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A new species of the genus *Nomada* SCOPOLI, 1770 (Hymenoptera, Apidae) from the island of Cyprus

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A b s t r a c t : In 2022 and 2023 Christodoulos Makris (Cyprus, Lemessos) collected a number of specimens of the bee genus *Nomada* on Cyprus. This resulted in many new data and a new species which is here described: *Nomada makrisi* nov.sp. This species belongs to the subgenus *Collicula* (STRAKA et al. 2024) and is close to *Nomada rubiginosa* PÉREZ, 1884 and *Nomada carthaginensis* DUSMET, 1932. The female can easily be distinguished by the erect long dark hair on the scutum. A targeted search at the same location in 2025 yielded a number of males of this new species.

K e y w o r d s : Cyprus, Nomada, new species, Apidae

Introduction

A first comprehensive survey on the bee genus *Nomada* of Cyprus can be found in the identification key to the European *Nomada* species, in which 37 species of this genus are mentioned for Cyprus (SMIT 2018). In 2020 a list of the known wild bee species of Cyprus was published (VARNAVA et al. 2020), in which 39 *Nomada* species are listed for the island. However, in this list, *Nomada flavinervis* was mentioned with reference to SMIT (2018), but this work did not support the listing.

In 2022 and 2023 Christodoulos Makris (Limassol, Cyprus) collected many *Nomada* specimens in Cyprus, this material contained some specimens of a new species.

New species

The material collected in 2023 contained some unknown small bees of the genus *Nomada* belonging to the subgenus *Collicula* (STRAKA et al. 2024). The bees of this subgenus correspond to the *Nomada integra* group. For 15 species and some subspecies of this group Schwarz provided an identification key for the species from Europe and North Africa (SCHWARZ 1967). The unknown specimens from Cyprus do not fit into that key. In recent times two more species belonging to this group where discovered and described: *Nomada legoffi* and *Nomada halophila* (DUFRÊNE 2021, WOOD 2022). These also differ much from the new species. The subgenus *Collicula* therefore consists of 17 species in the West Palaearctic, the new species in this article is the 18th. A targeted search in 2025 yielded a number of males of this new species.

Material and methods

The terminology for the external parts of adult bees adopted by MICHENER (2007) is followed. For comparing the length of antennal segments view the antenna from below. For hair length on scutum and propodeum: long = as long as or longer than the width of an ocellus, short = shorter than the width of an ocellus.

Results

Nomada makrisi nov.sp.

Holotype: CYPRUS: Lemesos, Foinikaria, 85 m. 34.7581°N 33.0971°E. 09.03.2023, ♀, leg. C. Makris, in coll. J. Smit.

Paratypes: CYPRUS: Lemesos, Foinikaria, 85 m, 34.7581°N 33.0971°E. 09.03.2023, 4♀♀, leg. C. Makris, 2 in coll. C. Makris, 1 in coll. Biodiversity Center Linz (Oberösterreichisches Landesmuseum Linz, OLML); Lemesos, Foinikaria, 85 m, 34.7581°N 33.0971°E. 30.03.2023, ♀, leg. C. Makris, in coll. J. Smit; Lemesos, Foinikaria, 85 m, 34.7581°N 33.0971°E. 27.02.2025, ⁵♂♂, leg. C. Makris, 3 coll. J. Smit, 2 coll. C. Makris.

Description female: Length 5-6 mm (Figs 1a, 1b).

Head: Strongly punctate, with narrow shiny interspaces, clypeus closely punctate. Immediately above the antennal socket a small impunctate area (Fig. 2). Antennal segment 3 as long as segment 4. All antennal segments longer than wide. Labrum rather small, punctation with narrow shiny interspaces. Labrum with a rather strong triangular tooth just above the middle of the of labrum (Fig. 3). Mandible seen from outer side somewhat widened towards the end, tip of mandible rather blunt (Fig. 4). Dorsal and ventral side of mandible with rather strong black bristles (Fig. 4). Head black, clypeus and mandible red. Labrum red, centrally with dark (black) spot. Orbital margin with red line up to the top of the eye. Antenna red, dorsally darkened.

Mesosoma: Scutum strongly punctate, at the rear side with some very narrow shiny interspaces. Scutellum flat, slightly indented at the rear side, confluent punctate. Side of propodeum shallow but clearly punctate, central triangle of propodeum impunctate, slightly wrinkled, somewhat shiny. Scutum and scutellum with long, erect dark hair (Fig. 5). Mesepisternum with sparse long white hair. Propodeum with very sparse, yellowish short hair. Underneath the base of the wing with a very small and thin yellowish hairtuft. Dorsal side of coxa 3 with silvery coloured hair. Mesosoma black, red: pronotum, pronotal lobe, tegula, axilla, two spots laterally on scutellum, mesepisternum largely red (sometimes only a few red spots). Legs red. Apex of tibia 3 rounded with 4-5 dark, straight spines, elongated towards the end of the tibia (Fig. 6).

<u>Metasoma</u>: Terga clearly punctate, marginal zones rather wide and impunctate, very shiny. Sternum 5 apically with a very short, shallow longitudinal carina (Fig. 7). Hairband at tergum 5 with very short hair. Metasoma red, T1 basally black, T4 and T5 basaly also black.

Description male: Length 5-6 mm (Fig. 8).

<u>Head</u>: Strongly punctate, with very narrow shiny interspaces, clypeus closely punctate. Antennal segment 3 slightly shorter than segment 4. Antennal segments as long as wide, segments 5-8 ventrally with rounded tubercles (Fig. 9). Labrum with shiny interspaces. A strong, sharp triangular tooth in basal half of labrum (Fig. 10). Mandible basally with an



Figs 1a-7: Female of *Nomada makrisi* nov.sp. (1a) Habitus dorsal of the holotype; photo J.T. Smit; (1b) habitus lateral of the holotype; photo J.T. Smit; (2) frons with impunctate area immediately above the antennal socket; photo C. Makris; (3) tooth just above the centre of labrum; photo C. Makris; (4) mandible; photo C. Makris; (5) hair on scutum and scutellum Photo C. Makris; (6) spines at apex of tibia 3; photo C. Makris; (7) sternum 5 with short shallow carina; photo C. Makris.



Figs 8-14: Male of *Nomada makrisi* nov.sp. (8) Habitus; photo C. Makris; (9) antennal segments 5-8 with rounded tubercles; photo C. Makris; (10) strong sharp tooth in basal half mandible; photo C. Makris; (11) mandibles basally with strong upright tooth and a smaller tooth on the outer side; photo C. Makris; (12) punctation on scutum; photo C. Makris; (13) genitalia, dorsal view; photo C. Makris; (14) genitalia, lateral view; photo C. Makris.

upright strong tooth (Figs 9, 11) and a tubercle on the outer side (Fig. 11). Tip of mandible rather blunt. Dorsal side of mandible with five strong bristles. Head with long yellowish hair, decumbent at clypeus. Head black, reddish yellow are mandible and malar area. Clypeus apically orange.

Mesosoma: Scutum strongly punctate with very narrow shiny interspaces (Fig. 12). Scutellum flat, slightly indented at the rear side, almost confluent punctate. Side of propodeum shallow but clearly punctate, central triangle of propodeum wrinkled, somewhat shiny. Scutum and scutellum with very long, erect yellowish hair. Mesepisternum with a tuft of very long white hair. Propodeum with very sparse, yellowish short hair. Underneath the base of the wing with a very small and thin yellowish hairtuft.

Dorsal side of coxa 3 with white hair. Femur 3 with very short hair. Mesosoma black, pronotal lobe and tegula red. Legs red, femora basally black. Tibia 3 with dark spot, basitarsus 3 black at the outer side.

<u>Metasoma</u>: Terga shallowly punctate, marginal zones impunctate, shiny. Tergum 7 rather wide, rounded at the apex. Metasoma red, T1 basally black, T2 basally with lateral black spot, often T4 and T5 basally black. Genitalia (Figs 13): gonostylus elongate and strongly curved downwards, somewhat backwards and inwards. Blades of gonostylus in lateral view narrow.

Ecology and distribution: All specimens of the new species were collected in an area located next to the northern banks of the Germasogeia dam, near the village of Foinikaria. The location is mainly composed of uncultivated land and grain fields. The specimens were collected in and around a dirt road next to a grain field (Fig. 14, 15). All the specimens were sitting on the bare ground or flying among the low vegetation, or visiting the flowers of *Rapistrum rugosum* (Fig. 14). A search at several other places in the same area did not reveal any further specimens of this species.

Derivation ominis: This species is dedicated to Christodoulos Makris (Lemessos, Cyprus), the collector of the new species. In thank for his help in investigating the *Nomada* fauna of Cyprus.





Figs 15-16: (15) Habitat of *Nomada makrisi*, photo C. Makris; (16) habitat with flowers on which some specimens fed; photo C. Makris.

D i a g n o s i s : The female can be recognised by the following characters. Labral tooth placed slightly above the middle of the labrum. Mandible widened towards the end, with a rather blunt tip. At ventral and dorsal side of the mandible with strong dark bristles. Immediately above the antennal socket a small impunctate area.

Nomada makrisi is closely related to to Nomada rubiginosa and Nomada carthaginensis. It can easily be distinguished from these two species by the erect long dark hair on the scutum. The other two species have short decumbent or suberect light coloured hair on the scutum. Apex of tibia 3 with 4-5 dark, straight spines, elongated towards the end of the tibia. These spines are stronger than in the other two species. Sternum 5 with a short, shallow longitudinal carina. Nomada carthaginensis has no carina at sternum 5, Nomada rubiginosa has a short shallow carina.

The male can be recognised by the following characters: Antennal segment 3 slightly shorter than 4 or equal. Segments 5-8 with rounded tubercles. Mandible basally with a strong upright tooth and the outer side of the mandible with a smaller tooth. Femur 3 posteriorly with short hair.

Other material examined:

Nomada catharginensis DUSMET 1932: 2♀♀, TUNISIA, La Marsa (IV-30) (Dr. R. Meyer), paratypes at Museo Nacional de Ciencias Naturales, Madrid (España). 1♀, SPAIN, San Pedro de Alcantara (Malaga E), 22.4.1979, leg. H. Teunissen, coll. J. Smit.

Nomada rubiginosa PÉREZ, 1884: 1 ♀, FRANCE, Alpes maritimes, Biot, 30.4.-6.5.2002, leg. H. Nieuwenhuijsen, det. Max. Schwarz, coll. J. Smit; 1♀, SPAIN, Andalusia, Los Parralejos N36°13'14" W05°58'46", 22.4.2012, leg J. & I. Smit, coll. J. Smit.

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Zusammenfassung

In den Jahren 2022 und 2023 hat Christodoulos Makris mehrere Exemplare der Bienengattung *Nomada* auf Zypern gesammelt. Nach Auswertung der Daten ergaben sich interessante Ergebnisse, darunter auch eine neue Art, die hier beschrieben wird: *Nomada makrisi* nov.sp. Die Spezies gehört zur Untergattung *Collicula* (STRAKA et al. 2024), sie steht *Nomada rubiginosa* PÉREZ, 1884 und *Nomada carthaginensis* DUSMET, 1932 sehr nahe. Das Weibchen von *Nomada makrisi* nov.sp. unterscheidet sich von den beiden genannten Vergleichsarten in erster Linie durch aufrechte lange dunkle Haare am Scutum. Eine gezielte Suche syntop im Jahre 2025 ergab einige Männchen dieser neuen Art.

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