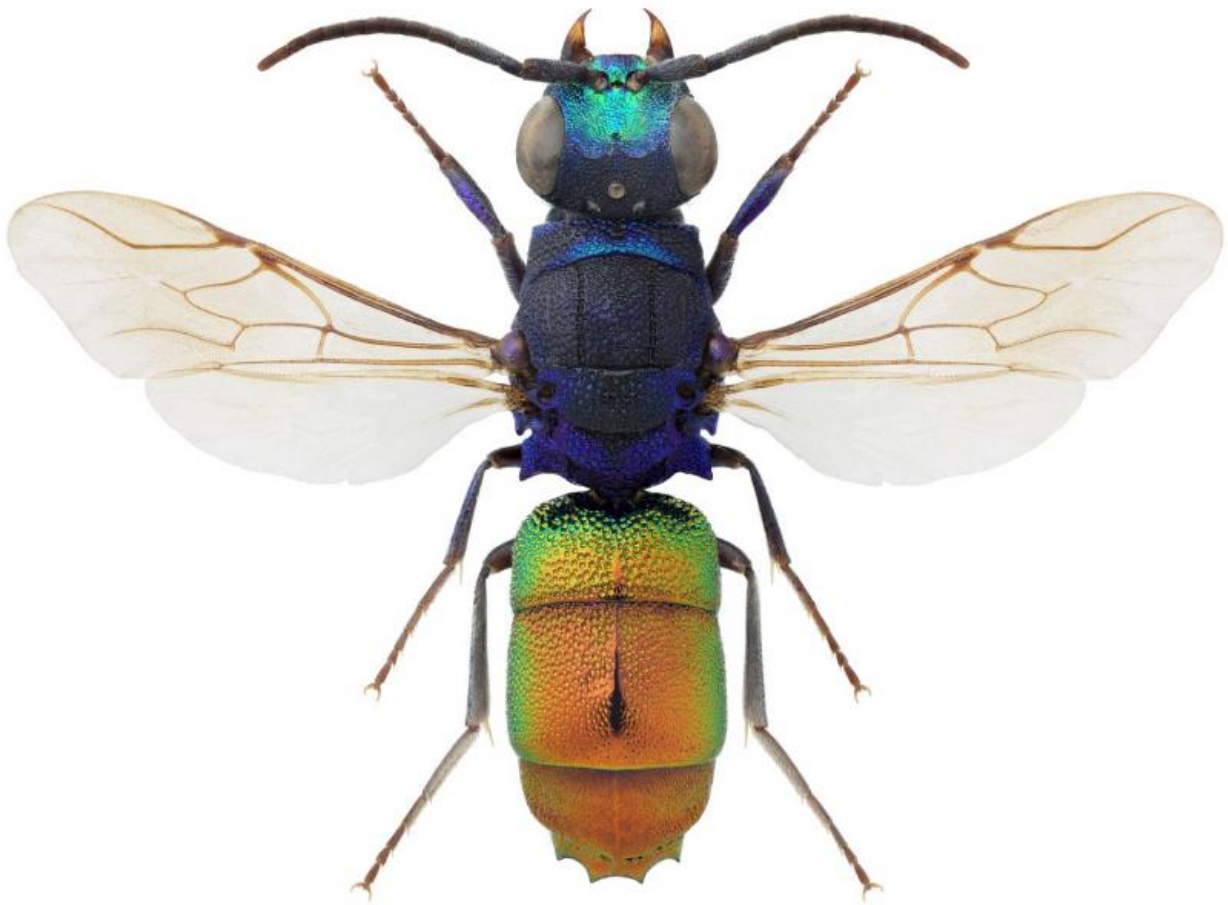


Seventy-four cuckoos in the nest: A new key to all North European cuckoo wasp species

December 28 2015



A picture of a newly described cuckoo wasp species *Chrysis borealis*. Credit: Alexander Berg

Captivating with their bright, vivid and brilliantly metallic bodies, the

cuckoo wasps are also fascinating with their curious lifestyle, which has given them this common name. However, in terms of their taxonomic grouping, they have been quite problematic due to similarities between species and a wide range of variations within them.

To shed light on the issue, an international research team, led by MSc Juho Paukkunen, Finnish Museum of Natural History, Helsinki, provides descriptions and illustrations of all 74 [species](#) found in the Nordic and Baltic countries, including one new, in their recent publication in the open-access journal *ZooKeys*.

Beautiful in appearance, the cuckoo wasps penetrate the nests of unrelated solitary wasps and solitary bees to lay their eggs, similar to how a [cuckoo bird](#) does in songbird nests. With their armoured bodies and the ability to curl up into a tight ball the cuckoo wasps are well-defended against the owners of the nests and their stings and jaws. At the larval stage, they take advantage of their hosts by either parasitising them or stealing their food, eventually killing the host's offspring.

Within the Nordic representatives of the family there are an exceptionally large number of red-listed and endangered species. This is one of the reasons why the authors intend to trigger more interest among their fellow entomologists about these curious wasps. They have compiled all relevant information concerning their distribution, abundance, habitats, flight season and host species. The authors have tried to keep their identification key as comprehensive and concise as possible, by singling out the essential information on diagnostic characters.

In the present study, the researchers describe a [new species](#), called *Chrysis borealis*, which can be translated as 'Northern' cuckoo wasp. Although the male and female individuals are very similar, there is a significant variation in the colouration within the species. It is especially

noticeable between the specimens collected from the northern localities and those from the southern ones. For instance, while the middle section of the body in southern specimens is either bright blue or violet with a greenish shimmer, in northern individuals it is nearly black, turning to greenish or golden green at the periphery.

The varying shades within a certain species are quite common among the cuckoo wasps. While it is often that distinctive colouration among other wasps and insects indicates their separate origin and therefore, taxonomic placement, within the emerald family it can be a mere case of habitat location with the northern populations typically darker.

Such tendencies often lead to doubts such as the one the authors have faced regarding their new species. It has been suggested that the Northern cuckoo wasp is in fact yet another variation of the very similar *C. impressa*, which is generally slightly brighter in colour, but at the same time distributed in warmer localities. However, using DNA sequence information and morphometric analysis, the team shows that there are enough consistent differences to separate them as distinct species, although they are defined as evolutionarily young siblings.

With their research the authors intend to provide a basis for further and more detailed studies on the distribution, biology and morphology of the North European representatives of these intriguing wasps.

More information: Juho Paukkunen et al. An illustrated key to the cuckoo wasps (Hymenoptera, Chrysididae) of the Nordic and Baltic countries, with description of a new species, *ZooKeys* (2015). [DOI: 10.3897/zookeys.548.6164](https://doi.org/10.3897/zookeys.548.6164)

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Citation: Seventy-four cuckoos in the nest: A new key to all North European cuckoo wasp species (2015, December 28) retrieved 24 April 2024 from <https://phys.org/news/2015-12-seventy-four-cuckoos-key-north-european.html>

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