

## New data and a checklist of the jumping spiders (Aranei: Salticidae) of Algeria

### Новые находки и список пауков-скакунчиков (Aranei: Salticidae) Алжира

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КЛЮЧЕВЫЕ СЛОВА: Araneae, Африка, фаунистика, Средиземноморье, новые находки.

**ABSTRACT.** A list of the jumping spiders newly collected from Biskra and Touggourt Wilayas, Algeria is provided, with five new records for the country. Six species are illustrated. A checklist of the jumping spiders of Algeria is compiled and presented.

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**РЕЗЮМЕ.** Приведён список свежесобранных пауков-скакунчиков из вилайетов Бискра и Тутгурт, Алжир, из них пять новых для страны. Шесть видов проиллюстрированы. Составлен и приведён полный список пауков-скакунчиков Алжира.

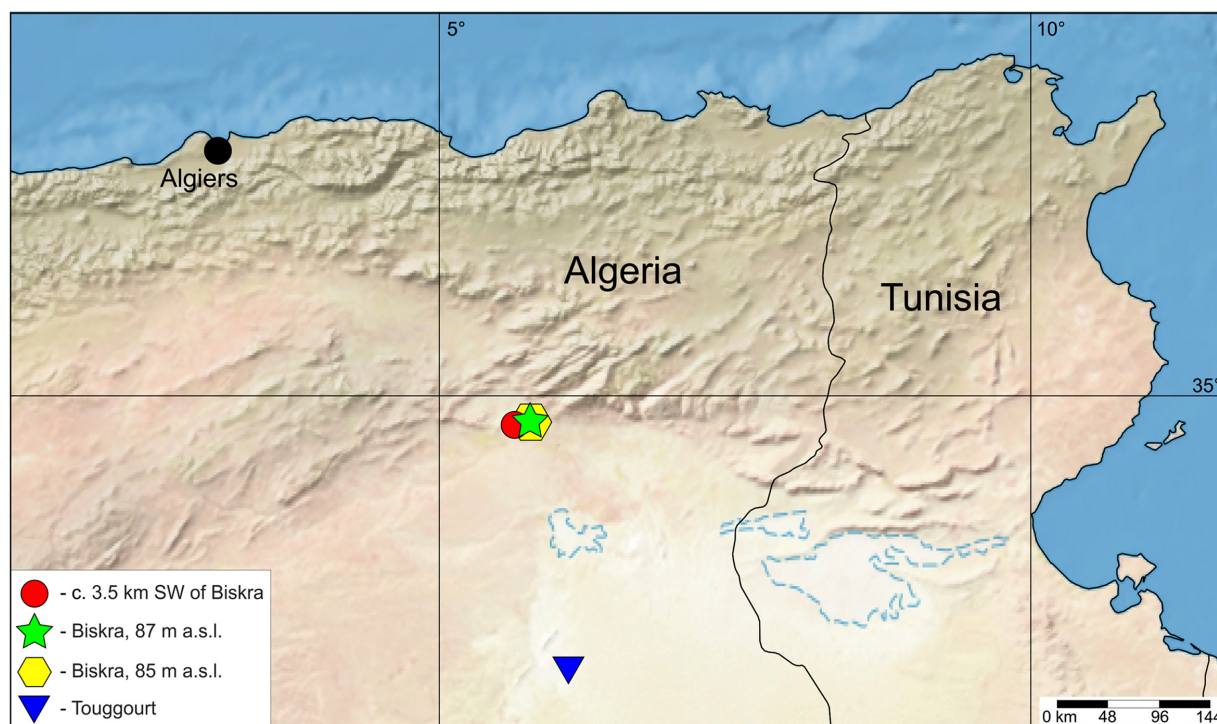
### Introduction

The family Salticidae Blackwall, 1841, represented by 6767 species in 690 genera, is the most diverse spider family worldwide [WSC, 2025]. The Mediterranean Salticidae are very species rich but remain insufficiently studied, representing one of the least studied groups in the Mediterranean, particularly in northern Africa (Algeria, Tunisia and Lybia) [Logunov, 2015]. The studies of Salticidae in Algeria began with Lucas [1846], who published detailed descriptions of 60 salticid species, followed by Denis [1937] who described 28 species. More

recent papers dealing with a few salticid genera include the revision of Afrotropical *Menemerus* Simon, 1868 by Wesolowska [1999] and the paper by Azarkina & Logunov [2006] on the taxonomy of nine species of *Aelurillus* Simon, 1885 from the western Mediterranean. In southern Algeria, beyond the Saharan Atlas, jumping spiders have received growing attention thanks to research carried out by Alioua *et al.* [2022] on a new record of *Menemerus soldani* (Audouin, 1826) with a new synonym, and Alioua, Bosmans [2024] on new records of three salticids from northern Algerian Sahara.

Saharan oases have a favourable microclimate for the survival and reproduction of a range of insect species that could be potential spider prey. Due to the presence of irrigation water, the relative humidity in oases is higher than in dunes. The same holds true for the temperature, which is milder in the shade of date palms than outside the oases. Biskra and Touggourt are situated in the north-eastern part of the Algerian Sahara, some 400 km and 690 km south-eastward of the capital Algiers, respectively. They lie in the Saharan bioclimatic zone. Both regions are characterised by temperate cold winters and hot, dry summers. In Sahara, palm groves are maintained through weeding, irrigation and crop rotation resulting in a microclimate favourable to the survival and reproduction of a large number of arthropod species.

The aims of the present paper are as follows: (1) to provide a list of the salticid species newly recorded from Biskra and Touggourt; (2) to discuss five new records of



Map. Collecting localities in Biskra and Touggourt Wilayas, Algeria.  
Карта. Точки сборов в вилайетах Бискра и Туггурт, Алжир.

Salticidae from Algeria; (3) to illustrate six species; and (4) to compile and present a complete checklist of the Algerian salticids.

## Material and methods

The specimens studied were collected from the regions of Biskra and Touggourt in 2014–2015 (Map) of four date palm groves consisting of their different varieties. Spiders were collected by the first author every three weeks from April, 2014 to March, 2015 from three palm groves located in Biskra and one in Touggourt, by means of pitfall traps with 4% formaldehyde solution with some detergents to reduce surface tension and hand-collecting. The abbreviation I.T.D.A.S. is used below for the field station belonging to the Institut Technique de Développement de l'Agronomie Saharienne near Biskra (Algeria). The collected specimens were preserved in 70% ethanol by the first author and then sorted to families in the Laboratory of Dynamics and Biodiversity, University of Sciences and Technology Houari Boumediene, Algiers. Of this collection, Salticidae were sorted out, sent to Galina Azarkina for identification and are now deposited in the Institute of Systematics and Ecology of Animals SB RAS, Novosibirsk, Russia (curator G.N. Azarkina; ISEA). In the 'Material' studied presented below the name of the collector (WB) is not included.

Specimens were studied in 70% ethanol, and their colouration refers to that of the preserved specimens. The epigynes were detached and their soft tissues dissolved in a 10% KOH solution overnight. Once photographs and drawings were taken, the dissected parts were placed in microvials along with the specimens. All drawings were made with the aid of a reticular eyepiece attached to a Zeiss Stemi-2000 stereomicroscope at ISEA. Photographs of preserved specimens were taken with a Canon EOS 550D camera attached to a Zeiss Stemi-2000

stereomicroscope at ISEA. Images were stacked using Helicon Focus. The drawings were edited in Adobe Photoshop and Corel Draw. The reference list for each species is restricted to the papers relevant to Algeria; for full taxonomic reference lists see WSC [2025]. The map was produced using the online mapping software SimpleMapp [Shorthouse, 2010]. The similarities between faunas of Algeria and other countries of North Africa have been analysed by hierarchical clustering based on binary data (present/absent in species lists) using the unweighted pair group mean algorithm (UPGMA) and Jaccard's similarity index using the PAST v. 5.0.2 software [Hammer *et al.*, 2001]. For this analysis we have used the information from Benhacene *et al.* [2023] for Algeria, El-Hennawi [2006] for Egypt, Elkrew *et al.* [2024] for Lybia, Benhalim & Bosmans [2024] for Morocco, and Bosmans [2003] and Dimassi *et al.* [2016] for Tunisia.

## Results

### *Aelurillus luctuosus* (Lucas, 1846)

*Salticus luctuosus* Lucas, 1846: 139, pl. 5, fig. 7 (D♂).

*Salticus affinis* Lucas, 1846: 161, pl. 7, fig. 4.

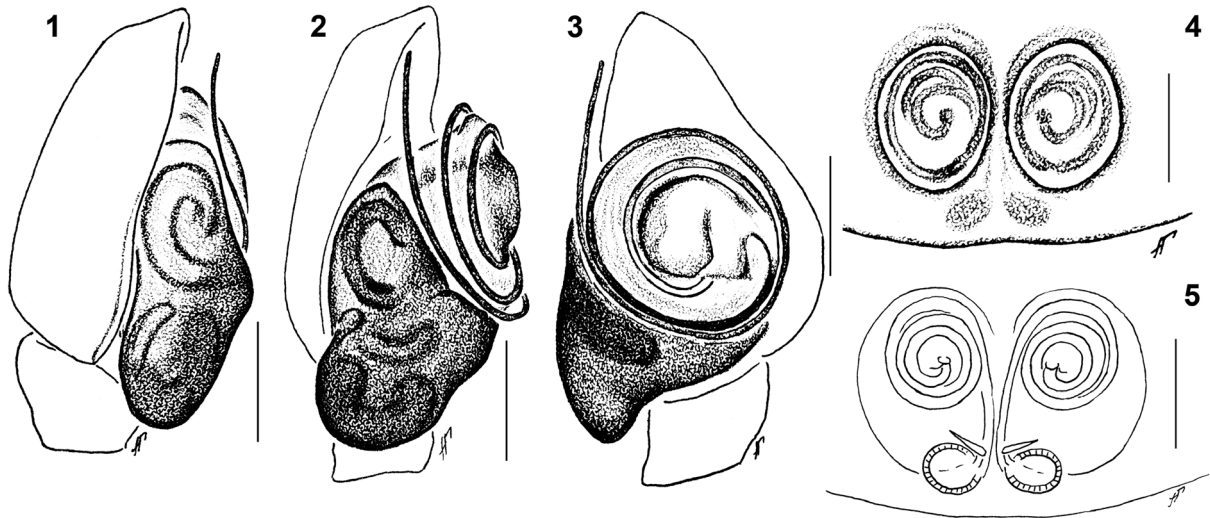
*Aelurillus affinis*: Denis, 1937: 1056, pl. 5, fig. 10.

*Aelurillus pallidemaculatus* Denis, 1937: 1056, pl. 5, fig. 12.

*Aelurillus luctuosus*: Azarkina, Logunov, 2006: 238, figs 9–12, 46–81; Logunov, 2015: 53; Alioua *et al.*, 2016: 37; Boucherit *et al.*, 2020: 64; Alioua *et al.*, 2022a: 167; Benhacene *et al.*, 2023: 334; Alioua, Bosmans, 2024: 319.

MATERIAL. ALGERIA, *Biskra Wilaya*: 1 ♂ (ISEA, 001.9145), Biskra, 34.824196°N 5.770094°E, abandoned palm grove, 87 m a.s.l., pitfall traps, May 2014; 1 ♂ (ISEA, 001.9144), Biskra, 34.822567°N 5.774353°E, abandoned palm grove, 85 m a.s.l., pitfall trap, May 2014.

RECORDS IN ALGERIA. Aïn Defla, Alger, Batna, Béjaïa, Biskra, Blida, Bouira, Chlef, Constantine, El Guerrara, El Menaïâ, El Tarf, Mila, Saïda, Tamanghasset, Tebessa, Tizi Ouzou.



Figs 1–5. *Euophrys friedmani* Marusik, 2019: 1 — male palp, retrolateral view; 2 — same, retrolatero-ventral view; 3 — same, ventral view; 4 — epigyne, ventral view; 5 — epigyne, dorsal view. Scale bars: 0.1 mm.

Рис. 1–5. *Euophrys friedmani* Marusik, 2019: 1 — палпа самца, ретролатерально; 2 — то же, ретролатерально-вентрально; 3 — то же, вентрально; 4 — эпигина, вентрально; 5 — то же, дорсально. Масштаб: 0,1 мм.

**DISTRIBUTION.** The Mediterranean [Azarkina, Logunov, 2006; Logunov, 2015].

#### *Aelurillus monardi* (Lucas, 1846)

*Salticus monardi* Lucas 1846: 156, pl. 7, fig. 2 (D♂).

*Salticus nicoletii* Lucas, 1846: 160, pl. 7, fig. 5.

*Aelurillus monardi*: Denis, 1937: 1056; Azarkina, Logunov, 2006: 243, figs 1–8, 83–97; Benhacene *et al.*, 2023: 334; Alioua, Bosmans, 2024: 320.

**MATERIAL.** ALGERIA, *Biskra Wilaya*: 1 ♂ (ISEA, 001.9112), c. 3.5 km SW of Biskra, I.T.D.A.S. station, 34.806444°N 5.654325°E, well-maintained palm grove, 114 m a.s.l., pitfall traps, May 2014; 1 ♀ (ISEA, 001.9113), same locality, October 2014; 2 ♂♂ (ISEA, 001.9115), Biskra, 34.824196°N 5.770094°E, abandoned palm grove, 87 m a.s.l., pitfall traps, May 2014; 1 ♂ 2 ♀♀ (ISEA, 001.9114), same locality but 34.822567°N 5.774353°E, 85 m a.s.l., August 2014; 1 ♀ (ISEA, 001.9111), same locality, September 2014. — *Touggourt Wilaya*: 1 ♂ 1 ♀ (ISEA, 001.9116), Touggourt, 33.071667°N 6.095556°E, palm grove, 87 m a.s.l., pitfall traps, May 2014.

**RECORDS IN ALGERIA.** Alger, Annaba, Berriane, Biskra, El Atteuf, El Guerrara, El Tarf, Mila, Sétif.

**DISTRIBUTION.** Algeria and Tunisia [Azarkina, Logunov, 2006].

#### *Euophrys friedmani* Marusik, 2019 Figs 1–11.

*Euophrys friedmani* Marusik, 2019: 562, figs 1–3, 6–11, 13–21 (D♂♀).

**MATERIAL.** ALGERIA, *Biskra Wilaya*: 1 ♂ (ISEA, 001.9147), Biskra, 34.824196°N 5.770094°E, abandoned palm grove, 87 m a.s.l., pitfall traps, May 2014; 1 ♀ (ISEA, 001.9148), same locality and date but 34.822567°N 5.774353°E, 85 m a.s.l.

**DISTRIBUTION.** So far it has been known from Israel only [Marusik, 2019]. This is the first record for Algeria and the first one from outside of its type locality.

**REMARKS.** The body colouration and the conformation of copulatory organs of *E. friedmani* are similar to those of *Euophrys albimana* Denis, 1937 described and known from Algeria (Babour Mt. Range – Djebel Daya and Djebel Arrès

[Denis, 1937]. The original description and illustrations are not good enough, with only the male dorsum colour pattern and the ventral view of the epigyne being provided, which is not enough for a reliable identification. The studied specimens from Algeria could belong to the latter species, and if so *E. friedmani* would become a junior synonym of *E. albimana*. However, for a proper synonymization it is necessary to re-examine the type material, which is kept in Muséum National d'Histoire Naturelle (Paris, France) and is currently inaccessible.

#### *Euophrys* cf. *sulphurea* (L. Koch, 1867) Figs 12–16.

*Attus sulphureus* L. Koch, 1867: 873 (D♂).

*Euophrys sulphurea*: Logunov, 1997: 351, figs 33–35; Metzner, 1999: 51, fig. 17a–m.

**MATERIAL.** ALGERIA, *Touggourt Wilaya*: 1 ♀ (ISEA, 001.9149), Touggourt, 33.071667°N 6.095556°E, palm grove, 87 m a.s.l., pitfall traps, October 2014.

**DISTRIBUTION.** Southern Europe, Turkey and Morocco [Logunov, 2015]. It is a new species record for Algeria.

**REMARKS.** *E. sulphurea* was described from Cyclades, Tinos Island, Greece [Koch, 1867], and then has been found in southern Europe, Turkey and Morocco [Coşar, 2015; Fage, 1938; Logunov, 2015; Metzner, 2025; WSC, 2025]. Simon [1892] mentioned *E. sulphurea* for Kouloniyé, Syria (probably the territory of present Israel), but Zonstein, Marusik [2013] argued that Simon's record may have referred to either *E. gambosa* (Simon, 1868) or *E. pseudogambosa* Strand, 1915.

The epigyne and vulva of Algerian specimen (Figs 15–16) are similar to those of *E. sulphurea* (cf. Metzner [1999: fig. 17e–f]), but the body colouration is different: viz., dark brown legs, carapace and abdomen in south European specimens [Metzner, 2025], whereas yellow legs and brown carapace in the Algerian specimen (Figs 12–14). The present identification is provisional because the females of *Euophrys* are difficult/impossible to identify. A male collected together with the female is required to confirm/clarify this identification.



Figs 6–11. *Euophrys friedmani* Marusik, 2019: 6 — male habitus, dorsal view; 7 — same, ventral view; 8 — same, frontal view; 9 — female habitus, frontal view; 10 — same, dorsal view; 11 — same, ventral view. Scale bars: 1.0 mm (6, 7, 10, 11), 0.2 mm (8, 9).

Рис. 6–11. *Euophrys friedmani* Marusik, 2019: 6 — тело самца, сверху; 7 — то же, снизу; 8 — то же, спереди; 9 — тело самки, спереди; 10 — то же, сверху; 11 — то же, снизу. Масштаб: 1,0 мм (6, 7, 10, 11), 0,2 мм (8, 9).

*Menemerus fagei* Berland et Millot, 1941

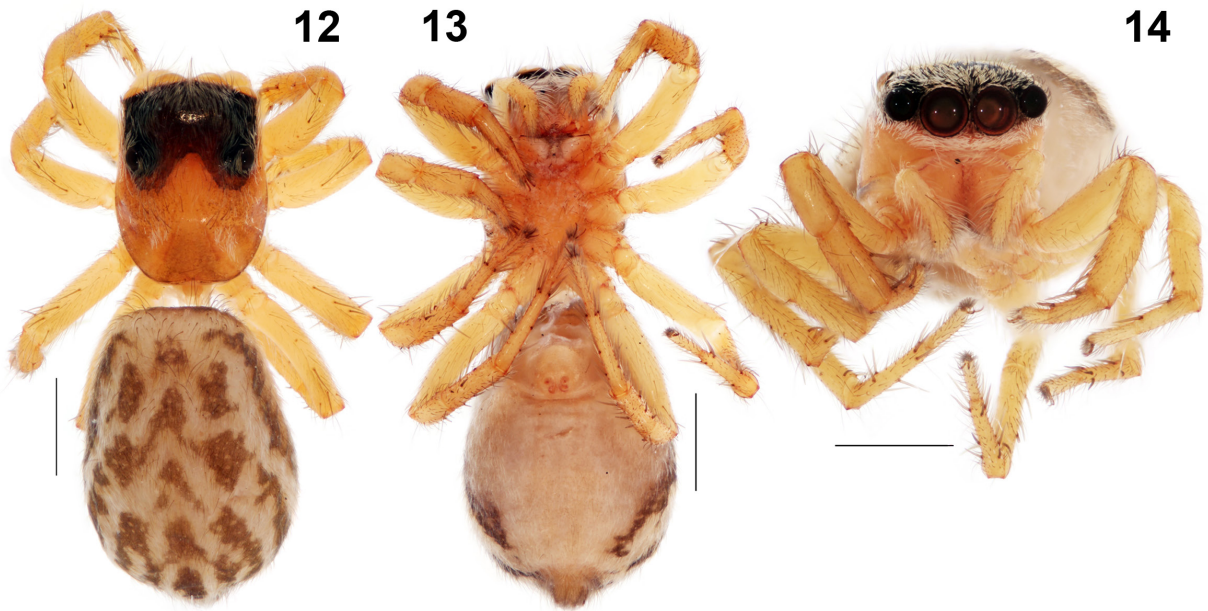
*Menemerus fagei* Berland et Millot, 1941: 350, fig. 53 (D♀).

*Menemerus fagei*: Wesołowska, 1999: 289, fig. 120–133; Prószyński, 2003: 91, figs 360–374.

MATERIAL. ALGERIA, *Biskra Wilaya*: 1 ♂ (ISEA, 001.9154), c. 3.5 km SW of Biskra, I.T.D.A.S. station, 34.806444°N 5.654325°E, well-maintained palm grove, 114 m a.s.l., pitfall traps, April 2014. —

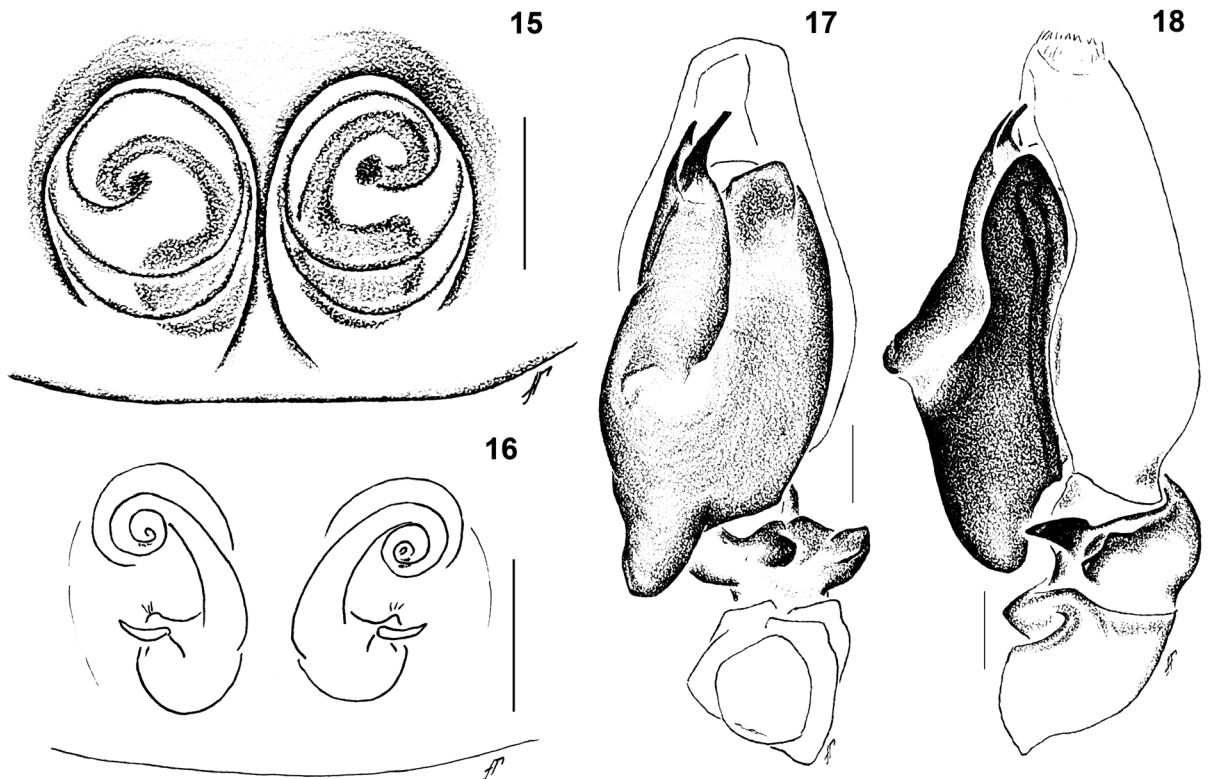
*Touggourt Wilaya*: 1 ♂ (ISEA, 001.9155), Touggourt, 33.071667°N 6.095556°E, palm grove, 87 m a.s.l., pitfall traps, October 2014.

DISTRIBUTION. This species was described from Côte d'Ivoire [Berland, Millot, 1941], later found in the Canary Islands [Schäfer, 2022], Cyprus [Bosmans *et al.* 2019] and Malta [Freudenschuss *et al.* 2013]. This is the new species record for Algeria.



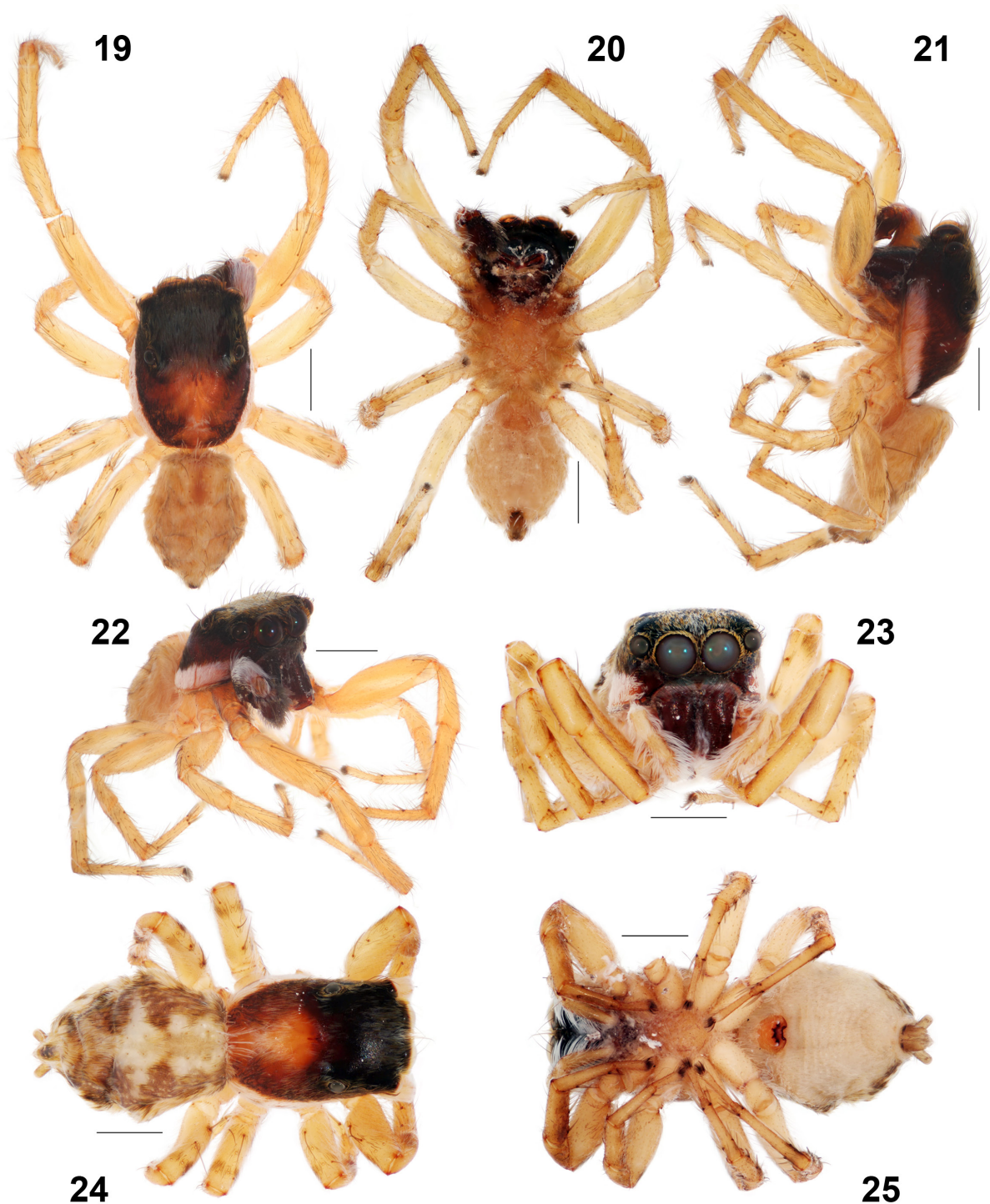
Figs 12–14. Female *Euophrys cf. sulfurea* (L. Koch, 1867): 12 — habitus, dorsal view; 13 — same, ventral view; 14 — same, frontal view. Scale bars: 1.0 mm.

Рис. 12–14. Самка *Euophrys cf. sulfurea* (L. Koch, 1867): 12 — тело, сверху; 13 — то же, снизу; 14 — то же, спереди. Масштаб: 1,0 мм.



Figs 15–18. *Euophrys cf. sulfurea* (L. Koch, 1867) (15–16) and *Menemerus modestus* Wesolowska, 1999 (17–18): 15 — epigyne, ventral view; 16 — same, dorsal view; 17 — male palp, ventral view; 18 — same, retrolateral view. Scale bars: 0.1 mm.

Рис. 15–18. *Euophrys cf. sulfurea* (L. Koch, 1867) (15–16) и *Menemerus modestus* Wesolowska, 1999 (17–18): 15 — эпигина, вентрально; 16 — то же, дорсально; 17 — пальпа самца, вентрально; 18 — то же, ретролатерально. Масштаб: 0,1 мм.



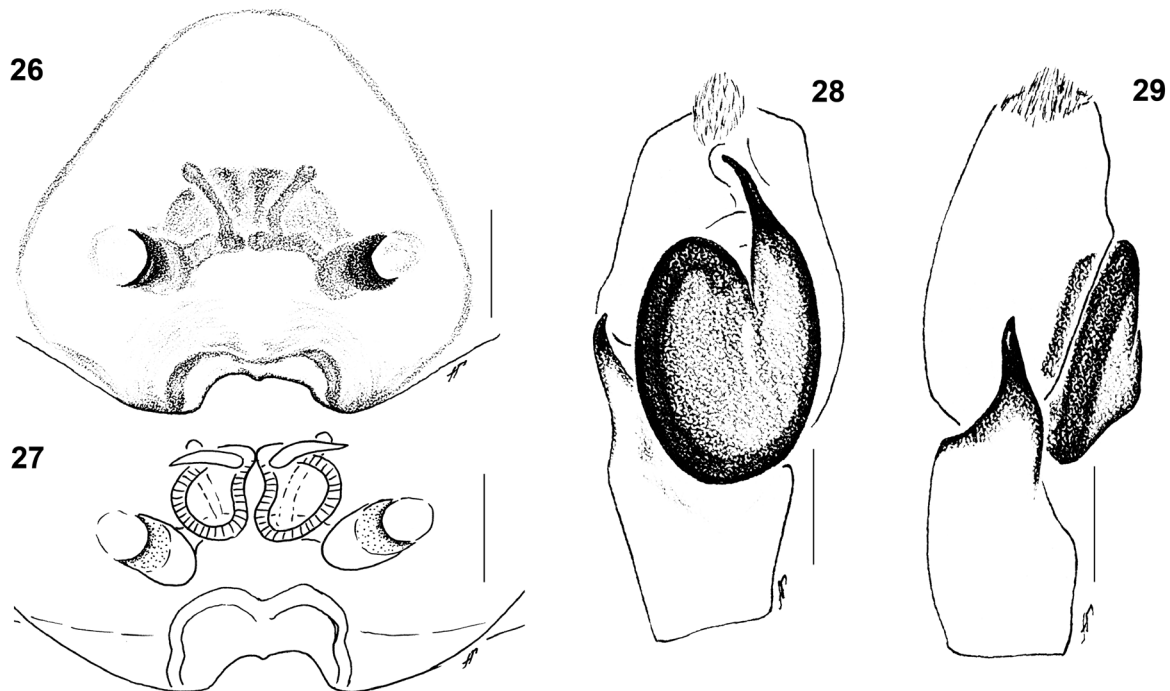
Figs 19–25. *Menemerus modestus* Wesolowska, 1999 (19–22) and *Menemerus soldani* (Audouin, 1826) (23–25): 19 — male habitus, dorsal view; 20 — same, ventral view; 21 — same, lateral view; 22 — same, frontal view; 23 — female habitus, frontal view; 24 — same, dorsal view; 25 — same, ventral view. Scale bars: 1.0 mm.

Рис. 19–25. *Menemerus modestus* Wesolowska, 1999 (19–22) и *Menemerus soldani* (Audouin, 1826) (23–25): 19 — тело самца, сверху; 20 — то же, снизу; 21 — то же, сбоку; 22 — то же, спереди; 23 — тело самки, спереди; 24 — то же, сверху; 25 — то же, снизу. Масштаб: 1,0 мм.

*Menemerus modestus* Wesolowska, 1999  
Figs 17–22.

*Menemerus modestus* Wesolowska, 1999: 313, figs 210–213 (D♂).  
MATERIAL. ALGERIA, *Biskra Wilaya*: 1 ♂ (ISEA, 001.9150), c.

3.5 km SW of Biskra, I.T.D.A.S. station, 34.806444°N 5.654325°E, well-maintained palm grove, 114 m a.s.l., pitfall traps, May 2014; 1 ♂ (ISEA, 001.9160), same locality but June 2014; 1 ♂ (ISEA, 001.9158), Biskra, 34.824196°N 5.770094°E, abandoned palm grove, 87 m a.s.l., pitfall traps, 6 July 2014; 1 ♂ (ISEA, 001.9159), same as previous but 34.822567°N 5.774353°E, 85 m a.s.l., May 2014.



Figs 26–29. *Menemerus soldani* (Audouin, 1826) (26–27) and *Neaetha membrosa* (Simon, 1868) (28–29): 26 — epigyne, ventral view; 27 — same, dorsal view; 28 — male palp, ventral view; 29 — same, retrolateral view. Scale bars: 0.1 mm.

Рис. 26–29. *Menemerus soldani* (Audouin, 1826) (26–27) и *Neaetha membrosa* (Simon, 1868) (28–29): 26 — эпигина, вентрально; 27 — то же, дорсально; 28 — палпы самца, вентрально; 29 — палпы самца, ретролатерально. Масштаб: 0,1 мм.

DISTRIBUTION. So far known from Tunisia [Wesołowska, 1999], it is the first species record for Algeria.

*Menemerus soldani* (Audouin, 1826)  
Figs 23–27.

*Attus soldanii* Audouin, 1826: 407, pl. 7, fig. 17 (D♂).

*Salticus rufolimbatu* Lucas, 1846: 176, pl. 6, fig. 4.

*Menemerus silver* Wesołowska, 1999: 334, figs 270–276.

*Menemerus soldani*: Wesołowska, 1999: 333, figs 268–269; Alioua *et al.*, 2022b: 28, figs 1A–C, 2A–D, 3A–B; Benhacene *et al.*, 2023: 336; Alioua, Bosmans, 2024: 322.

MATERIAL. ALGERIA, *Biskra Wilaya*: 1 ♀ (ISEA, 001.9156), c. 3.5 km SW of Biskra, I.T.D.A.S. station, 34.806444°N 5.654325°E, well-maintained palm grove, 114 m a.s.l., pitfall traps, June 2014. — *Touggourt Wilaya*: 1 ♀ (ISEA, 001.9157), Touggourt, 33.071667°N, 6.095556°E, palm grove, 87 m a.s.l., pitfall traps, September 2014.

RECORDS IN ALGERIA. Berriane, Biskra, Ghardaïa and Oran, Touggourt.

DISTRIBUTION. Algeria, Egypt and Tunisia [Wesołowska, 1999].

REMARKS. Both sexes of *M. soldani* were described, but the type series is lost. In 1999, Wesołowska [1999] designated the male neotype for this species (not examined). Based on the males and the females collected together, Alioua *et al.* [2022] proposed that *M. silver* to be a junior synonym of *M. soldani*. We collected *Menemerus* males and females together, but the males have been identified as *M. modestus* (see above) while the females as *M. soldani*. Thus, the sexes of *M. soldani* could have been mismatched by Alioua *et al.* [2022]. Further collecting is required to resolve this matter.

*Neaetha membrosa* (Simon, 1868)  
Figs 28–33.

*Attus membrusus* Simon, 1868: 617 (D♂♀).

*Ballus membrusus*: Thorell, 1875: 182.

MATERIAL. ALGERIA, *Touggourt Wilaya*: 1 ♂ (ISEA 001.9146), Touggourt, 33.071667°N 6.095556°E, palm grove, 87 m a.s.l., pitfall traps, October 2014.

RECORDS IN ALGERIA. Annaba, Touggourt.

DISTRIBUTION. The western Mediterranean to Germany [Logunov, 2015].

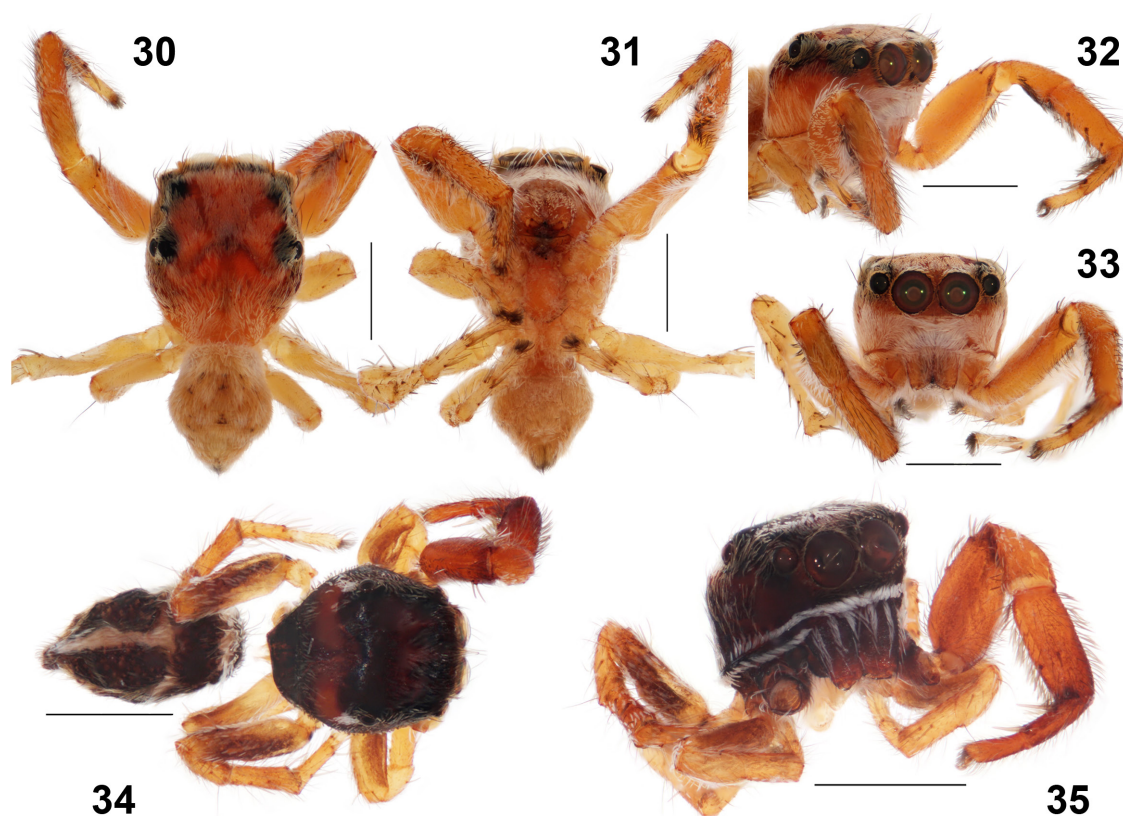
REMARKS. The male studied differs in palp structure and yellow colouration of the first leg pair (Figs 30–33) from the illustrated *N. membrosa* males, having brown legs [Metzner, 2025]. Its tibial apophysis is directed apicad (Fig. 29), while in true *N. membrosa* its tip is bent dorsad [Logunov, 1996: fig. 8]. The males from Greece have the tibial apophysis similar to that of the Algerian male but broader [Metzner, 1999: fig. 85c]. Based on a single male, it is impossible to be certain whether the observed differences reflect intraspecific variation or may indicate that it is a different (new) species.

*Pellenes nigrociliatus* (Simon, 1875)  
Figs 34–38.

*Pellenes nigrociliatus* Simon, in L. Koch, 1875: 14, pl. 1, figs 9–11 (D♂♀).

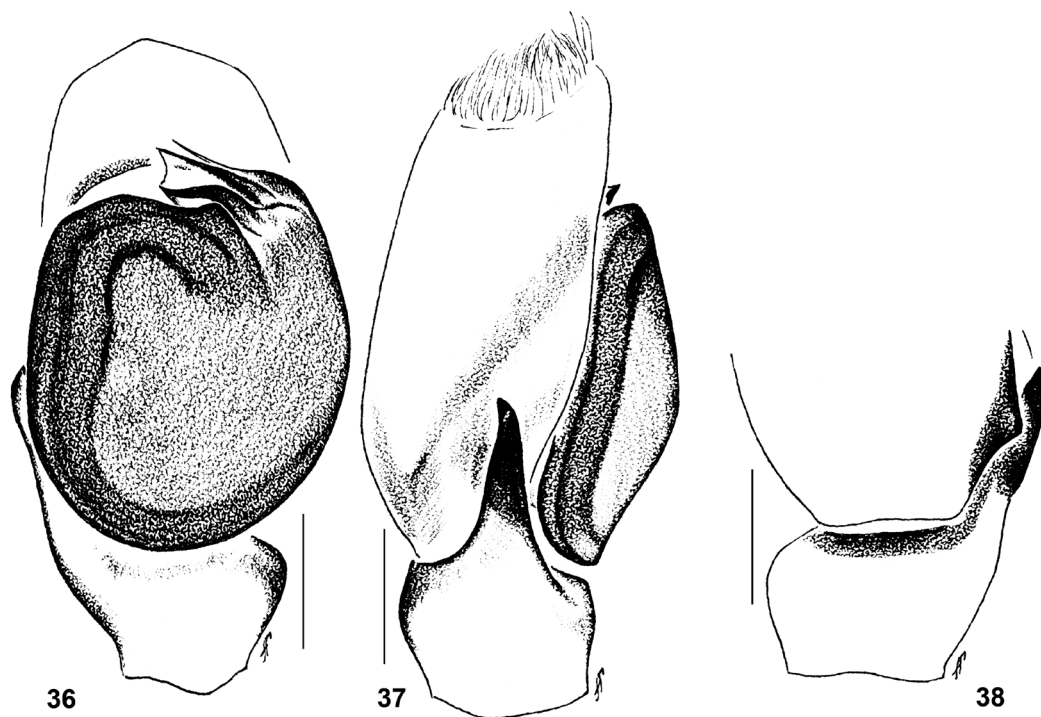
*Pellenes nigrociliatus*: Logunov *et al.*, 1999: 132, figs 74–76, 85–86, 172–179.

MATERIAL. ALGERIA, *Biskra Wilaya*: 1 ♂ (ISEA 001.9152), Biskra, 34.824196°N 5.770094°E, abandoned palm grove, 87 m



Figs 30–35. Males of *Neaetha membrosa* (Simon, 1868) (30–33) and *Pellenes nigrociliatus* (Simon, 1875) (34–35): 30, 34 — habitus, dorsal view; 31 — same, ventral view; 32 — same, latero-frontal view; 33, 35 — same, frontal view. Scale bars: 1.0 mm.

Рис. 30–35. Самцы *Neaetha membrosa* (Simon, 1868) (30–33) и *Pellenes nigrociliatus* (Simon, 1875) (34–35): 30, 34 — тело, сверху; 31 — то же, снизу; 32 — то же, спереди-сбоку; 33, 35 — то же, спереди. Масштаб: 1,0 мм.



Figs 36–38. *Pellenes nigrociliatus* (Simon, 1875): 36 — male palp, ventral view; 37 — same, retrolateral view; 38 — same, dorsal view. Scale bars: 0.1 mm.

Рис. 36–38. *Pellenes nigrociliatus* (Simon, 1875): 36 — палпа самца, вентрально; 37 — то же, ретролатерально; 38 — то же, дорсально. Масштаб: 0,1 мм.



a.s.l., pitfall traps, May 2014; 1 ♂ (ISEA 001.9153), same locality but 34.822567°N 5.774353°E, 85 m a.s.l., October 2014.

**DISTRIBUTION.** From the Canary Islands, Europe to Central Asia [Logunov *et al.*, 1999]. It is the new species record for Algeria.

**REMARKS.** Alioua & Bosmans [2024] recorded two *Pellenes* species from Algeria but did not illustrate them. They also suggested that *Pellenes* sp. 2 could be *P. nigrociliatus*. In body colouration and palp structure, the studied males resembled *P. nigrociliatus* (see Metzner [2025]) and have therefore been identified as such.

However, these males may belong to a different (new) species because they differ from true *P. nigrociliatus* by the following characters: the apical part of tegulum near embolus is of different shape, and the tip of the tibial apophysis bent dorsad (Fig. 37) *vs.* directed apicad in true *P. nigrociliatus* [Logunov *et al.*, 1999: fig. 75]; the cymbial ridge is poorly marked in Algerian males (Fig. 38) *vs.* well developed in true *P. nigrociliatus* [Logunov *et al.*, 1999: fig. 76]. Lucas [1846: sub. *Salticus* r.] described *Neaetha ravoisiaei* (Lucas, 1846) from Algeria, and this species may be either a senior synonym of *P. nigrociliatus*, or a separate species, which is the one recorded in this paper. Unfortunately, Lucas' original illustrations are not good enough to come to a univocal conclusion. The matter requires further attention when more specimens of both sexes have been collected from Algeria.

### *Thyene imperialis* (Rossi, 1846)

*Attus imperialis* Rossi, 1846: 12.

*Salticus morelleti* Lucas, 1846: 147, pl. 6, fig. 3.

*Thyene imperialis*: Logunov, 2015: 81; Boucherit *et al.*, 2020: 64; Boutmedjet *et al.*, 2022: 103; Benhacene *et al.*, 2023: 338; 2024: 490.

**MATERIAL.** ALGERIA, *Biskra Wilaya*: 1 ♀ (ISEA, 001.9151), c. 3.5 km SW of Biskra, I.T.D.A.S. station, 34.806444°N 5.654325°E, well-maintained palm grove, 114 m a.s.l., pitfall traps, May 2014.

**RECORDS IN ALGERIA.** Annaba, Biskra, El Atteuf; El Guerrara, El Kala.

**DISTRIBUTION.** The Mediterranean to China [Logunov, 2015].

## Discussion and conclusion

Recently, Benhacene *et al.* [2023] published a checklist of spiders of Algeria, in which for Salticidae they listed 93 species in 34 genera, of which 24 species appear to be endemic to Algeria. Yet, the latter list contains some inaccuracies. For instance, the records of two species, *Helafricanus edentulus* (Simon, 1871) [sub: *Heliophanus e.*] and *Icius subinermis* Simon, 1937, seem doubtful. In both cases, the authors of the checklist refer to 'Spiders of Europe' by Nentwig *et al.* [2025], who in turn reported on both species from Algeria, but 'without precise locality', referring to the work of Benhacene *et al.* [2023]. In fact, it was Logunov [2015: sub *Heliophanus e.*] who erroneously listed *H. edentulus* for Algeria, referring to the map 896 in Wesolowska [1986], whereas the North African localities shown on that map refer to Morocco and Libya (see Wesolowska [1986: 17–18]). Although the species is to be excluded from the current list of salticids of Algeria, there is a high probability that it may be found there in the future, as the species is known from Morocco [Benhalima, Bosmans, 2024] and Egypt [El-Hennawi, 2006]. *Icius subinermis* has been found in the northern Mediterranean,

eastwards to Iran. To date, it has not been recorded from North Africa, but its occurrence there is also possible. Simon [1901] described *Pseudicius maculatus* Simon, 1901 from Algeria and South Africa (KwaZulu-Natal). Recently, Dippenaar-Schoeman *et al.* [2023] provided another record of the species for the Northern Cape Province. It is likely that Simon's specimens of *P. maculatus* from Algeria and South Africa are not conspecific; this matter requires a special attention in the future. *Phlegra nitidiventris* Lucas, 1846 was mentioned Benhacene *et al.* [2023] only for Wilayas Skikda and Annaba, while actually it has been also recorded from Blida and Tissemilt Wilayas [Azarkina *et al.*, 2022]. More errors are not mentioned here and will be discussed in the upcoming paper of Kherbouche-Abrous *et al.* [in press].

Metzner [2025] reports 103 species in 33 genera for Algeria, of which 24 species appear to be endemics. One species, *Ballus rufipes* (Simon, 1868), recorded by Simon [1899; 1937] from Algeria was not listed by Metzner [2025]. Besides, we have failed to find published references for six species listed as occurring in Algeria in Metzner's catalogue: *Afraflacilla berlandi* Denis, 1955, *A. wadis* (Prószyński, 1989), *Heliophanus tribulosus* Simon, 1868, *Mogrus fulvovittatus* Simon, 1882, *Pellenes geniculatus* (Simon, 1868), and *P. hedjazensis* Prószyński, 1993. All these species should be excluded from the current list of Algerian jumping spiders. There are few more problems that are worth considering. For instance, Azarkina & Logunov [2006] erroneously stated that the type of *Aelurillus hirtipes* was described from Chad rather than Djanet, Algeria (=Oued de Djanet) [Denis, 1960], collected during the Mission Berliet Ténéré where the expedition crossed Ténéré Desert from Algerian Djanet to Fort Lamy in Chad [Capot-Rey, 1964]. The record of *Neaetha ravoisiaei* from South Africa by Strand [1907] is likely to be erroneous. Dippenaar-Schoeman *et al.* [2023] excluded this species from the list of South African Salticidae, and their decision is followed here. Prószyński [2003, 2017] only provided the image of *Plexippus clemens* (O. Pickard-Cambridge, 1872) based on the Algerian specimen without specifying the material studied. Yet, we have decided to keep the latter record in the list of Algerian Salticidae. Logunov, Marusik [2003] mentioned that type of *Pseudomogrus auriceps* [sub: *Yllenus a.*] was collected from de Sabha, Algeria, while actually Sabha is situated in Libya. Therefore, this species is to be excluded from the Algerian fauna. Based on the aforementioned corrections, the Algerian list of Salticidae currently accounts for 107 species in 34 genera (Suppl. Table 1). The most species-rich genera are *Euophrys* C.L. Koch, 1834 and *Heliophanus* C.L. Koch, 1833, with 10 and nine species recorded respectively.

Most of the Algerian territory lies in the southern part of the Palaearctic Region and border with the Afrotropical Region (*sensu* Dippenaar-Schoeman, Jocqué [1997]). The coastal belt, which includes the Atlas Mountains, belongs to the Mediterranean and shares many species with southern Europe and the Near East [Metzner, 2025; WSC, 2025]. This part of Algeria seems to be best studied. Yet, the Saharan part of Algeria is less studied, with only

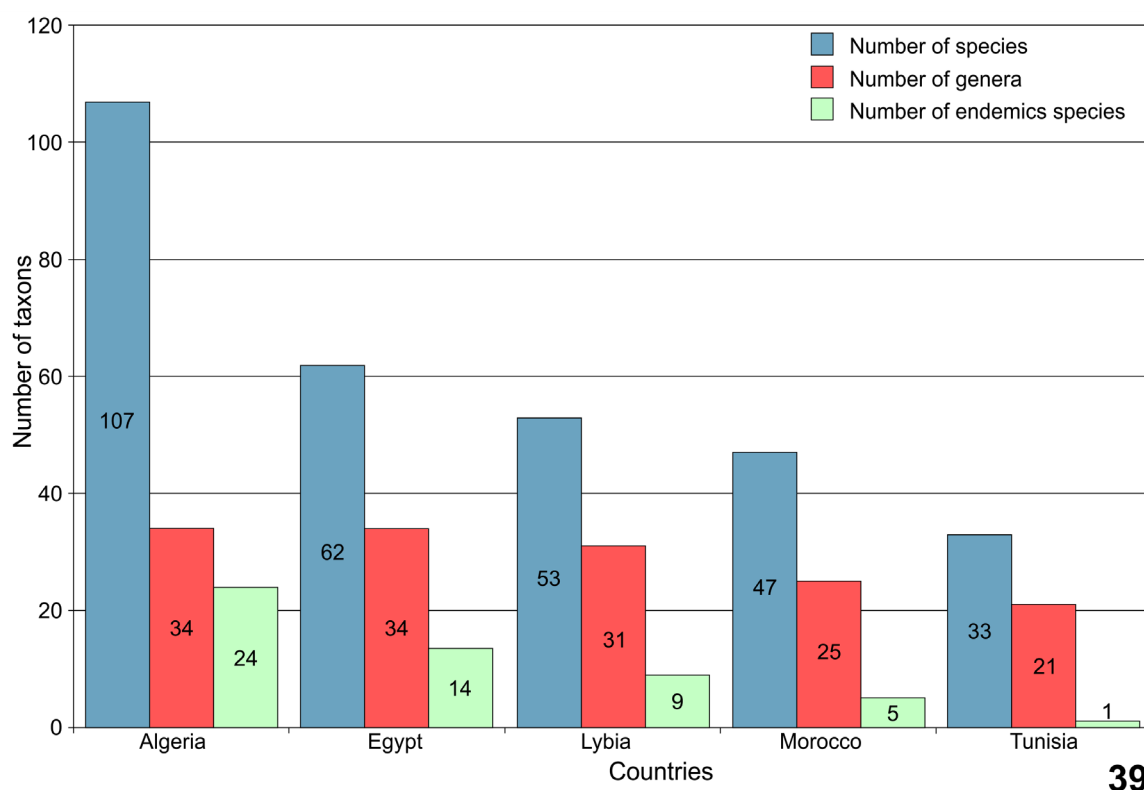


Fig. 39. Distribution diagram of species, genera and endemic species of North Africa faunas.

Fig. 39. Диаграмма распределения видов, родов и эндемичных видов в фаунах стран Северной Африки.

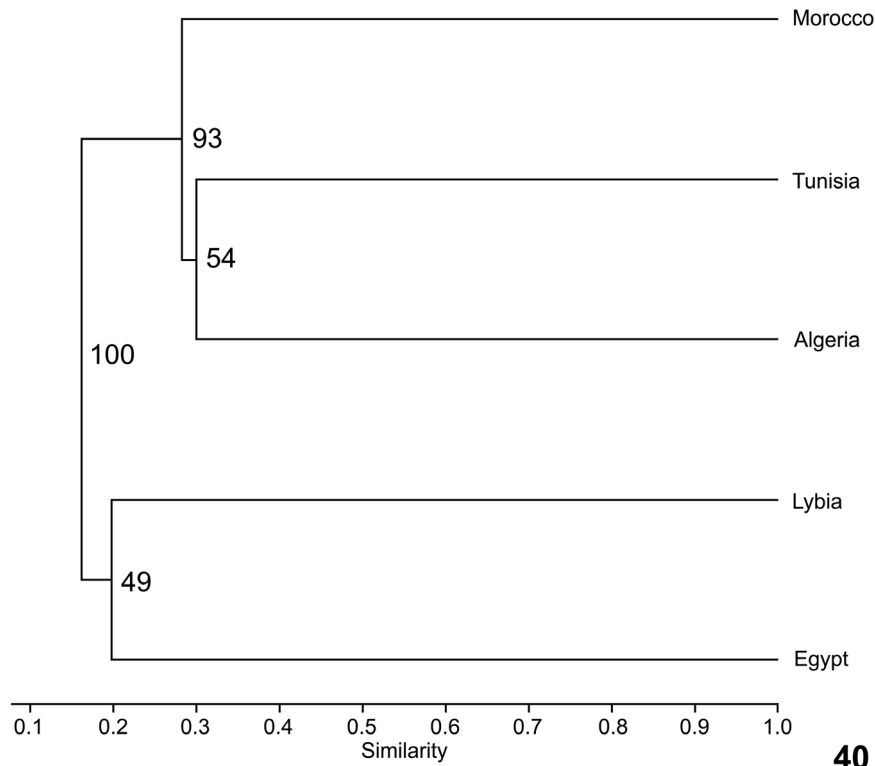
a few salticid species found there [Denis, 1960; Azarkina, Logunov, 2006; Logunov, 2015; Alioua *et al.*, 2016, 2022; Boutmedjet *et al.*, 2022; Alioua, Bosmans, 2024]. Although the majority of spider and insect species of this region are Mediterranean, this section of the Palaearctic Region also shares a strong similarity with the Afrotropics (see Kryzhanovsky [2002]).

Checklists of spiders from all North African countries have been published recently: Benhacene *et al.* [2023] for Algeria, El-Hennawi [2006] for Egypt, Elkrew *et al.* [2024] for Libya, Benhalima & Bosmans [2024] for Morocco, and Bosmans [2003] and Dimassi *et al.* [2016] for Tunisia, which makes it possible to carry out a comparative analysis of their salticid faunas for the first time. In the following analysis, five salticid species from the Tunisian list given by Dimassi *et al.* [2016] have been excluded, as their identifications are clearly mistaken: *Evarcha falcata* (Clerck, 1757), *Dendryphantes rudis* (Sundevall, 1833), *Marpissa muscosa* (Clerck, 1757), *M. radiata* (Grube, 1859) and *Phlegra fasciata* (Hahn, 1826). Yet, in their list of Moroccan spiders, Benhalima & Bosmans [2024] listed 48 salticid species in 26 genera in Table 2, but only 47 species in 25 genera in Suppl. Table 1.

The salticid spider fauna of Algeria, with an equal number of genera with Egypt (34), contains almost one and a half times as many species and endemics, 107 and 24 vs. 62 species and 14 endemics, respectively. The lowest number of species, genera and endemics was recorded from Tunisia: 33 species in 21 genera, with one endemic species. Libya and Morocco occupy an

intermediate position, with 53 species in 31 genera (nine endemics) and 47 species in 25 genera (five endemics), respectively (Fig. 39).

The similarity dendrogram (Fig. 40) shows that the jumping spider faunas of Algeria, Tunisia and Morocco form one large cluster, within which Algeria and Tunisia form another smaller cluster, whereas the faunas of Libya and Egypt form the second large cluster. The salticid fauna of Egypt has many elements of the Near East fauna. It is likely that some species known from the Near East may be found elsewhere westward in North Africa (e.g., Azarkina [2004]; Marusik [2019]; etc.), and *vice versa*. At the same time, it is obvious that the Afrotropical fauna also contributes to the fauna of Algeria. Among the 107 salticid species recorded from Algeria (Suppl. Table 1), seven species are known from the Afrotropics as well: viz., *Bianor albobimaculatus* Lucas, 1846 described from Algeria and later found throughout Africa [Logunov, 2001], *Menemerus animatus* O. Pickard-Cambridge, 1876 also known from Senegal [Simon, 1886] and Mali, Mauritania and Sudan [Wesołowska, 1999], *M. fagei* Berland et Millot, 1941 described from Côte d'Ivoire [Berland, Millot, 1941] and newly found in Algeria (present data); *M. semilimbatus* (Hahn, 1829) known from the Afrotropical part of Mauritania [Wesołowska, 1999], *Phlegra bresnieri* (Lucas, 1846) described from Algeria and found throughout Africa [Wesołowska, Russell-Smith, 2000, 2022; Logunov, Azarkina, 2006; Wesołowska, Tomaszewicz, 2008; Wesołowska, Cumming, 2011; Haddad, Wesołowska, 2011; Wesołowska, Haddad, 2014; Wiśniewski, Weso-



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Fig. 40. Dendrogram of North African countries, grouped by checklists of salticid species (Jaccard's similarity index, UPGMA). Numbers in nodes is the percentage of probabilities by bootstrapping.

Рис. 40. Дендрограмма стран Северной Африки, сгруппированная по количеству видов сальтицид в чек-листах (индекс сходства Жаккара, UPGMA). Числа в узлах — процент вероятностей по бутстреппингу.

łowska, 2024], *Stenaelurillus nigricaudus* Simon, 1885 also known from western Africa [Szűts, Scharff, 2005; Logunov, Azarkina, 2018], *Thyene imperialis* (Rossi, 1846) widespread in east Africa [Caporiacco, 1941; Dawidowicz, Wesółowska, 2016].

The jumping spiders of Algeria, especially its Saharan part, which is hard to reach and explore due of the harshness climate and difficulties related to the accessibility to many sites [Alioua, Bosmans, 2024], require more attention in the future. Additional targeted sampling in both the Palaearctic and Afrotropical sections of the country would undoubtedly increase the number of species recorded by two/threefold.

**Supplementary data.** The following materials are available online.

Supplementary Table 1. Checklist of the jumping spiders of Algeria.

#### Compliance with ethical standards

**Conflict of interests:** The authors declare that they have no conflict of interest.

**Ethical approval:** No ethical issues were raised during our research.

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