



**SERKET**

**سرکت**



**The Arachnological Bulletin  
of the Middle East and North Africa**

**Volume 20  
May, 2024**

**Part 2  
Cairo, Egypt**

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**ISSN: 1110-502X**

## **The first record of the spider *Segestria florentina* (Rossi, 1790) (Araneae: Segestriidae) in Libya**

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### **Abstract**

The genus *Segestria* Latreille, 1804 and the species *Segestria florentina* (Rossi, 1790) are recorded in Libya for the first time, based on a single adult female specimen.

**Keywords:** Araneae, Segestriidae, *Segestria florentina*, first record, Libya.

### **Introduction**

Segestriidae Simon, 1893 is a spider family with 179 recorded species and five genera, with the second largest of which is *Segestria* Latreille, 1804, with 21 species and 1 subspecies. *Segestria* is distributed in Asia, Europe, Madagascar, Mediterranean, New Zealand, Northern Africa, North and South America (El-Hennawy, 2020a; World Spider Catalog, 2024). Segestriidae is characterized as medium-sized (tube web) ecribellate, haplogyne, araneomorph spiders; with three tarsal claws, six eyes and third pair of legs directed anteriorly; posterior tracheal spiracles far in front, just behind booklung slits; female palpal claw turned inwards over almost 90° (Jocqué & Dippenaar-Schoeman, 2006). Of the family Segestriidae, only one species is recorded in Libya, *Ariadna insidiatrix* Savigny, 1825 (Nentwig *et al.*, 2024). The majority of segestriids, including *Segestria florentina* (Rossi, 1790), inhabit wide range of environments, although they prefer to live in cracks or fissures found in the walls or barks or beneath rocks, where

they can build a tubular hideaway with robust silk strands stretching from the exit (entrance) (Roberts, 1995; Zamani, 2014).

So far, 310 spider species of 37 families have been recorded in Libya (Nentwig *et al.*, 2024). To the time of writing this work the species *Segestria florentina* (Rossi, 1790) has not been recorded yet from Libya.

### Material and Methods

One adult female specimen was encountered accidentally at night (9 pm on 13<sup>th</sup> December 2023) in Badrten village, Gharyan city (mountainous city, 750 m above sea level and 105 kilometres south of Tripoli). While the spider was wandering on patio floor of farm house (the farm was containing palm, grape and olive trees), it was collected by hand, using metal box, and kept alive in a glass jar with perforated cover for some time before being preserved in 75% alcohol. Examination was conducted at laboratory of Biology department, faculty of education (Souq Al Jum'aa), University of Tripoli using Wild M3 (Heerbrugg) dissecting stereomicroscope and photos were taken with Omax A35180U3 mounted microscope digital camera. All measurements are presented in millimetres. The following abbreviations are used: AL = abdomen length, CL = cephalothorax length, CW = cephalothorax width, TL = total length.



Fig.1. First distribution map of *Segestria florentina* (Rossi, 1790) in Libya. Red sign [Badrten village, Gharyan city, 105 km south of Tripoli].

### Taxonomy

Family **Segestriidae** Simon, 1893

Genus ***Segestria*** Latreille, 1804

Diagnosis: with 21 species and 1 subspecies, this genus is the second largest of Segestriidae, distributed mainly in Asia, Europe and north Africa (World Spider Catalog,



Figs. 2-7. *Segestria florentina* (Rossi, 1790), ♀. 2-3. Habitus. 2. dorsal view. 3. lateral view. 4. frontal view showing green iridescent chelicerae and eyes. 5. Prosoma, ventral view, showing sternum, labium and endites. 6. Spinnerets. 7. Abdomen (underside) showing epigyne.

2024). The species of *Segestria* resemble those of *Ariadna* Savigny, 1825 and *Gippsicola* Hogg, 1900, but have some defining features: three anterior and two posterior triangular cheliceral teeth, thin, extended, and nearly parallel sided labium, the female has many spines on leg IV and two ventral rows of long, thin spines on tibiae and metatarsi I-II (Giroti & Brescovit, 2011). Moreover, *Segestria* species have their median eyes and posterior lateral eyes on a strongly recurved line compared to a nearly straight line of their counterparts in *Ariadna* species (Nentwig *et al.*, 2024).

***Segestria florentina* (Rossi, 1790)**

For detailed list of synonyms, see World Spider Catalog (2024).

Material examined: 1♀, Libya: Al Jabal Al Gharbi District, Gharyan City, Badrten Village, (32°09'18.0"N, 13°03'28.8"E, altitude 750 m), 13<sup>th</sup> December 2023, found at night while the spider was wandering on patio floor of farm house (Fig. 1).

Description: Female (Figs. 2-7). TL 15.1, CL 8.7, CW 4.93, AL 6.4. Carapace dark orange to brown, darker laterally and at eye area. Chelicerae are with green iridescent shine. Carapace elevated (convex) when viewed from lateral side. The dorsal side of abdomen has dark gray to brown connected lobes in the mid line, absent ventrally. Sternum and legs relatively light orange brown.

Diagnosis: *Segestria florentina* (Green-fanged Tube web spider) can be distinguished from its closely related species by the presence of green, iridescent chelicerae in female (Roberts, 1995; Bee *et al.*, 2020), while the male palpal organs have short blunt embolic tips of the palpal bulbs (Roberts, 1995; Giroti & Brescovit, 2011). Moreover, chelicerae have three promarginal (anterior) and two retromarginal (posterior) triangular teeth when viewed ventrally (Giroti & Brescovit, 2011; El-Hennawy, 2020b).

Global distribution: Europe, North Africa, Jordan, Turkey, Ukraine, Russia, Georgia. Introduced to Brazil, Uruguay, Argentina (World Spider Catalog, 2024). More detail: Algeria, Andorra, Belgium, Bulgaria, Croatia, Cyprus, Egypt, France (Corsica), Georgia, Germany, Greece/Crete, Hungary, Ireland, Italy (Sardinia, Sicily), Jordan, Montenegro, Morocco, Netherlands, North Macedonia, Portugal, Romania, Russia/Southern, Serbia, Slovakia, Slovenia, Spain, Balearic Islands, Switzerland, Tunisia, Turkey (Asia), Ukraine, United Kingdom (Nentwig *et al.*, 2024).

## Discussion

Although this spider species is mainly found in the Mediterranean, it has been reported far from this habitat (e.g. Germany, Netherlands, as far east as Georgia and as far north as Britain) (Nolan, 2008). The species is commonly found within cargo such as banana boxes (Nolan, 2008) or building materials (Helsdingen, 2008). There must be breaks in the walls of buildings or slits between the walls the window-frame, because *Segestria florentina* does not usually benefit from modern construction methods; however, it can still find its way in the ventilation slits (Helsdingen, 2008).

## Acknowledgments

We are indebted to Ms. Sarah Ben Zeglam of biology department, faculty of education, University of Tripoli and Mr. Salah Alostafa for their help with photographing the specimen, editing the pictures and taking measurements.

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