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Contribution to the knowledge of the spider fauna of Morocco (Arachnida: Araneae) – Third note. On sixteen new species, and noteworthy records.

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Abstract. We present the latest results of our studies on spiders in Morocco, based on material sampled between 2021 and 2025. A total of eight caves were surveyed in the Tazekka NP and the Beni Snassen massif. Several other habitats were also surveyed (e.g., coastal habitats, mixed forests, arid stony grasslands, shrubby slopes, lapiaz, etc.). In total, 40 species belonging to 10 families were recorded. Sixteen species are described as new to science: *Agelescape atlas* Lecigne sp. nov.; *Berlandina campestris* Lecigne & Moutaouakil sp. nov.; *Dysdera asaahil* Lecigne sp. nov.; *D. sidimaafa* Lecigne sp. nov.; *Gorbiscape dayetchiker* Lecigne sp. nov.; *G. hichamelguerrouji* Lecigne sp. nov.; *G. littoralis* Lecigne sp. nov.; *Nomisia tazekka* Lecigne sp. nov.; *Oecobius diafa* Lecigne & Lips sp. nov.; *O. tiznit* Lecigne sp. nov.; *Scotophaeus amicitiae* Lecigne, Moutaouakil & Lips sp. nov.; *Zelotes pax* Lecigne & Moutaouakil sp. nov.; *Z. rex* Lecigne sp. nov.; *Z. subcallidus* Lecigne sp. nov.; two of which may be considered troglophile, i.e., *Lycosoides jlida* Lecigne sp. nov. or troglobitic, i.e., *Lepthyphantes* s. lat. *ntafaghi* Lecigne sp. nov. The males of *Diplocephalus bosmansi* Lecigne, 2025 and *Lepthyphantes noeli* Barrientos & Brañas, 2024 are described for the first time. The findings of several other species are noteworthy (either endemic or recently described species, but also species with a poorly known taxonomy, ecology or distribution) and hence represent important records for specific knowledge, both at national and local scales, e.g., *Gorbiscape amazighus*, Zamani & Marusik 2025; *Liocranum atlasicum* Zamani & Marusik, 2025; *Mogrus sahariensis* Berland & Millot, 1941; *Pecado impudicus* (Denis, 1945) or *Zodarion maghrebense* Bosmans & Benhalima, 2020. It was found that *Tetragnatha nitens* (Audouin, 1826) (Lecigne *et al.* 2025: 146, fig. 90c–e) was misidentified and this record refers to *Tetragnatha bogotensis* Keyserling, 1865. The species is new to Morocco. *Zodarion camillae* Lecigne, 2025 was transferred to *Acanthinozodium* Denis, 1966 and a new combination was established: *A. camillae*

(Lecigne, 2025) comb. nov. *Zelotes scrutatus* (O. Pickard-Cambridge, 1872) syn. nov. is synonymised with *Zelotes erythrocephalus* (Lucas, 1846).

Keywords. *Gorbiscape*, High Atlas, key, new combination, new synonym, subterranean, taxonomy, Tazekka National Park.

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Introduction

Morocco recently acquired a reference list of species of spider (Benhalima & Bosmans 2024). The authors established that in 2024, the country counted 549 species belonging to 225 genera and 46 families, 27% of which were endemic. Knowledge of araneology in Morocco has advanced significantly in recent decades, particularly through numerous revisions that have mainly focused on some large families, e.g., Linyphiidae Blackwall, 1859; Theridiidae Sundevall, 1833; and Gnaphosidae Banks, 1892; and also on several genera such as *Haplodrassus* Chamberlin, 1922; *Lycosoides* Lucas, 1846; and *Zodarion* Walckenaer, 1826 (Benhalima & Bosmans 2024).

However, it is worth noting that the subterranean fauna is still understudied, given the importance of the Moroccan karst system and the number of known but not yet surveyed caves, as well as those still to be discovered (Lecigne *et al.* 2023).

To date, our previous research (Lecigne *et al.* 2020, 2023, 2025) has added 90 spider species to Morocco's fauna, including 32 species new to science.

The present paper, the third in a series on spiders of the Morocco, focuses on new species and new species records. It aims to contribute to this global effort, in particular by improving the knowledge of subterranean species of spider. We considered that it would be relevant and useful to combine in a single manuscript descriptions of numerous new species, new records, first descriptions of unknown sexes, taxonomic suggestions (new combination, synonymy), ecological and distributional notes, as well as an identification keys to the species of *Gorbiscape* from the Maghreb.

Material and methods

This work is the result of research covering the period May 2021–2025. A total of 8 caves were surveyed, as well as several other terrestrial ecosystems. Most of the sites are located in Fig. 1 and illustrated in Figs 2–3.

The main methods used were hand collection (especially under stone), beating, sieving, mowing and pitfall trapping (plastic containers of 9.6 cm height and 8.6 cm diameter filled with a saline solution as fixative (about 75 g/l) and some detergent to reduce surface tension). Several immature specimens were fed until maturity; this information is systematically specified. Position and elevation of localities were recorded by use of a smartphone's GPS; geographic coordinates are presented in the World Geodetic System (WGS) 84 system.

All specimens were preserved in 70% ethanol for identification purposes. Specimens were examined using a Nikon SMZ800N. Photographs of the specimens and the copulatory organs were obtained using either a Mycstack camera (16MP) mounted on a Leica M80 stereo microscope, a Motic camera (5MP) mounted on an Olympus SZX7 stereo microscope, a Mystack camera (20MP) mounted on a Nikon SMZ800N stereo microscope, a Motic camera (10MP) mounted on a Realux stereoscopic microscope or a Mycstack camera (20MP) mounted on a Motic Panthera stereoscopic microscope. Some photographs were also obtained using a Huawei P30 pro smartphone mounted on the ocular piece of a Nikon SMZ800N stereo microscope. Wherever possible, specimens were photographed in their habitat using a Nikon D80 camera with a 105 mm lens. Digital images of different focal planes

were stacked with Helicon Focus ver. 8. Illustrations of vulva were made after digesting soft tissues off in a 80 or 90% lactic acid aqueous solution.

For identification we relied on several publications (see references) and websites including Nentwig *et al.* (2026) and Oger (2026), the World Spider Catalog (2026).

Somatic measurements were made with a scaled eyepiece mounted into a stereo microscope and are expressed in mm. The length of the chelicerae was measured on the outer margin, up to the edge of the carapace; the length of the leg segments was measured in lateral view.

Type material will be deposited at the Senckenberg Museum, Frankfurt am Main (SMF). Unless otherwise specified, non-type material is conserved in the private collection of the first author (CSL).

The taxonomic status follows the World Spider Catalog (2026). The taxonomic references cited are either those pertaining to Morocco, those from the original description of the species, or those used to confirm the identity of the specimens examined. Unless otherwise indicated, the terminology of genital structures follows Saaristo & Tanasevitch (1996) in Micronetinae and is inspired by Arnedo *et al.* (2000) for species of *Dysdera*.

Abbreviations for morphological terms

List of abbreviations not mentioned in the figure captions:

AME	=	anterior median eyes
CL	=	carapace length
CW	=	carapace width
Fe	=	femur
Mt	=	metatarsus
Pa	=	patella
PME	=	posterior median eyes
Ti	=	tibia

Other abbreviations

CSL	=	Private collection of Sylvain Lecigne, Fressies, France
juv.	=	juvenile
loc. typ.	=	locus typicus (type locality)
NP	=	National Park
Prov.	=	province
Pref.	=	prefecture
sub.	=	subadult
WSC	=	World Spider Catalog

Institutional abbreviations

MNHN	=	Muséum national d'Histoire naturelle de Paris, Paris, France
SMF	=	Senckenberg Forschungsinstitut und Naturmuseum Frankfurt, Frankfurt am Main, Germany

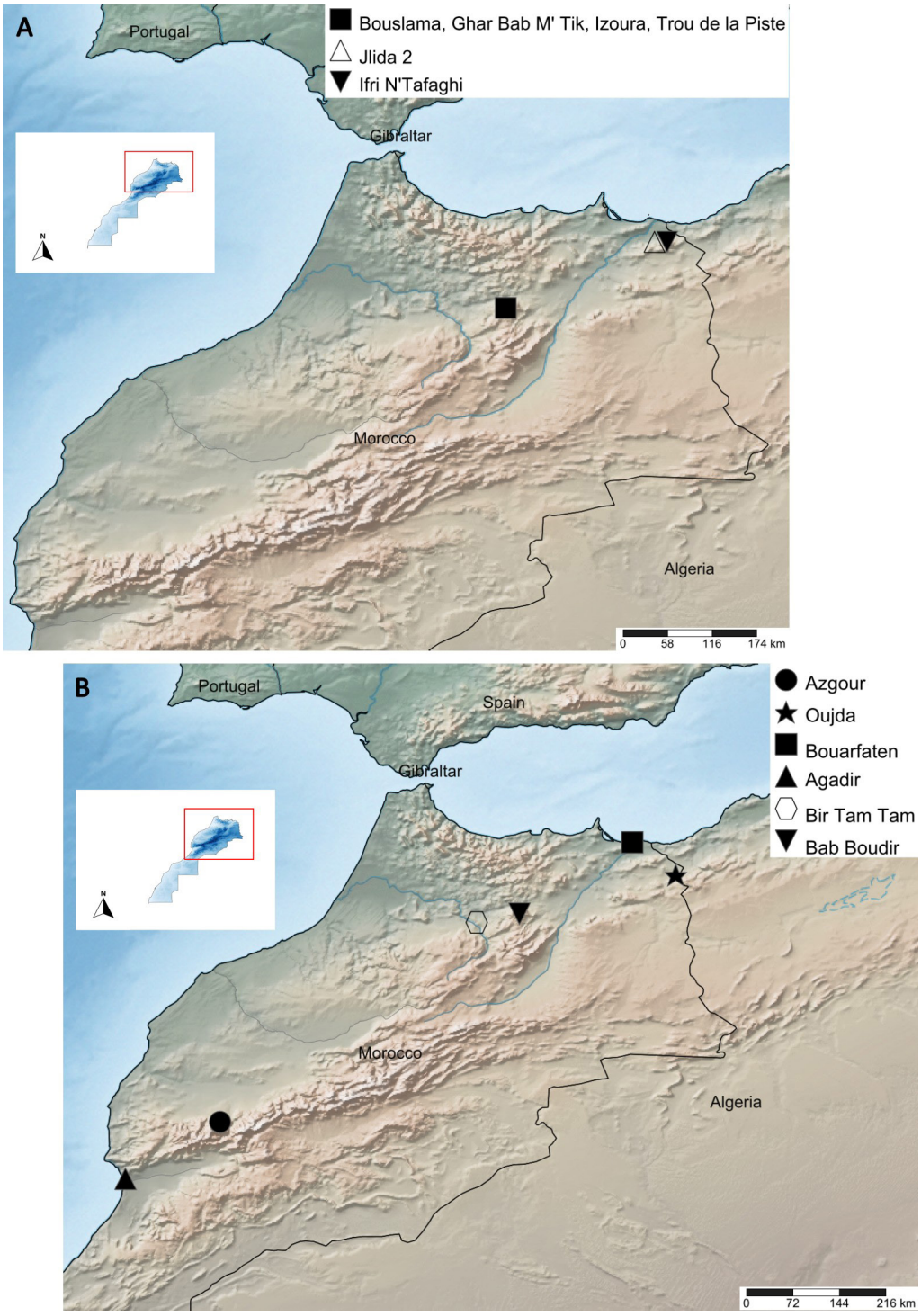


Fig. 1. Geographical location of the study area; main sectors surveyed. **A**. Caves. **B**. Other habitats. (Source: Shorthouse 2010).

Fig. 2. Main caves surveyed. **A**. Bouslama (Bab Boudir, Tazekka NP). **B**. Ghar Bab M' Tik (Bab Boudir, Tazekka NP). **C**. Ifri N'Tafaghi (Aïn Sfa, Beni Snassen). **D**. Izoura (Bab Boudir, Tazekka NP). **E**. Jlid 2 (Oujda, Beni Snassen). **F**. Kehf El Ghar (Douar Achrad). **G**. Trou de la Piste (Smià). Photos: A–E, G = S. Lecigne; F = B. Lips.

Fig. 3. Main habitats surveyed. **A**. Rocky shrubby slope in the High Atlas Mountains (Azgour). **B**. Mixed forest *Pinus halepensis – Eucalyptus* sp. (Oujda, Sidi Mâafa park). **C**. Stony area with sparse vegetation along the coastline (between Ayeddim and Bouarfaten). **D**. Coastal dune with wooded or pioneer vegetation (Agadir). **E**. Residual lapiaz (Bir Tam Tam). **F**. Dry grassland on rocky, wooded slopes (Bab Boudir). Photos: S. Lecigne.

Results

This third paper presents part of the results of the biospeleological expedition carried out in May 2025 in Tazekka NP. It also includes observations from previous expeditions that required sample collection and/or additional examination.

A total of 187 specimens were studied, representing 40 species (10 families) (see Table 1), 16 of which are new to science and 22 of which are currently considered endemic to Morocco. One species is new to Morocco.

Furthermore, species new to Morocco will be the subject of a fourth paper.

Taxonomy

Class Arachnida Cuvier, 1812
Order Araneae Clerck, 1757
Family Agelenidae C.L. Koch, 1837
Genus *Agelescape* Levy, 1996

Agelescape atlas Lecigne sp. nov.
urn:lsid:zoobank.org:act:D1481192-5409-4CF5-9556-E0EB66E5758D
Figs 1, 3–4, Table 1

Diagnosis

Males of *Agelescape atlas* Lecigne sp. nov. can be distinguished from congeners by the tibial apophysis in two parts (i.e., dorsal and ventral branches, Fig. 4E, H) vs "tibia with slightly elongated, … apophysis" in *A. livida* (Simon, 1875) (Levy 1996: 89, figs 14–15) and *A. affinis* (Kulczyński, 1911), and by the absence of a "strong apically ridged tegular process" sensu Levy (1996: 89) vs present in *A. livida* and *A. affinis*. The males of the new species also differ by the tongue-shaped patellar apophysis (vs pointed patellar apophysis in *A. livida* and *A. affinis*) (cf. Fig. 4E, H; PA vs Levy 1996: 89, figs 14–15).

Etymology

The name of the new species refers to the High Atlas Mountain where it was discovered.

Material examined

Holotype

MOROCCO – **Al-Haouz Prov.** • ♂; Azgour, Anoughal; 31.18426° N, 8.26919° W; 1653 m a.s.l.; 1 Feb. 2024; S. Lecigne leg.; rocky, shrubby slope, S exposed, under stone, by hand; CSL MOR_1241; SMF. Remarks: subadult specimen raised to maturity. Left pedipalp detached.

Other material examined

MOROCCO • 1 ♂; same data as for holotype.

Fig. 4 (on next page). *Agelescape atlas* Lecigne sp. nov., holotype, ♂ (CSL MOR_1241). **A–B**. Dorsal views. **C**. Ventral view. **D, H**. Palp, retrolateral views. **E**. Idem, tibial and patellar apophyses, lateral view. **F, I**. Palp, ventral views. **G**. Idem, ventro-prolateral view. Photos: A = S. Lecigne; B–G = P. Oger. Abbreviations: C = conductor; DTA = dorsal tibial apophysis; E = embolus; PA = patellar apophysis; RTA = retrolateral tibial apophysis; SD = sperm duct; TeA = tegular apophysis. Scale bars: B–C = 3.0 mm; D, F, H–I = 0.5 mm; E, G = 0.2 mm.

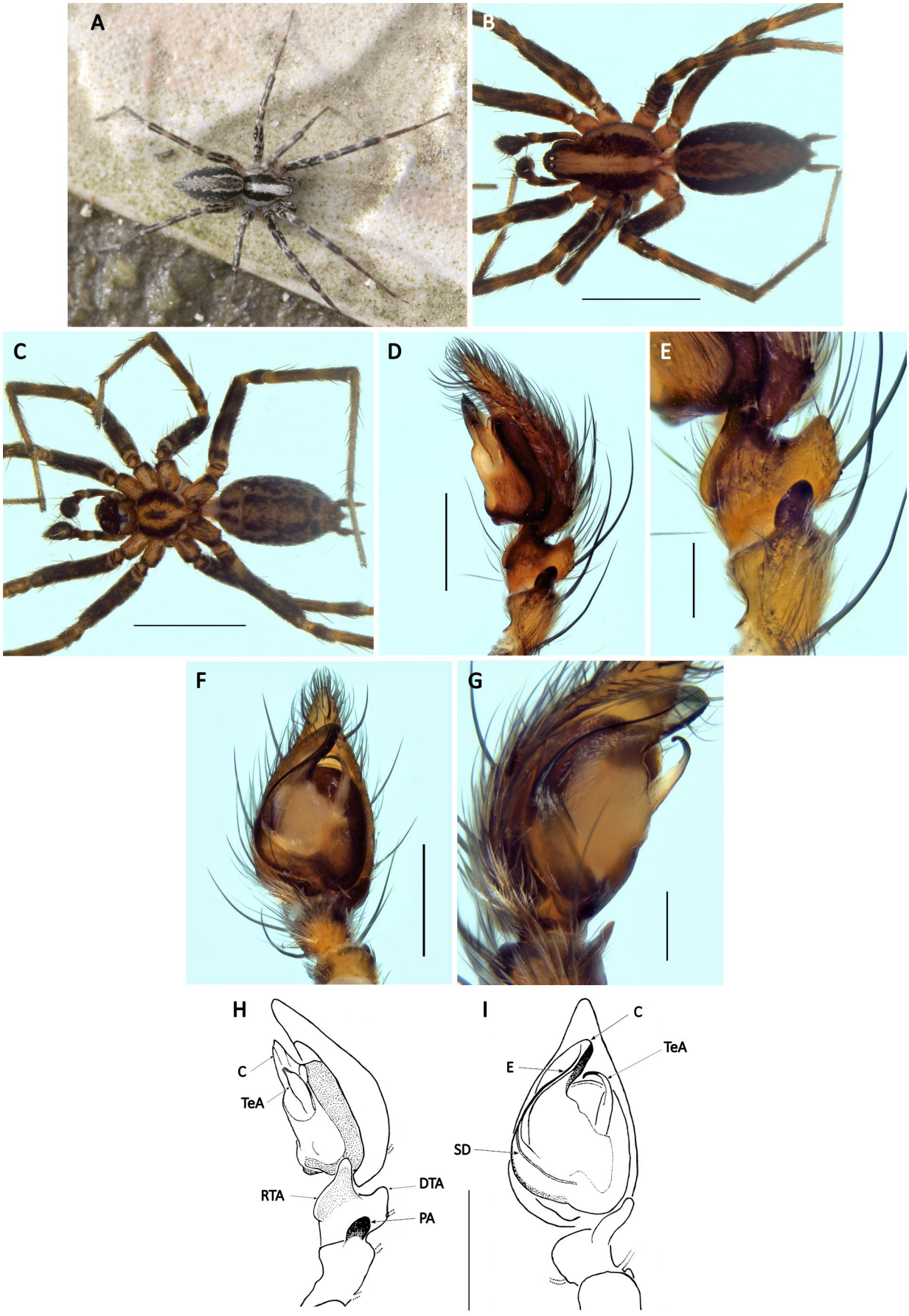

A
B
C
D
E
F
G
H
C
TeA
RTA
DTA
PA
I
C
TeA
E
SD

Table 1 (continued on the next page). List of species studied. The species are presented in the alphabetical order of family and genus. The name of the province / prefecture is also specified. The marked species are those which are new to Morocco (M) (absent in Benhalima & Bosmans 2024) and to science (S). The species endemic to Morocco, or presumed as such, are marked (*).

Family: species		Province or prefecture (region)
Agelenidae	–	–
Agelescape atlas Lecigne sp. nov.*	S	Al-Haouz (Marrakech-Safi)
Gorbiscape amazighus, Zamani & Marusik 2025*	–	Al-Haouz (Marrakech-Safi)
Gorbiscape dayetchiker Lecigne sp. nov.*	S	Taza (Fès-Meknès)
Gorbiscape hichamelguerrouji Lecigne sp. nov.*	S	Berkane (Oriental)
Gorbiscape littoralis Lecigne sp. nov.*	S	Agadir Ida-Outanane (Souss-Massa)
Lycosoides flavomaculata Lucas, 1846	–	Oujda-Angad (Oriental)
Lycosoides jlida Lecigne sp. nov.*	S	Oujda-Angad (Oriental)
Dysderidae	–	–
Dysdera asaahil Lecigne sp. nov.*	S	Nador (Oriental)
Dysdera sidimaafa Lecigne sp. nov.*	S	Oujda-Angad (Oriental)
Gnaphosidae	–	–
Berlandina campestris Lecigne & Moutaouakil sp. nov.*	S	Al-Haouz (Marrakech-Safi)
Echemus amicitiae Lecigne, Moutaouakil & Lips sp. nov.*	S	Séfrou, Taza (Fès-Meknès)
Haplodrassus nigroscriptus (Simon, 1909)*	–	Agadir Ida-Outanane (Souss-Massa)
Haplodrassus securifer Bosmans & Abrous, 2018	–	Taza (Fès-Meknès)
Marinarozelotes bardiae (Caporiacco, 1928)	–	Taza (Fès-Meknès)
Marinarozelotes holosericeus (Simon, 1878)	–	Taza (Fès-Meknès)
Nomisia tazekka Lecigne sp. nov.*	S	Taza (Fès-Meknès)
Scotophaeus dolanskyi Lissner, 2017		Berkane (Oriental)
Zelotes erythrocephalus (Lucas, 1846)	–	Séfrou, Taounate, Taza (Fès-Meknès); Berkane, Oujda-Angad, Taourirt (Oriental); Tiznit (Souss-Massa)
Zelotes pax Lecigne & Moutaouakil sp. nov.*	S	Taounate (Fès-Meknès)
Zelotes rex Lecigne sp. nov.*	S	Agadir Ida-Outanane (Souss-Massa)
Zelotes scrutatus (O. Pickard-Cambridge, 1872) = *Zelotes erythrocephalus* (Lucas, 1846) syn. nov.	–	–
Zelotes subcallidus Lecigne sp. nov.*	S	Berkane (Oriental); Agadir Ida-Outanane (Souss-Massa)
Linyphiidae	–	–
Canariphantes naili (Bosmans & Bouragba, 1992)	–	Taza (Fès-Meknès)
Diplocephalus bosmansi Lecigne, 2025*	–	Taza (Fès-Meknès)
Lepthyphantes noeli Barrientos & Brañas, 2024*	–	Oujda-Angad (Oriental)
Lepthyphantes ntafaghi Lecigne sp. nov.*	S	Berkane (Oriental)

Table 1 (continued). List of species studied. The species are presented in the alphabetical order of family and genus. The name of the province / prefecture is also specified. The marked species are those which are new to Morocco (M) (absent in Benhalima & Bosmans 2024) and to science (S). The species endemic to Morocco, or presumed as such, are marked (*).

Family: species		**Province or prefecture (region)**
Palliduphantes cadiziensis (Wunderlich, 1980)	–	Taza (Fès-Meknès)
Pecado impudicus (Denis, 1945)	–	Taza (Fès-Meknès)
Liocranidae	–	–
Liocranum atlasicum Zamani & Marusik, 2025*	–	Al-Haouz (Marrakech-Safi)
Lycosidae	–	–
Arctosa villica (Lucas, 1846)	–	Nador (Oriental)
Trabea cazorla Snazell, 1983	–	Chefchaouen (Tanger-Tétouan-Al Hoceïma)
Oecobiidae	–	–
Oecobius diafa Lecigne & Lips sp. nov.*	S	Séfrou (Fès-Meknès)
Oecobius tiznit Lecigne sp. nov.*	S	Tiznit (Souss-Massa)
Salticidae	–	–
Aelurillus hirtipes Denis, 1960	–	Jerada (Oriental); Agadir Ida-Outanane (Souss-Massa)
Heliophanus machaerodus Simon, 1909	–	Taza (Fès-Meknès)
Mogrus sahariensis Berland & Millot, 1941	–	Oujda-Angad (Oriental)
Salticus conjonctus (Simon, 1868)	–	Nador (Oriental)
Tetragnathidae	–	–
Tetragnatha bogotensis Keyserling, 1865	M	Azilal (Beni Mellal-Khénifra)
Zodariidae	–	–
Zodarion camillae Lecigne, 2025 = *Acanthinozodium camillae* (Lecigne, 2025)* comb. nov.	–	Sidi Bennour (Casablanca-Settat)
Zodarion maghrebense Bosmans & Benhalima, 2020	–	Taza (Fès-Meknès)
Zodarion valentii Bosmans, Loverre & Addante, 2019	–	Berkane (Oriental) ; Taza (Fès-Meknès)

Description

Male holotype (Fig. 4)

Measurements. Total length 6.65; carapace 2.95 long, 2.01 wide.

Colour on live specimen (Fig. 4A). Carapace dorsally with 3 light (one median and two marginal) and 2 dark submarginal, longitudinal stripes. Legs dark brown, dotted by paler markings. Abdomen with median brown dorsal stripe, paler in rear half, anterior half flanked on each side by lighter line; pair of lateral longitudinal dark stripes, flanks mottled with small light spots.

Colour in ethanol (Fig. 4B–C). Chelicerae brown. Sternum yellowish; brown median mark stretched longitudinally; margins covered with thick dark band not reaching rear tip. Legs: coxae yellow, ventrally blackish at the base and apex; femora, patellae and tibiae brown with large, darker marks; all metatarsi and tarsi pale brown. Abdomen ventrally pale yellow, framed by a vague blackish pattern.

Carapace. Chelicerae: fang groove with 3 teeth on outer margin, middle one the largest, distal one smallest; 2 equal conical teeth on inner margin.

Palp (Fig. 4D–I). Patella with rounded, tongue-shaped apophysis (Fig. 4H, PA). Tibia with 2 apophyses: retrolateral apophysis broad at base, apical third elongated and more sclerotized, flat and rounded (Fig. 4H, RTA); dorsal apophysis, broad, blunt, weakly sclerotized outgrowth (Fig. 4H, DTA). Tegular apophysis slender, first part straight and membranous, second part in the form of a fine hook, sclerotized and curved inwards (Fig. 4H, TeA). Conductor, membranous projection of tegulum with folded gutter-shaped margins, receiving most of thread-like embolus (Fig. 4H, see C, E). Embolus long, filamentous from 9 to 12 o'clock position.

Female

Unknown.

Variation

Measurements. Male (n = 2): total length 4.70–6.65, carapace 2.28–2.95 long, 1.53–2.01 wide, CL/CW 1.47–1.49.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality, from a single station, in the vicinity of Amizmiz, on a rocky, shrubby slope in the High Atlas Mountains.

Remarks

The specimens from Azgour feature most of the male genital characters defined by Zamani & Marusik (2020: 371), i.e., embolus long and filamentous; conductor long and straight. However, the number of teeth on the margins of the chelicerae is consistent with Levy's diagnosis (1996: 88), i.e., 3–4 promarginal and 2–4 retromarginal teeth. Regarding the genera *Agelena* and *Agelescape*, Zamani & Marusik (2020) usefully state that "both of these genera are poorly delimited and encompass species that are quite different from their generotypes". We therefore assign these specimens to the genus *Agelescape*.

The genus *Persiscape* Zamani & Marusik, 2020 was not retained because males have in particular a complex embolus with a thumb-like base, a short embolus proper and a conductor twisted around its axis. Similarly, the genus *Gorbiscape* Zamani & Marusik, 2020 was not considered because males have a thick and nearly straight embolus, and a twisted conductor.

Genus *Gorbiscape* Zamani & Marusik, 2020

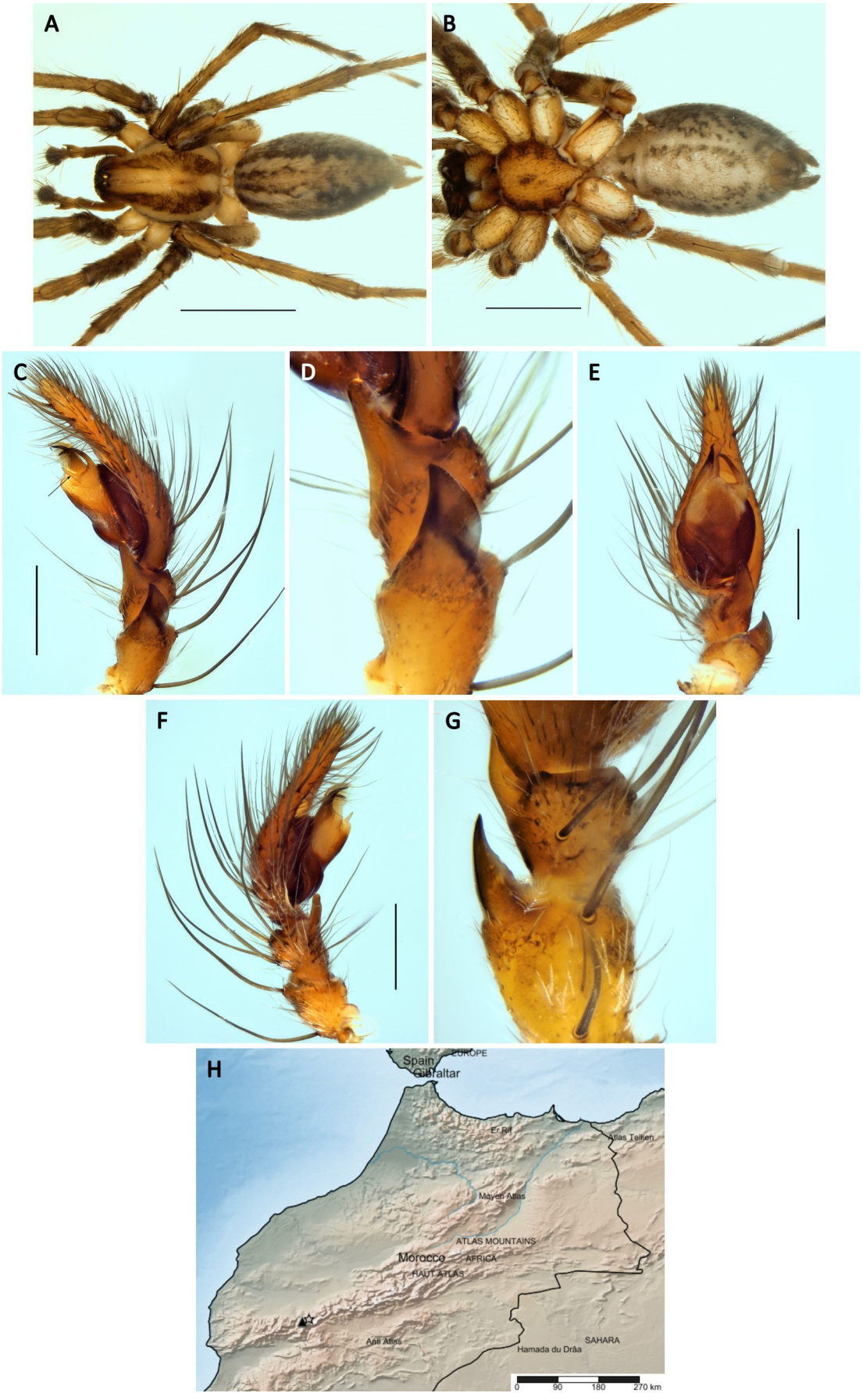
Gorbiscape amazighus Zamani & Marusik, 2025
Fig. 5, Table 1

Gorbiscape amazighus Zamani & Marusik, 2025: 322, figs 1a–b, 3a–e, 4a–c, 5a–c (d♂♀).

Material examined

MOROCCO – **Al-Haouz Prov.** • 1 ♂; Ouirgane, Tizi Oussem, Toubkal NP; 31.11803° N, 7.97586° W; 1774 m a.s.l.; 20 Jun. 2021; S. Moutaouakil leg.; by hand; CSL MOR_0602.

Fig. 5 (on next page). *Gorbiscape amazighus* Zamani & Marusik, 2025, ♂ (CSL MOR_0602). **A**. Dorsal view. **B**. Ventral view. **C**. Palp, retrolateral view (black arrow: long basal outgrowth of the tegular apophysis). **D**. Idem, tibial and patellar apophyses, lateral view. **E**. Palp, ventral view. **F**. Idem, prolateral view. **G**. Idem, patellar apophysis, dorsal view. **H**. Distribution map: star = loc. typ.; triangle = new record (source: Shorthouse 2010). Photos: P. Oger. Scale bars: A = 3.0 mm; B = 2 mm; C, E–F = 0.5 mm.


A
B
C
D
E
F
G
H
Spain
Gibraltar
EUROPE
Er Rif
Atlas Tellien
Moyen Atlas
ATLAS MOUNTAINS
Morocco
AFRICA
HAUT ATLAS
Anti Atlas
SAHARA
Hamada du Drâa
0
90
180
270 km

Distribution and habitat

The species was recently described based on a specimen captured in the High Atlas Mountains (Oukaïmeden) in a semi-arid rocky area with sparse vegetation (Zamani & Marusik 2025). The new record concerns an individual found in a nearby mountain range about 20 km from the type locality (Fig. 5H).

Gorbiscape dayetchiker Lecigne sp. nov.
urn:lsid:zoobank.org:act:2B93AF7A-736D-4BCF-A011-564A93401454
Figs 1, 3, 6, Table 1

Diagnosis

Males of *Gorbiscape dayetchiker* Lecigne sp. nov. can be distinguished from congeners by the shape of both the conductor (thick and broad) and the embolus, S-shaped, with pointed tip directed anteriorly (Fig. 6E, H, see E). The palpal patellar apophysis, short and sharply pointed (Fig. 6G, PA) is also different from all other species.

Etymology

The species epithet is a noun in apposition after the Dayet Chiker lodge where the team spent part of their stay during their last biospeleology expedition in Tazekka NP, not far from where it was discovered.

Material examined

Holotype

MOROCCO – **Taza Prov.** • ♂; Bab Boudir, Tazekka NP; 34.08921° N, 4.10500° W; 1270 m a.s.l.; 20 May 2025; S. Lecigne leg.; short grassland, under stone, by hand; CSL MOR_2211; SMF. Remarks: left pedipalp detached.

Description

Male holotype (Fig. 6)

Measurements. Total length 5.80; carapace 2.88 long, 2.03 wide.

Colour in ethanol (Fig. 6A–B). Carapace dorsally with 1 light median longitudinal stripe extending to AME and narrower clear marginal band on each side only on rear half; small subcircular clear area between the AME extending onto clypeus; rest of carapace blackish. Chelicerae yellowish, covered with black veil; lighter distally. Sternum yellowish covered with black veil, broad, lighter-coloured median band. Legs: femora and patella blackish, dorsally with vague lighter areas; tibiae same, but with lighter ring at base; metatarsi and tarsi yellowish. Abdomen with orange dorsal median stripe with undulating edges; sides black; ventrally, cream-coloured median stripe framed on sides.

Carapace. Chelicerae: fang groove with 3 teeth on outer margin, middle one largest; 2 subequal teeth on inner margin.

Palp (Fig. 6C–F). Patella with short (about ⅓ the length of the patella), sharply pointed apophysis (Fig. 6G, PA). Tibial apophysis in ventro-retrolateral position, barely sclerotized, not pointed, about 0.85 times palpal tibia length (Fig. 6H, RTA). Cymbium about 1.8 times as long as wide. Bulb about 1.5 times as long as wide. Tegular apophysis: basal part fairly broad (retrolateral view), subapical part abruptly narrowed; apical hook short, directed ventrally (Fig. 6G, TeA). Base of conductor broad and thick; retrolateral margin directed outwards (Fig. 6H, C); distal part lamellar and translucent, inconspicuous, directed anteriorly (Fig. 6H, dotted arrow). Embolus broad, gradually tapering, originating at about 10 o'clock, S-shaped, i.e., first curved outward then pointing forward; apical part heavily sclerotized, tip reaching anterior edge of conductor (Fig. 6H, see E).

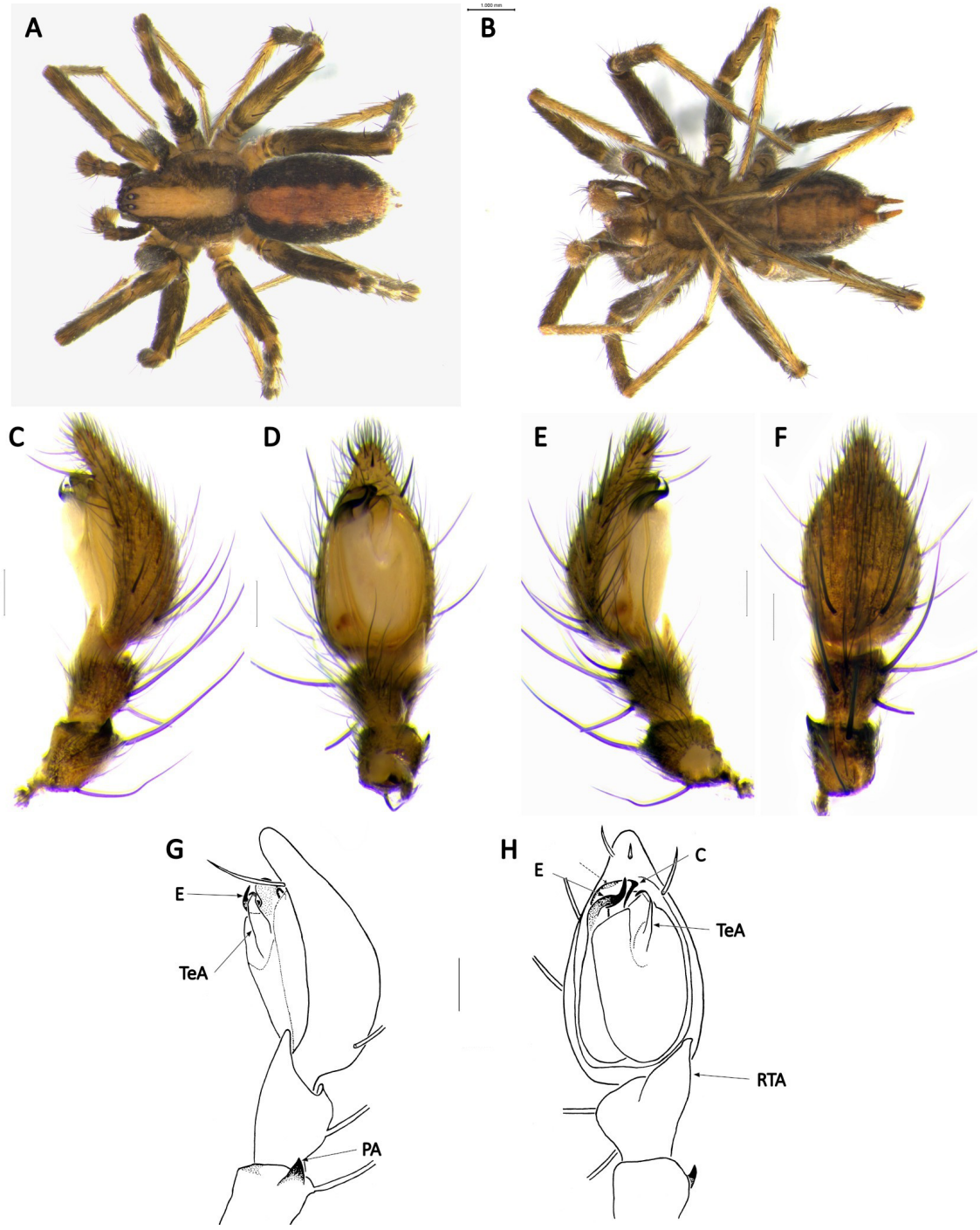


Fig. 6. *Gorbiscape dayetchiker* Lecigne sp. nov., holotype, ♂ (CSL MOR_2211). **A**. Dorsal view. **B**. Ventral view. **C, G**. Palp, retrolateral views. **D**. Idem, ventral view. **E**. Idem, prolateral view. **F**. Idem, dorsal view. **H**. Idem, ventral view (dotted arrow: lamellar distal part of the conductor). Photos: S. Lecigne. Abbreviations: C = conductor; E = embolus; PA = patellar apophysis; RTA = palpal retrolateral tibial apophysis; TeA = tegular apophysis. Scale bars: B = 1.0 mm; C–H = 0.2 mm.

Female

Unknown.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality, from a single station, in sparse short grass, under stone, near the edge of a *Quercus ilex* forest of the Tazekka NP.

Remarks

The male specimen from Bab Boudir features several of the genital characters of the genus *Gorbiscape* defined by Zamani & Marusik (2020: 378), i.e., pedipalp with acute patellar apophysis and elongated retrolateral tibial apophysis, tegular apophysis strongly bent (90°) in ventral view; chelicera armed with 3 teeth on promargin and 2 teeth on retromargin; conductor long and straight; abdomen with distinct median band and darker sides. However, the length-to-width ratio of the tegulum exceeds 1.5 and the embolus is not nearly straight. As with the genera *Agelena* Walckenaer, 1805 and *Agelescape* Zamani & Marusik, 2020, it is likely that *Gorbiscape* encompasses species that are quite different from its generotype. We therefore provisionally assign the specimen to the genus *Gorbiscape*.

The genus *Agelescape* was not retained because males have in particular a long and filamentous embolus; short and curved in the new species. Similarly, the genus *Agelena* was not considered because males have a prolateral bulge on the bulb, which is lacking in the male of the new species.

Gorbiscape hichamelguerrouji Lecigne sp. nov.
urn:lsid:zoobank.org:act:AC3B9FA0-B0C9-42AE-945C-DC57DAB360D5
Figs 1, 7–8, Table 1

Diagnosis

The male of *Gorbiscape hichamelguerrouji* Lecigne sp. nov. resembles that of *G. amazighus* but the tegular apophysis of the new species does not bear any basal outgrowth and only its tip is curved ventrally (vs tegular apophysis evenly curved ventrally with long, digitiform basal outgrowth in *G. amazighus*) (cf. Fig. 7G, TeA vs Fig. 5C and Zamani & Marusik 2025: 325, fig. 3C, Ob). Furthermore, the dorsal margin of the patellar apophysis of *G. hichamelguerrouji* sp. nov. is concave at the base (vs evenly convex in *G. amazighus*) (cf. Fig. 7G, PA vs Fig. 5D). The female of the new species can be distinguished by their subcircular spermathecae widely spaced, i.e., 1.25 times their horizontal diameter (Fig. 8H, Sp).

Etymology

In naming this species, the first author wished to pay special tribute to one of the greatest athletic champions of all time, for his abnegation, for the image he has given to his sport, and for the generations of young athletes he has and will continue to inspire. To Mr. Hicham El Guerrouj.

Material examined

Holotype

MOROCCO – **Berkane Prov.** • ♂; Berkane, Ifrane Yaâcoube, Takerbouste, Jbel Tamajjout, Zegzel road; 34.86460° N, 2.36360° W; 430 m a.s.l.; 23 May 2025; S. Lecigne leg.; arid, stony grassland, under stone, by hand; CSL MOR_2286; SMF. Remarks: left pedipalp detached.

Paratype

MOROCCO – **Berkane Prov.** • 1 ♀; same data as for holotype; SMF. Remarks: immature specimen raised to maturity. Epigyne detached.

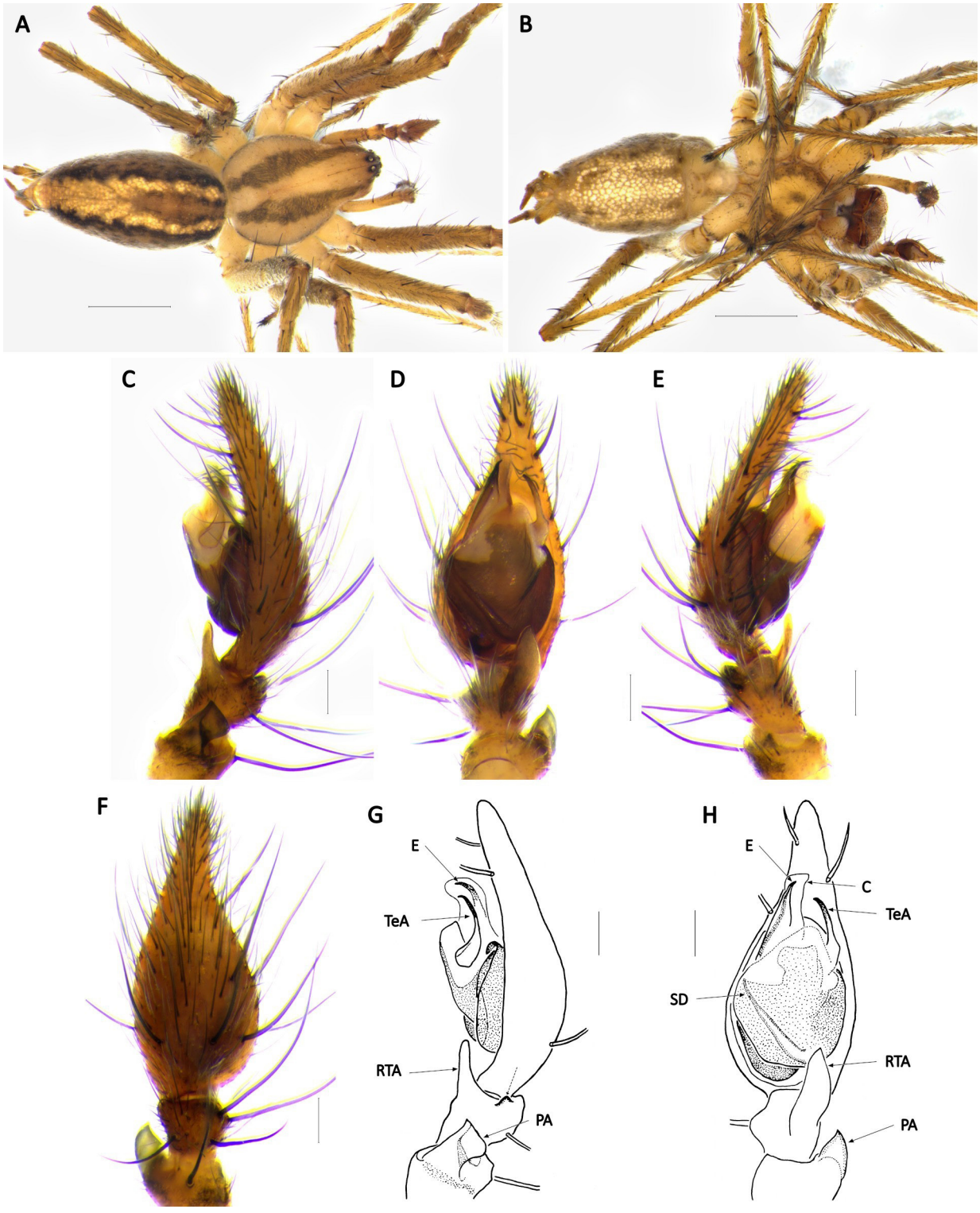


Fig. 7. *Gorbiscape hichamelguerrouji* Lecigne sp. nov., holotype, ♂ (CSL MOR_2286). **A**. Dorsal view. **B**. Ventral view. **C**. Palp, retrolateral view. **D, H**. Idem, ventral views. **E**. Idem, prolateral view. **F**. Idem, dorsal view. **G**. Idem, retrolateral view (dotted arrow: small, blunt dorso-retrolateral tibial tubercle). Photos: S. Lecigne. Abbreviations: C = conductor; E = embolus; PA = patellar apophysis; RTA = palpal retrolateral tibial apophysis; SD = sperm duct; TeA = tegular apophysis. Scale bars: A–B = 2.0 mm; C–H = 0.2 mm.

Other material examined

MOROCCO – **Al Haouz Prov.** • 1 ♀; Oukaïmeden; 31.22789° N, 7.82222° W; 2330 m a.s.l.; 31 Mar. 2023; S. Lecigne and S. Moutaouakil leg.; wooded mountain slope, under stone, by hand; CSL MOR_0809. Remarks: epigyne detached. – **Berkane Prov.** • 1 ♂; same data as for holotype.

Description

Male holotype (Fig. 7)

Measurements. Total length 9.15; carapace 3.75 long, 2.65 wide; palpal femora 1.45 long; cymbium 1.33 long.

Colour in ethanol (Fig. 7A–B). Carapace dorsally with 3 light (one median, widened at both ends, and two marginal) and 2 dark submarginal longitudinal stripes, widened in median section. Chelicerae brown. Sternum yellowish with brown central mark; margins with broad dark band. Legs: coxae and trochanters pale yellow; femora, patellae and tibiae pale brown, metatarsi and tarsi paler; femora ventrally with vague darker marks. Abdomen: clear dorsal median stripe with small white guanine spots, its margins underlined with black undulated line; cardiac mark reddish-brown; sides pale brown with elongated dark spots; ventrally, clear median stripe with small white guanine dots, framed on each side by vague darker dotted line.

Carapace. Chelicerae: fang groove with 3 teeth on outer margin and 2 subequal teeth on inner margin (Fig. 7B).

Palp (Fig. 7C–H). Femora long, about 1.1 times as long as cymbium. Patella with large apophysis, thin and translucent, greyish, dorsally inclined, dorsal margin concave (Fig. 7G, PA). Tibia with finger-like ventro-retrolateral apophysis (lateral view) and small, blunt dorso-retrolateral tubercle (Fig. 7G, dotted arrow). Cymbium 1.9 times as long as wide; bulb about 1.4 times as long as wide, barely inclined outwards. Tegular apophysis: basal part fairly broad; upper part narrow, slightly inclined inwards (Fig. 7H, TeA), tip directed ventrally (Fig. 7G, TeA). Conductor: wide, almost flat, translucent lamella, longer than embolus, tip rounded (Fig. 7H, see C). Embolus broad, gradually tapering; apical part heavily sclerotized, curved and pointing ventrally (Fig. 7G, see E).

Female paratype (Fig. 8; as in male except as noted)

Measurements. Total length 10.40; carapace 4.75 long, 3.25 wide.

Colour on live specimen (Fig. 8A–B). The three dorsal light bands on the carapace whitish in appearance; as well as ventral side (Fig. 8B).

Colour in ethanol (Fig. 8C). As in male.

Epigyne/vulva (Fig. 8D–H). Scape distinct, subtriangular (Fig. 8D, Sc). Epigynal plate moderately sclerotized, thick; posterior margin swollen, forming a prominent transverse bulge (Fig. 8D). Copulatory openings: small pits located laterally, directed ventrally (Fig. 8D, CO). Spermathecae subcircular, separated by 1.25 times their horizontal diameter (Fig. 8H, Sp), surmounted by short membranous copulatory duct (Fig. 8H, CD).

Fig. 8 (on next page). *Gorbiscape hichamelguerrouji* Lecigne sp. nov. **A–C, E–F, H**. Paratype ♀ (CSL MOR_2286). **D, G**. ♀ (CSL MOR_0809). **A**. Dorsal view. **B–C**. Ventral views. **D**. Epigyne. **E**. Vulva, ventral view. **F**. Idem, postero-ventral view. **G**. Idem, posterior view. **H**. Idem, dorsal view. Photos: A–F, H = S. Lecigne; G = P. Oger. Abbreviations: CD = copulatory duct; CO = copulatory opening; FD = fertilization duct; Sc = scape; Sp = spermatheca. Scale bars: C = 2.0 mm; E–H = 0.2 mm.


A
B
C
E
F
H
CD
Sp
D
Sc
CO
G
FD

Variation

Measurements. Male (n = 2): total length 9.15–9.40; carapace 3.75–3.95 long, 2.65–2.70 wide, CL/CW 1.42–1.46. Female (n = 2): total length 10.15–10.40; carapace 3.9–4.75 long, 2.60–3.25 wide, CL/CW 1.46–1.50.

Distribution and habitat

Endemic to Morocco? To date, known from two localities in mountainous environment: the type locality near Jbel Tamajjout (Beni-Snassen) in the Rif Mountains, and Oukaïmeden in the High Atlas. It inhabits shrubby slope, under stone.

Gorbiscape littoralis Lecigne sp. nov.
urn:lsid:zoobank.org:act:1980E3DC-29D2-48D1-A4AE-969A6650D444
Figs 1, 3, 9, Table 1

Diagnosis

Males of *Gorbiscape littoralis* Lecigne sp. nov. can be distinguished from congeners by the patellar apophysis in two parts (i.e., retrolateral and dorsal, Fig. 9G, RPA, DPA), and both by the absence of an outgrowth at the base of the tegular apophysis and by the shape of the palpal retrolateral tibial apophysis (Fig. 9G, RTA).

Etymology

The name of the new species refers to the habitat in which it was discovered, in a coastal area near the mouth of the Oued Souss River.

Material examined

Holotype

MOROCCO – **Agadir Ida-Outanane Pref.** • ♂; Agadir; 30.38504° N, 9.59418° W; 22 m a.s.l.; 16 to 22 Mar. 2025; S. Lecigne leg.; behind the beach, in a dune grassland and low thorny bushes, pitfall; CSL MOR_1801; SMF. Remarks: left pedipalp and right leg III detached.

Description

Male holotype (Fig. 9)

Measurements. Total length 6.34; carapace 3.00 long, 2.06 wide.

Colour in ethanol (Fig. 9A). Carapace dorsally with 3 light (one median and two marginal) and 2 dark submarginal, longitudinal stripes; edges of thoracic part darkened. Chelicerae brown. Sternum yellowish with brown median mark; margins covered with very broad dark band not reaching rear tip. Legs pale brown, femora, patellae and tibiae with ring-shaped dark marks. Abdomen with dorsal median stripe formed by succession of whitish spots chevron-shaped at rear, edged on each side by black wavy line punctuated with white haired spots; cardiac mark reddish-brown; flanks pale brown with dark brown dotted spots; ventrally, cream-coloured median stripe framed on sides and rear by thick black line, and on each side yellowish lateral stripe dotted with small white dots.

Carapace. Chelicerae: fang groove with 3 triangular teeth on outer margin, middle one largest, proximal one smallest; 2 subequal teeth on inner margin.

Palp (Fig. 9B–H). Patella with 2 apophyses: retrolateral apophysis, thick, widely rounded protuberance (Fig. 9G, RPA); dorsal apophysis shorter than former, broad, sclerotized and pointed (Fig. 9G, DPA). Tibial apophysis slightly sclerotized, broad at the base, with rounded anterior edge, apical part elongated, shaped like sword tip (Fig. 9G, RTA). Tegular apophysis: basal part broad, apical hook fairly short, heavily sclerotized, tip broadened and flattened, strongly bent towards the 8 o'clock position (Fig. 9G, TeA).

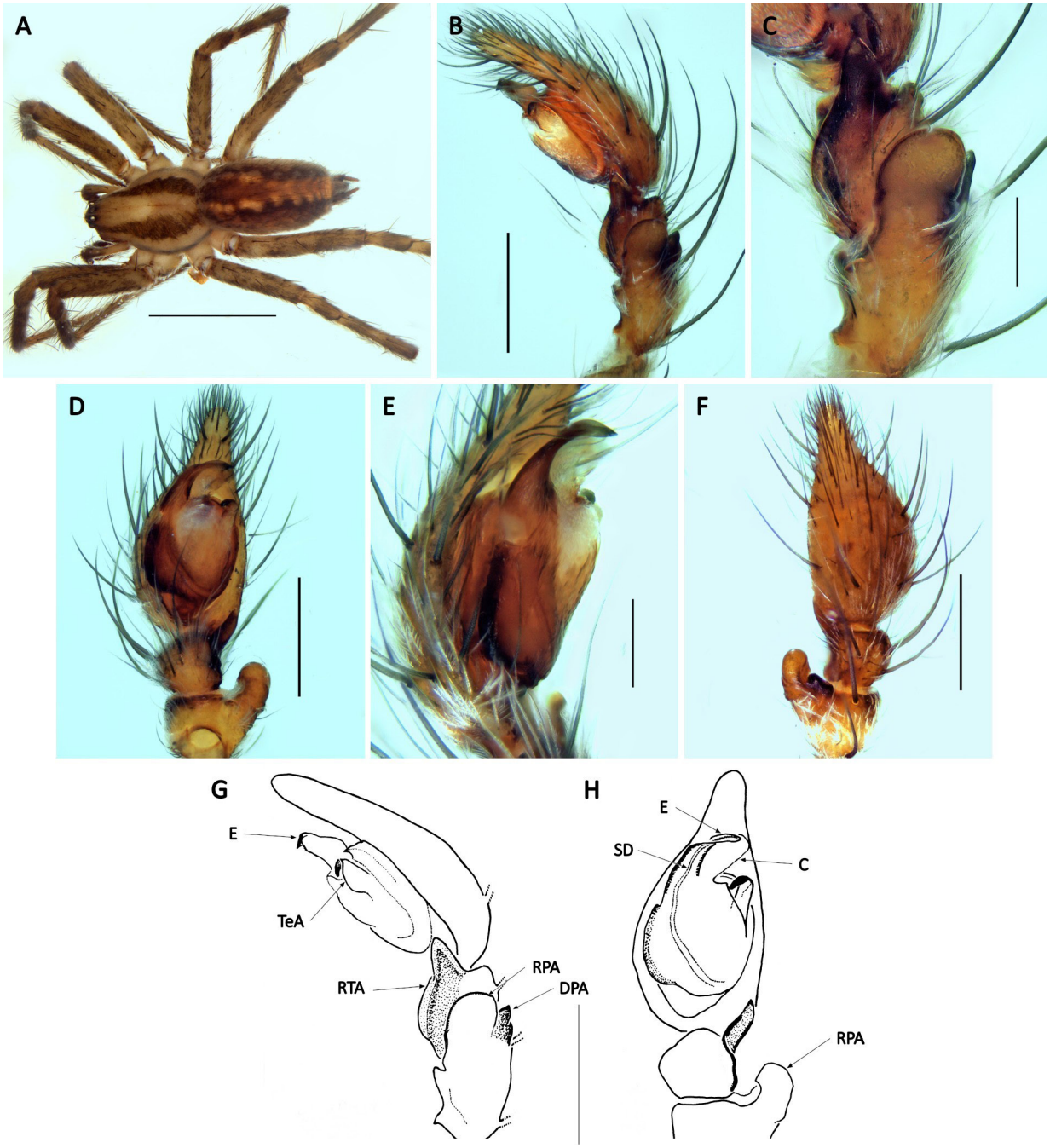


Fig. 9. *Gorbiscape littoralis* Lecigne sp. nov., holotype, ♂ (CSL MOR_1801). **A**. Dorsal view. **B, G**. Palp, retrolateral views. **C**. Idem, tibial and patellar apophyses, lateral view. **D, H**. Palp, ventral views. **E**. Idem, ventro-prolateral view. **F**. Idem, dorsal view. Photos: P. Oger. Abbreviations: C = conductor; DPA = dorsal patellar apophysis; E = embolus; RPA = retrolateral patellar apophysis; RTA = retrolateral tibial apophysis; SD = sperm duct; TeA = tegular apophysis. Scale bars: A = 3.0 mm; B, D, F, G–H = 0.5 mm; C, E = 0.2 mm.

Table 2. List of species of *Lycosoides* and their distribution in North Africa. Endemic species , or presumed as such, are marked (*).

***Lycosoides* species**	**Morocco**	**Algeria**	**Tunisia**	**Libya**	**Egypt**
L. caparti (de Blauwe, 1980)	X	X	X	–	–
L. coarctata (Dufour, 1831)	X	X	X	X	X
L. crassivulva (Denis, 1954)*	X	–	–	–	–
L. flavomaculata Lucas, 1846	X	X	X	–	–
L. incisofemoralis Bosmans, 2022*	–	X	–	–	–
L. instabilis (Denis, 1954)*	X	–	–	–	–
L. jlida Lecigne sp. nov.*	X	–	–	–	–
L. kabyliana Bosmans, 2022*	–	X	–	–	–
L. leprieuri (Simon, 1875)	–	X	X	–	–
L. murphyorum Bosmans, 2022*	X	–	–	–	–
L. parva (Denis, 1954)*	X	–	–	–	–
L. robertsi Bosmans, 2022*	–	–	X	–	–
L. saiss Bosmans, 2022*	X	–	–	–	–
L. taghzout Lecigne, 2025*	X	–	–	–	–
L. toubkal Lecigne, 2025*	X	–	–	–	–
L. variegata (Simon, 1870)	X	X	–	–	–

Conductor, flat translucent membrane erected behind embolus, barely longer than latter (Fig. 9H, see C). Embolus large and robust, apical part partially twisted, flattened and curved outwards (Fig. 9H, see E).

Female

Unknown.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality, from a single station, in a coastal dune with sparse vegetation and low thorny bushes, behind the beach, near the mouth of Oued Souss River.

Including three new species from our recent research, there are currently six known species of the genus *Gorbiscape* in Morocco (Benhalima & Bosmans 2024; Zamani & Marusik 2025): *Gorbiscape agelenoides* (Walckenaer, 1841) (♂♀), *Gorbiscape amazighus* Zamani & Marusik 2025 (♂♀), *Gorbiscape canariensis* (Lucas, 1838) (♂♀), *G. dayetchiker* Lecigne sp. nov. (♂), *G. hichamelguerrouji* Lecigne sp. nov. (♂♀) and *G. littoralis* Lecigne sp. nov. (♂).

In the rest of the Maghreb, only two of these species are known: *G. agelenoides* and *G. canariensis* (Algeria; Beladjal *et al.* 2025). We propose the keys to the species of *Gorbiscape* from the Maghreb.

Keys of the species of *Gorbiscape*

Males

1. Palpal patellar apophysis wide and rounded (Fig. 9C, G, black arrow) 2
– Palpal patellar apophysis different 3

2. Palpal tibial apophysis with rounded ventral edge, apical part elongated, shaped like sword tip; tegular apophysis with short hook (Fig. 9G, RTA, TeA) ..... ***G. littoralis*** sp. nov.

– Ventral edge of palpal tibial apophysis not rounded, apical part elongated and truncated; tegular apophysis with long and evenly curved hook ..... ***G. agelenoides***

3. Tegular apophysis with a long basal outgrowth (Fig. 5C, black arrow) ..... ***G. amazighus***
– Tegular apophysis without basal outgrowth 4

4. Palpal patellar apophysis short (Fig. 6G, PA); apical part of the tegular apophysis in a pronounced hook shape in ventral view (Fig. 6H, TeA) 5
– Palpal patellar apophysis well developed (Fig. 7G, PA); apical part of the tegular apophysis slightly inclined in ventral view, not hook-shaped (Fig. 7H, TeA) ..... ***G. hichamelguerrouji*** sp. nov.

5. Embolus sigmoid (Fig. 6H); patella with sharply pointed apophysis (Fig. 6G, PA) .... ***G. dayetchiker*** sp. nov.
– Embolus short, not S-shaped; patella without sharply pointed apophysis ..... ***G. canariensis***

Females (unknown in *G. dayetchiker* sp. nov. and *G. littoralis* sp. nov.)

1. Spermathecae less than twice as long as wide 2
– Spermathecae at least twice as long as wide ..... ***G. amazighus***

2. Spermathecae subcircular, separated by at least one time their diameter, without any extension (Fig. 8H, Sp) ..... ***G. hichamelguerrouji*** sp. nov.
– Spermathecae rounded, separated by less than one time their diameter, each spermatheca with a small basal extension 3

3. Copulatory openings in latero-anterior position; spermatheca almost in contact ..... ***G. canariensis***
– Copulatory openings in latero-posterior position; spermathecae separated by half their diameter..... ..... ***G. agelenoides***

Genus ***Lycosoides*** Lucas, 1846

To date, 15 species of *Lycosoides* have been described worldwide (WSC 2026), all occur in the Maghreb (Bosmans *et al.* 2022; Benhalima & Bosmans 2024; Lecigne *et al.* 2025).

Table 2 presents an overview of species of *Lycosoides* distribution in North Africa. To date, Morocco has the greatest diversity, i.e., 12 species, two-thirds of which are considered endemic (including *L. jlida* sp. nov. described below).

Lycosoides flavomaculata Lucas, 1846

Fig. 10, Tables 1–2

Lycosoides flavo-maculata Lucas, 1846: 124, pl. 4, fig. 2 (d♂♀).
Textrix subfasciata Simon, 1870: 290 (d♀).

Textrix flavomaculata – de Blauwe 1980: 22, figs 29–34 (♂♀).
Lycosoides flavomaculata – Levy 1996: 107, figs 89–95 (♂♀). — Bosmans *et al.* 2022: 22, figs 24, 27–31 (♂). — Lecigne *et al.* 2025: 127 (♂♀).

Remarks

A record of this species in the Oriental region (Morocco, Ahfir) was recently published (Lecigne *et al.* 2025). We provide here several photographs of the species, which is currently poorly illustrated.

Lycosoides jlida Lecigne sp. nov.
urn:lsid:zoobank.org:act:5E0E2014-7F33-4982-A36E-2DE3D23FCBE8
Figs 1, 2, 11, Tables 1–2

Diagnosis

Females of *Lycosoides jlida* Lecigne sp. nov. can be distinguished from congeners by the shape both of the epigynal plate (double structure, triangle-like, facing each other) (Fig. 11F, black and dotted arrows) and the spermathecae (elongated and inclined outwards) (Fig. 11G, Sp).

Etymology

The species epithet is a noun in apposition derived from the cave where it was discovered: Jlida.

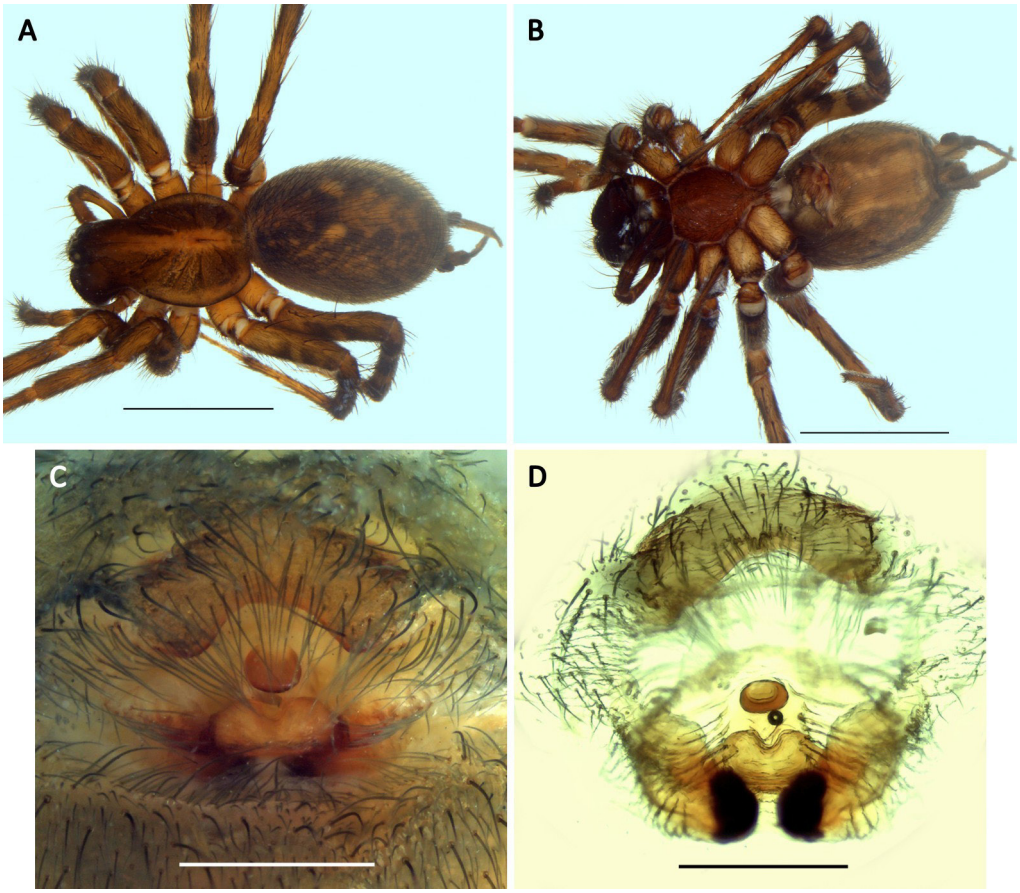
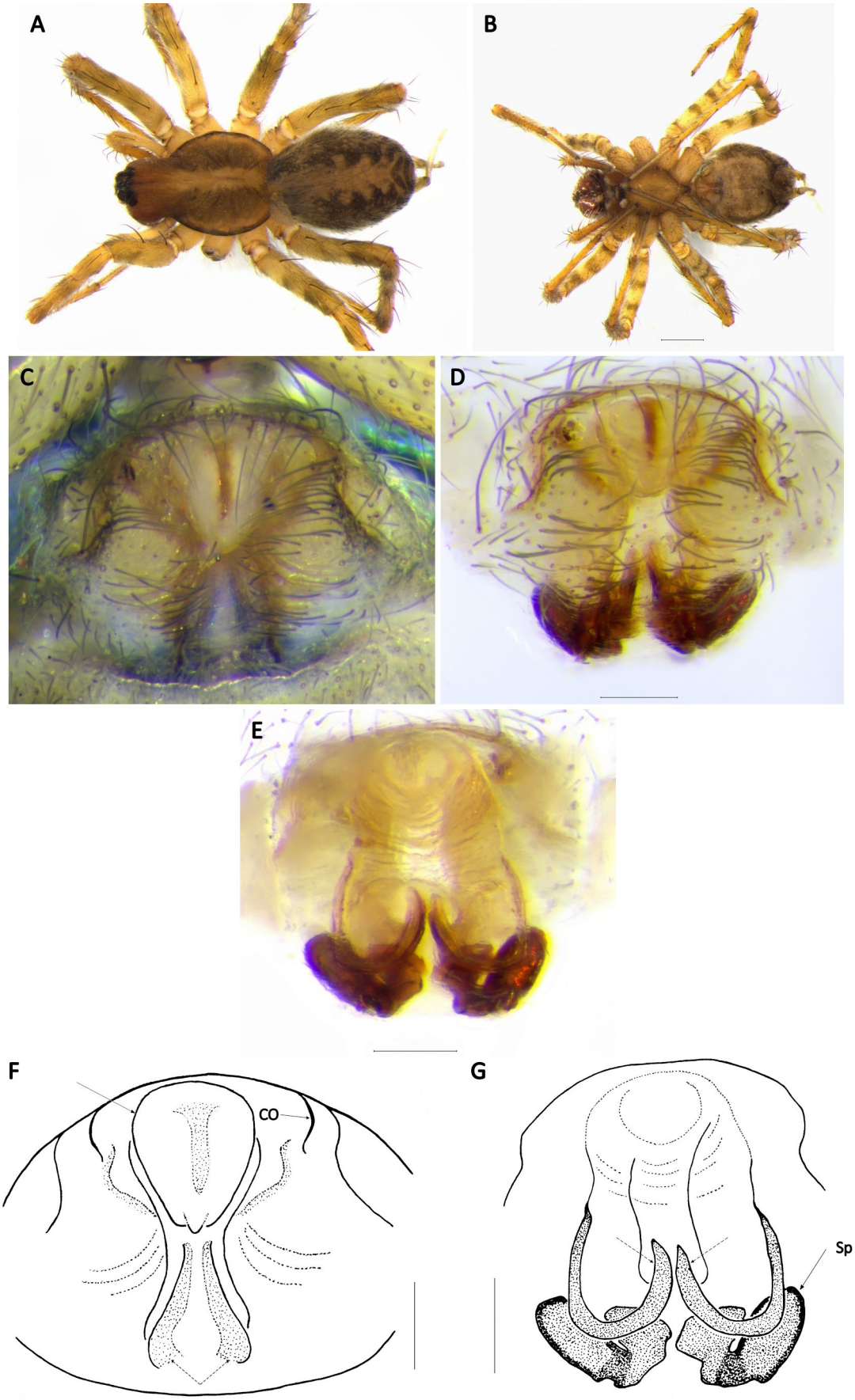


Fig. 10. *Lycosoides flavomaculata* Lucas, 1846. ♀ (CSL MOR_1605). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne. **D**. Vulva, dorsal view. Photos: P. Oger. Scale bars: A–B = 3.0 mm; C–D = 0.5 mm.

Fig. 11 (on next page). *Lycosoides jlida* Lecigne sp. nov., holotype, ♀ (CSL MOR_2189). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne. **D**. Vulva, ventral view. **E**. Idem, dorsal view. **F**. Epigyne (black arrow: rounded anteromedian plate; dotted arrows: postero-median subtriangular structure). **G**. Vulva, dorsal view (dotted arrows: rounded arch-shaped sclerotized structures). Photos: S. Lecigne. Abbreviations: CO = copulatory opening; Sp = spermatheca. Scale bars: B = 1.0 mm; D–G = 0.2 mm.


A
B
C
D
E
F
co
G
Sp

Material examined

Holotype

MOROCCO – **Oujda-Angad Pref.** • ♀; Berkane, Ifrane Yaâcoube, Takerbouste, Jbel Tamajjout, Zegzel road, Jlida 2 cave; 34.86472° N, 2.36075° W; 542 m a.s.l.; 23 May 2025; S. Lecigne leg.; cave, by hand; CSL MOR_2189; SMF. Remarks: abdomen and epigyne detached; left leg II missing.

Paratype

MOROCCO – **Oujda-Angad Pref.** • 1 ♀; same data as for holotype; SMF.

Description

Female holotype (Fig. 11)

Measurements. Total length 5.20; carapace 2.75 long, 1.82 wide.

Colour in ethanol (Fig. 11A–B). Carapace, dorsally: narrow anterior part uniformly pale brown; rounded posterior part with one median light stripe and one blackish band on each side submarginally lighter, edges black; fovea dark brown. Chelicerae orange brown. Sternum yellowish; margins and vague median mark slightly darker. Legs yellow, femora, patellae and tibiae with ring-shaped dark marks, ventrally more contrasted. Abdomen with dorsal median light area and four pairs of round light spots; at front of spinnerets, series of fine, light-coloured chevrons; sides dark brown; venter pale.

Carapace. Chelicerae: fang groove with 3 teeth on outer margin and 2 teeth on inner margin.

Epigyne/vulva (Fig. 11C–G). Anterior part: yellowish subtriangular plate with rounded corners; small protrusion pointing backward (Fig. 11F, black arrow). Posterior part: subtriangular whitish structure, facing the former, narrower, sides underlined with black curved stripe (Fig. 11F, dotted arrows). Latter curving dorsally and forming 2 rounded, sclerotized structures arch-shaped (Fig. 11G, dotted arrows). Copulatory openings in antero-lateral position, directed outwards (Fig. 11F, CO). Spermathecae located posteriorly, longer than wide, inclined outwards; additional structure on posterior inner edge. (Fig. 11G, Sp).

Male

Unknown.

Variation

Measurements. Female (n = 2): total length 5.20–6.85, carapace 2.75–3.00 long, 1.82–1.95 wide, CL/CW 1.51–1.54.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality (Jlida 2 cave; Beni-Snassen).

Family Dysderidae C.L. Koch, 1837
Genus *Dysdera* Latreille, 1804

Dysdera asaahil Lecigne sp. nov.
urn:lsid:zoobank.org:act:5713A56E-EE6A-4970-BEB8-FE1456AE6F65
Figs 1, 3, 12–13, Table 1

Diagnosis

The male of *Dysdera asaahil* Lecigne sp. nov. can be distinguished from other representatives of the species complex by the peculiar shape both of the distal apophysis (leaf-like, Fig. 12F, see D) and the

distal part of the internal sclerite (indented and also with an elongated, sub-vertical lamella, Fig. 12F–H, dotted arrow). The female can be recognized by the shape and the size both of the spermatheca and the transversal bar (Fig. 13C, E, see Sp, TB).

Etymology

The term 'asaahil' comes from the Arabic word "الساحل", which means 'coastline' or 'seaside', referring to the ecosystem in which the new species was discovered.

Material examined

Holotype

MOROCCO – **Nador Prov.** • ♂; Bouarfaten; 35.100382° N, 2.48973° W; 9 Feb. 2025; S. Moutaouakil leg.; coastal area, bare rocky area at the top of a cliff, under stone; by hand; CSL MOR_1665; SMF. Remarks: left pedipalp detached.

Paratypes

MOROCCO – **Nador Prov.** • 2 ♀♀; Bouarfaten; 35.10504° N, 2.47925° W; 22 m a.s.l.; 9 Feb. 2025; S. Lecigne and S. Moutaouakil leg.; coastal area, bare rocky area, under stone, by hand; CSL MOR_2186; SMF. Remarks: epigyne and abdomen of one female detached.

Other material examined

MOROCCO – **Nador Prov.** • 1 ♀; Ras El Ma; 35.13089° N, 2.39645° W; 19 m a.s.l.; 8 Feb. 2025; S. Lecigne and S. Moutaouakil leg.; limestone slope covered with sand, under stone, by hand; CSL MOR_1640.

Description

Dysdera asaahil Lecigne sp. nov. is a medium-sized species; it features the following characters: strong, more or less projected chelicerae; fang shorter than the basal segment of the chelicera; length of the chelicerae longer than half the length of the cephalothorax. On average for the females, Fe III are sometimes spineless but Fe IV bears at least 3 spines. For the species of the *Dysdera crocata*-complex, Fe I–III are often and Fe IV are almost always armed with one or more spines (after Deeleman-Reinhold & Deeleman 1988). Therefore, we assign the species to the *Dysdera crocata*-complex as defined by these authors.

Male holotype (Fig. 12)

Measurements. Total length 6.00; carapace 2.77 long, 2.13 wide; chelicerae 1.40 long, fang 1.03 long; anterior eyes diameter 0.14.

Colour in ethanol (Fig. 12A). Carapace and chelicerae dark orange; sternum orange; legs yellowish; abdomen cream.

Carapace. Flat, posterior eye-row barely procurved. Anterior eyes separated by 0.90 time their diameter. Height of clypeus 0.73 times diameter of anterior eyes. Chelicerae massive, projected; with piligerous granulations; cheliceral margin armed with 3 teeth, middle one smallest; basal part with smooth keel.

Leg spination. Fe I, 1–2 antero-apical spines; Fe II, 1 antero-apical spine; Fe III, 1–4 spines; Fe IV, 4–5 dorso-basal spines. Ti and Mt III–IV with numerous spines.

Palp (Fig. 12B–H). Tegulum as long as distal division; prolateral margin concave (Fig. 12G, IS), distal part indented and translucent, outer margin shaped like elongated, sub-vertical lamella (Fig. 12F–H, dotted arrow); distal apophysis, flattened sclerotized structure, undulating, tip pointed and slightly bent (Fig. 12F, H, see D); retrolateral margin with reduced translucent membranous structure (Fig. 12G, MS); posterior apophysis short, hollowed and rounded (Fig. 12F–G, see P).

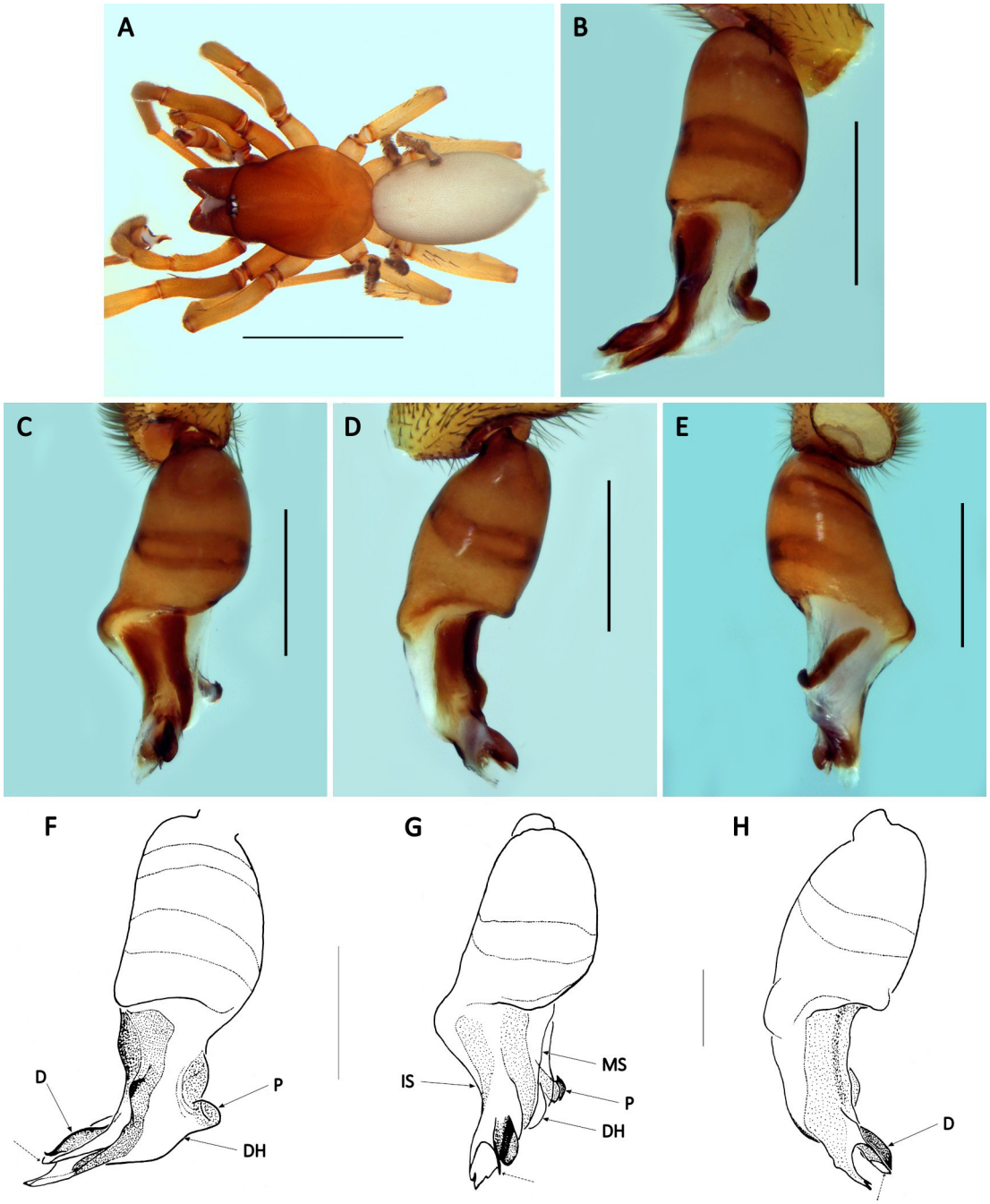


Fig. 12. *Dysdera asaahil* Lecigne sp. nov., holotype, ♂ (CSL MOR_1665). **A**. Dorsal view. **B**. Bulb, retrolateral view. **C**. Idem, ventral view. **D**. Idem, ventro-prolateral view. **E**. Idem, dorsal view. **F**. Bulb, retrolateral view (dotted arrow: distal lamella of internal sclerite). **G**. Idem, ventral view (dotted arrow: distal lamella of internal sclerite). **H**. Idem, ventro-prolateral view (dotted arrow: distal lamella of internal sclerite). Photos: P. Oger. Abbreviations: D = distal apophysis; DH = distal haematodocha; IS = internal sclerite; MS = membranous structure; P = posterior apophysis. Scale bars: A = 3.0 mm; B–H = 0.5 mm.

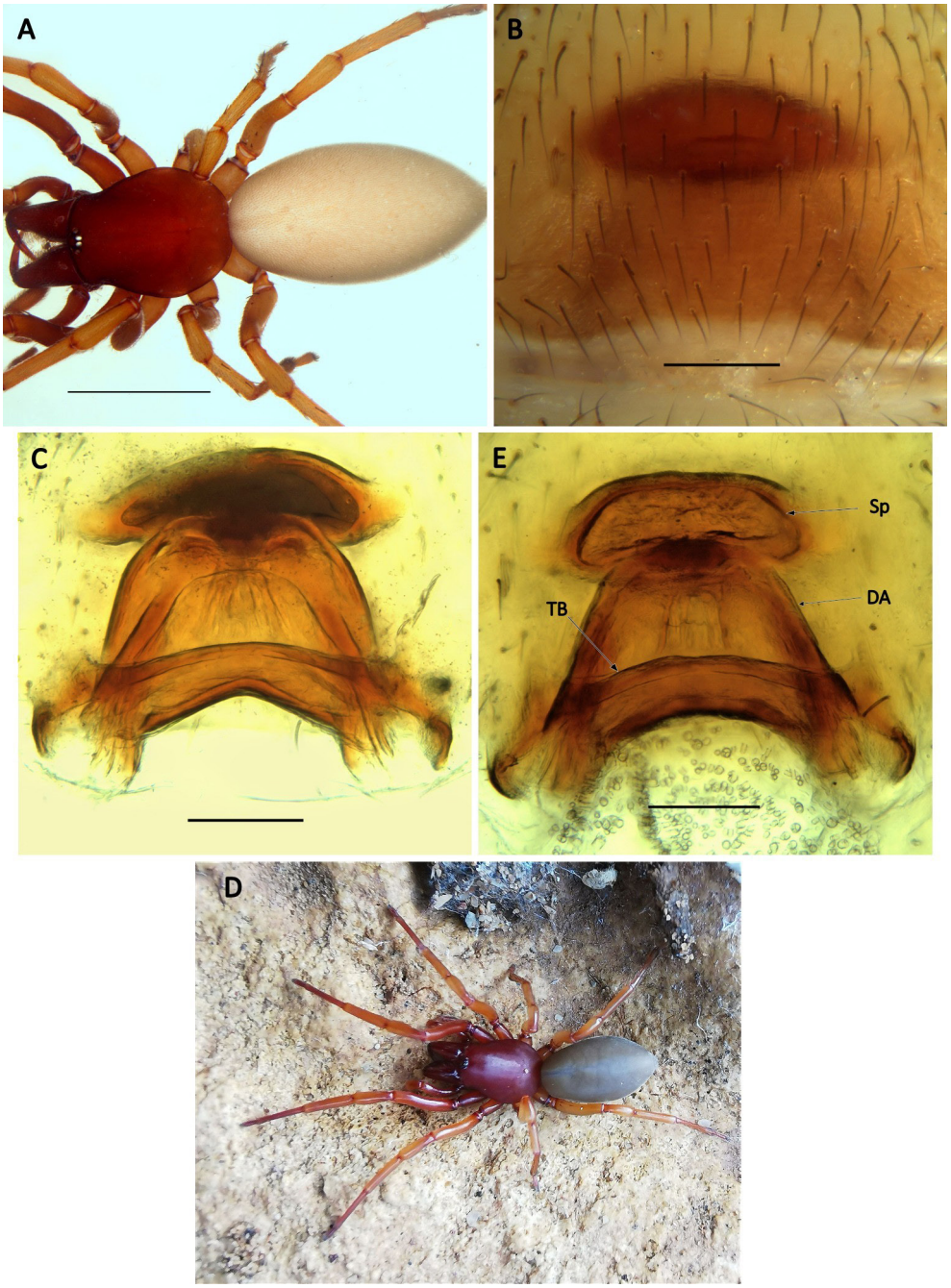


Fig. 13. *Dysdera asaahil* Lecigne sp. nov. **A–C**. Paratype ♀ (CSL MOR_2186). **D–E**. Paratype ♀ (CSL MOR_1640). **A, D**. Dorsal views. **B**. Epigyne. **C, E**. Vulva, dorsal views. Photos: A–C, E = P. Oger; D = S. Lecigne. Abbreviations: DA = dorsal arch of anterior diverticulum; Sp = spermatheca; TB = transversal bar. Scale bars: A = 3.0 mm; B–C, E = 0.2 mm.

Female paratypes (Fig. 13; as in male except as noted)
Measurements. Total length 9.10–9.70; carapace 3.45–3.50 long, 2.77–2.78 wide, CL/CW 1.25–1.26; chelicerae 1.70–1.75 long, fang 1.38–1.40 long; anterior eyes diameter 0.17–0.19.

Colour on live specimen (Fig. 13D). Carapace and chelicerae purplish; legs orange; abdomen greyish.

Colour in alcohol (Fig. 13A). As in male, but somewhat darker.

Carapace. Chelicerae with only few piligerous granulations on lower part of inner side.

Leg spination. Fe III spineless. Fe IV, 3–4 dorso-basal spines.

Vulva (Fig. 13C, E). Spermatheca barely convex, 2.6 times as wide as high (Fig. 13E, Sp); dorsal arch slightly flared posteriorly, as wide or slightly wider (about 1.2 times) than spermatheca (Fig. 13E, DA); transversal bar thick and convex (Fig. 13E, TB), lateral edges strongly bent backwards and finally inwards.

Variation

Measurements min.–max. (average). Female (n = 3): total length 9.10–10.00 (9.60); carapace 3.45–3.85 (3.60) long, 2.77–3.00 (2.85) wide, CL/CW 1.25–1.28 (1.26); chelicerae 1.70–1.90 (1.78) long; fang 1.38–1.47 (1.41) long.

Carapace. One cheliceral margin of male holotype armed with 2 teeth only, distal one missing.

Leg spination (females; in brackets: less frequent pattern for spines number). Fe I, 2 (1) antero-apical spine(s); Fe III spineless (1 dorso-median spine); Fe IV, 3 (4–5) dorso-basal spines.

Distribution and habitat

Endemic to Morocco? To date, only known from two localities on the northeast coast, near the border with Algeria. It inhabits coastal sandy environments, under stone.

Dysdera sidimaafa Lecigne sp. nov.

urn:lsid:zoobank.org:act:1C69156F-EEF7-4CE0-AE45-796E342D654A

Figs 1, 3, 14–15, Table 1

Diagnosis

The male of *Dysdera sidimaafa* Lecigne sp. nov. resembles that of *D. crocata* C.L. Koch, 1838 but the anterior femora of the new species bear 1 to 2 antero-apical spines (vs spineless in *D. crocata*) and the bulb shows an embolic division with a lamellar process (Fig. 14H, PE) (vs absent in *D. crocata*). The female of the new species can be distinguished from other representatives of the species complex by the shape and the size both of the spermatheca and the transversal bar (Fig. 15D–E, see Sp, TB).

Etymology

The new species is named after the "Sidi Mâafa" peri-urban park where it was found for the first time.

Material examined

Holotype
MOROCCO – **Oujda-Angad Pref.** • ♂; Oujda, Sidi Mâafa park; 34.64101° N, 1.88193° W; 640 m a.s.l.; 5 Feb. 2025; S. Lecigne and S. Moutaouakil leg.; rocky, deforested, arid hill, under stone, by hand; CSL MOR_1570; SMF. Remarks: left pedipalp and right leg IV detached.

Paratype
MOROCCO – **Oujda-Angad Pref.** • 1 ♀; Oujda, Sidi Mâafa park; 34.64123° N, 1.88096° W; 648 m a.s.l.; 5 Feb. 2025; S. Lecigne and S. Moutaouakil leg.; mixed forest of *Pinus halepensis* and *Eucalyptus* sp., under stone, by hand; CSL MOR_1637; SMF. Remarks: epigyne detached.

Other material examined

MOROCCO – **Oujda-Angad Pref.** • 1 ♂; same data as for holotype.

Description

Dysdera sidimaafa Lecigne sp. nov. is a medium species; it features the following characters: strong, more or less projected chelicerae; fang shorter than the basal segment of the chelicera; length of the chelicerae as long as or longer than half the length of the cephalothorax. Fe III are sometimes spineless but Fe IV bears at least 2 spines. For the species of the *Dysdera crocata*-complex, Fe I–III are often and Fe IV are almost always armed with one or more spines (after Deeleman-Reinhold & Deeleman 1988). Therefore, we also assign this new species to the *Dysdera crocata*-complex as defined by these authors.

Male holotype (Fig. 14)
Measurements. Total length 6.80; carapace 3.20 long, 2.50 wide; chelicerae 1.65 long, fang 1.13 long; anterior eyes diameter 0.14.

Colour on live specimen (Fig. 14A). Carapace and chelicerae dark orange; legs pale orange, femora slightly darker; abdomen cream.

Colour in ethanol (Fig. 14B). Thoracic part of carapace and sternum orange.

Carapace. Flat, posterior eye-row barely procurved. Anterior eyes separated by 1.23 time their diameter. Height of clypeus 0.91 times diameter of anterior eyes. Chelicerae massive, projected; with piligerous granulations; cheliceral margin armed with 3 teeth, basal one triangular, strongest; basal part with smooth keel.

Leg spination. Fe I, 1–2 antero-apical spines; Fe II, 1 antero-apical spine; Fe III, 0–2 anterior spines; Fe IV, 2–4 dorso-basal spines. Ti and Mt III–IV with numerous spines.

Palp (Fig. 14C–H). Tegulum almost as long as distal division; embolic division with lamellar process starting from its base, hardly sclerotized, short and rounded (Fig. 14H, PE); external sclerite curved, distal part shaped like flattened, sub-vertical, elongated and pointed lamella (Fig. 14G–H, dotted arrow); retrolateral margin with reduced translucent membranous structure (Fig. 14G–H, MS); posterior apophysis with short, semicircular lamellar crest, and 2 inconspicuous denticles (Fig. 14G, see P).

Female paratype (Fig. 15; as in male except as noted)
Measurements. Total length 8.80; carapace 3.38 long, 2.60 wide; chelicerae 1.70 long, fang 1.30 long; anterior eyes diameter 0.14.

Leg spination. Fe III spineless; Fe IV, 4 dorso-basal spines.

Vulva (Fig. 15E). Spermatheca barely concave, 3.2 times as wide as high (Fig. 15D–E, Sp); dorsal arch evenly curved backwards (Fig. 15E, DA); transversal bar fairly thin, convex, about 2.3 times as wide as spermatheca (Fig. 15E, TB), lateral edges strongly bent backwards and finally inwards (Fig. 15D–E, LE); posterior diverticulum wider than long, ovate (Fig. 15E, PD).

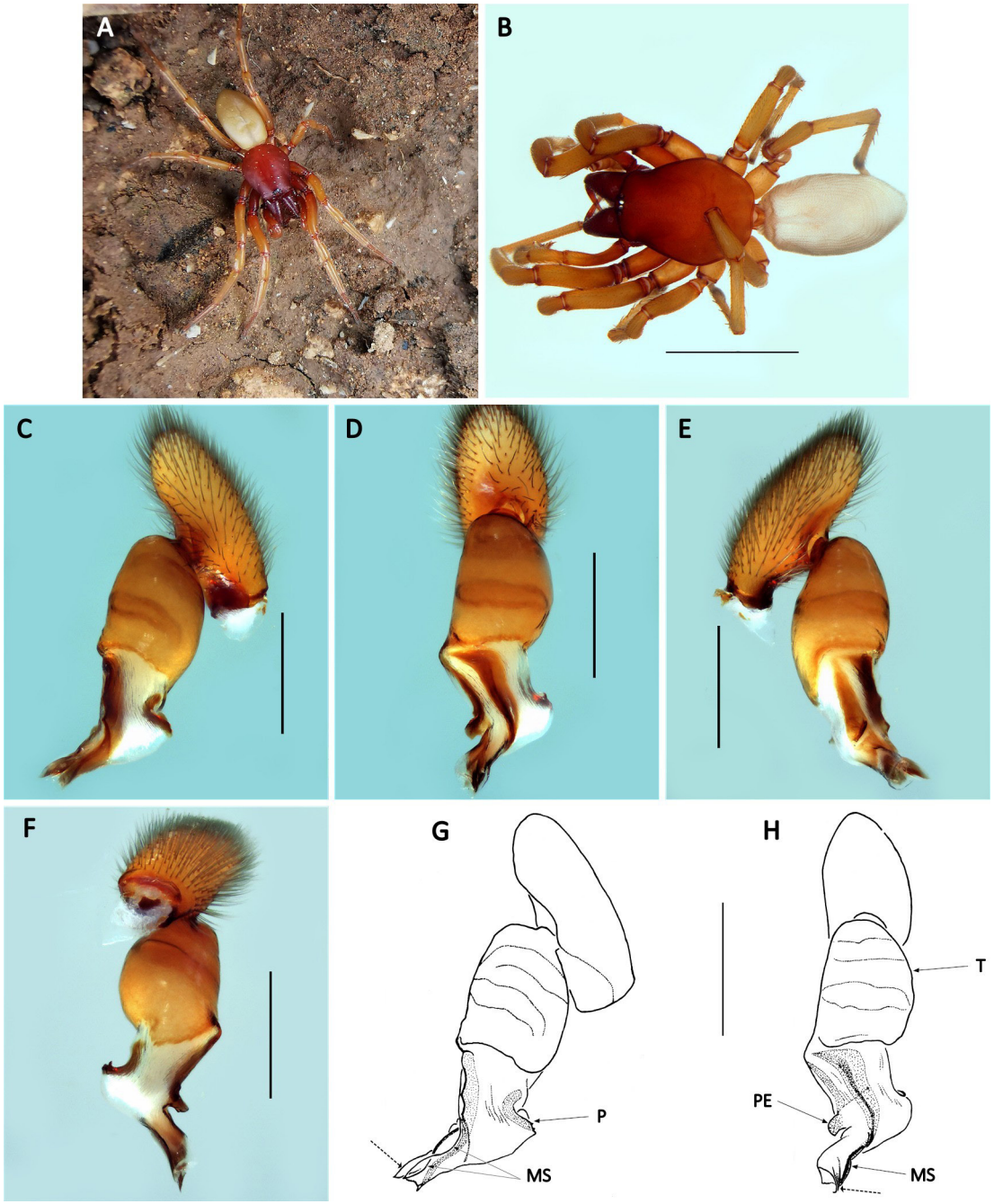


Fig. 14. *Dysdera sidimaafa* Lecigne sp. nov., holotype, ♂ (CSL MOR_1570). **A–B**. Dorsal views. **C**. Palp, ventro-retrolateral view. **D**. Idem, ventral view. **E**. Idem, prolateral view. **F**. Idem, dorsal view. **G**. Idem, ventro-retrolateral view (dotted arrow: distal pointed lamella of the external sclerite). **H**. Idem, ventral view (dotted arrow: distal pointed lamella of the external sclerite). Photos: A = S. Lecigne, B–F = P. Oger. Abbreviations: MS = membranous structure; P = posterior apophysis; PE = process of the embolic division; T = tegulum. Scale bars: B = 3.0 mm; C–H = 0.5 mm.

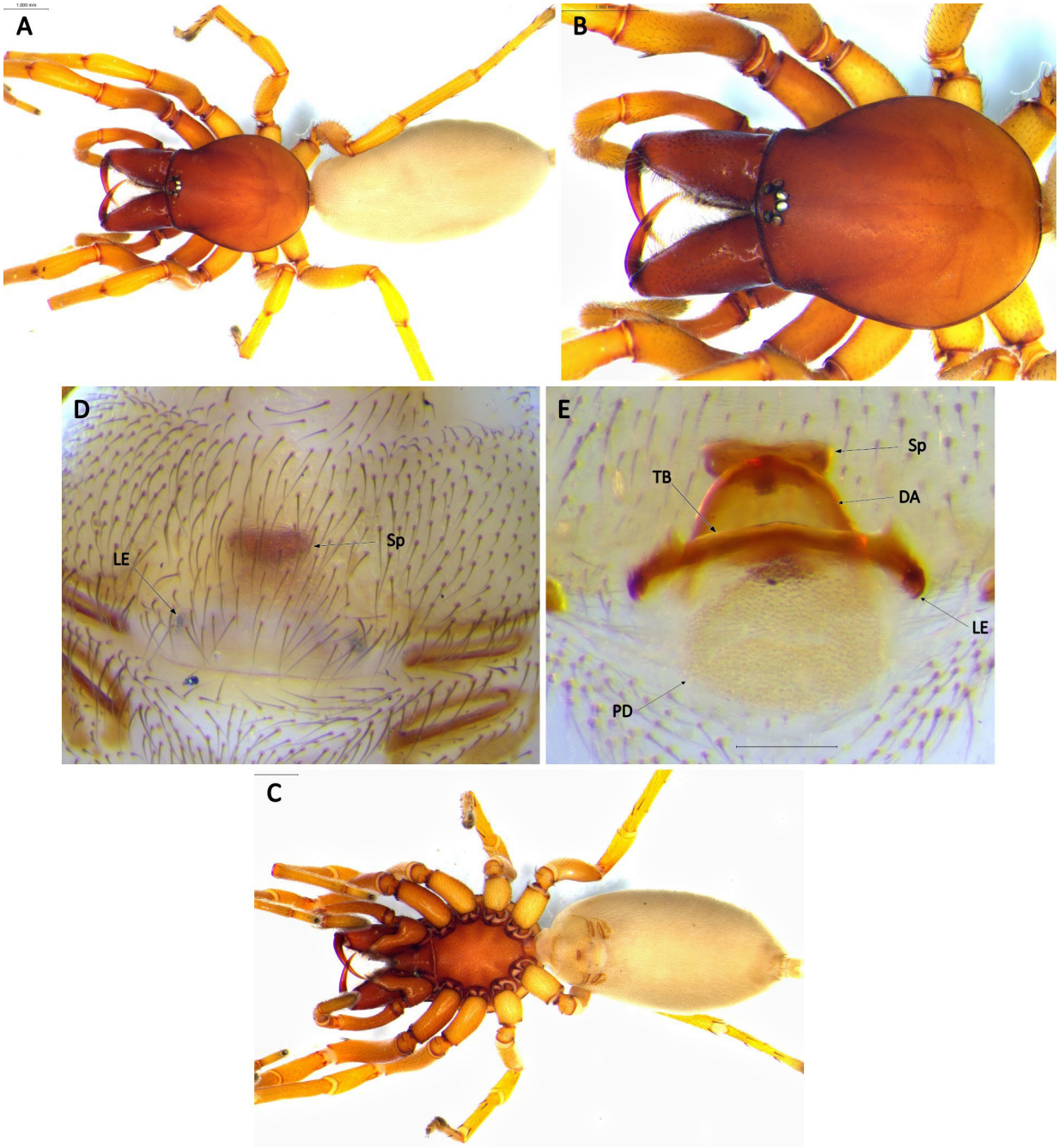


Fig. 15. *Dysdera sidimaafa* Lecigne sp. nov., paratype, ♀ (CSL MOR_1637). **A**. Dorsal view. **B**. Carapace. **C**. Ventral view. **D**. Epigyne. **E**. Vulva, dorsal view. Photos: S. Lecigne. Abbreviations: DA = dorsal arch of anterior diverticulum; LE = lateral edge; PD = posterior diverticulum; Sp = spermatheca; TB = transversal bar. Scale bars: A–C = 1.0 mm; E = 0.2 mm.

Variation

Measurements min.–max. Male (n = 2): total length 6.80–8.95; carapace 3.20–4.10 long, 2.50–3.15 wide, CL/CW 1.28–1.30; chelicerae 1.65–2.05 long; fang 1.13–1.40 long.

Carapace. One cheliceral margin of male holotype armed with 4 teeth, i.e., additional small blunt subdistal tooth.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality, i.e., Oujda, Sidi Mâafa peri-urban park. It inhabits sparsely mixed forest of *Pinus halepensis* and *Eucalyptus* sp., under stone in dry and rather anthropogenic environment.

Family Gnaphosidae Banks, 1892

Genus ***Berlandina*** Dalmas, 1922

To date, 43 species of *Berlandina* have been described worldwide (WSC 2026), only 3 of which occur in North Africa, i.e., *B. deserticola* (Dalmas, 1921), *B. plumalis* (O. Pickard-Cambridge, 1872) and *B. punica* (Dalmas, 1921) (Elkrew *et al.* 2024; Beladjal *et al.* 2025; Kmira *et al.* 2025), and none in Morocco (Benhalima & Bosmans 2024).

Berlandina campestris Lecigne & Moutaouakil sp. nov.
urn:lsid:zoobank.org:act:F75F9A51-EE2F-4A0F-82C5-E3385E5DB520
Fig. 16, Table 1

Diagnosis

The female of *Berlandina campestris* Lecigne & Moutaouakil sp. nov. resembles that of *B. plumalis* (O. Pickard-Cambridge, 1872) but the fovea is about 1.1 times as broad as total width of spermathecae span (vs total width of spermathecae at least 1.3 times as broad as fovea) (cf. Fig. 16F vs Denis 1966: 138, fig. 10 and Chatzaki *et al.* 2002: 610, fig. 15) and the tip of the copulatory ducts is curved forwards (vs directed laterally towards the spermathecae in *B. plumalis*) (same figures).

Etymology

In Latin, '*campestris*' means, amongst other things, from 'field area'. The specific epithet is an adjective and refers to the habitat where the new species was first discovered.

Material examined

Holotype
MOROCCO – **Al-Haouz Pref.** • ♀; Gheba, Jaidate; 31.66264° N, 7.67525° W; 80 m a.s.l.; 24 Apr. 2023; S. Moutaouakil leg.; rural setting, on the edge of crop, by hand; CSL MOR_1435; SMF. Remarks: abdomen and epigyne detached.

Description

Female holotype (Fig. 16)
Measurements. Total length 9.40; carapace 3.37 long, 2.59 wide.

Colour in ethanol (Fig. 16A–B). Carapace light brown, thoracic part with one dark mark on each side, cephalic part with 3 pairs of dark lateral spots; legs light brown, metatarsi and tarsi barely darker;

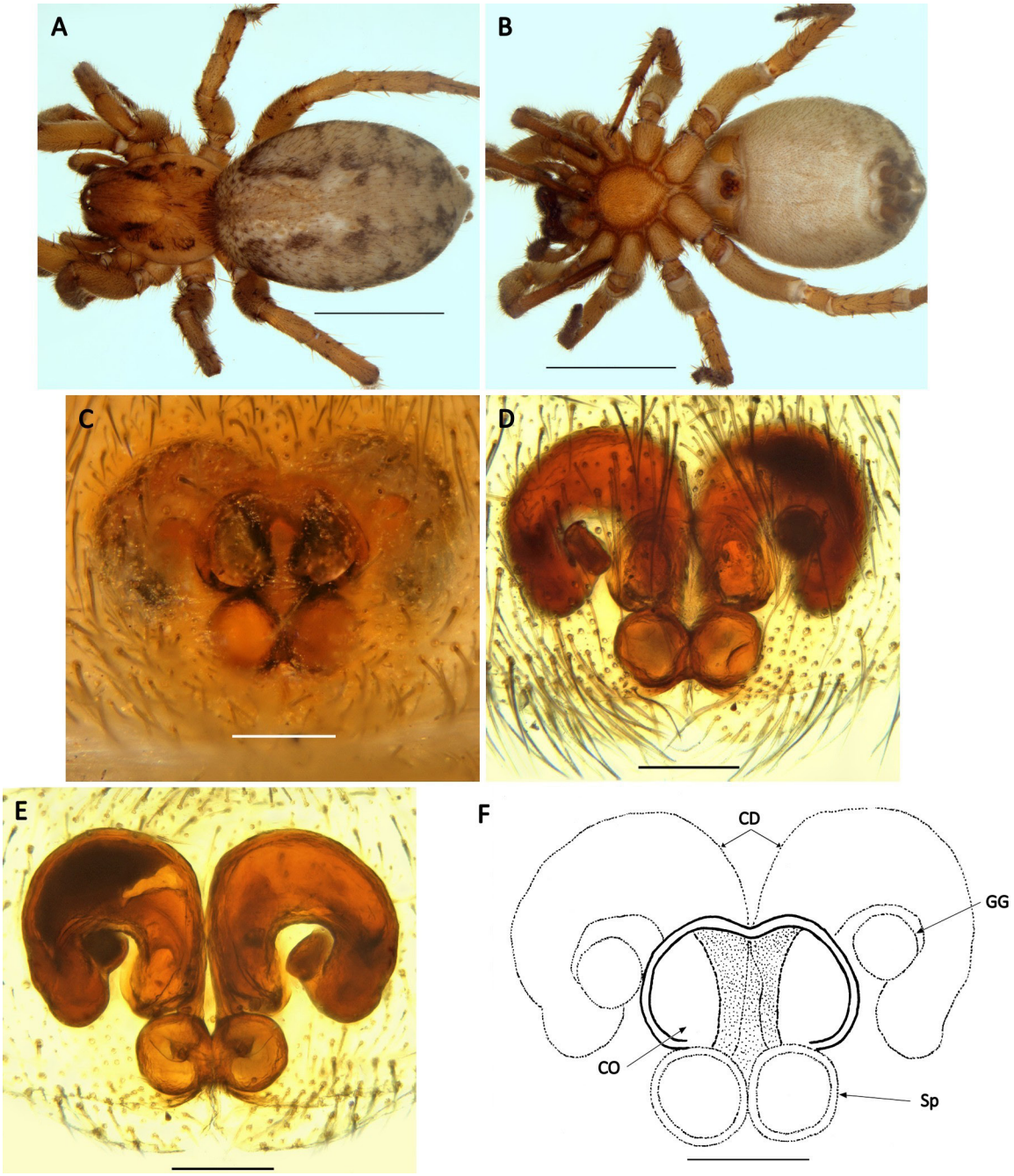


Fig. 16. *Berlandina campestris* Lecigne & Moutaouakil sp. nov., holotype, ♀ (CSL MOR_1435). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne . **D, F**. Vulva, ventral views. **E**. Idem, dorsal view. Photos: P. Oger. Abbreviations: CD = copulatory duct; CO = copulatory opening; GG = globular gland; Sp = spermatheca. Scale bars: A–B = 3.0 mm; C–F = 0.2 mm.

sternum light brown; chelicerae brown with black setae. Abdomen with clear median stripe, a pair of white dots at rear of cardiac mark; sides clear, framed by vague blackish pattern; venter pale yellow.

Carapace. Posterior eyes slightly recurved.

Leg spination. Femora I–II, 2 dorsal and 1 antero-apical spines; except patellae and tarsi I–II, spineless, other segments with variable number of spines, more numerous on legs III–IV.

Epigyne/vulva (Fig. 16C–F). Fovea about 1.75 times as wide as high, divided by median septum, more flared anteriorly; copulatory openings broad (Fig. 16F, CO). Copulatory ducts wide (Fig. 16F, CD), first running to antero-lateral then posterior side, end turned forwards and featuring globular gland (Fig. 16F, GG); spermathecae round, in contact, diameter slightly less than half the width of fovea (Fig. 16F, Sp).

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality, from a single station, in a rural area, on the edge of a field.

Genus ***Echemus*** Simon, 1878

To date, there are 23 representatives of this genus worldwide (WSC 2026), but only two species are recorded in North Africa: *E. escalerai* (Simon, 1909) only known from Morocco (Benhalima & Bosmans 2024) and *E. scutatus* (Simon, 1880) only known from Algeria (Beladjal *et al.* 2025).

Echemus amicitiae Lecigne, Moutaouakil & Lips sp. nov.

urn:lsid:zoobank.org:act:3B7F3759-279D-4A91-8403-96C758FFEBEB

Figs 1, 3, 17–18, Table 1

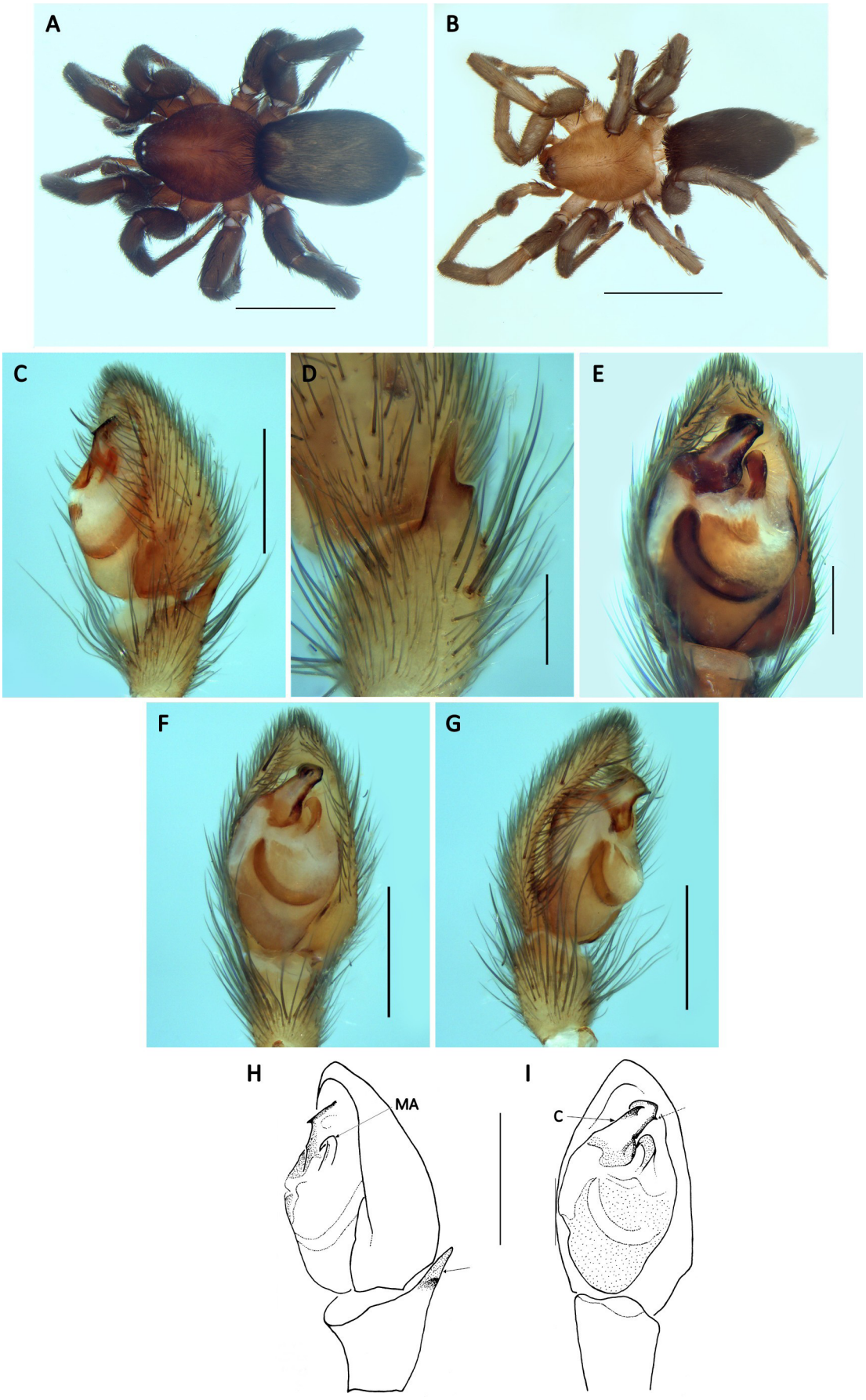
Diagnosis

The male of *Echemus amicitiae* Lecigne, Moutaouakil & Lips sp. nov. can be distinguished from other representatives of the genus both by the dorsal position and shape of the tibial apophysis (Fig. 17D) and by the orientation and shape of the distal part of the conductor/embolus combination. The female can be recognized by the two large atria that occupy nearly two-thirds of the total length of the epigyne (Fig. 18C–E), as well as by the presence of a small additional round extension to the spermathecae (Fig. 18D, dotted arrow).

Etymology

In Latin, '*amicitiae*' means 'friendship'. The specific epithet is a noun which refers to the strong bonds that have grown between the team members over the course of our expeditions.

Fig. 17 (on next page). *Echemus amicitiae* Lecigne, Moutaouakil & Lips sp. nov. **A, E**. Holotype, ♂ (CSL MOR_1890). **B–D, F–I**. Paratype, ♂ (CSL MOR_1845). **A–B**. Dorsal views. **C**. Palp, ventro-retrolateral view. **D**. Idem, tibial apophysis, dorsal view. **E–F**. Palp, ventral views. **G**. Idem, prolateral view. **H**. Idem, ventro-retrolateral view (black arrow: tibial apophysis). **I**. Idem, ventral view (dotted arrow: angular point of the conductor). Photos: P. Oger. Abbreviations: C = conductor; MA = median apophysis. Scale bars: A = 2 mm; B = 3.0 mm; C, F–I = 0.5 mm ; D–E = 0.2 mm.


A
B
C
D
E
F
G
H
MA
I
C

Material examined

Holotype

MOROCCO – **Taza Prov.** • ♂; Ghiata Al Gharbia, near R6 road; 34.17026° N, 4.32596° W; 276 m a.s.l.; 15 May 2025; S. Lecigne, J.-P. Dégletagne leg.; arid, olive grove on a slope, under stone and in dead leaf litter, at dusk, by hand; CSL MOR_1890; SMF. Remarks: left pedipalp detached.

Paratypes

MOROCCO – **Séfrou Prov.** • 1 ♂; Bir tam Tam, near N6 road; 33.97929° N, 4.67142° W; 527 m a.s.l.; 15 May 2025; S. Lecigne leg.; residual lapiaz, under stone, by hand; CSL MOR_1845; SMF. Remarks: pale specimen, probably recently moulted; left pedipalp detached. – **Taza Prov.** • 1 ♂, 1 ♀; same data as for holotype; SMF. Remarks: abdomen of the female and epigyne detached.

Other material examined

MOROCCO – **Taza Prov.** • 2 ♂♂; same data as for holotype.

Description

Males: holotype (Fig. 17A, E), **paratype** (Fig. 17B–D, F–I)

Measurements. Total length 5.50; carapace 2.65 long, 2.00 wide3; scutum 0.70 long; tibial apophysis 0.23 long.

Colour in ethanol (Fig. 17A). Carapace, legs, sternum and scutum brown hazelnut; abdomen anthracite, venter paler.

Carapace. Posterior eye-row procurved. Chelicerae: outer margin with 1 tooth and 2 denticles, one of which inconspicuous.

Leg spination. Palpal femora with 2 dorsal spines. Legs I–II: femora with 2 dorsal and 1 antero-apical spines; other segments spineless. Legs III-IV with numerous spines.

Abdomen. Anterior scutum occupying about 25% of its length.

Palp (Fig. 17C–I). Tibial apophysis in dorsal position (Fig. 17H, black arrow), relatively short (about two thirds of the tibia's length) and pointing dorso-anteriorly; base broad, outer margin almost straight, inner margin slightly then strongly inclined outwards, stair-step like (Fig. 17D). Median apophysis moderately developed, sclerotized, distal part hook-shaped and directed forwards (Fig. 17H, MA). Conductor sclerotized (Fig. 17H, see C), base very broad, outer edge S-shaped (Fig. 17G) and marked by angular point (Fig. 17I, dotted arrow) distal part twisted backwards. Embolus concealed by conductor for most of its course; terminal part curved (only visible in ventro-retrolateral view).

Female paratype (Fig. 18; as in male except as noted)

Measurements. Total length 5.75; carapace 2.80 long, 2.00 wide.

Leg spination. Palpal femora with 3 dorsal spines; tibiae and tarsi with numerous spines.

Epigyne/vulva (Fig. 18C–E). Anterior part of epigyne consisting of two large atria, about 1.7 times as long as wide. Medio-posterior part quadrilateral, covered by translucent plate revealing much of internal structures; posterior and latero-posterior margins strongly sclerotized. Copulatory ducts short (Fig. 18E, CD). Spermathecae triangular in appearance (Fig. 18E, Sp), each connected to small round lateral extension (Fig. 18E, dotted arrow).

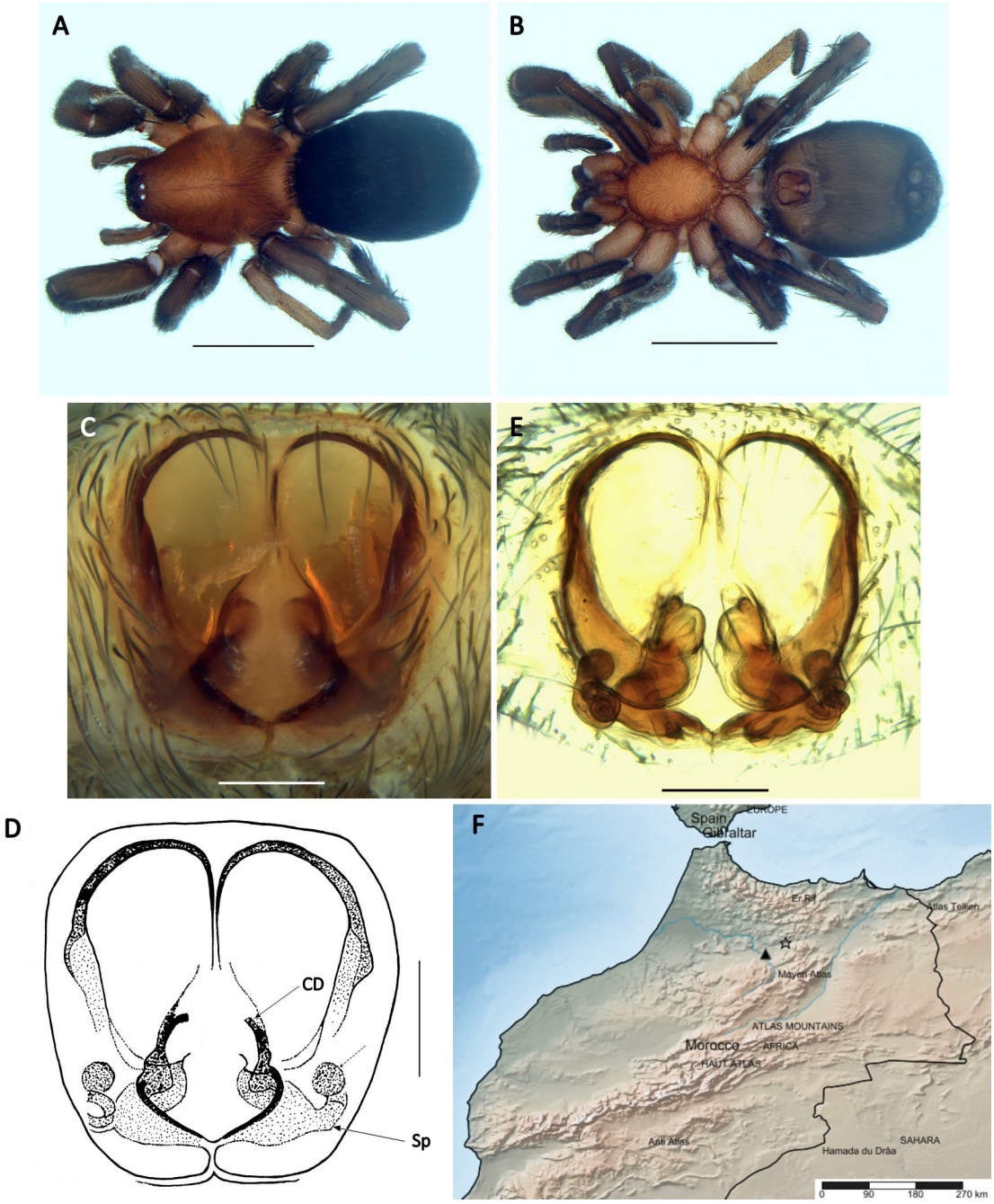


Fig. 18. *Echemus amicitiae* Lecigne, Moutaouakil & Lips sp. nov., paratype, ♀ (CSL MOR_1890). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne. **D**. Vulva, ventral view (dotted arrow: small round lateral extension of the spermatheca). **E**. Idem, dorsal view. **F**. Distribution map: star = loc. typ.; triangle = other record (source: Shorthouse 2010). Photos: P. Oger. Abbreviations: CD = copulatory duct; Sp = spermatheca. Scale bars: A–B = 2.0 mm; C–E = 0.2 mm.

Variation

Measurements min.–max. (average). Male (n = 5): total length 5.00–6.70 (5.78), carapace 2.50–2.95 (2.80) long, 1.85–2.10 (2.01) wide, CL/CW 1.32–1.40 (1.36); scutum length / abdomen length (%) 19–25 (23).

Leg spination (males; in brackets: less frequent pattern for spines number). Palpal femora with 3 (2) dorsal spines. Fe I with 2 dorsal and 1 (0–2) antero-apical spines.

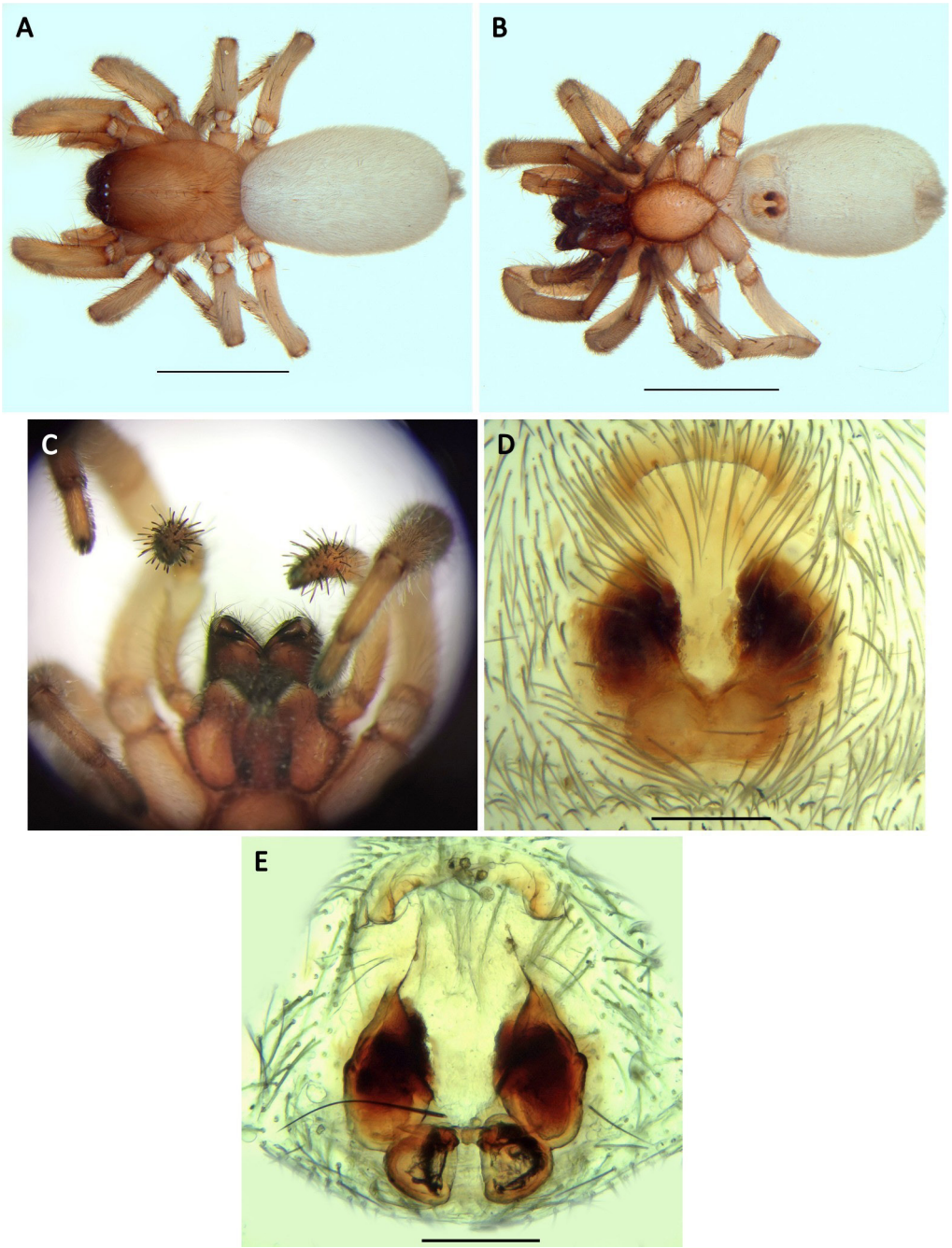


Fig. 19. *Haplodrassus nigroscriptus* (Simon, 1909), ♀ (CSL MOR_1800). **A–B, D–E**. ♀ (CSL MOR_1800). **C**. ♀ (CSL MOR_1795). **A**. Dorsal view. **B**. Ventral view. **C**. Palp, ventral view. **D**. Epigyne. **E**. Vulva, dorsal view. Photos: A–B, D–E = P. Oger, C = S. Lecigne. Scale bars: A–B = 2.0 mm; D–E = 0.2 mm.

Distribution and habitat

Endemic to Morocco? To date, only known from two localities (Fig. 18E). It inhabits arid habitats, in open (residual lapiaz) or wooded environment (olive grove) under stone or in leaf litter.

Remarks

The new species belongs to the *Echemus* group of gnaphosid genera due to a plain-coloured opisthosoma and presence of a scutum in the male. The specimens fit the diagnosis as defined by Almquist (2007: 395), e.g., posterior eye row procurved; AME largest; ocular median quadrangle widest anteriorly; sternum oval, convex, posterior end pointed, not extending between coxae IV; promargin with one tooth and 2 denticles, with dense row of short bristles, retromargin with one denticle. We therefore assign these specimens to the genus *Echemus*.

Genus ***Haplodrassus*** Chamberlin, 1922

With a total of 11 species recorded to date, the genus *Haplodrassus* is one of the best represented in the Gnaphosidae family in Morocco, along with the genus *Zelotes* Gistel, 1848 (Benhalima & Bosmans 2024).

Haplodrassus nigroscriptus (Simon, 1909)
Figs 1, 3, 19, Table 1

Drassodes nigroscriptus Simon, 1909: 16 (d♂♀).

Haplodrassus nigroscriptus – Bosmans *et al.* 2018: 22, figs 67–76, 83–86 (♂♀).

Material examined

MOROCCO – **Agadir Ida Outanane Pref.** • 1 ♀; Agadir; 30.38618° N, 9.59505° W; 15 m a.s.l.; 16–22 Mar. 2025; S. Lecigne leg.; coastal environment, wooded dune, in thick litter of dead leaves, pitfall; CSL MOR_1795 • 1 ♀; Agadir; 30.38504° N, 9.59418° W; 22 m a.s.l.; 16 to 22 Mar. 2025; S. Lecigne leg.; behind the beach, in a dune grassland and low thorny bushes, pitfall; CSL MOR_1800. Remarks: epigyne detached.

Distribution and habitat

So far, the species is only known from a limited area in the south of Morocco. *H. nigroscriptus* inhabits coastal habitats, i.e., estuary and neighbouring dunes (Bosmans *et al.* 2018).

Haplodrassus securifer Bosmans & Abrous, 2018
Figs 1, 3, 20, Table 1

Haplodrassus securifer Bosmans & Abrous in Bosmans *et al.* 2018: 39, figs 145–153, 162–166 (d♂♀).

Material examined

MOROCCO – **Taza Prov.** • 1 ♀; Bab Boudir, Tazekka NP; 34.08866° N, 4.10663° W; 1392 m a.s.l.; 16 May 2025; S. Lecigne, S. Moutaouakil and J. Lips leg.; short-grazed grassland, under stone, by hand; CSL MOR_1944.

Distribution and habitat

Although only recently described, the known distribution of the species is already quite extensive (WSC 2026) (Maghreb, Iberian Peninsula, France, Italy, and Belgium, where the actual establishment of a population remains to be verified). *H. securifer* appears to occupy a fairly wide variety of habitats, e.g., forests (*Cedrus atlantica*; *Quercus suber*); orange garden; olive and palm groves; fields; grassland; steppe etc. (Bosmans *et al.* 2018).

Fig. 20. *Haplodrassus securifer* Bosmans & Abrous, 2018, ♀ (CSL MOR_1944). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne. Photos: S. Lecigne.

Fig. 21. *Marinarozelotes bardiae* (Caporiacco, 1928), ♀ (CSL MOR_1918). **A**. Dorsal view. **B**. Epigyne. Photos: S. Lecigne.

Genus *Marinarozelotes* Ponomarev, 2020

Marinarozelotes bardiae (Caporiacco, 1928)
Figs 1, 3, 21, Table 1

Zelotes costatus – Denis 1952: 118, fig. 4 (d♀).

Material examined

MOROCCO – **Taza Prov.** • 2 ♀♀; Bab Boudir, Tazekka NP; 34.10080° N, 4.06919° W; 1355 m a.s.l.; 17 May 2025; S. Lecigne leg.; dry grassland, under stone, by hand; CSL MOR_1918.

Distribution and habitat

Marinarozelotes bardiae is a western Mediterranean species (WSC 2026). Until now, there were only two records for Morocco: Oued Cherrat (between Casablanca and Rabat), under a stone resting on highly decalcified limestone terrain (Denis 1952) and Ourika (Platnick & Murphy 1984; with the mention "MNHN"). The few data available indicate capture dates between April and June. There is currently insufficient information to attempt to define its ecology.

Marinarozelotes holosericeus (Simon, 1878)
Figs 1, 22, Table 1

Prosthesima holosericea Simon, 1878: 47, pl. 14, fig. 10 (d♂♀).

Trachyzelotes holosericeus – Platnick & Murphy 1984: 17 (♂♀).

Material examined

MOROCCO – **Taza Prov.** • 1 ♂; Bab Boudir, Tazekka NP; 34.10080° N, 4.06919° W; 1355 m a.s.l.; 15 May 2025; S. Lecigne and S. Moutaouakil leg.; on an arid, anthropized soil around a rural dwelling, at dusk, by hand; CSL MOR_1909 • 1 ♂; same locality; 34.09194° N, 4.11208° W; 1411 m a.s.l.; 16 May 2025; S. Lecigne leg.; grassland, on a rocky, shrubby slope, under stone, by hand; CSL MOR_1994 • 1 ♂; same locality; 34.12220° N, 4.03823° W; 1360 m a.s.l.; 17 May 2025; S. Lecigne leg.; sparse grassland, under *Quercus ilex*, by hand; CSL MOR_2026 • 1 ♂; same data as for preceding; 34.07840° N, 4.01941° W; 19 May 2025; S. Lecigne leg.; arid wasteland, under stone, by hand; CSL MOR_2116.

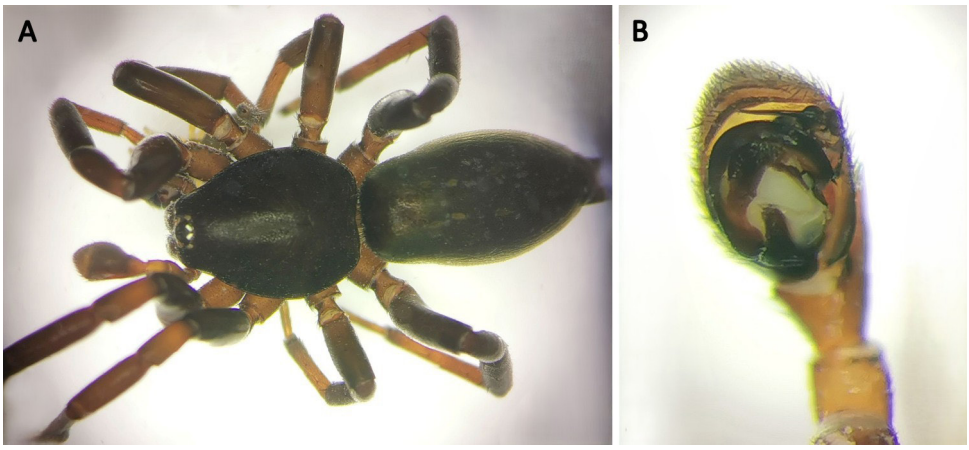


Fig. 22. *Marinarozelotes holosericeus* (Simon, 1878), ♂ (CSL MOR_1909). **A**. Dorsal view. **B**. Palp, antero-ventral view. Photos: S. Lecigne.

Distribution and habitat

Marinarozelotes holosericeus is a West Mediterranean species (WSC 2026). For Morocco, there are only three locations of the species to date: Essaouira; Ourika and a fourth one unknown (after Platnick & Murphy 1984). As with *M. bardiae,* there is currently insufficient information to determine the ecology of this species.

Genus *Nomisia* Dalmas, 1921

Nomisia tazekka Lecigne sp. nov.
urn:lsid:zoobank.org:act:2F267E70-357E-44BB-957F-64AE8DD5CF8E
Figs 1, 23, Table 1

Diagnosis

The female of *Nomisia tazekka* Lecigne sp. nov. resembles that of *N. palaestina* (O. Pickard-Cambridge, 1872) but atrium of the epigyne approximately twice as wide at the base as at the front (vs 3 times as wide at the base as at the front in *N. palaestina*) (cf. Fig. 23F vs Chatzaki 2010: 13, fig. 32) and apical part of the tubular extension of the spermathecae forming a loop (vs apical part recurved without forming a loop) (cf. Fig. 23G, dotted arrow vs Chatzaki 2010: 13, fig. 33).

Etymology

The new species is named after the Moroccan NP of Tazekka where it was found for the first time.

Material examined

Holotype
MOROCCO – **Taza Prov.** • ♀; Bab Boudir, Tazekka NP; 34.10166° N, 4.07220° W; 1392 m a.s.l.; 16–21 May 2025; S. Lecigne leg.; dry grassland, pitfall; CSL MOR_2228; SMF. Remarks: epigyne and left leg III detached.

Description

Female holotype (Fig. 23)
Measurements. Total length 6.15; carapace 2.92 long, 2.25 wide.

Colour in ethanol (Fig. 23A, B). Carapace light brown, median area of cephalic part clearer with dark convex mark on each side; edge of thoracic part of carapace darkened. Legs light brown, femora darker, tarsi clearer; sternum and chelicerae pale brown. Abdomen dark grey; venter barely paler.

Carapace. Metatarsi I–II: scopula present as 2 ventrolateral rows of small, robust black hairs in apical half.

Leg spination. Femora I–II, 2 dorsal and 1 antero-apical spines; tibiae I, 2 pairs of ventral spines; metatarsi I–II, 1 pair of ventral spines in basal half. Except patellae and tarsi, spineless, other segments with variable number of spines, more numerous on legs III–IV.

Epigyne/vulva (Fig. 23C–E). Lateral margins of atrium oblique (Fig. 23C, black arrow), resulting in an opening of the genital plate approximately twice as wide at base as at front. Septum: whitish median structure, enlarged posteriorly in an arrowhead shape (Fig. 23C, Se). Copulatory openings inconspicuous, located postero-laterally, partially concealed by lateral margin of epigyne (Fig. 23C, CO). Spermathecae subcircular, inner margin concave (Fig. 23E, Sp); extended at anterior-inner margin by tubular structure initially directed forwards and then outwards before forming posterior loop (Fig. 23E, dotted arrow). Anterior course of tubes not extending beyond anterior margin of atrium (Fig. 23D, dotted line). Fertilization ducts sickle-shaped (Fig. 23E, FD).

Fig. 23. *Nomisia tazekka* Lecigne sp. nov., holotype, ♀ (CSL MOR_2228). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne (black arrow: lateral margin of the atrium; dotted line: anterior margin of the atrium). **D**. Vulva, ventral view. **E**. Idem, dorsal view (dotted arrow: tubular extension of the spermatheca). Photos: S. Lecigne. Abbreviations: CO = copulatory opening; FD = fertilization duct; Se = septum; Sp = spermatheca. Scale bars: A–B = 1.0 mm; C–E = 0.2 mm.

Male
Unknown.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality in the Tazekka NP.

Genus *Scotophaeus* Simon, 1893

Scotophaeus dolanskyi Lissner, 2017
Fig. 24, Table 1

Scotophaeus dolanskyi – Lecigne *et al.* 2025: 132, fig. 97a–e (♂).

Material examined

MOROCCO – **Berkane Prov.** • 1 ♀; Ahfir, N17 road, between Abrouz and Bni Drar; 34.91456° N, 2.03832° W; 542 m a.s.l.; 6 Feb. 2025; S. Lecigne and S. Moutaouakil leg.; wooded slope, under stone, by hand; CSL MOR_1602.

Distribution

So far, is known from the Iberian Peninsula and Morocco (Nentwig *et al.* 2026; WSC 2026).

Genus *Zelotes* Gistel, 1848

Zelotes erythrocephalus (Lucas, 1846)

Drassus erythrocephalus Lucas, 1846: 223, pl. 13, fig. 7 (d♂♀).
Drassus scrutatus O. Pickard-Cambridge, 1872: 239, pl. 15, fig. 16a (d♂♀). **Syn. nov.**

Zelotes erythrocephalus – Marinaro 1968: 691, fig. 7 (♀). — Lecigne *et al.* 2025: 72, fig. 41a–f (d♂).
Zelotes scrutatus – FitzPatrick 2007: 111, figs 35–38 (♀). — Lecigne *et al.* 2025: 132, fig. 74i–k (♂).

Material examined

MOROCCO – **Berkane Prov.** • 1 ♂; Aïn Sfa, Beni Snassen; 34.86609° N, 2.21035° W; 1006 m a.s.l.; 24 May 2025; S. Lecigne leg.; arid, stony grassland, under stone, by hand; CSL MOR_2317.

Fig. 24. *Scotophaeus dolanskyi* Lissner, 2017, ♀ (CSL MOR_1602). **A**. Dorsal view. **B**. Epigyne. Photos: S. Lecigne.

– **Oriental Prov.** • 1 ♀; Houara Oulad Raho; 34.25597° N, 3.25468° W; 390 m a.s.l.; 25 May 2025; S. Lecigne leg.; *Eucalyptus* grove, in the litter, by hand; CSL MOR_2359. – **Oujda-Angad Pref.** • 1 ♂; Taghit, Bni Drar, Beni Snassen; 34.81237° N, 2.11348° W; 648 m a.s.l.; 24 May 2025; S. Lecigne leg.; dry, rocky grassland, under stone, by hand; CSL MOR_2332. • 1 ♂, 1 ♀; Ouled Zaïm; 34.82897° N, 2.13782° W; 985 m a.s.l.; 24 May 2025; S. Lecigne leg.; dry, rocky grassland with sparse vegetation, under stone, by hand; CSL MOR_2305. – **Séfrou Prov.** • 2 ♂♂; Bir tam Tam, near N6 road; 33.97929° N, 4.67142° W; 527 m a.s.l.; 15 May 2025; S. Moutaouakil, S. Lecigne leg.; residual lapiaz, under stone, by hand; CSL MOR_1842. – **Taounate Prov.** • 1 ♂; Oulad Ayyad, near N6 road; 34.10161° N, 4.59608° W; 216 m a.s.l.; 15 May 2025; S. Moutaouakil, S. Lecigne leg.; arid rocky wasteland, under stone, by hand; CSL MOR_1874. – **Taourirt Prov.** • 2 ♂♂; Aïn Lehjer; 34.58207° N, 2.46464° W; 609 m a.s.l.; 21 May 2025; J. Lips leg.; *Pinus* forest, under stone, at dusk, by hand; CSL MOR_2251. – **Taza Prov.** • 1 ♂; Bab Boudir, Tazekka NP; 34.11501° N, 4.04698° W; 1359 m a.s.l.; 17 May 2025; S. Lecigne leg.; rocky grassland, under stone, by hand; CSL MOR_2050. – **Tiznit Prov.** • 1 ♀; Tnine Aglou; 29.80688° N, 9.82755° W; 26 m a.s.l.; 21 Mar. 2025; S. Lecigne, K. Lecigne leg.; back beach, under stone, by hand; CSL MOR_1982.

Distribution and habitat

The range of *Z. erythrocephalus*, combined with that of *Z. scrutatus,* extends from the Canary Islands and North Africa to Central Asia (WSC 2026). The first mention of the species in Morocco (sub. *Z. scrutatus*) was in 1977 (Oulmès) (FitzPatrick 2007). Our recent observations suggest that the species is both fairly common and widely distributed in Morocco. The species frequents a wide variety of natural and anthropized xerothermophilic habitats, e.g., wasteland, stony grassland, lapiaz, coastal dunes, *Pinus* and *Eucalyptus* forests, argan groves, etc. Our observations concern altitudes between 25 m and 1360 m a.s.l. from January to July.

Remarks

It was not possible to examine the type of *Zelotes simplex* (Denis 1937) (borrowed from the MNHNP but not returned; considered unavailable sine die), synonymized by Levy (1998) with *Z. scrutatus* (O. Pickard-Cambridge, 1872). However, Denis's drawings (1937) of *Z. simplex* leave no doubt and match the photos by Lecigne *et al.* (2025) of the male palp of *Z. erythrocephalus* (Lucas, 1846), as well as of the specimens examined in the present study.

Thus, we consider *Zelotes scrutatus* (O. Pickard-Cambridge, 1872) as a junior synonym of *Z. erythrocephalus* (Lucas, 1846).

Zelotes pax Lecigne & Moutaouakil sp. nov.
urn:lsid:zoobank.org:act:D0B5360D-A4C8-4BE8-898A-E630A87FC26A
Figs 25–26, Table 1

Diagnosis

The female of *Zelotes pax* Lecigne & Moutaouakil sp. nov. resembles that of *Zelotes cornipalpus* Melic, Silva & Barrientos, 2016 but the lateral margins of the median depression are sub-vertical, anteriorly slightly divergent, and its posterior margin is indistinct (vs narrow at the top and rounded and slightly widened at basal part in *Z. cornipalpus*) (cf. Fig. 26E vs Melic *et al.* 2016: 111, fig. 2d). The male of *Zelotes pax* sp. nov. can be distinguished from other representatives of the genus both by the size and shape of the median apophysis (Fig. 25F, MA) and by the orientation and shape of the embolus, as well as by the presence of a dorsal lamellar projection pointing forwards (Fig. 25F, dotted arrow).

Etymology

The name of this new species is inspired by the Latin word '*pax*'. It is intended as an encouragement and a hope for lasting peace in Palestine, Ukraine, and more broadly, in other regions of the world plagued by conflict or war.

Material examined

Holotype

MOROCCO – **Taounate Prov.** • ♂; Oulad Ayyad, near N6 road; 34.10161° N, 4.59608° W; 216 m a.s.l.; 15 May 2025; S. Moutaouakil, S. Lecigne leg.; arid rocky wasteland, under stone, by hand; CSL MOR_1878; SMF. Remarks: left pedipalp and left leg IV detached.

Paratypes

MOROCCO – **Taounate Prov.** • 2 ♀♀; same data as for holotype; SMF. Remarks: epigyne of one female detached.

Other material examined

MOROCCO – **Taounate Prov.** • 1 ♀; same data as for holotype.

Description

Male holotype (Fig. 25)

Measurements. Total length 3.55; carapace 1.53 long, 1.27 wide; scutum 0.4 long.

Colour in ethanol (Fig. 25A). Carapace brown, darker radiations extending from fovea and lighter transverse band running from side to side across the fovea. Chelicerae brown, 2 to 3 darker diffuse vertical stripes not reaching apex. Sternum brown. Legs pale brown, tarsi paler. Abdomen dark grey, venter paler.

Carapace. Covered with black hairs lying flat, longer at rear. Chelicerae with few long, thin setae pointing forwards; outer margin with 5 minute teeth, inner margin with 1 inconspicuous blunt denticle.

Leg spination. Metatarsi II, 1 pair of ventral, sub-basal spines, other segments spineless or with variable number of spines, more numerous on legs III–IV.

Abdomen. Anterior scutum occupying about 20% of its length.

Palp (Fig. 25B–G). Tibial apophysis robust, approximately 1.3 times as long as tibia, in dorso-retrolateral position, inclined dorsally (Fig. 25G, RTA). Median apophysis extended, leaf-shaped, first oriented dorsally then folded, apical part triangular pointing ventrally (Fig. 25F, G, MA). Dorsal lamellar projection pointing forwards (Fig. 25F, dotted arrow). Embolar base largely concealed (Fig. 25F, EB), more visible in ventro-prolateral view; embolus broad, strongly sclerotized, hooked-beak shaped pointing ventrally (Fig. 25F, see E).

Female paratypes (Fig. 26; as in male except as noted)

Measurements. Total length 4.80–5.80; carapace 1.90–2.10 long, 1.50–1.65 wide.

Colour in ethanol (Fig. 26A–B).

Epigyne/vulva (Fig. 26C–E). Epigyne sub-rectangular, approximately 1.4 times as long as wide (measured at its midpoint). Anterior margins with large extension joining in median position (Fig. 26E, AEM). Lateral margins initially divergent, then anteriorly tilted inwards (Fig. 26E, LEM). Very long median depression, occupying approximately 60% of the epigynal plate; its lateral margins sub-vertical, its posterior margin indistinct. Spermatheca small, round, in contact (Fig. 26E, Sp).

Variation

Measurements min.–max. (average). Female (n = 3): total length 4.80–5.27 (5.29); carapace 1.85–2.10 (1.95) long, 1.48–1.65 (1.54) wide, CL/CW 1.25–1.27 (1.26).

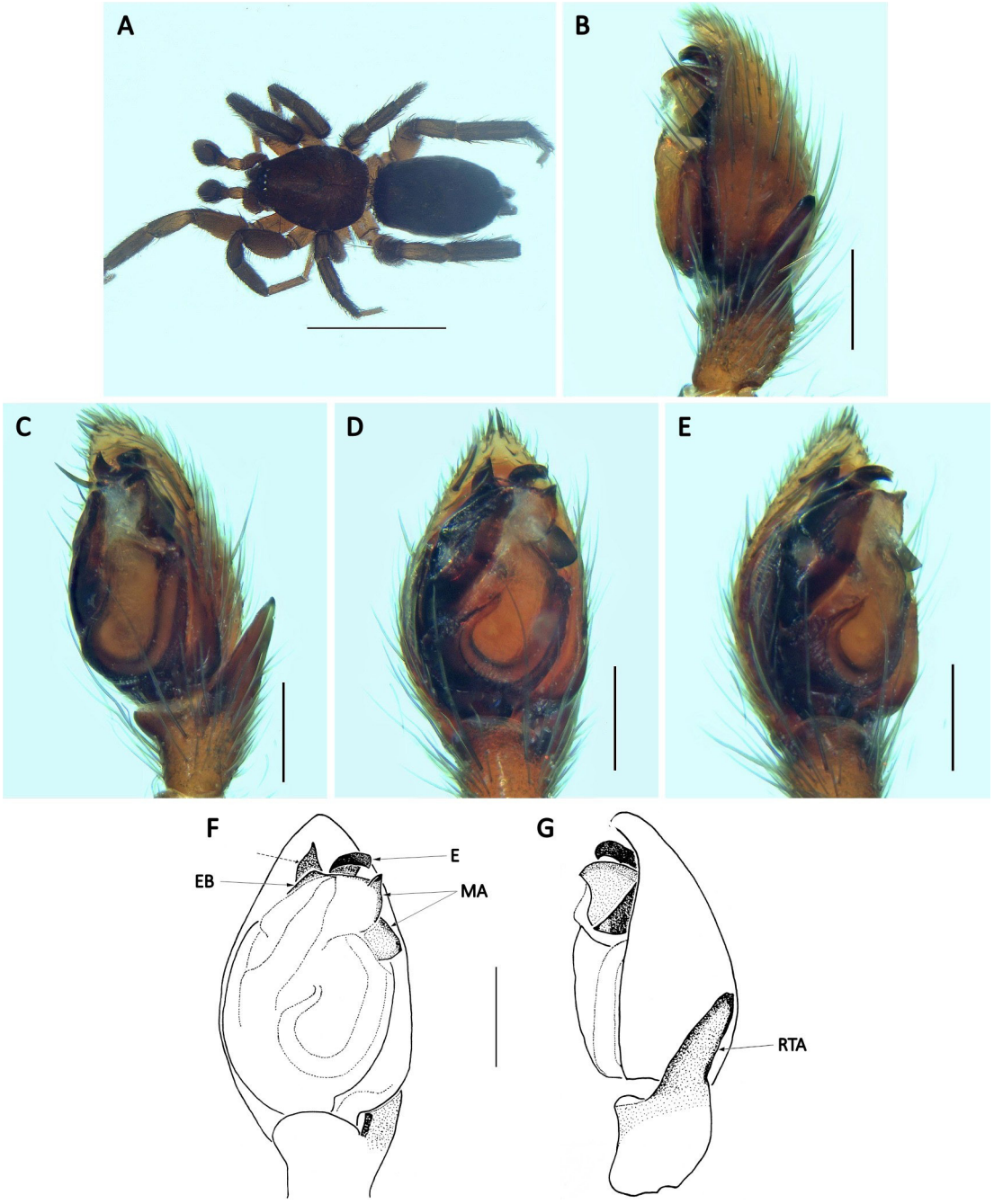


Fig. 25. *Zelotes pax* Lecigne & Moutaouakil sp. nov., holotype, ♂ (CSL MOR_1878). **A**. Dorsal view. **B, G**. Palp, retrolateral views. **C**. Idem, ventro-retrolateral view. **D**. Idem, ventral view. **E**. Idem, ventro-prolateral view. **F**. Palp, ventral view (dotted arrow: dorsal lamellar projection). Photos: P. Oger. Abbreviations: E = embolus; EB = embolar base; MA = median apophysis; RTA = palpal retrolateral tibial apophysis. Scale bars: A = 2 mm; B–G = 0.2 mm.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality, from a single station. It inhabits an arid rocky wasteland, near the Idriss I dam.

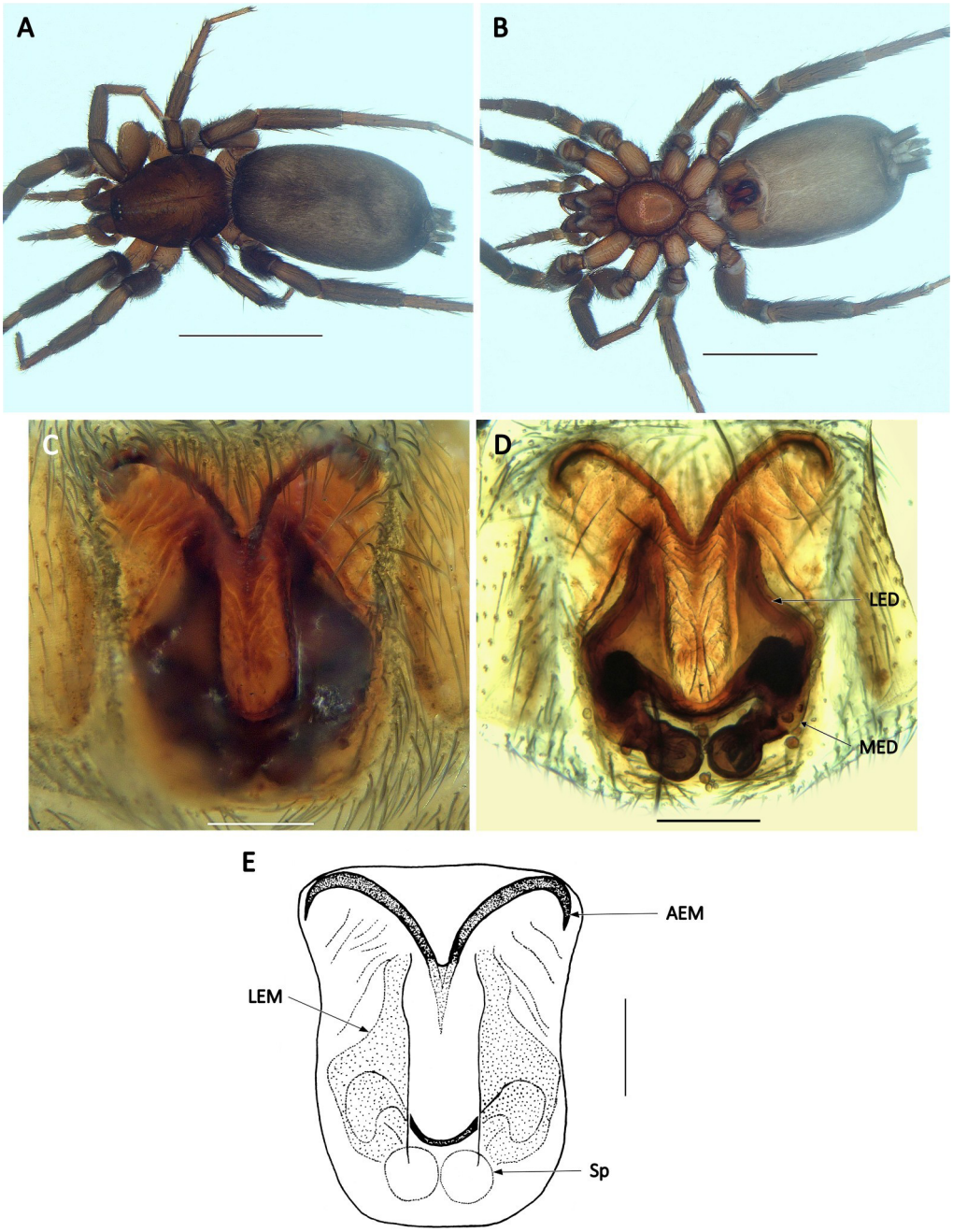


Fig. 26. *Zelotes pax* Lecigne & Moutaouakil sp. nov., paratypes, ♀ (CSL MOR_1878). **A**. Dorsal view. **B**. Ventral view. **C, E**. Epigyne. **D**. Vulva, dorsal view. Photos: S. Lecigne. Abbreviations: AEM = anterior epigynal margin; LED = lateral epigynal duct; LEM = lateral epigynal margin; MED = median epigynal duct; Sp = spermatheca. Scale bars: A–B = 2.0 mm; C–E = 0.2 mm.

Zelotes rex Lecigne sp. nov.
urn:lsid:zoobank.org:act:B5B781A3-3F59-414A-82A7-9BAD40CCC7E1
Figs 1, 3, 27, Table 1

Diagnosis

The male of *Zelotes rex* Lecigne sp. nov. can be distinguished from other representatives of the genus in the following unique combination of characters: hook-shaped median apophysis pointing ventrally, trapezoid terminal apophysis directed antero-retrolaterally (Figs 27E–F, MA, TA) and discrete embolus visible only by its tip in ventral view (Fig. 27F, see E).

Etymology

The name of the new species is the Latin translation of the word 'king', in reference to the location where it was discovered, in the dunes surrounding the Royal Palace of Agadir.

Material examined

Holotype

MOROCCO – **Agadir Ida-Outanane Pref.** • ♂; Agadir; 30.38504° N, 9.59418° W; 22 m a.s.l.; 16 to 22 Mar. 2025; S. Lecigne leg.; behind the beach, in a dune grassland and low thorny bushes, pitfall; CSL MOR_1802; SMF. Remarks: left pedipalp detached.

Other material examined

MOROCCO – **Agadir Ida-Outanane Pref.** • 1 ♂; same data as for holotype; CSL MOR_1804.

Description

Male holotype (Fig. 27)

Measurements. Total length 5.00; carapace 2.07 long, 1.61 wide; scutum 0.47 long.

Colour in ethanol (Fig. 27A). Carapace dark chocolate brown. Chelicerae reddish brown. Sternum brown. Legs brown, femora darker, metatarsi and tarsi paler except for leg III with patella and tibia also paler; femora with lighter longitudinal stripes, Fe I with a large lighter patch on inner side. Abdomen dark anthracite, ventrally barely paler.

Carapace. Shiny. Chelicerae with a few long spines pointing forwards; outer margin with 2 teeth, inner margin with 1 blunt denticle.

Leg spination. Legs I–II: patellae, tibiae, metatarsi and tarsi spineless; other segments with a variable number of spines, more numerous on legs III–IV.

Abdomen. Few long dorsal setae. Anterior scutum occupying about 18% of its length.

Palp (Fig. 27B–F). Tibial apophysis straight, not longer than tibia; tip curved inwards (Fig. 27E, RTA). Cymbium with at least 2 anterior spines. Median apophysis: distal part sclerotized, hook-shaped and pointing ventrally (Fig. 27H, MA). Terminal apophysis trapezoid, directed antero-retrolaterally (Fig. 27F, TA). Conductor membranous, edges folded outwards, gutter-shaped, tip rounded extending slightly beyond the alveolus (Fig. 27F, see C). Embolus running from retrolateral side, evenly bent (better visible from anterior view), concealed for most of its course by the tegulum, pointing at about 12 o'clock position (Fig. 27F, see E).

Female

Unknown.

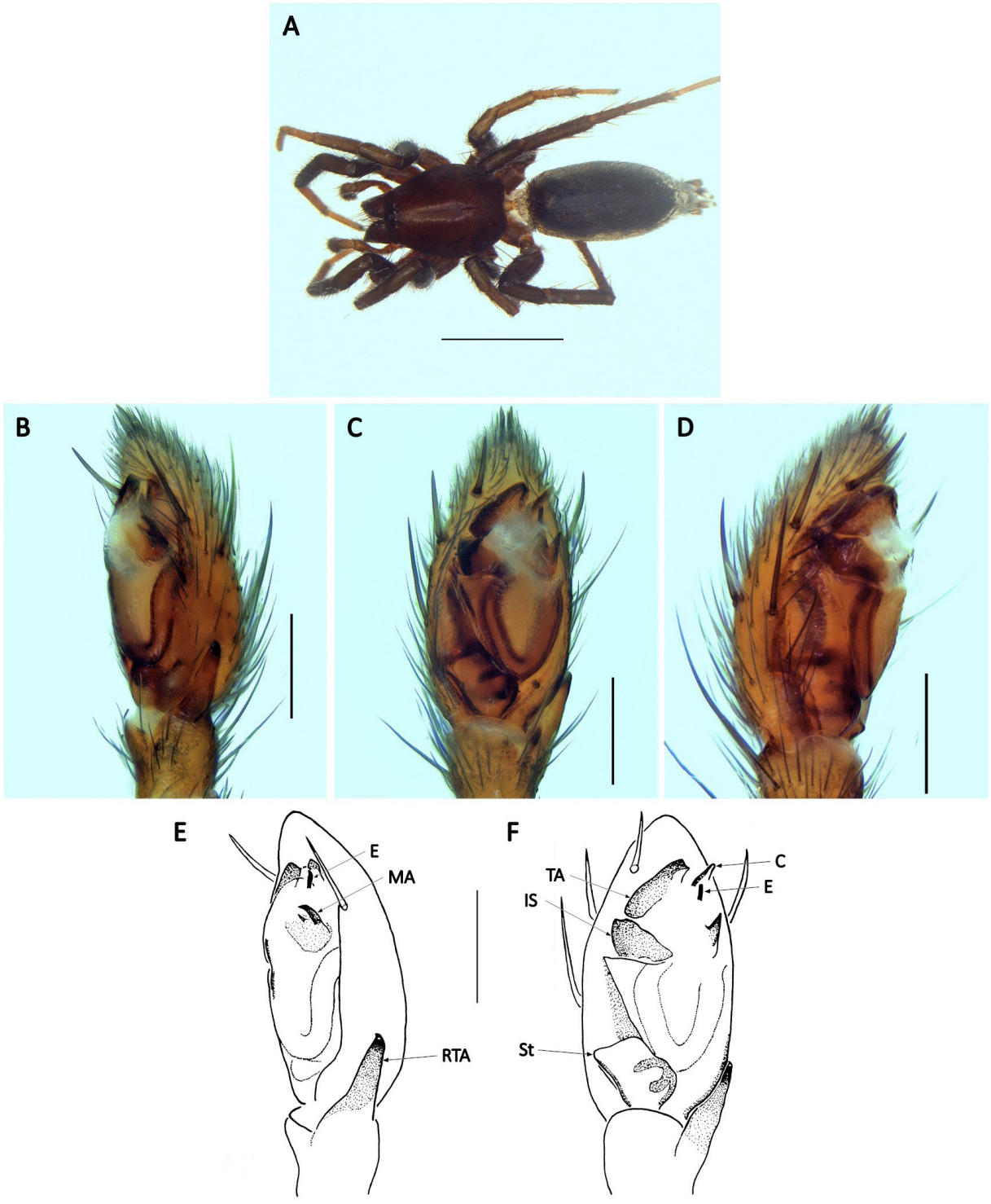


Fig. 27. *Zelotes rex* Lecigne sp. nov., holotype, ♂ (CSL MOR_1802). **A**. Dorsal view. **B, E**. Palp, ventro-retrolateral views. **C, F**. Idem, ventral views. **D**. Idem, ventro-prolateral view. Photos: P. Oger. Abbreviations: C = conductor; E = embolus; IS = intercalary sclerite; MA = median apophysis; RTA = palpal retrolateral tibial apophysis; St = subtegulum; TA = terminal apophysis;. Scale bars: A = 2 mm; B–F = 0.2 mm.

Variation

Measurements. Male (n = 2): total length 5.00–5.75, carapace 2.07–2.27 long, 1.58–1.61 wide; scutum 0.47–0.50 long.

Carapace. Chelicerae: outer margin with 2–3 teeth.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality, from a single location, in a sparse dune vegetation and low thorny bushes, near the mouth of Oued Souss River.

Zelotes s. lat. ***subcallidus*** Lecigne sp. nov.
urn:lsid:zoobank.org:act:D46651E1-BCED-4D68-B01B-81EAA597C1A0
Figs 1, 3, 28, Table 1

Diagnosis

The male of *Zelotes* s. lat. *subcallidus* Lecigne sp. nov. resembles that of *Zelotes callidus* (Simon, 1878) but the tip of the RTA is bent and bifid; the prolateral projection of the embolar base is straight and directed forwards (teeth-like) and the pointed tip of the median apophysis is directed ventrally (vs tip of RTA straight and not bifid; prolateral projection of the embolar base bent outwards (hooked-shape) and tip of the median apophysis pointing outwards) (cf. Fig. 28E, RTA and Fig. 28F, EB, MA vs Senglet 2004: 105, figs 47–48 sub. *Zelotes ruscinensis*). Moreover, the anterior projection of the tegulum is longer and more pointed in the new species (cf. Fig. 28E, dotted arrow vs Senglet 2004: 105, fig. 48).

Etymology

The species epithet derives from the similarity of the new species to *Zelotes callidus*.

Material examined

Holotype

MOROCCO – **Agadir Ida-Outanane Pref.** • ♂; Agadir; 30.38618° N, 9.59505° W; 15 m a.s.l.; 16–22 Mar. 2025; S. Lecigne, K. Lecigne leg.; coastal environment, wooded dune, in thick litter of dead leaves, pitfall; CSL MOR_1792; SMF. Remarks: left pedipalp detached; right leg II missing.

Paratype

MOROCCO – **Berkane Prov.** • 1 ♂; Ahfir, N17 road, between Abrouz and Bni Drar; 34.91456° N, 2.03832° W; 542 m a.s.l.; 6 Feb. 2025; S. Lecigne, S. Moutaouakil and K. Lecigne leg.; wooded slope, under stone, by hand; CSL MOR_1834. Remarks: subadult specimen raised to maturity.

Other material examined

MOROCCO – **Agadir Ida-Outanane Pref.** • 1 ♂; same data as for holotype. Remarks: subadult specimen raised to maturity.

Description

Male holotype (Fig. 28)

Measurements. Total length 7.00; carapace 3.23 long, 2.35 wide; scutum 0.87 long.

Colour in ethanol (Fig. 28A). Carapace and sternum dark yellow; fovea dark brown; chelicerae and sternum pale orange. Abdomen dark grey, sides and venter pale grey, spinnerets pale orange.

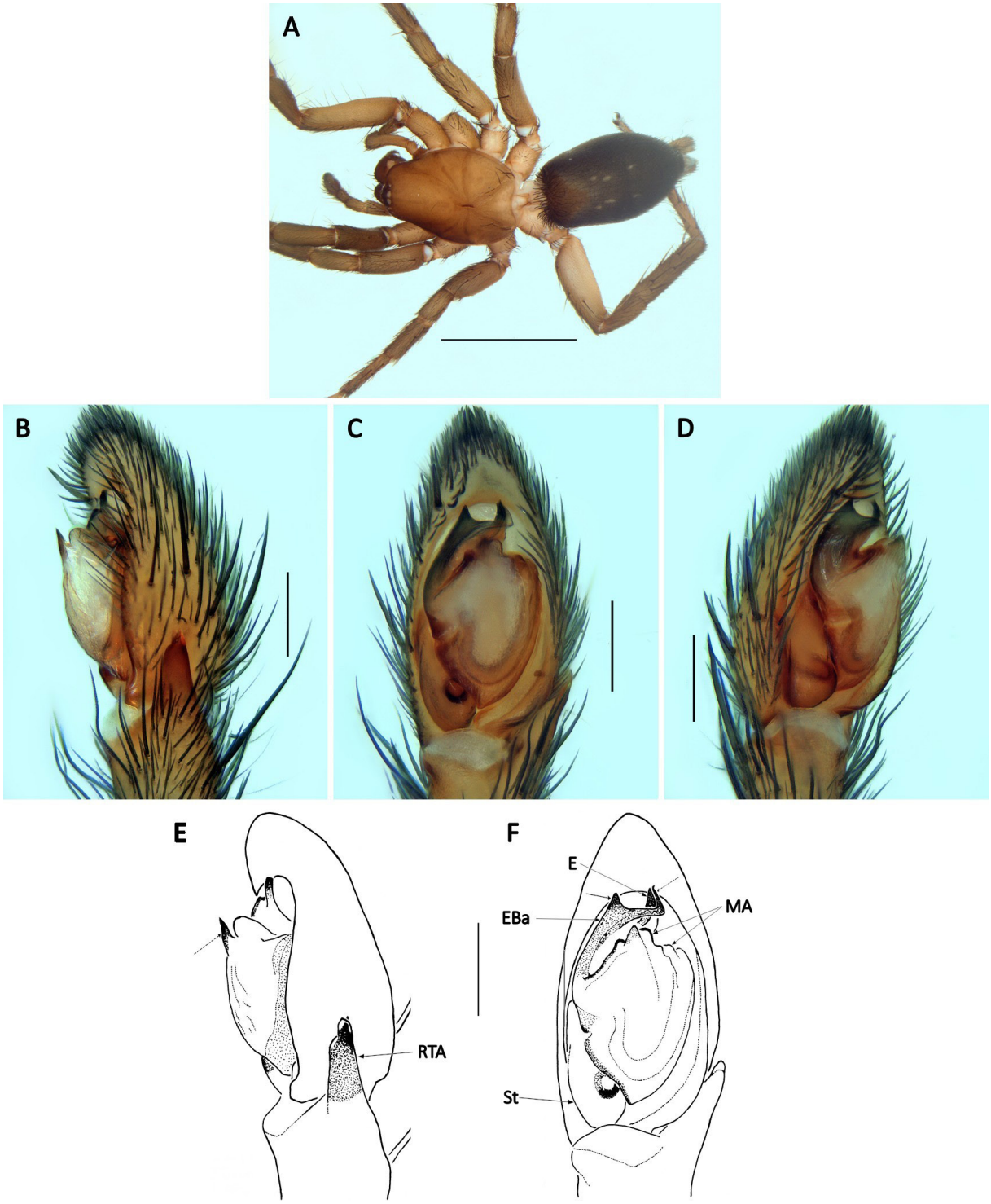


Fig. 28. *Zelotes* s. lat. *subcallidus* Lecigne sp. nov., holotype, ♂ (CSL MOR_1792). **A**. Dorsal view. **B**. Palp, retrolateral view. **C**. Idem, ventral view. **D**. Idem, ventro-prolateral view. **E**. Idem, retrolateral view (dotted arrow: pointed tegular projection). **F**. Idem, ventral view (black arrow: prolateral embolic tooth; dotted arrow: apical embolic projection). Photos: P. Oger. Abbreviations: E = embolus; EBa = apical margin of embolar base; MA = median apophysis; RTA = palpal retrolateral tibial apophysis; St = subtegulum. Scale bars: A = 3 mm; B–F = 0.2 mm.

Carapace. Dorsally covered with dark, very short, flat and barely perceptible hairs. At rear, on each side, 1 oblique row of 5 to 6 long black setae, directed towards fovea without reaching it. Sternum also covered with dark short flat hairs; edges covered with medium-length black erect setae. Chelicerae with few short, medium and long setae pointing forwards; outer margin with 3 proximal teeth and then 4 denticles, inner margin with 2 blunt denticles, one additional median inconspicuous denticle.

Leg spination. Metatarsi II: 1 pair of ventral sub-basal spines, 1 ventral median spine; other segments spineless or with variable number of spines, more numerous on legs III–IV.

Abdomen. With 3 pairs of dosrsal sigilla. Scutum occupying about ¼ of its length.

Palp (Fig. 28B–F). Tibial apophysis half the length of tibia; tip bifid, slightly bent inwards, ventral part widest, lamellar, dorsal part partially hidden by the former, tooth-shaped (Fig. 28E, RTA). Tibia and cymbium with few dorsal stout spines. Tegulum with anterior projection, arrowhead-shaped pointing anteriorly (Fig. 28E, dotted arrow). Median apophysis discrete, tip folded, tooth like and pointing ventrally (Fig. 28F, MA). Apical margin of embolic base with 2 projections pointed anteriorly (Fig. 28F, EBa): prolateral, heavily sclerotized, broad, tooth-like (Fig. 28F, black arrow); apical projection thinner and curved around embolus, tip spine-like directed dorsally (Fig. 28F, dotted arrow). Embolus broad, terminal part truncated, pointing at about 12 o'clock position (Fig. 28F, see E).

Female

Unknown.

Variation

Measurements min.–max. (average). Male (n = 3). Medium size species. Total length 6.30–7.00 (6.77), carapace 2.83–3.23 (3.10) long, 2.00–2.35 (2.22) wide, CL/CW 1.38–1.42 (1.40); scutum length / abdomen length (%) 24–26 (25).

Carapace. Chelicerae: outer margin with 3–4 proximal teeth and then 3–4 denticles.

Abdomen. Dorsal sigilla not always visible.

Distribution and habitat

Endemic to Morocco? To date, known only from two locations, nearly 900 km apart. Although it appears to be widely distributed, it remains to be clarified whether *Zelotes* s. lat. *subcallidus* Lecigne sp. nov. is actually uncommon and/or under-surveyed. So far, it has been found in coastal areas and inland near a road, only in wooded areas, under stone or in dead leaf litter.

Family Linyphiidae Blackwall, 1859
Genus *Canariphantes* Wunderlich, 1992

Canariphantes naili (Bosmans & Bouragba, 1992)
Figs 1, 2, 29, Table 1

Lepthyphantes naili Bosmans & Bouragba, 1992: 254, figs 17–22 (d♂♀).

Canariphantes naili – Lecigne *et al.* 2025: 75, fig. 43a–f (♀).

Material examined

MOROCCO – **Taza Prov.** • 1 ♂, 2 ♀♀; Bab Boudir, Ghar Bab M' Tik Cave, Tazekka NP; 34.12478° N, 4.04804° W; 1422 m a.s.l.; 17 May 2025; S. Lecigne leg.; cave, by hand; CSL MOR_2035.

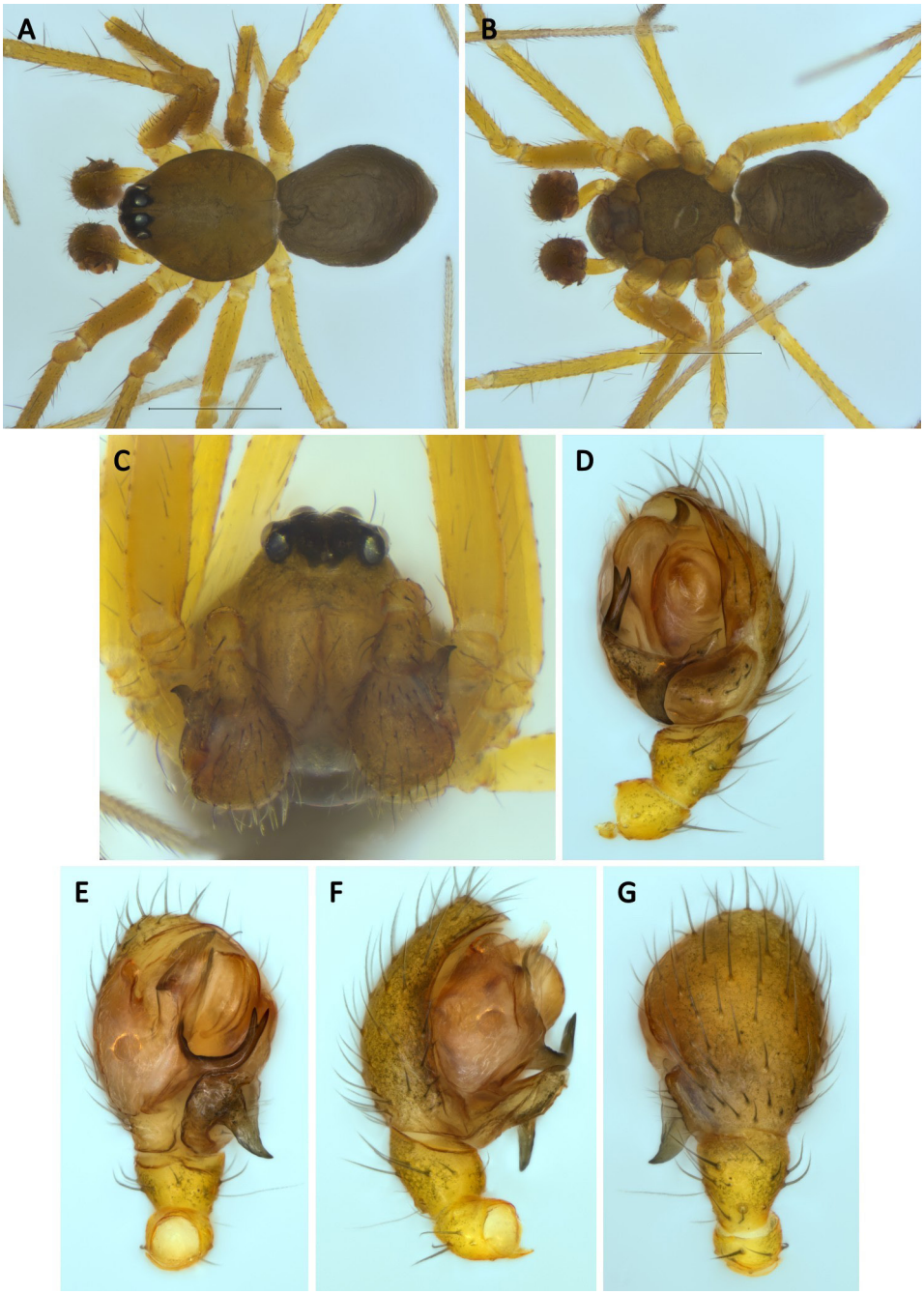


Fig. 29. *Canariphantes naili* (Bosmans & Bouragba, 1992), ♂ (CSL MOR_2035). **A**. Dorsal view. **B**. Ventral view. **C**. Front view. **D**. Palp, ventro-retrolateral view. **E**. Idem, ventral view. **F**. Idem, prolateral view. **G**. Idem, dorsal view. Photos: N. Hénon. Scale bars: A–B = 0.5 mm.

Distribution and habitat

Canariphantes naili is currently known from Morocco and Algeria (possibly Spain, Hernández-Corral *et al.* 2025) in wooded habitats (Lecigne *et al.* 2025).The new record is the first of the species in a subterranean environment.

Genus *Diplocephalus* Bertkau, 1883

Diplocephalus bosmansi Lecigne, 2025
Figs 1, 2, 30, Table 1

Diplocephalus bosmansi Lecigne *et al.*, 2025: 77, fig. 44a–h (d♀).

Material examined

MOROCCO – **Taza Prov.** • 1 ♂, 4 ♀♀, 2 juv.; Bab Boudir, Bouslama Cave, Tazekka NP; 34.09194° N, 4.11208° W; 1411 m a.s.l.; 16 May 2025; S. Lecigne, S. Moutaouakil and B. Lips leg.; cave, by hand; CSL MOR_2014. Remarks: the male will be deposited at SMF; left pedipalp detached.

Diagnosis

Male of *Diplocephalus bosmansi* Lecigne, 2025 resembles *D. inanis* Tanasevitch, 2014 e.g., size, colour, ecology (troglobitic species), eyes totally reduced, shape of the radical apophysis with two-pointed process of different lengths. However, the palpal tibia of the new species, shaped like a lobe, occupies the entire width of the cymbium, is smooth on its outer edge and indented on its anterior and inner margins (vs narrower than the width of the cymbium and its margins completely smooth in. *D. inanis*) (cf. Fig. 30G vs Tanasevitch 2014: 280, fig. 7).

Description

Male (Fig. 30; as in female after Lecigne *et al.* 2025: 79, except as noted)
Measurements. Total length 1.24; carapace 0.54 long, 0.46 wide.

Colour in ethanol (Fig. 30A–C). Carapace pale yellow, cephalic area barely darker; chelicerae pale orange. Legs and sternum pale yellow. Abdomen whitish.

Carapace. Cephalic part slightly elevated; few short setae, slightly more numerous anteriorly; sulci present; eyes totally reduced. Cheliceral outer margin armed with 4 strong teeth (Fig. 30C). Sternum nearly as wide as long.

Leg spination and Chaetotaxy. Tibial spine formula 2211; position of trichobothrium on metatarsus I 0.32, metatarsus IV without trichobothrium.

Palp (Fig. 30D–I). Tibial apophysis lobe-shaped, as wide as cymbium, outer margin thickened, rounded and translucent (Fig. 30H, TA), anterior margin inclined inward, serrated and sclerotized (Fig. 30G). Distal suprategular apophysis developed as a long transverse and slightly curved lamella, directed inwards, narrowing in distal part (Fig. 30H–I, DSA). Embolic division large, distal radical apophysis with 2 convex pointed process of different lengths, directed forwards (Fig. 30I, DRA); presence of a short and strong distal radical tooth, beak-like (Fig. 30F, DRT). Embolus relatively short, strongly curved distally, tip directed ventrally (Fig. 30I, see E).

Distribution and habitat

Diplocephalus bosmansi is only known from the type locality (Bouslama Cave, Bab Boudir, Tazekka NP). The species is endemic to Morocco.

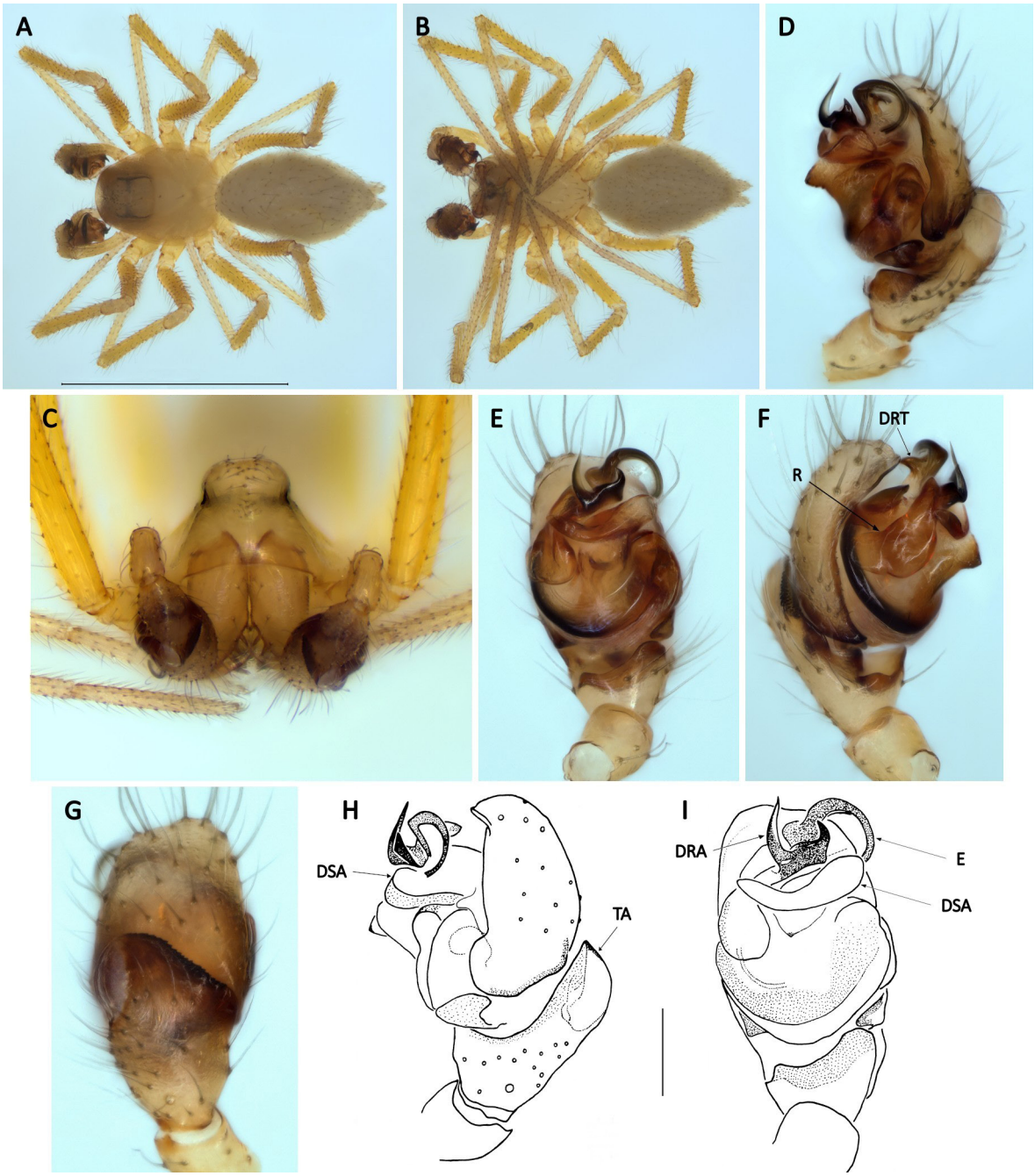


Fig. 30. *Diplocephalus bosmansi* Lecigne, 2025, ♂ (CSL MOR_2014). **A**. Dorsal view. **B**. Ventral view. **C**. Frontal view. **D**. Palp, ventro-retrolateral view. **E, I**. Idem, ventral views. **F**. Idem, ventro-prolateral view. **G**. Palpal tibial apophysis, dorsal view. **H**. Palp, retrolateral view. Photos: N. Hénon. Abbreviations: E = embolus; DRA = distal radical apophysis; DRT = distal radical tooth; DSA = distal suprategular apophysis; R = radix; TA = tibial apophysis. Scale bars: A = 1 mm; H–I = 0.05 mm.

Genus *Lepthyphantes* Menge, 1866

Lepthyphantes noeli Barrientos & Brañas, 2024
Figs 1–2, 31, Table 1

Lepthyphantes noeli Barrientos *et al.,* 2024: 106, figs 4, 5a–c, pl. 2a–c (d♀).

Lepthyphantes noeli – Lecigne *et al.* 2025: 86, fig. 49a–e (♀).

Diagnosis

The conformation of the embolic division (in particular the appearance of the radix, the lamella characteristica and the suprategular and terminal apophyses) together with the shape of the paracymbium (see description) distinguish the male of *L. noeli* from the other congeners.

Material examined

MOROCCO – **Oujda-Angad Pref.** • 1 ♂, 12 ♀♀; Berkane, Ifrane Yaâcoube, Takerbouste, Jbel Tamajjout, Zegzel Rd, Jlida 2 cave (type loc.) ; 34.86472° N, 2.36075° W ; 542 m a.s.l. ; 23 May 2025; S. Lecigne, S. Moutaouakil and J. Lips leg. ; by hand ; CSL MOR_2192. Remarks: the male will be deposited at SMF; left pedipalp detached.

Description

Male (Fig. 31)

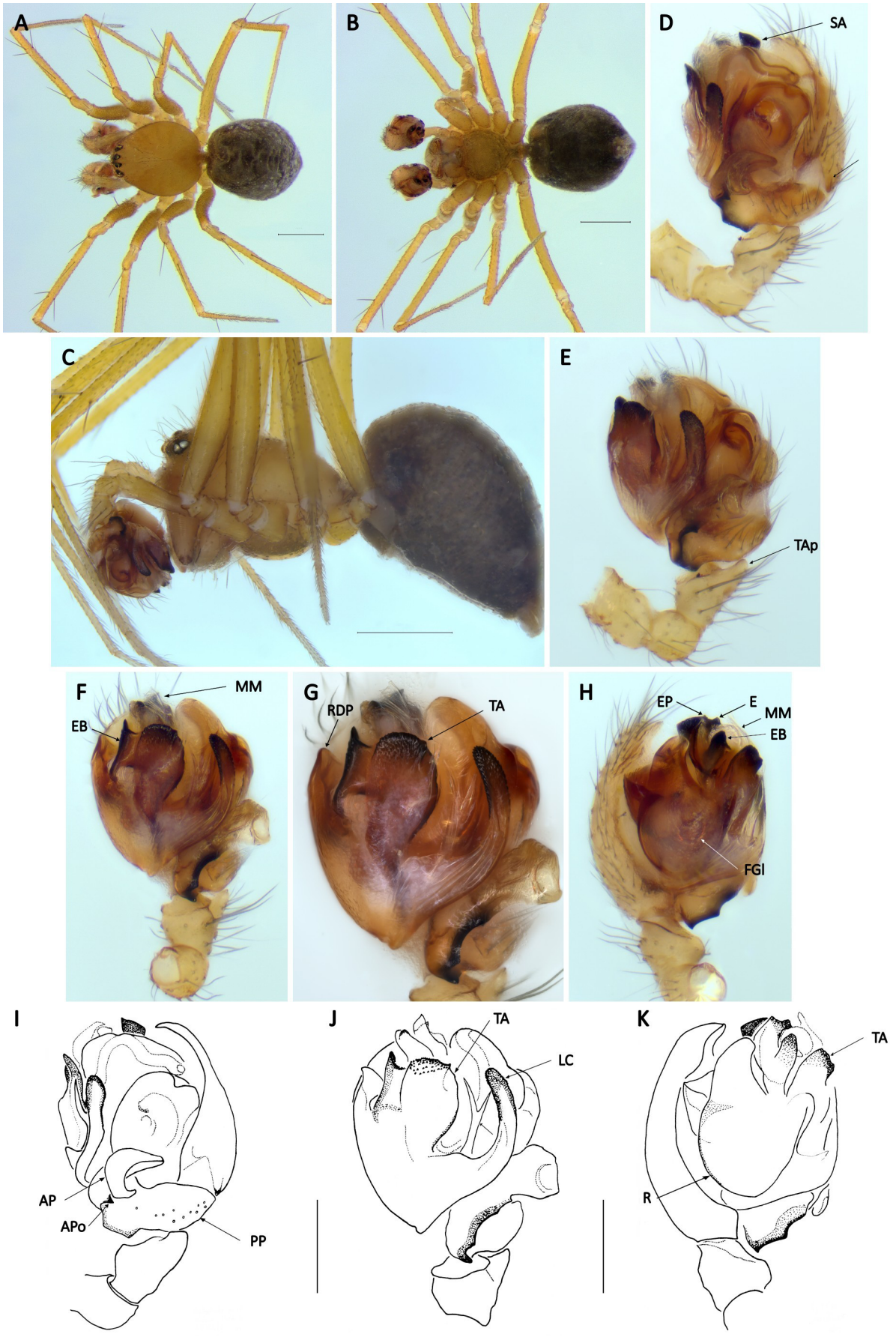
Measurements. Total length 2.20; carapace 0.95 long, 0.81 wide; sternum 0.5 long, 0.53 wide; Ti I 1.47; Mt I 1.4.

Colour in ethanol (Fig. 31A–C). Carapace, sternum and legs pale yellow, chelicerae barely darker. Abdomen greyish, with vague darker transverse markings.

Carapace. Cheliceral outer margin armed with 3 teeth, the middle one strongest. Sternum almost as long as wide. Cephalic part of carapace and eyes area with few setae of medium size.

Leg spination and chaetotaxy. Fe I, 1 prolateral spine; Pa I–IV, 1 dorsal spine; tibial spine formula 2222, Ti I, position of first dorsal spine 0.28, position of second dorsal spine 0.74, 1 prolateral and 1 retrolateral spines, Ti II 1 retrolateral spine; Mt I, 1 dorsal spine, position of trichobothrium 0.17, Mt II–IV, 1 dorsal spine, Mt IV without trichobothrium.

Palp (Fig. 31D–K). Patella with 1 long dorsal seta directed forwards (Fig. 31C). Tibia with short and rounded dorso-retrolateral apophysis (Fig. 31E, TAp). Cymbium with inconspicuous postero-retrolateral protrusion, moderately sclerotized and rounded (Fig. 31D, black arrow) (better visible in dorsal view). Paracymbium: proximal area with about 10 setae (Fig. 31I, PP); anterior pocket consisting of short, stout dorsally pointing projection (Fig. 31I, APo); edges of apical part folded, widened distally and rounded, overall gutter-shaped appearance (Fig. 31I, AP). Radix broad and rounded (Fig. 31K, R), with slightly curved and rounded dorsal projection directed outward (Fig. 31G, RDP). Fickert's gland hardly visible through transparency (Fig. 32H, FGl). Lamella characteristica long and narrow, evenly curved, apical part more sclerotized and covered with denticles (Fig. 31J, LC); 1 additional forked branch, translucent, tapered and sharply pointed (Fig. 31J, black arrow). Terminal apophysis narrow at base then widened, tongue-like, apical area sclerotized and covered with denticles (Fig. 31G, J, K, TA). Base of embolus wide, sclerotized (Fig. 31F, EB), tip rounded (internal view; Fig. 31H, EB). Apical part of suprategular apophysis enlarged, strongly sclerotized, tip pointed, directed ventrally (only visible in lateral views, Fig. 31D, SA).


A
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Distribution and habitat

Lepthyphantes noeli is only known from the type locality (Jlida 2 cave, Berkane, Beni Snassen). The species is endemic to Morocco.

Remarks

Lepthyphantes noeli is an endemic subterranean species of the Moroccan High Atlas, from Jlida Cave, recently described from 2 female specimens (Barrientos *et al.* 2024). We describe the unknown male, sampled together with several females from the same cave (type locality).

Lepthyphantes s. lat. ***ntafaghi*** Lecigne sp. nov.
urn:lsid:zoobank.org:act:4F54A702-99A4-4A90-A664-D595111674CB
Figs 1–2, 32–33, Table 1

Diagnosis

Analysis of the genital structures of both sexes clearly reveals a close relationship between *Lepthyphantes* s. lat. *ntafaghi* Lecigne sp. nov. and *L. noeli*. However, the male of the new species can be distinguished in particular both by the length of the lamella characteristica extending forward beyond the terminal apophysis, and by the shape of the bifid extension of the lamella characteristica, with only one branch being pointed (vs terminal apophysis extending forward beyond the lamella characteristica and the bifid extension of the terminal apophysis, forked, bearing two tapered and sharply pointed process in *L. noeli*) (cf. Fig. 32K, LC, TA and black arrow vs Fig. 31J, LC, TA and black arrow). The female of the new species can be distinguished by the width of the long sclerotized structure, slightly narrower in its last third, as well as by the width of the stretcher, almost as wide as latter (vs edges of the sclerotized structure subparallel and stretcher markedly narrower than apex of anterior and lateral walls fused in *L. noeli*) (cf. Fig. 33D and 33F, ALW, St vs Barrientos *et al.* 2024: 107, fig. 5a, lw, st). In addition, spermathecae only coil two times (vs three times in *L. noeli*) (cf. Fig. 33F, Sp vs Barrientos *et al.* 2024: 107, fig. 5c, re).

Etymology

The new species is named after the cave “Ifri N’Tafaghi” where it was discovered.

Material examined

Holotype

MOROCCO – **Berkane Prov.** • ♂; Aïn Sfa, Ifri N’Tafaghi, Beni Snassen; 34.86710° N, 2.21328° W; 945 m a.s.l.; 24 May 2025; S. Lecigne, B. Lips leg.; cave, by hand; CSL MOR_2198; SMF. Remarks: left pedipalp detached.

Paratypes

MOROCCO – **Berkane Prov.** • 3 ♀♀; same data as for holotype; SMF. Remarks: epigyne of one female detached.

Fig. 31 (on previous page). *Lepthyphantes noeli* Barrientos & Brañas, 2024, ♂ (CSL MOR_2192). **A**. Dorsal view. **B**. Ventral view. **C**. Lateral view. **D, I**. Palp, retrolateral views. **E**. Idem, ventro-retrolateral view. **F–G**. Idem, ventral views. **H, K**. Idem, prolateral views. **J**. Idem, ventral view (black arrow: additional forked branch of the lamella characteristica). Photos: N. Hénon. Abbreviations: AP = apical part of paracymbium; APo = anterior pocket of paracymbium; E = embolus; EB = base of embolus; EP = embolus proper; FGl = Fickert’s gland; LC = lamella characteristica; MM = median membrane; PP = proximal part of paracymbium; R = radix; RDP = radix dorsal projection; SA = suprategular apophysis; TA = terminal apophysis; TAp= tibial apophysis. Scale bars: A–C = 0.5 mm; I–K = 0.2 mm.

Other material examined

MOROCCO – **Berkane Prov.** • 3 ♀♀; same data as for holotype.

Description

Male holotype (Figs 32, 33I)

Measurements. Total length 1.94; carapace 1.07 long, 0.89 wide; sternum 0.55 long, 0.54 wide; chelicerae 0.38 long; Ti I 1.60; Mt I 1.54.

Colour on live specimen (Fig. 33I).

Colour in ethanol (Fig. 32A–C). Carapace and legs pale yellow, thoracic part and chelicerae barely darker; sternum whitish. Abdomen pale yellow.

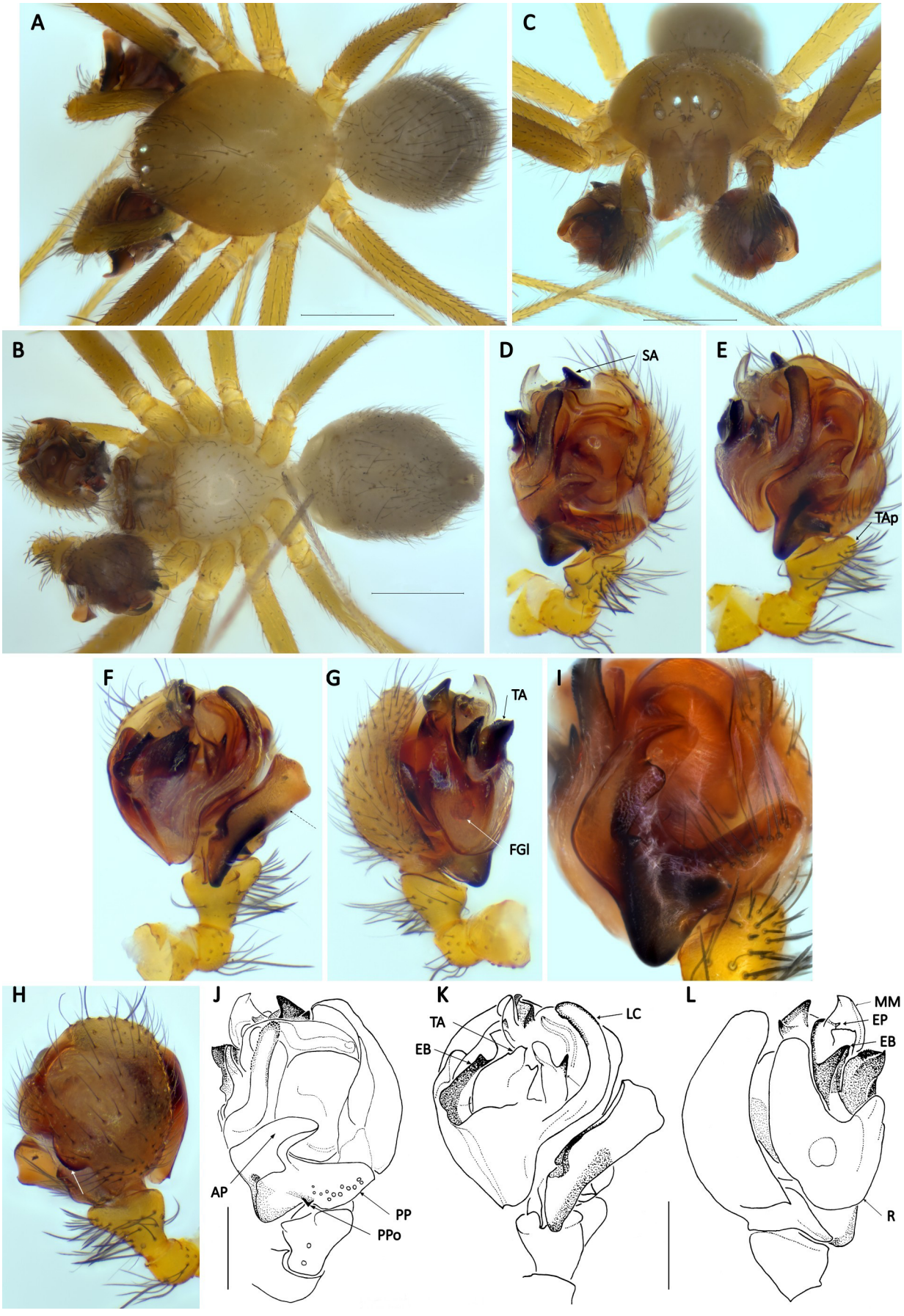
Carapace. Eyes pale, whitish. Cephalic part of carapace and eyes area with few setae of medium size; thoracic part with few scattered short setae. Cheliceral inner margin with 4 minute teeth, the proximal one the largest; outer margin armed with 3 teeth. Sternum almost as wide as long.

Leg spination and chaetotaxy. Fe I, 1 prolateral spine; Pa I–IV, 1 dorsal spine; tibial spine formula 2222, Ti I, position of first dorsal spine 0.29, position of second dorsal spine 0.72, 1 prolateral and 1 retrolateral spines, Ti II 1 retrolateral spine; Mt I, 1 dorsal spine, position of trichobothrium 0.11, Mt II–III, 1 dorsal spine, Mt IV without trichobothrium.

Abdomen (Fig. 32A). Covered with long dark hairs.

Palp (Fig. 32D–L). Patella dorsally with one spine and few long setae; dorsal and outer sides of tibiae with a fairly dense group of medium spines and long setae (Fig. 32D–E). Tibia with a short and rounded dorso-retrolateral apophysis (Fig. 32E, TAp). Cymbium with a postero-retrolateral protrusion, margin moderately sclerotized and rounded (Fig. 32H, white arrow). Paracymbium: proximal area with about twelve setae (Fig. 32J, PP); posterior pocket consisting of a short, stout backward pointing projection (Fig. 32J, PPo); median and apical parts almost four times as long as wide (Fig. 32F, black arrow). Radix with a broad and rounded basal part (Fig. 32L, R), and an elongated dorsal projection, its apical part rounded and slightly curved. Fickert's gland visible through transparency (Fig. 32G, FGl). Lamella characteristica long and narrow, ruban-like evenly curved, extending forward to apex of bulb; inner margin and apical part covered with numerous denticles (Fig. 32K, LC); one additional bifurcated branch, outer part short, pointed and sclerotized, inner part longer, rounded, with folded edges, mainly translucent (Fig. 32K, black arrow). Terminal apophysis very wide, apical margin highly irregular (Fig. 32K, TA). Base of embolus wide, sclerotized (Fig. 32K, see EB). Apical part of suprategular apophysis enlarged, strongly sclerotized, tip pointed, directed antero-ventrally (Fig. 32D, SA).

Fig. 32 (on next page). *Lepthyphantes* s. lat. *ntafaghi* Lecigne sp. nov., holotype, ♂ (CSL MOR_2198). **A**. Dorsal view. **B**. Ventral view. **C**. Front view. **D, J**. Palp, retrolateral views. **E**. Idem, ventro-retrolateral view. **F**. Idem, ventral view (dotted arrow: median and apical parts of the paracymbium). **G, L**. Idem, prolateral views. **H**. Idem, dorsal view (white arrow: postero-retrolateral protrusion of the cymbium). **I**. Idem, paracymbium, retrolateral view. **K**. Palp, ventral view (black arrow: additional bifurcated branch of the lamella characteristica). Photos: N. Hénon. Abbreviations: AP = apical part of paracymbium; EB = base of embolus; EP = embolus proper; FGl = Fickert's gland; LC = lamella characteristica; MM = median membrane; PP = proximal part of paracymbium; PPo = posterior pocket of paracymbium; R = radix; SA = suprategular apophysis; TA = terminal apophysis; TAp = tibial apophysis. Scale bars: A–C = 0.5 mm; J–L = 0.2 mm.


A
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R

Females paratypes (Fig. 33A–H; as in male except as noted)
Measurements (see variation). Total length 2.70; carapace 1.08 long, 0.83 wide; sternum 0.58 long, 0.62 wide; genital structure 0.52 long.

Colour in ethanol (Fig. 33A–C). Fovea pale brown, barely visible.

Carapace. Eyes surrounded by a small black areola; second specimen with pale, whitish and partially reduced eyes. Clypeus slightly prominent, evenly bulging along its entire width. Cheliceral inner margin with 5–6 minute teeth, the proximal one the largest. Sternum 1.2 times as wide as long.

Leg spination and chaetotaxy. Fe I, 1 prolateral spine; Ti I, position of first dorsal spine 0.27, position of second dorsal spine 0.70; Mt I, position of trichobothrium 0.13, Mt II–IV, 1 dorsal spine.

Epigyne/vulva (Fig. 33D–H). Anterior wall of the epigyne elongated and fused with the lateral walls, together forming a long (about 0.75 the length of the sternum) well-sclerotized rigid and convex structure (Fig. 33B, dotted arrow; Fig. 33D, G, ALW); margins subparallel, apical third barely narrowed. Scape completely covered and hidden by ALW . Stretcher almost as wide as apical part of ALW (Fig. 33G, St). Spermathecae at the base of the structure, coiled (Fig. 33F, Sp); fertilization ducts wide, visible through transparency.

Variation

Colour in ethanol. Female: several specimens with a dorsal abdominal pattern consisting of 5 recurved greyish transverse bars; area around the spinnerets greyish.

Measurements min.–max. (average). Female (n = 3 unless otherwise stated): total length (n = 6) 2.15–3.05 (2.55), carapace 0.98–1.13 (1.08) long, 0.75–0.90 (0.83) wide, CL/CW 1.25–1.32 (1.29); sternum 0.53–0.60 (0.58) long, 0.55–0.65 (0.62) wide; genital structure 0.50–0.57 (0.52) long.

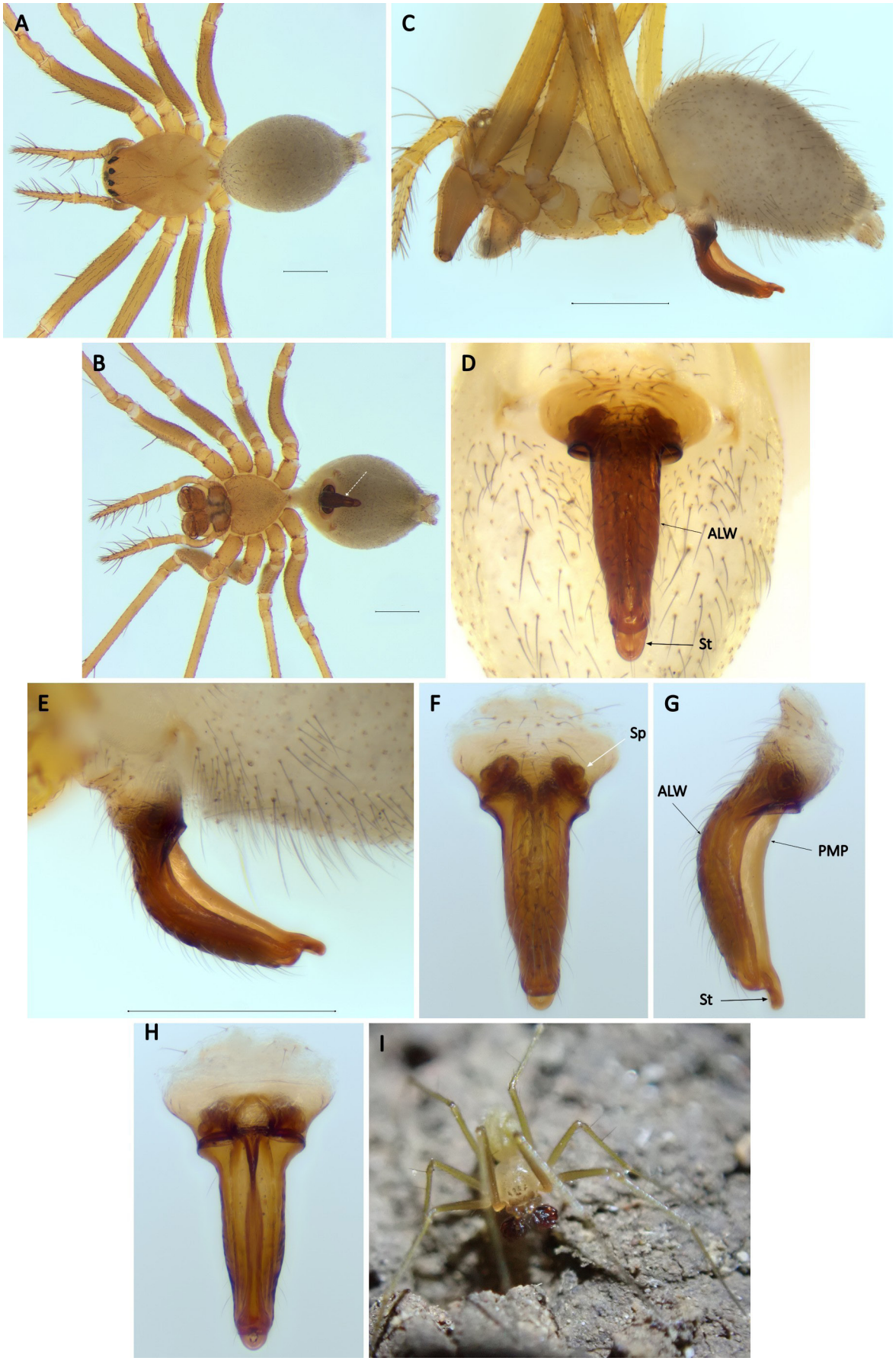
Leg spination and chaetotaxy (in brackets: less frequent pattern for spines number). Male (n = 1): Ti I, 1–2 retrolateral spine(s). Female (n = 4): Fe I, 1 (2) prolateral spine; Ti I, position of first dorsal spine 0.24–0.28, position of second dorsal spine 0.67–0.73, Ti II 0 (1) prolateral and 1 (2) retrolateral spine(s), Ti III 0 (1) prolateral and 0 (1) retrolateral spine(s), Ti IV 0 (1) retrolateral spine; Mt I, position of trichobothrium 0.12–0.13.

Carapace. Females: eyes surrounded by a small black areola but one specimen with pale, whitish and partially reduced eyes.

Distribution and habitat

Lepthyphantes s. lat. *ntafaghi* sp. nov., only known from the type locality (Ifri N'Tafaghi Cave, Aïn Sfa, Beni Snassen), is closely related to *L. noeli*. Both species can be regarded as troglobitic and endemic to Morocco; they are known only from their type localities, approximately 13 km apart.

Fig. 33 (on next page). *Lepthyphantes* s. lat. *ntafaghi* Lecigne sp. nov. **A–H**. Paratypes, ♀ (CSL MOR_2198). **I**. Holotype, ♂ (CSL MOR_2198). **A**. Dorsal view. **B**. Ventral view. **C**. Lateral view. **D**. Epigyne, ventral view. **E**. Idem, lateral view. **F**. Vulva, ventral view. **G**. Idem, lateral view (dotted arrow: sclerotized rigid structure). **H**. Idem, dorsal view. **I**. Antero-dorsal view. Photos: N. Hénon. Abbreviations: ALW = anterior and lateral walls, fused (forming sclerotized rigid structure); PMP = posterior median plate; Sp = spermatheca; St = stretcher. Scale bars: A–C, E = 0.5 mm.


A
C
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ALW
St
E
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Sp
G
ALW
PMP
St
H
I

Remarks

The new species fit the chaetotaxy of the genus *Lepthyphantes* Menge, 1866 sensu Saaristo & Tanasevitch (1996) but shows a very particular lamella characteristica (see description) and the embolus is not sickle-shaped, which suggests that it should be assigned as *Lepthyphantes* sensu lato.

Genus *Palliduphantes* Saaristo & Tanasevitch, 2001

Palliduphantes cadiziensis (Wunderlich, 1980)
Figs 1–2, 34, Table 1

Lepthyphantes cadiziensis Wunderlich, 1980: 323, figs 13–14 (d♂).

Palliduphantes cadiziensis – Bosmans 2006a: 184, figs 32–39 (d♀). — Lecigne *et al.* 2025: 137, figs 80a–n, 107 (♂♀).

Material examined

MOROCCO – **Taza Prov.** • 1 ♂, 3 ♀♀ (Fig. 34A); Bab Boudir, Izoura Cave, Tazekka NP; 34.09476° N, 4.09866° W; 1394 m a.s.l.; 18 May 2025; S. Lecigne and J. Lips leg.; cave, by hand; CSL MOR_2072. • 1 ♀; Bab Boudir, outer surroundings of Izoura Cave, same data as for preceding; in undergrowth, in leaf litter, by hand; CSL MOR_2080. • 1 ♀; Douar Achrad, Kehf El Ghar Cave; 34.47878° N, 4.27646° W; 692 m a.s.l.; 21 May 2025; S. Lecigne leg.; cave, by hand; CSL MOR_2245. • 1 ♂, 1 ♀; Smià, "Trou de la Piste" cave; 34.07840° N, 4.01941° W; 20 May 2025; S. Lecigne, J. Lips leg.; cave, by hand; CSL MOR_2141.

Distribution and habitat

The species is only known from Iberian Peninsula and Morocco (Lecigne *et al.* 2025; WSC 2026).

The present study adds three new locations, with records from subterranean environments or in the immediate vicinity of cave entrances. We update the distribution map of the species for Morocco (Fig. 34B).

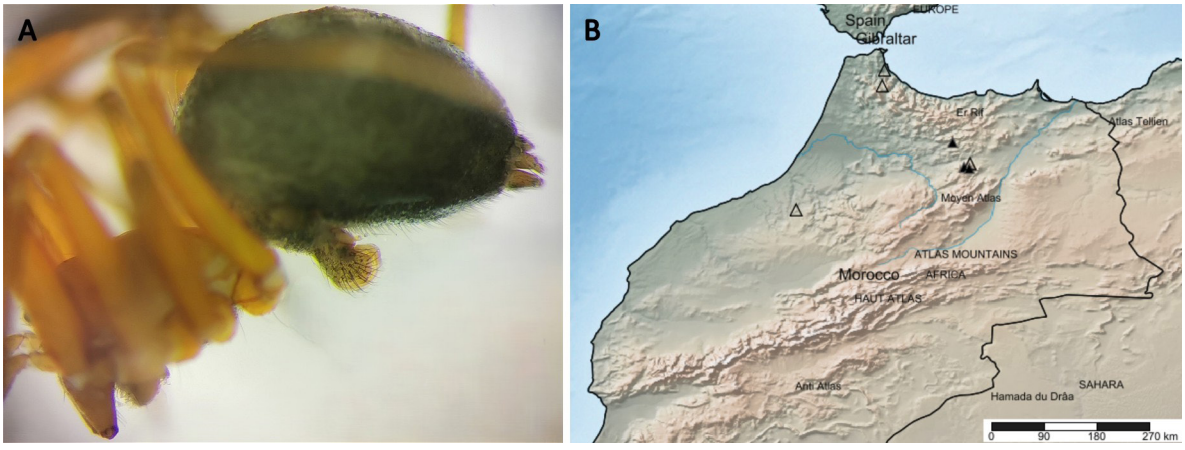


Fig. 34. *Palliduphantes cadiziensis* Wunderlich, 1980, ♀ (CSL MOR_2072). **A**. Epigyne, lateral view. **B**. Distribution map: open triangles = previous records for Morocco; solid triangles: new records (source: Shorthouse 2010). Photo by S. Lecigne.

Genus *Pecado* Hormiga & Scharff, 2005

Pecado impudicus (Denis, 1945)
Figs 1–2, 35, Table 1

Labulla impudica Denis, 1945: 52, figs 26–28 (d♂).

Pecado impudica – Bosmans 2006b: 148, figs 29–32 (♂d♀).

Material examined

MOROCCO – **Taza Prov.** • 2 ♀♀; Bab Boudir, Izoura Cave, Tazekka NP; 34.09476° N, 4.09866° W; 1394 m a.s.l.; 18 May 2025; S. Lecigne, J. Lips leg.; in damp pieces of wood on the ground, at the entrance to a cave, by hand; CSL MOR_2074.

Distribution and habitat

The ecology, phenology, and distribution of *Pecado impudicus* remain largely unknown. There are only five published records of the species: Algeria (type locality: Algiers), with no details of date or habitat (Denis 1945); Morocco (Prov. of Ifrane, Azrou, 1 male, in the litter of a dense *Quercus ilex* forest, in February) (Bosmans 2006b) and Spain (Prov. of Ciudad Real, Cabañeros NP, 5 females, in tree cavities; Prov. of Malaga: Aloizana, 1 female, in the litter of a small *Quercus suber* forest, in April and Cordoba, 1 female, in El Patriarca urban park, no further details on habitat, in February) (Bosmans 2006b; Barrientos *et al.* 2022; Martin & Adame 2024).

The available data on the habitats colonized by the species, together with the new record in Morocco (in the entrance of a cave), would indicate at least that the species is sciaphilous.

Apart from the cave record, females are observed between February and April, and males in February.

Figure 35F shows the known distribution of the species to date (based on approximate location for previous records), including the new Moroccan station (Bab Boudir).

Family Liocranidae Simon, 1897
Genus *Liocranum* L. Koch, 1866

Liocranum atlasicum Zamani & Marusik, 2025
Fig. 36, Table 1

Liocranum atlasicum Zamani & Marusik, 2025: 332, figs 1c, 6a–b (d♀).

Material examined

MOROCCO – **Al-Ahouz Prov.** • 7 ♀♀; Oukaïmeden; 31.24248° N, 7.81473° W; 2089 m a.s.l.; 10 May 2022; S. Moutaouakil leg.; by hand, forest, on the ground; CSL MOR_0684.

Distribution and habitat

Species known only from Morocco. The species has been reported as occurring in semi-arid rocky mountain with sparse vegetation (Zamani & Marusik 2025). The new record corresponds to the type locality, in a wooded rocky habitat. Current data all correspond to observations in May, at altitudes between 2100 and 2900 m a.s.l.

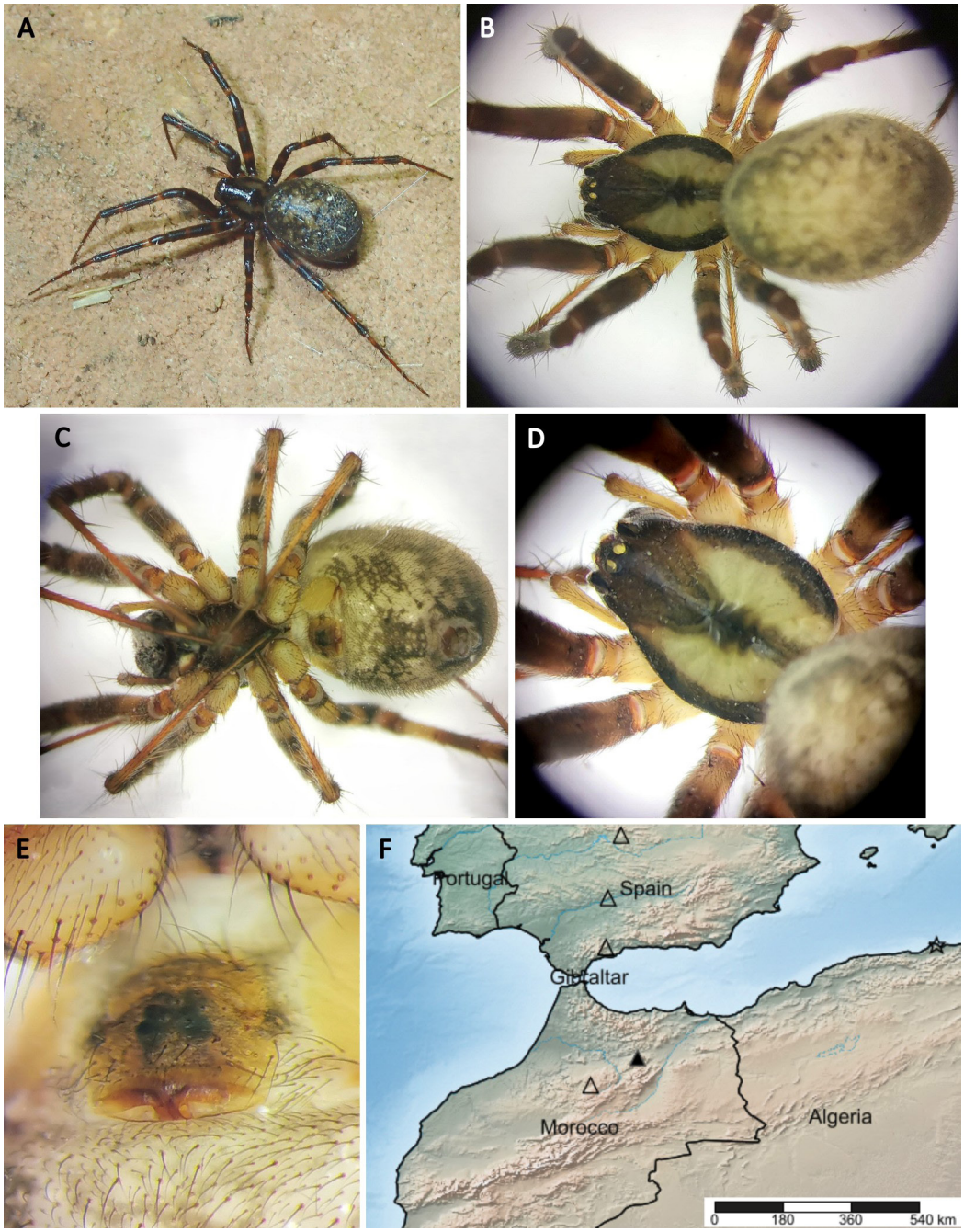


Fig. 35. *Pecado impudicus* (Denis, 1945), ♀ (CSL MOR_2074). **A–B**. Dorsal views. **C**. Ventral view. **D**. Carapace. **E**. Epigyne, postero-ventral view. **F**. Distribution map: star = loc. typ.; open triangles = previous records; solid triangle: new record (source: Shorthouse 2010). Photos: A = J. Lips; B–E = S. Lecigne.

Family Lycosidae Sundevall, 1833
Genus *Arctosa* C.L. Koch, 1847

Arctosa villica (Lucas, 1846)
Figs 1, 3, 37, Table 1

Leaena villica – Guy, 1966: 115, figs 59–60 (♀).

Material examined

MOROCCO – **Nador Prov.** • 2 ♂♂; Ayeddim, Plage Rouge, near Bouarfaten; 35.10504° N, 2.47925° W; 22 m a.s.l.; 9 Feb. 2025; S. Lecigne, K. Lecigne leg.; coastal area, bare stony ground, under stone, by hand; CSL MOR_1671.

Distribution

According to WSC (2026) the distribution of the species is Western Mediterranean. However, the confirmed presence of the species in Morocco was unclear. The only mention is that assumed by Guy (1966) based on a label from a jar at the MNHNP written by Simon. However, in none of his publications mentioning the species (Simon 1876, 1898, 1937) does the author cite Morocco. However, its presence would not have been surprising given that it is recorded in neighbouring countries (Algeria, Tunisia, Spain, Portugal, etc.) (Nentwig *et al.* 2026). Its recent discovery on the northwestern coast of the country is therefore the first reliable mention of *A. villica* in Morocco.

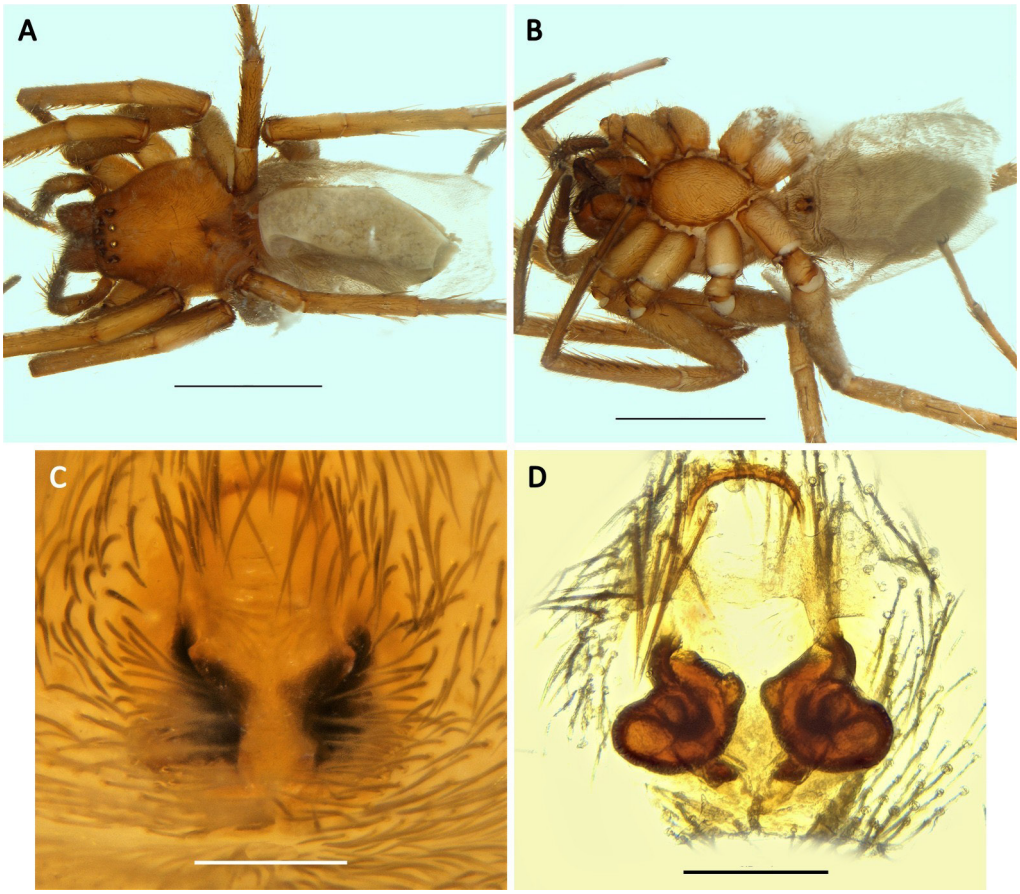


Fig. 36. *Liocranum atlasicum* Zamani & Marusik, 2025, ♀ (CSL MOR_0684). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne. **D**. Vulva, dorsal view. Photos: P. Oger. Scale bars: A–B = 3.0 mm; C–D = 0.2 mm.

Genus *Trabea* Simon, 1876

Trabea cazorla Snazell, 1983
Fig. 38, Table 1

Trabea cazorla Snazell, 1983: 75, figs 1, 3, 5, 7 (d♀).

Material examined

MOROCCO – **Chefchaouen Prov.** • 1 ♀; Azilane, Kehf Mourâa Taghza Cave, Talassemtane NP; 35.18046° N, 5.20083° W; 1298 m a.s.l.; 10 Feb. 2024; J. Lips leg.; cave, by hand; CSL MOR_1318.

Distribution and habitat

Trabea cazorla was described based on specimens captured in Spain (Snazell 1983). The species is also recorded in Morocco (Ifrane, 1987; Van den Spiegel *et al.* 2025). Platnick (2001) reported this species in Morocco and Algeria. It should be noted that Beladjal *et al.* (2025) did not include the species in the checklist of species in Algeria. In the present study, we specify the second location where *T. cazorla* was recorded in Morocco.

Its potential preferences in terms of habitats remain to be clarified. In Spain, it has been observed in a small area of open pine forest (*Pinus pinaster*) growing on a steep north-west facing slope at an altitude of around 1300 m a.s.l., in a dry, stony meadow (Snazell 1983). In Morocco, it was found in a cave at

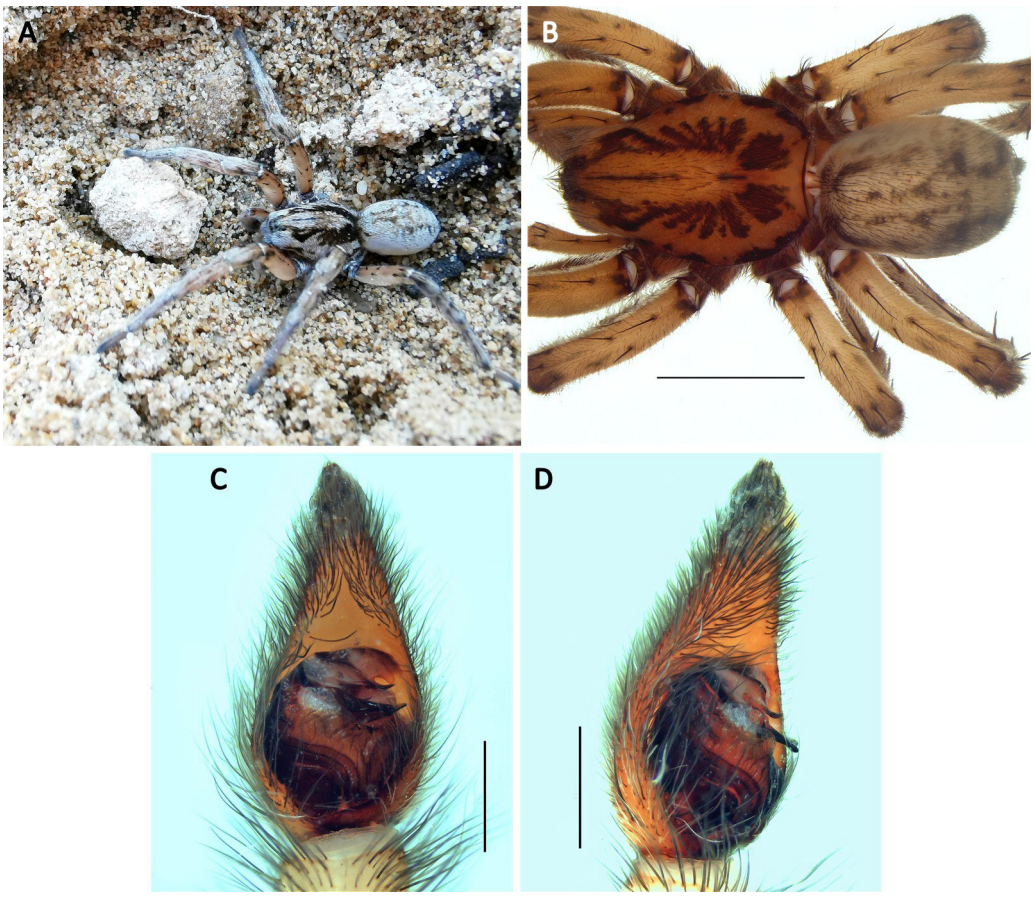


Fig. 37. *Arctosa villica* (Lucas, 1846), ♂ (CSL MOR_1671). **A–B**. Dorsal views. **C**. Palp, ventral view. **D**. Idem, ventro-prolateral view. Photos: A = S. Lecigne; B–D = P. Oger. Scale bars: B = 3.0 mm; C–D = 0.5 mm.

the bottom of a chasm. It is likely that the individual fell in. The entrance to the chasm is also located in a rocky forest habitat (mixed forest) on a steep slope.

The records available from Spain and Morocco mention adult specimens between August and September, at an average altitude of 1300 m a.s.l.

Family Oecobiidae Blackwall, 1862
Genus *Oecobius* Lucas, 1846

Oecobius diafa Lecigne & Lips sp. nov.
urn:lsid:zoobank.org:act:328E4E7A-2237-4512-80B6-0CE2D7C1C996
Figs 1, 3, 39, Table 1

Diagnosis

The male of *Oecobius diafa* Lecigne & Lips sp. nov. resembles that of *O. paulomaculatus* Wunderlich, 1995 but the posterior branch of the tegular apophysis is enlarged posteriorly and pointing both inward and outward (vs tegular apophysis in *O. paulomaculatus* with two protrusions pointing inward) (cf. Fig. 39F, TeA vs Wunderlich 1995: 605, fig. 37). Besides, in the new species the radical apophysis bears a short, rounded, finger-shaped outgrowth, and the apical part is directed anteriorly (vs no basal outgrowth on the radical apophysis in *O. paulomaculatus*, and apical part directed ventrally) (cf. Fig. 39G, dotted arrow and RA vs Wunderlich 1995: 605, fig. 39).

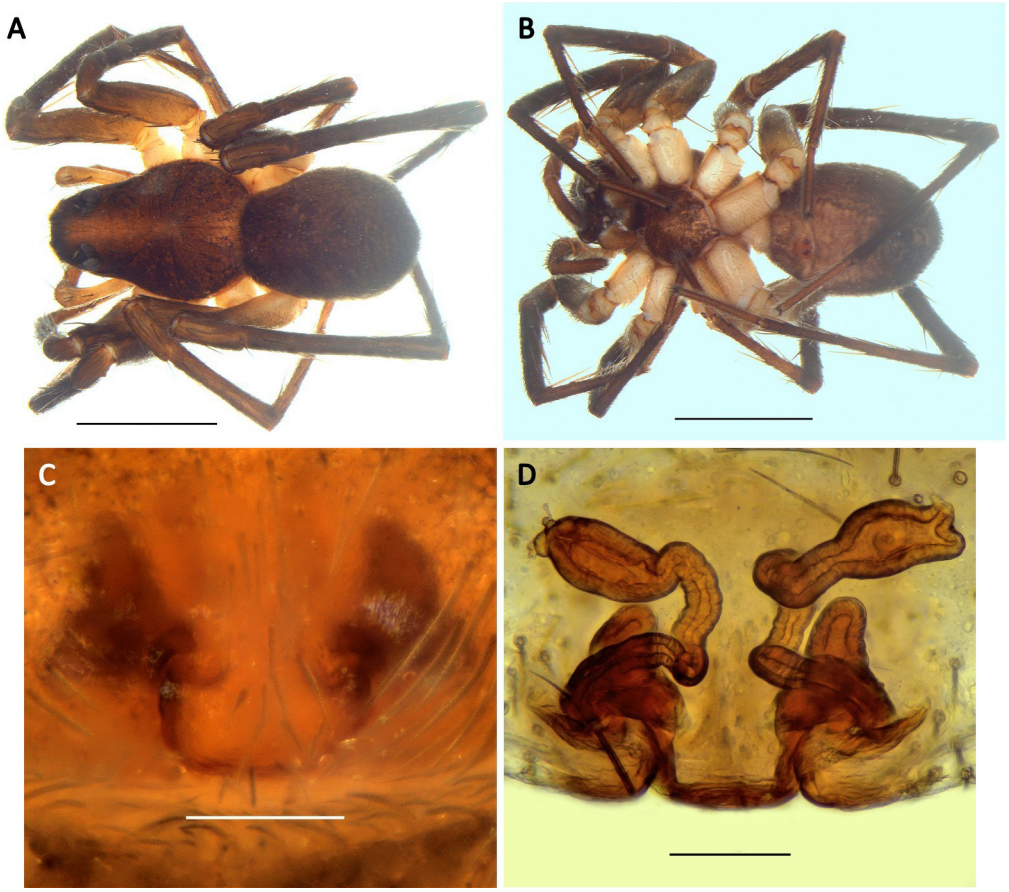


Fig. 38. *Trabea cazorla* Snazell, 1983, ♀ (CSL MOR_1318). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne. **D**. Vulva, dorsal view. Photos: P. Oger. Scale bars: A–B = 3.0 mm; C–D = 0.1 mm.

Etymology

The name of the species comes from the Arabic word 'ضايفة', which means 'hospitality'. It refers to the locals who welcomed us during our research, and more generally to the hospitality of the Moroccan people wherever we went during our surveys and expeditions.

Material examined

Holotype

MOROCCO – **Séfrou Prov.** • ♂; Bir tam Tam, near N6 road; 33.97929° N, 4.67142° W; 527 m a.s.l.; 15 May 2025; J. Lips leg.; residual lapiaz, under stone, by hand; CSL MOR_1856; SMF. Remarks: left pedipalp detached.

Other material examined

MOROCCO – **Séfrou Prov.** • 1 ♂; same data as for holotype.

Description

Oecobius diafa Lecigne & Lips sp. nov. belongs to the *navus*-group.

Male holotype (Fig. 39)

Measurements. Total length 2.27; carapace 0.83 long, 1.05 wide.

Colour in ethanol (Fig. 39A). Carapace light brown, veiled with black, margins darker; 3 triangular black spots on each side; eyes with black rings, except PME. Sternum pale with fine light brown dots and thin black margins. Legs pale yellow with dark annulation. Chelicerae pale brown, face darker. Abdomen dorsally variegated, with a vague black pattern dotted with small white guanine spots, at the rear, a triangular white mark pointing towards the spinnerets; posterior spinnerets black; venter hardly paler and less contrasting.

Carapace. a few dorsal medium-sized white hairs; margins of the sternum with a few long thin bristles, apically blackish. Coxae with one ventral spine.

Palp (Fig. 39B–G). Bulb ovate. Retrolateral margin of the tegulum with small rounded extension (Fig. 39B, black arrow); ventro-retrolateral margin with subvertical lamellar extension (Fig. 39E–F, black arrow); tegular apophysis two-branched, anterior branch (Fig. 39F, dotted arrow) thin and concave, pointing ventro-retrolaterally (better visible in anterior view; tip broken on the left palp), posterior branch thick and widened in its posterior part (Fig. 39F, TeA). Radical apophysis highly developed, a short, rounded, finger-shaped outgrowth, directed dorso-anteriorly (Fig. 39G, dotted arrow); apical part very broad, thin and concave, rectangular in prolateral view (Fig. 39G, RA). Embolus located in the median of bulb in ventral view (Fig. 39B–C, see E), short, sclerotized, bent ventrally, concealed by the conductor (better visible in anterior view).

Female

Unknown.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality, from a single station, in an open area, in residual lapiaz, under stone.

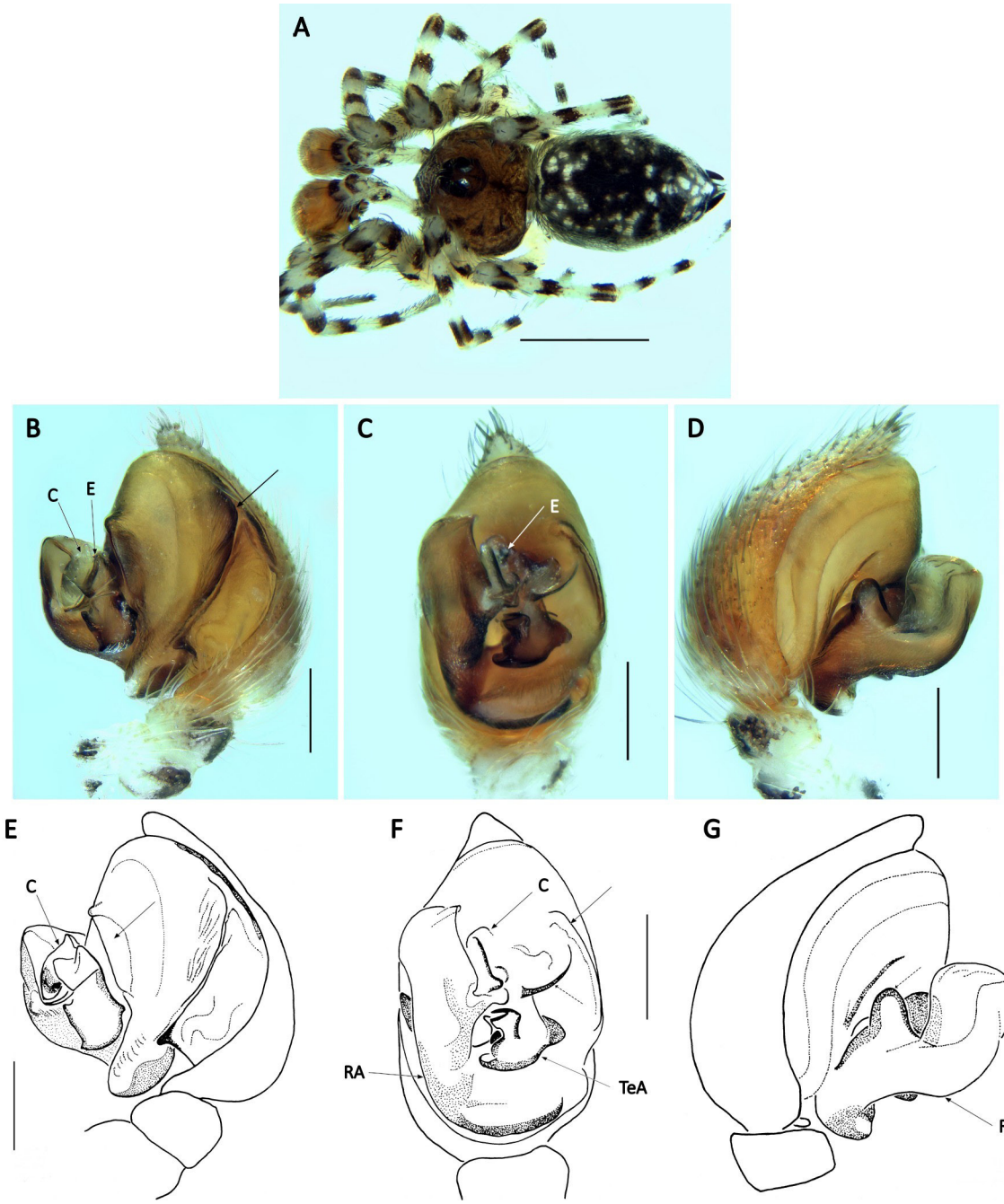


Fig. 39. *Oecobius diafa* Lecigne & Lips sp. nov., holotype, ♂ (CSL MOR_1856). **A**. Dorsal view. **B, E**. Palp, retrolateral views (black arrow: retrolateral extension of the tegulum). **C**. Idem, ventral view. **D**. Idem, prolateral view. **F**. Idem, ventral view (black arrow: retrolateral extension of the tegulum; dotted arrow: anterior branch of the tegular apophysis). **G**. Idem, prolateral view (dotted arrow: dorsal outgrowth of the radical apophysis). Photos: P. Oger. Abbreviations: C = conductor; E = embolus; RA = radical apophysis; TeA = tegular apophysis. Scale bars: A = 1 mm; B–G = 0.2 mm.

Oecobius tiznit Lecigne sp. nov.
urn:lsid:zoobank.org:act:5C4DC8C5-2344-420E-AD65-F8C6FB8DF510
Fig. 40, Table 1

Diagnosis

Males of *Oecobius tiznit* Lecigne sp. nov. can be distinguished from all other congeners mainly both by the atypical shape of the tegular apophysis in two parts (i.e., anterior and posterior branches, Fig. 40C, F–G, TeA, white and black arrows, dotted arrow) and by the shape of the radical apophysis, also with two branches (Fig. 40D, F–G, RA, white arrow).

Etymology

The specific epithet is a noun in apposition derived from the type locality, the village of Aglou is also known as 'Tiznit Beach'.

Material examined

Holotype

MOROCCO – **Tiznit Prov.** • ♂; Tnine Aglou; 29.80688° N, 9.82755° W; 26 m a.s.l.; 21 Mar. 2025; S. Lecigne, K. Lecigne leg.; back beach, under stone, by hand; CSL MOR_1828; SMF. Remarks: left pedipalp detached; abdomen damaged.

Description

Oecobius tiznit sp. nov. belongs to the *navus*-group.

Male holotype (Fig. 40)

Measurements. Total length 2.20; carapace 0.83 long, 0.90 wide; bulb 0.50 long, 0.32 wide.

Colour in ethanol (Fig. 40A). Carapace light brown, veiled with black; eyes with black rings, except PME. Sternum pale with a slight greyish tinge and thin black margins. Legs pale yellow with dark annulation. Chelicerae pale, face greyish. Abdomen dorsally cream-brown, with small white guanine spots, cardiac mark brown, one pair of dark marks at the rear; sides blackish; venter yellowish.

Carapace. a few dorsal medium-sized white hairs; sternum cordiform, margins with a few long thin bristles, apically blackish. Coxae with one ventral spine.

Palp (Fig. 40B–G). Bulb ovate, 1.55 times as long as wide. Apical part of the subtegulum visible through transparency (Fig. 40B, white arrow). Tegular apophysis complex, two-branched, apical part of the anterior branch rounded, translucent, thin and concave (Fig. 40F–G, dotted arrow), posterior branch, massive (Fig. 40F–G, TeA), bearing an outgrowth (Fig. 40F, black arrow), connected to the anterior branch by a strongly sclerotized sub-horizontal structure (Fig. 40C, white arrow). Radical apophysis highly developed (Fig. 40F–G, RA), also two-branched, prolateral branch projecting forward, ventral margin folded outward, apex rounded; secondary branch concealed by the first, shorter and more sclerotized, visible through transparency (Fig. 40D, white arrow). Embolus located in the median of bulb in ventral view, short, weakly sclerotized, concealed by the conductor (Fig. 40B–C, see E), emerging behind the latter (better visible in anterior view).

Female

Unknown.

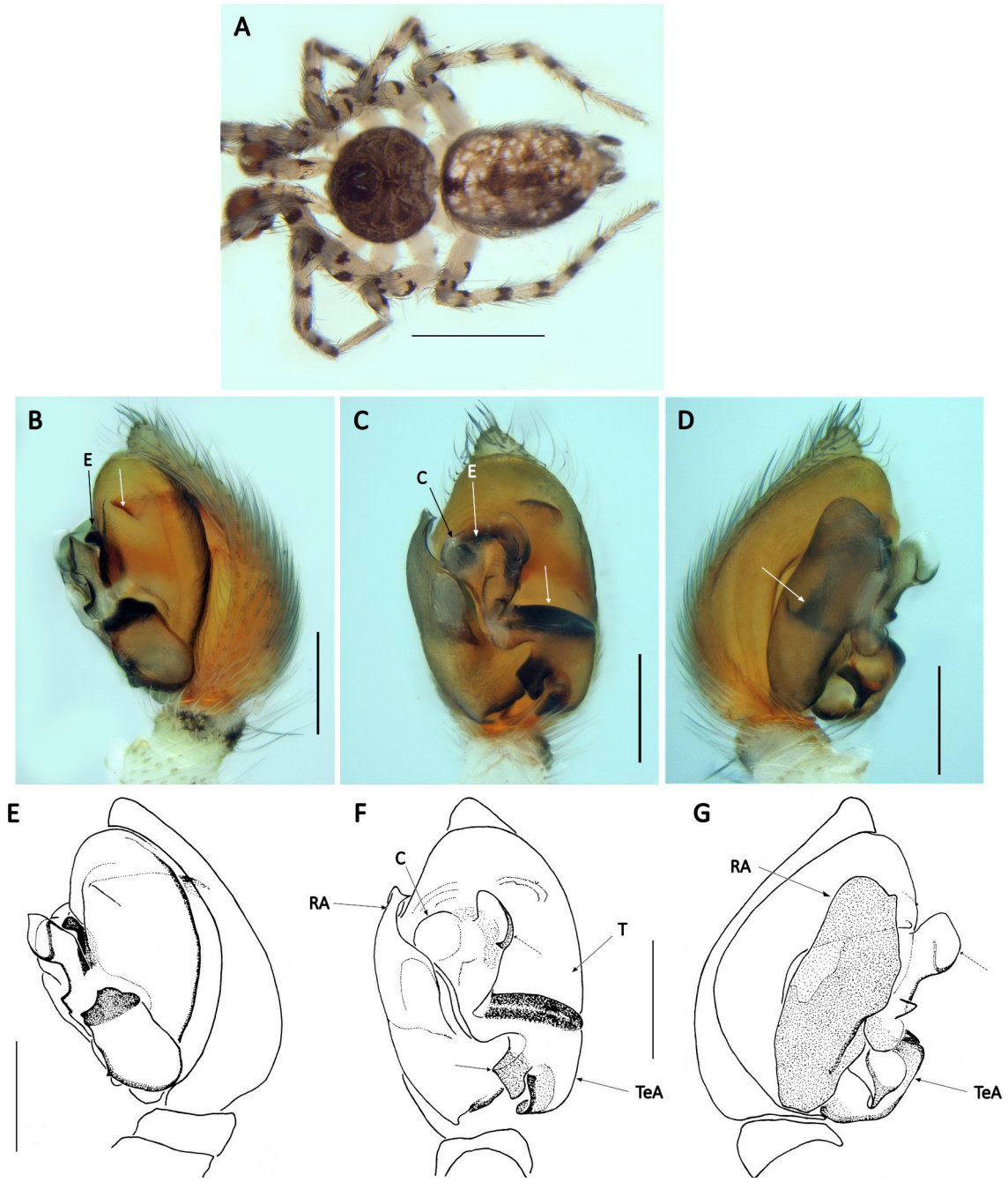


Fig. 40. *Oecobius tiznit* Lecigne sp. nov., holotype, ♂ (CSL MOR_1828). **A**. Dorsal view. **B**. Palp, retrolateral view (white arrow: apical part of the subtegulum visible through transparency). **C**. Idem, ventral view (white arrow: sclerotized connection between anterior and posterior branches of the tegular apophysis). **D**. Idem, prolateral view (white arrow: secondary branch of the radical apophysis, visible through transparency). **E**. Palp, retrolateral view. **F**. Idem, ventral view (black arrow: outgrowth of the posterior branch of the tegular apophysis; dotted arrow: anterior branch of the tegular apophysis). **G**. Idem, prolateral view (dotted arrow: anterior branch of the tegular apophysis). Photos: P. Oger. Abbreviations: C = conductor; E = embolus; RA = radical apophysis; T = tegulum; TeA = tegular apophysis. Scale bars: A = 1 mm; B–G = 0.2 mm.

Distribution and habitat

Endemic to Morocco? To date, only known from the type locality, from a single station, in the coastal area, behind the beach, under limestone.

Family Salticidae Blackwall, 1841
Genus *Aelurillus* Simon, 1885

Aelurillus hirtipes (Denis, 1960)
Fig. 41, Table 1

Aelurillus hirtipes – Azarkina & Logunov 2006: 237, figs 33–45 (♂, d♀). — Ouakri *et al.* 2026: 24, fig. 9a–f (♂).

Material examined

MOROCCO – **Agadir Ida Outanane Pref.** • 1 ♂, 1 ♀; Taghazout; 30.54498° N, 9.69794° W; 75 m a.s.l.; 20 Mar. 2025; S. Lecigne, K. Lecigne leg.; sparse argan grove on rocky soil, under stone, by hand; ref. CSL MOR_1813. – **Jerada Prov.** • 1 ♂; Guenfouda; 34.52334° N, 2.01642° W; 902 m a.s.l.; 25 May 2025; S. Lecigne leg.; semi-desert, arid area without vegetation, under stone, by hand; CSL MOR_2348.

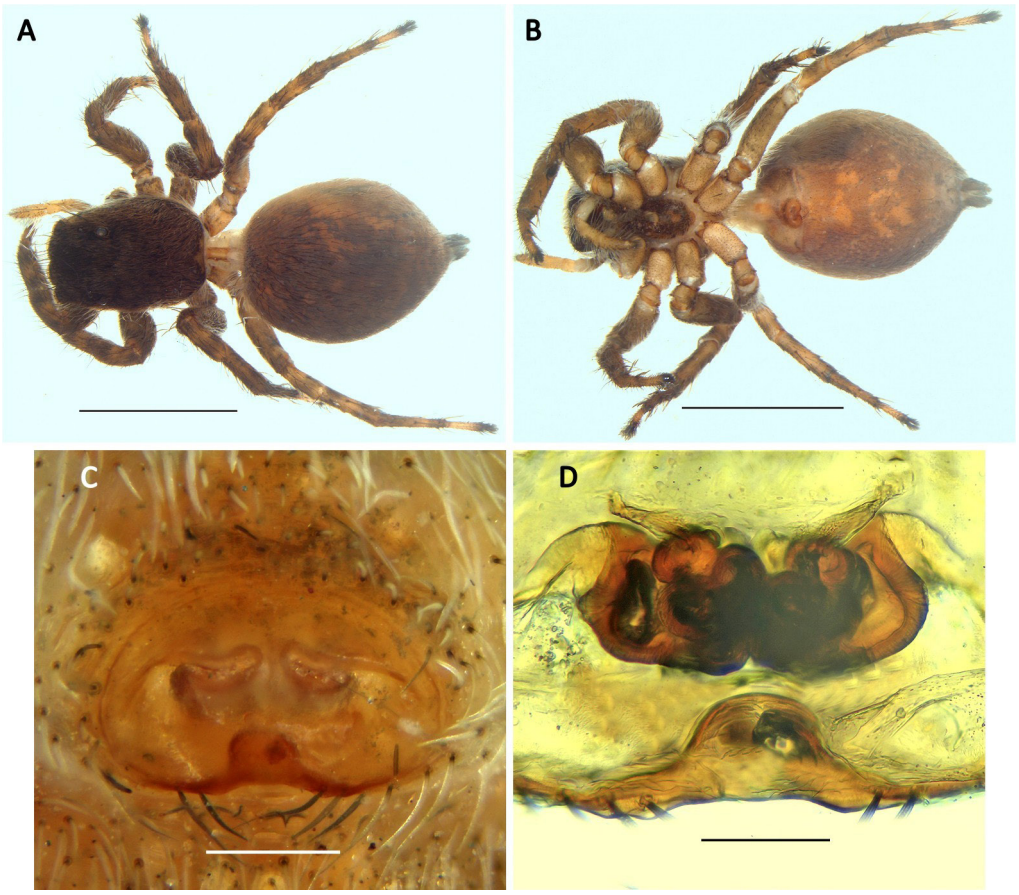


Fig. 41. *Aelurillus hirtipes* (Denis, 1960), ♀ (CSL MOR_1813). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne. **D**. Vulva, dorsal view. Photos: P. Oger. Scale bars: A–B = 3.0 mm; C = 0.2 mm; D = 0.1 mm.

Distribution and habitat

Aelurillus hirtipes is known across North Africa to Sinai Peninsula (Azarkina & Logunov 2006; Nentwig *et al.* 2026). We have previously observed *A. hirtipes* in particularly dry environments, in semi-arid to semi-desert habitats.

Genus *Heliophanus* C.L. Koch, 1833

Heliophanus machaerodus Simon, 1909
Fig. 42, Table 1

Heliophanus machaerodus – Lecigne *et al.* 2025: 143, fig. 88i–k (♀).

Material examined

MOROCCO – **Taza Prov.** • 1 ♂, 1 ♀; Bab Boudir, Tazekka NP; 34.10080° N, 4.06919° W; 1355 m a.s.l.; 15 May 2025; S. Lecigne and S. Moutaouakil leg.; on an arid, anthropized soil around a rural dwelling, at dusk, by hand; CSL MOR_1928.

Distribution an habitat

Heliophanus machaerodus is only known from Morocco to Tunisia (Nentwig *et al.* 2026). We add one additional location to the four stations previously published for Morocco (WSC 2026).

Fig. 42. *Heliophanus machaerodus* Simon, 1909, ♂ (CSL MOR_1928), pedipalp, slightly expanded bulb, and femoral apophysis, retrolateral view. Photo by P. Oger.

Genus *Mogrus* Simon, 1882

Mogrus sahariensis Berland & Millot, 1941
Figs 1, 3, 43, Table 1

Mogrus sahariensis Berland & Millot, 1941: 307, fig. 8 (d♀).

Mogrus sahariensis – Ouakri *et al.* 2026: 29, fig. 12a-d (♀).

Material examined

MOROCCO – **Oujda-Angad Pref.** • 2 ♀♀; Oujda, Sidi Mâafa park; 34.64160° N, 1.88650° W; 667 m a.s.l.; 22 May 2025; S. Lecigne leg.; rocky, deforested, arid hill under stone, and in the litter of *Pinus halepensis* of a suburban park, by hand; CSL MOR_2279.

Distribution and habitat

There are only a few records of this species, which is known to occur in Niger, Egypt, and, most recently, Morocco. It inhabits semi-natural or anthropogenic habitats such as wooded suburban parks, argan groves, vineyards, and under fruit trees.

Genus *Salticus* Latreille, 1804

Salticus conjonctus (Simon, 1868)
Figs 1, 3, 44, Table 1

Salticus conjonctus – Denis 1954: 135 (♂).

Material examined

MOROCCO – **Nador Prov.** • 1 ♀; Ayeddim, Plage Rouge, near Bouarfaten; 35.10504° N, 2.47925° W; 22 m a.s.l.; 9 Feb. 2025; S. Lecigne leg.; coastal area, bare stony ground, under stone, by hand; CSL MOR_1672.

Distribution

Denis (1954) reports the presence of the species in Morocco without specifying any locations. In the present study, we specify the first located record of *S. conjonctus* in Morocco. To date, there are no citations of this species in other African countries. It is also present in Spain, where it was only recently discovered (Méndez *et al.* 2024; Hernández-Corral *et al.* 2025), as well as in France and Italy (WSC 2026). It may appear uncommon at first glance, but the species is cryptic and probably under-detected and certainly under-surveyed.

Family Tetragnathidae Menge, 1866
Genus *Tetragnatha* Latreille, 1804

Tetragnatha bogotensis Keyserling, 1865

Tetragnatha nitens – Lecigne *et al.* 2025: 146, fig. 90c–e (♀), misidentified.

Remarks

Tetragnatha nitens (Audouin, 1826) and *T. bogotensis* are closely related. According to Morano's diagnosis (2020), females of the two species can be distinguished by the size of the auxiliary tooth at the base of the chelicera in ventral view, i.e., large in *T. bogotensis* vs shorter (cf. Morano 2020, 'Ax1' fig. 50 vs fig. 90).

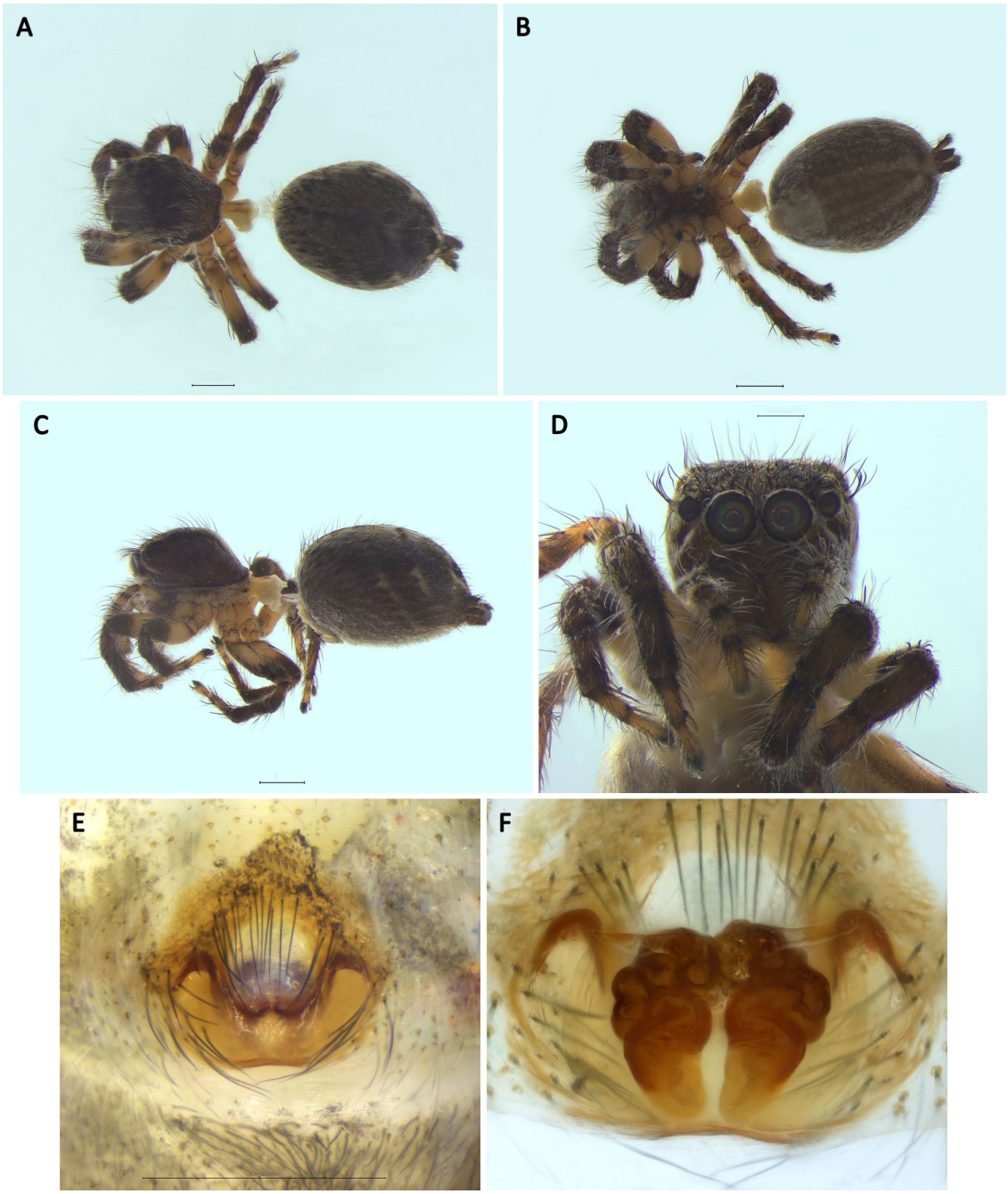


Fig. 43. *Mogrus sahariensis* Berland & Millot, 1941, ♀ (CSL MOR_2279). **A**. Dorsal view. **B**. Ventral view. **C**. Lateral view. **D**. Front view. **E**. Epigyne. **F**. Vulva, dorsal view. Photos: N. Hénon. Scale bars: A–C = 1.0 mm; D–E = 0.5 mm.

In addition, the relative size of the spermathecae ('s') compared to the mid-posterior sac ('Sp') is different, i.e., approximately identical in *T. bogotensis* vs larger (cf. Morano 2020: fig. 49 vs fig. 89).

The female specimen from Azilal mentioned by Lecigne *et al.* (2025) features the characters of *T. bogotensis*, i.e., large auxiliary tooth at the base of the chelicera in ventral view (cf. fig. 90C; the caption is incorrect, it is indeed a figure of the chelicera of a female) and spermathecae size more or less identical to that of the mid-posterior sac (cf. fig. 90e).

On the distribution of *T. bogotensis*: see Morano (2020).

The species is new to Morocco.

Family Zodariidae Thorell, 1881
Genus *Acanthinozodium* Denis, 1966

Acanthinozodium camillae (Lecigne, 2025)

Zodarion camillae – Lecigne *et al.* 2025: 114, fig. 68a–g (♂), comb. nov.

Remarks

The species was recently described (Lecigne *et al.* 2025) and assigned to the genus *Zodarion* Walckenaer, 1826, closely related to the genus *Acanthinozodium*. Jocqué & Henrard (2015) provided a clear diagnosis

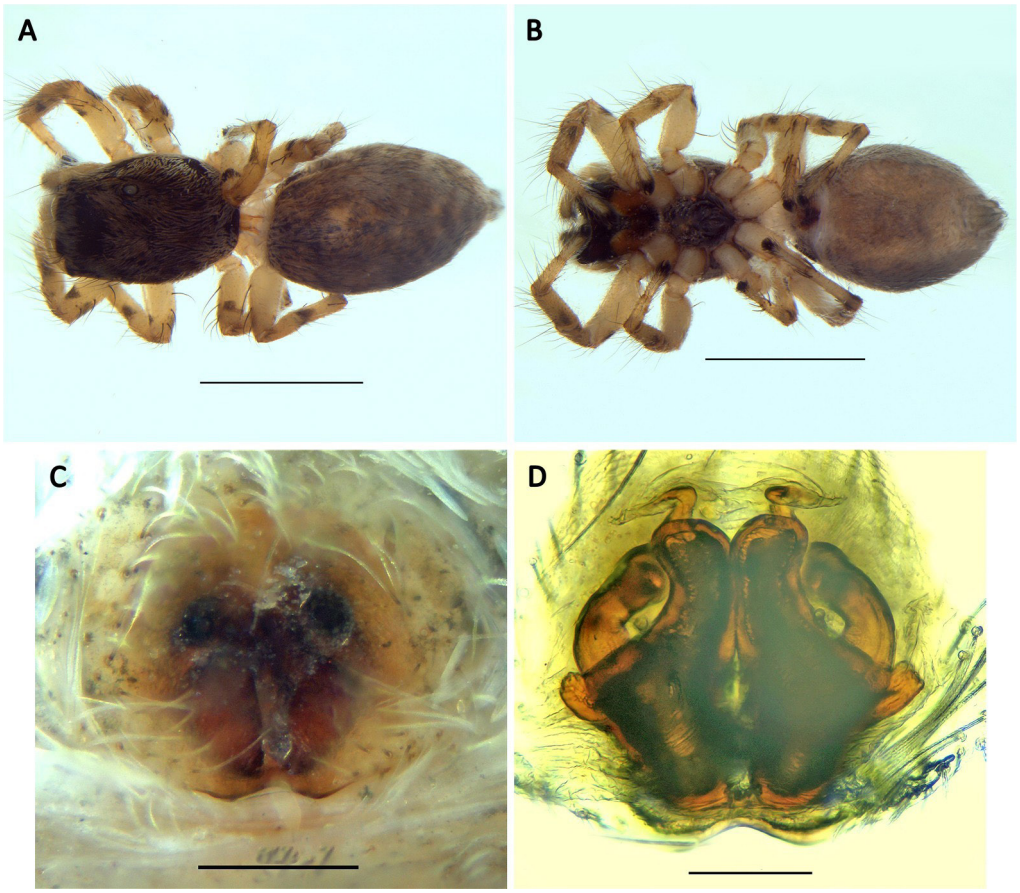


Fig. 44. *Salticus conjonctus* (Simon, 1868), ♀ (CSL MOR_1672). **A**. Dorsal view. **B**. Ventral view. **C**. Epigyne. **D**. Vulva, dorsal view. Photos: P. Oger. Scale bars: A–B = 2.0 mm; C = 0.2 mm; D = 0.1 mm.

for *Acanthinozodium*. In particular, males are characterized by the deep dorsal pit at the base of the cymbium and large AME (cf. Jocqué & Henrard 2015: 8, fig. 4c; 16, fig. 10c and 18, fig. 12b–c vs S. Lecigne *et al.* 2025: 115, fig. 68a, e). Consequently, the species *Zodarion camillae*, Lecigne *et al.* 2025 needs to be transferred to the genus *Acanthinozodium*.

Genus *Zodarion* Walckenaer, 1826

Zodarion maghrebense Bosmans & Benhalima, 2020
Fig. 45, Table 1

Zodarion maghrebense Bosmans & Benhalima in Benhalima & Bosmans, 2020 : 102, figs 27–28, 39–43, 54–58 (d♂♀).

Zodarion maghrebense – Lecigne *et al.* 2025: 150, fig. 98j–k (♀).

Material examined

MOROCCO – **Taza Prov.** • 2 ♂♂; Bab Boudir, Tazekka NP; 34.09194° N, 4.11208° W; 1411 m a.s.l.; 16 May 2025; S. Lecigne leg.; rocky shrubby slope in an open grassland area, on the ground and under stone, by hand; CSL MOR_1984.

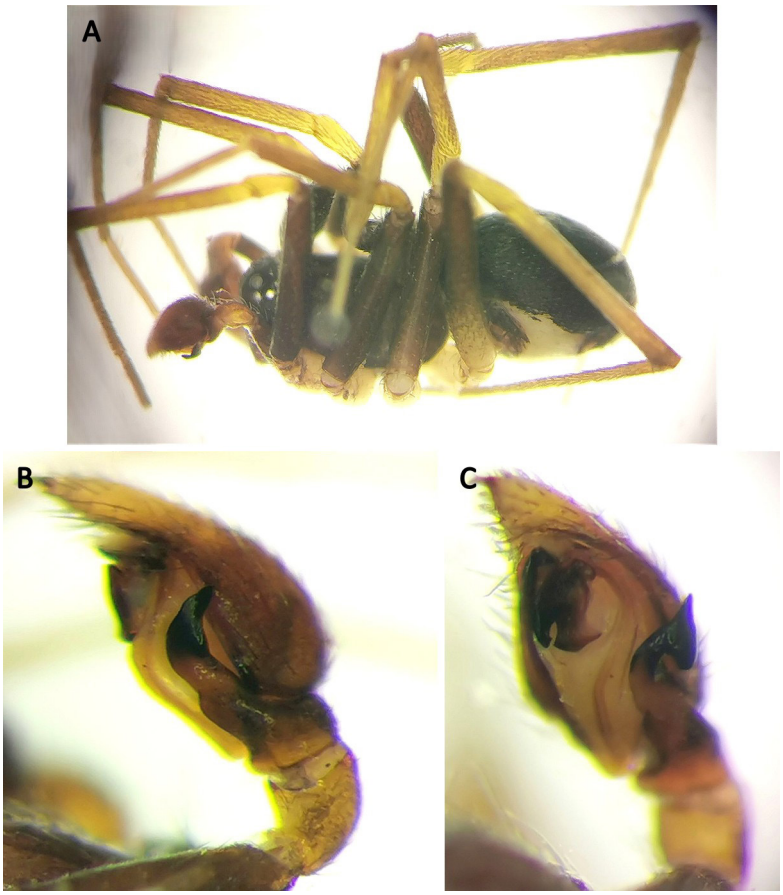


Fig. 45. *Zodarion maghrebense* Bosmans & Benhalima, 2020, ♂ (CSL MOR_1984). **A**. Lateral view. **B**. Palp, RTA, retrolateral view. **C**. Palp, ventro-retrolateral view. Photos: S. Lecigne.

Distribution and habitat

North and Central Morocco, NW Algeria (Benhalima & Bosmans 2020). We sampled the specimens in an open area (grassland). Benhalima & Bosmans (2020) mainly mention the species in forest habitats, e.g., recent mixed forest plantation in steppe, mixed *Pinus-Thuya* forest, *Quercus ilex* and *Quercus suber* forests.

Zodarion valentii Bosmans, Loverre & Addante, 2019
Fig. 46, Table 1

Zodarion valentii Bosmans, Loverre & Addante in Bosmans *et al.,* 2019: 10, figs 4a–f, 5a–e (d♂♀).

Zodarion valentii – Benhalima & Bosmans 2020: 98, figs 23–24, 29–33, 44–48 (♂♀).

Material examined

MOROCCO – **Berkane Prov.** • 1 ♂; Aïn Sfa, Beni Snassen; 34.86609° N, 2.21035° W; 1006 m a.s.l.; 24 May 2025; S. Lecigne leg.; arid, stony grassland, under stone, by hand; CSL MOR_2323. – **Taza Prov.** • 3 ♂♂, 2 ♀♀; Bab Boudir, Tazekka NP; 34.10080° N, 4.06919° W; 1355 m a.s.l.; 19 May 2025; S. Lecigne and S. Moutaouakil leg.; on an arid, anthropized soil around and in a rural dwelling, by hand; CSL MOR_1905.

Distribution and habitat

Italy (Puglia and Sicily), S Spain, NE Morocco and NW Algeria (Benhalima & Bosmans 2020). It occurs in a variety of habitats, i.e., anthropized environment (see above), border of wheat fields, *Oxalis* vegetation, steppe, forest, coastal dunes.

Discussion

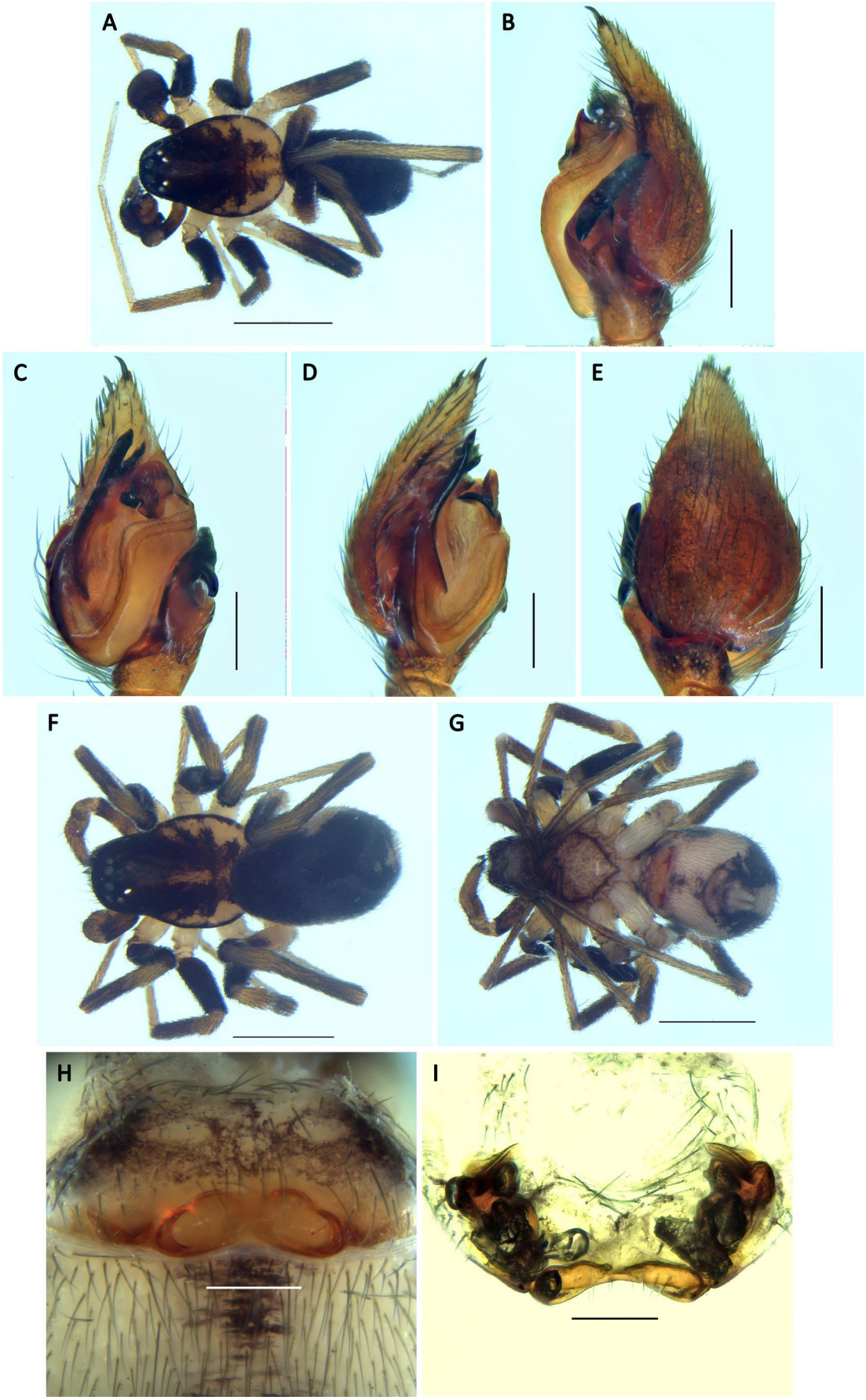
Regardless of their size, collections of specimens gathered during scientific expeditions or occasional surveys contribute to advancing knowledge. Benhalima & Bosmans (2024) established a reference work by publishing the first checklist of spider species in Morocco. Thus, in December 2024, Morocco recorded 549 spider species, 148 of which were considered endemic.

Since then, several authors have published new papers (Canto del & Canto del 2025; Gál *et al.* 2025; Lecigne *et al.* 2025; Logunov & Schäfer 2025; Zamani & Marusik 2025; Korba & Opatova 2026; Ouakri *et al.* 2026) and have added a total of 93 species, 32 of which are new to science and currently considered endemic.

The present paper adds 17 additional species, 16 of which are new to science.

The updated count is therefore as follows: the checklist of spiders in Morocco now includes 659 species, 197 of which are considered endemic (29.9%). This is comparable to the rate in Algeria, i.e., 27.4% (Beladjal *et al.* 2025). For Morocco, this can be explained by geographical factors, i.e., the topographical complexity of the country (Zamani & Marusik 2025), which is largely occupied and interspersed with several mountain ranges (the Atlas and Rif Mountains), as well as biological factors such as the ability of certain species or groups of species to disperse more or less effectively (e.g. most Dysderidae) (Zamani *et al.* 2023). The rate of endemism in Morocco is also influenced by the number of caves it contains, even though the vast majority of them remain largely or completely unexplored (Lecigne *et al.* 2023). These subterranean habitats frequently harbor troglobitic species known to exist in only one cave.

Fig. 46 (on next page). *Zodarion valentii* Bosmans, Loverre & Addante, 2019. **A–E**. ♂ (CSL MOR_1905). **F–I**. ♀ (CSL MOR_1905). **A, F**. Dorsal views. **B**. Palp, retrolateral view. **C**. Idem, ventral view. **D**. Idem, prolateral view. **E**. Idem, dorsal view. **G**. Ventral view. **H**. Epigyne. **I**. Vulva, dorsal view. Photos: P. Oger. Scale bars: A, F–G = 1.0 mm; B–E, H–I = 0.2 mm.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Thus, beyond the results, this work also aims to encourage further research to shed light on the presumed great biodiversity of spiders (and probably many other taxa) in Morocco.

Acknowledgments

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References

Almquist S. 2007. Swedish Araneae, part 2 – families Dictynidae to Salticidae. *Insect Systematics & Evolution, Supplement* 63 (2006): 285–601. [publ. in 2007 per Jonsson, in litt.]

Arnedo M.A., Oromí P. & Ribera C. 2000. Systematics of the genus *Dysdera* (Araneae, Dysderidae) in the eastern Canary Islands. *Journal of Arachnology* 28 (3): 261–292. https://doi.org/10.1636/0161-8202(2000)028[0261:SOTGDA]2.0.CO;2

Azarkina G.N. & Logunov D.V. 2006. Taxonomic notes on nine *Aelurillus* species of the western Mediterranean (Araneae: Salticidae). *Bulletin of the British Arachnological Society* 13 (7): 233–248.

Barrientos J.A., Martínez-Devesa G., Hernández-Corral J. & Micó E. 2022. Arañas (Araneae) de las oquedades arbóreas del Parque Nacional de Cabañeros (Ciudad Real, España). *Revista Ibérica de Aracnología* 40: 33–46.

Barrientos J.A., Fadrique F., Brañas N., Gerace V. & Mederos J. 2024. *Lepthyphantes younnesi* sp. nov. y *Lepthyphantes noeli* sp. nov. (Araneae, Linyphiidae), dos especies nuevas de Marruecos. *Revista Ibérica de Aracnología* 44: 101–109.

Beladjal L., Bouseksou S., Kherbouche-Abrous O., Alioua Y. & Bosmans R. 2025. First exhaustive catalog of spiders of Algeria (Arachnida: Araneae). *Zootaxa* 5598: 1–185. https://doi.org/10.11646/zootaxa.5598.1.1

Benhalima S. & Bosmans R. 2020. Revision of the genus *Zodarion* Walckenaer, 1833 (part IV). The species of Morocco (Araneae: Zodariidae). *Zootaxa* 4899 (1): 93–114. https://doi.org/10.11646/zootaxa.4899.1.5

Benhalima S. & Bosmans R. 2024. First historical checklist of spiders (Arachnida: Araneae) from Morocco, between 1840–2024. *Zootaxa* 5555: 407–435. https://doi.org/10.11646/zootaxa.5555.3.5

Blauwe R. de 1980. Révision de la famille des Agelenidae (Araneae) de la région méditerranéenne (2ème partie). *Bulletin de l'Institut royal des Sciences naturelles de Belgique* 52 (1): 1–54.

Bosmans R. 2006a. Contribution to the knowledge of the Linyphiidae of the Maghreb. Part X. New data on *Lepthyphantes* Menge (*sensu lato*) species (Araneae: Linyphiidae). *Belgian Journal of Zoology* 136: 173–191.

Bosmans R. 2006b. Contribution to the knowledge of the Linyphiidae of the Maghreb. Part XI. Miscellaneous linyphiid genera and additions (Araneae: Linyphiidae: Linyphiinae). *Bulletin & Annales de la Société Entomologique de Belgique* 141: 125–161.

Bosmans R. & Bouragba N. 1992. Trois nouvelles Linyphiidae de l'Atlas Algérien, avec la description du mâle de *Lepthyphantes djazairi* Bosmans, et la redescription de *Lepthyphantes homonymus* Denis (Araneae). *Bulletin & Annales de la Société Entomologique de Belgique* 128: 245–262.

Bosmans R., Kherbouche-Abrous O., Benhalima S. & Hervé C. 2018. The genus *Haplodrassus* Chamberlin, 1922 in the Mediterranean and the Maghreb in particular (Araneae: Gnaphosidae). *Zootaxa* 4451 (1): 1–67. https://doi.org/10.11646/zootaxa.4451.1.1

Bosmans R., Pantini P., Loverre P. & Addante R. 2019. New species and new records of ant-eating spiders from Mediterranean Europe (Araneae: Zodariidae). *Arachnologische Mitteilungen* 57: 8–20. https://doi.org/10.30963/aramit5703

Bosmans R., Lecigne S., Benhalima S. & Abrous-Kherbouche A. 2022. The genus *Lycosoides* Lucas, 1846 in the Maghreb region, with the description of five new species (Araneae: Agelenidae). *Arachnology* 19 (Special Issue): 316–340. https://doi.org/10.13156/arac.2022.19.sp1.316

Canto L. del & Canto R. del. 2025. Presencia de *Phlegra blaugrana* Azarkina, Pérez-Gómez & Sánchez-García, 2022 (Araneae: Salticidae) en el norte de Marruecos. *Revista Ibérica de Aracnología* 47: 175–176.

Chatzaki M. 2010. A revision of the genus *Nomisia* in Greece and neighboring regions with the description of two new species. *Zootaxa* 2501: 1–22. https://doi.org/10.11646/zootaxa.2501.1.1

Chatzaki M., Thaler K. & Mylonas M. 2002. Ground spiders (Gnaphosidae, Araneae) of Crete and adjacent areas of Greece. Taxonomy and distribution. II. *Revue Suisse de Zoologie* 109 (3): 603–633. https://doi.org/10.5962/bhl.part.79612

Deeleman-Reinhold C.L. & Deeleman P.R. 1988. Révision des Dysderinae (Araneae, Dysderidae), les espèces méditerranéennes occidentales exceptées. *Tijdschrift voor Entomologie* 131: 141–269.

Dalmas R. de. 1921. Monographie des araignées de la section des *Pterotricha* (Aran. Gnaphosidae). *Annales de la Société entomologique de France* 89: 233–328.

Denis J. 1937. On a collection of spiders from Algeria. *Proceedings of the Zoological Society of London* 106 (4): 1027–1060, pl. 1–5. https://doi.org/10.1111/j.1469-7998.1936.tb06301.x

Denis J. 1945. Descriptions d'araignées nord-africaines. *Bulletin de la Société d'Histoire Naturelle de Toulouse* 79 (1, 1944): 41–57.

Denis J. 1952. Notes d'aranéologie marocaine. I. Les *Zelotes* du Maroc. *Revue Française d'Entomologie* 19: 113–126.

Denis J. 1954. Notes d'aranéologie marocaine. III. Quelques araignées du massif de l'Ayachi, avec une étude sur les *Textrix* du Maroc. *Revue Française d'Entomologie* 21: 132–144.

Denis J. 1966. Les araignées du Fezzân. *Bulletin de la Société d'Histoire Naturelle d'Afrique du Nord* 55: 103–144.

Elkrew H., Hamza A., Ghana S., Shaibi T., Swehli A.I., Elmareme H. & Ahmad A. 2024. Checklist of the spiders (Araneae) of Libya. *Pakistan Journal of Life and Social Sciences* 22: 19346–19369. https://doi.org/10.57239/PJLSS-2024-22.2.001419

FitzPatrick M.J. 2007. A taxonomic revision of the Afrotropical species of *Zelotes* (Arachnida: Araneae: Gnaphosidae). *Bulletin of the British Arachnological Society* 14 (3): 97–172. https://doi.org/10.13156/arac.2011.14.3.97

Gál J., Kovács G., Vincze Z., Keve G., Páll-Gergely B., Bagyó R., Fehér E., Bali K. & Kaszab E. 2025. The red-colored oddball – a new ladybird spider with unusual coloring from Morocco, *Eresus rubrocephalus* sp. nov. (Araneae: Eresidae). *Animals* 15 (2707): 1–15. https://doi:10.3390/ani15182707

Guy Y. 1966. Contribution à l'étude des araignées de la famille des Lycosidae et de la sous-famille des Lycosinae avec étude spéciale des espèces du Maroc. *Travaux de l'Institut Scientifique Chérifien et de la Faculté des Sciences, Série Zoologie, Rabat* 33: 1–174.

Hernández-Corral J., Barrientos J.A. & García-Teba J.P. 2025. Nuevos datos sobre las arañas (Arachnida: Araneae) del Parc Natural del Carrascal de la Font Roja (Alicante, España). *Revista Ibérica de Aracnología* 46: 51–75.

Jocqué R. & Henrard A. 2015. Revalidation of *Acanthinozodium* Denis, 1966 with description of three new species and discovery of a remarkable male palpal character (Araneae, Zodariidae). *European Journal of Taxonomy* 114: 1–23. https://doi.org/10.5852/ejt.2015.114

Kmira G., Nasri-Ammar K., Petillon J. & Bosmans R. 2025. Catalog of the spiders of Tunisia (Arachnida: Araneae). *Zootaxa* 5641: 1–95. https://doi.org/10.11646/zootaxa.5641.1.1

Korba J. & Opatova V. 2026. Out of North Africa: evolution and biogeography of Afro-Arabian dwarf tarantulas (Theraphosidae, Ischnocolinae). *Molecular Phylogenetics and Evolution* 218: e108559. https://doi.org/10.1016/j.ympev.2026.108559

Lecigne S., Lips J., Moutaouakil S. & Oger P. 2020. Two new cave-dwelling spider species from the Moroccan High Atlas (Araneae: Liocranidae, Theridiidae). *Arachnologische Mitteilungen* 60: 12–18. https://doi.org/10.30963/aramit6002

Lecigne S., Moutaouakil S. & Lips J. 2023. Contribution to the knowledge of the spider fauna of Morocco (Arachnida: Araneae) – first note – on new records of cave spiders. *Arachnologische Mitteilungen* 66: 44–71. https://doi.org/10.30963/aramit6607

Lecigne S., Moutaouakil S. & Lips, J. 2025. Contribution to the knowledge of the spider fauna of Morocco (Arachnida: Araneae) – second note. On new species and new records from caves and miscellaneous terrestrial ecosystems. *Journal of the Belgian Arachnological Society* 40 (1, supplement): 1–184.

Levy G. 1996. The agelenid funnel-weaver family and the spider genus *Cedicus* in Israel (Araneae, Agelenidae and Cybaeidae). *Zoologica Scripta* 25 (2): 85–122. https://doi.org/10.1111/j.1463-6409.1996.tb00154.x

Levy G. 1998. The ground-spider genera *Setaphis*, *Trachyzelotes*, *Zelotes*, and *Drassyllus* (Araneae: Gnaphosidae) in Israel. *Israel Journal of Zoology* 44: 93–158.

Lucas H. 1846. Histoire naturelle des animaux articulés. *In*: Lucas H. (ed.) *Exploration scientifique de l'Algérie pendant les années 1840, 1841, 1842 publiée par ordre du Gouvernement et avec le concours d'une commission académique*. Paris, Sciences physiques, Zoologie 1: 89–271, pl. 1–17. https://doi.org/10.5962/bhl.title.112444

Logunov D.V. & Schäfer M. 2025. A review of the jumping spider genus *Macaroeris* Wunderlich, 1992 (Arachnida: Araneae: Salticidae: Dendryphantini). *Arachnology* 20 (3): 364–409. https://doi.org/10.13156/arac.2024.20.3.7

Martín D.F. & Adame F.R. 2024. Nuevas adiciones a la fauna aracnológica de Andalucía. *Revista Ibérica de Aracnología* 45: 150–166.

Melic A., Silva A., Patanita M.I., Santos S.A.P., Benhadi-Marín J. & Barrientos J.A. 2016. Three new species of Gnaphosidae (Arachnida, Araneae) collected in Iberian Peninsula. *Revista Ibérica de Aracnología* 28: 107–113.

Méndez Ó., Marquerie M. & Domènech M. 2024. Nuevos registros aracnológicos (Araneae) en Cataluña aportan nuevas citas a nivel regional, nacional y peninsular. *Arxius de Miscel·lània Zoològica* 22: 79–94. https://doi.org/10.32800/amz.2024.22.0079

Menge A. 1866. Preussische Spinnen. erste Abtheilung. *Schriften der Naturforschenden Gesellschaft in Danzig* (N.F.) 1: 1–152.

Morano E. 2020. La familia Tetragnathidae Menge, 1866 (Araneae) en el área ibero-balear. *Revista Ibérica de Aracnología* 37: 101–136.

Nentwig W., Blick T., Bosmans R., Hänggi A., Kropf C. & Stäubli A. 2026. Spiders of Europe. Version 02. 2026. Available from https://www.araneae.nmbe.ch [accessed 20 Feb. 2026]. https://doi.org/10.24436/1

Oger P. 2026. Les araignées de Belgique et de France. https://arachno.piwigo.com/ [accessed 20 Feb. 2026].

Ouakri N., Lecigne S., Abou Oualid J. & Dugon M. 2026. Spiders from the Arganeraie Biosphere Reserve of Souss-Massa region (Morocco), and description of two new species (Arachnida: Araneae: Gnaphosidae, Salticidae). *European Journal of Taxonomy* 1051: 1–50. https://doi.org/10.5852/ejt.2026.1051.3261

Platnick N.I. & Murphy J.A. 1984. A revision of the spider genera *Trachyzelotes* and *Urozelotes* (Araneae, Gnaphosidae). *American Museum Novitates* 2792: 1–30.

Shorthouse D.P. 2010. SimpleMappr, an online tool to produce publication-quality point maps. https://www.simple-mappr.net [accessed 20 Feb. 2026].

Platnick N.I. 2001. The world spider catalog, version 2. American Museum of Natural History. Available from https://wsc.nmbe.ch/resources/archive/catalog_2.0/index.html. [accessed 20 Feb. 2026] https://doi.org/10.5531/db.iz.0001

Saaristo M.I. & Tanasevitch A.V. 1996. Redelimitation of the subfamily Micronetinae Hull, 1920 and the genus *Lepthyphantes* Menge, 1866 with descriptions of some new genera (Aranei, Linyphiidae). *Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck* 83: 163–186.

Senglet A. 2004. Copulatory mechanisms in *Zelotes*, *Drassyllus* and *Trachyzelotes* (Araneae, Gnaphosidae), with additional faunistic and taxonomic data on species from southwest Europe. *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* 77 (1–2): 87–119. https://doi.org/10.5169/seals-402861

Simon E. 1870. Aranéides nouveaux ou peu connus du midi de l'Europe. *Mémoires de la Société royale des Sciences de Liège* (2) 3: 271–358.

Simon E. 1876. *Les arachnides de France. Tome troisième*. Roret, Paris.

Simon E. 1898. *Histoire naturelle des araignées. Deuxième édition, tome second*. Roret, Paris. https://doi.org/10.5962/bhl.title.51973

Simon E. 1909. Étude sur les arachnides recueillis au Maroc par M. Martinez de la Escalera en 1907. *Memorias de la Real Sociedad Española de Historia Natural* (6) 1: 5–43.

Simon E. 1937. *Les arachnides de France. Synopsis générale et catalogue des espèces françaises de l'ordre des Araneae. Tome VI. 5^e^ et dernière partie*. Roret, Paris.

Snazell R. 1983. A new wolf spider of the genus *Trabaea* (Araneae: Lycosidae) from southern Spain. *Bulletin of the British Arachnological Society* 6: 75–77.

Tanasevitch A.V. 2014. Linyphiid spiders (Araneae, Linyphiidae) from caves of Morocco. *Revue Suisse de Zoologie* 121(2): 277–290.

Van den Spiegel D., Henrard A., Theeten F. & Musschoot T. 2025. Arachnomorpha collection of the Royal Museum for Central Africa. Version 1.3. Royal Museum for Central Africa, Belgium. Occurrence dataset available from https://www.gbif.org/occurrence/5842032836 [accessed 20 02 2026] https://doi.org/10.15468/ehmc5q

WSC 2026. World Spider Catalog. Version 27. Natural History Museum Bern. Available from http://wsc.nmbe.ch [accessed Feb. 2026]. https://doi.org/10.24436/2

Wunderlich J. 1980. Linyphiidae aus Süd-Europa und Nord-Afrika (Arachn.: Araneae). *Verhandlungen des Naturwissenschaftlichen Vereins in Hamburg (NF)* 23: 319–337.

Wunderlich J. 1995. Zu Taxonomie und Biogeographie der Arten der Gattung *Oecobius* Lucas 1846, mit Neubeschreibungen aus der Mediterraneis und von der Arabischen Halbinsel (Arachnida: Araneae: Oecobiidae). *Beiträge zur Araneologie* 4 (1994): 585–608. [publ. in Dec. 1995]

Zamani A. & Marusik Y.M. 2020. A review of Agelenini (Araneae: Agelenidae: Ageleninae) of Iran and Tajikistan, with descriptions of four new genera. *Arachnology* 18 (4): 368–386. https://doi.org/10.13156/arac.2020.18.4.368

Zamani A. & Marusik Y.M. 2025. New taxonomic and faunistic data on Moroccan spiders (Arachnida: Araneae), including the description of five new species. *Zootaxa* 5692 (2): 321–337. https://doi.org/10.11646/zootaxa.5692.2.6

Zamani A., Marusik Y.M. & Szűts T. 2023. A survey of the spider genus *Dysdera* Latreille, 1804 (Araneae, Dysderidae) in Iran, with fourteen new species and notes on two fossil genera. *ZooKeys* 1146: 43–86. https://doi.org/10.3897/zookeys.1146.97517

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