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A revision of the spider genus *Mexcala* Peckham et Peckham, 1902 (Araneae: Salticidae)

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Abstract. Species of the *Mexcala* are revised. Altogether twenty species have been treated, ten of which are new to science: *angolensis* (Angola), *fizi* (Congo), *kabondo* (Congo), *meridiana* (South Africa), *namibica* (Namiba), *ovambo* (Namibia), *signata* (Kenya), *synagelese* (Angola), *torquata* (Ivory Coast) and *vicina* (Cameroon). *Cosmophasis natalensis* Lawrence, 1942 is synonymised with *M. elegans* Peckham et Peckham, 1903 and *Cosmophasis tristis* Berland et Millot, 1941 with *M. caerulea* (Simon, 1901). Three new combinations are proposed (all ex *Cosmophasis*); *M. caerulea* (Simon, 1901), *M. nigrocyanea* (Simon, 1886) and *M. quadrimaculata* (Lawrence, 1942). New data on the distribution of *Mexcala* species are given. The identification key is provided.

Key words: arachnology, taxonomy, Salticidae, *Mexcala, Cosmophasis*, redescription, new species, Africa.

INTRODUCTION

The genus *Mexcala* was established by Peckhams (1902) for *Mexcala rufa* occurring in South Africa. The same authors (1903) included the second species to the genus - *M. elegans* from Zimbabwe and Lawrence (1928) added the third species - *M. agilis* from Namibia. For all three species only males were described and the genus remains poorly known till present. Besides the original descriptions there are no references to this genus in the literature.

In the last years four new species were described and placed into *Mexcala*: *M. monstrata* from Yemen (Wesołowska & van Harten 1994), *M. macilenta* from Tanzania (Wesołowska & Russell-Smith 2000), *M. farsensis* from Iran (Logunov 2001) and *M. formosa* from Ethiopia (Wesołowska & Tomasiewicz 2008).

Currently the genus *Mexcala* comprises of seven species distributed in Africa, southern part of the Arabian Peninsula and Iran. On the other hand some African species described as members of the genus *Cosmophasis* Simon, 1901 are closely related to *Mexcala* spp. and their taxonomic position demands reconsideration.

In this paper redescriptions of all known *Mexcala* species are given, some African species of *Cosmophasis* are redescribed and placed into *Mexcala*, and new species are described as well. The paper summarizes our knowledge of the genus, but *Mexcala* demands further study. The majority of species are known from only one sex, their distribution is very poorly studied and their natural history remains unexplored.

MATERIAL AND METHODS

Specimens for the study were borrowed from the following museum collections:

BMNH – British Museum, Natural History, London;
CAS – California Academy of Sciences, San Francisco;
MCZ – Museum of Comparative Zoology, Harvard;
MNHN – Muséum Nationale d'Histoire Naturelle, Paris;
NM – Natal Museum, Pietermaritzburg;
NMZ – National Museum (Natural History) of Zimbabwe, Bulawayo;
NNM – Namibian National Museum, Windhoek;
PPRI – Plant Protection Research Institute, Pretoria;
SAMC – South African Museum, Cape Town;
SMN – State Museum of Namibia, Windhoek.

Specimens were examined in a Petri dish with alcohol. Descriptions of colours pertain to wet specimens. Living individuals have contrasting, glaring abdomen, usually the pattern is composed of velvet black and reddish orange areas. Unfortunately, this coloration very quickly bleaches in alcohol, orange spots disappear almost at once in preserved specimens. So, descriptions of coloration based on preserved spiders are inadequate and should be supplemented by descriptions of living individuals. The drawings were made with the aid of a reticular eyepiece attached to a stereomicrocope. The male pedipalp and epigyne were removed for the study. The epigyne was macerated in 5% hot KOH for a few minutes and cleared in eugenol. After examination, the genitalia were put in micro-vials with ethanol and placed together with the specimens. Terminology is standard for spiders. Length of carapace, eye field and abdomen, as well as anterior and posterior width of eye field were measured. All measurements are given in millimetres.

KEY TO SPECIES

Males

1. Transverse black band in mid way of abdomen (Figs 3, 70) ..... 2.
–. Coloration of abdomen different ..... 11.

2. Bulb with large posterior lobe (Figs 5, 99) ..... 3.
–. Bulb without prominent posterior lobe ..... 9.
3. Embolus straight (Fig. 120) ..... *vicina*
–. Embolus turn down (Figs 21, 71) ..... .4.
4. Tibial apophysis (laterally) more or less as long as wide at base (Figs 6, 48) .... 5.
– Tibial apophysis (laterally) longer than wide ..... 6.
5. Tibial apophysis (ventrally) with blunt tip (Fig. 47) ..... *fizi*
–. Tibial apophysis (ventrally) pointed (Fig. 5) ..... *agilis*
6. Tibial apophysis (laterally) with small incision (Figs 51, 72) ..... 7.
–. Tibial apophysis (laterally) without incision, pointed (Figs 32, 79) ..... 8.
7. Tibial apophysis as in Fig. 50, white scales on palp retrolaterally ..... *formosa*
–. Tibial apophysis as in Fig. 71, no scales on palp ..... *monstrata*
8 Tibial apophysis stiletto-like, bended towards bulb (Figs 104, 105) ... *synagelese*
–. Tibial apophysis spine-like, bended from bulb (Figs 35, 36) ..... *elegans*
9. Tibial apophysis serrate at tip (Fig. 16) ..... *angolensis*
–. Tibial apophysis without teeth ..... 10.
10. Tibial apophysis stout; embolus long, strongly bended (Fig. 21) ..... *caerulea*
–. Tibial apophysis thin; embolus short, sickle-like (Fig. 62) ..... *macilenta*
11. Abdominal pattern composed with several patches (Fig. 77) ..... *namibica*
–. Abdomen uniformly reddish with black anterior edge (Fig. 95) ..... *rufa*

Females

1. Epigyne with pocket at epigastric fold (Fig. 25) ..... *caerulea*
–. Epigyne without pocket ..... 2.
2. Epigyne with transversal fissure (Fig. 125) ..... sp.?
–. Epigyne different ..... 3.
3. Epigyne with large central depression ..... 4.
–. Epigyne different ..... 6.
4. Abdomen with black patch, like Y turned upside down (Fig. 64), epigynal depression deep (Fig. 65) ..... *macilenta*
–. Abdominal pattrern different, epigynal depression very shallow ..... 5.
5. Seminal ducts and receptacles occupy whole epigynal depression (Fig. 67) .... *meridiana*
–. Seminal ducts and receptacles occupy only central part of depression (Fig. 117) ....*torquata*
6. Epigyne with two rounded openings ..... 7.
–. Epigyne with two shallow rounded depressions, clearly larger than copulatory openings ..... 8.
7. Copulatory openings widely spaced (Fig. 85) ..... *ovambo*
–. Distance between copulatory openings less then diameter of opening (Fig. 102) ..... *signata*
8 Copulatory openings placed at posterior edges of depressions (Fig. 93) .... *quadrimaculata*

–. Copulatory openings placed at paracentral edges of depressions ..... 9.
9. Receptacles long, placed horizontally (Fig. 113) ..... *synagelese*
–. Receptacles ovoid or spherical ..... 10.
10. Epigynal depressions deep, clearly marked (Fig. 75) ..... *monstrata*
– Epigynal depressions shallow, poorly marked ..... 11.
11. Receptacles spherical (Fig. 46) ..... *elegans*
–. Receptacles ovoid ..... 12.
12. Copulatory openings smaller than diameter of initial part of seminal ducts (Fig. 59) ..... *kabondo*
–. Copulatory openings larger than diameter of initial part of seminal ducts (Fig. 82) .....*nigrocyanea*

SYSTEMATICS

Mexcala Peckham et Peckham, 1902

Type species: *Mexcala rufa* Peckham et Peckham, 1902, by monotypy.

Mexcala contains slender, medium-sized spiders with thin long legs, especially last pair (very long metatarsus IV). The spiders are mimicks; their models are mutillid wasps, called also velvet ants, specialized group of insects belonging to the family Mutillidae. Females of these wasps are wingless, ant-like in body shape, covered with velvet hairs. They are dark brown or black, often ringed or marked with vivid red, yellow or orange patches. The venom of mutillids is powerful. The *Mexcala* species resemble velvet ants faithfully, especially in body proportions and bright, contrasting abdominal pattern. The majority of *Mexcala* species have similar coloration, namely carapace is blackish, legs brown with darker lines along sides, abdomen in males is reddish orange with three transverse velvet black bands; broad, triangular median one, and narrower anterior and posterior ones (Fig. 1). In females pattern is composed of thin whitish line and two pairs of reddish orange patches on black background (Fig. 2). Some *Mexcala* can also mimic *Camponotus* ants.

1-2. Typical coloration of *Mexcala*. 1 – male of *Mexcala monstrata* from Yemen (phot. B. Thaler-Knoflach); 2 – female of *Mexcala elegans* from South Africa (phot. C. Haddad)

Chelicerae in *Mexcala* have some short thick spines on dorsal surfaces; their role is unknown, but similar bristles in other spiders may be used for scooping underground retreats.

Natural history of *Mexcala* spiders is very poorly known. Some observations of *M. namibica* and *M. rufa* were provided by Curtis (1988). The two species were observed with dead workers of *Camponotus* ants in chelicerae, but it is not clear whether the spiders preyed on the ants or just picked up the ants' odour. C. Haddad (pers. comm.) in South Africa have many times observed *M. elegans* preying on a wide variety of ant species and on no other prey.

The members of *Mexcala* occur in the whole Africa and the Arabian Peninsula.

Mexcala agilis Lawrence, 1928

(Figs 3-14)

Mexcala agilis Lawrence 1928: 261.

Material

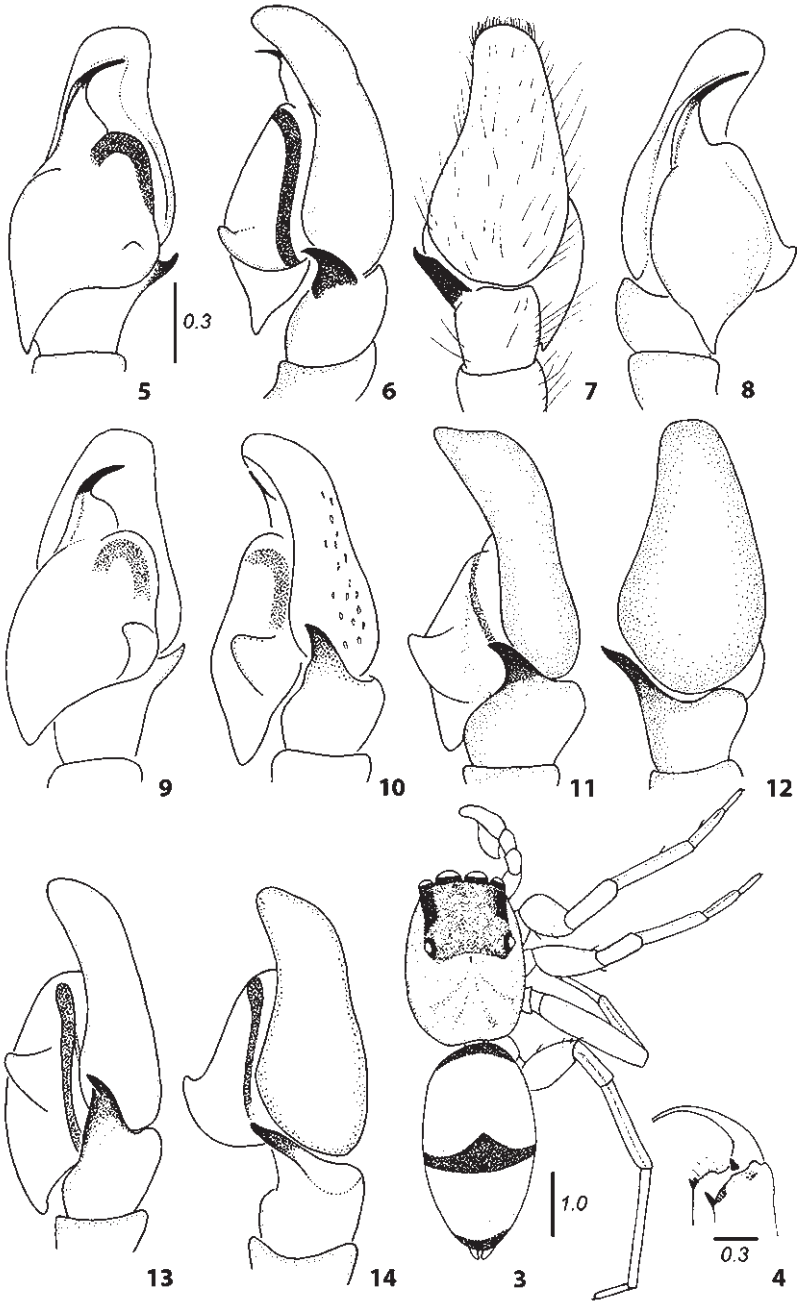
CONGO: Mpala, border of Tanganyika Lake, 6°45´S 29°31´E, 1♂, 11.VII.1953, leg. H. Bomans (MRAC, 75962); same locality, 1♂ (MRAC, 75932); Haut Uele, Moto, 2°50´N 29°25´E, 1♂, leg. L. Burgeon (MRAC, 12070); Kisantu, 4°45´S 14°38´E, 1♂, leg. R. Vanderyst (MRAC, 1253); Kivu, Semliki, valley of Camoyenne river, 1°14´N 29°28´E, 1♂, 1.VIII.1968, leg. R. Lejeune (MRAC, 135701); KENYA: Mombasa airport, 4°03´S 39°41´E, leaf litter, 1♂, leg. J. Parau (PPRI); MALAWI: Chintheche, 11°50´S 24°14´E, 1♂, I-II.1976, leg. R. Jocqué (MRAC, 147916); NAMIBIA: Kaoko Otavi, 18°15´S 13°37´E, 1♂, I-IV.1926, holotype (SAMC, 3054); TANZANIA: Kigoma, 4°52´S 29°38´E, 2550 m a.l.s., on tree trunk, 1♂, 10.X.1959 (BMNH); ZIMBABWE: Victoria Falls, 18°S 24°38´E, 1♂, 24.IV.1991, leg. V. & B. Ross (CAS).

Description

Measurements. Carapace length 2.7-3.9. Abdomen length 3.2-3.7. Eye field length 1.3-1.5, anterior width 1.5-1.6, posterior width 1.6-1.7.

Male. Slender spider with long legs, general appearance in Fig. 3. Carapace medium high, widest posteriorly, dark brown, eye field black, clothed with short brilliant hairs, near eyes long brown bristles. Chelicera unidentate, promargin serrate with long setae (Fig. 4). Short, thick, spike-like bristles on anterior cheliceral surface. Labium, gnathocoxae and sternum dark brown. Clypeus low, dark. Pedicel long. Abdomen dark with three velvet black transverse band (Fig. 3), densely covered with scale-like hairs. Venter brownish. Spinnerets light brown. Legs very long and thin, femora blackish, remaining segments light brown with black streaks along sides. Spines long, leg hairs dark. Pedipalps light brown, dark line along dorsum tibia and patella, on cymbium some translucent scales (Fig. 10). Palpal organ shown on Figs 5-14, tibial apophysis wide at base.

Female unknown.



3-14. *Mexcala agilis*: 3 – habitus of male (holotype); 4 – cheliceral dentition; 5, 9 – palpal organ, ventral view; 6, 10, 11, 13, 14 – palpal organ, lateral view; 7, 12 – palpal organ, dorsal view; 8 – palpal organ, ventrolateral view. 5-8 – specimen from Tanzania; 9, 10 – specimen from Kenya; 11, 12 – specimen from Congo, 13, 14 – specimen from Malawi

Distribution

Hitherto known only from the type locality in Namibia, for the first time recorded in Congo, Kenya, Malawi and Tanzania.

Remarks

M. agilis is related to *M. fizi*, but has longer tibial apophysis.

***Mexcala angolensis* n. sp.**

(Figs 15-17)

Type material

Holotype male, ANGOLA, Nova Chavez [Muconda], 10°34´S 21°20´E, Lunda, 15.IX.1949, leg. Malkin (CAS).

Diagnosis

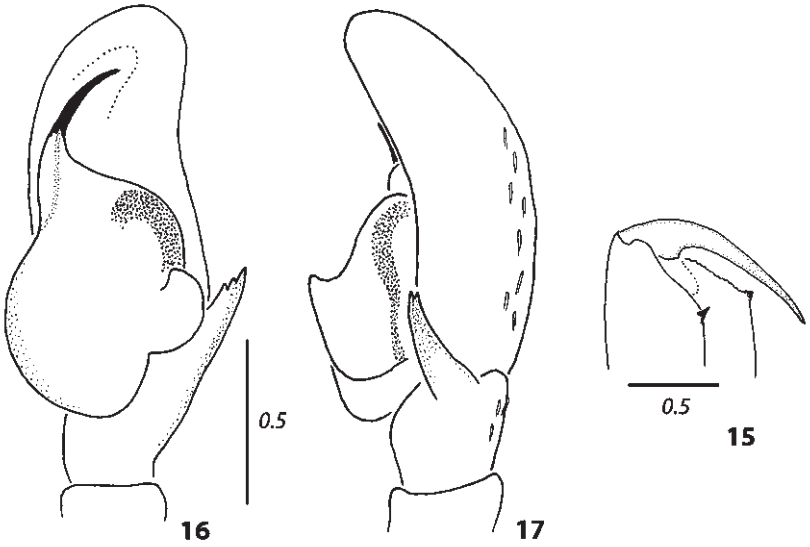
The male of this species is distinguishable by serrate tip of tibial apophysis and lack of posterior lobe of the bulb.

Etymology

This specific name is derived from *terra typica* (Angola).

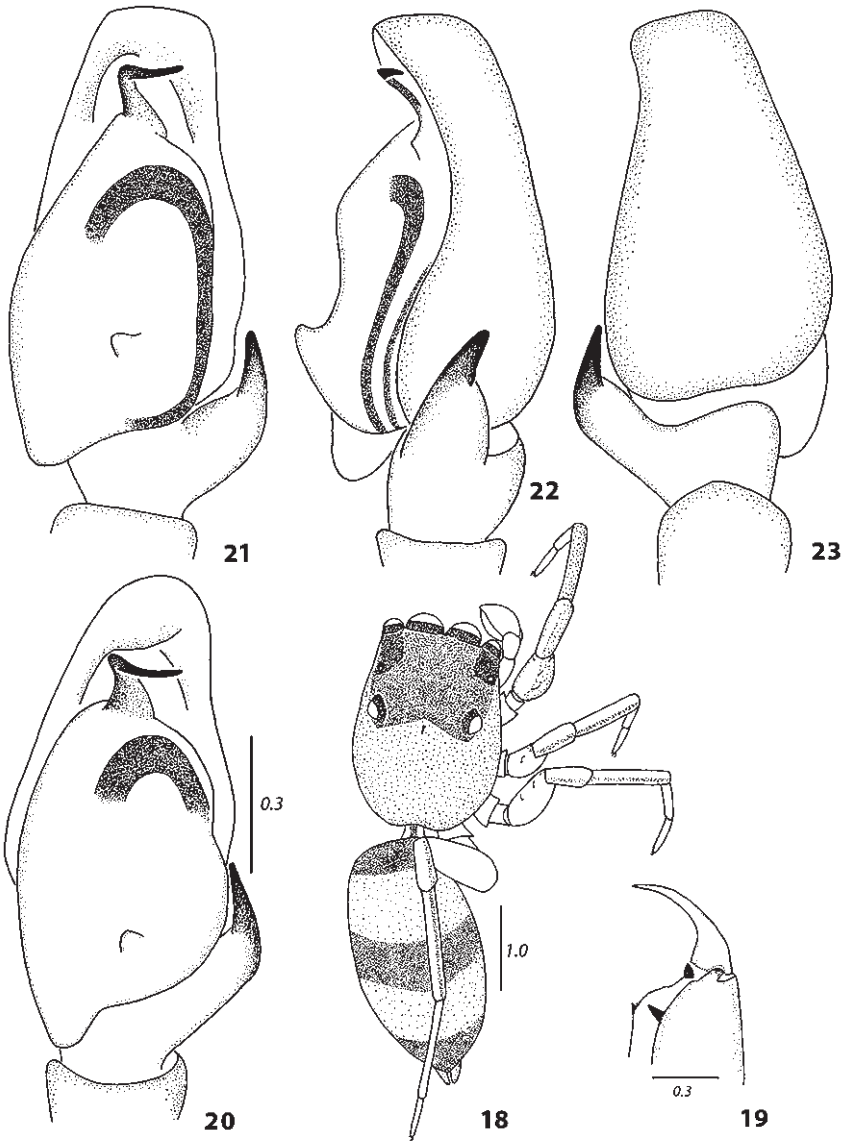
Description

Measurements. Carapace length 3.4. Abdomen length 3.0. Eye field length 1.4, anterior width 1.4, posterior width 1.5.



15-17. *Mexcala angolensis*, holotype: 15 – cheliceral dentition; 16 – palpal organ, ventral view; 17 – palpal organ, lateral view

Male. Body slender, coloration bleached. Carapace brownish, with short eye field. Chelicera unidentate (Fig. 15). Abdomen light brown with traces of median dark streak along dorsum and pair of light patches anteriorly, venter with four lines composed of yellowish dots. Hairs covering body short, brown. Legs long and thin, brownish with black lines along lateral surface of their segments. Pedipalps brown, long whitish



18-23. *Mexcala caerulea*, male: 18 – habitus; 19 – cheliceral dentition; 20, 21 – palpal organ, ventral view; 22 – palpal organ, lateral view; 23 – palpal organ, dorsal view

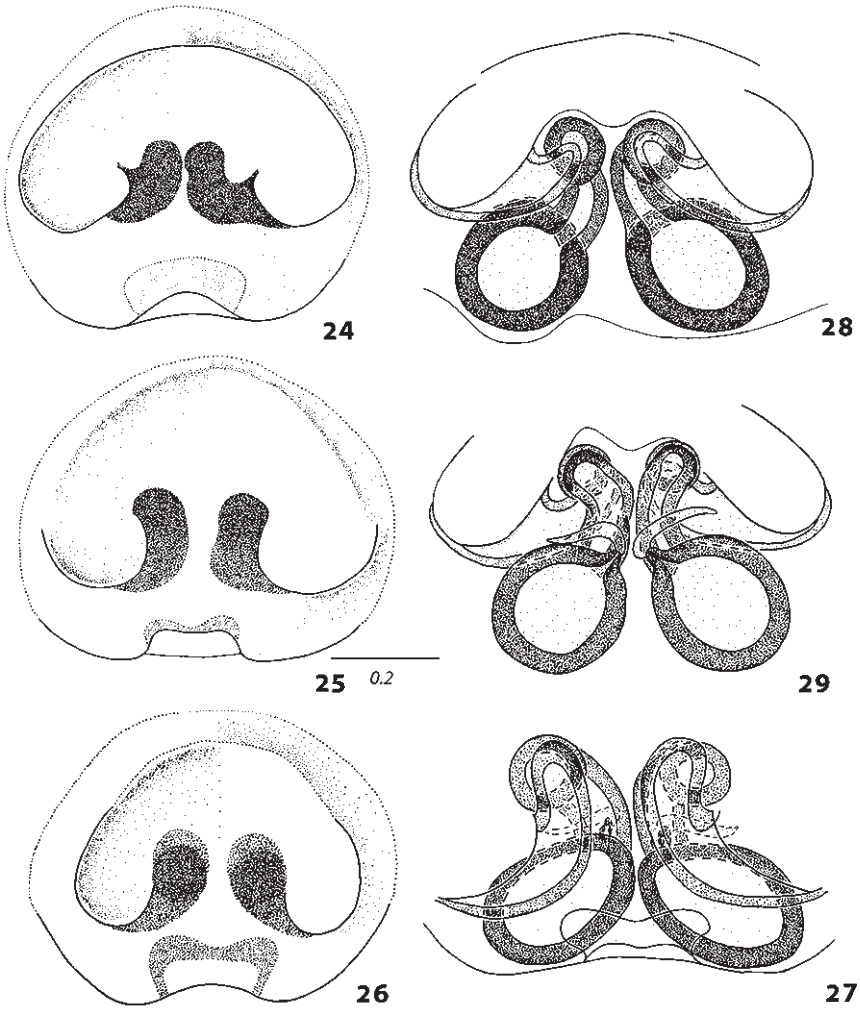
scales on tibia and cymbium. Tibial apophysis with small teeth at tip, bulb posteriorly rounded (Figs 16-17).

Female unknown.

Mexcala caerulea (Simon, 1901), comb. n.

(Figs 18-29)

Cosmophasis caerulea Simon 1901: 148; Clark 1974: 14.
Cosmophasis tristis Berland et Millot 1941: 319, **syn. n.**



24-29. *Mexcala caerulea*, female: 24-26 – epigyne; 27, 28 – internal structure of epigyne, ventral view; 29 – internal structure of epigyne, dorsal view; 26, 27 – holotype of *Cosmophasis tristis*

Material

IVORY COAST: Danane, 7°16´N 8°09´W, 1♀ (holotype of *Cosmophasis tristis*), VIII.1937, leg. J. Millot (MNHN); Lamto Foret, 1♀, 5.VIII.1968, leg. J. van Mol (MRAC, 134627); Kossou, Maounou, 7°01´N 5°29´W, 1♂, 27.IX.1974, leg. R. Jocqué (MRAC, 149728); without data, 1♂, 1♀, 1. juv. (BMNH).

Description

Measurements (♂/♀). Carapace length 2.6/2.6-2.7. Abdomen length 2.9/3.0-3.8. Eye field length 1.2/1.3-1.5, anterior width 1.5/1.6-1.7, posterior width 1.8/1.8-1.9.

Male. Shape of body and coloration as in the majority of *Mexcala* members; carapace dark brown with darker ocular area, abdomen with three transverse black bands (Fig. 18), but background slightly lighter than in other species, yellowish brown, venter light. Chelicera unidentate (Fig. 19). Legs I brown, remaining yellowish with longitudinal black lines on sides. Palpal organ shown on Figs 20-23, tibial apophysis stout, wide at its base, embolus hooked.

Female. Similar to male. Epigyne oval with broad pocket at epigastric furrow and large central depression, posteriorly separated by wide elevation (Figs 24-26). Internal structure as Figs 27-29, receptacle large, spherical, thick walled.

Distribution

Known only from Ivory Coast.

Remarks

Berland & Millot (1941) gave as the type locality "Man", however on label is "Danane"; both localities are about 60 km apart.

The species differs from other congeners by the genitalia; the male by the shape of the embolus (more curved), the female by the course of the copulatory canals, which run first from the gonopores forward and to turn backward next.

The male is described here for the first time.

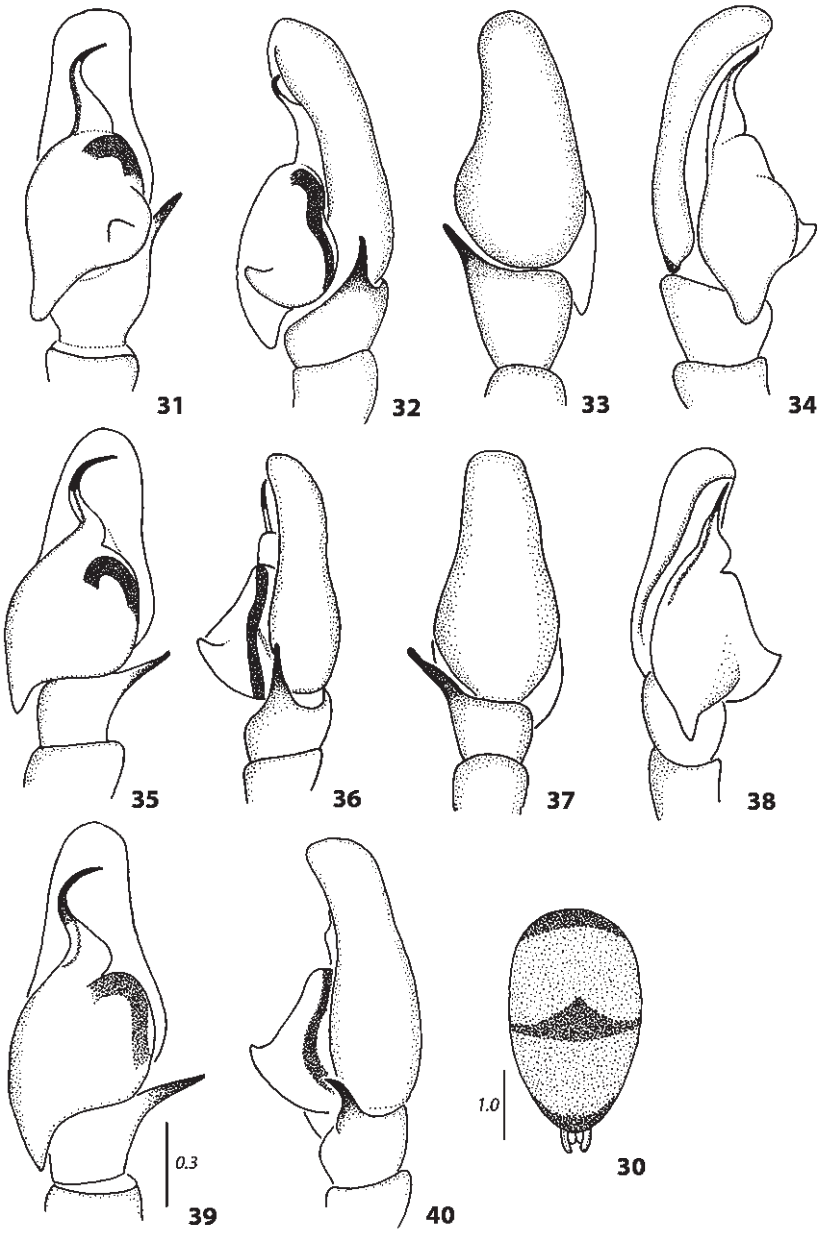
Mexcala elegans Peckham et Peckham, 1903

(Figs 2, 30-46)

Mexcala elegans Peckham et Peckham 1903: 248.
Cosmophasis natalensis Lawrence 1942: 184, **syn. n.**
Mexcala natalensis: Wesołowska & Cumming 2008: 197.

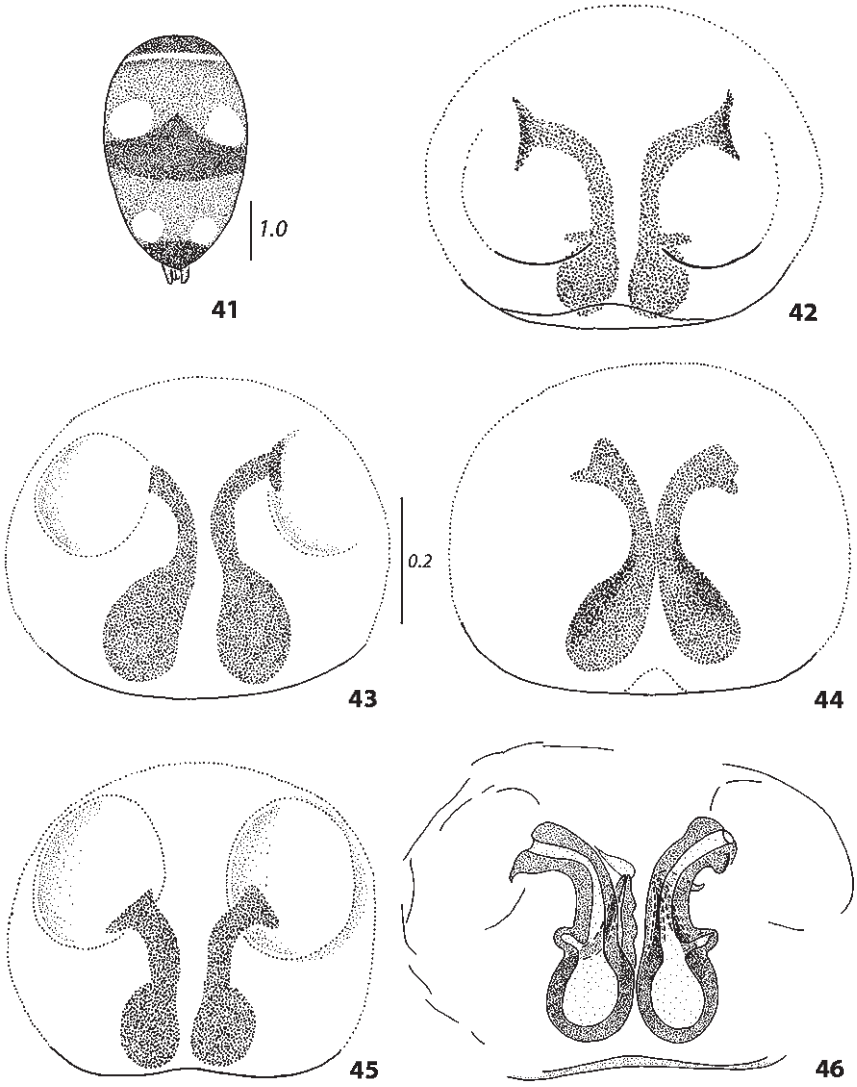
Material

BOTSWANA: Okawango river valley, 19°S 23°E, 1♂, beats, X.2003, leg. J. van Niekerk (PPRI); IVORY COAST: 9 km S of Touba, 8°16´N 7°44´W, 400 m a.l.s., 1♂, 19.VIII.1966, leg. B. Ross & K. Lorenzen (CAS); MALAWI [Nyasaland]: 30 km W of Dedza, 1388 m a.l.s., 1♀, 24.II.1958, R. Leech (CAS); NAMIBIA: Kavango area, Mahongu, 18°40'S 21°40'E, leaf litter, 1♂. 6.XII.1983 (SMN, 41705); SOUTH AFRICA: Natal, Umhlali river, north coast, Sheffield beach, 1♂, 2♀♀, syntypes of *C. natalensis*,



30-40. *Mexcala elegans*, male: 30 – abdominal pattern; 31, 35, 39 – palpal organ, ventral view; 32, 36, 40 – palpal organ, lateral view; 33, 37 – palpal organ, dorsal view; 34, 38 – palpal organ, ventrolateral view. 31-34 – syntype of *Cosmophasis natalensis*; 35-38 – holotype of *Mexcala elegans*; 39, 40 specimen from Zimbabwe

II.1940 (NM, 2935); same locality, 3♂♂ (NM, 2936); same locality 1♂, 3♀♀, X. 1940 (NM, 3314); 50 km E of Prieska, 29°40′S 22°44′E, on gravel, 1♀, 26.XI.2001, leg. C. Haddad (PPRI); St Lucia Nat. Park, Fanies Camp, 28°00′S 32°30′E, 1♂, 24.I.1991, leg. V. & B. Ross (CAS); ZIMBABWE: Mashonaland, Manica Mt, 1♂, holotype of *M. elegans*, 1902 (MCZ, 508); Hwange, Baobab Hill, 18°S 27°E,1♀, XI.1987, leg. A. Ellert (NMZ A/6408); Bulawayo, 20°09′S 28°34′E, hillside, on ground, 1♀, 2.XII.1982 (NMZ A/1652); same locality, 1♂, 17.XI.1991, leg. J. Minshull (NMZ A/9051); Bu-



41-46. *Mexcala elegans*, female: 41– abdominal pattern; 42-45 – epigyne; 46 – internal structure of epigyne; 43, 44 – specimens from Zimbabwe; 42, 45, 46 – specimens from South Africa

lawayo, Natural History Museum, 5383); Matopos NP, Maleme Rest Camp, 28°30´S 20°30´E, 1♀, 9.II.1988, leg. J. Minshull (NMZ A/6360); Matopos NP, Rowallan Park, 1♀, 14.II.1993, leg. K. Hustler (NMZ A/10330); Sibuba Camp., 17°51´S 25°23´E, 1♀, 10.XII.1982, leg. D. Broadley (NMZ A/1683); Katambora rapides, 1♀, 2.XII.1982, leg. R. Chawanda (NMZ A/1679); Dibudibu river, Batoka Gore, 17°58´S 25°57´E, 1♂, 28.V.1990, leg. B. Roth (NMZ A/9106); same locality, 1♂, 27-28.X.1990, leg. V. & B. Roth (CAS); 19°50´S 33°00´E, 1♂, 22.X.1990, leg. V. & B. Roth (CAS).

Description

Measurements (♂/♀). Carapace length 2.7-3.2/3.1-3.3. Abdomen length 3.2-3.7/4.5-5.1. Eye field length 1.2-1.4/1.2-1.3, anterior width 1.6/1.7, posterior width 1.7/1.8.

Male. Slender spider with long legs. Carapace brown with darker eye field, eyes encircled by black rings. Translucent hairs on carapace, some hairs on eye field whitish. Near eyes long, brown bristles. Clypeus low, brown. Chelicerae long, unidentate, their promargin slightly serrate, thick setae on dorsal surfaces of chelicerae. Mouth parts yellowish to light brown. Abdomen elongated, narrowing posteriorly, olive yellow (bright orange reddish in freshly collected specimens) with two transverse black stripes, first narrow laying at anterior margin and second wider in midway of abdomen length, posterior edge of abdomen also blackish (Fig. 30). Hairs on dorsum delicate, colourless, only on dark bands blackish, long brown bristles on anterior edge of abdomen. Venter yellowish tinged with grey. Spinnerets brown. Legs long, thin, yellowish brown with darker femora, bearing brown hairs, only on femora hairs whitish. Longest last pair (very long metatarsus). Pedipalps small, brown, clothed in long dark hairs. Palpal organ shown in Figs 31-40. Tibial apophysis thin, slightly folded back (Fig. 35).

Female. General appearance in Fig. 2. Slightly larger than male. Abdomen not as slender as in male, its pattern similarly as in male composed of black transverse streaks, thin transverse whitish line behind anterior black streak and two pairs of orange yellowish spots (Fig. 45). Lateral surfaces brown, venter brownish with two longitudinal serrate lighter streaks (Fig. 96 in Wesołowska & Cumming 2007). Legs with slightly darker lateral surfaces. Epigyne rounded with large shallow cavity occupying almost whole surface. Copulatory openings situated anteriorly, in imperceptible depressions (Figs 42-45). Internal structure shown in Fig. 46, receptacles spherical.

Distribution

Known from South Africa and Zimbabwe, for the first time recorded from Botswana, Ivory Coast, Malawi and Namibia.

Remarks

The palpal structure of the species resembles that in *M. namibica* and *M. rufa*, but *M. elegans* differs from these species by pattern of abdomen. Epigyne similar to some other species of *Mexcala*, but receptacles spherical.

C. Haddad (pers. comm.) observed in South Africa individuals of *M. elegans* preying on a wide variety of ant species.

Mexcala fizi n. sp.
(Figs 47-49)

Type material

Holotype male, CONGO, Sud-Kivu, 9 km s of Fizi, 4°19´S 28°56´E, 1320 m a.l.s., 10.I.1958, leg. B. Ross & R. Leech (CAS).

Paratype male, TANZANIA: Seronera, Serengeti Plain [N Tanzania], 1500 m a.l.s, 1♂, 24.X.1957, leg. B. Ross & R. Leech (CAS).

Diagnosis

The species is closely related to *M. agilis*, but has shorter tibial apophysis.

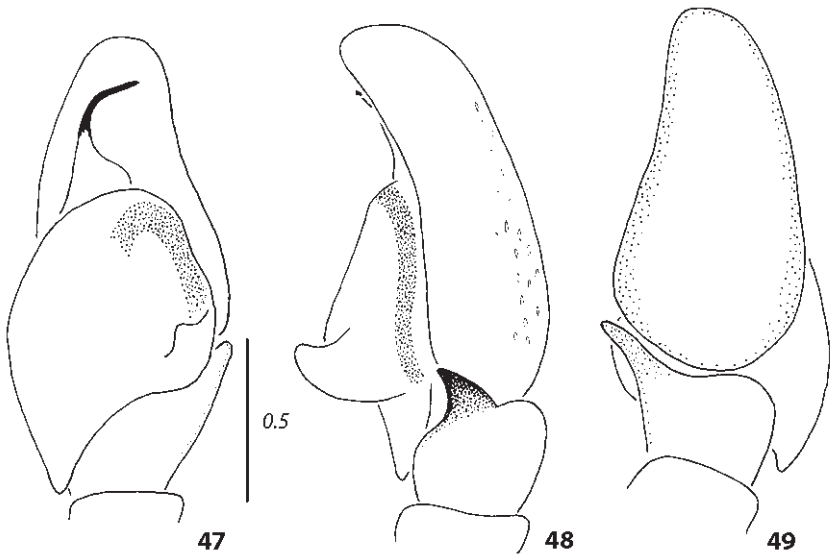
Etymology

The specific epithet is a noun in apposition, referring to the type locality.

Description

Measurements. Carapace length 2.7-2.9. Abdomen length 3.1-3.4. Eye field length 1.3-1.4, anterior width 1.4, posterior width 1.5.

Male. Medium sized, slender spider. Carapace dark brown, clothed in some brown hairs, longer and denser in vicinity of eyes. Chelicera unidentate, its promargin serrate, labium, gnathocoxae and sternum light brown. Coloration of abdomen typical for the majority of species; three transverse velvet black bands on brownish background. Legs long and slender, with traces of dark lines on sides. Pedipalps brown with dark line on



47-49. *Mexcala fizi*, holotype: 47 – palpal organ, ventral view; 48 – palpal organ, lateral view; 49 – palpal organ, dorsal view

dorsal surface of patella and tibia, some small scales on cymbium. Tibial apophysis short, wide at base (Figs 47-49), bulb convex.

Female unknown.

Mexcala formosa Wesołowska et Tomasiewicz, 2008

(Figs 50-52)

Mexcala formosa Wesołowska et Tomasiewicz 2008: 24.

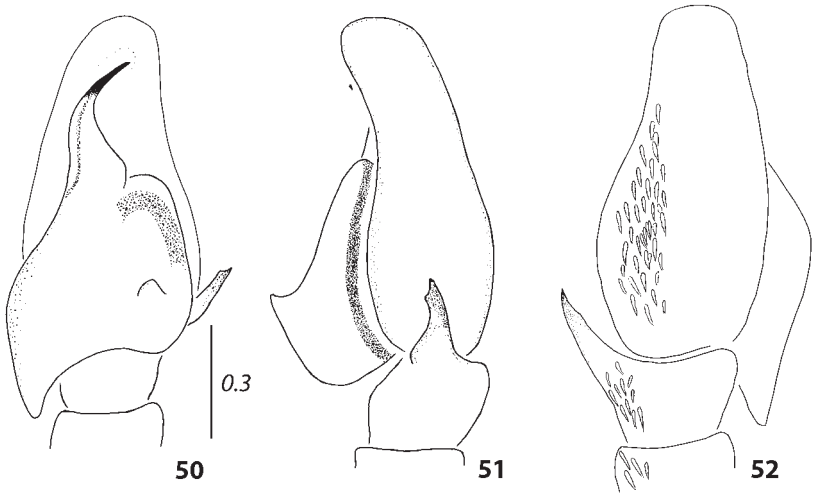
Material

ETHIOPIA: Hararghe Prov., Awash National Park, 9°N 40°E, 1000 m a.s.l., Ras hotel, in grass and gravel, 1♂, holotype, 16.XII.1988, leg. A. Russell-Smith (MRAC, 219313).

Description

Measurements. Cephalothorax: length 2.9, width 2.0, height 1.1. Abdomen: length 3.5, width 1.7. Eye field: length 1.2, anterior width 1.6, posterior width 1.7.

Male. Carapace dark brown with narrow dark line along lateral margins, vicinity of eyes black. Some white hairs on slopes. Brown bristles on eye field. Clypeus low, dark. Chelicerae long, their anterior surfaces covered with short, very thick, spike-like bristles. Mouth parts and sternum dark brown. Abdomen elongated, brownish with traces of dark patch at centre. Dark, thin hairs scattered on dorsal surface of abdomen, at anterior margin long brown bristles. Ventrally abdomen yellowish tinged with grey. Spinnerets brownish. Legs thin, long, brown, only tarsi yellowish. Longitudinal darker lines on lateral surfaces of patellae and tibiae. White scales scattered on femora. Pedipalp brown with white scales on dorsal surface of cymbium, tibia and patella (Fig. 52). Tibial



50-52. *Mexcala formosa*, holotype: 50 – palpal organ, ventral view; 51 – palpal organ, lateral view; 52 – palpal organ, dorsal view

apophysis straight, wide at base, with small incision on tip (Fig. 51). Bulb triangular with large posterior lobe, embolus short, slightly bent to bulb (Fig. 50).

Female unknown.

Distribution

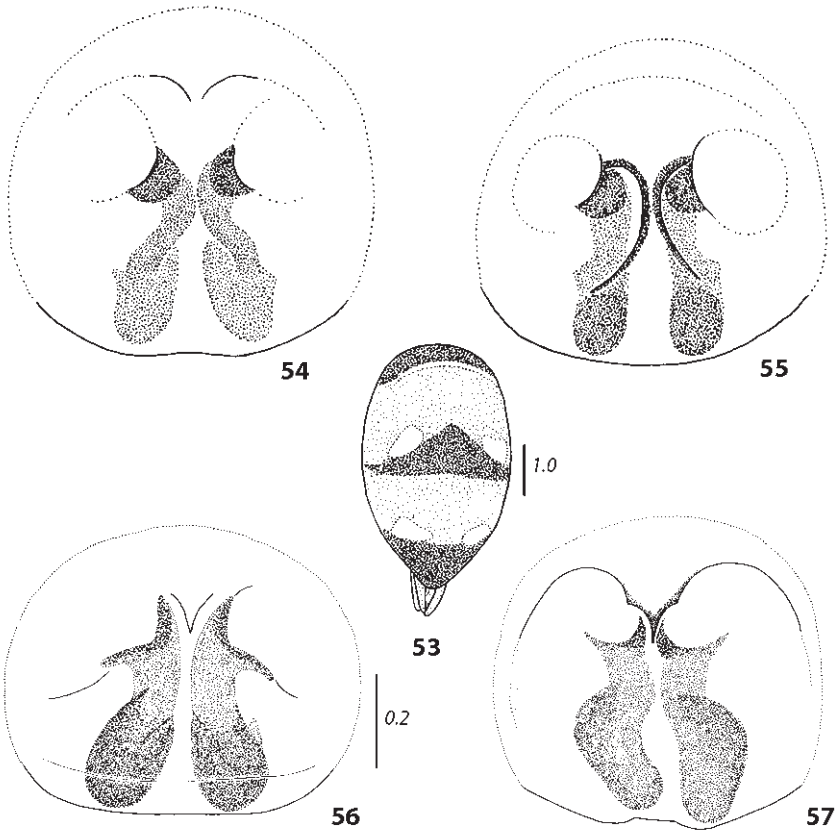
Known from Ethiopia only.

Remarks

The species is related to *M. elegans*, but the palpal structure differs with a wider tibial apophysis and the presence of white scales along the retrolateral edge on cymbium.

***Mexcala kabondo* n. sp.**

(Figs 53-61)

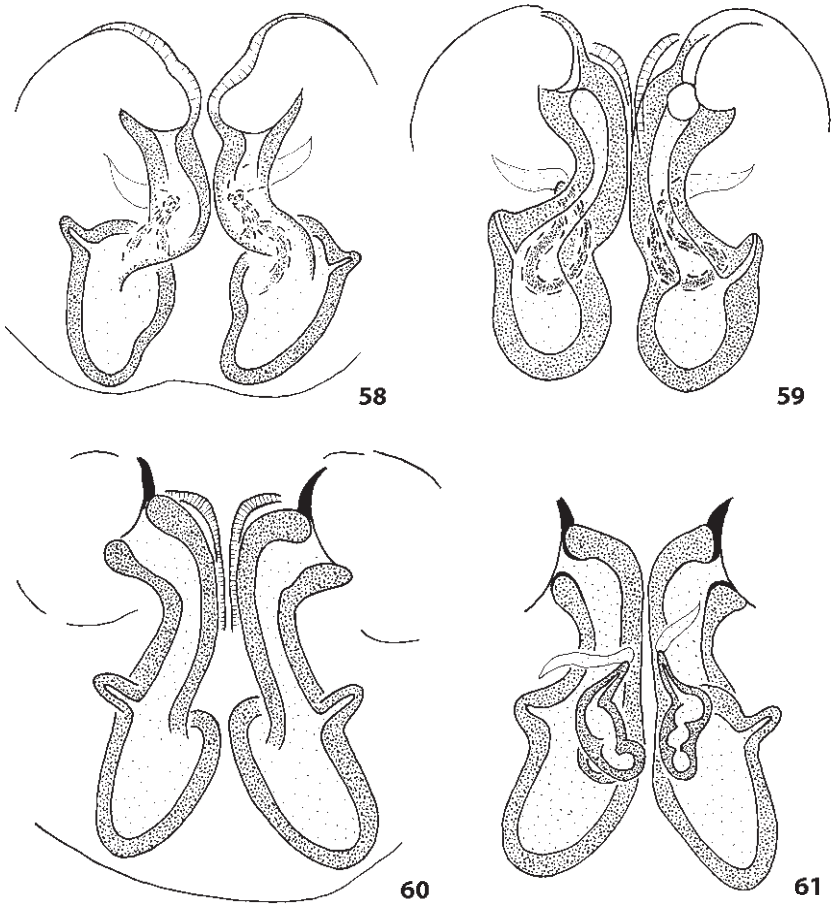


53-57. *Mexcala kabondo:* 53 – abdominal pattern; 54-57 – epigyne

Type material

Holotype female, CONGO,18 km NW of Kabondo Dianda, 25°30´E 8°50´S, 900 m a.l.s., 3.II.1958, leg. B. Ross & R. Leech (CAS).

Paratypes, CONGO: Albertville, 1♀, 1954, leg. H. Bomans (MRAC, 80915); Mpala, bord of Tanganyika Lake, 6°45´S 29°31´E, 1♀, 11.VII.1953, leg. H. Bomans (MRAC, 75931); same locality, 1♀ (MRAC, 75944); Kasongo, 4°27´S 26°40´E, 1♀, IX.1959, leg. P. Benoit (MRAC, 114978); Kisangani [Stanleyville], 0°25´N 25°12´E, 1♀, 11.III.1928, leg. A. Collart (11831); MALAWI: 16 km N of Chitipa, 9°42´S 33°16´E, 1432 m a.l.s., gathering dry leaves and twigs, 1♀, 10.VIII.1972, leg. B. Ross & R. Leech (CAS); TANZANIA: Tanganyika Lake, Kasoge Camp, 6°10´S 29°45´E, 2550 m a.l.s., 1♀, 26.IX.1959 (BMNH, 730).



58-61. *Mexcala kabondo:* 58-60 – internal structure of epigyne, ventral view; 61 – internal structure of epigyne, dorsal view; 58 – holotype

Diagnosis

The species is distinguished from others by the seminal ducts adjacent to each other and vertical placement of receptacles.

Etymology

The specific name is a noun in apposition, referring to the type locality.

Description

Measurements. Carapace length 3.0-3.3. Abdomen length 4.0-5.3. Eye field length 1.3-1.5, anterior width 1.4-1.6, posterior width 1.5-1.7.

Male unknown.

Female. Medium sized spider. Carapace brown to blackish, white small scales on thoracic part. Mouth parts and sternum dark. Abdomen with pattern typical of the majority of *Mexcala* species; blackish with three transversal velvet black bands, thin whitish line anteriorly and two pairs of orange patches (Fig. 53), variable in size (especially the posterior one). Legs thin, brown. Epigyne large, with two shallow depressions (Figs 54-57), in some specimens plugged with waxy secretion. Adjacent edges of these depressions often with strongly sclerotized rims. Internal structures strongly sclerotized (Figs 58-61).

Mexcala macilenta Wesołowska et Russell-Smith, 2000

(Figs 62-66)

Mexcala macilenta Wesołowska et Russell-Smith 2000: 68; Wesołowska & Tomasiewicz 2008: 26.

Material

ETHIOPIA: Sidamo Prov., Dembala Watcho, 7°N 38°20´E, dry *Acacia* bushland in valley, 1♀, 10.X.1988, leg. A. Russell-Smith (MRAC, 219261); TANZANIA: Mkomazi Game Reserve [NE Tanzania], Ibaya camp, *Acacia/Commiphora* bushland, 1♂, holotype, 7.VIII.1995, leg. A. Russell-Smith (MRAC, 207985); same locality, 1♀, 18.XI.1995 (MRAC, 207986).

Description

Measurements (♂/♀). Cephalothorax: length 3.2/3.4;3.7. Abdomen: length 3.4/4.2-5.5. Eye field: length 1.2/1.4-1.6, anterior width 1.5/1.5-1.8, posterior width 1.5/1.6-1.9.

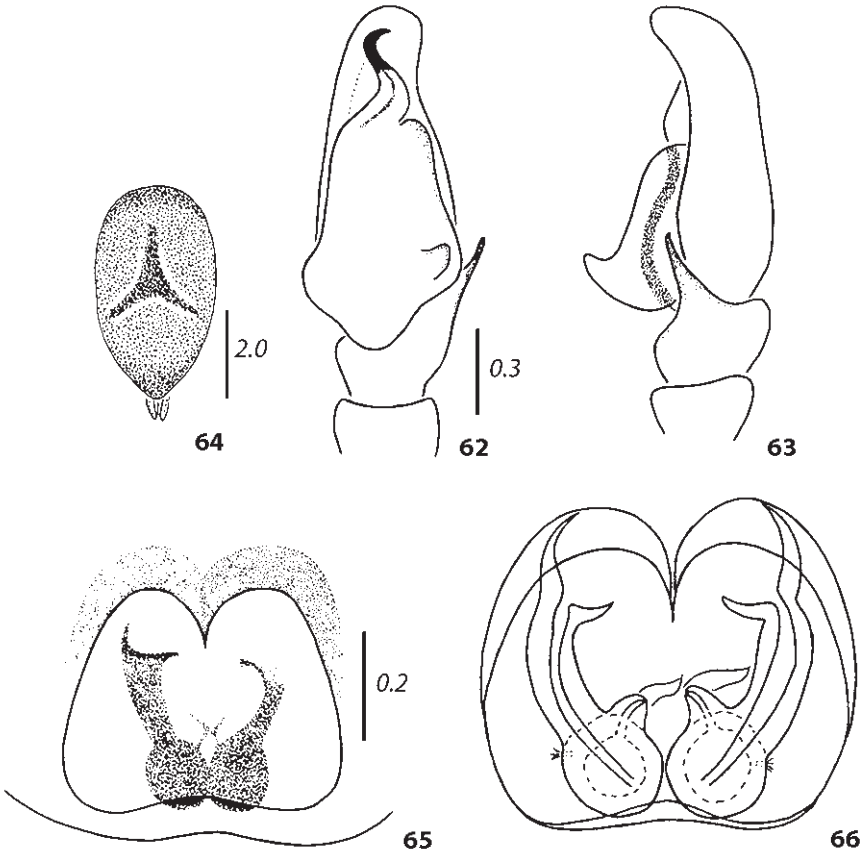
Male. Carapace dark brown, vicinity of eyes black. Brown hairs cover thoracic part, near eyes long brown bristles. Mouth part dark, chelicera unidentate. Abdomen rusty brown with three black transverse bands, venter blackish. Legs and pedipalps brown. Posterior lobe of bulb rounded, tibial apophysis straight, thin (Figs 62, 63).

Female. Larger than male. Carapace oval, brown with short eye field. Ocular area slightly lighter than thorax, lateral eyes with black rings. Eye field covered with very short thick bristles, especially abundant in anterior half. Traces of lines radiate from clearly visible fovea. Gnathocoxae brown with light tips. Abdomen oval, greyish

russet with black triangular patch at centre, white scales form fringe of the dark patch (Fig. 64). Whole dorsal surface of abdomen clothed in delicate short colourless hairs, among them sparse brown bristles. Long dark hairs at anterior abdominal edge. Two diagonal white lines on lateral surfaces, ends of lines overlapping on ventral surface of abdomen. Venter dark grey. Spinnerets dark. Legs thin, very long, last pair longest. Legs light brown, darker lines along lateral surfaces of patellae and tibiae. Leg hairs and spines brown, some white scales on femora. Epigyne strongly sclerotized with large central depression (Fig 65.). Seminal ducts straight, thick walled; receptacles spherical; accessory glands very small (Fig. 66).

Distribution

Species known from Tanzania and Ethiopia.



62-66. *Mexcala macilenta*: 62 – palpal organ, ventral view; 63 – palpal organ, lateral view; 64 – abdominal pattern of female; 65 – epigyne; 66 – internal structure of epigyne; 62, 63 – holotype (65-66 from Wesołowska & Russell-Smith 2000)

Remarks

The male is recognized by the shape of bulb (without posterior lobe) and short, hooked embolus. The female differs from other species by the shape of the epigynal depression and coloration of the abdomen.

Mexcala meridiana n. sp.

(Figs 67-68)

Type material

Holotype female, SOUTH AFRICA, E Transvaal, Sabie Reserve, 25°15'S 31°30'E, VIII.1927, leg. E. Gill (SAMC, 7163).

Diagnosis

The female of this species is distinguishable by position of the copulatory canals, which are separated from each other.

Etymology

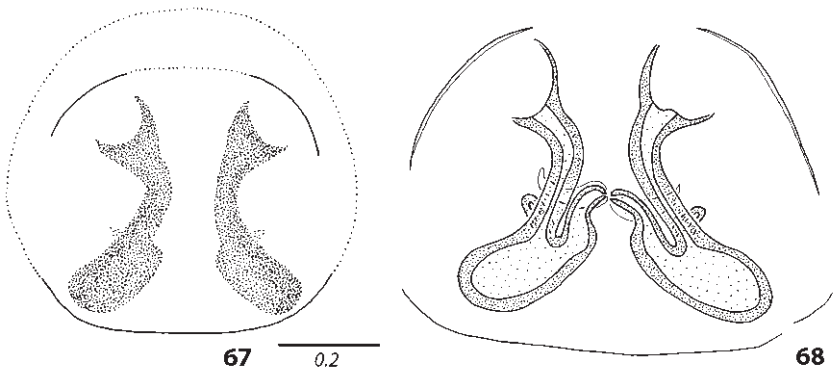
Latin word meaning "southern" refers to locality in southern Africa.

Description

Measurements. Carapace length 3.0. Abdomen length 4.0. Eye field length 1.3, anterior width 1.6, posterior width 1.7.

Male unknown.

Female. Carapace brown, with darker eye field, eyes surrounded black. Carapace covered with short brown hairs, denser on ocular area, near eyes long brown bristles. Mouth parts light brown, gnathocoxae with yellowish inner margins. Abdomen bleached, brownish with black posterior margin. Venter dark, with two lighter streaks laterally. Legs light brown, femora darker, leg hairs dark. Epigyne with large shallow depression (Fig. 67). Internal structure simple, shown in Fig. 68.

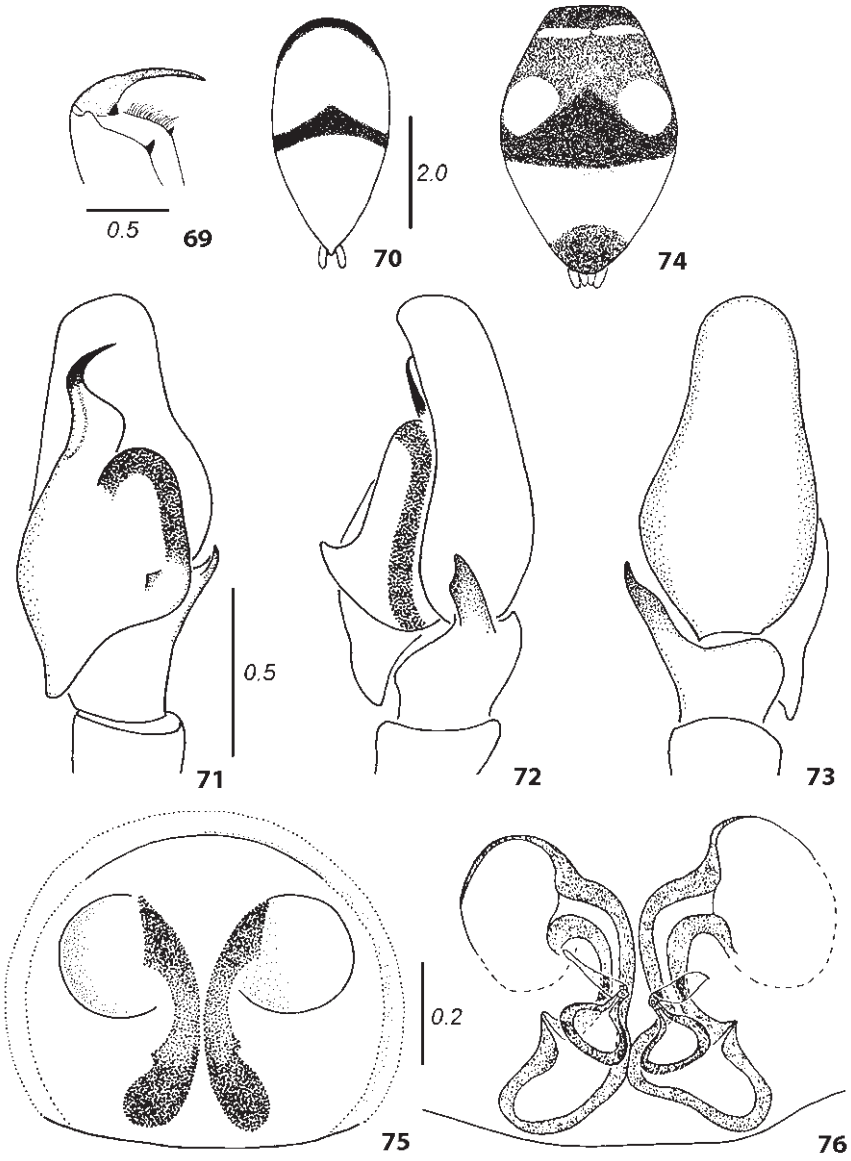


67-68. *Mexcala meridiana*, holotype: 67 – epigyne; 68 – internal structure of epigyne

Mexcala monstrata Wesołowska et van Harten, 1994

(Figs 1, 69-76)

Mexcala monstrata Wesołowska et van Harten 1994: 49; 2007: 228.



69-76. *Mexcala monstrata*: 69 – cheliceral dentition of male; 70 – abdominal pattern of male; 71 – palpal organ, ventral view; 72 – palpal organ, lateral view; 73 – palpal organ, dorsal view; 74 – abdominal pattern of female; 75 – epigyne; 76 – internal structure of epigyne (from Wesołowska & van Harten 2007)

Material

YEMEN: Khamis Bani Sa'd, 15°11'N 43°30'E, 1♂, 9.VI.1999, leg. A. van Harten (MRAC); Ta'izz, 13°34'N 44°02'E, 1♀, 12.VII.1999, leg. A. van Harten (MRAC).

Description

Measurements (♂/♀): Carapace length 3.1/3.6. Abdomen length 3.5/5.8. Eye field length 11.4/2.0, anterior width 1.8/2.0, posterior width1.9/2.1.

Male. General appearance in Fig. 1. Slender spider with long legs. Carapace pear-shaped, widest posteriorly, coloured dark brown, clothed in delicate short brilliant hairs, long brown bristles on eye field. Mouth parts and sternum dark brown. Chelicerae long, cheliceral dentition as in Fig. 69. Anterior surface of chelicerae covered with short, very thick, spike-like bristles. Abdomen elongated, pointed posteriorly, orange with blackish anterior and posterior margins and narrow transverse velvet black band midway (Fig. 70). Posterior part of abdomen bright. Dense short clinging scale-like hairs of background colour cover dorsum. Venter yellowish tinged with grey. Spinnerets orange brownish. Legs thin and very long, last pair longest, femora brown, tarsi whitish yellow, remaining segments orange with brown lines along lateral surfaces. Spines long, leg hairs dark. Pedipalps brown. Palpal organ shown in Figs 71-73.

Female. Bigger than male. General body shape and coloration like male, but abdominal pattern different; median transverse band wider, two large rounded orange patches in front of it (Fig. 74). Venter dark. Pedipalps light, only femora brownish. Epigyne with two round grooves (Fig. 75). Internal structure shown in Fig. 76.

Distribution

Known from Yemen only.

Remarks

The male of this species resembles *M. agilis*, but its tibial apohysis is abruptly pointed at tip, whereas the apophysis in *M. agilis* is gently narrowing. The female has epigyne with clearly visible round epigynal depressions, their rims are sclerotized.

Mexcala namibica n. sp.

(Figs 77-79)

Type material

Holotype male, NAMIBIA, Gobabab, Noctivago, 23°30´S 15°00´E, 9.X.1986, leg. J. Henschel (NNM, 40789).

Diagnosis

The species is easily distinguished by the unique abdominal pattern (see below). The palpal structure very similar to that in *M. elegans* and *M. rufa.*

Etymology

The specific name is derived from *terra typica* (Namibia).

Description

Measurements. Carapace length 3.3. Abdomen length 4.1, width 2.2. Eye field length 1.4, anterior width 1.6, posterior width 1.7.

Male. Slender, medium sized spider, with long and thin legs. Coloration of carapace blackish, mouth parts and sternum dark brown. Carapace clothed in brown hairs, on eye field longer bristles. Chelicerae unidentate, short stout bristles on their dorsal surface. Abdomen reddish orange with black band at anterior margin, pair of dark patches in centre and chain of black chevrons posteriorly (Fig. 77). Dorsum of abdomen covered with scale-like hairs. Venter dark. Legs brown, darker stripes on lateral surfaces of their distal segments. Palpal organ shown in Figs 78, 79.

Female unknown.

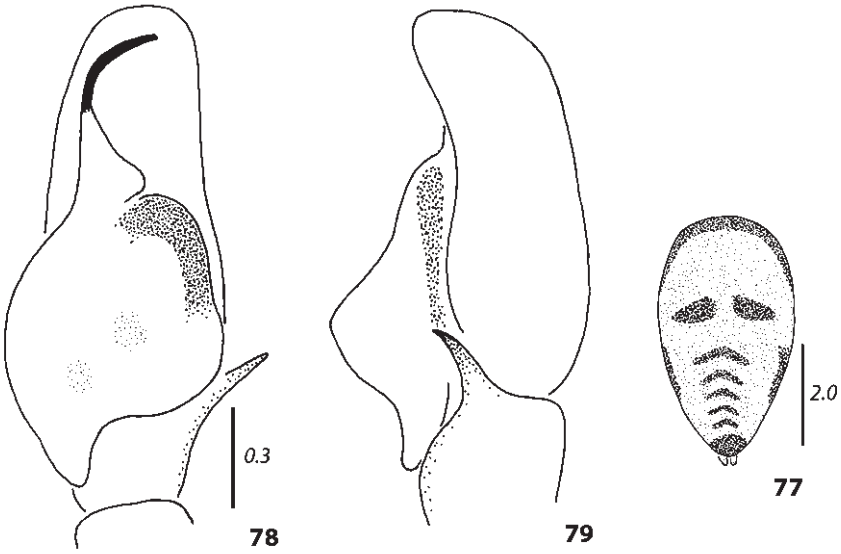
Remarks

Curtis (1988) provided some behavioural observation of the species (sub *Cosmophasis* sp. 1). She gave attention to very similar coloration of the spider to *Camponotus detritus* Emery, 1886 (see Fig. 1 in Curtis paper) and several times observed individuals of *M. namibica* with dead ant in chelicerae.

Mexcala nigrocyanea (Simon, 1886), comb. n.

(Figs 80-83)

Cosmophasis nigro-cyanea Simon 1886: 390; Clark 1974: 14.
Cosmophasis cincta Denis 1947: 67.



77-79. *Mexcala namibica,* holotype: 77 – abdominal pattern of male; 78 – palpal organ, ventral view; 79 – palpal organ, lateral view

Material

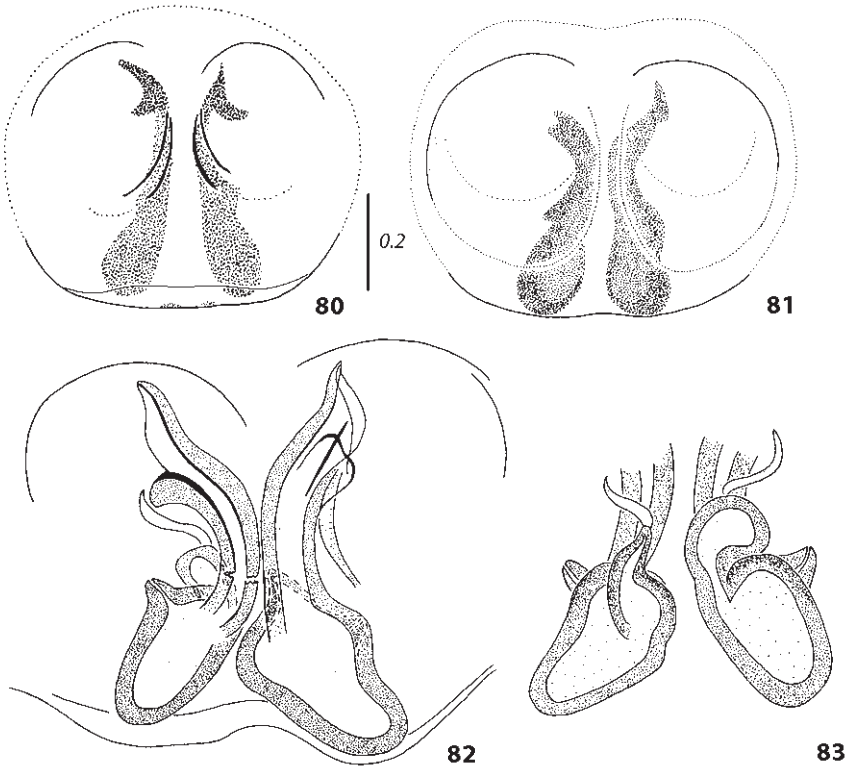
ETHIOPIA [Abyss.]: 1 female, holotype of *C. nigrocyanea* (MNHN, 7484); LIBYA: Fezzan, El Hafra, 1♀ (det. as *M. quadrimaculata*), 1960, leg. G. Spencer (MRAC, 131267).

Description

Measurements. Carapace length 2.7. Abdomen length 4.9. Eye field length 1.0, anterior width 1.5, posterior width 1.5.

Male unknown.

Female. Carapace brown, eye field darker. Whole carapace covered with short dark hairs, longer bristles near eyes. Mouth parts brownish, only inner margins of gnathocoxae yellowish. Abdomen uniformly brown, pattern probably bleached. Denis (1947) described abdomen (in description of *C. cincta*) as "clothed with white and blackish-brown hairs; the white ones form in the front half a wide transverse band with its posterior edge concave posteriorly, and in the hind part two lateral oval spots not meeting together in the median line". Venter light, with traces of two longitudinal



80-83. *Mexcala nigrocyanea*: 80-81 – epigyne; 82 – internal structure of epigyne, ventral view; 83 – internal structure of epigyne, dorsal view; 81-82 – holotype

darker streaks. Legs light brown, with dark lines along both sides, only femora uniformly dark brown. Epigyne with two large rounded depressions (Figs 80, 81). Internal structure as in Figs 82, 83.

Distribution

Hitherto known from Egypt and Ethiopia, for the first time recorded in Libya.

Remarks

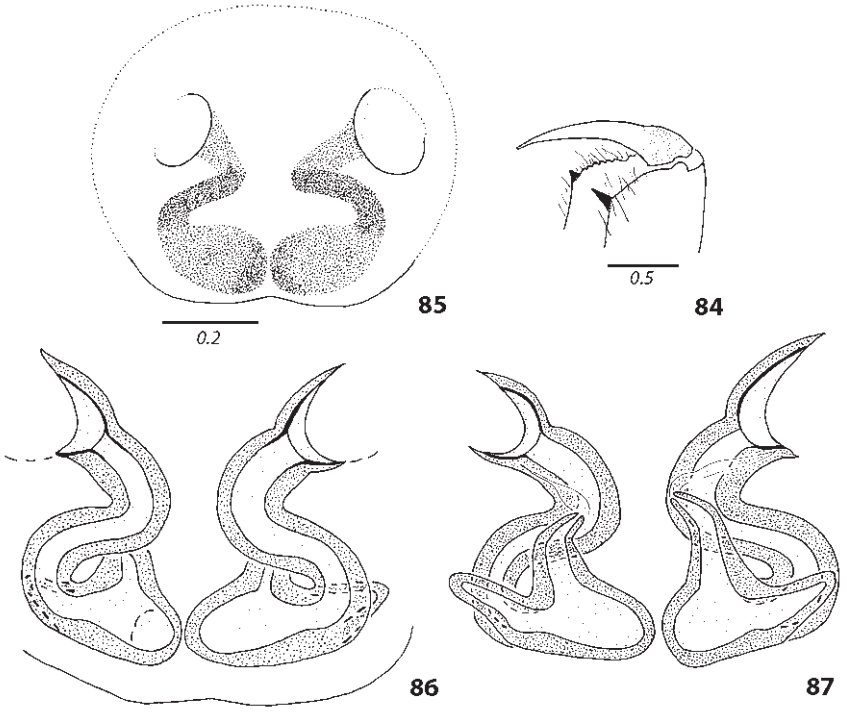
The species is related to *M. synagelese*, but the receptacles are shorter.

Mexcala ovambo n. sp.

(Figs 84-87)

Type material

Holotype female, NAMIBIA [South West Africa]: Ongandjera, 17°52´N 15°10´E, III.1923, leg. R. Lawrence (SAMC, 6264).



84-87. *Mexcala ovambo,* holotype: 84 – cheliceral dentition; 85 – epigyne; 86 – internal structure of epigyne, ventral view; 87 – internal structure of epigyne, dorsal view

Diagnosis

The female of the species is very similar to *M. quadrimaculata*, but is separable from it by having epigynal depressions clearly further apart.

Etymology

The specific name is derived from Ovambo, the people living in northern Namibia, *terra typica* of the species.

Description

Measurements. Carapace length 3.1. Abdomen length 4.7. Eye field length 1.2, anterior width 1.4, posterior width 1.5.

Male unknown.

Female. Specimens bleached, coloration yellowish brown, only eye field darker. Legs yellow with darker lines along sides, femora brown. Whole body clothed in brown hairs. Chelicera unidentate (Fig. 84), with serrate promargin and short thick setae on dorsal surface. Epigyne with two rounded, widely spaced openings, (Fig. 85). Internal structure shown in Figs 86, 87, seminal ducts curved, strongly sclerotized.

Mexcala quadrimaculata (Lawrence, 1942), comb. n.

(Figs 88-94)

Cosmophasis quadrimaculatus Lawrence 1942: 186.

Material

SOUTH AFRICA: North Transvaal, Njelele river, 22°20´S 30°30´E, 1♀ (holotype), IX.1939, leg. H. Munro (NM, 2627); ZIMBABWE: Victoria Falls, 17°55´S 25°45´E, 1♀, XII.1938 (NMZ A/468); Hwange, Baobab Hill,18°S 27°E, 1♀, 28.X.1988, leg. A. Ellert (NMZ A/7322).

Description

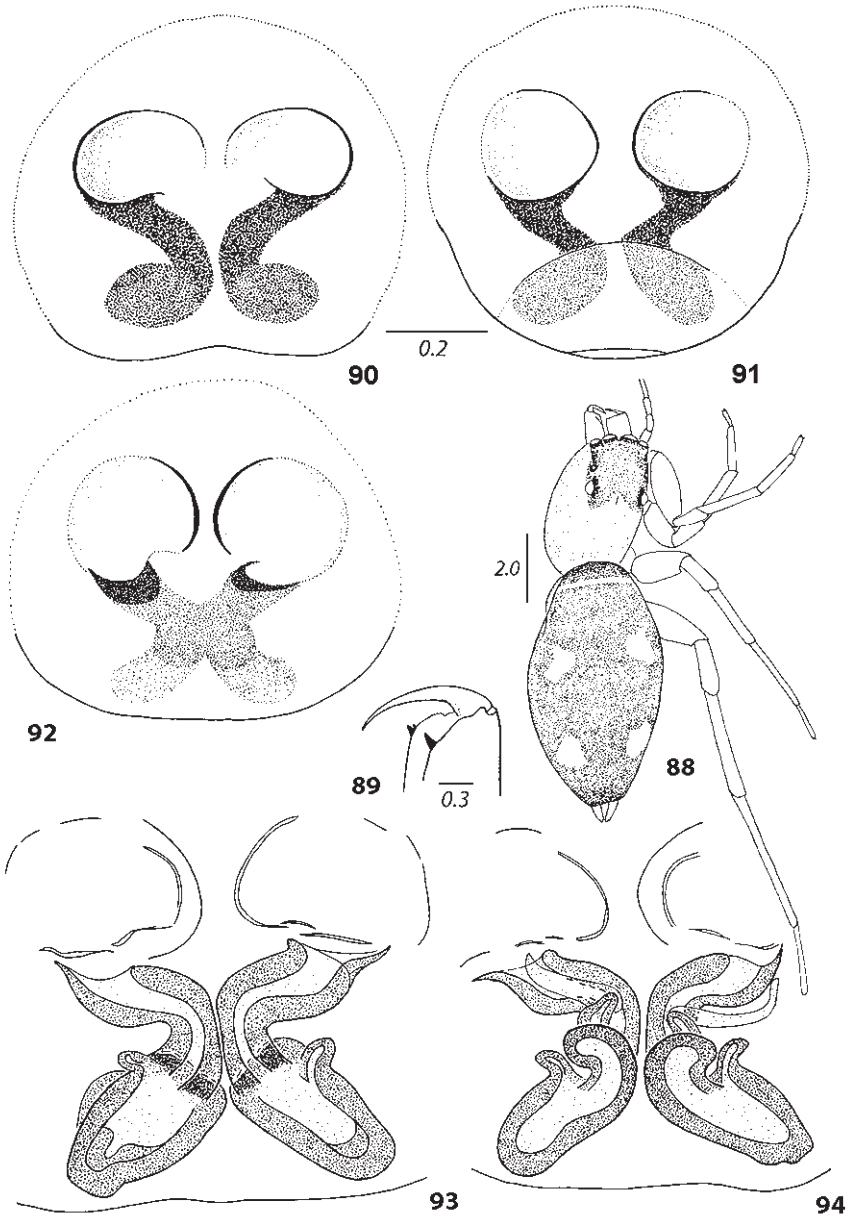
Measurements. Carapace length 3.5, width 2.7. height 1.3. Abdomen length 5.1, width 3.3. Eye field length 1.5, anterior width 1.8, posterior width 1.9.

Male unknown.

Female. General appearance in Fig. 88. Carapace dark brown, eye field blackish. Whitish hairs cover carapace, some brown bristles near eyes. Chelicerae unidentate, with serrate anterior margin (Fig. 89). Mouth parts and sternum brown. Abdomen dark, clothed in gleaming black hairs. There are three transverse velvet black streaks on dorsum; median (creating large triangle in centre), and thinner ones at anterior and posterior edge. Thin transverse yellow line near anterior margin of abdomen, behind dark streak, and two pairs of rounded spots, anterior ones usually slightly larger (in the type black streaks bleached – Fig. 88). Venter brownish fawn with two longitudinal light belts. Spinnerets grey. Legs brownish, femora darker. Epigyne with two rounded depressions (Figs 90-92). Internal structures as in Figs 93, 94.

DISTRIBUTION

The species is known only from South Africa, for the first time recorded in Zimbabwe.



88-94. *Mexcala quadrimaculata*: 88 – habitus; 89 – cheliceral dentition; 90-92 – epigyne; 93 – internal structure of epigyne, ventral view; 94 – internal structure of epigyne, dorsal view; 88, 92-94 – holotype

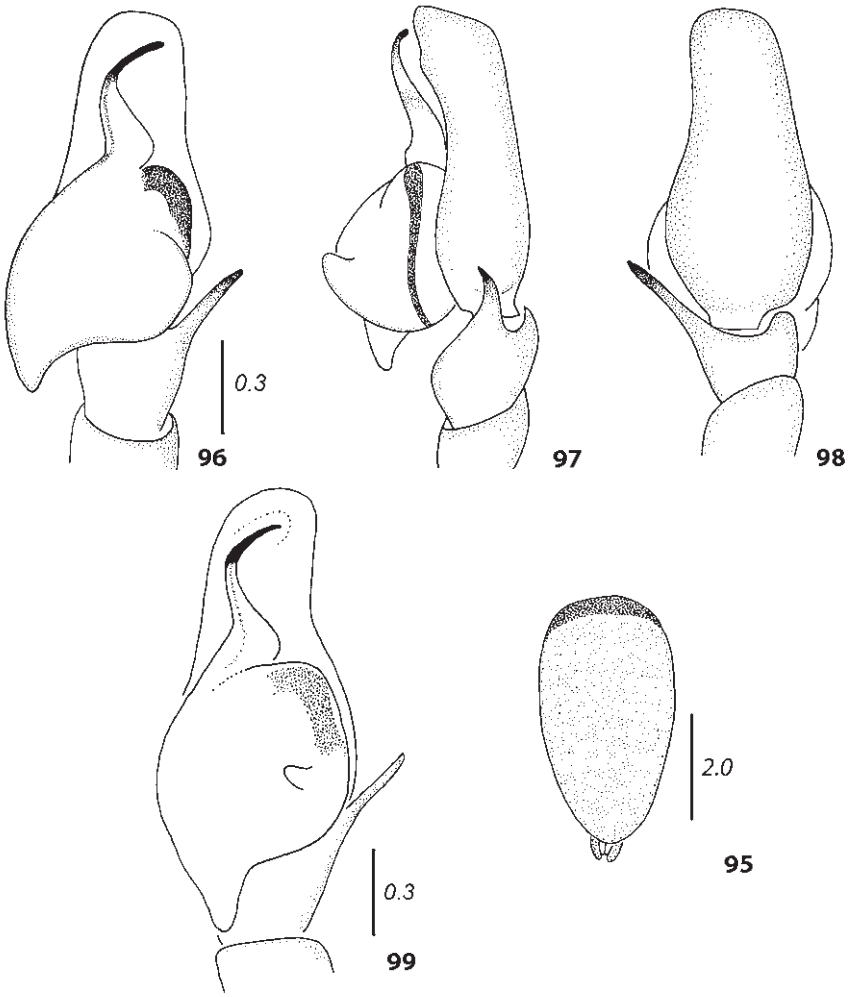
Remarks

The female of the species remaining *M. ovambo*, but epigynal depressions are larger and placed closer each other.

Mexcala rufa Peckham et Peckham, 1902

(Figs 95-99)

Mexcala rufa Peckham & Peckham 1902: 333.



95-99. *Mexcala rufa*: 95 – abdominal pattern; 96, 99 – palpal organ, ventral view; 97 – palpal organ, lateral view; 98 – palpal organ, dorsal view; 96-98 – holotype; 99 – specimen from Zimbabwe

Material

NAMIBIA: Windhoek, 22°34´S 17°06´E, 1♂, XII.1987, with *Camponotus* ants (NNM, 40788); SOUTH AFRICA: "Cape Colony", 1♂ (holotype) (MCZ, 516); distr. Northern Cape, Geelkofpies Farm Schmidt, 1♂, on stone, above *Camponotus* ants, 3.V.2001, leg. C. Haddad (PPRI); near Prieska, 29°40´S 22°42´E, 1♂, 21.IX.2001, in gravel, leg. C. Haddad (PPRI).

Description

Measurements. Carapace length 2.9-3.8. Abdomen length 3.8-4.6. Eye field length 1.4-1.6, anterior width 1.7-1.9, posterior width 1.8-2.0.

Male. Carapace brown with darker striae radiating from fovea, eye field dark brown, vicinity of eyes black. Long brown bristles near anterior eyes, some whitish hairs on anterior part of ocular area and on sides of carapace. Mouth parts and sternum brown. Chelicera with serrate promargin and small bicuspid tooth on it, retromargin with single tooth. Abdomen slender, in fresh specimens orange, at anterior edge black transverse band (Fig. 95). Venter dark with two longitudinal light lines. Whole abdomen covered with scale-like hairs, at anterior edge protruding brown setae. Spinnerets dark. Legs thin and slender, dark brown, bearing long dark hairs. Pedipalps brown with darker line on dorsal surface of patella and tibia. Palpal organ shown in Figs 96-99, bulb convex, tibial apophysis thin.

Female unknown.

Distribution

Hitherto known only from South Africa, for the first time recorded from Namibia.

Remarks

Curtis (1988) observed *M. rufa* (reported as *Cosmophasis* sp. 2) in vicinity of nest of *Camponotus fulvopilosus* (De Geer, 1778) and also with the ant in chelicerae, but not observed it attacking the ant. The spider coloration is very similar to the *C. fulvopilosus* - see Fig. 3 in Curtis (1988).

Palpal structure very similar to that in *M. elegans* and *M. namibica*. *M. rufa* may be separated from other species **of** the genus by coloration of abdomen.

Mexcala signata n. sp.

(Figs 100-103)

Type material

Holotype female, KENYA, Nairobi airport, 1°19´S 34°56´E, leaf litter, 2.IX.2006, leg. J. Parau (PPRI).

Paratype female, TANZANIA: Nend Lake Manyara, 3°30´S 35°45´E, 1000 m a.l.s., 1♀, 21.X.1957, leg. B. Ross & R. Leech (CAS).

Diagnosis

The species is characterized by shorter than in other species seminal ducts and horizontally placed receptacles.

Etymology

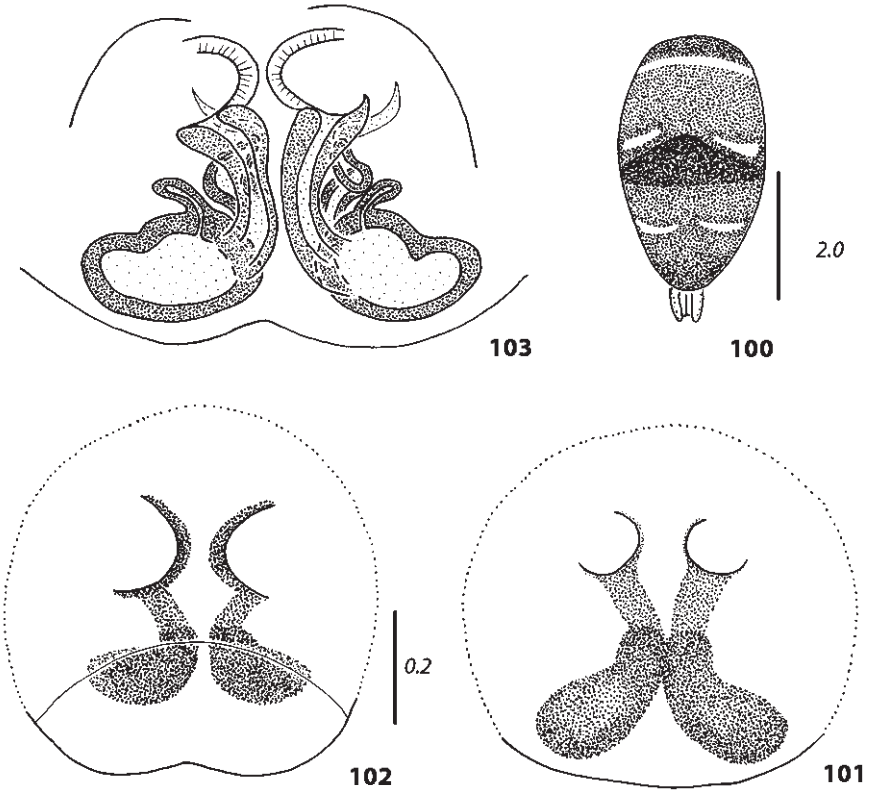
The specific name is the Latin word meaning “signed”, referring to the presence of bright marks on abdomen.

Description

Measurements. Carapace length 3.2. Abdomen length 3.8. Eye field length 1.5, anterior width 1.8, posterior width 1.9.

Male unknown.

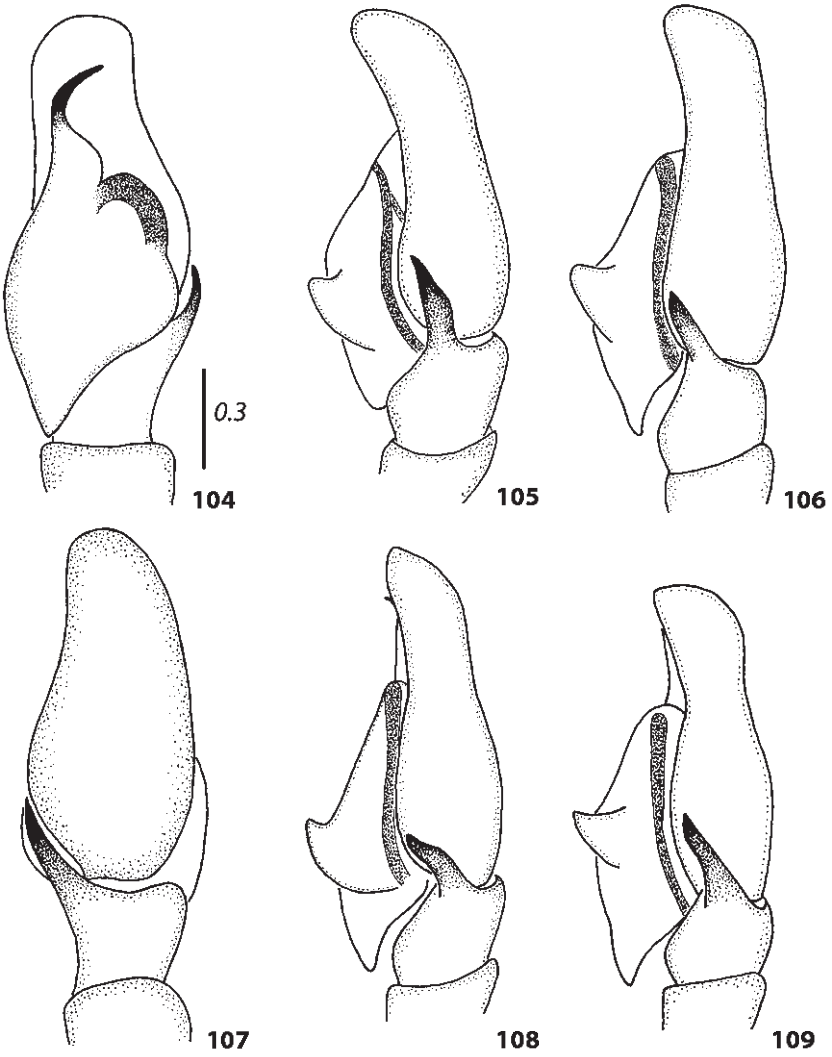
Female. Carapace darkly coloured, eye field punctured reticulate. Near eyes long bristles, thoracic part clothed in delicate colourless hairs. Abdomen shiny black, with transverse velvet black fillet in midway, anteriorly thin whitish line, and two pairs of orange transverse marks (Fig. 100). Venter blackish with two white lines laterally. Dor-



100-103. *Mexcala signata*: 100 – abdominal pattern; 101, 102 – epigyne; 103 – internal structure of epigyne; 102-103 – holotype

sum of abdomen covered with clinging black scale-like hairs, among them sparse long bristles. Spinnerets yellowish grey. Legs dirty yellow, on sides darker stripes, femora brownish. Tarsi of first pair of leg whitish. Pedipalps yellow, dark line on dorsal surface. Epigyne as Figs 101, 102. Internal structures shown in Fig. 103, copulatory openings with sclerotized edge, seminal ducts short, receptacles bean shaped.

***Mexcala synagelese* n. sp.**
(Figs 104-113)



104-109. *Mexcala synagelese*, male: 104 – palpal organ, ventral view; 105,106, 108, 109 – palpal organ, lateral view; 107 – palpal organ, dorsal view; 104-107 – holotype; 108, 109 – specimens from Sudan

Type material

Holotype male, ANGOLA, leg. Monard (MRAC, 12055).

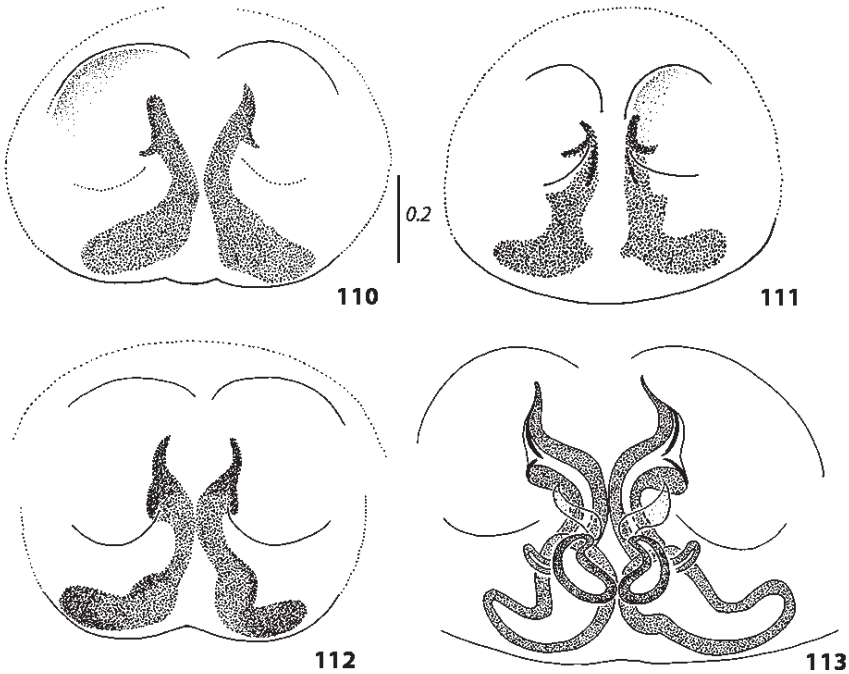
Paratypes, CONGO: Jadotville [Likasi], Kasompi, 10°59´S 26°43´E, 1♀, X.1956, leg. Z. Bacq (MRAC, 90210); IVORY COAST: Kossou, 7°01´N 5°29´W, 1♂, 29.IV.1972, leg. R. Jocqué (MRAC, 149763); 9 km S of Touba, 8°20'N 7°40'W, 400 m a.s.l., 1♂, 19.VIII.1966, leg. E. Ross & K. Lorenzen (CAS); SUDAN: Khartoum, 15°36´N 32°32´E, 1♂, 1962, leg. J. Cloudsky-Thompson (MRAC, 123039); same locality, 2♂,1 juv. (MRAC, 123049); same locality, 1♂ (MRAC, 123027); same locality, 2♂,1 juv., XI.1964, leg. J. Cloudsky-Thompson (MRAC, 127496); same locality, 1♀, XI.1964 (MRAC, 127499); same locality, 1♀, XI.1964, (MRAC, 127495).

Diagnosis

The male is recognizable by the shape of the tibial apophysis, which is long, stiletto-like and slightly bended towards bulb. The female has epigyne resembling that **of** *M. nigrocyanea*, but receptacles are longer (with narrowed posterior part) and placed more horizontally.

Etymology

The type was labelled "*Mexcala synagelese*" by R. Lessert, but he has not described it formally. The specific name refers to the Holarctic ant-like salticid, *Synageles*.



110-113. *Mexcala synagelese*, female: 110-112 – epigyne, 113 – internal structure of epigyne, dorsal view; 111 – specimen from Congo

Description

Measurements (♂/♀). Carapace length 2.8-3.1/2.7-3.2. Abdomen length 3.2-3.3/3.4-4.0. Eye field length 1.1-1.5/1.2-1.4, anterior width 1.4-1.6/1.5-1.7, posterior width 1.5-1.7/1.7-1.8.

Male. Carapace dark brown, eye field almost black, some brown bristles on eye field. Mouth parts dark. Abdomen slightly elongated, fawn brownish to dark brown, with three transverse black bands, venter dark. Abdomen clothed in scale-like hairs. Spinnerets yellowish. Legs thin and long, III and IV pairs especially long. Femora dark brown, remaining leg segments lighter with black lines along their sides. Leg hairs brown, spines long. Palpal organ shown in Figs 104-109, tibial apophysis bended towards to bulb (Fig. 92).

Female. Coloration typical for the majority of *Mexcala* species; abdomen with dark transverse bands and four light patches. Venter with longitudinal wide dark streak. Legs yellowish brown. Epigyne with two shallow depressions (Figs 110-112). Internal structure as in Fig. 113.

Mexcala torquata n. sp.

(Figs 114-119)

Holotype

Holotype female, IVORY COAST, Kossou, 7°01´N 5°29´W, savanne, 8.IX.1974, leg. R. Jocqué (MRAC, 152959).

Paratypes, GUINEA: Lola region, Zougepo, 7°42´N 8°24´W, 2♀♀, 23.I.1957 (BMNH, 223); IVORY COAST: Kossou, 1♀, 1.VI.1975, leg. R. Jocqué (MRAC, 149634); without data, 1♀ (BMNH, 5011).

Diagnosis

The female of the species may be distinguished by the form of the epigyne- very small with broad depression covering all its area.

Etymology

The specific name is Latin word meaning “with fillet” and refers to abdominal pattern.

Description

Measurements. Carapace length 3.1-3.3. Abdomen length 3.6-3.7. Eye field length 1.4-1.6, anterior width 1.6-1.7, posterior width 1.7-1.8.

Male unknown.

Female. Shape of body similar to other members of the genus. Carapace dark brown, eye field black. Long brown bristles near eyes, dark hairs on thoracic part. Mouth parts almost black, only gnathocoxae with thin whitish inner margins. Chelicerae with small retromarginal tooth and serrate promargin (Fig. 114). Abdomen dark brown, with transversal black fillet at mid way of abdominal length, in one specimen anterior edge blackish as well (Fig. 115). Dorsum of abdomen covered with clinging scale-like

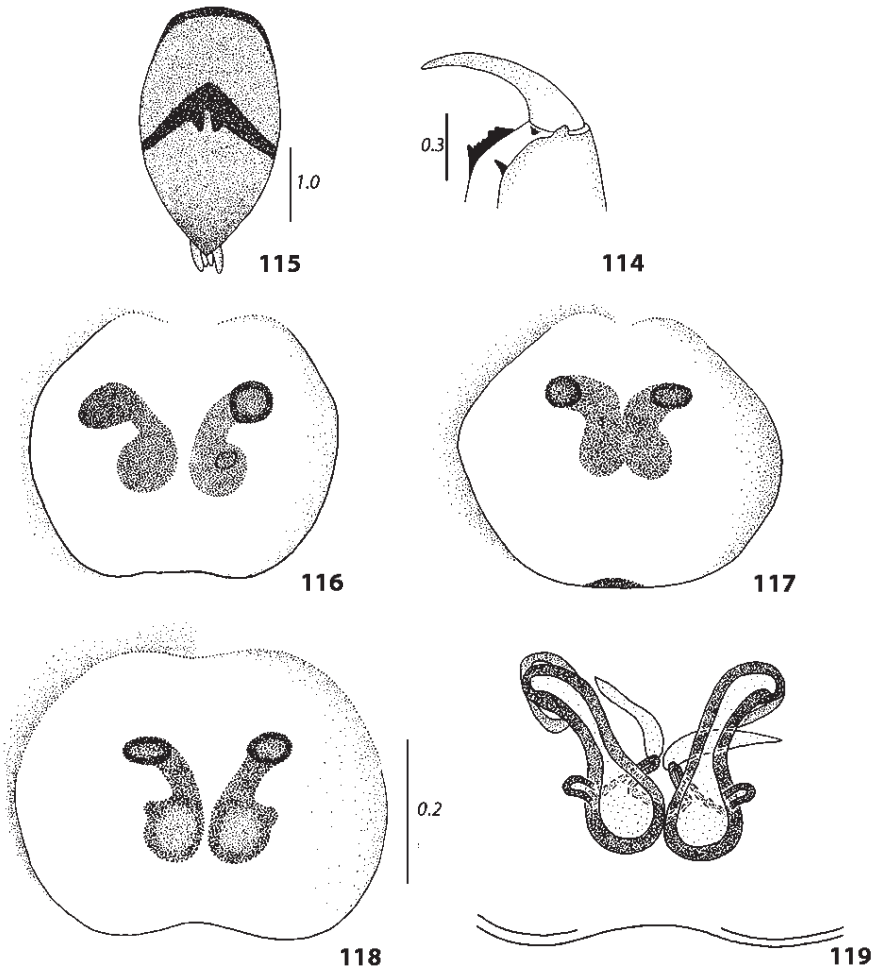
hairs and sparse brown bristles. Venter dark. Legs dark brown, first pair lighter with black belts along sides of segments (only femora uniformly dark brown). Epigyne very small, with large rounded depression occupying whole its area (Figs 116-118). Internal structure simple, copulatory canals straight, receptacles spherical (Fig. 119).

Mexcala vicina n. sp.

(Figs 120-122)

Type material

Holotype male, CAMEROUN, Mieri, Batouri, 4°25´N 14°20´E, 30.I.1976, leg. F. Puylaert (MRAC, 148356).



114-119. *Mexcala torquata*: 114 – cheliceral dentition; 115 – abdominal pattern; 116-118 – epigyne, 119 – internal structure of epigyne; 117 – holotype; 118, 119 – specimen from Guinea

Paratype

CONGO: Kola, 4°01´S 11°43´E, 1♂, 1956, leg. R. P. Looteus (MRAC, 93518).

Diagnosis

The male of the species is separable from other congeners in having a long rounded posterior lobe of bulb and characteristic shape of tibial apophysis with strongly curved tip.

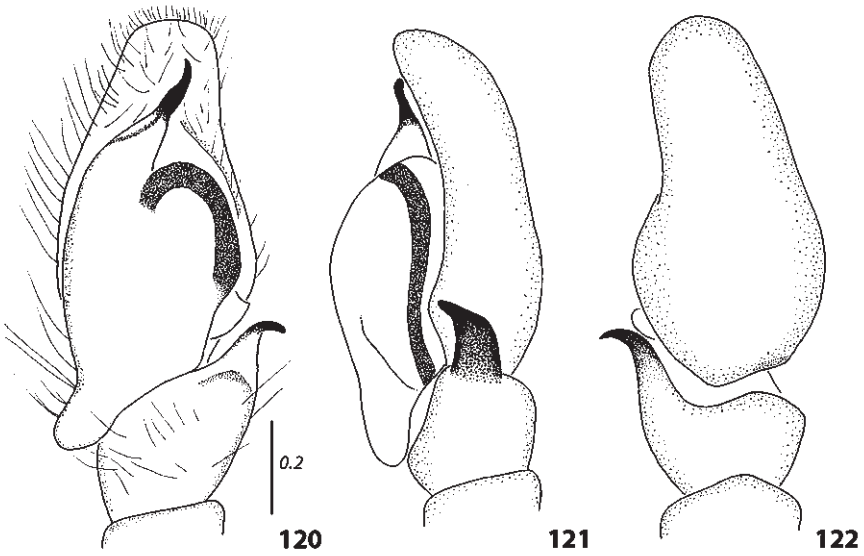
Etymology

The specific epithet is Latin word meaning "neighbour", referring to the relationship of this species to the congeners.

Description

Measurements. Carapace length 2.5. Abdomen length 2.3-2.7. Eye field length 1.1-1.3, anterior width 1.6, posterior width 1.7.

Male. Carapace dark brown, eyes with black rings. Short greyish hairs cover carapace, near eyes long brown bristles. Clypeus low, brown. Labium, gnathocoxae and sternum light brown. Chelicera with two small teeth and long bristles on promarginal edge, retromargin with single tooth. Abdomen with coloration typical for the majority of *Mexcala* species; brown with three transversal velvet black stripes (narrow at anterior and posterior edges and wide median one, forming large triangle in the middle of abdomen), dorsum densely covered with scale-like gleaming hairs. Venter brown. Spinnerets light brown. Legs light brown, darker stripes on lateral sides of their distal



120-122. *Mexcala vicina*, holotype: 120 – palpal organ, ventral view; 121 – palpal organ, lateral view; 122 – palpal organ, dorsal view

segments, tarsus of first leg whitish. Pedipalps yellow. Palpal organ shown in Figs 120-122, tibial apophysis wide, hooked on tip; embolus straight.

Female unknown.

Mexcala sp.

(Figs 123-126)

Material

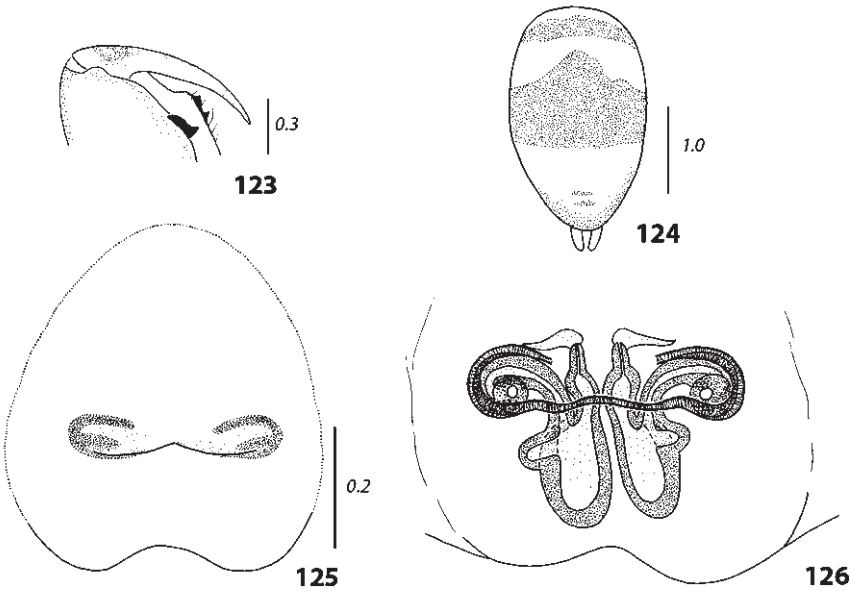
Jungle, 1♀, 26.VI.1901 (BMHN).

Description

Measurements. Carapace length 3.8. Abdomen length 5.0. Eye field length 2.0, anterior width 2.2, posterior width 2.4.

Male unknown.

Female. Carapace brown, slightly lighter behind eye field, eyes surrounded black. Short, clinging whitish hairs on carapace, long brown bristles in vicinity of eyes. Clypeus very low, brown. Sternum brownish, labium and gnathocoxae brown with yellow tips. Chelicera with serrate promargin. Abdomen yellow with two transverse dark brown bands, first at anterior margin and second, very wide in mid of abdomen length (Fig. 124). Venter yellow. Legs brown, longitudinal black lines on sides of femora. Leg hairs dark, on femora with admixture whitish ones. Palps yellow. Epigyne as in Fig. 125, copulatory openings located in fissure, partially plugged with waxy



123-126. *Mexcala* sp.: 123 – cheliceral dentition; 124 – abdominal pattern; 125 – epigyne; 126 – internal structure of epigyne

secretion. Edge of the fissure framed by strongly sclerotized flange. Internal structure shown in Fig. 126.

Remarks

The female is distinctive in having a unique form of epigyne, without depression but with long transverse furrow.

Lack of the locality of origin prevents description of this specimen as a new species.

SPECIES EXCLUDED FROM THE GENUS

Mexcala farsensis Logunov, 2001

Mexcala farsensis Logunov 2001: 61.

Type material

Holotype female, IRAN, Fars Prov., Barm-e-peere-Ggaibi (Museum of the Moscow State University) – not examined.

Remarks

The type not been examined, but judging from the description of Logunov (2001) the species is not related to *Mexcala*.

Acknowledgements

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