

## **Notes on *Megachile* species (Hymenoptera: Megachilidae) from Eritrea deposited in the Natural History Museum Vienna, Austria**

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### Abstract

The bee collection of the Natural History Museum Vienna (Austria) contains three species of the genus *Megachile* LATREILLE, 1802 from Eritrea: *Megachile arabica* FRIESE, 1901, *M. kerenensis* FRIESE, 1904, and *M. minutissima* RADOSZKOWSKI, 1876. Specimens of *Megachile fuelleborni* FRIESE, 1903 and *M. kerenensis*, which are marked as types, have no type status. The female of *M. fuelleborni* from Eritrea belongs to *Megachile arabica* FRIESE, 1901. Phoretic mites were detected on its abdomen. The identification of the male from Ethiopia remains uncertain.

Key words: Type status, new records, phoretic mites, Eritrea, Ethiopia.

### Zusammenfassung

In der Bienensammlung des Naturhistorischen Museums in Wien (Österreich) werden drei Arten der Gattung *Megachile* LATREILLE, 1802 aus Eritrea aufbewahrt: *Megachile arabica* FRIESE, 1901, *M. kerenensis* FRIESE, 1904 und *M. minutissima* RADOSZKOWSKI, 1876. Exemplare von *Megachile fuelleborni* FRIESE, 1903 und *M. kerenensis* sind als Typen gekennzeichnet, haben aber keinen Typenstatus. Das Weibchen von *Megachile fuelleborni* aus Eritrea gehört zu *M. arabica* FRIESE, 1901. Auf seinem Hinterleib wurden phoretische Milben gefunden. Das Männchen von Äthiopien konnte nicht auf Artniveau bestimmt werden.

### Introduction

While compiling a catalogue of the Megachilidae of Eritrea, I also searched for specimens from the Horn of Africa in the bee collection of the Natural History Museum Vienna, Austria. I detected four specimens from Eritrea and Ethiopia belonging to *Megachile fuelleborni* FRIESE, 1903, *M. kerenensis* FRIESE, 1904, and *M. minutissima* RADOSZKOWSKI, 1876. Specimens of *Megachile fuelleborni* and *Megachile kerenensis* are marked as types, but none of these belong to the type series. The specimens of *Megachile fuelleborni* are even misidentified.

### Material

#### ***Megachile fuelleborni* FRIESE, 1903**

*Megachile fuelleborni* sp.n.: FRIESE 1903: 281 (description ♂ ♀, Angola (Chinchoxa), Kenya (Ikutha), South Africa (Zeerust, Capland, Transvaal without exact locality), and Tanzania (Langenburg, Zanzibar).

*Megachile fülleborni* (!) FRIESE, 1903: FRIESE 1915: 275 (taxonomy, Ethiopia including Eritrea).

Material: Eritrea: without exact locality, 1908, 1 ♀, leg. Kristensen. – Ethiopia: Tekoa, 1 ♂.

Notes: FRIESE (1903) described *Megachile fuelleborni*, which is a synonym of *Megachile (Creightonella) discolor* SMITH, 1853 (EARDLEY & URBAN 2010: 289; EARDLEY 2012: 21), from Angola, Kenya, South Africa, and Tanzania. Therefore the two specimens from Eritrea and Ethiopia, which are labelled “Typus”, do not belong to the type series. They are part of the material mentioned by FRIESE (1915) and were identified by himself after the original description (Fig. 1). Furthermore they are not conspecific with specimens from Namibia and South Africa identified by Friese, Brauns, and Pasteels. The female differs from *M. discolor* by a redbrown tergite 1 and red vestiture on it, and the male by a stronger median carina and a larger posteromedian spine on tergite 6.

The female from Eritrea fits the description of an unnamed variety of *Megachile sudanica* MAGRETTI, 1899 mentioned by MAGRETTI (1899: footnote on p. 590). MAGRETTI (1899) described *M. sudanica* from Somalia (the female from Lugh should become the lectotype) and, in the footnote, he added specimens with doubtful type status from Eritrea (two females from Massawa) and Sudan (both sexes from Kassala). PASTEELS (1965: 25) based his redescription of *Megachile sudanica* only on the type (recte syntype) from Eritrea. Therefore, he suspected a close relationship to *Megachile arabica* FRIESE, 1901. I have compared the female from Eritrea with the female lectotype of *Megachile arabica* FRIESE, 1901 from Yemen and two females with the same data, which are deposited in the Natural History Museum Vienna. All females are conspecific, but there are minor differences. Phoretic mites attached to the anterior part of the abdomen were detected on the female from Eritrea.

The specific status of the male from Ethiopia remains uncertain, because there is no reference material of *Megachile arabica* and *Megachile sudanica* in the Natural History Museum Vienna.

I have compiled a catalogue of *Megachile arabica* and *Megachile sudanica* for future taxonomic investigation:

### *Megachile (Creightonella) arabica* FRIESE, 1901

*Megachile arabica* sp.n.: FRIESE 1901: 71 (description ♀, Yemen without exact locality, not Saudi Arabia!).

*Megachile (Amegachile) arabica* FRIESE, 1901: FRIESE 1909: 326 (catalogue Africa), 370 (taxonomy, description ♀, Yemen without exact locality, not Saudi Arabia!), 467 (catalogue Africa).

*Megachile arabica* FRIESE, 1901: COCKERELL 1937: 144 (taxonomy).

*Creightoniella* (!) *arabica* (FRIESE, 1901): PASTEELS 1965: 11 (biology), 16 (key ♀), 24 (taxonomy, description ♀, Yemen without exact locality, not Saudi Arabia!).

*Creightonella (Metamegachile) arabica* FRIESE, 1901: VAN DER ZANDEN 1989: 80 (Morocco).

*Creightonella (Metamegachile) arabica* FRIESE, 1901: ORNOSA et al. 2007: 114 (catalogue West Mediterranean).

*Megachile arabica* FRIESE, 1901: RASMUSSEN & ASCHER 2008: 25 (catalogue of taxa described by Friese).

*Megachile arabica* FRIESE, 1901: EARDLEY & URBAN 2010: 272 (taxonomy, catalogue Afrotropical Region).

*Megachile arabica* FRIESE, 1901: SCHWARZ & GUSENLEITNER 2011: 250 (figures 1–6), 251 (taxonomy, lectotype designation, Oman, Yemen).



Figs. 1–3: Labels of *Megachile* specimens: (1): male of *M. fülleborni* from Ethiopia; (2) female of *M. fülleborni* from Eritrea; (3) *M. kerensis* from Eritrea.

*Megachile arabica* FRIESE, 1901: SALEM & EL-AZAB 2017: 46 (catalogue Egypt).

*Megachile arabica* FRIESE, 1901: PRAZ 2017: 30 (taxonomy).

\**Megachile sudanica* sp.n.: MAGRETTI 1899: 590 (footnote: taxonomy, description ♀ var., Eritrea: Massawa).

*Megachile sudanica* MAGRETTI, 1898 (!): GUIGLIA 1940: 281 (taxonomy partim).

*Creightoniella* (!) *sudanica* (MAGRETTI, 1899): PASTEELS 1965: 16 (key), 25 (taxonomy, description ♀ syntype, not type, Eritrea without exact locality (= Massawa !)).

\**Megachile fülleborni* (!) FRIESE, 1903: FRIESE 1915: 275 (taxonomy, Ethiopia without exact localities, partim misidentification).

\**Megachile discolor* SMITH, 1853: EARDLEY & URBAN 2010: 289 (catalogue Afrotropical Region, partim).

Distribution: Afrotropical Region: Eritrea. – Palaearctic Region: Egypt, Morocco, Oman, Yemen.

Notes: ORNOSA et al. (2007) also listed *Megachile arabica* from Sudan, but I could not find published data.

### *Megachile (Creightonella) sudanica* (MAGRETTI, 1899)

*Megachile sudanica* sp.n.: MAGRETTI 1899: 589 (description ♀, Somalia: Lugh), 590 (footnote: taxonomy, description ♂, Sudan: Kassala).

*Megachile sudanica* MAGRETTI, 1899: MAGRETTI 1906: 15 (Eritrea: Keren).

*Megachile sudanica* MAGRETTI, 1899: FRIESE 1909: 327 (catalogue Africa), 396 (taxonomy, description ♀, Somalia), 468 (catalogue Africa).

*Megachile sudanica* MAGRETTI, 1898 (!): GUIGLIA 1932: 133 (taxonomy, Somalia).

*Megachile sudanica* MAGRETTI, 1899: COCKERELL 1937: 239 (taxonomy, Somalia, not Sudan!).

*Megachile sudanica* MAGRETTI, 1898 (!): GUIGLIA 1940: 281 (taxonomy, partim, Ethiopia).

*Creightonella (Metamegachile) sudanica* (MAGRETTI, 1899): VAN DER ZANDEN 1989: 80 (Jordan, probably misidentified).

*Creightoniella (!) sudanica* MAGRETTI, 1898: PASTEELS 1965: 24 (taxonomy, partim).

*Megachile sudanica* MAGRETTI, 1898 (!): EARDLEY & URBAN 2010: 331 (catalogue Afrotropical Region).

*Megachile sudanica* MAGRETTI, 1898 (!): PRAZ 2017: 30 (taxonomy).

**Distribution:** Afrotropical Region: Eritrea, Ethiopia, Somalia, Sudan. – Palaeartic Region: Jordan (?).

**Notes:** The correct publication date of MAGRETTI's paper (Imenotteri dell'ultima spedizione del Cap. Bottego) is 10 April 1899 (POGGI 2010: 128).

### ***Megachile kerenensis* FRIESE, 1904**

(= *Megachile (Gronoceras) felina* GERSTAECKER, 1858)

*Megachile kerenensis* sp.n.: FRIESE 1904: 301 (description ♀, Eritrea: Keren).

*Megachile kerenensis* FRIESE, 1904: FRIESE 1915: 274 (Eritrea: Keren, without exact locality).

**Material:** Eritrea: without exact locality, 1908, 1 ♀.

**Notes:** FRIESE (1904) described *Megachile kerenensis* based on two females from Keren collected by Magretti in February 1900. The specimen labelled "Typus" does not belong to the type series, because it was collected (probably by G. Kristensen) after the original description and Friese identified it in 1909 (Fig. 3). It is part of the material mentioned in FRIESE (1915). *Megachile kerenensis* is a junior synonym of *Megachile felina* GERSTAECKER, 1858, which is widely distributed in the Afrotropical Region including the Malagasy Subregion (EARDLEY & URBAN 2010, EARDLEY 2012).

### ***Megachile (Eutrichareae) minutissima* RADOSZKOWSKI, 1876**

*Megachile minutissima* RADOSZKOWSKI, 1876: FRIESE 1915: 265 (taxonomy), 275 (Keren).

*Megachile minutissima* RADOSZKOWSKI, 1876: PASTEELS 1965: 335 (figures 821–823), 337 (taxonomy, description ♀, Eritrea: Keren).

*Megachile minutissima* RADOSZKOWSKI, 1874 (!): EARDLEY & URBAN 2010: 312 (catalogue Afrotropical Region, Eritrea, not Ethiopia!).

**Material:** Eritrea: Keren, XI.1908, 1 ♀, leg. Kristensen.

**Notes:** The redescription of *Megachile minutissima* by PASTEELS (1965: 337) is based on this specimen. In the collection, I found it under *Megachile (Eutrichareae) meadowaldoi* BRAUNS, 1912, a species known from southern Africa (EARDLEY 2013: 70). *Megachile minutissima* is widespread in the southern Palaeartic Region, where it is recorded, e.g., from Egypt, Saudi Arabia and United Arab Emirates (ALQUARNI et al. 2014: 636), but in the Afrotropical Region it is only known from Eritrea.

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