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THE CRAB-SPIDERS OF SOUTHERN AFRICA (ARANEAE: THOMISIDAE). 4. THE GENUS *MONAESES* THORELL, 1869

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ABSTRACT

Key words: Crab-spiders, Araneae, Thomisidae, *Monaeses*, taxonomy.

Seven species of *Monaeses* from southern Africa are recognized and distinguished in a key. Two are new, namely *M. fuscus* and *M. gibbus*. The female of *M. quadrituberculatus* is described for the first time. Four species *M. debilispina*, *M. magnus*, *M. nigeriensis* and *M. voltaensis* and one subspecies *M. paradoxus albidus* are synonymized with species dealt with in this paper. *M. pustulosus* is recorded from this area for the first time.

Uittreksel

DIE KRAPSPINNEKOPPE VAN SUIDELIKE AFRIKA (ARANEAE: THOMISIDAE). 4. DIE GENUS MONAESES THORELL, 1869

Sewe spesies van die genus Monaeses *van suidelike Afrika is herken en onderskei in 'n sleutel. Twee is nuut, naamlik* M. fuscus *en* M. gibbus. *Die wyfie van* M. quadrituberculatus *is vir die eerste keer beskryf. Vier spesie* M. debilispina, M. magnus, M. nigeriensis *en* M. voltaensis *en een subspesie* M. paradoxus albidus *is sinonieme van spesies behandel in die teks.* M. pustulosus *is vir die eerste keer in hierdie area versamel.*

INTRODUCTION

The present paper, the fourth in a series on the spider family Thomisidae considers the genus *Monaeses* Thorell in southern Africa.

Monaeses is a distinctive genus and is characterized by a long narrow body, where the caudal part in most species usually extends beyond the spinnerets in a tail-like extension. They are slow-moving spiders and cling to stems of plants with outstretched legs, the first two pairs directly anterad, and the third and last pairs directly posterad, along the axis of the plant. They live on plants, mainly grass, where their long and straw-coloured bodies camouflage them exceedingly well. *Monaeses* comprises a medium large genus of c. 22 species of which seven are known from southern Africa.

The area covered by this study is southern Africa south of 15°S latitude. This area includes the following countries: South Africa, Lesotho, Swaziland, South West Africa/Namibia, Botswana, Mozambique, Zimbabwe and Zambia. During the course of this study various South African homelands gained independence but, for the sake of convenience, they have been considered to fall within the territory of the Republic of South Africa. Locality co-ordinates are given only for type-localities of species and their synonyms. Distribution records were compiled from the literature whereas the new records refer to the material studied.

The material studied is deposited in the following institutions (abbreviations in parentheses): Albany Museum, Grahamstown, South Africa (A.M.); Museum national d'Histoire naturelle, Paris, France (M.N.H.P.); Museè royal de l'Afrique Centrale Tervuren, Belgium (M.R.A.C.); National Collection of Arachnida, Pretoria, South Africa (N.C.A.); National Museum Bulawayo, Bulawayo, Zimbabwe (N.M.B.); South African Museum, Cape Town, South Africa (S.A.M.).

The format of the descriptions and abbreviations of morphological terms follows those used by Dippenaar-Schoeman (1983).

MONAESES Thorell, 1869

Monastes Lucas, 1846: 192.

Monaeses Thorell, 1869: 37; 1870: 182; Koch, 1874: 492, 523; 1876: 764; Simon, 1895: 990; Gertsch, 1939: 302; Millot, 1941: 21; Levy, 1973: 109.

Rhynchognatha Thorell, 1887: 285. Type-species: *Rhynchognatha cinerascens* Thorell, 1887.

Type-species: *Monastes paradoxus* Lucas, 1846.

The genus *Monastes* includes a group of spiders characterized by an elongated abdomen which extends caudally past the spinnerets. However, the name *Monastes* was pre-occupied and Thorell (1869) consequently substituted *Monaeses* for it.

Thorell (1887) described the genus *Rhynchognatha*, which is closely related to *Monaeses* but has a much shorter abdomen, which does not extend caudally beyond the spinnerets. Simon (1895) synonymized *Rhynchognatha* and *Monaeses* but Crome (1962) did not agree with Simon and treated them as separate genera. He regarded the caudal extension of the abdomen to be of generic value because there were no intermediate forms with short, dorsal projections above the spinnerets which could be considered as transitional to others with long caudal extensions of the abdomen.

Crome (1962) regarded these two genera as valid also on the ground that they inhabit different geographical regions. *Monaeses* occurs throughout Africa, whereas *Rhynchognatha* was thought to be limited only to southern Asia. However, two African species, *M. quadrituberculatus* and a new species *M. gibbus* (described below), have short caudal extensions similar to those of *Rhynchognatha*. Therefore Crome's acceptance that the length of the caudal extension of the abdomen is correlated with the geographical distribution of the genus is not valid.

Furthermore I studied material from several collections and series of specimens of the same species from different localities and found that the caudal extension may vary considerably in individuals of the same species. It may range from very short (not exceeding the spinnerets) in the first to fifth instars, to moderate in the immature female and mature males, to long in the mature females.

The new species, *M. gibbus*, has a short caudal extension: it projects slightly past the spinnerets and can be regarded as intermediate between *M. quadrituberculatus* Lawrence (with a short caudal extension) and *M. austrinus* Simon (with a long caudal extension). I am of the opinion that this character is obviously too variable and not important enough for the characterization of genera. Thus *Rhynchognatha* is here considered as a synonym of *Monaeses*.

On the basis of the African material at hand, the genus *Monaeses* is delimited as follows:

FEMALE. Size: small to moderate (5,3–11,8 mm).

Colour of carapace cream to fawn with two faint, broad brown lines mediolaterally; cephalic area and clypeus suffused with white; carapace margin usually narrowly white; a white line stretching ventrally from lateral eyes to edge of clypeus. Sternum and mouthparts fawn. Abdomen cream to greyish white. Legs fawn, mottled with dark brown.

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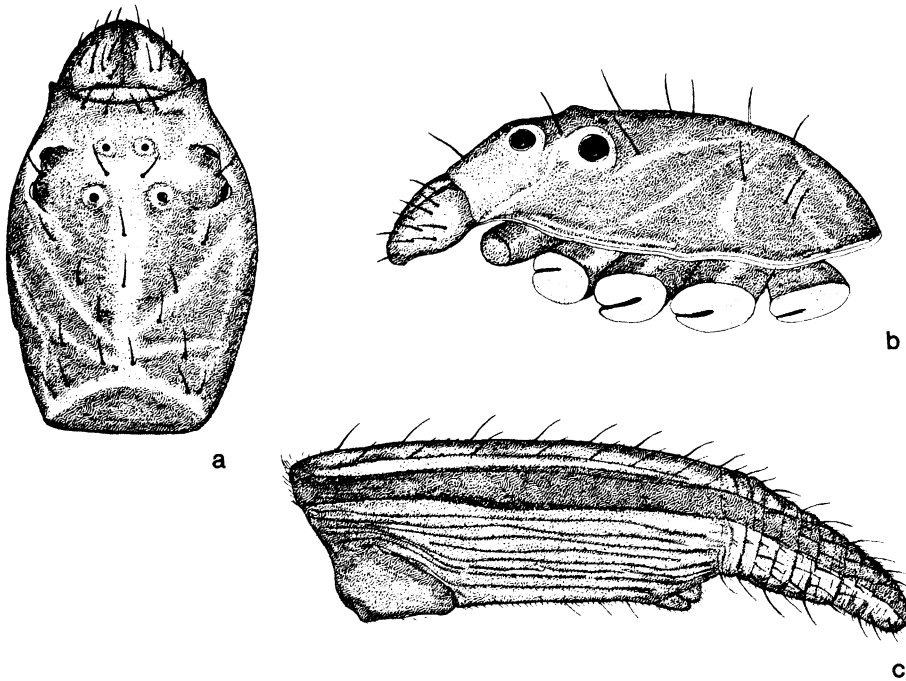


FIG. 1 (a–c) *Monaeses* sp. female/*wyfie*. (a) Carapace, dorsal view/*Karapaks, dorsale aansig*. (b) Carapace, lateral view/*Karapaks, laterale aansig* (c) Abdomen, lateral view/*Abdomen, laterale aansig*

Carapace longer than wide, subrectangular in shape; caudal margin subtruncate, sides weakly rounded (Fig. 1a); carapace (seen from the side) moderately high, about equal in height from posterior eyes to posterior declivity, which drops abruptly (Fig. 1b). Clypeus sloping, almost horizontal but on a lower plane than the rest of the carapace; margin provided with three pairs of primary setae. Chelicerae relatively large, directed ventrally and obliquely forward, covered with numerous setae. Anterior row of eyes narrower than posterior row; anterior row almost straight, posterior one slightly recurved; MOQ wider than long; lateral eyes situated on tubercles; PME farther apart from each other than from PLE. Carapace covered with numerous setae. Abdomen: long and slender, sides almost parallel; caudal part varies from short, not extending past the spinnerets, to very long, extending much past the spinnerets (Fig. 1c); caudal extension covered with numerous folds, clothed with long setae; remainder of abdomen dorsally provided with long setae, usually arranged in rows. Sternum longer than wide, clothed with numerous fine hairs. Labium twice as long as wide. Legs: anterior two pairs longer and stronger than the posterior pairs; legs clothed with numerous short and fine hairs and a few irregularly spaced setae; tibiae and metatarsi I and II with a double row of long macro-setae, their numbers varying between the species. Epigynum: varies from small and simple, usually a shallow depression bordered by a thickened rim, to a complex large darkly sclerotized structure.

MALE. Size: smaller than female (4,2–6,8 mm).

Colour fawn to brown. Apart from genitalia the male differs from female structurally as follows. Caudal extension of abdomen shorter in males; legs longer and thinner; setae on legs more numerous and longer. Palp: tibia with two apophyses; VTA situated slightly laterally; RTA usually with short stout stem, not much longer than the VTA; palp provided laterally with a tutacular apophysis which has specific value.

Distribution

Monaeses comprises c. 22 species with the following distribution: Afrotropical region (11); Australian region (2); Neotropical region (1); Oriental region (6); Palaearctic (2) see Fig. 2.

Species from the Afrotropical region

Eleven species of *Monaeses* are known to occur in the Afrotropical region (Appendix 1), ten which seem to be endemic. Seven of the eleven species are recorded from southern Africa. Appendix 1 lists the species of *Monaeses* known from the Afrotropical region, their synonyms and distribution.

Discussion

Morphological characters. Monaeses is very homogeneous and only after a critical examination of the genitalia can the species be separated from each other. The epigynum varies slightly in shape between individuals of the same species, as shown in Fig. 5 (f–i) and 8 (c–g). This is probably due to the age of the individual.

The genitalia have rarely been used by the previous authors for the diagnosis of species of *Monaeses*. They mostly used characters such as the number of leg setae, length of the caudal extension of the abdomen, size and colour. Series of conspecific specimens from different localities were examined and the intra-population variation in these characters were found to be extensive. Size

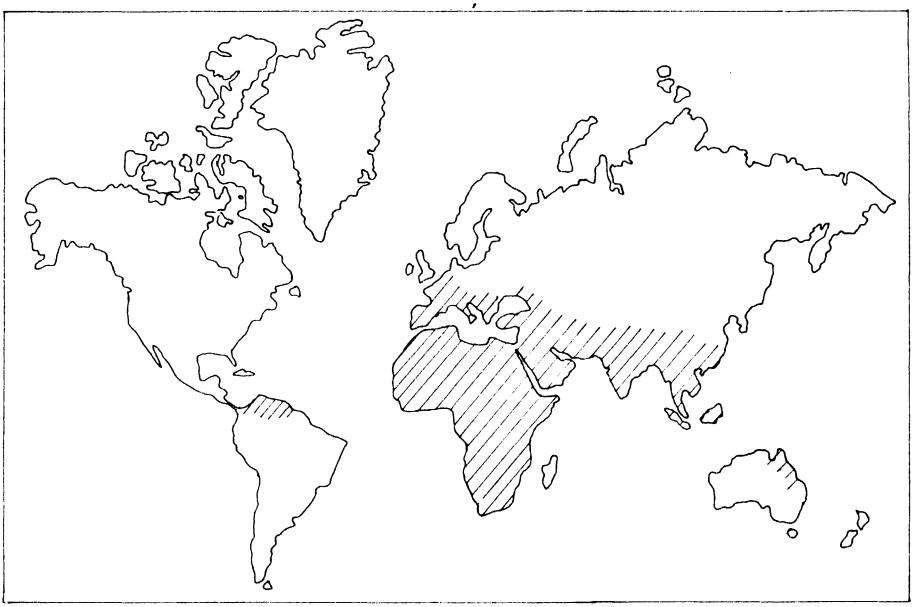


FIG. 2 Known geographical distribution of *Monaeses* Thorell/*Bekende geografiese verspreiding van* Monaeses *Thorell*

may vary from 6,4–11,6 mm within a species and is therefore too variable to be of specific value.

Colour may also vary markedly within a species; from white to entirely black (melanic forms) or with various shades of brown and grey in between. In accordance with this the integument may also be faintly mottled with black (Fig. 5c). These colour variations are apparently not correlated with the environment or time of the year. The new species, *M. fuscus*, is the only species with a uniform brown colour.

Morphological adaptations. The genus *Monaeses* is characterized by long, narrow bodies, where the caudal part in most species usually extends past the spinnerets in a tail-like extension. They are slow-moving and cling to stems of plants using their legs which are then stretched along the plant's axis. In this way they are well camouflaged with their surroundings. They inhabit grass and the low vegetation and are easily collected with a sweep-net.

Biology. Unknown.

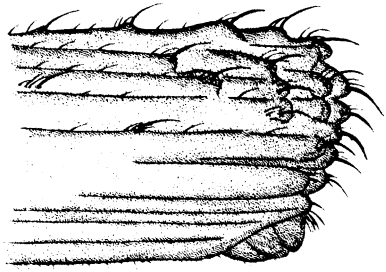
KEY TO THE SPECIES OF *MONAESES* FROM SOUTHERN AFRICA

Females

1. Abdomen long, extending well past spinnerets (Fig. 1c) 3
— Abdomen shorter, not extending past spinnerets (Fig. 3a) 2
2. Abdomen provided with small caudal tubercles, situated above the spinnerets (Fig. 3a) ..... *quadrituberculatus* Lawrence
— Abdomen provided with a blunt projection situated well above the spinnerets (Fig. 4a) ..... *gibbus* spec. nov.
3. Epigynum wider than long (Fig. 5f) ..... *paradoxus* (Lucas)
— Epigynum longer than wide (Fig. 8c) 4
4. Body chocolate brown..... *fuscus* spec. nov.
— Body greyish white 5
5. Caudal extension of abdomen long (distance from spinnerets to posterior apex about equal to distance from anterior apex to spinnerets) ..... *austrinus* Simon
— Caudal extension of abdomen of medium length (distance from spinnerets to posterior apex about a third of the distance from anterior apex to spinnerets) 6
6. Legs covered with numerous long and dark setae..... *pustulosus* Pavesi
— Legs sometimes without distinct setae, or when present almost transparent ..... *griseus* Pavesi

Males

1. Tutacular apophysis distinct (Fig. 5e)..... 3
— Tutacular apophysis only a small swelling (Fig. 3e) 2
2. Embolus long, extending past the tutacular apophysis (Fig. 3e); VTA shorter than RTA ..... *quadrituberculatus* Lawrence
— Embolus short, not extending past the tutacular apophysis (Fig. 4f); VTA almost same size as RTA ..... *gibbus* spec. nov.
3. Tutacular apophysis originates from cymbium, not pigmented..... 4
— Tutacular apohysis not originating from cymbium, darkly pigmented (Fig. 9c) ..... *griseus* Pavesi
4. Tutacular apophhysis small, situated well above RTA (Fig. 8b) ..... *pustulosus* Pavesi
— Tutacular apophysis larger, situated close to RTA (Fig. 5e) 5



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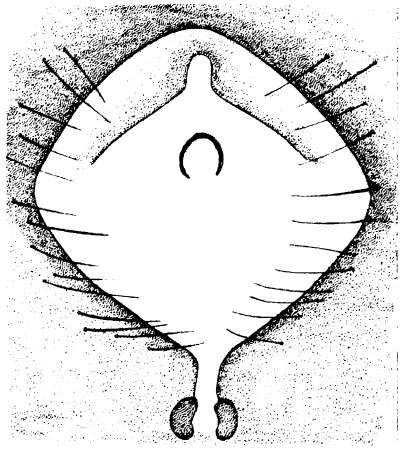

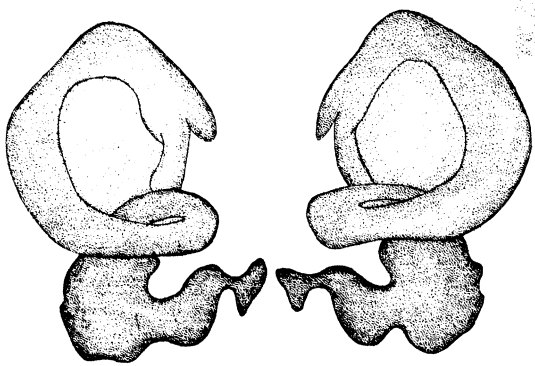

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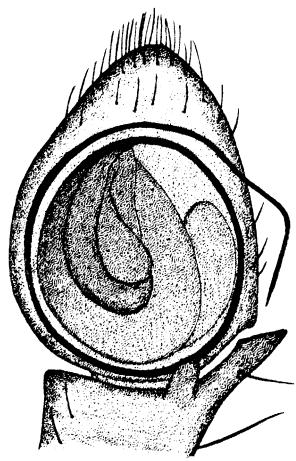

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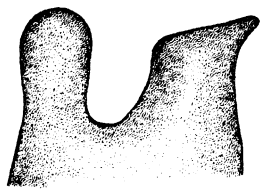


d

FIG. 3 (a–e) *Monaeses quadrituberculatus* Lawrence. (a) Posterior part of abdomen of female, lateral view/*Laterale aansig van wyfie, posterior gedeelte van abdomen*. (b) Epigynum, ventral view/*Epigynium, ventrale aansig*. (c) Internal genitalia, dorsal view/*Inwendige genitalieë, dorsale aansig*. (d) Tibial apophysis, retrolateral view/*Tibiale apofiese, retrolaterale aansig*. (e) Palp, ventral view/*Palp, ventrale aansig*

5. RTA sharply pointed (Fig. 5e) .... *paradoxus* (Lucas)
— RTA blunt (Fig. 6b) 6
6. Tutacular apophysis sharp, pointing slightly upwards; RTA blunt, the tip slightly rounded (Fig. 6b) ..... *fuscus* spec. nov.
— Tutacular apophysis smaller and blunt, pointing laterally; RTA with a small tubercle ventrally, when viewed laterally (Fig. 7e) .... *austrinus* Simon

Monaeses quadrituberculatus Lawrence, Fig. 3 (a–e)

Monaeses quadrituberculatus Lawrence, 1927: 33 (in part).

Description

The female of this species is described here for the first time.

FEMALE. Size (n=2): TL 5,3; CL 1,8; CW 1,4; CI 1,3; distance betweeen PME 0,32; PME-PLE 0,26; AME-PME 0,22.

Colour of carapace fawn, mottled with brown and white; tubercles of eyes and edge of clypeus white. Abdomen white dorsally, with faint grey mediolateral lines; caudal extension darker in colour; white ventrally with broad median grey line; sternum and mouthparts fawn. Legs fawn, mottled with brown.

Carapace structurally as described for genus. Abdomen twice longer than wide; not extending caudally past the spinnerets; posteriorly provided with small tubercles, each tubercle provided with a long seta medially, surrounded by a cluster of shorter setae (Fig. 3a). Epigynum longer than wide; upper part crescentic, forming a transparent hood-like protuberance slightly covering a shallow median depression; a small sclerotized circular brown mass present medially (Fig. 3b); internal genitalia shown in Fig. 3c.

MALE. Size (n=5): TL 4,7(4,0–5,4); CL 1,6(1,4–1,8); CW 1,2(1,0–1,4); CI 1,3; distance between PME 0,26(0,24–0,28); PME-PLE 0,20; AME-PME 0,20.

Apart from the genitalia, the male is structurally very similar to the female. Lawrence (1927) gave a complete dsecription of the male. However, as more material has been collected and studied it has been found that the following characters vary: the abdomen sometimes with a black patch on the anterior margin and the abdomen posteriorly sometimes with more than four tubercles. Palp as shown in Fig. 3(d–e): the tutacular apophysis a small blunt swelling laterally.

JUVENILE. Juvenile and immature males very similar in shape and colour to females.

Synonymy and relationships

This species was hitherto known only from the type-series which consists of two males, one immature and one mature female. The male can be distinguished by the genitalia and the shape of the abdomen which terminates caudally in a blunt projection above the spinnerets. In the two females of the type-series the abdomen extends caudally well past the spinnerets, the extension being almost the same length as the distance from the spinnerets to the anterior margin of the abdomen, unlike that of the males.

An examination of all the available material of *M. quadrituberculatus* revealed that the shape of the caudal extension is constant and very characteristic of this species; a short projection above the spinnerets, consisting of small but distinct tubercles (Fig. 3a); each tubercle is provided with a long spiniform seta surrounded by tufts of shorter and thicker setae. Two females (one collected together with a male) were seen; they are structurally similar in appearance to the male of *M. quadrituberculatus* in that they possess a short projection above the spinnerets. The two female paratypes, with their long abdomens, more closely resemble *M. paradoxus* in the shape of the abdomen and epigynum. I am therefore of the opinion that these two specimens (S.A.M. B5898 and B6203) have been misidentified and represent *M. paradoxus*. Thus the female of this species is described here for the first time.

The short abdomen of *M. quadrituberculatus* bears some resemblance to that of the new species, *M. gibbus*. The tutacular apophysis of the palp of *M. quadrituberculatus* closely resembles that of *M. guineensis*, a species described by Millot (1941) from Guinea.

Type-locality

Onka near Ondangwa, Owamboland, South West Africa, ♂ (S.A.M. B6203).

Distribution

South West Africa.

New records: South Africa (Transvaal, Orange Free State and Natal).

Material examined

SOUTH WEST AFRICA: Onka, ii.1923, R. F. Lawrence, ♂ holotype (S.A.M. B6203); Ongandjera, iii. 1923, R. F. Lawrence, 1 ♂ paratype (S.A.M. B6255). SOUTH AFRICA: Transvaal: Hammanskraal, near Pretoria, 25.x.1976, L. Harley ♀ ♂ (N.C.A. 76/1574 and 79/311); Hammanskraal, Makapan, ♀ (M.N.H.P. 16855); Dendron, 12.vii.1967, A. S. Dippenaar, 1 immature ♂ (N.C.A. 76/850); Pyramid, near Pretoria, v.1981, R. Harris, ♀ (N.C.A. 82/318). Natal: Makatini Flats, near Jozini, 4.iv.1977, A. S. Dippenaar, 2 ♂ (N.C.A. 79/297); Hluhluwe Game Reserve, 18.iv.1977, A. S. Dippenaar, ♂ (N.C.A. 79/298); Empangeni, 12.iii.1981, P. Reavell, ♂ (N.C.A. 81/166); Enseleni Reserve, 8.iv.1981, P. Reavell, 1 juvenile (N.C.A. 81/169); Valley of a Thousand Hills, 12.ii.1981, P. Reavell, 1 immature ♂ (N.C.A. 81/264). Orange Free State: Golden Gate, 8.ii.1982, M. K. P. Meyer, ♂ (N.C.A. 82/729).

Bionomics

M. quadrituberculatus was collected from grass, herbs, lucerne and the bark of *Acacia* sp.

Monaeses gibbus spec. nov. Fig. 4(a–g)

Description

FEMALE. Size, measurements of holotype, range of paratypes in parentheses (n=3); TL 7,6(7,6–7,7); CL 1,7(1,6–1,7); CW 1,6(1,6); CI 1,1; distance between PME 0,33(0,32–0,33); PME-PLE 0,27(0,27); PME-AME 0,24(0,24).

Colour of carapace fawn; eye area and clypeus mottled with white; two broad, brown mediolateral lines present. Abdomen cream to white; two broad grey mediolateral lines covering the length of the abdomen. Legs fawn, irregularly spotted with brown; distal parts of patella, tibia and metatarsus slightly darkened (varies between individuals).

Carapace as described for genus. Abdomen twice as long as wide; truncated anteriorly but widens posteriorly; on dorsocaudal part a blunt projection situated well above the spinnerets and slightly longer than these, covered with numerous small tubercles, each provided with a seta (Fig. 4a); two broad mediolateral lines present dorsally on abdomen, four rows of setae present on edge of these lines. All legs clothed with fine hairs; femora I and II with few irregularly spaced setae dorsally; tibiae I

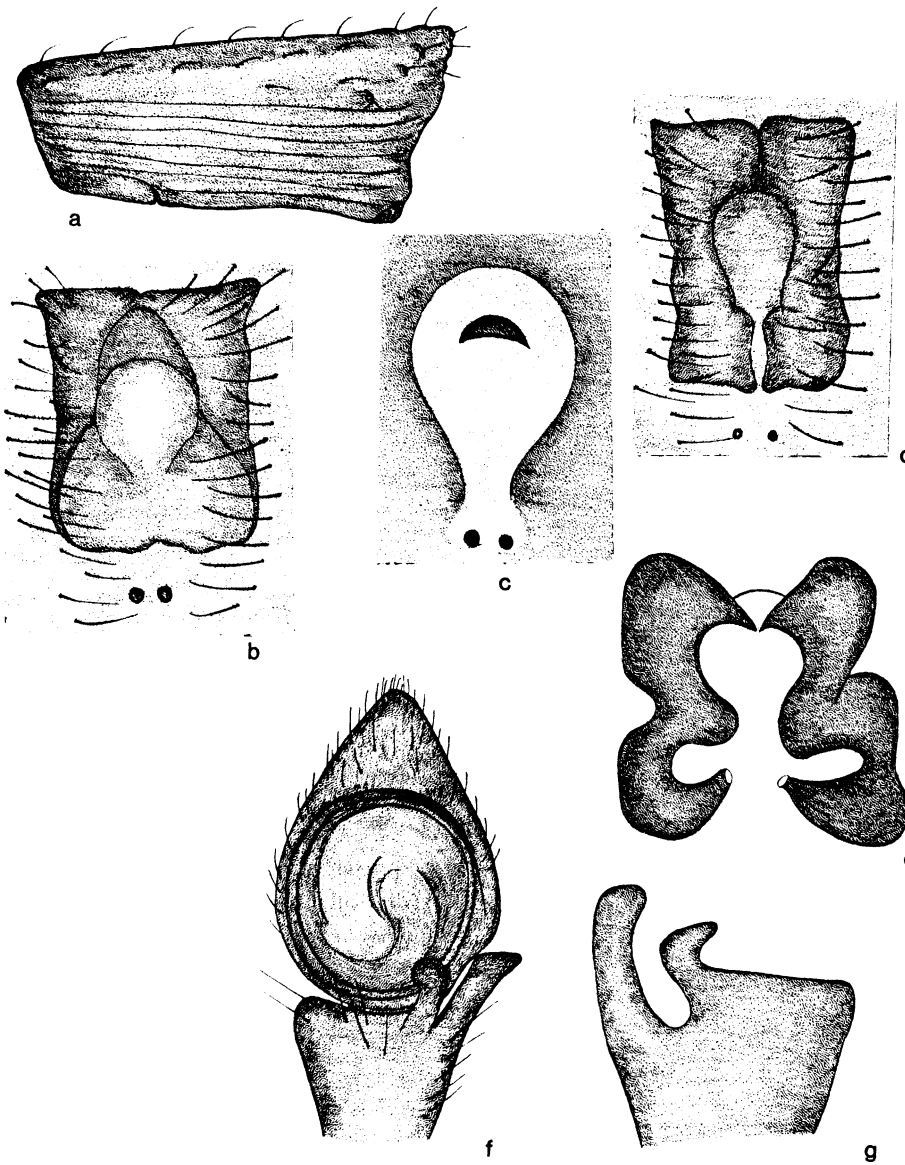


FIG. 4 (a–g) *Monaeses gibbus* spec. nov. (a) Abdomen of female, lateral view/*Abdomen van wyfie, laterale aansig*. (b–d) Epigynums, ventral view (variations)/*Epigyniums, ventrale aansig (variasies)*. (e) Internal genitalia, dorsal view/*Inwendige genitalieë, dorsale aansig*. (f) Palp, ventral view/*Palp, ventrale aansig*. (g) Tibial apophysis, retrolateral view/*Tibiale apofiese, retrolaterale aansig*

and II with 5–7 pairs of macro-setae ventrally and metatarsi I and II with 5 pairs. Epigynum varies in shape between individuals, variations shown in Fig. 4 (b–d); internal genitalia shown in Fig. 4e.

MALE. Size (n=1): TL 6,1; CL 1,6; CW 1,3; CI 1,2; distance between PME 0,28; PME-PLE 0,24; PME-AME 0,20.

Colour very similar to female, but carapace only a shade darker. Structurally similar to female except for genitalia.

Palp: tutacular apophysis only a slight swelling, situated close to the tip of RTA; embolus not reaching past the tutaculum; VTA almost the same length as RTA (Fig. 4f and g).

JUVENILE. Similar to adults, characterized by a blunt, caudal projection.

Relationships

This new species can be readily separated from its African congeners by the distinctive shape of the abdomen which does not extend caudally past the spinnerets, but forms a blunt projection, situated well above the spinnerets. Related to *M. quadrituberculatus* which also has a blunt projection caudally; however the genitalia of the two species differ.

Type-locality

Umfolozi Game Reserve, Natal, South Africa (28° 19'E, 31°50'S), ♀ (N.C.A. 79/305).

Distribution

South Africa (Natal, Transvaal)

Material examined

SOUTH AFRICA: Natal: Umfolozi Game Reserve, 11.iv.1977 and 10.iii.1978, P. Reavell, ♀ holotype, 3 ♀ paratypes (1 immature) (N.C.A. 79/305 and 306); Ndumu, 16.i.1980, P. Reavell, 1 ♀ paratype, 1 ♂ paratype, 1 juvenile (N.C.A. 80/332). Material not included in type-series: Dukuduku Nature Reserve, Natal, 31.iii.1977, A. S. Dippenaar, juvenile (N.C.A. 77/636); Jozini, 1.iv.1977, A. S. Dippenaar, juvenile (N.C.A. 77/691); between Jozini and Mkuzi (Lebombo Mountains), 5.iv.1977, A. S. Dippenaar, juvenile (N.C.A. 77/738). Richard's Bay, 10.iv.1980, P. Reavell, 1 juvenile (N.C.A. 81/334). Transvaal: Letaba Estates, 13.v.1980, C. J. Cilliers, 1 juvenile (N.C.A. 80/333); Roodeplaatdam Nature Reserve, 29.iv.1982, T. Marren, 2 juveniles (N.C.A. 83/172). The types are deposited in the National Collection of Arachnida in Pretoria.

Bionomics

The females were collected in March and April and the males in January, mainly from grass.

Etymology

The specific name refers to the blunt caudal projection.

Monaeses paradoxus (Lucas), Fig. 5 (a–i)

Monastes paradoxus Lucas, 1846: 193.

Thomisus paradoxus Simon, 1866: 286.

Monaeses paradoxus Thorell, 1869: 82; Pavesi, 1884: 474; Simon, 1895: 995; 1907: 313; 1908: 432; 1932: 782; Strand, 1915: 147; De Lessert, 1919: 177; Bacelar, 1940: 103; Millot, 1941: 21; Crome, 1962: 163; Levy, 1973: 113.

Monaeses caudicula Simon, 1884: 324; Chyzer & Kulczynski, 1891: 102.

Monaeses paradoxus albidus Simon, 1906: 1165; Millot, 1941: 21, syn. nov.

Monaeses quadrituberculatus Lawrence, 1927: 33 (misidentification of females).

Monaeses nigriensis Millot, 1941: 25, syn. nov.

Description

FEMALE. Size (n=7): TL 9,1(6,9–11,3); CL 2,1(1,9–2,2); CW 1,5(1,4–1,6); CI 1,4; distance between PME 0,35(0,32–0,36); PME-PLE 0,25(0,20–0,28); PME-AME 0,23(0,20–0,24).

Colour of carapace varies from fawn to grey, mottled with white and black; carapace distinctly marked with white as follows. The area directly bordering the eyes; the two lines stretching from the lateral eyes to the chelicerae and narrowly around lateral margin of carapace. Abdomen whitish with white lines laterally, sometimes with broader greyish tinted lines mediolaterally. Legs cream, darkly mottled with grey and black, especially legs I and II (Fig. 5a). Polymorphic colour variants were observed, with colour that varies from that described above to very dark (melanic forms). Intermediate forms were observed where specimens were covered all over with black spots (Fig. 5c) to individuals with only a series of large markings on the carapace and abdomen (Fig. 5d).

Carapace as described for genus. Caudal extension of abdomen correlated with various developmental stages: short, not extending past the spinnerets in the immature specimens; of medium length in males, to long in females. Legs covered with numerous dark hairs and irregularly spaced setae; femora I and II dorsally usually with 4–5 setae; tibiae I and II each ventrally with 2–3 pairs of macro-setae; metatarsi I and II each with 2–3 pairs (Fig. 5a). Epigynum wider than long; shape and colour vary, these variations are probably dependant on the age of the specimen (Fig. 5 f–i).

MALE. Size (n=4): TL 4,9(3,9–5,5); CL 1,5(1,3–1,5); CW 1,0(0,9–1,1); CI 1,4; distance between PME 0,24(0,24); PME-PLE 0,20(0,16–0,20); PME-AME 0,19(0,18–0,20).

Colour of body yellowish brown with distinct white markings as in female. Structurally similar to female except for genitalia.

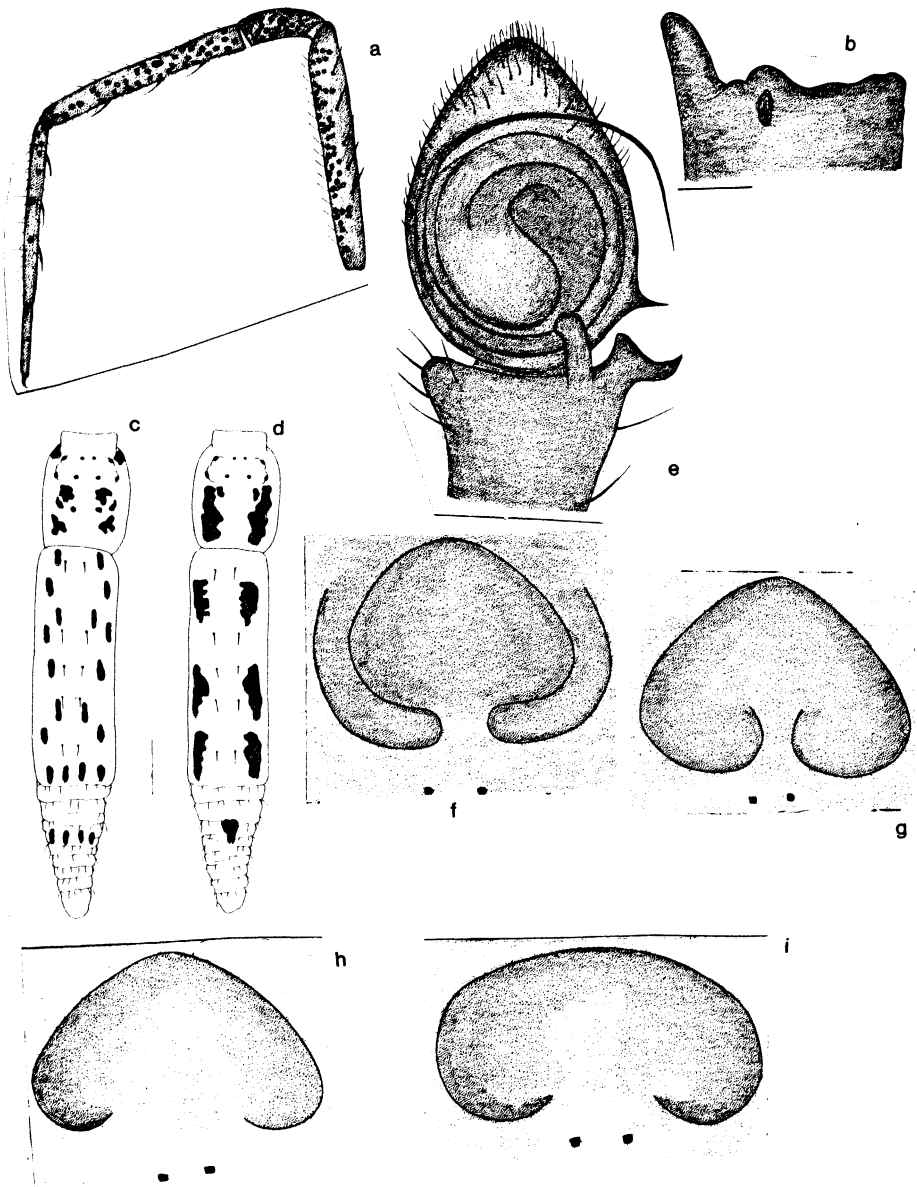
Palp: RTA very characteristic (Fig. 5 b and e); tutacular apophysis not situated close to RTA apophysis, sharp and directed slightly dorsal.

JUVENILE. Similar to female, with carapace and abdomen distinctly covered with white markings. Legs with small black spots.

Synonymy and relationships

The female of *M. paradoxus* is easily distinguished by the shape of epigynum which is wider than long in comparison with the other African species where the epigynum is longer than wide. The male palp is provided with a sharply pointed tutacular apophysis with the RTA also sharply pointed and directed laterad. All the specimens examined were distinctly covered with white markings on the carapace and abdomen and the legs covered with numerous small spots. The juveniles were recognized by the last two characters.

Millot (1941) described a new species, *M. nigeriensis* based on one specimen from the Sudan, characterized by the white markings on the body and the male palp. In comparing the type-material of *M. nigeriensis*, borrowed from the M.N.H.P., with the material of *M. paradoxus*, I found that palps of the males to be almost indistinguishable from each other. The two species are also very similar in the shape and colour of the body. Because there are no clear characters separating the two species, *M. nigeriensis* is considered to be synonymous with *M. paradoxus*.



liggaam van wyfie, toon die kleurvariasies. (e) Palp, ventral view/*Palp, ventrale aansig.* (f–i) Epigynums, ventral view (variations)/*Epigyniums, ventrale aansig (variasies)*

The subspecies *M. paradoxus albidus*, described by Simon (1906), differs from *M. paradoxus* only by a slight variation in the shape of the epigynum of the female. This kind of variation (Fig. 5 f–i) was frequently observed in epigyna of females of this genus. These small differences may be ascribed to the age of the specimen. As this subspecies is based on a single specimen I consider it to be merely a variant, rather than a subspecies of *M. paradoxus*.

Type-locality

Algeria (no exact locality), North-west Africa, ♀, ♂ (? type-material).

Type-locality of synonym: *M. nigeriensis*, Sangha, Sudan (co-ordinates unknown), ♂ (M.R.A.C.).

Distribution

Europe, Algeria, Ethiopia, Sudan, Tunisia, Guinea, Republic of the Congo, Zaire, South Africa (Cape Province).

New records: Zimbabwe, South Africa (Natal, Orange Free State, Transvaal).

Material examined

SUDAN: Sangha, ix.1937, J. Millot, ♂ (holotype *M. nigeriensis*) (M.R.A.C.). ZIMBABWE: Salisbury, iv.1917, R. W. Tucker, ♂ (S.A.M. B3245). SOUTH AFRICA: Natal: Tugela River, vii.1939, J. Talbot, 3 juveniles (N.M.); Shakaskraal, 9.v.1979, C. J. Cilliers, juvenile (N.C.A. 79/245); 4 km NE of Margate, 6.i.1977, A. S. Dippenaar, 4 juveniles (N.C.A. 77/247); Pietermaritzburg, x.1951, ♀ (N.M. 5880). Orange Free State: Oranjeville, 12.v.1979, M. K. P. Meyer, ♀, 20 juveniles (N.C.A. 79/299); Loteni Nature Reserve, 25.xii.1978, E. van den Berg, 2 juveniles (N.C.A. 79/300). Cape Province: 10 km WNW Uitenhage, 12.v.1978, N. J. Dippenaar, 2 juveniles (N.C.A. 78/558); Tsitsikamma, Storms River, 13.i.1951, Brinck, juvenile (swe. exp. AM.); 40 km NE Ceres (Touwsriver Road), 18.xi.1981, A. S. Dippenaar, ♀ (N.C.A. 81/1032); Plettenberg Bay, 16.i.1979, C. Kok, 1 immature ♂ (N.C.A. 79/37); Hogsback, 2.iv.1979, N. J. van Rensburg, juvenile (N.C.A. 79/302). Transvaal: 5 km W Levubu, 28.iii.1973, A. S. Dippenaar, ♀, juvenile (N.C.A. 76/763); Hammanskraal, Makapan, 4♂, 2♀, 3 juveniles (M.N.H.P. 16855); Abe Bailey Nature Reserve, Carletonville, 11.ii.1979, A. le Roy, ♂ (N.C.A. 79/81); 10 km N Graskop, Blyde River Nature Reserve, 26.viii.1976, A. S. Dippenaar, 20 juveniles (N.C.A. 76/1762); 14 km S Middelburg, 11.iv.1978, S. Stiemie and G. Nel, 1 immature ♀ (N.C.A. 78/339); farm "Al-te-ver", Maasstroom, 21–24.viii.1976. A. S. Dippenaar, 34 juveniles (N.C.A. 76/1372, 1414, 1423, 1434, 1480); farm "Enkeldoorn", Molotto, 6.viii.1974, A. S. Dippenaar, 3 juveniles (N.C.A. 76/293); 5 km E Groblersdal, 20.iv.1979, A. S. Dippenaar, 4 juveniles (N.C.A. 79/301); Pietersburg 2.v.1979, C. J. Cilliers, 2 juveniles (N.C.A. 79/247); Loskopdam Nature Reserve, 6.iv.1974, A. S. Dippenaar, juvenile (N.C.A. 76/1814); 13 km S Potgietersrust, 24.iii.1973, A. S. Dippenaar, juvenile (N.C.A. 76/1796); farm Elandsfontein, Thabazimbi, 2.ix.1979, M. Stiller, juvenile (N.C.A. 80/69); Rustenburg Nature Reserve, 5.ii.1980, M. Stiller, ♂ (N.C.A. 80/237); Mosdene, Naboomspruit, 19.iv.1981, A. le Roy, ♂ (N.C.A. 81/177); Norscott Koppies, Sandton, 22.iii.1981, A. le Roy, ♀ (N.C.A. 81/209); Northshare, Lochvaal, 27.i.1980, A. le Roy, 2 juveniles (N.C.A. 81/448); Loskopdam Nature Reserve, 15.xi.1981, H. van Tonder 8 ♀♀ (N.C.A. 81/1121).

Bionomics

Adults were collected throughout the year, except in the winter months, from grass.

Monaeses fuscus spec. nov. Fig. 6 (a–c) and 1c

Description

FEMALE. Size (n=1), measurements of paratype female: TL 8,5; CL 2,1; CW 1,5; CI 1,4; distance between PME 0,28; PME-PLE 0,24; PME-AME 0,20.

Colour of carapace dark brown; eye area tinted with black; faint white line from PLE to edge of clypeus. Abdomen dark brown. Sternum tinted with black. Legs fawn to brown, slightly tinted with black; legs I and II slightly mottled with black.

Carapace as described for genus. Caudal extension of abdomen about a third of distance from the anterior apex to the spinnerets (see Fig. 1c); setae on abdomen almost transparent and not prominent. Legs: femur I with 5–6 long setae dorsally; tibiae I and II with 3–5 pairs of setae ventrally; metatarsi I and II with 3–4 pairs ventrally. Epigynum darkly sclerotized, dorsal part forms a hood over medial depression (Fig. 6a).

MALE. Size: measurements of holotype (paratype in parentheses): TL 5,3(3,6); CL 1,6(1,2); CW 1,1(1,0); CI 1,5; distance between PME 0,24(0,24); PME-PLE 0,20(0,20); PME-AME 0,20(0,20).

Colour of carapace dark brown; eye area slightly tinted with white; with a thin white line present from PLE to edge of clypeus. Abdomen dark brown, a white line running laterally for the entire length of the abdomen. Legs fawn with numerous large black spots.

Carapace as described for genus. Caudal extension of abdomen a third of the length from the anterior apex to the spinnerets, blunt. Legs long and thin with numerous hairs; femur I with 5 long setae dorsally; metatarsi I and II with 2 pairs of macro-setae ventrally; tibiae I and II with 2–4 pairs of macro-setae ventrally. Palp: tutacular apophysis acuminate, directed slightly dorsad; RTA dark, bluntly pointed (Fig. 6b and c).

JUVENILE. Unknown.

Relationships

This species may be distinguished from its congeners by the shape of the genitalia and the uniformly dark brown body. *M. austrinus* is closest to *M. fuscus*, in that the female has the epigynum longer than wide and the RTA of the male is blunt. They differ, however, in other features of the genitalia and in body colour.

Type-locality

Halfway House, between Johannesburg and Petoria, Transvaal, South Africa (26° 05′S, 28° 08′E), ♂ (N.C.A. 76/1104).

Distribution

South Africa (Transvaal, Cape Province, Natal).

Material examined

SOUTH AFRICA: Transvaal: Halfway House, between Johannesburg and Pretoria, xii.1970, J. Findlay, collected on potatoes, ♂ holotype (N.C.A. 76/1104); Rust de Winter, 10.v.1972, L. Pretorius, collected from cotton, 1 ♀ paratype (immature) (N.C.A. 76/1705). Cape Province: Knysna, 17.i.1979, C. Kok, collected from grass, 1 ♂ paratype (N.C.A. 79/39). Natal: Hluhluwe Game Reserve (only data available), ♀ paratype (N.M. 80).

The type-material is housed in the National Collection of Arachnida (Pretoria) and the Natal Museum.

Bionomics

Females were collected in May and males in January and December, mainly from grass but also on cotton and potato plants.

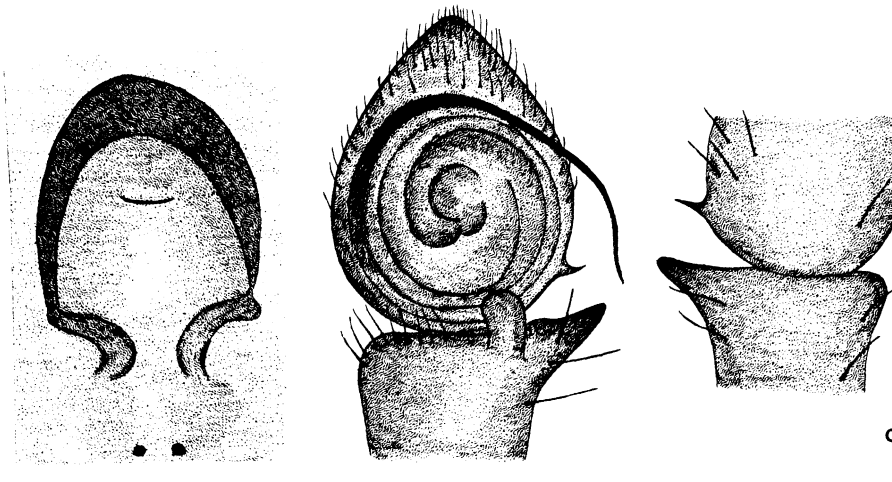


FIG. 6 (a–c) *Monaeses fuscus* spec. nov. (a) Epigynum, ventral view/*Epigynium, ventrale aansig*. (b) Palp, ventral view/*Palp, ventrale aansig*. (c) Palp, dorsal view/*Palp, dorsale aansig*

Etymology

The specific name refers to the dusky colour of the body.

Monaeses austrinus Simon, Fig. 7 (a–e)

Monaeses austrinus Simon, 1910: 194; De Lessert, 1919/177; Millot, 1941: 21; Crome, 1962: 163.

Monaeses magnus Millot, 1941: 27, syn. nov.

Monaeses voltaensis Millot, 1941: 28, syn. nov.

Description

FEMALE. Size (n=6); TL 11,8(9,8–14,4); CL 2,3(2,0–2,5); CW 1,8(1,7–1,9); CI 1,3; distance between PME 0,47(0,42–0,52); PME-PLE 0,34(0,30–0,36); PME-AME 0,27(0,24–0,28).

Colour of carapace fawn, suffused with white, two broad brown sub-marginal lines run from eyes to posterior declivity; area surrounding eye white. Abdomen white, faintly tinted with grey. Legs fawn; femur I covered with numerous small spots as well as five larger ones, each provided dorsally with a strong seta; patella I with one spot; tibia I with 3–4 spots and metatarsus I with 2 spots, tarsus uniformly fawn (Fig. 7a).

Carapace as described for genus. Abdomen narrow, extending caudally past the spinnerets, tapering towards apex; caudal extension long, almost the same length as the distance from the tip to the spinnerets, covered with numerous long setae, more densely on caudal portion. Legs covered with numerous hairs and setae; femur I dorsally with 5–6 setae; tibiae I and II ventrally with 5–6 pairs of macro-setae and metatarsi I and II with 5–8 pairs. Epigynum longer than wide, the shape somewhat variable (Fig. 7b), internal genitalia as in Fig. 7c.

MALE. Size (n=8): TL 6,0(4,8–6,8); CL 1,5(1,3–1,6); CW 1,2(1,1–1,4); CI 1,2; distance between PME 0,30(0,24–0,36); PME-PLE 0,22(0,18–0,24); PME-AME 0,21(0,20–0,24).

Colour of carapace fawn; abdomen white to fawn; legs fawn. Structurally similar to female with the following exceptions: femur I dorsally with 4–6 setae; tibiae I and II ventrally with 2–4 pairs of macro-setae and metatarsi I and II with 2–5 pairs. Palp: RTA with stout stem, tip pointing laterally, tutacular apophysis a small projection on ventral side directed slightly outwards (Fig. 7d and e).

JUVENILE. Similar to females, in having long abdomens.

Synonymy and relationships

Simon (1910) described *M. austrinus* from one immature female, characterized by a very long abdomen, extending caudally well past the spinnerets; legs fawn and distinctly marked with black spots on the patellae and metatarsi. Material, consisting of females, males and juveniles, collected from various localities in southern Africa resembles the type-specimen borrowed from M.N.H.P. The specimens also fit Simon's description of this species and are therefore considered to be referable to *M. austrinus*.

Millot (1941) described two species namely *M. magnus* and *M. voltaensis*. Each was based on a female specimen only. Both species were collected at the same locality in the Ivory Coast. According to Millot, the two species closely resemble each other, differing only in the number of leg setae, colour, and size and shape of the epigynum; from *M. austrinus* they differ only in colour and size. Great variation in these characters was encountered in the southern African material, so they do not seem to be reliable for the characterization of species. In comparing the type-material of *M. magnus* and *M. voltaensis* (borrowed from M.N.H.P.) with *M. austrinus* no other characters could be found to differentiate between them; they are therefore considered to be conspecific. From Guinea-Bissau Simon (1907) described *M. xiphosura* also characterized by a long caudal extension. Unfortunately the type-material was not available for study but is is quite possible that this species is also conspecific with *M. austrinus*.

Type-locality

Simon (1910) described this species from southern Africa, exact locality unknown (M.N.H.P. 24484).

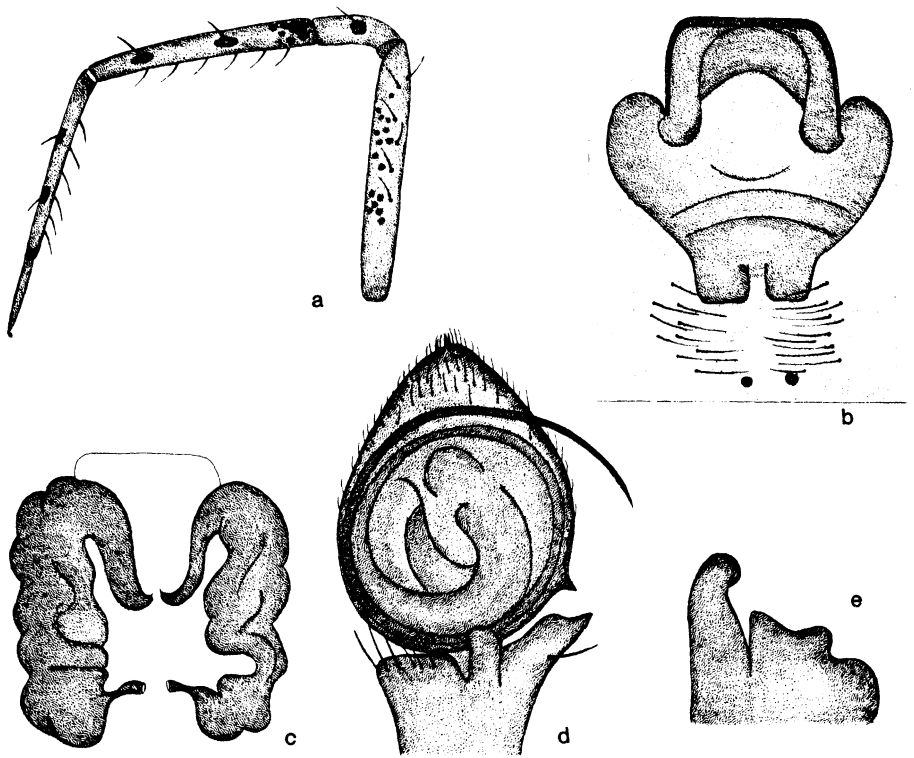


FIG. 7 (a–e) *Monaeses austrinus* Simon. (a) Leg I of female, prolateral view/*Poot I van wyfie, prolaterale aansig*. (b) Epigynum, ventral view/*Epigynium, ventrale aansig*. (c) Internal genitalia, dorsal view/*Inwendige genitalieë, dorsale aansig*. (d) Palp, ventral view/*Palp, ventrale aansig*. (e) Tibial apophysis, retrolateral view/*Tibiale apofiese, retrolaterale aansig*

Type-localities of synonyms: *M. magnus*, Diébougou, Ivory Coast, (11° 0′N, 3° 15′W), ♂ (M.N.H.P.); *M. voltaensis*, Diébougou, Ivory Coast (11 ° 0′N, 3 ° 15′W), ♀ (M.N.H.P.).

Distribution

South Africa, Botswana, Ivory Coast.

New records: South West Africa, Zimbabwe.

Material examined

IVORY COAST: Diébougou, ix.1937, J. Millot, ♂ (holotype *M. magnus*) (M.N.H.P.); Diébougou, ix.1937, J. Millot, ♀ (holotype *M. voltaensis*) (M.N.H.P.). ZIMBABWE: Kezi, 6.iv.1980, C. A. Car, ♂, 4♀ (N.M.B. A844, 850, 856). BOTSWANA: Serendella, Chobe Park, 29.xii.1980, P. Reavell, juvenile (N.C.A. 81/87); Okavango Delta, 28.xii.1980, P. Reavell, ♀, ♂ (N.C.A. 81/77); Nyala Game Reserve, 20.i.1981, P. Reavell, 3♀, 4♂ (N.C.A. 81/72 and 81/159); Kasane, Chobe, 3.i.1981, P. Reavell, 2 immature ♂ (N.C.A. 81/64); Thamalakane River, 28.xii.1980, P. Reavell, ♂ (N.C.A. 81/62). SOUTH WEST AFRICA: Farm Hoas, Kamanyab, 26.xi.1968, R. F. Lawrence, ♂ (A.M.); Kaokofeld, 16.vi.1951, juvenile (swe. exp. A.M.). SOUTH AFRICA: 1♀ holotype (immature), only data available (M.N.H.P. 24484). Cape Province: 12 km N of Komgha, 1.xii.1977, A. S. Dippenaar, ♂ (N.C.A. 77/1204); Kuruman, ii.1961, D. Brown, ♀, juvenile (N.M. 8033). Transvaal. Mosdene, Naboomspruit, 19.iv.1981, A. le Roy, ♂ (N.C.A. 81/178); Loskopdam Nature Reserve, 15.xi.1981, H. van Tonder, 7♀♀ (N.C.A. 81/1122); Rust de Winter, 24.v.1972, L. Pretorius, juvenile (N.C.A. 76/1671); 2 km E Nelspruit, 23.iii.1976, L. Venter, ♂ (N.C.A. 76/529); Suikerbosrand Nature Reserve, Heidelberg, 14.ii.1979, A. Jordaan, juvenile (N.C.A. 79/152); Rustenburg Nature Reserve, 7.xi.1979, A. S. Dippenaar, ♂, ♀ (N.C.A. 79/395, 80/226, 80/221, 80/217 and 80/219). Natal: Hluhluwe Game Reserve, 30.iii.1977, A. S. Dippenaar, 2♂ (N.C.A. 77/669); 10 km NW Sordwanabay, 2.iv.1977, A. S. Dippenaar, 2♀, 1 juvenile (N.C.A. 77/696); Nagels Dam, Drummond, vii.1954, 1 immature ♀ (N.M. 6307); Ngoye Forest, 1.xii.1977, P. Reavell, juvenile (N.C.A. 78/155); Umfolozi Game Reserve, 11.iv.1977, P. Reavell, 1 immature ♀ (N.C.A. 79/303); 20 km E Hluhluwe, 30.iii.1977, A. S. Dippenaar, ♂, 2 immature ♀, 5 juveniles (N.C.A. 77/662); Dukuduku Forest Reserve, vii.1960, R. F. Lawrence, 2♂, 2 juveniles (N.M. 8040); Jozini Dam, 1.iv.1977, A. S. Dippenaar, 1 immature ♀ (N.C.A. 77/690); 5 km W Illovo Beach, 5.i.1977, A. S. Dippenaar, juvenile (N.C.A. 77/238); Empangeni, v.1978, P. Reavell, ♀ (N.M.); Makatini Flats, 3–4.iv.1977, A. S. Dippenaar, 2♂ (N.C.A. 77/608); Mbabane, i.1939, 1 immature ♀

(N.M. 2560); Mtimona, Zululand, 2.i.1980, P. Reavell, 3♀, ♂ (N.C.A. 80/48); Ndumu Nature Reserve, 14.i.1980, P. Reavell, ♀ (N.C.A. 80/49); Westville, Durban, 9.ii.1981, P. Reavell, 2♀, ♂ (N.C.A. 81/104); Mtambanana, 29.xii.1979, P. Reavell, ♀, ♂ (N.C.A. 80/51); Ifafa, 16.vii.1979, C. J. Cilliers, 1 immature ♀ (N.C.A. 80/63); Mtunzini, Zululand, 10.iii.1981, P. Reavell, ♂ (N.C.A. 81/195); Valley of a Thousand Hills, 12.ii.1981, C. Cilliers, ♂ (N.C.A. 81/265); Margate, 22.iv.1980, C. J. Cilliers, 2♂ (N.C.A. 81/366).

Bionomics

Females were collected in January, February, April and May and the males from November to April mainly from grass

Monaeses pustulosus Pavesi, Fig. 8 (a–g)

Monaeses pustulosus Pavesi, 1895:513; De Lessert, 1915:35; 1919:113; 1928:318; 1936:254; Reimoser, 1937:22; Lawrence 1937:243; Millot, 1941:22; Jézéquel, 1964:1115.

Tmarus pustulosus Simon, 1901:222.

Description

FEMALE. Size (n=6): TL 9,4(8,0–11,6); CL 2,2(2,0–2,6); CW 1,6(1,5–1,9); CI 1,4; distance between PME 0,38(0,32–0,48); PME-PLE 0,29(0,24–0,36); PME-AME 0,24(0,20–0,28).

Colour of carapace dark grey, faint mediolateral lines present; fovea suffused with white. Abdomen greyish white, tinted with black, ventrally with a dark brown median band. Legs fawn to very dark brown covered with numerous dark brown spots (Fig. 8a).

M. pustulosus is more robust and darker in colour and more densely hairy than are the other African species. Caudal extension of abdomen shorter than in *M. austrinus*, covered with numerous hairs and setae, especially on the caudal part; setae sometimes situated on small tubercles, each tubercle provided with tufts of setae. Legs very hairy and provided with numerous setae; femur I with 4–5 pairs of setae dorsally; tibia I and II with 4–6 pairs of setae ventrally; metatarsi I and II with 5–8 pairs ventrally. Epigynum longer than wide, shape varies between individuals; variations shown in Fig. 8 (c–g).

MALE. Size (n=10): TL 6,2(5,5–6,8); CW 1,3(1,2–1,3); CL 1,6(1,5–1,8); CI 1,3; distance between PME 0,26(0,24–0,28); PME-PLE 0,22(0,20–0,24); PME-AME 0,21(0,20–0,22).

Colour of carapace fawn with brown mediolateral lines. Abdomen grey to brown. Legs yellow, only slightly mottled with brown.

Abdomen covered with numerous long, dark setae, sometimes situated on small tubercles; caudal extension as in females and of medium length. Legs covered with numerous hairs and long setae; femur I with 5–6 setae dorsally; both tarsi and metatarsi of legs I and II with 4–5 pairs of setae ventrally. Palp: tutacular apophysis small, placed well above RTA (Fig. 8b).

Relationships

M. pustulosus is more robust and darker in colour than the other African species.

Type-locality

Ethiopia, East Africa ♀ (? type-material).

Distribution

Ethiopia, Zaire, Guinea, Upper Volta, Tanzania, Eritrea, South Africa (Natal).

New records: Kenya, Zimbabwe, South West Africa, South Africa (Cape Province, Transvaal).

Material examined

GUINEA: Dalaba, viii.1937, Millot, ♂ (M.N.H.P.); Kindia, vii.1937, Millot, ♂ (M.N.H.P.). ZAIRE: Kisantu, R. P. Vanderyst, ♂♂, ♀♀ (M.R.A.C. 11590 and 11597). KENYA: Nairobi Karura forest, 8.xii.1979, P. Reavell, ♂, ♀ (N.C.A. 80/50). ZIMBABWE: Bulawayo, Matsheumhlope, 10.xi.1978, C. A. Car, ♀ (N.M.B.). SOUTH WEST AFRICA: Nusagas, R. Tucker, ♂ (S.A.M. B5044). SOUTH AFRICA: Natal: 12 km N Port Shepstone, 17.i.1979, C. J. Cilliers, ♀ (N.C.A. 79/40); between Jozini and Ndumu, 4.iv.1977, A. S. Dippenaar, 2♂ (N.C.A. 77/709); Margate, 11.vi.1978, C. J. Cilliers, 2 juveniles (N.C.A. 79/310). Cape Province: between Port Alfred and East London, 1.xii.1977, A. S. Dippenaar, 1 immature ♀ (N.C.A. 77/1193); 12 km N Komgha, 1.xii.1977, A. S. Dippenaar, ♂ (N.C.A. 79/309); 40 km NE Ceres (Touwsriver Road), 18.xi.1981, A. S. Dippenaar, 2♀ (N.C.A. 81/1033). Transvaal: Skukuza, 14.iii.1977, P. v.d. Hyde, ♂ (N.C.A. 77/797); Loskopdam, 27.ii.1975, J. Oosthuizen, ♂ (N.C.A. 76/262); Buffelspoort, 11.i.1979, C. J. Cilliers, ♂ (N.C.A. 79/308); Buffelspoort, 12.x.1978, A. S. Dippenaar, ♂ (N.C.A. 79/307); Nylsvley, Naboomspruit, xii.1976–i.1977, G. Ferreira, 1 immature ♀ (N.C.A. 78/517); Suikerbosrand Nature Reserve, 4.iii.1979, A. le Roy, juvenile (N.C.A. 79/202).

Bionomics

M. pustulosus was collected from grass, and a *Dombeya* sp. at Nylsvley.

Monaeses griseus Pavesi Fig. 9 (a–d)

Monaeses griseus Pavesi, 1897:173; Millot, 1941:23.

Monoeses (sic) debilispina Lawrence, 1928:235, syn. nov.

Description

FEMALE. Size: the single specimen available for examination was so damaged that no measurements could be taken. Total length of female 5,9 mm (Lawrence, 1928).

Colour of body and legs yellowish, thickly mottled with grey; carapace with a faint white line running from lateral eyes to chelicerae, as well as marginally; two brown submarginal broad longitudinal lines running from eyes to posterior declivity; area immediately surrounding eyes blackish. Abdomen mottled with grey dorsally, covered with several rows of irregularly spaced blackish spots, each with a thick seta medially; lateral sides with white line broadening posteriorly.

Abdomen with short caudal extension (Fig. 9a) about one fifth of the distance from the spinnerets to the anterior apex; abdominal setae becoming progressively more numerous posteriorly. Legs with irregularly spaced weak and sometimes transparent setae or sometimes without setae; remainder of legs covered with numerous long hairs. Epigynum slightly longer than wide; rim of epigynum sclerotized (Fig. 9b).

MALE. Size (n=3): TL 4,2(3,7–4,8); CL 1,3(1,1–1,5); CW 1,1(1,0–1,2); CI 1,2; distance between PME 0,25(0,20–0,28); PME-PLE 0,19(0,16–0,22); PME-AME 0,19(0,16–0,20).

Male very similar to female. Palp with darkly sclerotized and flattened tutacular apophysis, which does not originate from cymbium but from alveolus; bending slightly backwards, tip at same level as tip of RTA. Ventral and retrolateral view of tibial apophyses shown in Fig. 9c and d.

JUVENILE. Not seen.

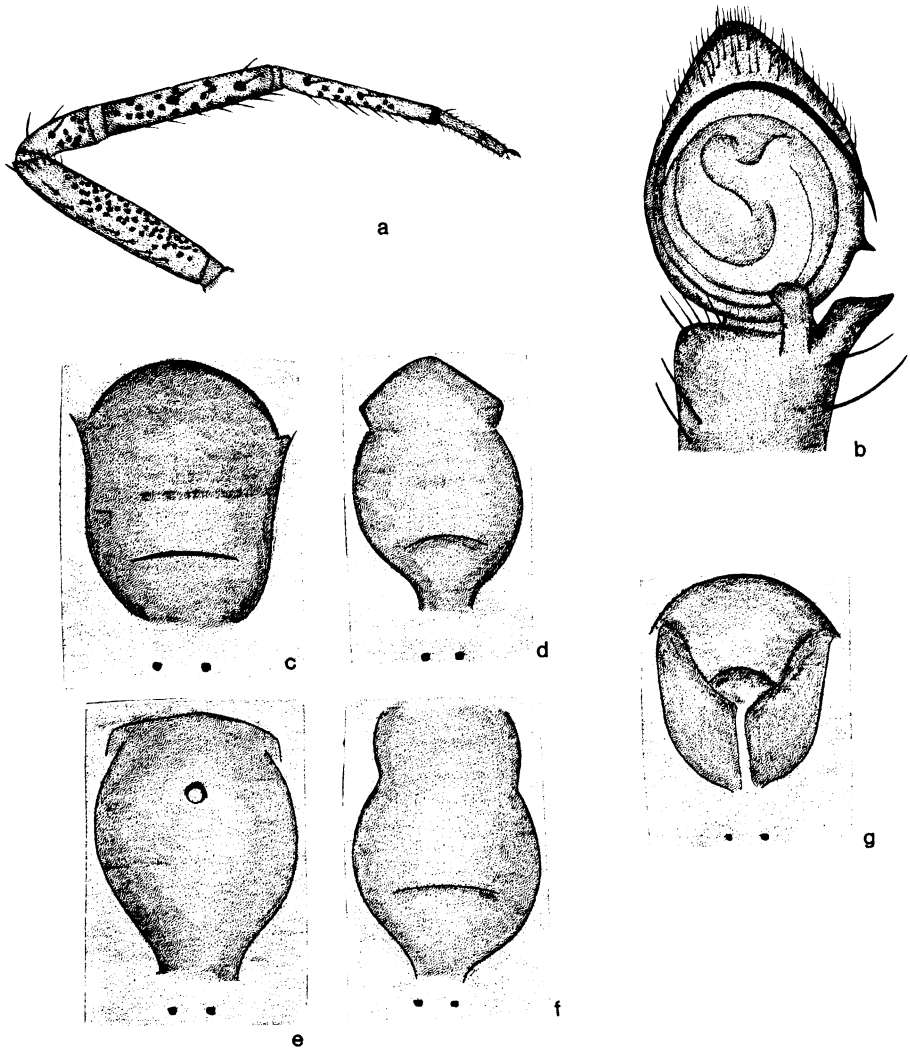


FIG. 8 (a–g) *Monaeses pustulosus* Pavesi. (a) Leg I of female, prolateral view/*Poot I van wyfie, prolaterale aansig*. (b) Palp, ventral view/*Palp, ventrale aansig*. (c–g) Epigynums, ventral view (variations)/*Epigyniums, ventrale aansig (variasies)*

Synonymy and relationships

This species was described by Pavesi (1897) from one immature female only and according to Millot (1941) it could be distinguished by the absence of setae on the legs. Millot (1941) assigned a male specimen to this species based on their similarity in size and colour, as well as the legs which have setae only on the tibiae. A distinctive character of the male is the shape of the tutacular apophysis of the palp which is a dark, sclerotized outgrowth of the genital bulb. This male specimen, determined by Millot, was borrowed from M.N.H.P. and compared with two males collected from the Transvaal. They were found to be similar in size, colour and shape of the abdomen and palp except that the legs of the last two males were without setae. However, a close examination of Millot's specimen revealed that there are also some transparent setae on the femora and patellae of legs I and II and not only on the tibiae as he had noted. The presence or absence and number of leg setae seem to be variable characters that cannot be used for specific differentiation.

Lawrence (1928) described a species *M. debilispina*, with weak leg setae from South West Africa. However, he was uncertain of its species status and considered the possibility that it could prove to be conspecific with *M. griseus*. Millot (1941) was also of the opinion that these

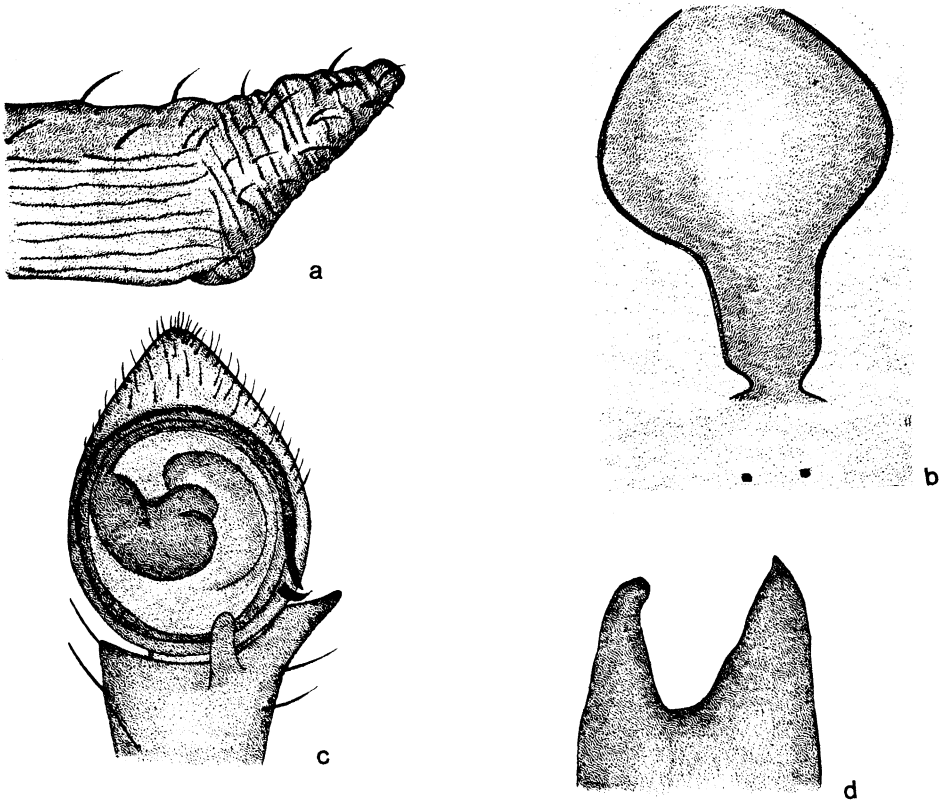


FIG. 9 (a–d) *Monaeses griseus* Pavesi. (a) Posterior part of abdomen of female, lateral view/*Laterale aansig van posterior deel van abdomen van wyfie*. (b) Epigynum, ventral view/*Epigynium, ventrale aansig*. (c) Palp ventral view/*Palp, ventrale aansig*. (d) Tibial apophysis, retrolateral view/*Tibiale apofiese, retrolaterale aansig*

two species are probably conspecific but he did not formally synonymize them. I studied the holotype female of *M. debilispina* (S.A.M. B7030) but unfortunately the specimen was in a poor condition; however, the colour, shape of the body, the hairs and weak setae correspond with the description of *M.griseus*. I therefore regard *M. debilispina* to be a synonym of *M. griseus*.

Type-locality

Ethiopia, East Africa, ♂ (?type-material).

Type-locality of synonym: *M. debilispina*, Kaoko Otavi, South West Africa (19° 39'S, 17° 19'E), ♀ (S.A.M. B7030).

Distribution

Ethiopia, Sudan, Somalia.

New records: South West Africa, South Africa (Transvaal).

Material examined

SUDAN: Bamako, x.1937, J. Millot, ♂ (M.N.H.P.). SOUTH WEST AFRICA: Kaoko Otavi, R. F. Lawrence, ♀ (holotype of *M. debilispina*) (S.A.M. B7030). SOUTH AFRICA: Transvaal: Swartkoppiespruit between Machadodorp and Nelspruit, 20.ii.1978, E. van den Berg, ♂ (N.C.A. 78/200); Long Tom Pass, 20.ii.1978, E. van den Berg, ♂ (N.C.A. 78/213). Natal: Nkandla forest, 30.iii.1980, P. Reavell, ♂ (N.C.A. 81/398).

Bionomics

M. griseus was collected from grass.

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APPENDIX 1: Species of *Monaeses* of the Afrotropical region: their synonymy and distribution
AANHANGSEL 1: *Spesies van* Monaeses *van die Afrotropiese gebied: hul sinonieme en verspreiding*

Species *Spesies*	Type collections *Tipeversameling*	Synonyms *Sinonieme*	Distribution *Verspreiding*
**austrinus* Simon, 1910: 194	♀ (M N.H.P. 24484)	*M. magnus* Millot, 1941: 27 (♀, M.N.H.P.), syn. nov. *M. voltaensis* Millot, 1941: 28 (♀, M.N.H.P.), syn. nov.	West and southern Africa
fasciculigera Jézéquel, 1964: 1117	♀ (M.N.H.P.?)		West Africa
**fuscus* spec. nov.	♂ (N.C.A. 76/1104)		Southern Africa
**gibbus* spec. nov.	♀ (N.C.A. 79/305)		Southern Africa
**griseus* Pavesi, 1897: 173		*M. debilispina* Lawrence, 1928: 235 (S.A.M. B7030), syn. nov.	North, East and southern Africa
guineensis Millot, 1941: 26	♂ (M.N.H.P.)		West Africa
**paradoxus* (Lucas, 1846): 193	♂, ♀	*M. caudicula* Simon, 1884: 324; Chyzer & Kulczynski, 1891: 102 (juvenile, M.N.H.P.) *M. paradoxus albidus* Simon, 1906: 1165; Millot, 1941: 21 (M.N.H.P.) *M. nigeriensis* Millot, 1941: 25 (♂, M.R.A.C.), syn. nov	North, East, West, Central and southern Africa
**pustulosus* Pavesi, 1895: 513	♀		East, West, Central and southern Africa
**quadrituberculatus* Lawrence, 1927: 33	♂ (S.A.M. B6203)		Southern Africa
nigeriensis Millot, 1941: 25	♂ (M.N.H.P.)		North Africa
xiphosura Simon, 1907: 313	♀ (M.N.H.P.)		West Africa

* Species discussed in text/*Spesies bespreek in teks*

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