The State of the Art of the Tunisian Apidae Fauna (Hymenoptera: Anthophila)

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Abstract
Based on a review of the available literature, the state of the art and a checklist of the fauna of the Apidae family of Tunisia is presented. The first list of the species of the family is given. 184 species and subspecies belonging to 19 genera, 12 tribes and three subfamilies were listed. Distribution of recorded taxa from Tunisia and from the world is provided. Apinae is the subfamily with the highest species richness with 89 species. Nomada has the highest number of species represented by 62 taxa. The Tunisian East center is the least species-diversified regions with only 16 species and subspecies reported so far. Five species are endemic to Tunisian fauna. Eight Nomada and one Anthophora species were collected from Tunisia, but their identity should be re-confirmed. The presence of Thyreomelecta sibirica (Radoszkowski, 1893) in Tunisia is doubtful and a re-examination and confirmation are needed.

Introduction

Hymenoptera is one of the most diverse insect orders with more than 150,000 described species (Aguiar et al., 2013). Members of this group are known for their important ecological role as pollinators and regulators of arthropods populations through parasitism and predation (Michez et al., 2019). The hymenopteran pollinators belong mainly to the superfAMILY Anthophila which has a crucial role in the reproduction of most flowering plants. For example, 70% of cultivated plants worldwide directly depend on the Anthophila (Apoida) (Klein et al., 2007).

Anthophila is represented worldwide by more than 20,000 described species belonging to seven families (Michener, 2007; Ascher & Pickering, 2021). Despite its diversity and its significance in the biodiversity and the terrestrial ecosystems, studies on this group, particularly within Apidae, are scarce in Tunisia. Most species records in Tunisian ecosystem were outdated (Schulthess, 1924; Dusmet & Alonso, 1928, 1932; Daly, 1983; Sonet & Jacob-Remacle, 1987). Luckily, during the last years have been conducted some studies focusing on pollination of wild and cultivated plants (Rjiba, 2014; Chouchaine, 2015; Ben Abdelkader et al., 2020). Some records of species belonging to Apidae were cited by Chouchaine (2015) which reported 10 genera of Apidae, indicating the genus Eucera with a high number of species. Also, Rjiba (2014) reported the presence of Nomada, Eucera and Anthophora in Sousse and Bizerte provinces. The study conducted by Ben Abdelkader et al. (2020) in Northern Tunisia (Goubellat, Beja province) indicated the presence of two families of bees, Apidae represented by Apis mellifera Linnaeus, 1758 and Megachilidae represented by Megachile sp.
These studies are still seldom and do not determine the complete identity of captured specimens, in addition to have been carried out on a regional scale, not covering the entire country.

Here in, we provide an up to date list based on the screening of different literature review on the occurrence of species of Apidae recorded in Tunisia.

Materials and Methods

Available data existing in old and recent literature about Apidae family in Tunisia (Fig 1) were examined and summarized in a list as follows: for each species or subspecies, its valid name followed by the reference to its original description and its distribution in Tunisia and in the world were given. The classification and nomenclature follow Michener (2007) with some updates, as the case of the genus *Tetraloniella* Ashmead, 1900 which was synonymized under *Tetralonia* Spinola, 1838 by Michener (2007) and subsequently treated as a junior synonym of *Eucera* by Dorchin et al. (2018). General distribution follows mainly Ascher and Pickering (2021). Species and subspecies within genera were ordered alphabetically. References of the distribution in Tunisia in published data were provided chronologically from the oldest to the most recent. “No specific locality” was mentioned when no reference about the exact location have been provided.

Abbreviations used in the list are: **M.R.**: Main Road; **S.R.**: Secondary Road; **N**: North; **S**: South; **E**: East; **SE**: Southeast; **SW**: Southwest; **NW**: Northwest and **km**: Kilometer.

Results

In this study and based on published data a total of 184 species and subspecies belonging to 19 genera, 12 tribes and three subfamilies of Apidae are recorded in Tunisia. The most species-rich subfamilies were Apinae (89 species; 10 genera; six tribes), Nomadinae (81 species; seven genera; four tribes) and Xylocopinae (14 species; two genera; two tribes). The most diverse genus is *Nomada* with 62 species, followed by *Eucera* and *Anthophora* with 33 and 26 species, respectively (Fig 2).

![Fig 1. Provinces of Tunisia: 1. Bizerte; 2. Mannouba; 3. Ariana 4. Ben Arous; 5. Zaghouan; 6. Tunis; 7. Nabeul; 8. Beja; 9. Jendouba; 10. Le Kef; 11. Siliana; 12. Sousse; 13. Monastir; 14. Mahdia; 15. Sfax; 16. Kairouan; 17. Sidi Bouzid; 18. Kasserine; 19. Gabes; 20. Medenine; 21. Gafsa; 22. Tozeur; 23. Kebili; 24. Tataouine.](image-url)
Subfamily: Apinae Latreille, 1802
Tribe: Anthophorini Dahlbom, 1835
Genus: Amegilla Friese, 1897
Amegilla (Amegilla) ochroleuca (Pérez, 1879)
Anthophora ochroleuca Pérez, 1879.
Distribution in Tunisia: Tunisia: no specific locality (Ascher & Pickering, 2021).
General distribution: France, Greece, Italy, Morocco, Russia, Tunisia, and Ukraine (Ascher & Pickering, 2021).
Amegilla (Amegilla) quadrifasciata (de Villers, 1789)
Apis quadrifasciata de Villers, 1789.
Distribution in Tunisia: Ben Arous (Hammam Lif), Gafsa, Kairouan, Kasserine (Sbeitla), Sfax (Schulthess, 1924 as Anthophora quadrifasciata); Sousse (Ascher & Pickering, 2021).
General distribution: Albania, Algeria, Austria, Bulgaria, Myanmar, China, Croatia, Czech Republic, Egypt, France, Georgia, Germany, Greece, Hungary, India, Iran, Iraq, Israel, Italy, Japan, Kazakhstan, Kyrgyzstan, Libya, Luxemburg, Malta, Mongolia, Montenegro, Morocco, Pakistan, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, South Africa, Spain, Switzerland, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).
Amegilla (Micamegilla) andresi (Friese, 1914)
Anthophora andresi Friese, 1914.
Distribution in Tunisia: Gabes (Schwarz & Gusentleiner, 2001).
General distribution: Egypt, Israel, Libya, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).
Amegilla (Micamegilla) fasciata (Fabricius, 1775)
Apis fasciata Fabricius, 1775.
Distribution in Tunisia: Tunisia: no specific locality (Ascher & Pickering, 2021).
General distribution: Egypt, France, Italy, Libya, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).
Amegilla (Zebramegilla) albigena (Lepeletier, 1841)
Anthophora albigena Lepeletier, 1841.
Distribution in Tunisia: Sfax (Schulthess, 1924 as Anthophora albigena); Le Kef (Ascher & Pickering, 2021).
General distribution: Albania, Algeria, Austria, Bulgaria, Croatia, Czech Republic, Egypt, France, Georgia, Greece, Hungary, Iran, Israel, Italy, Jordan, Lebanon, Libya, Macedonia, Malta, Morocco, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Switzerland, Syria, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).
Amegilla marqueti (Pérez, 1895)
Anthophora marqueti Pérez, 1895.
Distribution in Tunisia: Tozeur (Schulthess, 1924 as Anthophora marqueti).
General distribution: North Africa (Ascher & Pickering, 2021).
Genus: Anthophora Latreille, 1803
Anthophora (Anthophora) canescens Brullé, 1832
Anthophora canescens Brullé, 1832.
Distribution in Tunisia: Kairouan (Schulthess, 1924 as Anthophora nigrocincta); Ariana, Tunis (Ascher & Pickering, 2021).
General distribution: Algeria, Croatia, Cyprus, Egypt, Greece, Israel, Italy, Libya, Malta, Morocco, Spain, and Tunisia (Ascher & Pickering, 2021).
Anthophora (Anthophora) crinipes Smith, 1854
Anthophora crinipes Smith, 1854.
Distribution in Tunisia: Tunisia: no specific locality (Ascher & Pickering, 2021).
General distribution: Algeria, Austria, Bulgaria, Czech Republic, Egypt, France, Georgia, Germany, Greece, Iran, Iraq, Israel, Italy, Hungary, Kyrgyzstan, Morocco, Portugal, Romania, Russia, Spain, Slovakia, Slovenia, Switzerland, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

**Anthophora (Anthophora) fulvitarsis** Brullé, 1832
*Anthophora fulvitarsis* Brullé, 1832.
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, Austria, China, France, Germany, Iran, Italy, Kazakhstan, Kyrgyzstan, Morocco, Pakistan, Portugal, Russia, Spain, Tunis, Turkey, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

**Anthophora (Anthophora) plumipes** (Pallas, 1772)
*Apis plumipes* Pallas, 1772.
**Distribution in Tunisia:** Zaghouan (Thuburbo Majus ruins, 2 km N Al Fahs) (Ascher & Pickering, 2021).

**General distribution:** Afghanistan, Azerbaijan, Belarus, China, Cyprus, Czech Republic, Denmark, England, Finland, Germany, Greece, Hungary, Iran, Italy, Japan, Kazakhstan, Lithuania, Morocco, Poland, Portugal, Russia, Spain, Syria, Tunisia, and Turkey (Ascher & Pickering, 2021).

**Anthophora (Anthophora) senescens** Lepeletier, 1841
*Anthophora senescens* Lepeletier, 1841.
**Distribution in Tunisia:** Kairouan, Kasserine (Sbeitla), Tunis (Carthage) (Schulthess, 1924); Medenine (Zarzis), Tunis (Ascher & Pickering, 2021).

**General distribution:** Algeria, China, France, Israel, Italy, Morocco, Spain, and Tunisia (Ascher & Pickering, 2021).

**Anthophora (Caranthonthora) pubescens** (Fabricius, 1781)
*Anthophora pubescens* Fabricius, 1781.
**Distribution in Tunisia:** Gafsa, Kasserine (Sbeitla) (Schulthess, 1924).

**General distribution:** China, Germany, Israel, Morocco, Russia, Slovakia, Slovenia, Spain, Tunisia, and Ukraine (Ascher & Pickering, 2021).

**Anthophora (Heliophila) bimaculata** (Panzer, 1798)
*Apis bimaculata* Panzer, 1798.
**Distribution in Tunisia:** Sfax, Kairouan (Schulthess, 1924).

**General distribution:** Algeria, Austria, Bulgaria, China, Croatia, Czech Republic, England, Estonia, France, Georgia, Germany, Hungary, Iran, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Libya, Lithuania, Morocco, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Spain, Switzerland, Tajikistan, Tunisia, Turkey, and Turkmenistan (Ascher & Pickering, 2021).

**Anthophora (Heliophila) humilis** (Spinola, 1838)
*Saropoda humilis* Spinola, 1838.
**Distribution in Tunisia:** Tozeur (Schulthess, 1924 as *Anthophora albocinerea*).

**General distribution:** Algeria, Egypt (Ascher & Pickering, 2021).

**Anthophora (Lophanthophora) dispar** Lepeletier, 1841
*Anthophora dispar* Lepeletier, 1841.
**Distribution in Tunisia:** Tunis (Carthage) (Schulthess, 1924); Medenine (Zarzis), Tunis (Ascher & Pickering, 2021).

**General distribution:** Algeria, Egypt, Israel, Libya, Malta, Morocco, Portugal, Spain, Syria, and Tunisia (Ascher & Pickering, 2021).

**Anthophora (Lophanthophora) hispanica** (Fabricius, 1787)
*Apis hispanica* Fabricius, 1787.
**Distribution in Tunisia:** Tunis (Carthage) (Schulthess, 1924).

**General distribution:** Egypt, Israel, Libya, Morocco, Portugal, Spain, Syria, Tunisia, and Turkey (Ascher & Pickering, 2021).

**Anthophora (Paramegilla) astragali** Morawitz, 1879
*Anthophora astragali* Morawitz, 1879.
**Distribution in Tunisia:** Tozeur (Nefta) (Schulthess, 1924).

**General distribution:** Armenia, Azerbaijan, Georgia, and Russia (Ascher & Pickering, 2021).

**Anthophora (Paramegilla) blanda** Pérez, 1895
*Anthophora blanda* Pérez, 1895.
**Distribution in Tunisia:** Kairouan, Kasserine (Sbeitla), Tunis (Carthage) (Schulthess, 1924).

**General distribution:** Algeria and Israel (Ascher & Pickering, 2021).

**Anthophora (Paramegilla) planca** Pérez, 1895
*Anthophora planca* Pérez, 1895.
**Distribution in Tunisia:** Sfax (Schulthess, 1924).

**General distribution:** Algeria (Ascher & Pickering, 2021).

**Anthophora (Paramegilla) quadricolor** (Erichson, 1840)
*Megilla quadricolor* Erichson, 1840.
**Distribution in Tunisia:** Tunis (Carthage) (Schulthess, 1924).

**General distribution:** France, Italy, Morocco, Portugal, and Spain (Ascher & Pickering, 2021).

**Anthophora (Petalosternom) calcarata** Lepeletier, 1841
*Anthophora calcarata* Lepeletier, 1841.
**Distribution in Tunisia:** Ben Arous (Hammam Lif), Kairouan, Kasserine (Sbeitla), Tunis (Carthage) (Schulthess, 1924).

**General distribution:** Algeria, France, Italy, Morocco, Spain, and Tunisia (Ascher & Pickering, 2021).
Anthophora (Petalosternom) rivolleti Pérez, 1895
Anthophora rivolleti Pérez, 1895.
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).
**General distribution:** Algeria, Egypt, Israel, and Tunisia (Ascher & Pickering, 2021).

Anthophora (Pyganthophora) albosignata (Friese, 1896)
*Podalirius albosignatus* Friese, 1896b.
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).
**General distribution:** Egypt, Iran, Israel, Libya, Morocco, Portugal, and Tunisia (Ascher & Pickering, 2021).

Anthophora (Pyganthophora) atriceps Pérez, 1879
Anthophora atriceps Pérez, 1879.
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).
**General distribution:** Egypt, Iran, Israel, Libya, Morocco, Portugal, and Tunisia (Ascher & Pickering, 2021).

Anthophora (Pyganthophora) atroalba Lepeletier, 1841
*Anthophora atroalba* Lepeletier, 1841.
**Distribution in Tunisia:** Tunis (Cockerell, 1920); Tunis (Centre, Carthage), Kairouan (Schulthess, 1924).
**General distribution:** Algeria, Croatia, France, Greece, India, Iran, Italy, Lebanon, Libya, Morocco, Pakistan, Portugal, Spain, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

Anthophora (Pyganthophora) caroli Pérez, 1895
Anthophora caroli Pérez, 1895.
**Distribution in Tunisia:** Kasserine (Sbeitla) (Schulthess, 1924).
**General distribution:** Algeria, Palestine, and Tunisia.

Anthophora (Pyganthophora) facialoides Brooks, 1988
Anthophora facialoides Brooks, 1988.
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).
**General distribution:** Egypt and Tunisia (Ascher & Pickering, 2021).

Anthophora (Pyganthophora) holoxantha Pérez, 1895
Anthophora holoxantha Pérez, 1895.
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).
**General distribution:** Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

Anthophora (Pyganthophora) libyphaenica Gribodo, 1893
Anthophora libyphaenica Gribodo, 1893.
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).
**General distribution:** Algeria, Israel, Libya, Morocco, and Tunisia (Ascher & Pickering, 2021).

Anthophora (Pyganthophora) scopipes Spinola, 1838
*Anthophora scopipes* Spinola, 1838.
**Distribution in Tunisia:** Sfax (Schulthess, 1924).
**General distribution:** Algeria, Egypt, Israel, Morocco, and Tunisia (Ascher & Pickering, 2021).

Anthophora (Pyganthophora) ventrilabris Lepeletier, 1841
*Anthophora ventrilabris* Lepeletier, 1841.
**Distribution in Tunisia:** Tunisia: no specific locality (Schulthess, 1924; Ascher & Pickering, 2021).
**General distribution:** Algeria, Egypt, Greece, Italy, Morocco, Spain, and Tunisia (Ascher & Pickering, 2021).

Anthophora sp.
**Distribution in Tunisia:** Tozeur (Schulthess, 1924).
**Genus:** *Habropoda* Smith, 1854

Habropoda oraniensis (Lepeletier, 1841)
*Anthophora oraniensis* Lepeletier, 1841.
**Distribution in Tunisia:** Tunisia: no specific locality (Schwarz & Gusentleitner, 2001); Medenine (Zarzis) (Ascher & Pickering, 2021).
**General distribution:** Algeria, Egypt, Libya, and Tunisia (Ascher & Pickering, 2021).
**Tribe:** Ancylaini Michener, 1944
**Genus:** Ancyla Lepeletier, 1841

Ancyla brevis Dours, 1873
*Ancyla brevis* Dours, 1873.
**Distribution in Tunisia:** Tunis (Friese, 1922 as *Ancyla punica*).
**General distribution:** Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

Ancyla oraniensis Lepeletier, 1841
*Ancyla oraniensis* Lepeletier, 1841.
**Distribution in Tunisia:** Tunisia: no specific locality (Schulthess, 1924; Ascher & Pickering, 2021).
**General distribution:** Algeria, Morocco, and Tunisia (Ascher & Pickering, 2021).
**Tribe:** Apini Latreille, 1802
**Genus:** Apis Linnaeus, 1758

Apis mellifera Linnaeus, 1758
*Apis mellifera* Linnaeus, 1758.
**Distribution in Tunisia:** Everywhere.
**General distribution:** Worldwide (Ascher & Pickering, 2021).
**Tribe:** Bombini Latreille, 1802
**Genus:** Bombus Latreille, 1802

Bombus (Bombus) terrestris (Linnaeus, 1758)
*Apis terrestris* Linnaeus, 1758.
**Distribution in Tunisia:** Tunisia: no specific locality (Schulthess, 1924 as var. with scopa red on hind tibiae); Jendouba (Hotel les Chines, 5 km South Ain Draham) (Ascher & Pickering, 2021).
**General distribution:** Afghanistan, Algeria, Argentina, Australia, Belarus, Brazil, Canary Islands, Chile, China, Georgia, Iceland, Iran, Israel, Japan, Kazakhstan, Kyrgyzstan, Libya, Mongolia, Morocco, New Zealand, Palestine, Russia, South Korea, Syria, Tajikistan, Tunisia, Turkey, United States, and Uzbekistan, very common in Europe (Ascher & Pickering, 2021).

**Apis (Megabombus) ruderatus** (Fabricius, 1775)
*Apis ruderata* Fabricius, 1775.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, Argentina, Austria, Czech Republic, Belarus, Belgium, Bosnia, Bulgaria, Canary Islands, Chile, Czech Republic, England, France, Germany, Greece, Hungary, Iceland, Italy, Luxemburg, Morocco, New Zealand, Norway, Poland, Portugal, Romania, Russia, Spain, Switzerland, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

**Bombus (Thoracobombus) laesus** Morawitz, 1875
*Bombus laesus* Morawitz in Fedtschenko, 1875.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, Austria, Azerbaijan, Belarus, Bulgaria, China, Czech Republic, Estonia, France, Georgia, Germany, Greece, Hungary, Iran, Kazakhstan, Kyrgyzstan, Lithuania, Macedonia, Morocco, Poland, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Tajikistan, Tunisia, Turkey, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

**Bombus (Thoracobombus) ruderarius** (Müller, 1776)
*Apis ruderaria* Müller, 1776.

**Distribution in Tunisia:** Tunis (Ascher & Pickering, 2021).

**General distribution:** Algeria, Azerbaijan, Georgia, Iran, Kazakhstan, Kyrgyzstan, Russia, Tunisia, and Turkey, very common in Europe (Ascher & Pickering, 2021).

**Tribe:** Eucerini Latreille, 1802

**Genus:** *Eucera* Lepeletier, 1841

**Eucera (Eucera) alopex** Risch, 1999
*Eucera alopex* Risch, 1999.

**Distribution in Tunisia:** Medine (30 km N Medine, Zarzis, 20 km S Zarzis, 30 km S Zarzis), Nabeul (Hamamet, Grombelia) (Risch, 1999).

**General distribution:** Tunisia (Ascher & Pickering, 2021).

**Eucera (Eucera) dimidiata** Brullé, 1832
*Eucera dimidiata* Brullé, 1832.

**Distribution in Tunisia:** Kairouan (Dusmet & Alonso, 1928).  
**General distribution:** Afghanistan, Algeria, Cyprus, Egypt, Greece, Hungary, Iran, Iraq, Israel, Morocco, Saudi Arabia, Tunisia, and Turkey (Ascher & Pickering, 2021).

**Eucera (Eucera) ferruginea** Lepeletier, 1841
*Eucera ferruginea* Lepeletier, 1841.

**Distribution in Tunisia:** Jendouba (10 km E Ain Draham) (Ascher & Pickering, 2021).

**General distribution:** Afghanistan, Algeria, Morocco, Tunisia (Ascher & Pickering, 2021).

**Eucera (Eucera) grisea** Fabricius, 1793
*Eucera grisea* Fabricius, 1793.

**Distribution in Tunisia:** Kairouan, Kasserine (Bcheu), (Schulthess, 1924; Dusmet & Alonso, 1928).

**General distribution:** Algeria, Egypt, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

**Eucera (Eucera) interrupta** Bäer, 1850
*Eucera interrupta* Bäer, 1850.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Albania, Algeria, Austria, Azerbaijan, Bulgaria, China, France, Georgia, Germany, Greece, Hungary, Italy Kazakhstan, Macedonia, Poland, Romania, Russia, Slovenia, Slovakia, Switzerland, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

**Eucera (Eucera) nigrilabris** Lepeletier, 1841
*Eucera nigrilabris* Lepeletier, 1841.

**Distribution in Tunisia:** Tunis (Carthage) (Schulthess, 1924); Kairouan (Dusmet & Alonso, 1928); Gabes (10 km SE Matmata), Kasserine (Boucheu) (Ascher & Pickering, 2021).

**General distribution:** Azerbaijan, Algeria, France, Germany, Greece, Iran, Israel, Kazakhstan, Morocco, Portugal, Russia, Spain, Tajikistan, Tunisia, Turkey, Turkmenistan, and Uzbekistan (Ascher & Pickering, 2021).

**Eucera (Eucera) numida** Lepeletier, 1841
*Eucera numida* Lepeletier, 1841.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, France, Italy, Malta, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

**Eucera (Hetereucera) algira** Brullé, 1840
*Eucera algira* Brullé, 1840.

**Distribution in Tunisia:** Tozeur (Oued Melah between Gafsa and Tozeur) (Schulthess, 1924); Kairouan, Tunis (Dusmet & Alonso, 1928).

**General distribution:** Algeria, Greece, Israel, Italy, Malta, Morocco, and Spain (Ascher & Pickering, 2021).

**Eucera (Hetereucera) atricornis** Fabricius, 1793
*Eucera atricornis* Fabricius, 1793.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Iran, Morocco, Tunisia and Turkey (Ascher & Pickering, 2021).
**Eucera (Heteroeucera) bequaerti Alfken, 1914**

*Eucera bequaerti* Alfken, 1914.

**Distribution in Tunisia:** Jendouba (Tabarka, 15 km S Jendouba), Kasserine (20 km S Thala), Nabeul (Hamammet, Grombelia), Tunis (Risch, 2001).

**General distribution:** Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) clypeata Erichson, 1835**

*Eucera clypeata* Erichson, 1835.

**Distribution in Tunisia:** Jendouba (4 km S Ain Draham, 10 km E Ain Draham) (Risch, 2003).

**General distribution:** Afghanistan, Albania, Algeria, Azerbaijan, Bulgaria, Czech Republic, France, Georgia, Germany, Greece, Iran, Iraq, Italy, Jordan, Kazakhstan, Kyrgyzstan, Macedonia, Moldova, Morocco, Pakistan, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) elongatula Vachal, 1907**

*Eucera elongatula* Vachal, 1907.

**Distribution in Tunisia:** Sfax (Ascher & Pickering, 2021).

**General distribution:** Algeria, France, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) genovefae Vachal, 1907**

*Eucera Genovefae* Vachal, 1907.

**Distribution in Tunisia:** Gafsa (15 km N Metlaoui, 20 km N Metlaoui, 20 km N Gafsa, Sidi Boubaker), Kasserine, Medenine (30 km SW Medenine), Tataouine (55 km S Tataouine, 56 km S Tataouine, Ksar Hadada), Kasserine (Bouchebka), Tozeur (8 km S Tamerza) (Ascher & Pickering, 2021).

**General distribution:** Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) notata Lepeletier, 1841**

*Eucera notata* Lepeletier, 1841.

**Distribution in Tunisia:** Kasserine (Sbeïta), Tunis (Schulthess, 1924); Tunis (Ascher & Pickering, 2021).

**General distribution:** Algeria, Egypt, Germany, Italy, Libya, Morocco, Portugal, Spain, Tunisia, and Turkey (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) obliterata Pérez, 1895**

*Eucera obliterata* Pérez, 1895.

**Distribution in Tunisia:** Beja (10 km S Beja, 15 NW Téboursouk, 15 km SE Téboursouk, 5 km NW Téboursouk), Gabes (Matmata, Jendouba (Fernana, 15 km S Jendouba, 10 km N Jendouba, 21 km N Jendouba, 10 km S Tabarka), Medenine (Djerba, Houmt Souk 5 km S Richtung Midoun), Nabeul (5 km NW Grombelia, Korba, Nabeul), Siliana (15 km SW Makthar, 15 km N Makthar), Sousse (Msaken), Tunis (NE Tunis Jebel Amarbei Jabbes), Gafsa (Bou Hedma), Zaghouan (30 km SE Zaghouan, 20 km NW Zaghouan) (Risch, 2003).

**General distribution:** Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) oraniensis Lepeletier, 1841**

*Eucera oraniensis* Lepeletier, 1841.

**Distribution in Tunisia:** Kasserine (Bouchebka), Tataouine (5 km E Djouama) (Ascher & Pickering, 2021).

**General distribution:** Algeria, Malta, Morocco, Spain, and Tunisia (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) polita Pérez, 1895**

*Eucera polita* Pérez, 1895.

**Distribution in Tunisia:** Gabfa (40 km NW Gabfa), Kasserine (10 km NW Thelepte) (Ascher & Pickering, 2021).

**General distribution:** Libya, Morocco and Tunisia (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) saundersi Friese, 1899**

*Eucera saundersi* Friese, 1899.

**Distribution in Tunisia:** Tunis (Friese, 1899b; Schulthess, 1924; Dusmet & Alonso, 1928).

**General distribution:** North Africa (Lhomme et al., 2020).

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**Eucera (Heteroeucera) seminuda Brulé, 1832**

*Eucera seminuda* Brulé, 1832.

**Distribution in Tunisia:** Kairouan (Schulthess, 1924 as Eucera trivittata).

**General distribution:** Armenia, Austria, Azerbaijan, Bulgaria, Croatia, Cyprus, Greece, Hungary, Macedonia, Czech Republic, Russia, Slovakia, Turkey, and Ukraine (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) spatulata Gribodo, 1893**

*Eucera spatulata* Gribodo, 1893.

**Distribution in Tunisia:** Beja (10 km S Beja, 15 NW Téboursouk, 15 km SE Téboursouk, 5 km NW Téboursouk), Gabes (Matmata, Jendouba (Fernana, 15 km S Jendouba, 10 km N Jendouba, 21 km N Jendouba, 10 km S Tabarka), Medenine (Djerba, Houmt Souk 5 km S Richtung Midoun), Nabeul (5 km NW Grombelia, Korba, Nabeul), Siliana (15 km SW Makthar, 15 km N Makthar), Sousse (Msaken), Tunis (NE Tunis Jebel Amarbei Jabbes), Gafsa (Bou Hedma), Zaghouan (30 km SE Zaghouan, 20 km NW Zaghouan) (Risch, 2003).

**General distribution:** Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

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**Eucera (Heteroeucera) vachali Pérez, 1895**

*Eucera vachali* Pérez, 1895.

**Distribution in Tunisia:** Beja (10 km NW Téboursouk), Gabes (5 km SE Matmata, 10 km SE Matmata, Matmata), Kairouan (10 km W Shikha), Kasserine (10 km NW Thelepte), Medenine (Zarris, Djerba, 14 km SE Houmt Souk, 20 km SW Medenine), Nabeul (Hamammet, Grombelia), Sfax (30 km SW Sfax), Sidi Bouzid, Siliana (Makthar), Sousse (Msaken), Tataouine (Ksar Hadada, Chenini), Tunis (La Marsa?), Zaghouan (20 km NW Zaghouan) (Risch, 2003).

**General distribution:** Algeria, Morocco, Tunisia (Ascher & Pickering, 2021).
**Eucera (Heteroeucera) warnckei** Risch, 1999

*Eucera warnckei* Risch, 1999.

**Distribution in Tunisia:** Medenine (30 km E Medenine), Nabeul (Hamammet, Grombélia) (Risch, 1999); Gabes (50 km W Matmata, 10 km SE Matmata), Nabeul (Ascher & Pickering, 2021).

**General distribution:** Morocco and Tunisia (Ascher & Pickering, 2021).

**Eucera (Pteneucera) eucomidea** Dours, 1873

*Eucera eucomidea* Dours 1873.

**Distribution in Tunisia:** Tunisia: no specific locality (Schulthess, 1924; Risch, 1997); Gafsa (Oasis Gafsa) (Dusmet & Alonso, 1928).

**General distribution:** Algeria, Armenia, France, Italy, Kazakhstan, Libya, Malta, Morocco, Portugal, Russia, Spain, Syria, Tunisia, and Turkey (Ascher & Pickering, 2021).

**Eucera (Pteneucera) nigrifacies** Lepeletier, 1841

*Eucera nigricrasis* Lepeletier, 1841.

**Distribution in Tunisia:** Beja, Mannouba (Tebourba) (Schulthess, 1924); Tunisia: no specific locality (Risch, 1997); Jendouba (10 km E Ain Draham) (Ascher & Pickering, 2021).

**General distribution:** Algeria, Azerbaijan, Bulgaria, France, Georgia, Germany, Greece, Hungary, Iran, Israel, Italy, Jordan, Kazakhstan, Macedonia, Morocco, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Syria, Tajikistan, Tunisia, Turkey, and Uzbekistan (Ascher & Pickering, 2021).

**Eucera (Synhalonia) cuniculina** Klug, 1845

*Eucera cuniculina* Klug, 1845.

**Distribution in Tunisia:** Tozeur (Schulthess, 1924 as *Eucera (Macrocerha) cuniculina*).

**General distribution:** Egypt, Israel, Jordan, Libya, Morocco, Spain, and Tunisia (Ascher & Pickering, 2021).

**Eucera (Synhalonia) mediterranea** Friese, 1895

*Eucera mediterranea* Friese, 1895.

**Distribution in Tunisia:** Tunisia: no specific locality (Schulthess, 1924).

**General distribution:** Greece, Israel, Italy, Spain, and Turkey (Ascher & Pickering, 2021).

**Eucera (Synhalonia) metallescens** (Morawitz, 1888)

* Tetralonia metallescens Morawitz, 1888.

**Distribution in Tunisia:** Tozeur (Oued Melah between Gafsa and Tozeur) (Schulthess, 1924).

**General distribution:** Pakistan and Turkmenistan (Ascher & Pickering, 2021).

**Eucera (Synhalonia) ruficollis** (Brullé, 1832)

*Macrocera ruficollis* Brullé, 1832.

**Distribution in Tunisia:** Gafsa, Kasserine (Sbeitla), Tunis (Carthage) (Schulthess, 1924).

**Eucera (Synhalonia) tricincta** Ericson, 1835

*Eucera tricincta* Ericson, 1835.

**Distribution in Tunisia:** Gafsa, Kasserine (Sbeitla) (Schulthess, 1924).

**General distribution:** Afghanistan, Algeria, Azerbaijan, Egypt, Greece, Hungary, Iran, Israel, Italy, Jordan, Kazakhstan, Morocco, Portugal, Romania, Russia, Slovakia, Spain, Tajikistan, Turkey, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

**Eucera (Tetralonia) alticincta** (Lepeletier, 1841)

*Macrocerha alticincta* Lepeletier, 1841.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021). Ascher & Pickering, 2021 as *Tetraloniella alticincta*.

**General distribution:** Albania, Bulgaria, Czech Republic, France, Germany, Greece, Hungary, Ireland, Kyrgyzstan, Macedonia, Morocco, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Switzerland, Tajikistan, Tunisia, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

**Eucera (Tetralonia) cinctella** Saunders, 1908

*Eucera (Macrocerha) cinctella* Saunders, 1908.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021) as *Tetraloniella cinctella*.

**General distribution:** Algeria, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

**Eucera (Tetralonia) dentata** Germar, 1839

*Eucera dentata* Germar, 1839.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021). Ascher & Pickering, 2021 as *Tetraloniella dentata*.

**General distribution:** Algeria, Armenia, Austria, Belarus, Bulgaria, China, Croatia, Czech Republic, Estonia, France, Germany, Iran, Israel, Italy, Kazakhstan, Kyrgyzstan, Macedonia, Mongolia, Morocco, Pakistan, Poland, Portugal, Serbia, Slovakia, Slovenia, Spain, Romania, Russia, Syria, Tajikistan, Tunisia, Turkey, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

**Eucera (Tetralonia) fulvescens** (Giraud, 1863)

*Tetralonia fulvescens* Giraud, 1863.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021). Ascher & Pickering, 2021 as *Tetraloniella fulvescens*.

**General distribution:** Albania, Algeria, Austria, Azerbaijan, Bulgaria, China, Croatia, France, Greece, Hungary, Italy, Kazakhstan, Morocco, Portugal, Romania, Russia, Slovakia, Spain, Switzerland, Tunisia, Turkey, and Uzbekistan (Ascher & Pickering, 2021).

**Tribe:** Melectini Westwood, 1840

**Genus:** *Melecta* Latreille, 1802
**Genus: **Melecta

*Melecta (Melecta) aegyptiaca* Radoszkowski, 1876

*Melecta aegyptiaca* Radoszkowski, 1876.

**Distribution in Tunisia:** Kasserine (Feriana), Tunis (Carthage) (Lief tinck, 1980).

**General distribution:** Algeria, Czech Republic, Egypt, France, Greece, Hungary, Israel, Italy, Morocco, Portugal, Slovakia, Spain, Syria, and Tunisia (Ascher & Pickering, 2021).

*Melecta (Melecta) albifrons* (Forster, 1771)

*Apis albifrons* Forster, 1771.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, Austria, Croatia, Denmark, Egypt, England, France, Georgia, Germany, Greece, Hungary, Iran, Libya, Macedonia, Montenegro, Morocco, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Syria, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

*Melecta (Melecta) duodecimmaculata* (Rossi, 1790)

*Nomada duodecimmaculata* Rossi, 1790.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, Austria, Croatia, Denmark, Egypt, England, France, Georgia, Germany, Greece, Hungary, Iran, Libya, Macedonia, Montenegro, Morocco, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Syria, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

*Melecta (Melecta) histrionica* Radoszkowski, 1874

*Crocisa hirta* (de Beaumont, 1939), Nabeul (Hammamet) (Lieftinck, 1968).

**Distribution in Tunisia:** Tozeur (Lieftinck, 1968).

**General distribution:** Algeria, Azerbaijan, Bulgaria, Croatia, Cyprus, Egypt, Greece, Iran, Iraq, Israel, Italy, Kazakhstan, Kyrgyzstan, Libya, Montenegro, Morocco, Pakistan, Portugal, Romania, Russia, Slovakia, Spain, Tunisia, Turkey, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

*Melecta (Melecta) grandis* Lepeletier, 1841

*Melecta grandis* Lepeletier, 1841.

**Distribution in Tunisia:** Tunis (Ascher & Pickering, 2021).

**General distribution:** Algeria, Egypt, Israel, Italy, Libya, Morocco, Spain, Tunisia (Ascher & Pickering, 2021).

*Melecta (Melecta) italica* Radoszkowski, 1876

*Melecta italica* Radoszkowski, 1876.

**Distribution in Tunisia:** Tunis (Ascher & Pickering, 2021).

**General distribution:** Algeria, Croatia, Cyprus, Egypt, France, Greece, Italy, Jordan, Libya, Macedonia, Malta, Morocco, Portugal, Spain, Tunisia, and Turkey (Ascher & Pickering, 2021).

*Melecta (Melecta) leucorhyncha* Gribodo, 1893

*Melecta luctuosa* var. *leucorhyncha* Gribodo, 1893.

**Distribution in Tunisia:** Tunis (Ascher & Pickering, 2021).

**General distribution:** Albania, Algeria, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Czech Republic, Denmark, England, France, Georgia, Germany, Greece, Hungary, Iran, Israel, Jordan, Kazakhstan, Lithuania, Macedonia, Malta, Montenegro, Morocco, Pakistan, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Sweden, Switzerland, Ukraine, Uzbekistan, Turkey, and Turkmenistan (Ascher & Pickering, 2021).

*Melecta (Paracrocisa) guilochei* Dusmet & Alonso, 1915

*Melecta guilochei* Dusmet & Alonso, 1915.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Greece, Morocco and Tunisia (Ascher & Pickering, 2021).

**Genus:** Thyreus

Panzer, 1806

*Thyreus affinis* (Morawitz, 1874)

*Crocisa affinis* Morawitz, 1874.

**Distribution in Tunisia:** Kasserine (Feriana) (Pérez, 1895 as *Crocisa tunensis*).

**General distribution:** Albania, Algeria, Azerbaijan, Bulgaria, Croatia, Cyprus, Egypt, Greece, Iran, Iraq, Israel, Italy, Kazakhstan, Kyrgyzstan, Libya, Montenegro, Morocco, Pakistan, Portugal, Romania, Russia, Slovakia, Spain, Tunisia, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

*Thyreus elegans* (Morawitz, 1878)

*Crocisa elegans* Morawitz, 1878.

**Distribution in Tunisia:** Tozeur (Lieftinck, 1968).

**General distribution:** Algeria, Azerbaijan, Cyprus, Egypt, Eritrea, Iran, Kyrgyzstan, Libya, Mauritania, Morocco, Pakistan, Saudi Arabia, Sudan, Tunisia, Turkey, Turkmenistan, and United Arab Emirates (Ascher & Pickering, 2021).

*Thyreus hirtus* (de Beaumont, 1939)

*Crocisa hirta* de Beaumont, 1939.

**Distribution in Tunisia:** Le Kef (Ascher & Pickering, 2021).

**General distribution:** Algeria, France, Greece, Italy, Morocco, Portugal, Russia, Spain, Tunisia, and Turkey (Ascher & Pickering, 2021).

*Thyreus histrionicus* (Illiger, 1806)

*Meelecta histrionica* Illiger, 1806.

**Distribution in Tunisia:** Kairouan (Schulthess, 1924 as *Crocisa major*), Nabeul (Hammamet) (Lief tinck, 1968).

**General distribution:** Albania, Algeria, Azerbaijan, Belarus, Bulgaria, China, Cyprus, Czech Republic, Egypt, France, Germany, Georgia, Greece, Iran, Israel, Italy, Kazakhstan, Kyrgyzstan, Libya, Macedonia, Malta, Morocco, Poland, Portugal, Romania, Russia, Saudi Arabia, Slovakia, Spain, Switzerland, Syria, Tunisia, Turkey, Tajikistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

*Thyreus orbatus* (Lepeletier, 1841)

*Crocisa orbata* Lepeletier, 1841.

**Distribution in Tunisia:** Tunis (Carthage), Kairouan,
Kasserine (Sbeitla) (Schulthess, 1924 as *Crocsa orbata*), Tunis (Lieftinck, 1968).

**General distribution:** Algeria, Israel, Libya, Morocco, Russia, Tunisia, and Turkey (Ascher & Pickering, 2021).

**Thyreus ramosus** (Lepeletier, 1841)
*Crocisa ramosa* Lepeletier, 1841.

**Distribution in Tunisia:** Kairouan, Gafsa (Schulthess, 1924 as *Crocsa ramosa*); Monastir, Tunis (Carthage) (Lieftinck, 1968); Bizerte (25 km S Bizerte) (Ascher & Pickering, 2021).

**General distribution:** Albania, Afghanistan, Algeria, Austria, Belgium, Bulgaria, Croatia, Egypt, France, Georgia, Germany, Greece, Hungary, India, Iran, Iraq, Israel, Italy, Kazakhstan, Kyrgyzstan, Libya, Macedonia, Moldova, Morocco, Oman, Pakistan, Portugal, Romania, Russia, Slovakia, Spain, Sudan, Switzerland, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, United Arab Emirates, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

**Thyreus tricuspid** (Pérez, 1883)
*Crocisa tricuspis* Pérez, 1883.

**Distribution in Tunisia:** Nabeul (Hammamet) (Schulthess, 1924 as *Crocsa tricuspis*).

**General distribution:** Algeria, Israel, Italy, Libya, Morocco, Syria, and Tunisia (Ascher & Pickering, 2021).

**Genus:** *Thyreomelecta* Rightmyer & Engel, 2003

**Thyreomelecta sibirica** (Radoszkowski, 1893)
*Crocisa sibirica* Radoszkowski, 1893.

**Distribution in Tunisia:** Gafsa (Oasis Gafsa) (Meyer, 1921 as *Crocsa sibirica* (doubtful identity))

**General distribution:** Armenia, China, Russia and Turkey (Ascher & Pickering, 2021).

**Subfamily:** Nomadinae Latreille, 1802

**Tribe:** Ammobatini Handlirsch, 1925

**Genus:** *Ammobates* Latreille, 1809

**Ammobates (Ammobates) assimilis** (Warncke, 1983)
*Pasites assimilis* Warncke 1983.

**Distribution in Tunisia:** Jendouba (10 km N Jendouba) (Warncke, 1983 as *Pasites assimilis*).

**General distribution:** Tunisia (Ascher & Pickering, 2021).

**Ammobates (Ammobates) hipponensis** Pérez, 1902
*Ammobates hipponensis* Pérez, 1902.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria and Tunisia (Ascher & Pickering, 2021).

**Ammobates (Ammobates) minor** (Pérez, 1902)
*Phileremus minor* Pérez, 1902.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

**Ammobates (Ammobates) rufiventeris** Latreille, 1809
*Ammobates rufiventeris* Latreille, 1809.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, Italy, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

**Ammobates (Ammobates) syriacus** Friese, 1899
*Ammobates syriacus* Friese, 1899a.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, Morocco, Israel, Jordan, and Tunisia (Ascher & Pickering, 2021).

**Ammobates (Euphileremus) muticus** Spinola, 1843
*Ammobates muticus* Spinola, 1843.

**Distribution in Tunisia:** Tunisia (Belvédère) (Schulthess, 1924 as *Ammobates carinatus*).

**General distribution:** Austria, Bulgaria, Croatia, France, Greece, Italy, Portugal, Romania, Spain, and Tunisia (Ascher & Pickering, 2021).

**Ammobates (Euphileremus) oraniensis** (Lepeletier, 1841)
*Phileremus oraniensis* Lepeletier, 1841.

**Distribution in Tunisia:** Tunisia (Belvédère) (Schulthess, 1924); Tunis (Ascher & Pickering, 2021).

**General distribution:** Algeria, Armenia, Egypt, Greece, Iran, Israel, Italy, Jordan, Libya, Morocco, Portugal, Romania, Spain, Tunisia, Turkey, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).

**Ammobates (Xerammobates) minutissimus** Mavromoustakis, 1959
*Ammobates minutissimus* Mavromoustakis, 1959.

**Distribution in Tunisia:** Medenine (Djerba) (Mavromoustakis, 1959).

**General distribution:** Tunisia (Ascher & Pickering, 2021).

**Genus:** *Pasites* Jurine, 1807

**Pasites maculatus** Jurine, 1807
*Pasites maculatus* Jurine, 1807.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).
General distribution: Afghanistan, Algeria, Azerbaijan, Belarus, Bulgaria, China, Egypt, France, Greece, Hungary, Iran, Italy, Kazakhstan, Korea, Kyrgyzstan, Morocco, Pakistan, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Switzerland, Syria, Tunisia, Turkey, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).
Genus: Spinopasites Warncke, 1983

Spinopasites spinotus (Warncke, 1983)
Pasites spinotus Warncke 1983.

Distribution in Tunisia: Gabes (10 km S Gabes) (Warncke, 1983 as Pasites spinotus).
General distribution: Tunisia (Ascher & Pickering, 2021).
Tribe: Ammobatoidini Michener, 1944
Genus: Ammobatoide Radoszkowski, 1867

Ammobatoide abdominalis (Eversmann, 1852)
Phileremus abdominalis Eversmann, 1852.

Distribution in Tunisia: Tunisia: no specific locality (Maidl, 1922 as Phiarus abdominalis).
General distribution: Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Cyprus, Czech Republic, France, Germany, Georgia, Greece, Iran, Israel, Italy, Kazakhstan, Kyrgyzstan, Macedonia, Moldova, Romania, Russia, Syria, Tajikistan, Turkey, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

Ammobatoide schachti Schawarz, 1988
Ammobatoide schachti Schawarz, 1988.

Distribution in Tunisia: Kasserine (10 km E Kasserine) (Schwarz, 1988a).
General distribution: Morocco, Tunisia (Ascher & Pickering, 2021).
Genus: Schmiedeknechtia Friese, 1896

Schmiedeknechtia oraniensis Friese, 1896
Schmiedeknechtia orantiensis Friese, 1896b.

Distribution in Tunisia: Jendouba (10 km N Jendouba), Tunis (Schwarz, 1993); Beja, Jendouba, Tunis (Ascher & Pickering, 2021).
General distribution: Algeria, Spain and Tunisia (Ascher & Pickering, 2021).

Schmiedeknechtia verhoeffi Mavromoustakis, 1959
Schmiedeknechtia verhoeffi Mavromoustakis, 1959.

Distribution in Tunisia: Medenine (Djerba) (Mavromoustakis, 1959).
General distribution: Egypt, Israel and Tunisia (Ascher & Pickering, 2021).
Tribe: Epeolini Robertson, 1903
Genus: Epeolus Latreille, 1802

Epeolus aureovestitus Dours, 1873
Epeolus aureovestitus Dours, 1873.

Distribution in Tunisia: Jendouba (South Tabarka), Ben Arous (Hammam Lif) (Bogusch, 2021).
General distribution: Algeria, Portugal, Spain and Tunisia (Ascher & Pickering, 2021).

Epeolus collaris Pérez, 1884
Epeolus collaris Pérez, 1884.

Distribution in Tunisia: Bizerte (Ghar El Melh, East Bizerte), Tunis (Ezzahra, 15 km S Tunis) (Bogusch, 2021).
General distribution: Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

Epeolus fallax Morawitz, 1872
Epeolus fallax Morawitz, 1872.

Distribution in Tunisia: Tunis (La Marsa) (Dusmet & Alonso, 1932); Jendouba, Tunis (Bogusch, 2021).
General distribution: Algeria, France, Germany, Italy, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

Epeolus flavociliatus Friese, 1899
Epeolus flavociliatus Friese, 1899a.

Distribution in Tunisia: Kebili (Blidet), Tozeur (Nefta, Tozeur), Tataouine (Bogusch, 2021).
General distribution: Algeria, Egypt, Iran, Mauritania, Morocco, Pakistan, Spain, and Tunisia (Ascher & Pickering, 2021).
Tribe: Nomadini Latreille, 1802
Genus: Nomada Scopoli, 1770

Nomada accentifera Pérez, 1895
Nomada accentifera Pérez, 1895.

Distribution in Tunisia: Jendouba (Ain Draham) (Schwarz, 1977); Tunis (Ascher & Pickering, 2021).
General distribution: Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

Nomada agrestis Fabricius, 1787
Nomada agrestis Fabricius, 1787.

Distribution in Tunisia: Tunisia: no specific locality (Dusmet & Alonso, 1932); Kasserine (Bouchebka) (Ascher & Pickering, 2021)
General distribution: Algeria, Egypt, France, Greece, Iran, Iraq, Israel, Italy, Jordan, Libya, Morocco, Portugal, Spain, Syria, Tunisia, and Turkey (Ascher & Pickering, 2021).

Nomada algira Mocsáry, 1883
Nomada algira Mocsáry, 1883.

Distribution in Tunisia: Tunis (La Marsa) (Dusmet & Alonso, 1932 as Nomada platyzona); Tunis (Cartlage), Kairouan (Schwarz, 1978 as Nomada platyzona).
General distribution: Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

Nomada barbilabris Pérez, 1895
Nomada barbilabris Pérez, 1895.
**Nomada basalis** Herrich-Schäffer, 1839  
*Nomada basalis* Herrich-Schäffer, 1839.  
**Distribution in Tunisia:** Tunis (Belvédère) (Schulthess, 1924 as *Nomada flavomaculata* var. *tripunctata*); Tunisia: no specific locality (Dusmet & Alonso, 1932 as *Nomada astarte*).  
**General distribution:** Albania, Algeria, Austria, Bosnial and Herzegovina, Bulgaria, Croatia, Czech Republic, France, Greece, Hungary, Iran, Iraq, Israel, Italy, Kazakhstan, Kyrgyzstan, Macedonia, Montenegro, Morocco, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

**Nomada beaumonti** Schwarz, 1967  
*Nomada beaumonti* Schwarz, 1967.  
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).  
**General distribution:** Algeria, France, Greece, Italy, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

**Nomada bifasciata** Olivier, 1811  
*Nomada bifasciata* Olivier, 1811.  
**Distribution in Tunisia:** Gabes (Matmata), Kasserine (Bouchebka) (Ascher & Pickering, 2021).  
**General distribution:** Algeria, Austria, Belgium, Bulgaria, Czech Republic, France, Germany, Hungary, Libya, Liechtenstein, Macedonia, Malta, Morocco, Netherlands, Portugal, Romania, Slovakia, Spain, Switzerland, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

**Nomada bispinosa** Mocsáry, 1883  
*Nomada bispinosa* Mocsáry, 1883.  
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).  
**General distribution:** Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, France, Germany, Greece, Iran, Macedonia, Montenegro, Morocco, Poland, Portugal, Romania, Spain, Switzerland, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).  

**Nomada blepharipes** Schmiedeknecht, 1882  
*Nomada blepharipes* Schmiedeknecht, 1882.  
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).  
**General distribution:** Algeria, Austria, Bulgaria, Czech Republic, France, Greece, Hungary, Israel, Italy, Kazakhstan, Morocco, Portugal, Romania, Russia, Slovakia, Switzerland, Spain, Tunisia, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

**Nomada brevis** Saunders, 1908  
*Nomada brevis* Saunders, 1908.  
**Distribution in Tunisia:** Tunis (La Marsa) (Dusmet & Alonso, 1932 as *Nomada meyeri*); Tataouine (10 km SE Foum Tataouine), Tunis (Ascher & Pickering, 2021).  
**General distribution:** Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

**Nomada carnifex** Mocsáry, 1883  
*Nomada carnifex* Mocsáry, 1883.  
**Distribution in Tunisia:** Medenine (Djerba, SE Houmt Souk) (Ascher & Pickering, 2021).  
**General distribution:** Algeria, France, Italy, Libya, Morocco, Portugal, Spain, Switzerland, and Tunisia (Ascher & Pickering, 2021).

**Nomada chrysopyga pyrosoma** Dours, 1873  
*Nomada chrysopyga pyrosoma* Dours, 1873.  
**Distribution in Tunisia:** Kairouan (Schulthess, 1924 as *Nomada scutellata* and as *Nomada umbripennis*); Tunis (Schwarz, 1977 as *Nomada nigrita*).  
**General distribution:** North Africa (Ascher & Pickering, 2021).

**Nomada conjungens** Herrich-Schäffer, 1839  
*Nomada conjungens* Herrich-Schäffer, 1839.  
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).  
**General distribution:** Algeria, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, England, France, Germany, Greece, Hungary, Kazakhstan, Lithuania, Macedonia, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Spain, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

**Nomada coronata** Pérez, 1895  
*Nomada coronata* Pérez, 1895.  
**Distribution in Tunisia:** Tunis (Carthage) (Schwarz, 1977).  

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**Nomada blepharipes Schmiedeknecht, 1882**  
Nomada blepharipes Schmiedeknecht, 1882.  
**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).  
**General distribution:** Algeria, Austria, Bulgaria, Czech Republic, France, Greece, Hungary, Israel, Italy, Kazakhstan, Morocco, Portugal, Romania, Russia, Slovakia, Switzerland, Spain, Tunisia, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).
General distribution: Algeria, France, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

Nomada cristata Pérez, 1895
Nomada cristata Pérez, 1895.
Distribution in Tunisia: Tunis (Schwarz, 1977; Ascher & Pickering, 2021).
General distribution: Algeria, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

Nomada discedens Pérez, 1884
Nomada discedens Pérez, 1884.
Distribution in Tunisia: Le Kef (Schulthess, 1924).
General distribution: France, Germany, Morocco, Portugal, and Spain (Ascher & Pickering, 2021).

Nomada discrepans Schmiedeknecht, 1882
Nomada discrepans Schmiedeknecht, 1882.
Distribution in Tunisia: Tunisia: no specific locality (Dusmet & Alonso, 1932).
General distribution: Algeria, France, Hungary, Israel, Italy, Morocco, Portugal, Romania, Slovakia, Slovenia, Spain, Tunisia, Turkey, and Turkmenistan (Ascher & Pickering, 2021).

Nomada distinguenda Morawitz, 1874
Nomada distinguenda Morawitz, 1874.
Distribution in Tunisia: Tunis (La Marsa) (Dusmet & Alonso, 1932).
General distribution: Afghanistan, Albania, Algeria, Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, France, Georgia, Germany, Greece, Hungary, Iran, Italy, Lebanon, Macedonia, Malta, Montenegro, Morocco, Netherlands, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Syria, Tunisia, Turkey, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).

Nomada dolosa Mocsáry, 1883
Nomada dolosa Mocsáry, 1883.
Distribution in Tunisia: Zaghouan (Fahs, Thuburbo Majus) (Schwarz & Gusenleitner, 2013).
General distribution: Algeria, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

Nomada duplex Smith, 1854
Nomada duplex Smith, 1854.
Distribution in Tunisia: Tunis (Schwarz, 1977 as Nomada cirtana).
General distribution: Algeria, France, Italy, Morocco, Portugal, and Spain (Ascher & Pickering, 2021).

Nomada fallax Pérez, 1913
Nomada fallax Pérez, 1913.
Distribution in Tunisia: Medenine (Djerba, SE Houmt Souk) (Ascher & Pickering, 2021).

General distribution: Algeria, France, Italy, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

Nomada felici Schawarz, 1977
Nomada felici Schawarz, 1977.
Distribution in Tunisia: Tunis (Schwarz, 1977).
General distribution: Greece and Tunisia (Ascher & Pickering, 2021).

Nomada femoralis Morawitz, 1869
Nomada femoralis Morawitz, 1869.
Distribution in Tunisia: Tunis (La Marsa) (Dusmet & Alonso, 1932).
General distribution: Afghanistan, Algeria, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, France, Germany, Greece, Hungary, Israel, Italy, Kyrgyzstan, Lithuania, Macedonia, Morocco, Poland, Portugal, Romania, Russia, Slovakia, Spain, Switzerland, Syria, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

Nomada fenestrata Lepeletier, 1841
Nomada fenestrata Lepeletier, 1841.
Distribution in Tunisia: Tunisia: no specific locality (Schwarz, 1965 as Nomada vicarioi); Kasserine (10 km NW Thelepte) (Ascher & Pickering, 2021).
General distribution: Afghanistan, Albania, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Morocco, Pakistan, Portugal, Spain, Tunisia, and Turkey (Ascher & Pickering, 2021).

Nomada ferruginata Linnaeus, 1767
Nomada ferruginata Linnaeus, 1767.
Distribution in Tunisia: Tunis (La Marsa) (Dusmet & Alonso, 1932).
General distribution: Austria, Belarus, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Hungary, Italy, England, Lithuania, Netherlands, Poland, Romania, Russia, Serbia, Slovakia, Sweden, Switzerland, Spain, and Ukraine (Ascher & Pickering, 2021).

Nomada flavoguttata Kirby, 1802
Nomada flavoguttata Kirby, 1802.
Distribution in Tunisia: Tunisia: no specific locality (Dusmet & Alonso, 1932).
General distribution: Algeria, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, China, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Georgia, Greece, Hungary, India, Ireland, Israel, Italy, Japan, Kazakhstan, Korea, Kyrgyzstan, Lithuania, Macedonia, Morocco, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Tajikistan, Tunisia, Turkey, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).

Nomada fulvicornis maroccana Pérez, 1895
Nomada maroccana Pérez, 1895.
Distribution in Tunisia: Tunis (Bardo) (Schwarz, 1965 as Nomada pintosi).

General distribution: Northwest Africa (Ascher & Pickering, 2021).

Nomada glaucopis Pérez, 1890
Nomada glaucopis Pérez, 1890.
Distribution in Tunisia: Kairouan (Schulthess, 1924 as Nomada pusilla); Tunis (La Marsa) (Dusmet & Alonso, 1932 as Nomada pusilla).
General distribution: Algeria, Czech Republic, France, Germany, Greece, Hungary, Israel, Italy, Kazakhstan, Libya, Morocco, Portugal, Romania, Russia, Spain, Tunisia, and Turkey (Ascher & Pickering, 2021).

Nomada ibanezi Dusmet & Alonso, 1915
Nomada ibanezi Dusmet & Alonso, 1915.
Distribution in Tunisia: Tataouine (10 km SE Foum Tataouine) (Ascher & Pickering, 2021).
General distribution: Morocco and Tunisia (Ascher & Pickering, 2021).

Nomada inermis Pérez, 1895
Nomada inermis Pérez, 1895.
Distribution in Tunisia: Tataouine (Ascher & Pickering, 2021).
General distribution: Tunisia (Ascher & Pickering, 2021).

Nomada integra imperfecta Schwarz, 1967
Nomada cinctiventris ssp. imperfecta Schwarz, 1967.
Distribution in Tunisia: Tunisia: no specific locality (Alexander & Schwarz, 1994).
General distribution: Algeria, Israel and Tunisia (Ascher & Pickering, 2021).

Nomada judaica Schwarz & Smit, 2018
Nomada judaica Schwarz & Smit, 2018.
Distribution in Tunisia: Tataouine (Schwarz & Smit, 2018).
General distribution: Algeria, Israel, Jordan, Syria, Tunisia, and Turkey (Ascher & Pickering, 2021).

Nomada keroanensis Pérez, 1895
Nomada keroanensis Pérez, 1895.
Distribution in Tunisia: Tunisia: no specific locality (Dusmet & Alonso, 1932); Kairouan, Tunis (Schwarz, 1977); Kairouan, Kasserine (10 km NW Thelepte) (Ascher & Pickering, 2021).
General distribution: Morocco and Tunisia (Ascher & Pickering, 2021).

Nomada kohli Schmiedeknecht, 1882
Nomada kohli Schmiedeknecht, 1882.
Distribution in Tunisia: Tunisia: no specific locality (Dusmet & Alonso, 1932).

General distribution: Albania, Algeria, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, France, Germany, Greece, Hungary, Israel, Italy, Macedonia, Malta, Morocco, Portugal, Romania, Russia, Serbia, Slovenia, Slovakia, Spain, Switzerland, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

Nomada lathuriara Kirby, 1802
Nomada lathuriara Kirby, 1802.
Distribution in Tunisia: Tunisia: no specific locality (Ascher & Pickering, 2021).
General distribution: Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, England, Finland, France, Germany, Georgia, Hungary, Italy, Kazakhstan, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Spain, Sweden, Tajikistan, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

Nomada linsenmaieri Schwarz, 1974
Nomada linsenmaieri Schwarz, 1974.
Distribution in Tunisia: Tunisia: no specific locality (Ascher & Pickering, 2021).
General distribution: Algeria, France, Italy, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

Nomada litigiosa Gribodo, 1893
Nomada litigiosa Gribodo, 1893.
Distribution in Tunisia: Tunis (Ascher & Pickering, 2021).
General distribution: Algeria, Italy and Tunisia (Ascher & Pickering, 2021).

Nomada maculicornis Pérez, 1884
Nomada maculicornis Pérez, 1884.
Distribution in Tunisia: Kasserine (Bouchebka) (Ascher & Pickering, 2021).
General distribution: Algeria, France, Italy, Morocco, Portugal, and Spain (Ascher & Pickering, 2021).

Nomada marshamella Kirby, 1802
Nomada marshamella Kirby, 1802.
Distribution in Tunisia: Tunisia: no specific locality (Ascher & Pickering, 2021).
General distribution: Austria, Azerbaijan, Bulgaria, Croatia, Czech Republic, England, Estonia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Kazakhstan, Lithuania, Macedonia, Montenegro, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Sweden, Switzerland, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

Nomada mauritanica Lepeletier, 1841
Nomada mauritanica Lepeletier, 1841.
Distribution in Tunisia: Medenine (Schwarz, 1977 as Nomada poecilonota); Kairouan, Kasserine (10 km NW Thelepte) (Ascher & Pickering, 2021).
**Nomada numida Lepeletier, 1841**
Nomada numida Lepeletier, 1841.

**Distribution in Tunisia:** Sfax (Schulthess, 1924 as *Nomada mauritanica mannii*).

**General distribution:** Algeria, Austria, Croatia, Cyprus, Egypt, France, Greece, Hungary, Israel, Italy, Libya, Montenegro, Morocco, Portugal, Romania, Serbia, Slovakia, Spain, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

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**Nomada melanura Mocsáry, 1883**
Nomada melanura Mocsáry, 1883.

**Distribution in Tunisia:** Kairouan (Schwarz, 1976 as *Nomada gracilipes*).

**General distribution:** Algeria, Japan and Morocco (Ascher & Pickering, 2021).

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**Nomada mideltiaca Schwarz, Smit & Ockermüller, 2019**
Nomada mideltiaca Schwarz, Smit & Ockermüller, 2019.

**Distribution in Tunisia:** Kebili (Bir Soltane, 46 km E Douz) (Schwarz et al., 2019).

**General distribution:** Morocco and Tunisia (Ascher & Pickering, 2021).

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**Nomada minuscula Noskiewicz, 1930**
Nomada minuscula Noskiewicz, 1930.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Algeria, Austria, Croatia, France, Germany, Greece, Hungary, Italy, Morocco, Poland, Portugal, Serbia, Slovakia, Switzerland, Spain, Tunisia, and Ukraine (Ascher & Pickering, 2021).

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**Nomada mutabilis Morawitz, 1870**
Nomada mutabilis Morawitz, 1870.

**Distribution in Tunisia:** Tunis (Ascher & Pickering, 2021).

**General distribution:** Algeria, Austria, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, France, Georgia, Germany, Greece, Hungary, India, Iran, Israel, Italy, Kazakhstan, Kyrgyzstan, Lithuania, Macedonia, Morocco, Nepal, Netherlands, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Tunisia, Turkey, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

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**Nomada nobilis Herrich-Schäffer, 1839**
Nomada nobilis Herrich-Schäffer, 1839.

**Distribution in Tunisia:** Jendouba (15 km E Tabarka) (Ascher & Pickering, 2021).

**General distribution:** Albania, Algeria, Austria, Bulgaria, Croatia, Czech Republic, France, Germany, Greece, Hungary, Iran, Israel, Italy, Macedonia, Montenegro, Morocco, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Syria, Tunisia, Turkey, and Ukraine (Ascher & Pickering, 2021).

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**Nomada panurgina Morawitz, 1869**
Nomada panurgina Morawitz, 1869.

**Distribution in Tunisia:** Tunisia: no specific locality (Maidl, 1922 as *Nomada julliani*); Kairouan, Kasserine (Sbeitla), Tunis (Carthage) (Schulthess, 1924 as *Nomada julliani*).

**General distribution:** Algeria, Croatia, France, Italy, Morocco, Spain, Switzerland, and Tunisia (Ascher & Pickering, 2021).

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**Nomada panurginoides Saunders, 1908**
Nomada panurginoides Saunders, 1908.

**Distribution in Tunisia:** Tunis (La Marsa) (Dusmet & Alonso, 1932); Gabes (Matmata) (Ascher & Pickering, 2021).

**General distribution:** Algeria, Morocco, Tunisia (Ascher & Pickering, 2021).

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**Nomada pectoralis Morawitz, 1877**
Nomada pectoralis Morawitz, 1877.

**Distribution in Tunisia:** Jendouba (1 km S Ain Draham) (Ascher & Pickering, 2021).

**General distribution:** Azerbaijan, Bulgaria, Croatia, France, Greece, Hungary, Iran, Morocco, Romania, Russia, Slovakia, Spain, Tunisia, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).

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**Nomada pleurosticta Herrich-Schäffer, 1839**
Nomada pleurosticta Herrich-Schäffer, 1839.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Austria, Belgium, Bulgaria, France, Germany, Greece, Hungary, Iran, Italy, Netherlands, Portugal, Russia, Slovakia, Spain, Switzerland, Tunisia, and Turkey (Ascher & Pickering, 2021).

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**Nomada podagrica Gribodo, 1893**
Nomada podagrica Gribodo, 1893.

**Distribution in Tunisia:** Tunisia: no specific locality (Alexander & Schwarz, 1994).

**General distribution:** Algeria and Tunisia (Ascher & Pickering, 2021).

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**Nomada pruinosa Pérez, 1895**
Nomada pruinosa Pérez, 1895.

**Distribution in Tunisia:** Kairouan, Kasserine (10 km NW Thelepte) (Ascher & Pickering, 2021).

**General distribution:** Algeria, Egypt, Israel, Libya, Morocco, Spain, and Tunisia (Ascher & Pickering, 2021).

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**Nomada rubiginosa Pérez, 1884**
Nomada rubiginosa Pérez, 1884.

**Distribution in Tunisia:** Tunisia: no specific locality (Dusmet & Alonso, 1932: 233; Alexander & Schwarz, 1994).
General distribution: Algeria, France, Israel, Italy, Morocco, Portugal, Spain, Tunisia, and Turkey (Ascher & Pickering, 2021).

**Nomada sabulosa** Radoszkowski, 1876

Nomada sabulosa Radoszkowski, 1876.

**Distribution in Tunisia:** Kasserine (10 km NW Thelepte) (Ascher & Pickering, 2021).

General distribution: Algeria, Egypt, Israel, Morocco, Spain, and Tunisia (Ascher & Pickering, 2021).

**Nomada sanguinea** Smith, 1854

Nomada sanguinea Smith, 1854.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

General distribution: Algeria, France, Italy, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

**Nomada sexfasciata** Panzer, 1799

Nomada sexfasciata Panzer, 1799.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

General distribution: Algeria, Austria, Azerbaijan, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Egypt, England, France, Germany, Greece, Hungary, Iran, Israel, Italy, Kazakhstan, Liechtenstein, Luxemburg, Montenegro, Morocco, Netherlands, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Switzerland, Sweden, Tunisia, Turkey, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).

**Nomada sheppardana** (Kirby, 1802)

Apis sheppardana Kirby, 1802.

**Distribution in Tunisia:** Tunisia: no specific locality (Schwarz, 1988b as Nomada microsticta).

General distribution: Algeria, Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Egypt, England, France, Germany, Greece, Hungary, Ireland, Japan, Morocco, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Spain, Switzerland, and Tunisia (Ascher & Pickering, 2021).

**Nomada stigma** Fabricius, 1804

Nomada stigma Fabricius, 1804.

**Distribution in Tunisia:** Jendouba (11 km S Tabarka, Kataria meadow) (Ascher & Pickering, 2021).

General distribution: Algeria, Austria, Azerbaijan, Belgium, Bulgaria, Czech Republic, Croatia, Denmark, Egypt, England, France, Germany, Greece, Hungary, Iran, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Macedonia, Netherlands, Portugal, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Tajikistan, Tunisia, Turkey, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

**Nomada succincta** Panzer, 1798

Nomada succincta Panzer, 1798.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

General distribution: Algeria, Austria, Azerbaijan, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Israel, Italy, Jordan, Kazakhstan, Lithuania, Macedonia, Morocco, Netherlands, Poland, Portugal, Romania, Russia, Spain, Switzerland, Syria, Tunisia, Turkey, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).

**Nomada tridentirostris** Dours, 1873

Nomada tridentirostris Dours, 1873.

**Distribution in Tunisia:** Jendouba (11 km S Tabarka, Kataria meadow) (Ascher & Pickering, 2021).

General distribution: Algeria, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, France, Greece, Hungary, Iran, Israel, Italy, Macedonia, Morocco, Poland, Portugal, Russia, Slovakia, Slovenia, Spain, Switzerland, Tunisia, and Turkey (Ascher & Pickering, 2021).

Subfamily: Xylocopinae Latreille, 1802

**Tribe:** Ceratinini Latreille, 1802

**Genus:** Ceratina Latreille, 1802

**Ceratina (Ceratina) cucurbitina** (Rossi, 1792)

Apis cucurbitina Rossi, 1792.

**Distribution in Tunisia:** Ben Arous (Hamam Lif) (Schulthess, 1924); Beja (Teboursouk, 1 km S on M.R. 5; Teboursouk, Dougga ruins on S.R. 74; Nezfa, Djebel Abiod, 12 km S on S.R. 52), Bizerte (Utique ruins, Jefna on M.R. 7; Jefna, 2.1 km W on M.R. 7), Jendouba (Ain Drahem, 12.4 km S on M.R. 17; Ain Drahem, 5.6 km S on M.R. 17; Ain Drahem, Beni Mètir Damm on S.R. 65; Tabarka, 14 km E on M.R. 7; Tabarka, 3.5 km S on M.R. 17; Tabarka, 16.5 km S on M.R. 17; Ain Sekbaa, 6.2 km E on M.R. 7), Kasserine (Thala, on M.R. 17), Le Kef (Le Kef, 26 km NE on M.R. 5), Nabeul (Grombalia, 1 km NW on M.R. 1; Kéliibia, 4 km NE on S.R. 27; Menzel Temime, 1.4 km SW on S.R. 27), Sousse (Bouficha, 1.04 km N on M.R. 1), Siliana (Makthar, North city limits; Makzel Temime, 16 km E on M.R. 12 or 0.5 km E junction la Kesra road), Tunis (La Marsa), Zaghouan (Pont du Fahs, 23 km NE on M.R. 3; Pont du Fahs, 19 km SW on M.R. 4; Pont du Fahs, 20 km SW on M.R. 4) (Daly, 1983).

General distribution: Albania, Algeria, Azerbaijan, Bosnia, and Herzegovina, Bulgaria, France, Germany, Greece, Hungary, Iran, Israel, Italy, Jordan, Libya, Macedonia, Montenegro, Morocco, Poland, Portugal, Russia, Romania, Serbia, Slovakia, Spain, Switzerland, Syria, Tunisia, Turkey, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).

**Ceratina (Dalyatina) parvula** Smith, 1854

Ceratina parvula Smith, 1854.

**Distribution in Tunisia:** Jendouba (Ain Drahem, 7 km S on M.R. 17 and 2 km NE on S.R. 65; Tabarka, 14 km E on M.R. 7), Zaghouan (Pont du Fahs, 23 km NE on M.R. 3) (Daly, 1983).

General distribution: Algeria, Bulgaria, Croatia, Cyprus, Egypt France, Greece, Italy, Libya, Macedonia, Montenegro, Morocco, Portugal, Spain, Syria, Tunisia, Turkey, and Turkmenistan (Ascher & Pickering, 2021).

**Ceratina (Euceratina) acuta** Friese, 1896

Ceratina acuta Friese, 1896a.
**Distribution in Tunisia:** Tunisia no specific locality (Friese, 1896a, 1901; Maidl, 1922).

**General distribution:** Albania, Armenia, Austria, Bulgaria, Croatia, Czech Republic, Germany, Georgia, Greece, Iran, Israel, Kazakhstan, Lebanon, Macedonia, Romania, Russia, Serbia, Slovakia, Turkey, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).

**Ceratina (Euceratina) albosticta** Cockerell, 1931

Ceratina dallatorreana albosticta Cockerell, 1931.

**Distribution in Tunisia:** Bizerte (Jefna on M.R. 7), Jendouba (Ain Draham, 5.6 km S on M.R. 17; Ain Draham, 12.4 km S on M.R. 17), Nabeul (Grombalia, 1 km NW on M.R. 1; Kélibia, 4 km NE on S.R. 27), Siliana (Makthar, North city limits), Tunis (La Marsa) (Daly, 1983).

**General distribution:** Algeria, Morocco, Spain and Tunisia (Ascher & Pickering, 2021).

**Ceratina (Euceratina) callosa** (Fabricius, 1794)

Apis callosa Fabricius, 1794.

**Distribution in Tunisia:** Ben Arous (Hamam Lif), Tunis (Carthage) (Schulthess, 1924); Beja (Teboursouk, 1 km S on M.R. 5; Teboursouk, Dougga ruins on S.R. 74), Gafsa (Ksour), Kairouan (Kairouan, 17 km NW on M.R. 3), Le Kef (Le Kef, 22.5 km SW on M.R. 17; Le Kef, 26 km NE on M.R. 5), Nabeul (Grombalia, 1 km NW on M.R. 1), Siliana (Makthar, 13 km E on M.R. 12), Zaghouan (Pont du Fahs, 23 km NE on M.R. 3; Pont du Fahs, 19 km SW on M.R. 4; Draa Ben Joud, junction M.R.3/S.R. 123) (Daly, 1983).

**General distribution:** Algeria, Austria, France, Germany, Italy, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

**Ceratina (Euceratina) chalybea** Chevrier, 1872

Ceratina chalybea Chevrier, 1872.

**Distribution in Tunisia:** Jendouba (Ain Draham, 5.6 km S on M.R. 17; Ain Draham, 4.4 km S on M.R. 17; Tabarka, 16.5 km S on M.R. 17), Nabeul (Menzel Temime, 1.4 km SW on S.R. 27), Siliana (Makthar, North city limits; Makthar, 16 km E on M.R. 12 or 0.5 km E junction la Kesra road) (Daly, 1983).

**General distribution:** Albania, Algeria, Austria, Azerbaijan, Bulgaria, Croatia, France, Georgia, Germany, Greece, Iran, Italy, Jordan, Macedonia, Montenegro, Morocco, Portugal, Romania, Russia, Slovakia, Switzerland, Syria, Spain, Tunisia, Turkey, Turkmenistan, and Ukraine, (Ascher & Pickering, 2021).

**Ceratina (Euceratina) cyanea** (Kirby, 1802)

Apis cyanea Kirby, 1802.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Albania, Algeria, Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, England, France, Germany, Georgia, Greece, Iran, Italy, Kazakhstan, Libya, Lithuania, Malta, Montenegro, Netherlands, Norway, Portugal, Romania, Russia, Serbia, Spain, Sweden, Switzerland, Turkey, Turkmenistan, and Ukraine (Ascher & Pickering, 2021).

**Ceratina (Euceratina) dallatorreana** Friese, 1896

Ceratina dallatorreana Friese, 1896a.

**Distribution in Tunisia:** Beja (Nefza, Djebel Abiod, 12 km S on S.R. 52), Bizerte (Jefna on M.R. 7; Jefna, 2.1 km W on M.R. 7), Jendouba (Ain Draham, 5.6 km S on M.R. 17; Ain Draham, 12.4 km S on M.R. 17; Ain Sebaa, 6.2 E km on M.R. 7; Fernana, 3.1 km NW on S.R. 65; Tabarka, 14 km E on M.R. 7; Tabarka, 3.5 km S on M.R. 17), Le Kef (Le Kef, 26 km NE on M.R. 5), Nabeul (Grombalia, 1 km NW on M.R. 1; Menzel Temime, 1.4 km SW on S.R. 27; Kélibia, 4 km NE on S.R. 27), Siliana (Makthar, North city limits; Makthar 16 km E on M.R. 12 or 0.5 km E junction la Kesra road), Sousse (Bouficha, 10.4 km N on M.R. 1), Tunis (La Marsa) (Daly, 1983).

**General distribution:** Albania, Algeria, Bulgaria, Cyprus, France, Georgia, Greece, Iran, Israel, Italy, Kyrgyzstan, Malta, Montenegro, Morocco, Portugal, Romania, Slovenia, Spain, Syria, Tunisia, Turkey, Turkmenistan, Ukraine, United States, and Uzbekistan (Ascher & Pickering, 2021).

**Ceratina (Euceratina) dentiventris** Gerstäcker, 1869

Ceratina dentiventris Gerstäcker, 1869.

**Distribution in Tunisia:** Tunisia: no specific locality (Ascher & Pickering, 2021).

**General distribution:** Croatia, France, Georgia, Germany, Greece, Israel, Italy, Morocco, Portugal, Romania, Spain, Tunisia, and Turkey (Ascher & Pickering, 2021).

**Ceratina (Euceratina) maghrebensis** Daly, 1983

Ceratina maghrebensis Daly, 1983.

**Distribution in Tunisia:** Jendouba (Tabarka), Kairouan (Kairouan, 17 km NW on M.R. 3), Kasserine (Sbeitla), Zaghouan (Pont du Fahs, 19 km SW on M.R. 4; Pont du Fahs, 20 km SW on M.R. 4) (Daly, 1983).

**General distribution:** Algeria, Morocco and Tunisia (Ascher & Pickering, 2021).

**Ceratina (Euceratina) mocsaryi** Friese, 1896a

Ceratina mocsaryi Friese, 1896a.

**Distribution in Tunisia:** Jendouba (Ain Draham, 7 km S on M.R. 17 and 2 km NE on S.R. 65; Ain Draham, 15 km S on M.R. 17; Ain Draham, 7 km S on M.R. 17 and 2.8 km NE on S.R. 65; Ain Draham, 5.6 km S on M.R. 17; Ain Draham, 12.4 km S on M.R. 17; Ain Draham, 12.4 km S on M.R. 17; Ain Draham, Beni Météir Dam on S.R. 65; Tabarka, 14 km E on M.R. 7; Tabarka, 16.5 km S on M.R. 17; Ain Sebaa, 6.2 km E on M.R. 7; Fernana, 11.3 km NW on S.R. 65), Nabeul (Grombalia, 1 km NW on M.R. 1), Siliana (Makthar, 16 km E on M.R. 12 or 0.5 km E junction la Kesra road) (Daly, 1983).

**General distribution:** Algeria, Armenia, France, Italy, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).
Ceratina (Euceratina) saundersi Daly, 1983

Ceratina saundersi Daly, 1983.

Distribution in Tunisia: Gabes (3 km SW Matmata) (Ascher & Pickering, 2021); Beja (Nefza, Djebel Abiod, 12 km S on S.R. 52), Jendouba (Ain Sebaa, 6.2 km E on M.R. 7), Fernana, 3.1 km NW on S.R. 65; Tabarka, 16.5 km S on M.R. 17), Kasserine (Thala, 13 km SE on M.R. 17), Le Kef (Le Kef, 26 km NE on M.R. 5), Nabeul (Grombalia, 1 km NW on M.R. 1), Siliana (Makthar, North city limits; Makthar, 16 km E on M.R. 12 or 0.5 km E junction la Kesra road); Sousse (Bouficha, 10.4 km N on M.R. 1), Tunis (La Marsa), Zaghrouan (Pont du Fahs, 19 km SW on M.R. 4; Pont du Fahs, 20 km SW on M.R. 4) (Daly, 1983).

General distribution: Algeria, Italy, Libya, Morocco, Portugal, Spain, and Tunisia (Ascher & Pickering, 2021).

Tribe: Xylocopini Latreille, 1802

Genus: Xylocopa Latreille, 1802

Xylocopa (Copoxyla) iris (Christ, 1791)

Apis iris Christ, 1791.

Distribution in Tunisia: Tunis (Quamart) (Vicidomini, 2005).

General distribution: Afghanistan, Albania, Algeria, Austria, Azerbaijan, Bosnia and Herzegovina, Croatia, France, Bulgaria, Georgia, Germany, Greece, Hungary, Iran, Israel, Italy, Kazakhstan, Libya, Macedonia, Moldova, Morocco, Portugal, Romania, Russia, Serbia, Slovenia, Slovakia, Spain, Switzerland, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, and Uzbekistan (Ascher & Pickering, 2021).

Xylocopa (Xylocopa) violacea (Linnaeus, 1758)

Apis violacea Linnaeus, 1758.

Distribution in Tunisia: Tunisia: no specific locality (Ascher & Pickering, 2021).

General distribution: Algeria, Azerbaijan, Egypt, Georgia, Indonesia, Iran, Iraq, Israel, Kazakhstan, Libya, Morocco, Russia, Syria, Tajikistan, Tunisia, Turkey, and Turkmenistan, very common in Europe (Ascher & Pickering, 2021).

Discussion

Our study states that the Tunisian fauna of Apidae is composed of 184 species and subspecies belonging to 19 genera. The reported fauna is rich in terms of genera but not in species compared to Moroccan fauna where have been reported 15 genera and 241 species (Lhomme et al., 2020).

An uncertain identification for some species were noticed leading to the need for a re-examination of the specimens such as of Nomada femorata reported from Tunis province (Belvédère, Carthage) and Anthophora sp. from Tozeur (Schulthess, 1924). Also, Dusmet & Alonso (1932) reported Nomada species from Tunisia (Nomada discrepans Schmiedeknecht, 1882 var.?, Nomada n. sp. ? (furva Panz. var. ?), Nomada sp. ? (immaculata Mor. ?)) but without a clear identification. This may correspond to species already mentioned and for this reason they are excluded from the present list.

Some researchers (Maidl, 1922; Schulthess, 1924; Dusmet & Alonso, 1932; Ascher & Pickering, 2021) reported some species and subspecies from Tunisia, but without mentioning the specific locality. The total number of these taxa were 54 and the confirmation of their presence in Tunisia may be confirmed.

Geographically, Tunisia is divided into three main regions: North, Center and South regions (Fig 1). The North region is the most diverse in Apidae species with about 80% of the total number of species in the country (Fig 4). This may be related to edaphic, climatic and vegetation conditions characterizing this region which are favorable to the biology of those species. The East Center part of Tunisia including the Tunisian coast is the least rich area with only 16 species and subspecies. Future investigations in this area are required to contribute to knowledge of biodiversity of the apids in Tunisia (Figs 3, 4). A total of species recorded, only five are endemic to Tunisian fauna (Table 1).

Fig 3. Apidae species number per province in Tunisia.
Table 1. Endemic and near endemic Apidae species in Tunisia. The symbol “+” means presence.

| Species | Algeria | Libya | Morocco | Tunisia |
|---------|---------|-------|---------|---------|
| *Ammobates* Latreille, 1809 |         |       |         |         |
| *A. assimilis* (Warncke, 1983) |       |       |         | +       |
| *A. hipponensis* Pérez, 1902 | +       |       |         |         |
| *A. minor* (Pérez, 1902) | +       | +     | +       | +       |
| *A. minutissimus* Mavromoustakis, 1959 |       |       |         | +       |
| *Ammobatoides* Radoszkowski, 1867 |       |       |         |         |
| *A. schachti* Schwarz, 1988 |       | +     | +       | +       |
| *Anthophora* Latreille, 1803 |         |       |         |         |
| *A. holoxantha* Pérez, 1895 | +       | +     | +       |         |
| *Ancyla* Lepeletier, 1841 |       |       |         |         |
| *A. brevis* Dours, 1873 | +       | +     | +       |         |
| *Ceratina* Latreille, 1802 |         |       |         |         |
| *C. maghrebensis* Daly, 1983 | +       | +     | +       |         |
| *Epeolus* Latreille, 1802 |         |       |         |         |
| *E. collaris* Pérez, 1884 | +       | +     | +       |         |
| *Eucera* Scopoli, 1770 |         |       |         |         |
| *E. alopec* Risch, 1999 |       |       |         | +       |
| *E. bequertii* Alfken, 1914 | +       | +     | +       |         |
| *E. genovefæ* Vachal, 1907 | +       | +     | +       |         |
| *E. polita* Pérez, 1895 | +       |       |         |         |
| *E. spatulata* Gribodo, 1893 | +       | +     | +       |         |
| *E. vachali* Pérez, 1895 | +       | +     | +       |         |
| *E. warnckei* Risch, 1999 | +       | +     | +       |         |
| *Nomada* Scopoli, 1770 |         |       |         |         |
| *N. algira* Mocsáry, 1883 | +       | +     | +       |         |
| *N. brevis* Saunders, 1908 | +       | +     | +       |         |
| *N. carthaginensis* Dusmet & Alonso, 1932 | +       | +     | +       |         |
| *N. ibanezi* Dusmet & Alonso, 1915 |       |       |         | +       |
| *N. inermis* Pérez, 1895 |       |       |         | +       |
| *N. keroanensis* Pérez, 1895 | +       |       | +       |         |
| *N. mideltiaca* Schwarz, Smit & Ockermüller, 2019 |       |       | +       |         |
| *N. panurginoides* Saunders, 1908 | +       |       | +       |         |
| *N. podagrica* Gribodo, 1893 | +       | +     | +       |         |
| *Spinopasites* Warncke, 1983 |         |       |         |         |
| *S. spinotus* (Warncke, 1983) |       |       |         | +       |

Fig 4. Apidae species number per region in Tunisia.
This list represents the first attempt to review Apidae fauna of Tunisia. More investigations on wild bees are necessary to improve our knowledge to this fauna in the country.

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