



## RESEARCH ARTICLE

**Checklist of the spiders (Araneae) of Libya**

Housameddin Elkrew<sup>1\*</sup>, Abdulmaula Hamza<sup>2</sup>, Salah Ghana<sup>3</sup>, Taher Shaibi<sup>4</sup>, Abubaker Ibrahim Swehli<sup>5</sup>, Hoda Elmareme<sup>6</sup>, Amirrudin Ahmad<sup>7</sup>

<sup>1</sup> Department of Environmental and Food Sciences, Libyan Centre for Biotechnology Research, Tripoli, Libya

<sup>1,7</sup> Faculty of Science and Marine Environment, Universiti Malaysia Terengganu. 21030 Kuala Terengganu, Terengganu, Malaysia

<sup>2</sup> Biology Department, Faculty of Education, University of Tripoli, P.O. Box 13793 Tripoli, Libya

<sup>3,4,5,6</sup> Department of Zoology, Faculty of Sciences, University of Tripoli, Tripoli, Libya

<sup>7</sup> Institute of Tropical Biodiversity and Sustainable Development, Universiti Malaysia Terengganu. 21030 Kuala Terengganu, Terengganu, Malaysia

ARTICLE INFO	ABSTRACT
Received: Oct 12, 2024	Information on diversity and distribution of spiders in Libya is limited, due to lack of updates and lack of a systematic checklist for these arthropods in the country. Here we present the first checklist for spiders of Libya, based on published literature between 1881 and 2016-2017. Majority of the historic research was published in Italian, during the occupation period. The checklist include 353 species belongs to 174 genera and 37 families, among them 25 species and eight genera are new records for Libya. The specimens of the 25 new records were collected from the area extending from Tripoli to Msallata (Tripolitania, Northwest of Libya). This checklist will serve as a baseline information for further research on the biodiversity of spiders from this North African country.
Accepted: Dec 9, 2024	
<b>Keywords</b>	
Spiders Of Libya	
Araneae	
Checklist	
New Record	
Endemic Species	
<b>*Corresponding Author:</b>	
hmk4052019@gmail.com	
p3637@pps.umt.edu.my	

**INTRODUCTION**

The spider checklist of Libya has not been prepared yet, despite the fact that spiders constitute one of the most megadiverse orders of living organisms, with almost 52,000 extant and fossil species (World Spider Catalog, 2024). Libya is located in North Africa, bordering the Mediterranean Sea to the north, Egypt to the east, Sudan and Chad to the south, Niger to the southwest, and Algeria and Tunisia to the west. It is the 16th largest nation in the world by size, stretching over 1,759,540 square kilometers. Most of the country lies in the vast Sahara Desert, with the majority of the population concentrated along the Mediterranean coast. According to the geological history (Alley et al., 1997; Lezine, 1989) and geographical location of Libya, there is a unique diversity of living organisms in the country.

Despite the early start of research on spiders in Libya, in the late 19<sup>th</sup> century (Karsch, 1881), which lasted to the middle of the 20<sup>th</sup> century, there were only 11 publications on spider of Libya. Moreover, in the early 21<sup>st</sup> century, the last species was described in Libya by Jacques Denis in 1966. Since the

mid-2000's, a few field studies on Libyan spiders in the northwest region have been conducted (Bourass et al., 2014; Elkrew, 2012; Elmareme, 2006). The first publication that included information on the spiders of Libya dates back to 1881, when Ferdinand Karsch listed 31 species of spiders from different localities within the northwest of Libya (Karsch, 1881).

Later, Eugène Simon published a study on the spiders of Tripoli province (Simon, 1908). It included 61 species collected from Tripoli city, Tajoura, Ain Zara, and Gharian city. However, some of them were collected from Benghazi and Derna. Seven of them were new species for science, including *Aranus klaptocxi*, *Stetaphis bicolor* (previously *Zelotes scrutatus*), *Lithyphantes ochraceus* (previously *Steatoda ehippiata*), *Araneus dalmati* (previously *Neoseomna subfusca*), *Geolycosa cyrenaica* (previously *Lycosa cyrenica*), *Aculepeira armida* (previously *Araneus armada*), and *Stegodyphus desericola* (previously *Stegodyphus lineatus desericola*).

After that, Ludovico di Caporiacco published the results of some scientific expeditions to Libya. He identified the specimens that were collected by the scientific group of the Italian Geographical Society (Caporiacco, 1928) and listed 116 species, including 12 new species and a new genus (*Archaeodictyna Caporiaco*). In 1931, he carried out a study covering the area of Ajdabia, and the area of the oases of Jalo and Ogle to the south of the Kufra through Jgbob, including Tazrbo, Hawari, Jouf, and Kufra (Caporiacco, 1933); the list contained 103 species, and 17 of them were new species.

Eighty-three species (six of them were new species) were recorded in the eastern region of Libya (Cyrenaica) depending on samples collected from Derna, Shehat, Wadi Kouf, El Marj, Mukheli, Qawarishah, Tokrh, Am Elrzm and Karsa during many collection events (Caporiacco, 1934); the new species were *Amanobius festat*, *Zelotes incertissimus*, *Carrhotus affinis*, *Gonatium rufum*, *Evippa unguolata* and *Larinioides dernae* (a new genus). *L. dernae* was changed later to *L. suspicax*. In 1937, Caporiacco reported a study on spiders in Tripolitania, namely Gharyan, Khums, Azizia, and Tagoura (Caporiacco, 1937). The recorded species were nine; two of them were new species, namely *Ischnocolus tripolitanus*, which was changed to *I. valentinus* and *Dysdera menozzii*, which was changed to *D. crocata*.

Subsequently, Caporiacco (1949) recorded 16 species in the eastern region of Benghazi, Fuhayat, Shehata, Sousse, and Karsa; three species were new, namely *Alopecosa alis*, *Haplodrassus gridellii* (changed to *H. rufipes*), and *Pteroticha cyrenaica* (changed to *Gnaphosa cyrenaica*).

In 1947, Denis revealed the results of his exploratory trip in 1935 to Siwa Oasis, which belonged to the Libyan state at that time. Ninety Six species were recorded, including 24 new species (Denis, 1947). In another study, Denis' published the results of the Belgian mission in 1961 to the mountains of Tebsti in the far south of Libya, which demonstrated 13 species, including a new species that was found in Libya only, namely *Zodarion immaculatum* (Denis, 1962). In 1964, Denis revealed the results of identifying five species, which were collected from Tripolitania and Cyrenaica (Denis, 1964); *Typhochrestus cyrenianus* was identified as a new species. Denis (1966) published his work in different parts of Fezzan, such as Tragan, Qatarun, Sabha, Opari, Ghat, and Brak. 72 species were recorded, including seven new species: *Dysdera berardi*, *Acanthinozodium spinulosum*, *Nemosculus semilugens*, *Menemerus milloti*, *Leptodrassus leclerci* (later changed to *L. tenerrimus*), *Micaria femoralis* (after that changed to *M. pallipes*) and *Pardosa nigristeris* (then changed to *P. gefsana*).

Roughly from the mid-20<sup>th</sup> century, academic studies decreased noticeably due to the authorities' restrictions on international excavation campaigns and government meagre interest in scientific research. At the beginning of the 21<sup>st</sup> century, interest in Libyan spiders began again as some researchers studied them. In 2006, spiders were investigated by Elmareme (2006) in the north-western part of Libya, particularly from Zawiya city to the Tunisian border, including Farwa Island. She collected 3,919 individuals, divided into 37 families. In another study, Elkrew (2012) investigated

spiders in the urban, semi-urban, and wild habitats around the city of Tripoli over the course of a year. He obtained 2548 individuals, distributed among 25 families and 51 genera.

Bourass et al. (2014) investigated spiders in Abu Ghilan National Park, north of Gharyan; they compared three types of habitats: mountainous, wadis and lowland, over the four seasons. During the study period, a total of 1862 individuals were collected, belonging to 27 families and 58 genera. Elkrew (2023) conducted an ecological study on spiders in north western Libya and compiling the previous works on spider of Libya. This work was the first spider consolidated checklist for Libya, with general information regarding distribution with updated species valid nomenclature.

## **MATERIAL AND METHODS**

### **Source of Information**

Data were collected from different available sources, such as old literature on Libyan fauna (Zavattari, 1934) and available data on websites (World Spider Catalog, 2024), but the most focused study on spider fauna was in the western part of Libya, carried out by Elkrew (2023) and covering the area located from Tripoli to Khoms, reaching Masallātah.

Libya is located in North Africa, lies between roughly 19° 1' and 33° 4' N and 9° 1' and 25° 5' E, and has an area of 1,759,540 km<sup>2</sup>. It is bordered by Egypt and Sudan to the east, Tunisia and Algeria to the west, the Mediterranean Sea to the north, and Chad and Niger to the south (Figure 1). Traditionally, it is divided into three main regions: Tripolitania in the northwest, Fezzan in the desert southwest, and Cyrenaica covering the eastern part, spreading from the Mediterranean to the Sudanese and Chadian boundaries.

The Sahara Desert covers the majority of Libya and occupies more than 90% of its land area (Bauer et al., 2017). Libya has a mean elevation of 423 m. The lowest point is Sabkhat Ghuzayyil in western Cyrenaica, at 47 m below sea level, while the highest point is in the Tibesti Mountains, Bikku Bitti (2267 m) along the Chadian border. The limestone plateau of Jabal al Akhdar (878 m) is the most significant aspect of northern Cyrenaica. Its modest height did not prevent it from receiving heavy rainfall and forming a biogeographically prominent mesic zone within the country. The Marj Plain stretches to the north of Jabal Akhdar from Benghazi to Darnah, reaching inland only about 50 km. A belt of scattered grasslands covers the southern part of the plateau, grading into the desert proper (Bauer et al., 2017; Massa, 2009).

There are approximately 20 bodies of permanent natural water, all of which are brackish or saline, and most of which are situated in Fezzan and connected to the major oases. In relation to fauna and flora distributions, oases form a crucial part of Libyan geography. Typically, both taxa with both Mediterranean and sub-Saharan affinities are supported by Saharan oases (Le Berre, 1989), and several taxa are regionally confined to these deserts, though they may be more widely scattered in areas with less extreme conditions. Jalu, Jaghbub, Jufrah, Murzuq, Gadamis, Kufrah and Ghat are among the most prominent Libyan oases (Figure 1). While a number of oases are connected with relatively huge human populations (e.g., Kufrah), over 90% of the human populations are spread along the coastline of the Mediterranean, primarily between Zawiyah and Misratah in Tripolitania and from Ajdabiya to Tobruq in Cyrenaica (Bauer et al., 2017).

Charting the Köppen climate classification (Peel et al., 2007), the Mediterranean climate is moderate, as it is relatively warm to mildly cold in winter, whereas warm Mediterranean weather in summer it is hot, especially in the coastal area of Cyrenaica near Jabal Al-Akhdar and on the northern slopes of the Al-Jabal Al-Akhdar Mountain itself. A small area around Tripoli is characterized by a mild Mediterranean climate with a short period of warm Mediterranean weather. The steppe areas surrounding these relatively small areas of the Mediterranean environment experience a warm climate, while most southern parts of Tripolitania, which is a semi-barren area spreading up to 300

km, have a cold desert climate. The immeasurable majority of the country is located in a warm desert climate, including the coastal areas of Sirt's Bay, where the climate is totally different. Regarding the maximum coastal reception of annual rain, Tripoli has about 300 mm of rain, while the Al-Jabal Al-Akhdar Mountain receives up to 600 mm of rain per year. Yearly, most rainfall is generally concentrated in a very short period of time, mostly in winter and autumn on the coast, while it declines sharply in the interior region (the desert) in spring. These values mean that the average rainfall in the country as a whole is only 26 mm per year. In the past, Al-Aziziyah region, northwestern Libya, has long been known as the hottest place on earth, with a high temperature record of 58 °C, which is no longer true (El Fadli et al., 2013). The town nonetheless has a mean temperature of 39.2 °C in July; it is one of the hottest places in Africa.

Based on the low annual rainfall rate in Libya, it has been ranked as the highest part of the Sahara classification rather than as a Mediterranean taxon. Libya's coastal region is similar in terms of moderate vegetation diversity to North African countries, though it has been described as severely degraded compared to countries to the west (White, 1973). However, Jabal al Akhdar in Cyrenaica is an exception because of its rich flora. This leads to considering the region to have typically Mediterranean taxa compared to the rest of the northern rim of the country (Hegazy et al., 2011). The classification was made by the taxa of anthropogenic, which is a standard of the human landscape; wadis and oases have plenty of varied-adapted plants compared to the surrounding area; however, they are even more heavily impacted by agriculture. On the other hand, trees and shrubs are primarily considered dominant on the northern slopes of Jabal al-Akhdar.

The abundance of vegetation is mostly dependent in one way or another on the amount of rainfall system and the availability of water within the Libyan Desert (White, 1973). Although the rain is so scarce in the desert, the seeds may persist in the sand for a long time and will germinate rapidly when it rains. Rain is very low in parts of the Libyan desert, especially in central and southern Cyrenaica, leading to the absence of plant life altogether in large areas (Walter & Burnett, 1971). Prior to human intervention with nature and exploiting it in his favor, the oases area had local plants such as hyphaene and acacia among other dominant plants. Moreover, oases support unique vegetation; swamps and stands of Tamarix were found. (Walter & Burnett, 1971). However, today, they are taking over by date palms (*Phoenix dactylifera*).

According to Mahklouf and Etayeb (2018), the main ecological ecosystem is divided into 1. Coastal Ecosystems: They range from 25 to 100 km wide in the northern regions of Libya, and the average annual rainfall is about 200–250 mm. Over three-fourths of the vascular plants are distributed in this type of ecosystem, 2. Mountain Ecosystem: In the northern part of the country, there is Nafosa Mountain (Al-Jabel Al-Gharbi) which is located in the western part of Libya with annual rainfall of 200 – 300 mm, and in the eastern part of Libya Al-Jabal Al-Akhdar Mountain, with annual rainfall of around 400 – 600 mm (Mahklouf & Etayeb, 2018). In the southern part of Libya, there are several mountain chains, such as Al-Uweinat, Tibesti, Tassili, Arqueno, Al-Heroj and Acacus. These mountains are considered to be a transitional zone between the Sahara Desert in the north and the Sahel Bioclimatic Zone in the south (Saaed et al., 2019), and 3. Desert Ecosystem: The majority of the area in Libya is desert, which represents around 90% and consists of rocky, sandy, and congenital deserts. The climate is very hot in summer and mild in winter (Ying et al., 2013). Semi-desert ecosystem regions are located in the transitional zone between the mountain and desert zones, with an annual rainfall of about 50–150 mm (Mahklouf & Etayeb, 2018).

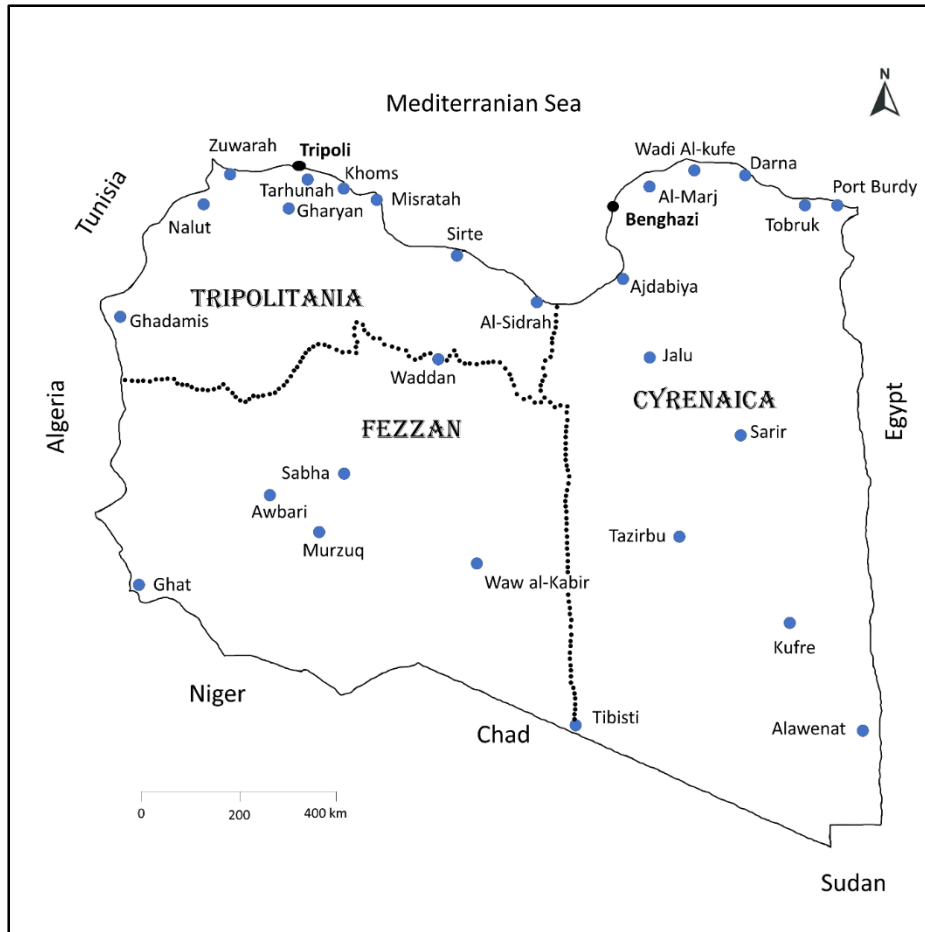


Figure 1. Map of Libya showing sampling sites.

**RESULTS AND DISCUSSION**

The present work included a literature survey for all available published data on spider species reported from Libya between 1881 and 2023. This is the first comprehensive checklist of Libyan spiders, with updated species names based on the (World Spider Catalog, 2024) and additional species reported for the first time from this North African country. The checklist consists of 353 species belonging to 174 genera and 37 families (Tables 1, and 2).

**Table 1. An updated checklist for spiders (Araneae) species, genera, families, new recorded, endemic species, and doubtful species in Libya. The synonyms have been changed according to World Spider Catalog (2024).**

Family	Genus	species	Endemic species	Doubtful Species	New recorded
Agelenidae	5	7	2	0	1
Amaurobiidae	1	1	1	0	0
Aranieidae	15	25	4	0	3
Cheiracanthiidae	1	4	0	0	1
Cithaeronidae	1	1	0	0	0
Clubionidae	1	2	0	0	0
Corinnidae	1	1	0	0	0
Dictynidae	5	5	0	0	0
Dysderidae	1	7	3	0	0

Eresidae	5	8	0	0	4
Filistatidae	3	3	0	0	0
Gnaphosidae	22	61	11	2	4
Hersiliidae	2	3	0	0	0
Linyphiidae	7	8	4	1	1
Liocranidae	1	1	0	0	0
Lycosidae	11	29	5	1	0
Oecobiidae	2	6	0	0	2
Oxyopidae	2	8	0	0	0
Palpimanidae	1	1	0	0	0
Philodromidae	4	18	5	0	1
Pholcidae	4	5	0	0	1
Pisauridae	1	1	0	0	4
Prodidomidae	2	1	1	0	0
Salticidae	31	59	11	3	0
Scytodidae	1	6	0	0	1
Segestriidae	2	2	0	0	1
Selenopidae	1	1	0	0	0
Sicariidae	1	1	0	0	0
Sparassidae	5	8	0	0	0
Tetragnathidae	2	4	0	0	1
Theraphosidae	1	1	0	0	0
Theridiidae	13	29	3	0	5
Thomisidae	9	21	2	1	3
Titanoecidae	2	2	0	0	1
Uloboridae	1	2	0	0	0
Zodariidae	2	8	4	0	0
Zoropsidae	1	1	0	0	0

**Table 2. A number of species and genera per family known from Libya according to published reports (Caporiacco, 1928, 1933, 1936a, 1936b, 1937, 1949; Denis, 1947, 1962, 1964, 1966; Elkrew, 2023; Karsch, 1881; Simon, 1908).**

Family / Species	Bibliographic and Locations	Authors and date of publication
Agelenidae		
<i>Benoitia lepida</i> (O. Pickard-Cambridge, 1876)	Tripoli Al Jaghbub, Kufra, Jalu, Al Jawf, Gharyan, Murzuq, Tibesti, Ain Zra, Al Seyaheyya Sirraj, Sūknah	Simon, 1908, Caporiacco, 1928, 1933, 1936, 1937, Denis, 1947, 1966, Karsch, 1881, Elkrew, 2023
<i>Lycosoides coarctata</i> (Dufour, 1831)	Tripoli	Simome, 1908, Caporiacco, 1934
<i>Pseudotegenaria parva</i> Caporiacco, 1934 **	Qawarishah	Caporiacco, 1934
<i>Tegenaria domestica</i> (Clerck, 1757)	Port Burdy, Tripoli, Sirraj, GurryBolly, Qaser Khiar	Caporiacco, 1928, Elkrew, 2023

<i>Tegenaria parietina</i> (Fourcroy, 1785)	Derna, Tripoli	Simome, 1908, Caporiacco, 1934
<i>Tegenaria vallei</i> Brignoli, 1972 **	Benghazi	Brignoli, 1972
<i>Textrix caudata</i> L. Koch, 1872 *	Ash Shiafiyin, Sirraj, GurryBolly	Elkrew, 2023
Amaurobiidae		
<i>Amaurobius festae</i> Caporiacco, 1934 **	Derna	Caporiacco, 1934
Araneidae		
<i>Aculepeira armida</i> (Audouin, 1826)	Shahat, Benghazi	Simon, 1908, Caporiacco, 1934, 1949
<i>Agalenatea redii</i> (Scopoli, 1763)	Shahat, Benghazi	Caporiacco, 1949
<i>Araneus circe</i> (Audouin, 1826) *	Ain zara, Tajoura, Ash shiafiyin	Elkrew, 2023
<i>Araneus diadematus</i> Clerck, 1757 *	Msallata, Ghameimh, Sirraj	Elkrew, 2023
<i>Araneus klaptoczi</i> Simon, 1908 **	Gharyan	Simon, 1908
<i>Araneus triguttatus</i> (Fabricius, 1775)	Tocre	Caporiacco, 1934
<i>Argiope lobata</i> (Pallas, 1772)	Tripoli, Msallata, Qaser Khiar, Benghazi, Kufra, Tocra, El Teilib, Sirraj, Alqoaa, Sūknah	Simon, 1908, Caporiacco, 1933, 1934, 1936, Karsch, 1881, Elkrew, 2023
<i>Argiope sector</i> (Forsskål, 1776) *	GurryBolly	Elkrew, 2023
<i>Argiope trifasciata</i> (Forsskål, 1775)	Tripoli, Ain Zara, Msallata, Ash shiafiyin, Qaser Khiar, Tibesti, Bnghazi, Alqoaa	Simon, 1908, Denis, 1947, Elkrew, 2023
<i>Cyclosa concolor</i> Caporiacco, 1933 **	Kufra	Caporiacco, 1933, 1936,
<i>Cyclosa insulana</i> (Costa, 1834)	Tripoli, Ain Zara, Tibesti, Al Seyaheyya	Simon, 1908, Denis, 1947, Elkrew, 2023
<i>Cyrtophora citricola</i> (Forsskål, 1775)	Al Jaghbub, Kufra, Hawari, Al Jawf, Es Zurch, Msallata, Ghameimh	Caporiacco, 1928, 1933, 1936, Denis, 1949, Elkrew, 2023
<i>Gibbaranea bituberculata</i> (Walckenaer, 1802)	Al Jaghbub	Caporiacco, 1928
<i>Hypsosinga albobittata</i> (Westring, 1851)	Tripoli, Ain Zara, Tajoura	Simon, 1908
<i>Hypsosinga heri</i> (Hahn, 1831)	Al Jaghbub	Caporiacco, 1928
<i>Larinia chloris</i> (Audouin, 1826)	Tripoli, Ain Zara, Kufra, Al Jawf	Simon, 1908, Caporiacco, 1963
<i>Larinioides patagiatus</i> (Clerck, 1757)	Al Jaghbub, Port Burdy	Caporiacco, 1928
<i>Larinioides suspicax</i> (O. Pickard-Cambridge, 1876)	Tripoli, Ain Zara, Benghazi, Derna, Kufra, Shahat, El Jedîd	Simon, 1908, Caporiacco, 1933, 1934, 1936, Denis, 1947, 1966, Elkrew, 2023

Mangora acalypha (Walckenaer, 1802)	Wadi Al Kouf	Caporiacco, 1934, 1949
Nemoscolus niger Caporiacco, 1936 **	Kufar	Caporiacco, 1963
Nemoscolus semilugens Denis, 1966 **	El Jedid	Denis, 1966
Neoscona adianta (Walckenaer, 1802)	Al Jaghbub	Caporiacco, 1928
Neoscona subfusca (C. L. Koch, 1837)	Tripoli, Al Jaghbub, Tibesti, Al Marj, Taknis	Simon, 1908, Caporiacco, 1928, 1933, 1934, Denis, 1947
Singa semiatra L. Koch, 1867	Al Jaghbub	Caporiacco, 1928
Zilla diodia (Walckenaer, 1802)	Al Jaghbub	Caporiacco, 1928
Cheiracanthiidae		
Cheiracanthium isiacum O. Pickard-Cambridge, 1874	Al Jaghbub, Tibesti	Caporiacco, 1928, Denis, 1947
Cheiracanthium mildei L. Koch, 1864	Al Jaghbub, Derna, Hawari, Kufra	Simon, 1908, Caporiacco, 1928, 1933, 1936
Cheiracanthium seidlitzii L. Koch, 1864	Al Jaghbub, Jalu, Kufar, Hawari	Caporiacco, 1928, 1933, 1936
Cheiracanthium sp C. L. Koch, 1839	Ajdabiya	Denis, 1966
Cithaeronidae		
Cithaeron praedonius O. Pickard-Cambridge, 1872	Ajdabiya	Caporiacco, 1928, 1933
Clubionidae		
Clubiona compta C. L. Koch, 1839	Ghameimh, Ash	Elkrew, 2023
Clubiona straminea O. Pickard-Cambridge, 1872	Derna	Caporiacco, 1934
Corinnidae		
Castianeira antinorii (Pavesi, 1880)	El Jedid	Denis, 1966
Dictynidae		
Altella uncata Simon, 1884	Al Kufrah	Caporiacco 1936
Archaeodictyna anguiniceps (Simon, 1899)	Al Jaghbub, Kufre, Hawari, Al Jawf, Siwah, Murzuq, Qatrun, Taraghin	Caporiacco, 1928, 1933, 1936, Denis, 1966
Archaeodictyna conducta (O. Pickard-Cambridge, 1876)	Al Jawf	Caporiacco 1936
Devade indistincta (O. Pickard-Cambridge, 1872)	Benghazi, Al Jaghbub, Siwah	Simon, 1908, Caporiacco 1928, Denis 1947
Lathys sp Simon, 1884 *	Al Allus, Al-Seyaheyya	Elkrew, 2023
Dysderidae		
Dysdera bernardi Denis, 1966 **	Aw bari	Denis, 1966
Dysdera cornipes Karsch, 1881 **	Uadi Mader	karsch, 1881
Dysdera crocata C. L. Koch, 1838	Port Burdy, Zawiyat Al Mukhayla, Tripoli, Msallata, Gharyan, Alaluuas	Caporiacco, 1928, 1934, 1937, Elkrew, 2023
Dysdera nomada Simon, 1911	port Burdy	Caporiacco, 1928



<i>Dysdera soleata</i> Karsch, 1881 **	Tarhunah, Bir Milrha	Karsch, 1881
<i>Dysdera subnubila</i> Simon, 1907	Zawiyat Al Mukhayla	Caporiacco, 1934
<i>Dysdera westringi</i> O. Pickard-Cambridge, 1872	Tripoli	Simon, 1908
Eresidae		
<i>Adonea</i> sp Simon, 1873 *	Al-Seyaheyya	Elkrew, 2023
<i>Dorceus quadripilotus</i> Simon, 1908*	Tajoura, Al gheran	Elkrew, 2023
<i>Eresus albopictus</i> Simon, 1873 *	Tripoli, Sirraj	Elkrew, 2023
<i>Eresus kollari</i> Rossi, 1846	Zawiyat Al Mukhayla	Caporiacco, 1934
<i>Loureedia annulipes</i> (Lucas, 1857)	Ghaneimh, Tajoura	Elkrew, 2023
<i>Stegodyphus dufouri</i> (Audouin, 1826)	Jalu, Al Kufrah, Hawary, Al Jawf, Tripoli, Msallata, Alqoaah, Buzaymah-Al Kufrah, Sūknah	Caporiacco, 1933, 1936, Karsch, 1881, Elkrew, 2023
<i>Stegodyphus lineatus</i> (Latreille, 1817)	Tegrena, Benghazi, Al Jaghbub, Siwah, Zawiyat Al Mukhayla	Simon, 1908; Caporiacco, 1928, 1933, 1936, Denis, 1947
<i>Stegodyphus manicatus</i> Simon, 1876 *	Al-Seyaheyya, Tajoura, Msallata	Elkrew, 2023
Filistatidae		
<i>Filistata insidiatrix</i> (Forsskål, 1775)	Al Jaghbub, Siwa, Msallata, Wadi Al Kouf, Gharyan, Wādī Muballam, Gharyan, Al Jaghbub, Siwa, port Burdy	Karsch, 1881, Siomne, 1908, Caporiacco, 1928, 1936, 1937, Dines, 1962, 1947, Elkrew, 2023
<i>Pritha nana</i> (Simon, 1868)	Al Jaghbub, port Burdy	Caporiacco, 1928
<i>Sahastata nigra</i> (Simon, 1897)	Tibesti	Dimes, 1962
Gnaphosidae		
<i>Echemus</i> sp Simon, 1878 *	Ash Shi'afiyin, Msallata, Tripoil	Elkrew, 2023
<i>Drassyllus</i> sp Chamberlin, 1922 *	Al Mayah, Souq Al Jumaa	Elkrew, 2023
<i>Anagraphis pallens</i> Simon, 1893	Al Jaghbub, Kufra, Jalu	Caporiacco, 1928, 1933, 1937, Elkrew, 2023
<i>Berlandina plumalis</i> (O. Pickard-Cambridge, 1872)	Port Burdy, Taraghin	Caporiacco, 1928, Denis, 1967
<i>Berlandina punica</i> (Dalmás, 1921)	Ajdabiya, Jalu, Wadi Al Kouf	Caporiacco, 1933, 1934
<i>Berlandina venatrix</i> (O. Pickard-Cambridge, 1874)	Al Jawf, Kufra	Caporiacco, 1936, Denis, 1966
<i>Drassodes deserticola</i> Simon, 1893	Al Jaghbub	Caporiacco, 1928
<i>Drassodes lutescens</i> (C. L. Koch, 1839)	Siwe, port Burdy, Jalu, Wadi Al Kouf, Taknis, Ajdabiya	Caporiacco, 1928, 1933, 1934, Denis, 1962

Drassodes nugatorius (Karsch, 1881) **	Sūknah	Karsch, 1881
Drassodes sockniensis (Karsch, 1881) **	Sūknah	Karsch, 1881
Drassodes tarrhunensis (Karsch, 1881) **	Tarhunah, Bir Milrha	Karsch, 1881
Drassodes unicolor (O. Pickard-Cambridge, 1872)	Wadi Al Kouf	Caporiacco, 1934, Elkrew, 2023
Gnaphosa cyrenaica (Caporiacco, 1949) **	Kirissah	Caporiacco, 1949
Gnaphosa zeugitana Pavesi, 1880	El Jadid	Denis, 1966
Haplodrassus dalmatensis (L. Koch, 1866)	Ajdabiya, Jalu, Tibesti	Caporiacco, 1928, 1933, Denis, 1966, Elkrew, 2023
Haplodrassus omissus (O. Pickard-Cambridge, 1872)	Al Jaghbub, Derna, Fattaih	Caporiacco, 1928, 1934
Haplodrassus rufipes (Lucas, 1846)	Shahat	Caporiacco, 1949
Haplodrassus spinicrus (Caporiacco, 1928) **	port Burdy	Caporiacco, 1928
Leptodrassus fragilis Dalmas, 1919	Al Jaghbub	Caporiacco, 1928
Leptodrassex algericus Dalmas, 1919	Ain Doua (Al 'Aweinat)	Dalmas, 1919
Leptopilos tenerrimus (O. Pickard-Cambridge, 1872)	El Abiod	Denis, 1966
Micaria coarctata (Lucas, 1846)	Al Jaghbub	Caporiacco, 1928
Micaria fausta Karsch, 1881 **	Tarhunah, Bir Milrha	Karsch, 1881
Micaria marchesii (Caporiacco, 1936) **	Al Jaghbub, Kufra	Caporiacco, 1928, 1936
Micaria pallipes (Lucas, 1846)	Ajdabiya	Denis, 1966
Minosiella pharia Dalmas, 1921	Sicli Garbaa (Cyrenaica)	Caporiacco, 1934
Nomisias aussereri (L. Koch, 1872)	Gharyan, Fattaih, Derna, Jalu, Awbari	Caporiacco, 1933, 1934, 1937, Denis, 1966
Nomisias castanea Dalmas, 1921	port Burdy	Caporiacco, 1928
Nomisias exornata (C. L. Koch, 1839)	port Burdy, Wadi Al Kouf, Tarhunah, Bir Milrha, Sūknah	Caporiacco, 1928, 1934, Karsch, 1881
Odontodrassus mundulus (O. Pickard-Cambridge, 1872)	Al Jaghbub, Sabha, Qatrun, Kufra	Caporiacco, 1928, 1936, Denis, 1966
Parasyrisca Schenkel, 1963 *	Sirraj, tripoli	Elkrew, 2023
Phaeoecidus Simon, 1893 *	Tajoura	Elkrew, 2023
Poecilochroa pugnax (O. Pickard-Cambridge, 1874)	Benghazi	Simon, 1908
Poecilochroa senilis auspex (Simon, 1878)	Shahat	Caporiacco, 1949
Poecilochroa senilis (O. Pickard-Cambridge, 1872)	Tripoli, Ain Zara, Al Marj, Derna	Simone.1908, Caporiacco, 1934

Pseudodrassus quadridentatus (Caporiacco, 1928) **	Al Jaghbub, Port Burdy	Caporiacco, 1928
Pterotricha cambridgei (L. Koch, 1872)	port Burdy	Caporiacco, 1928
Pterotricha chazaliae (Simon, 1895)	Awjilah, Jalu, Al Jawf	Caporiacco, 1933, 1936, Elkrew, 2023
Pterotricha conspersa (O. Pickard-Cambridge, 1872)	Tripoli, Benghazi, Derna, Gharyan, Al Jaghbub, port Burdy, Sidi el Garbaa	Simon, 1908, Caporiacco, 1928, 1934, Denis, 1947, 1966
Pterotricha egens Denis, 1966 **	El Abiod	Denis, 1966
Pterotricha paupercula Denis, 1966 **	Murzuq	Denis, 1966
Pterotricha schaefferi (Audouin, 1826)	Tripoli, Al Jaghbub, port Burdy	Simon, 1908, Caporiacco, 1928
Pterotricha vicina Dalmas, 1921	Zawiyat Al Mukhayla	Caporiacco, 1934
Pterotrichina elegans Dalmas, 1921	Al Jaghbub, port Burdy	Caporiacco, 1928
Scotophaeus microdon Caporiacco, 1933 **	Jalu	Caporiacco, 1933
Scotophaeus validus (Lucas, 1846)	Jalu, Kufre, Hawari, Al Jawf	Caporiacco, 1933
Setaphis carmeli (O. Pickard-Cambridge, 1872)	Port Burdy	Caporiacco, 1928
Setaphis mollis (O. Pickard-Cambridge, 1874)	Tarhunah, Bir Milrha	Karsch, 1881
Synaphosus minimus (Caporiacco, 1936)	Alawenat	Caporiacco, 1936
Synaphosus syntheticus (Chamberlin, 1924)	Oum El Ma	--
Trachyzelotes barbatus (L. Koch, 1866)	Al Jaghbub, Jalu, Awjilah	Caporiacco, 1928, 1933
Trachyzelotes bardiae (Caporiacco, 1928)	Port Burdy	Caporiacco, 1928
Urozelotes rusticus (L. Koch, 1872)	Port Burdy	Caporiacco, 1928
Urozelotes sp Mello-Leitão, 1938	Al Mayah, Souq Al Jumaa	Elkrew, 2023
Zelotes davidi (Simon, 1884)	Port Burdy	Caporiacco, 1928
Zelotes fuscus (Simon, 1878)	Es sahabi	Caporiacco, 1933
Zelotes incertissimus Caporiacco, 1934 **	Wadi Alkouf	Caporiacco, 1934
Zelotes kerimi (Pavesi, 1880)	Port Burdy	Caporiacco, 1928
Zelotes laetus (O. Pickard-Cambridge, 1872)	Sabha, Kufra, Qawarishah, Al Jaghbub, Port Burdy	Caporiacco, 1928, 1934, 1936, Denis 1966, Elkrew, 2023
Zelotes scrutatus (O. Pickard-Cambridge, 1872)	Tripoli	Simon, 1908, Caporiacco, 1934
Zelotes stolidus (Simon, 1880)	Al Jaghbub, Port Burdy	Caporiacco, 1928

Hersiliidae		
Hersilia caudata Audouin, 1826	Murzuq, Brak, Tazirbu, El Jedid, Ghaneimh	Caporiacco, 1936, Denis, 1966, Elkrew, 2023
Hersiliola macullulata (Dufour, 1831)	Sūknah	Karsch, 1881
Hersiliola simoni (O. Pickard-Cambridge, 1872)	Tripoli, Sowknah, Port Burdy, Jalu, Derna, Fattaih, Al Gawf, Tazirbu, Sabha, Msallata, alqarda	Simon, 1908, Caporiacco, 1928, 1933, 1934, 1936 a, b, Denis, 1966, Elkrew, 2023
Linyphiidae		
Brachycerasphora connectens Denis, 1964 **	Misratah	Denis 1964
Brachycerasphora monocerotum Denis, 1962**	Bakur, Ash Sha'afiyin, Tajura, Tripoli	Deni 1962, 1964, Elkrew, 2023
Gnathonarium dentatum (Wider, 1834)	Tripoli, Benghazi, Tarhunah, Ain Schersozura.	Denis 1964, Karsch, 1881
Gonatium rufum Caporiacco, 1934 **	Tripoli, Benghazi	Caporiacco, 1934
Maso gallicus Simon, 1894	Tripoli, Benghazi	Caporiacco, 1928, Denis 1964
Ostearius melanopygius (O. Pickard-Cambridge, 1880) *	Al Qarabūllī	Elkrew, 2023
Prinerigone vagans (Audouin, 1826)	Tibisti, Taraghin	Denis, 19962, 1966
Typhochrestus cyrenanius Denis, 1964 **	Wadi Al kufe	Denis 1964
Liocranidae		
Mesiotelus tenuissimus (L. Koch, 1866)	Shahat	Caporiacco, 1949
Lycosidae		
Allocosa tremens (O. Pickard-Cambridge, 1876)	Port Burdy, Derna, Kirissah, Gharyan	Simone, 1908, Caporiacco, 1928, 1933, 1934
Alopecosa albofasciata (Brullé, 1832)	Derna, Wadi Al Kouf, Tarhunah, Bir Milrha.	Caporiacco, 1934, Karsch, 1881
Alopecosa atis Caporiacco, 1949	Susah	Caporiacco, 1949
Alopecosa pelusiaca (Audouin, 1826)	Derna, fattaih,	Caporiacco, 1934
Arctosa similis Schenkel, 1938	Tibesti, Taraghin, Brak, Murzuq, Sabha	Denis, 1962, 1966
Arctosa depuncta (O. Pickard-Cambridge, 1876)	Kufra, Al Jawf	Caporiacco, 1933, 1936
Arctosa fulvolineata (Lucas, 1846)	Al Jaghbub, msallata, Alqoaah, Ain sharshara	Caporiacco, 1928, Krasch, 1881, Elkrew, 2023
Arctosa lacustris (Simon, 1876)	Al Jaghbub, Kufra, Al Jawj, Taraghin, Gharyan, Ain Maimuna	Simone, 1908, Caporiacco, 1928, 1933, 1936, Denis, 1966

<i>Arctosa perita</i> (Latreille, 1799)	Kufra, AL Jawf, Ain Sharshara	Caporiacco,1933,1936, Karsch, 1881
<i>Cynosa agedabiae</i> Caporiacco, 1933 **	Al Jaghbub	Caporiacco, 1933
<i>Evippa abacata</i> (Karsch, 1881)	Wadi Al Kouf, Bir Milrha, Tarhuna, Sūknah	Caporiacco, 1934, Karsch, 1881
<i>Evippa arenaria</i> (Audouin, 1826)	Al Jaghbub, Kufra, Benghazi, Tripoli, AinZara	Simon, 1908, Caporiacco, 1928, 1933, Denis, 1966, Elkrew, 2023
<i>Evippa praelongipes</i> (O. Pickard-Cambridge, 1871)	Port Burdy	Caporiacco, 1928
<i>Evippa ungulata</i> (O. Pickard-Cambridge, 1876)	Qawarishah, Siwa	Simon, 1908, Caporiacco, 1934, Denis, 1947,1966,
<i>Geolycosa cyrenaica</i> (Simon, 1908) **	Derna	Simon, 1908
<i>Hogna ferox</i> (Lucas, 1838)	Benghazi, Al Fuwayha, Derna	Simon, 1908, Denis, 1947, Caporiacco, 1949
<i>Hogna radiata</i> (Latreille, 1817)	Tajoura, Tripoli, Gharyan, Ain Zara, Benghazi	Simon, 1908, Caporiacco, 1928,1937
<i>Pardosa paleata</i> Alderweireldt & Jocqué, 1992 **	Mandara, Tripoli, Sirraj, al Qarabulli,	Alderweireldt & Jocqué, 1992, Elkrew, 2023
<i>Lycosa intermedialis</i> Roewer, 1955 **	Port Burdy, Tripoli,	Caporiacco, 1928
<i>Lycosa sylvatica</i> (Roewer, 1951)	Ain sharshara	Krasch, 1881
<i>Lycosa tarantula</i> (Linnaeus, 1758)	Tarhunah, Bir Milrha, Uadi Mader	Krasch, 1881
<i>Pardosa confalonierii</i> Caporiacco, 1928 **	Al Jaghbub, Kufra, Ghaneimh, al Qarābūllī	Caporiacco,1928,1936, Elkrew, 2023
<i>Pardosa gefsana</i> Roewer, 1959	Taraghin	Denis, 1966
<i>Pardosa injucunda</i> (O. Pickard-Cambridge, 1876)	Derna, Qatrun, Tibesti	Caporiacco, 1934, Denis, 1962, 1966
<i>Pardosa inopina</i> (O. Pickard-Cambridge, 1876)	Derna	Caporiacco, 1934
<i>Pardosa observans</i> (O. Pickard-Cambridge, 1876)	Zawiyat Al Mukhayla, AL Jawf	Caporiacco,1928,1934,1936a, b
<i>Trochosa annulipes</i> L. Koch, 1875	Brak	Denis, 1966
<i>Trochosa urbana</i> O. Pickard-Cambridge, 1876	Derna, Al Marj, Kirissah, siwa, El Jedid, Ash Shiafiyin, Ghaneimh, Msallata	Simon, 1908, Caporiacco, 1934, Denis, 1947,1966, Elkrew, 2023
<i>Wadicosa fidelis</i> (O. Pickard-Cambridge, 1872)	Port Burdy, Kufra, Derna, Al Jawf, Taraghin, Tibesti	Simon, 1908, Caporiacco, 1928, 1933, 1934,1936, Denis, 1947,1962,1966
Oecobiidae		
<i>Oecobius cellariorum</i> (Dugès, 1836)	Al Jaghbub, Tripoli	Simon, 1908, Caporiacco 1928

<i>Oecobius navus</i> Blackwall, 1859*	Tripoli, Al Qarabūlli	Elkrew, 2023
<i>Oecobius putus</i> O. Pickard-Cambridge, 1876	Ghat	Denis, 1966
<i>Oecobius</i> sp Lucas, 1846	Trpioli, Tajura, Al Qarabūlli	Elkrew, 2023
<i>Uroctea compactilis</i> L. Koch, 1878 *	Tajura	Elkrew, 2023
<i>Uroctea limbata</i> (C. L. Koch, 1843)	Al Jaghbub, Al Jawf, Siwah, Hawary,	Caporiacco 1928, 1933, Denis 1947
<b>Oxyopidae</b>		
<i>Oxyopes globifer</i> Simon, 1876	Al Jaghbub, Taknis, Derna	Simon, 1908, Caporiacco, 1928, 1934
<i>Oxyopes heterophthalmus</i> (Latreille, 1804)	Fattaih, Kirissah, Shahat	Caporiacco, 1934, 1949
<i>Oxyopes lineatus</i> Latreille, 1806	Jalu, Kufra, Shahat	Caporiacco, 1933, 1934, 1936 b
<i>Oxyopes sobrinus</i> O. Pickard-Cambridge, 1872	Port Burdy, Jalu	Caporiacco, 1928, 1933
<i>Oxyopes</i> sp Latreille, 1804	Alaluas, Al-Seyaheyya, Souq Al Jumah, Sirraj	Elkrew, 2023
<i>Peucetia arabica</i> Simon, 1882	Siwa	Denis, 1962
<i>Peucetia viridis</i> (Blackwall, 1858)	Awbari	Denis, 1966
<i>Peucetia virescens</i> (O. Pickard-Cambridge, 1872)	Uadi Iseièn (el Auenàt)	Caporiacco, 1936
<b>Palpimanidae</b>		
<i>Palpimanus gibbulus</i> Dufour, 1820	Qawarishah, port Burdy, Tripoli, Ain zara, Ash Shi'afiyin, Tarhunah, Bir Milrha, Sūknah	Caporiacco, 1928, 1934, 1937, Karsch, 1881, Elkrew, 2023
<b>Philodromidae</b>		
<i>Philodromus aureolus</i> (Clerck, 1757)	Al Jaghbub	Caporiacco, 1928
<i>Philodromus bigibbus</i> (O. Pickard-Cambridge, 1876)	Awbari	Denis, 1966
<i>Philodromus calidus</i> Lucas, 1846	Al Jaghbub	Caporiacco, 1928
<i>Philodromus cufrae</i> Caporiacco, 1936 **	Al Jawf, Tazirbu	Caporiacco, 1936
<i>Philodromus denisi</i> Levy, 1977	Kufra, El Talab	Denis, 1966
<i>Philodromus dubius</i> Caporiacco, 1933**	Kufar, ElTalab, Jalu, Al Jawf	Caporiacco, 1933,1936
<i>Philodromus erythropros</i> Caporiacco, 1933 **	Ghat, Ajdabiya, El Abiod	Caporiacco, 1933, Denis, 1966
<i>Philodromus fuscolimbatus</i> Lucas, 1846	Ajdabiya	Caporiacco, 1933,1936
<i>Philodromus grazianii</i> Caporiacco, 1933 **	Kufar, Jalu, Hawari	Caporiacco, 1933,1936
<i>Philodromus multispinus</i> Caporiacco, 1933 **	Kufar, ElTalab, Jalu, Al Jawf	Caporiacco, 1933,1936

<i>Philodromus venustus</i> O. Pickard-Cambridge, 1876	Al Jawf, Tazirbu, Taraghin, Tassili	Caporiacco, 1936, Denis, 1966
<i>Rhysodromus lepidus</i> (Blackwall, 1870)	Kufar, ElTalab, Jalu, Hawari, Al Jaghbub, Ash Shiafiyin, Msallata, Alqoaah	Caporiacco, 1928, 1933, 1936 a, b, Elkrew, 2023
<i>Thanatus fabricii</i> (Audouin, 1826)	Ajdabiya, Derna, Jalu	Caporiacco, 1933, 1934, Denis, 1966
<i>Thanatus lineatipes</i> Simon, 1870	alqarda	Denis, 1966
<i>Thanatus oblongiusculus</i> (Lucas, 1846)	Port burdy	Caporiacco, 1928
<i>Thanatus setiger</i> (O. Pickard-Cambridge, 1872)	Port Burdy	Caporiacco, 1928
<i>Thanatus vulgaris</i> Simon, 1870	Kufar, Jalu, Hawari, Ajdabiya, AlMarj	Caporiacco, 1933, 1934, 1936 a, b
<i>Tibellus armatus</i> Lessert, 1928 *	Tripoli, Souq AL Jumaa, Ash Shiafiyin, Sirraj	Elkrew, 2023
Pholcidae		
<i>Artema atlanta</i> Walckenaer, 1837	Tripoli, Benghazi, Derna, Tibesti, Al Jaghbub, Port Burdy, Al Jawf, Awjilah	Simon, 1908, Caporiacco, 1928, 1936, Denis, 1947, Karsch, 1881
<i>Holocnemus caudatus</i> (Dufour, 1820) *	Msallata	Elkrew, 2023
<i>Holocnemus pluchei</i> (Scopoli, 1763)	Tripoli, Tibesti	Simon, 1908, Denis, 1947
<i>Micropholcus fauroti</i> (Simon, 1887)	Tripoli	Simon, 1908, Caporiacco, 1928, 1934
<i>Pholcus phalangioides</i> (Fuesslin, 1775)	Tripoli	Simon, 1908, Elkrew, 2023
Pisauridae		
<i>Pisaura mirabilis</i> (Clerck, 1757)	Benghazi	Caporiacco, 1934
Prodidomidae		
<i>Prodidomus amaranthinus</i> (Lucas, 1846)	Port Burdy, Jalu, Talmitha, Aljawf	Caporiacco, 1928, 1933, 1934, 1936
<i>Prodidomus rollasoni</i> Cooke, 1964 **	Bakur	Cooke, 1964
<i>Zimirina vastitatis</i> Cooke, 1964	Bouerat, Gulf of Sirte	Cooke, 1964
Salticidae		
<i>Aelurillus ambiguus</i> (Denis, 1966) **	Tademika	Denis, 1966, Elkrew, 2023
<i>Aelurillus hirtipes</i> Denis, 1960	Tibesti	Denis, 1962
<i>Aelurillus luctuosus</i> (Lucas, 1846)	Wadi Al Kouf, Awjilah	Caopriacco, 1934, Denis, 1966, Karsch, 1881
<i>Afraflacilla berlandi</i> Denis, 1955 **	Tir Abounda, Awbari	Denis, 1966
<i>Afraflacilla tamaricis</i> (Simon, 1885)	Kufra, El Talab, Al Jawf, Hawari, Tazirbu,	Caporiacco, 1933, 1936, Denis, 1966

	Sabha, Awbari, Murzuq, Qatrun	
<i>Bianor albobimaculatus</i> (Lucas, 1846)	Kufra, AL Jawf, Tazirbu, Siwa, Triploi	Simon, 1908, Caporiacco, 1936, Denis, 1947
<i>Carrhotus affinis</i> Caporiacco, 1934 **	Taknis, Kufra, AL Jawf, Tazirbu	Caporiacco, 1934, 1936
<i>Carrhotus xanthogramma</i> (Latreille, 1819)	Al Jaghbub	Caporiacc, 1928, 1933
<i>Chalcoscirtus infimus</i> (Simon, 1868)	Port Burdy, Trjoura	Simon, 1908, Caporiacco, 1928,1934
<i>Cosmophasis fazanica</i> Caporiacco, 1936 **	Murzuq, alqarda	Caporiacco, 1936, Denis, 1966
<i>Cyrba algerina</i> (Lucas, 1846)	Wadi Al Kouf, Port Burdy	Caporiacco, 1928, 1934
<i>Euophrys convergentis</i> Strand, 1906	Port Burdy	Caporiacco, 1928
<i>Euophrys frontalis</i> (Walckenaer, 1802) *	Tripoli, Al gheran, Sirraj, Msallata	Elkrew, 2023
<i>Euophrys marmarica</i> Caporiacco, 1928 **	Port Burdy	Caporiacco, 1928
<i>Evarcha arcuata</i> (Clerck, 1757)	Kufra, Jalu, Msallata	Caporiacc, 1933, Elkrew, 2023
<i>Evarcha jucunda</i> (Lucas, 1846)	Al Jawf	Caporiacco,1936
<i>Evarcha laetabunda</i> (C. L. Koch, 1846)	Port Burdy, GurryBolly	Caporiacc, 1928, Elkrew, 2023
<i>Habrocestum latifasciatum</i> (Simon, 1868)	Al Jaghbub	Caporiacco, 1928
<i>Habrocestum verattii</i> Caporiacco, 1936 **	Kufra	Caporiacco,1936
<i>Hasarius adansoni</i> (Audouin, 1826)	Derna, Benghazi, Tripoli, Souq AL Jumaa	Simon, 1908, Caporiacco, 1934, Elkrew, 2023
<i>Heliophanillus fulgens</i> (O. Pickard-Cambridge, 1872)	Kufra, Qatrun, Brak, Taraghin	Caporiacc, 1933,1936, Denis, 1966
<i>Heliophanus decoratus</i> L. Koch, 1875	Ajdabiya, Siwa, Hawari, Kufra, et-Tag, Benghazi	Simon, 1908, Caporiacc, 1933,1936, Denis, 1947
<i>Heliophanus equester</i> L. Koch, 1867 *	Ash Shiafiyin, Ain Zara, Tajoura	Elkrew, 2023
<i>Heliophanus glaucus</i> Bösenberg & Lenz, 1895	Libya-Ramli [Er]	Denis, 1947
<i>Icius congener</i> (Simon, 1871)	Jalu, Taoura, Ain Zara	Caporiacco, 1933,1937, Elkrew, 2023
<i>Icius hamatus</i> (C. L. Koch, 1846)	Tademka, Kufra	Simon, 1908, Caporiacc, 1933, 1936, Denis, 1966
<i>Pseudomogrus albifrons</i> (Lucas, 1846)	Jalu	Caporiacco, 1933
<i>Pseudomogrus auriceps</i> (Denis, 1966) **	Sabha	Denis, 1966



<i>Pseudomogrus saliens</i> (O. Pickard-Cambridge, 1876)	Jalu, Kufra, Qatrun, Bandbeiya, Benghazi, Tripoli	Simon, 1908, Caporiacc, 1933, 1936, Denis, 1966
<i>Pseudomogrus tschoni</i> (Caporiacco, 1936)	Tazirbu	Caporiacco, 1936
<i>Mendoza canestrinii</i> (Ninni, 1868)	Al Jawf	Caporiacco, 1936
<i>Menemerus animatus</i> O. Pickard-Cambridge, 1876	Qawarishah, Sabha, Siwa	Caporiacco, 1934, Denis, 1947
<i>Menemerus illigeri</i> (Audouin, 1826)	Derna, Tripoli, Aljmail, Takut, Gharyan	Simon, 1908
<i>Menemerus milloti</i> Denis, 1966 **	Murzuq	Denis, 1966
<i>Menemerus</i> sp Simon, 1868	Alaluas, Al-Seyaheyya	Elkrew, 2023
<i>Mexcala nigrocyanea</i> (Simon, 1886)	Fezzan, El Hafra	Wesołowska, 2009
<i>Mogrus canescens</i> (C. L. Koch, 1846)	Zawiyat Al Mukhayla	Caporiacco, 1934
<i>Mogrus dalmasi</i> Berland & Millot, 1941	Awbari, Qatrun	Denis, 1966
<i>Mogrus incertus</i> Denis, 1955	El Abiod	Denis, 1966
<i>Mogrus logunovi</i> Prószyński, 2000*	Ain Zara, Algheran	Elkrew, 2023
<i>Mogrus</i> sp Simon, 1882	Tibesti	Denis, 1962
<i>Myrmarachne myrmicaeformis</i> (Lucas, 1871)	Kufra, Tazirbu	Caporiacc, 1933,1936
<i>Myrmarachne tristis</i> (Simon, 1882)	et-Tag	Caporiacc, 1933,1936, Denis, 1966
<i>Nigorella albimana</i> (Simon, 1902)	Al Jaghbub	Caporiacco, 1928
<i>Pellenes minimus</i> (Caporiacco, 1933) **	Jalu	Caporiacco,1933
<i>philaeus chrysops</i> (Poda, 1761)	Benghazi	Dienis, 1962
<i>Phintella castriesiana</i> (Grube, 1861)	Al Jaghbub, Port Burdy	Caporiacco, 1928
<i>Phlegra</i> sp1 Simon, 1876 *	Msallata, Alaluas	Elkrew, 2023
<i>Phlegra</i> sp2 Simon, 1876 *	Ash Shiafiyin, Ain Zara	Elkrew, 2023
<i>Phlegra</i> sp3 Simon, 1876 *	Ghaneimh, Al Mayah	Elkrew, 2023
<i>Plexippus clemens</i> (O. Pickard-Cambridge, 1872)	Al Jaghbub	Caporiacco, 1928
<i>Plexippus paykulli</i> (Audouin, 1826)	Port Burdy, Kufra, Jalu, Fezzan, Tripoli, Tajoura, Al Seysheyya, Qaser Khiar, Msallata, Benghazi	Simone,1908, Caporiacco,1928, 1933, 1936 a, b, Elkrew, 2023
<i>Pseudicius picaceus</i> (Simon, 1868)	Derna	Caporiacco,1934
<i>Rafalus insignipalpis</i> (Simon, 1882)	Port Burdy	Caporiacco, 1928
<i>Saitis latifrons</i> Caporiacco, 1928 **	Port Burdy	Caporiacco, 1928
<i>Salticus mutabilis</i> Lucas, 1846	Al Jaghbub, Jalu	Caporiacco,1928, 1933
<i>Stenaelurillus nigricaudus</i> Simon, 1886	Al Jawf, Kufra	Caporiacco, 1933,1936

<i>Stenaelurillus giovae</i> Caporiacco, 1936 **	Al Jawf	Caporiacco, 1936
<i>Thyene imperialis</i> (Rossi, 1846)	Al Jaghbub, Derna, Siwa, Kirissah, El Jedid, Benghazi, Sūknaḥ	Simon, 1908, Caporiacco, 1928, 1934, 1949, Denis, 1947, 1966, Karsch, 1881, Elkrew, 2023
Scytodidae		
<i>Scytodes annulipes</i> Simon, 1907	Tegrena, Sabha	Simon, 1908, Denis 1966
<i>Scytodes major</i> Simon, 1886	Port Burdy	Caporiacco, 1928
<i>Scytodes obelisci</i> Denis, 1947	Taraghin	Denis, 1966
<i>Scytodes thoracica</i> (Latreille, 1802)	Derna, Siwa	Caporiacco, 1934, Denis, 1947
<i>Scytodes univittata</i> Simon, 1882*	Souq Al Jumaa	Elkrew, 2023
<i>Scytodes velutina</i> Heineken & Lowe, 1832	Al Jaghbub, Siwa	Caporiacco, 1928, Denis, 1947
Segestriidae		
<i>Ariadna insidiatrix</i> Audouin, 1826	Qawarishah	Caporiacco, 1934
<i>Segestria florentina</i> (Rossi, 1790)	Ash shiafiyin	Elkrew, 2023
Selenopidae		
<i>Selenops radiatus</i> Latreille, 1819	Jalu, Ash Shiafiyin, Msallat, Awjilah	Caporiacco, 1933, Karsch, 1881, Elkrew, 2023
Sicariidae		
<i>Loxosceles rufescens</i> (Dufour, 1820)	Gharyan, Benghazi, Derna, Awjilah, Al Jaghbub, Kufre, Al Jawf, Siwa, Tripoli, Msallata, Gurrybolly, Alaluuas, Alqoaah, Tarhunah, Bir Milrha, Wādī Muballam, Sūknaḥ, Ain sharshara, Awjilah	Simon, 1908, Caporiacco, 1928, 1933, 1934, 1936a, b, Denis, 1947, 1966, Karsch, 1881, Elkrew, 2023
Sparassidae		
<i>Cebrennus castaneitarsis</i> Simon, 1880	Al Jaghbub, port Burdy	Caporiacco, 1928
<i>Cerbalus pulcherrimus</i> (Simon, 1880)	Oase Djibbene, Tazirbu, Wadi Maymun	Karsch, 1881
<i>Eusparassus oraniensis</i> (Lucas, 1846)	Sabha	Denis, 1966
<i>Eusparassus walckenaeri</i> (Audouin, 1826)	Gharyan, Tegrena	Simon, 1908
<i>Micrommata formosa</i> Pavesi, 1878	Derna, Msallata, Ghaneimh, Ash Shiafiyin	Caporiacco, 1933, Elkrew, 2023
<i>Micrommata</i> sp Latreille, 1804	Alaluuas, msallata, Tajoura	Elkrew, 2023
<i>Nonianus pictus</i> Simon, 1885	Al Jaghbub, port Burdy, Kufar, Hawari, Al Jawf, Gharyan	Caporiacco, 1928, 1933, 1936, 1937, Denis, 1966

Olios argelasius (Walckenaer, 1806)	Uadi Mader, Wādī Muballam, Bir Milrha, Tarhuna, Oase Djibbene	Karsch, 1881
Tetragnathidae		
Metellina meriana (Scopoli, 1763) *	Msallata	Elkrew, 2023
Tetragnatha isidis (Simon, 1880)	Ain Zara, Tripoli	Simone, 1908, Elkrew, 2023
Tetragnatha nitens (Audouin, 1826)	Derna	Simon, 1908, Caporiacco, 1934
Tetragnatha sp Latreille, 1804	Tajoura GurryBolly	Elkrew, 2023
Theraphosidae		
Ischnocolus valentinus (Dufour, 1820)	Khoms	Caporiacco, 1937
Theridiidae		
Anelosimus pulchellus (Walckenaer, 1802) *	Souq Al Jumaa, Alaluas, Sirraj	Elkrew, 2023
Anelosimus vittatus (C. L. Koch, 1836) *	Sirraj, Almayah, alqawayea, Ash Shi'afiyin	Elkrew, 2023
Argyrodes argyrodes (Walckenaer, 1841) *	Ain Zara, Sirraj, Almayah, alqawayea, Ash Shi'afiyin	Elkrew, 2023
Enoplognatha mandibularis (Lucas, 1846)	Jalu, Shahat	Caporiacco, 1928, 1949
Enoplognatha ovata (Clerck, 1757)	Al Jaghbub,	Caporiacco, 1928
Euryopis sexalbomaculata (Lucas, 1846)	Al Jaghbub,	Caporiacco, 1928
Heterotheridion nigrovariegatum (Simon, 1873)	Tibesti	Denis, 1947
Kochiura aulica (C. L. Koch, 1838)	Al Jaghbub, Jalu, Tibesti, Murzuq, Sabha	Caporiacco, 1928, 1933, Denis, 1947, 1966
Latrodectus geometricus C. L. Koch, 1841	Tripoli, Ain Zra, Al Seyaheyya, Sirraj, Tajoura, Soug Al Jumaa	Elkrew, 2023
Latrodectus pallidus O. Pickard-Cambridge, 1872	Jalu	Caporiacco, 1933
Latrodectus tredecimguttatus (Rossi, 1790)	Al Jaghbub, Bebhazi, Ajdabiya, Derna, Tocra, Shahat, Tripoli, Souq Al Jumaa, GurryBolly, Tarhuna, Ain sharshara	Simon, 1908, Caporiacco, 1928, 1933, 1934, Denis, 19626, Karsch, 1881, Elkrew, 2023
Paidiscura dromedaria (Simon, 1880)	Tripoli, Al Jaghbub,	Simon, 1908, Caporiacco, 1928
Phylloneta sisyphia (Clerck, 1757)	Port Burdy	Caporiacco, 1928
Simitidion simile (C. L. Koch, 1836)	Jalu	Caporiacco, 1928, 1933

<i>Steatoda albomaculata</i> (De Geer, 1778)	Kufra, Hawari	Caporiacco, 1933, 1936
<i>Steatoda ephippiata</i> (Thorell, 1875)	Tripoli, Jalu, Ajdabiya, Qatrun, El Abiod	Simon, 1908, Caporiacco, 1933, Denis, 1966, Elkrew, 2023
<i>Steatoda latifasciata</i> (Simon, 1873) *	Ain Zara, Tripoli	Elkrew, 2023
<i>Steatoda paykulliana</i> (Walckenaer, 1806)	Gharyan, Derna, Benghazi, Porta Burdy, Tripoli, Souq Al Jumaa, Ain sharshara	Simon, 1908, Caporiacco, 1928, Karsch, 1881, Elkrew, 2023
<i>Steatoda triangulosa concolor</i> (Caporiacco, 1933) **	Eltalab, Kufra,	Caporiacco, 1933, 1936,
<i>Steatoda triangulosa</i> (Walckenaer, 1802)	Eltalab, Kufra, Ain Zara, Ash shiafiyin, Soug Al Jumaa	Caporiacco, 1928, 1936 b, Elkrew, 2023
<i>Steatoda venator</i> (Audouin, 1826)	Derna, fattaih, Umm Ar Rizam, Sidi el Garbaa	Caporiacco, 1934
<i>Theridion melanostictum</i> O. Pickard-Cambridge, 1876	Al-Seyaheyya, Tajoura, Al Jawf	Caporiacco, 1936 a, b, Elkrew, 2023
<i>Theridion patrizii</i> Caporiacco, 1933 **	Jalu	Caporiacco, 1933
<i>Theridion pictum</i> (Walckenaer, 1802)	Jalu	Caporiacco, 1933
<i>Theridion pinicola</i> Simon, 1873*	Ash Shi'afiyin, Msallata, Tripoil, alqawayea	Elkrew, 2023
<i>Theridion varians cyrenaicum</i> Caporiacco, 1933 **	Awjilah, Kufra	Caporiacco, 1933, 1936a
<i>Theridion varians rusticum</i> Simon, 1873	Jalu, Kufre, Hawari, El Talab	Caporiacco, 1933, 1936 b
<i>Theridion varians</i> Hahn, 1833	Jalu	Caporiacco, 1933, Elkrew, 2023
<i>Tidarren cuneolatum</i> (Tullgren, 1910)	Tibesti	Denis, 1962
Thomisidae		
<i>Heriaeus setiger</i> (O. Pickard-Cambridge, 1872)	port burdy	Caporiacco, 1928
<i>Misumena spinifera</i> (Blackwall, 1862)	Kufar, Al Jawf	Caporiacco, 1933
<i>Monaeses paradoxus</i> (Lucas, 1846)	Tripoli, Ain Zara	Simon, 1908
<i>Ozyptila perplexa</i> Simon, 1875 *	Sirraj, Ghaneimh, GurryBolly, Tripoli	Elkrew, 2023
<i>Ozyptila subclavata</i> (O. Pickard-Cambridge, 1876)	Ajdabiya	Caporiacco, 1933
<i>Pistius truncatus</i> (Pallas, 1772)	Kufar, ElTalab	Caporiacco, 1933, 1934
<i>Runcinia grammica</i> (C. L. Koch, 1837)	Shahat, Wadi Al Kouf	Caporiacco, 1934, 1949
<i>Thomisus citrinellus</i> Simon, 1875	Kufra, Brak	Caporiacco, 1936, Denis, 1966
<i>Thomisus onustus</i> Walckenaer, 1805	Tripoli, Derna, Al Jaghub, Al Marj, Talmitha,	Simon, 1908, Caporiacco, 1928, 1933, 1936, 1949, Denis, 1966, Elkrew, 2023

	Wadi Al Kouf, Zawiyat Al Mukhayla, AL Jawf, Kirissah, Shahat, Ain Zara, Msallata	
<i>Tmarus staintoni</i> (O. Pickard-Cambridge, 1873) *	Ain Zara, Tripoli, Msallata, Qaser Khair	Elkrew, 2023
<i>Xysticus bliteus</i> (Simon, 1875)	Tripoli	Simon, 1908
<i>Xysticus bufo</i> (Dufour, 1820)	Benghazi	Simon, 1908
<i>Xysticus cribratus</i> Simon, 1885	Tibesti	Denis, 1962
<i>Xysticus cristatus</i> (Clerck, 1757)	Derna	Caporiacco, 1934
<i>Xysticus lalandei</i> (Audouin, 1826)	Derna, Kufar, Jalu, Awjilah, Hawari	Caporiacco, 1933, 1934, 1936,
<i>Xysticus nubilus</i> Simon, 1875	Al Jaghbub	Caporiacco, 1928
<i>Xysticus peccans</i> O. Pickard-Cambridge, 1876	Al Jawf	Caporiacco, 1936
<i>Xysticus quadrispinus concolor</i> Caporiacco, 1933 **	Kufar, Jalu, Al Jawf, Hawari	Caporiacco, 1933, 1936
<i>Xysticus quadrispinus</i> Caporiacco, 1933 **	Ajdabiyah, Al Jawf, Jalu	Caporiacco, 1933, 1936
<i>Xysticus rectilineus</i> (O. Pickard-Cambridge, 1872)	Qawarishah, Tocra	Caporiacco, 1934
<i>Xysticus sabulosus</i> (Hahn, 1832) *	Tripoli, Msallata, Qaser Khair, Tajoura, Ghaneima	Elkrew, 2023
Titanoecidae		
<i>Nurscia albomaculata</i> (Lucas, 1846)	Qatrun	Denis, 1966
<i>Titanoeca</i> sp Thorell, 1870 *	GurryBolly	Elkrew, 2023
Uloboridae		
<i>Uloborus plumipes</i> Lucas, 1846	Gharyan, Tegna, Siwa, Tibesti, Tripoli, Tajoura, sirraj, Al Mayah	Simon, 1908, Denis, 1947, Caporiacco, 1949, Elkrew, 2023
<i>Uloborus walckenaerius</i> Latreille, 1806	Kufra, Jalu, Al Jawf	Caporiacco, 1933, 1934
Zodariidae		
<i>Acanthinozodium spinulosum</i> Denis, 1966 **	Murzaq	Denis, 1966
<i>Zodarion cyrenaicum</i> Denis, 1935	Al Jaghbub	Denis, 1935
<i>Zodarion fazanicum</i> Denis, 1938 **	Fezzan	Caporiacco, 1936, Denis, 1962
<i>Zodarion immaculatum</i> Denis, 1962 **	Tibesti	Denis, 1962
<i>Zodarion isabellinum</i> (Simon, 1870)	Al Jaghbub, Ajdabiya	Caporiacco, 1928, 1933
<i>Zodarion maculatum</i> (Simon, 1870)	Tarhunah, Bir Milrha.	Karsch, 1881
<i>Zodarion nitidum</i> (Audouin, 1826)	Benghazi, GurryBolly	Simon, 1908, Elkrew, 2023

Zodarion pileolonotatum Denis, 1935 **	Siwa	Denis, 1935
Zoropsidae		
Zoropsis spinimana (Dufour, 1820)	Derna	Caporicco, 1934

Note: \* indicate to new species and genus. 2. \*\* indicates to Endemic species.

### New records

Twenty-five new species records and eight new genera records (Lathys, Adonea, Echemus, Drassyllus, Phlegra, Parasyrisca, Phaeocedus, and Titanoea) have been reported, thus increasing the spider biodiversity to 353 species (Table 2). Many of them have wide distribution or are recorded in the Mediterranean basin or in North Africa. Uroctea compactilis is distributed in China, Korea, and Japan. This species might be introduced to Libya through the importation of goods from Asia, particularly from China and Korea. The recent surveys were conducted in north western Libya (Bouras, 2013; Elkrew, 2012; Elkrew, 2023; Elmareme, 2016). However, expanding the investigations to parts of the country is important to cover the spider fauna of the country.

### Endemic species

Fifty-seven species of spiders are endemic to Libya, which represents 16% of all Libyan spiders (Table 2). The majority of spider endemic species in Libya were described during the past century. Some of the holotype specimens were either lost or, in some instances, the original specimen description was made using juvenile, subadult or just adult male or female only. Therefore, there is a need for further investigation by collecting holotype specimens to confirm their endemic status. Nevertheless, some species may also be described from neighboring countries and given synonym names.

### Doubtful species

Many species were considered doubtful species due to insufficient evidence or conflicting information to confidently determine the validity of a particular species. This classification is typically assigned temporarily until further research or evidence can clarify its status. Eight of the endemic species listed in the Libyan spider endemic list are now considered doubtful species, based on information extracted from World Spider Catalog (2024). These are species with descriptions that do not allow definite recognition or a very short description, and/or figures that are absent or only schematic, for juveniles or subadult only. If the original specimens of these species are still available, the type specimens have to be re-examined and re-described. However, the majority of these specimens are either lost or difficult to access. Therefore, sometimes field sampling is required to collect the new holotypes. Their details are shown in Table 3.

**Table 3. Doubtful species that recorded in Libya according to World Spider Catalog (2024)**

No.	Accepted name	Status / Problem	Material	Location
1	Haplodrassus spinicus (Caporiacco, 1928)	Nomen dubium	One male	Porto Bardia
2	Micaria fausta Karsch, 1881	Incertae sedis	Juvenile	Tripoli
3	Gonatium rufum Caporiacco, 1934	Nomen dubium	Female	Cyrenaica
4	Lycosa intermedialis Roewer, 1955	Incertae sedis	Juvenile	Port Burdy, Tripoli,
5	Menemerus milloti Denis, 1966	Nomen dubium	Female	Murzuq
6	Mogrus.cf. dalmasi		Juvenile	Tibesti

7	Stenaelurillus giovae Caporiacco, 1936	Nomen dubium	Juvenile	Al Jawf
8	Ozyptila subclavata (O. Pickard-Cambridge, 1876)	Nomen dubium	Juvenile	Ajdabiya

## CONCLUSION

Information on fauna of Libyan spider are limited and scattered so the need for check list is the priority to expand Libyan spider database. 353 spider species were revealed by this checklist with 25 of them are new record to Libyan spider fauna and 57 species are endemic. However, more research on spider will reveal more species diversity.

## ACKNOWLEDGMENTS

The authors thank the anonymous referee for their comments that improve the manuscript

## REFERENCES

- Alley, R. B., Mayewski, P. A., Sowers, T., Stuiver, M., Taylor, K. C., & Clark, P. U. (1997). Holocene climatic instability: A prominent, widespread event 8200 yr ago. *Geology* 25, 483-486.
- Bauer, A. M., DeBoer, J. C., & Taylor, D. J. (2017). Atlas of the reptiles of Libya. *Proceedings of the California Academy of Sciences*, 64(8), 155-318.
- Bouras, E. M. (2013). *Spiders of National Park of Abughelan* University of Tripoli, Libya].
- Bouras, E. M., Shaibi, T., Elkrew, H. M., Ghana, S., & Swehli, A. I. (2014). Spider fauna (Araneae) of Abu Ghilan National Park, north-western Libya. *Indian Journal of Arachnology*, 3(2), 6-16.
- Caporiacco, L. d. (1928). Aracnidi di Giarabub e di Porto Bardia (Tripolis). *Annali del Museo Civico di Storia Naturale di Genova*, 53, 77-107.
- Caporiacco, L. d. (1933). Araneidi. In: Spedizione scientifica all'oasi di Cufra (Marzo-Luglio 1931). *Annali del Museo Civico di Storia Naturale di Genova*, 56, 311-340.
- Caporiacco, L. d. (1934). Missione zoologica del Dott. E. Festa in Cirenaica. Aracnidi. *Bollettino dei Musei di Zoologia ed Anatomia Comparata della Reale Università di Torino*, 44, 121-146.
- Caporiacco, L. d. (1936a). Aracnidi fezzanesi raccolti dal prof. G. Scortecci nel 1934-XII. (Missione della R. Società geografica). *Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano*, 75, 67-93.
- Caporiacco, L. d. (1936b). Aracnidi raccolti durante la primavera 1933 nelle oasi del deserto libico. *Memorie della Società Entomologica Italiana, Genova*, 15, 93-122.
- Caporiacco, L. d. (1937). Un manipolo di araneidi della Tripolitania costiera. *Monitore Zoologico Italiano*, 48, 57-60.
- Caporiacco, L. d. (1949). Un manipolo di araneidi dalla Cirenaica. *Atti del Museo Civico di Storia Naturale di Trieste*, 17, 113-119.
- Denis, J. (1947). Results of the Armstrong College expedition to Siwa Oasis (Libyan desert), 1935. Spiders [Araneae]. *Bulletin de la Société Fouad 1er d'Entomologie*, 31, 17-103, Pl. I-VI.
- Denis, J. (1962). Araignées recueillies en 1961 par la Mission Belge au Tibesti. *Revue de Zoologie et de Botanique Africaines*, 65, 29-32.
- Denis, J. (1964). On a collection of erigonid spiders from North Africa. *Proceedings of the Zoological Society of London*, 142, 379-390.
- Denis, J. (1966). Les araignées du Fezzân. *Bulletin de la Société d'Histoire Naturelle d'Afrique du Nord*, 55, 103-144.

- El Fadli, K. I., Cerveny, R., Burt, C. C., Eden, P., Parker, D., Brunet, M., Peterson, T. C., Mordacchini, G., Pelino, V., Bessemoulin, P., Stella, J. L., Driouech, F., Wahab, M. M. A., & Pace, M. B. (2013). World Meteorological Organization assessment of the purported World record 58°C temperature extreme at El Azizia, Libya (13 September 1922). *Bulletin of the American Meteorological Society*, 94, 199–204.
- Elkrew, H. M. (2012). *Biodiversity of spiders of Tripoli, Libya* [University of Tripoli]. Tripoli.
- Elkrew, H. M. M. (2023). *Spider assemblages' structure and biodiversity at urban, farmland, and wild habitats in northwest Libya* [Universiti Malaysia Terengganu]. Terengganu.
- Elmareme, H. (2016). *Biodiversity and systematic of the Libyan northwest coast spider fauna (Arachnida: Areneae) and its clinical effect* [Universita Degli Di Palimo].
- Elmareme, H. M. (2006). *Biodiversity and classification of spiders of North-western Libya* [University of Az-zawia, Libya].
- Hegazy, A., Boulos, L., Kabiell, H., & Sharashy, O. (2011). Vegetation and species altitudinal distribution in Al-Jabal Al-Akhdar landscape, Libya. *Pakistan Journal of Botany*, 43(4), 1885-1898.
- Karsch, F. (1881). Verzeichniss der während der Rohlf'schen Afrikanischen Expedition erbeuteten Myriopoden und Arachniden. *Archiv für Naturgeschichte*, 47, 1-14.
- Le Berre, M. (1989). *Faune du Sahara. 1. Poissons–Amphibiens–Reptiles*. Lechevalier R. Chabanaud.
- Lezine, A. M. (1989). Late quaternary vegetation and climate of the Sahel. *Quaternary Res* 32, 317-334.
- Mahklouf, M. H., & Etayeb, K. S. (2018). Biodiversity in Libya. In T. Pullaiah (Ed.), *Global biodiversity* (Vol. 3, pp. 113-132). Apple Academic Press.
- Massa, B. (2009). Annotated check-list of Orthoptera of Libya. *Journal of Orthoptera Research*, 18(1), 75-93.
- Peel, M. C., Finlayson, B. L., & McMahon, T. A. (2007). Updated world map of the Köppen–Geiger climate classification. *Hydrology and Earth System Sciences*, 11, 1633–1644.
- Saaed, M. W., El-Barasi, Y. M., & Rahil, R. O. (2019). Our present knowledge about the history and composition of the vegetation and flora of Libya. *Webbia*, 74(2), 325-338.
- Simon, E. (1908). Etude sur les arachnides recueillis par M. le Dr Klaptocz en Tripolitaine. *Zoologische Jahrbücher, Abteilung für Systematik, Geographie und Biologie der Tiere*, 26, 419-438.
- Walter, H., & Burnett, J. H. (1971). *Ecology of tropical and subtropical vegetation*. Oliver and Boy.
- White, F. (1973). *The vegetation of Africa, a descriptive memoir to accompany the UNESCO /AETFAT/UNSO vegetation map of Africa*. United Nations educational, Scientific and Cultural Organization.
- World Spider Catalog. (2024). *World Spider Catalog. Version 25.0*. Natural History Museum Bern. Retrieved 10/02/2024 from <http://wsc.nmbe.ch>
- Ying, F., Lei, J.-Q., Xu, X.-W., & Pan, B.-R. (2013). Composition and characteristics of Libyan flora. *Archives of Biological Sciences*, 65(2), 651-657.
- Zavattari, E. (1934). *Prodromo Della Fauna Della Libia*. Tipografia Già Cooperativa.