Fixation of Lycosa fidelis O. Pickard-Cambridge, 1872 as the type species for the genus Wadicosa Zyuzin, 1985 (Araneae: Lycosidae), with a redescription of the species

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Fixation of *Lycosa fidelis* O. Pickard-Cambridge, 1872 as the type species for the genus *Wadicosa* Zyuzin, 1985 (Araneae: Lycosidae), with a redescription of the species

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ABSTRACT Contrib. Nat. Hist. 12: 813–828.

The name *Lycosa* or *Pardosa venatrix* has been used since Simon in 1882 to denote a widespread Palearctic species. The nominal species *Lycosa venatrix* Lucas, 1846 was originally designated as the type species for the genus *Wadicosa* Zyuzin, 1985. It has, however, been recognized that the species long known as *venatrix* was misidentified: the species so named by Lucas is evidently not a species of *Wadicosa*. Therefore, we now fix *Lycosa fidelis* O. P.-Cambridge, 1872, the species actually involved in the misidentification, as the type species for *Wadicosa*. An emended diagnosis for the genus *Wadicosa* is given, as well as a redescription of *W. fidelis*. The presence of some hitherto unrecorded structures in the male palp is emphasized. A hypothetic view on the mating mechanism in *W. fidelis* is presented.

Keywords: Araneae, Lycosidae, *Wadicosa*, diagnosis, type species, *Lycosa venatrix*, *Lycosa fidelis*, redescription.

Introduction

The genus *Wadicosa* was established by Zyuzin (1985: 48) with five included species, one of which was described as new, *W. commoventa* Zyuzin, 1985 from Turkmenistan Republic. *Lycosa venatrix* Lucas, 1846 was designated as the type species. At the same time, Zyuzin established the monogeneric subfamily Wadicosinae. As evident from the included species and the characters provided, the name *Lycosa venatrix* as used by Zyuzin (1985) refers to the widespread Palearctic species for a long time known as *Pardosa venatrix* in the sense of other araneologists during the 20th century (e. g., Simon 1937, Denis 1947, Buchar 1980) and not to *Lycosa venatrix* Lucas, 1846. The aim of this paper is to stabilize the name *Wadicosa* by fixation of its type species.

As the genus *Wadicosa* was originally described in Russian, a short, slightly emended and supplemented diagnosis in English is given below.

Fixation of the type species for the genus *Wadicosa* Zyuzin

A scrutiny of the original description of *Lycosa venatrix* Lucas, 1846 reveals that this species cannot be conspecific with the species currently known as *Pardosa venatrix*. This is in accordance with Kronestedt (1987: 975) who pointed out that "Lucas's (1846) original description and illustration of *venatrix* do not match the species later named as such by the authors cited [i. e. Simon 1937; Roewer 1959; Buchar 1980]". Similarly, Wunderlich (1987: 236) claimed that *Lycosa venatrix* Lucas, 1846 is not conspecific with the taxon "*Pardosa venatrix*" in the sense currently used by authors, and he listed the latter species under the name *Pardosa fidelis* (O. P.-Cambridge, 1872). The same view was further developed by Wunderlich (1991: 467) who wrote that "Ich vermute dass Zyuzin als Typus-Art von *Wadicosa* tatsächlich *Lycosa fidelis* O. Pickard-Cambridge 1872 (= *Pardosa f.*) vorgesehen hatte". At the same time he allocated *Lycosa fidelis* to the genus *Wadicosa* and further stated that because of being a dubious species, *Lycosa venatrix* will create nomenclatural problems when standing as the type species of *Wadicosa*. This view was also put forth by Kronestedt (1993: 313), who, with reference to species listed by name in Kronestedt (1987: 975), indicated that a number of species presently placed in *Lycosa* or *Pardosa* has to be transferred to Wadicosinae.

Lucas (1846: 116) described *Lycosa venatrix* from material collected in the vicinities of Oran and Algiers in Algeria, which is also within the distribution range of *Wadicosa fidelis*. Lucas described and illustrated the female sex in some detail. Though Lucas's description, as customary for his time, gives no details of the copulatory organs, some somatic characters in the female sex may be compared between the actual species (cf. tab. 1). Lucas's description of the *L. venatrix* male is brief: "Le mâle diffère de la femelle par une forme beaucoup plus étroite et par les organes de la locomotion, qui sont plus allongés et surtout plus grêles". He did not mention the apparent coloration/pilosity present in the male palp of *Pardosa venatrix* auctt. in which the patella, the tibia and the base of the cymbium are light-coloured and densely equipped with white hairs, in contrast to the dark (except apically) femur and most of the proximal half of the cymbium. No doubt this condition could not have escaped notice by Lucas if he had had material of *P. venatrix* auctt. at hand.

Several years later, Pickard-Cambridge (1872: 319) described *Lycosa fidelis* (male only) from material collected in Palestine (Jericho), Lebanon (Beirut), Egypt (Cairo) and India (Bombay).

Simon (1876: 257, footnote) remarked that "M. H. Lucas a décrit quatre espèces d'Algérie qui paraissent se rapprocher de *L[ycosa] accentuata*, au moins par le dessin de la face dorsale: .... *venatrix*. Cf. *Alg. Arach.*, p. ... 116; pl. 3; fig. ... 7" (referring to Lucas 1846). Thus, from the dorsal habitus shown in the original illustration, Simon (1876) found similarity between *Lycosa venatrix* Lucas, 1846 and *Lycosa accentuata* Latreille, 1816, the latter presently placed in the genus *Alopecosa* Simon, 1885. In the same paper Simon (p. 283, footnote) wrote "M. O. P. Cambridge a décrit trois espèces voisines de *L[ycosa] perita* et *leopardus*: ...- *L. fidelis*, loc. cit., p. 319, de Syrie, d'Egypt et de l'Inde." From this it is evident that Simon by then placed *Lycosa fidelis* close to *L. perita* and *L. leopardus*, both latter presently placed in the genus *Arctosa*.

A quite different position was taken a few years later by Simon when he (1882) indicated that he had examined the type of *L. venatrix* Lucas, by then said to be present in the Muséum National d'Histoire Naturelle, Paris. He stated that *L. venatrix* Lucas was conspecific with *Lycosa fidelis* O. P.-Cambridge, 1872, and *L. galerita* L. Koch, 1875. At about the same time, Pavesi (1884) considered *Lycosa venatrix* as a synonym of *Tarentula andrenivora* (Walckenaer, 1825), a species later placed in synonymy with species of *Alopecosa* (cf. Roewer 1954: 214; Bonnet 1955: 234).

When revising the African lycosid species known by then, Roewer (1959), in a paper regarded as exceptionally poor by today's specialists of Lycosidae, treated *fidelis* (p. 45), *galerita* (p. 64) and *venatrix* (p. 55) (sub *Pardosa*) as separate species. For *venatrix* he mentioned that no type material had been found in the Muséum National d'Histoire Naturelle, Paris and therefore "designated" a lectotype which is invalid because it was not based on any original material (lost). Rack (1961), as a curatorial routine, listed Roewer's "lectotype" as a "neotype" which under these conditions has no name-bearing status and should be set aside. We have examined the actual male specimen from Libya, and found it to be conspecific with the species referred to as *Pardosa venatrix* auctt. Because this species clearly differs from the species originally described by Lucas (1846), one may assume that mislabelling, mixing or some other cause may be the reason why Simon (1882) found the specimen indicated as type of *Lycosa venatrix* conspecific with *Lycosa fidelis* O. P.-Cambridge, 1872. The latter has been placed as a synonym of *Pardosa venatrix* auctt. since Simon (1882) until Wunderlich (1991).

Under the circumstances, we select and thereby fix *Lycosa fidelis* O. P.-Cambridge, 1872 as the type species of the genus *Wadicosa* Zyuzin, 1985. According to the ICZN Article 70.3.2 (effective from 1 January 2000), this may be done without application to the International Commission for Zoological Nomenclature. *Lycosa venatrix* Lucas is considered as a species incertae sedis.

Emended diagnosis of the genus *Wadicosa*

The original diagnosis was based on two species, *W. commoventa* and *W. fidelis* (s. lat.). An emended diagnosis is given below.

Wadicosinae Zyuzin is still treated as monogeneric, and the generic diagnosis consequently also applies to the subfamily.

Diagnosis: Lycosid spiders of medium size (carapace length approx. 2–4 mm), in general with dark-coloured body. Carapace with a more or less distinct median star-shaped lighter field. Dorsum of abdomen with an anterior median lanceolate stripe followed rearwards by a row of transversally paired light spots, the posterior ones confluent; each spot with a dark dot having a long erect dark hair.

Anterior eye row slightly procurved as seen from in front and considerably shorter than second row, which in turn is considerably shorter than third row. Anterior median eyes clearly larger than anterior lateral eyes (ØAME/ØALE 1.3–1.4).

Retromargin of chelicerae with three teeth.

Leg sequence IV-I-II-III.

Male palp: Tegulum with anterior retrolateral process pointing ventrad. Subtegulum relatively large, shifted towards the inner side of bulbus and more or less concealed by a corrugated cuticular cover. Apical portion of bulbus (palea) with conductor of embolus.

Epigyne: Anterior part with two more or less separated foveolae.

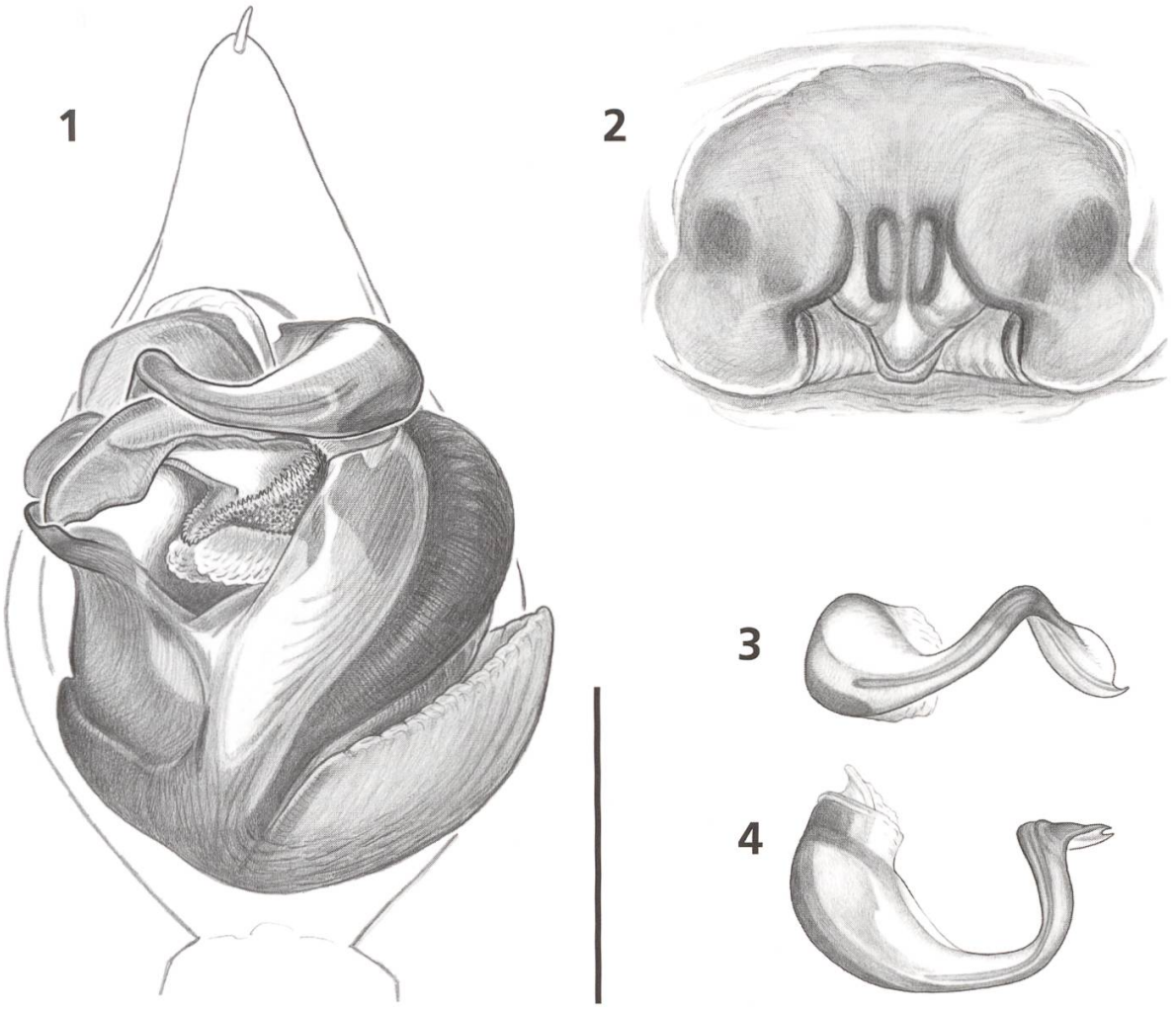
Species of *Wadicosa* are similar to members of *Pardosa* (s. lat.) in appearance (see Kronestedt 1993; Alderweireldt & van Harten 2004).

Species placed in *Wadicosa*

The following species have hitherto been formally placed in or transferred to *Wadicosa*:

Wadicosa commoventa Zyuzin, 1985 (Turkmenistan)

W. daliensis Yin, Peng & Zhang, 1997 (southern China)



Figs. 1–4. *Wadicosa fidelis* (O. P.-Cambridge). – 1: male (from Spain) right palp in ventral view; – 2: epigyne (from Spain); – 3: embolus (from Tunisia) in ventral view; – 4: same in anterior view. Scale line: 0.5 mm.

W. fidelis (O. P.-Cambridge, 1872) (reported from Cabo Verde Is. to China, but the conspecificity of material from the eastern part of this range is questioned)

W. okinawensis (Tanaka, 1985) (Japan)

W. quadrifera (Gravely, 1924) (India, Sri Lanka)

One species of *Wadicosa* was described from Borneo but not named (Zehethofer 1998).

A number of species from the Afrotropical and Indomalayan Regions await formal transfer to Wadicosinae (Kronestedt 1987).

Material and methods

Material from the following collections was included (cf. comments below):

BMNH	The Natural History Museum, London
CAZ	collection of A. A. Zyuzin, Almaty
MNHN	Muséum National d'Histoire Naturelle, Paris
MRAC	Musée Royal de l'Afrique Centrale, Tervuren, Belgium
NHRS	Swedish Museum of Natural History, Stockholm
OXUM	Oxford University Museum of Natural History, Oxford
ZMUH	Zoologisches Institut und Museum, Universität Hamburg, Hamburg

Measurements are given in millimetres and refer to a specified individual. Eyepiece micrometer units (as given for eyes) can be converted to mm by dividing by 80.

***Wadicosa fidelis* (O. Pickard-Cambridge)**

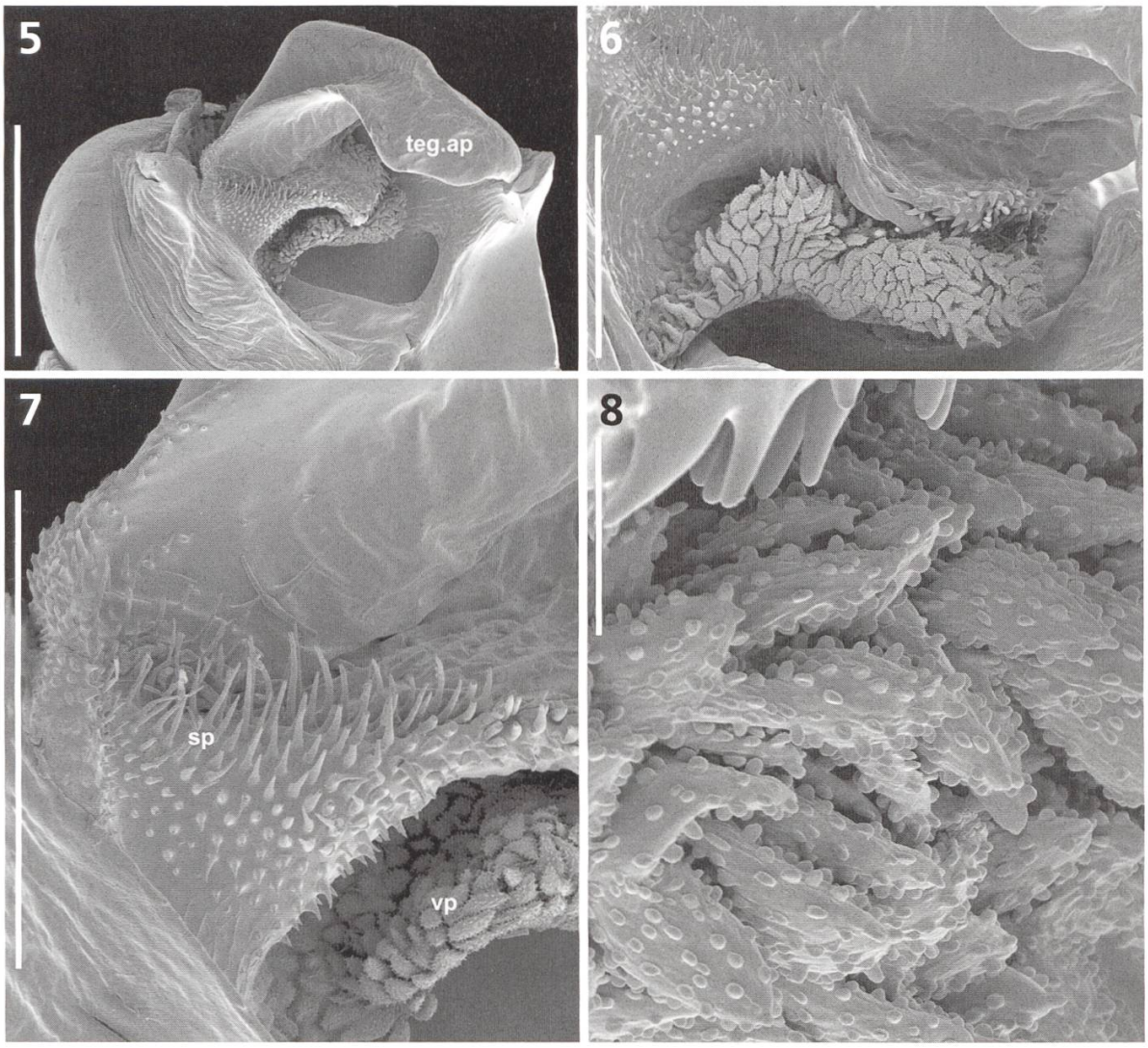
Lycosa fidelis;O. Pickard-Cambridge (1872): 319 (♂)
Pardosa venatrix; Denis (1947): 37 (nec *Lycosa venatrix* Lucas, 1846)
Pardosa venatrix; Buchar (1980): 88, part: fig. 29 (nec *Lycosa venatrix* Lucas, 1846)
Lycosa venatrix (nec Lucas, 1846); Zyuzin (1985): 49
Wadicosa fidelis; Wunderlich (1991): 467; Platnick (2009) online.

Type. Lectotype ♂ from "Palestine" (OXUM, collection of O. Pickard-Cambridge: bottle 1572, tube 39).

Diagnosis. Males may be distinguished by the combination: shape of tegular (median) apophysis, with an abundance of very small projections on its lower branch, embolus with rounded, non-sclerotized widening before tip, together with sclerotized posterior retrolateral tegular process being crest-shaped; females by the configuration and structure of the epigynal cavity and the spermathecae.

Description:

Male (from Spain; measurements of lectotype in parentheses). Total length 6.3 (6.5), carapace 3.20 (3.50) long, 2.45 (2.60) wide.



Figs. 5–8. *Wadicosa fidelis* (O. P.-Cambridge), male left palp (from Spain). – 5: anterior part of tegulum with tegular apophysis (*teg.ap*); – 6: close-up of folded lower branch of tegular apophysis; – 7: close- up of basal part of tegular apophysis with spinulae (*sp*) and verruciform projections (*vp*); – 8: close-up of verruciform projections. Scale lines: 300 µm (5), 120µm (6), 150 µm (7), 12 µm (8).

Carapace: Blackish brown with yellowish to dark greyish brown, wide, jagged-edged median field. Lateral bands missing or, when present, only as indistinct lighter spots. Sides of thoracic part with short, black recumbent hairs and light recumbent ones, median field with dense pubescence of recumbent light hairs. Clypeus blackish brown. Chelicerae brownish grey with dark veins to black, inner side distally yellowish. Sternum yellowish grey to black.

Eyes: Width of row I 55 (slightly procurved as seen from front), row II 70, row III 90, row II–III 70. Diameter of AME 12, ALE 9, PME 24, PLE 20. Distance between AMEs 10, between AME and ALE 2.

Abdomen: Dorsum blackish with pattern of yellowish spots and bars. Lanceolate stripe greyish yellow to blackish. Yellowish spots at each side of lanceolate stripe and posterior to it a series of 3–4 transverse yellowish bars (more or less confluent yellowish spots) alternating with blackish bars. Venter yellowish to greyish with light pubescence. Spinnerets yellowish.

Legs: Yellowish brown with dark annulation. Most of Fe I often darkened. (Legs may be more or less darkened with lighter markings obscured: probably more aged(?) specimens.)

Palp (Fig. 1): Fe 1.20, Pt 0.55, Ti 0.50, Cy 1.50. Pt and Ti yellow (sometimes with a few small darker blotches), Fe dark brown except apically (yellow), Cy dark brown (basally yellow), distally lighter. Pt, Ti and basalmost part of Cy with dense white pubescence. Tegular apophysis with comparatively long upper branch directed retrolaterad, distal part slightly angled obliquely ventrad (Fig. 5). Weakly sclerotized, shorter lower branch composite, folded into a lamelliform portion partly covered with a unique, hitherto unrecorded kind of numerous minute spinulae, and underlying pulvinate portion with a unique, hitherto unrecorded kind of verruciform outgrowths (Figs. 6–8). The whole lower branch lies in a large depression beneath the upper branch (Figs. 1, 5). Tegulum proximally with a heavily sclerotized, low cristate posterior retrolateral process, and distally with a distinct protruding anterior retrolateral process directed ventrad and adjoining the dilated end of the upper branch of the tegular apophysis (ventral view: Figs. 1, 5; retrolateral view: Fig. 12), its anterior side forming a shallow depression in which the apical part of the resting embolus lies[1]. Both retrolateral tegular processes are distantly separated by a pyriform depression (Figs. 1, 12, 18). Comparatively large subtegulum shifted prolaterad and covered with extensive, shell-like and somewhat spongy structure. Embolus long (Figs. 3, 4), forming a conspicuous bend over upper branch of tegular apophysis (Fig. 1); apical part with rounded, transparent extension, strongly narrowed to acute tip (Figs. 3, 9, 10). Conductor of embolus[2] heavily sclerotized, its axial part shortened and inclined, forming a slightly depressed bed (Fig. 11). Comparatively large terminal part of conductor slightly hooked in ventral view (Fig. 9) and distinctly incised on the inside[3] as seen in retrolateral view (Fig. 11); this incision, hitherto unrecorded in *W. fidelis*, is intended for the insertion of the apical embolic extension when mating, ensuring exact penetration of the tip of embolus into the copulatory opening of epigyne (see chapter "Presumable mating mechanism" below). Comparatively short palea distinctly concave (Fig. 9).

Female (from Spain). Total length 7.2 (carried egg sac), carapace 3.60 long, 2.85 wide.

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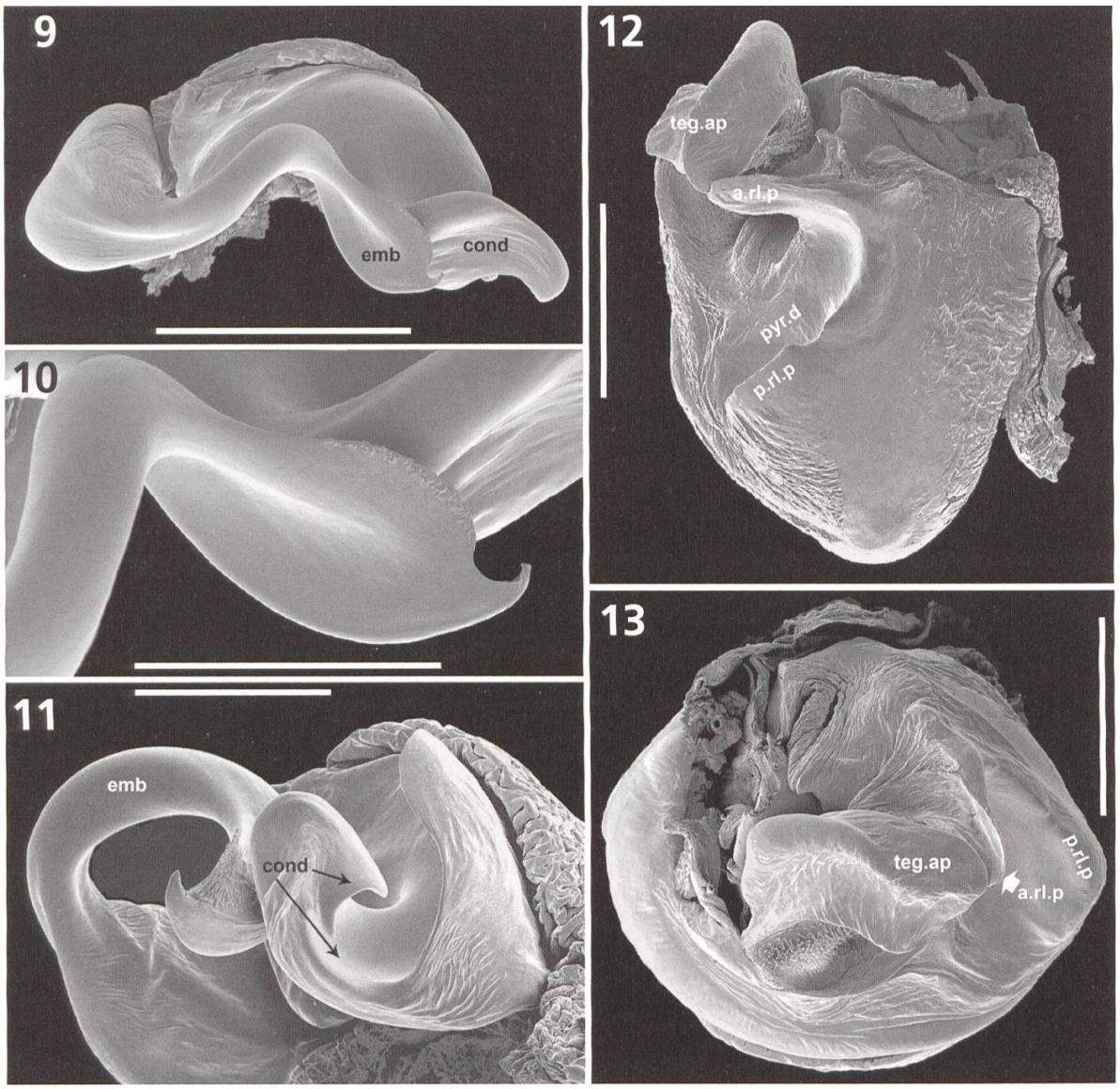
[1] Zyuzin (1985, figs. 17–18) designated both retrolateral processes as lower process of tegulum and upper process of tegulum, respectively; the latter was erroneously regarded (p. 49) as "functional conductor of embolus".

[2] The conductor was termed terminal apophysis in Kronestedt (1987, 1993) (cf. also Zyuzin 1993: 699).

[3] A similar incision is also present in *W. quadrifera* (see Kronestedt 1993, figs. 3a, 4c).



Figs. 9–13. ***Wadicosa fidelis*** **(O. P.-Cambridge), male left palp (from Spain). – 9: embolus and terminal part of conductor in ventral view; – 10: close-up of distal part of embolus; – 11: retrolateral view of embolus and conductor; – 12: tegulum (apical portion of bulbus removed) in retrolateral view; – 13: ditto in anterior view.**
a.rl.p **anterior retrolateral tegular process,** ***cond*** **conductor,** ***emb*** **embolus,** ***p.rl.p*** **posterior retrolateral tegular process,** ***pyr.d*** **pyriform depression,** ***teg.ap*** **tegular apophysis. Scale lines: 300 µm (9, 12, 13), 150 µm (10, 11).**

Carapace: Dark greyish brown with jagged-edged median field slightly lighter to yellowish brown. Lateral bands missing or, when present, only as indistinct lighter spots. Entire carapace covered with dense whitish recumbent pubescence; on thoracic sides also with scattered black hairs. Clypeus dark greyish brown with recumbent whitish pubescence and few long dark hairs. Chelicerae brown with whitish and dark erect hairs. Sternum dark grey with whitish pubescence mixed with scattered dark erect hairs.

	Lycosa venatrix Lucas (from Lucas 1846, incl. figs.)	*Wadicosa fidelis* (O. Pickard-Cambridge)
Carapace: median band	"Le céphalothorax...dans sa partie médiane, une large bande longitudinale d'un fauve clair". From illustration (pl. 3, fig. 7): almost evenly broad band in thoracic part, extending into cephalic part	in alcohol-preserved females there is a large light, median, star-shaped patch in the thoracic part (variation: the patch may be distinct to hardly visible)
Eyes: front row	eyes about equal in size ("presque de même grosseur")	anterior median eyes (AME) considerably larger than laterals (ALE)
Eyes: posterior eye quadrangle	almost regular square ("un carré presque régulier")	trapezoid, second eye row shorter than third row

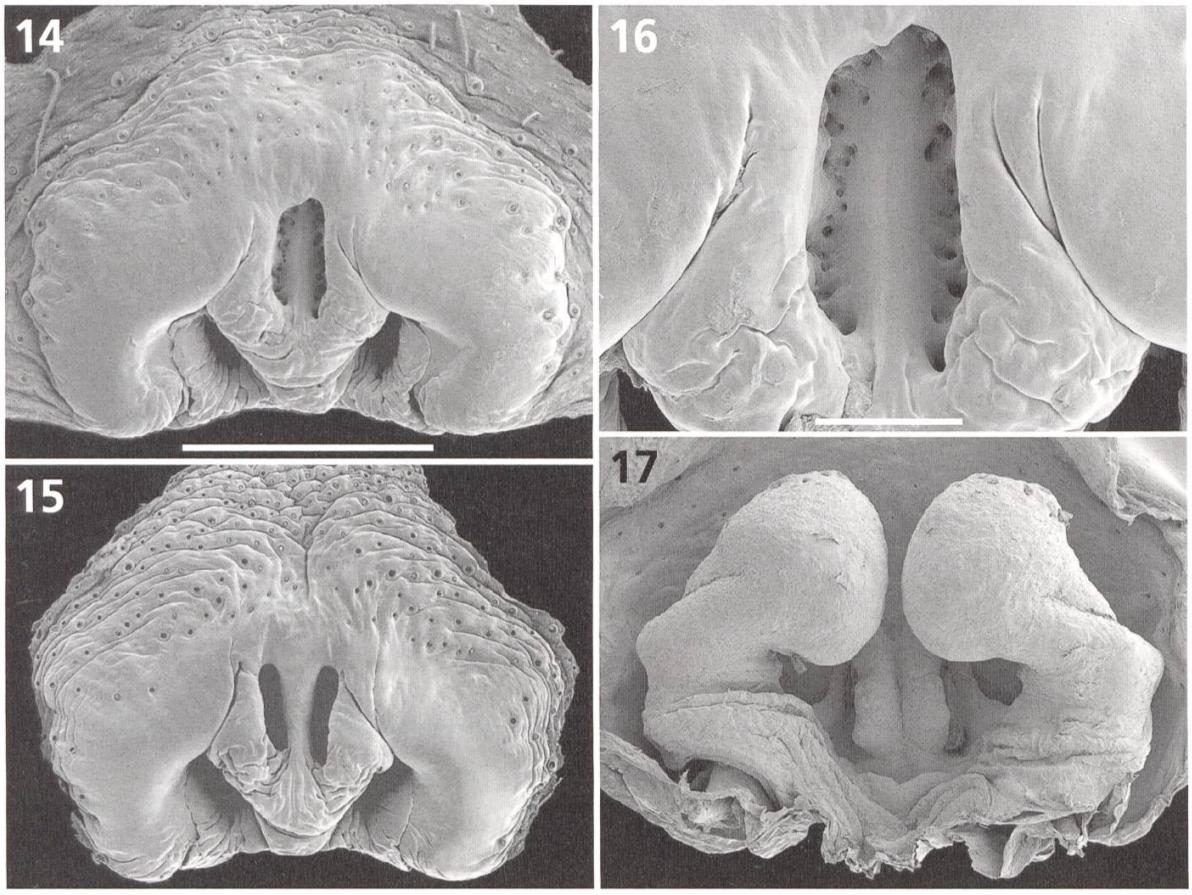
Tab. 1. Comparative characters of female *Lycosa venatrix* Lucas, 1846 and *Wadicosa fidelis* (O. Pickard-Cambridge, 1872) (= *Pardosa venatrix* sensu auctt.)

Eyes: Width of row I 58 (slightly procurved as seen from front), row II 74, row III 95, row II-III 72. AME 14, ALE 10, PME 24, PLE 22. Distance between AMEs 10, between AME and ALE 2.

Abdomen: Dorsum dark greyish brown with pattern of yellowish patches and bars. Lanceolate stripe dark greyish brown, indistinct . Yellowish patches at each side of lanceolate stripe and posterior to it in a series of 3–4 transverse yellowish bars (more or less confluent yellowish patches) alternating with blackish bars. Yellowish patches each with a dark dot with one long dark erect hair. Dorsum and sides covered with recumbent whitish pubescence and scattered dark hairs. Venter light brown to yellowish with white pubescence. Spinnerets yellowish.

Legs: Yellowish brown with darker annulation.

Epigyne (Figs. 2, 14–15): Epigynal cavity wider than long, posteriorly open to almost its entire (sometimes entire) width. Copulatory openings concealed within each epigynal corner (cf. Figs. 2, 18). Spermathecae comparatively large and prominent, somewhat spherical, situated close to mid-line (Fig. 17). Central part of epigynal cavity occupied by elevated, rather wrinkled, more or less triangular septum tapering backwards. Anterior to this triangular septum two elongated foveolae ("pockets" sensu Kronestedt 1993) are situated, sometimes more or less confluent and open posteriorly. Bottom of elongated foveolae perforated (Fig. 16).



Figs. 14–17. *Wadicosa fidelis* (O. P.-Cambridge), females (from Spain). – 14, 15: epigynes in ventral view; – 16: close-up of epigyneal foveolae (here the two foveolae are confluent) to show porous bottom; – 17: epigyne with spermathecae in dorsal view. Scale lines: 300 µm (14, 15, 17), 60 µm (16).

Presumable mating mechanism (sensu A. A. Zyuzin): Axes of bulbus and epigyne disposed nearly crosswise during copulation. The dilated end of the upper branch of the tegular apophysis partly enters the elongated foveola (Fig. 18), while the apical part of the anterior retrolateral tegular process adjoining the end of the upper branch (Figs. 1, 5, 12, 13) fixes the last on the septum with its slightly blunted tip. At the same time, the widened and deepened part of the pyriform depression lying posteriad covers the corresponding convexity of the epigynal lip, whereas the posterior retrolateral tegular process enters the epigastric furrow (Figs. 18, 19), ensuring firm fixation of the male bulbus on the female epigyne (in some cases, to fit one another, the male bulbus can slightly turn the foveolae: cf. Figs. 2, 15, 18). The depression under the upper branch of the tegular apophysis covers the convexity of the epigyne to the side of the foveolae, while the lower branch takes its place in the anterior part of the epigynal sclerite: its microspinulae may act as a supplementary fixer; besides, the whole lower branch including verruciform projections probably serves as a pad/cushion. The swelling haematodocha abducts and slightly turns the whole apical portion of bulbus so that the terminal part of the conductor comes close to the copulatory opening of the epigyne, whereas

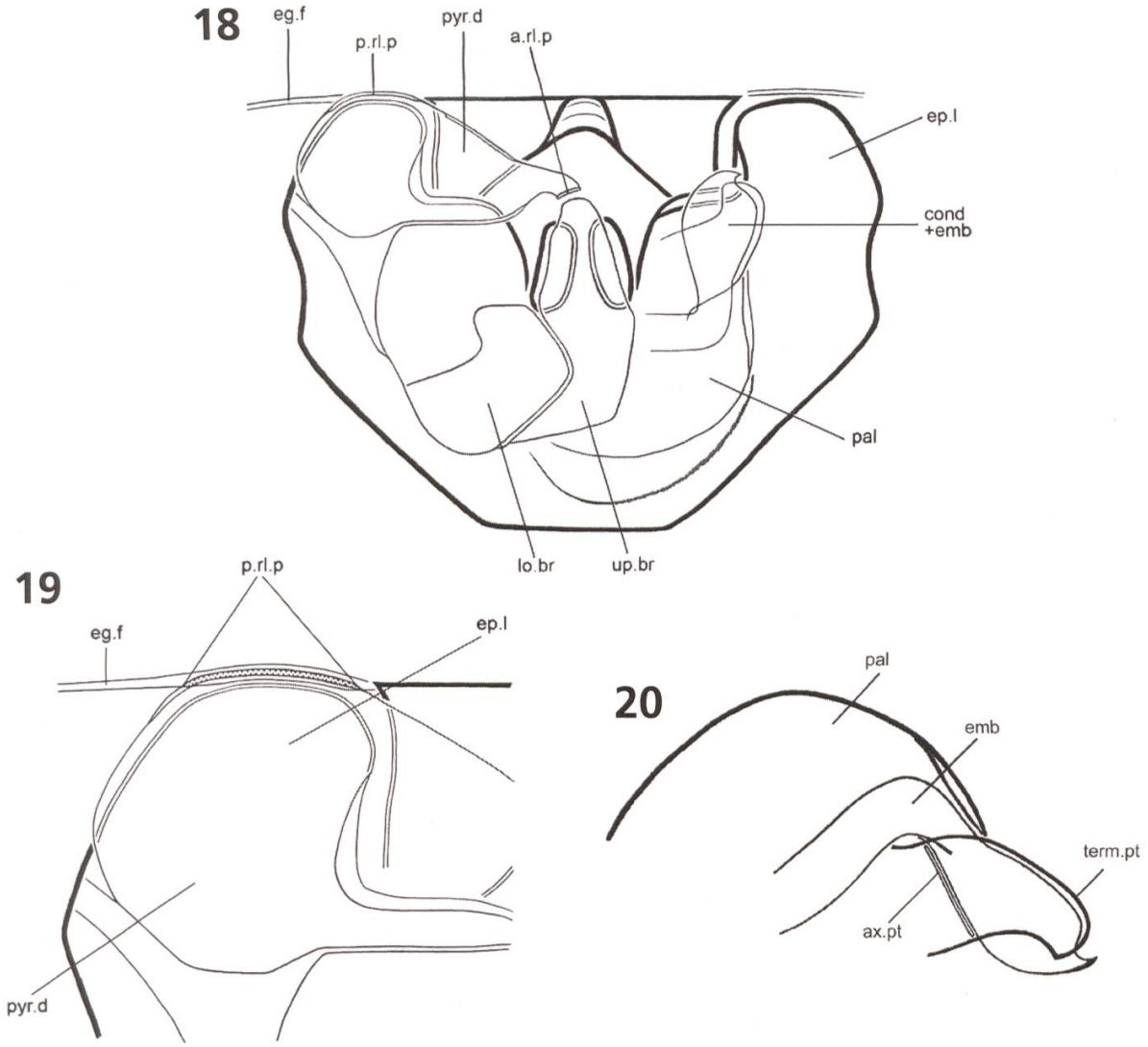
	Fe	Pt	Ti	Mt	Ta	Total
Male						
I	2.40	1.10	1.90	2.10	1.35	8.85
	(2.45)	(1.20)	(1.95)	(2.10)	(1.40)	(9.10)
II	2.30	1.05	1.70	2.00	1.25	8.30
	(2.35)	(1.10)	(1.70)	(2.05)	(1.30)	(8.50)
III	2.20	1.00	1.55	2.25	1.15	8.15
	(2.25)	(1.05)	(1.60)	(2.25)	(1.20)	(8.35)
IV	2.95	1.15	2.30	3.70	1.50	11.60
	(3.00)	(1.20)	(2.30)	(3.70)	(1.55)	(11.75)
Female						
I	2.80	1.30	2.20	2.20	1.50	10.00
II	2.70	1.25	1.95	2.10	1.40	9.40
III	2.60	1.15	1.80	2.50	1.30	9.35
IV	3.50	1.35	2.75	4.35	1.70	13.65

Tab. 2. Leg I–IV measurements (mm) of *Wadicosa fidelis* (O. P.-Cambridge)

the concave palea fixes in the free anterior part of the epigynal sclerite covering the corresponding convexity (Fig. 18). At the same time, the embolus comes into the contact with the conductor by its knee-bent section (Figs. 3, 9, 10), so that the posterior rim of the apical embolic extension takes its place in the inclined axial part of the conductor forming a peculiar holdfast; the anterior edge of the embolus immediately enters the incision on the inside of the terminal part (Fig. 20), whereas the acute embolic tip penetrates into the spermathecal duct (see Fig. 18).

Note: Though the mating mechanism proposed is hypothetical, this is the first attempt to understand the role and arrangement of the different structures in action in *W. fidelis* and in the whole peculiar subfamily Wadicosinae as well. Further studies are necessary in this respect.

Material examined: Palestine, 1 ♂ (O. P.-Cambridge, OXUM, lectotype). Egypt: Cairo, 2 ♂, 1 ♀ (MNHN: N11291); Fayum (C. W. Andrews, BMNH), 5 ♂, 8 ♀. Spain (all from Andalusia): Andalusia, 2 ♂, 1 ♀ (MNHN: N435); Playa de Arenas (S of Manilva), dry cracked bottom at rivulet close to seashore, 10 May 1977, 5 ♂, 5 ♀ (T. Kronestedt, NHRS, CAZ); San Pedro de Alcantara (W of Marbella), 12 May 1977, 1 ♂, 1 ♀ (T. Kronestedt, NHRS); Campo de Golf between Malaga and Torremolinos, 15 May 1977, 2 ♂, 2 ♀ (T. Kronestedt, NHRS); Fuengirola, on gravel bank at Rio Fuengirola, 2 ♂, 2 ♀, 19 May 1977 (T. Kronestedt, NHRS). Portugal(?): Porto, 24 ♀ (Seg, MNHN: N8567). Tunisia: Tozeur, 2 April



Figs. 18–20. *Wadicosa fidelis* (O. P.-Cambridge). – 18: a hypothetical arrangement of the left male bulbus structures on the female epigyne during copulation; – 19: close-up of the lip-furrow complex; – 20: close-up of the conductor-embolus complex.
***a.rl.p* anterior retrolateral tegular process, *ax.pt* axial part of conductor, *cond+emb* conductor-embolus complex, *eg.f* epigastric furrow, *ep.l* epigyneal lip, *lo.br* lower branch of tegular apophysis, *pal* palea, *p.rl.p* posterior retrolateral tegular process, *pyr.d* pyriform depression covering epigyneal lip (*ep.l*), *term.pt* terminal part of conductor, *up.br* upper branch of tegular apophysis.**

1954 (J. Cloudsley-Thompson, MRAC 122.198); Oued Mellegue, among stones at river bed, 17 April 1972, 1 ♂, 1 ♀ (Eva Kronestedt, NHRS). Libya: Dernah, 1 ♂ (so-called "neotype" of *Pardosa venatrix*, in ZMUH); numerous ♂ and ♀ in a vial without specified locality (MNHN: N1718, labelled "*Lycosa venatrix* Luc.").

Comments: The geographic range that has been attributed to *W. fidelis* is remarkably wide (see Buchar 1980: 88), and it is put in question whether the name encompasses more than one biospecies. Though we have seen material that can easily be referred to as *W. fidelis* from wide apart areas, we have limited ourselves to incorporate only Mediterranean material at this stage.

Habitat: The information about habitat amplitude in *W. fidelis* is rather scanty, though some extractions can be made from what is known, including our own data (cf. also Material examined above). The genus name *Wadicosa* refers to species inhabiting dry beds of intermittent rivers (from Arabic wādi) in Eurasian and African deserts and sub-deserts at low to moderate altitudes[4]. There they prefer scanty grassed loose soils (loamy, gravelly, etc.). *W. commoventa*, the first species described in this genus, was found under such conditions. Also *W. fidelis* can be found under similar circumstances but has a wider habitat amplitude, inhabiting various watersides, like river banks and seashores. When living on dried-up riverbeds, the spiders hide among loose fluvial deposits and in cracks, where they will find certain soil moisture supplemented by night dew.

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[4] In the Himalayas, *Wadicosa* species may occur at a height of 2700 m asl, and even up to 5300 m asl (see Buchar 1976, sub *Pardosa birmanica*, and 1980, sub *Pardosa venatrix*).

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