



A revision of the genus *Medmassa* Simon, 1887 (Araneae: Corinnidae) in the Afrotropical Region

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Abstract

The genus *Medmassa* Simon, 1887 is revised in the Afrotropical Region. The type species is *M. frenata* (Simon, 1887) from the Philippines, described from a subadult female. The widespread, but previously poorly known *M. semiaurantiaca* Simon, 1910, appears to be the only congeneric Afrotropical species. It is redescribed, illustrated for the first time, and proposed as a senior synonym of *M. hiekae* Berland, 1922. *Medmassa laurenti* Lessert, 1946 from the Congo D.R. is proposed as a junior synonym of *Mandaneta sudana* (Karsch, 1880). *Medmassa lesserti* Strand, 1916 from the Congo D.R. is transferred to *Procopius* Thorell, 1899 and proposed as a senior synonym of *Procopius quaerens* Lessert, 1946. *Medmassa nitida* Lawrence, 1942 from South Africa is proposed as a junior synonym of *Pronophaea natalica* Simon, 1897. *Medmassa proxima* Lessert, 1923 and *M. vidua* Lessert, 1923, also from South Africa, are misplaced and their transfer to *Pronophaea* Simon, 1897 is proposed. The female holotype of *M. nyctalops* Simon, 1910 from the island of Bioko is lost and this species is considered *nomen dubium*. *M. semiaurantiaca* is recorded from Botswana, Central African Republic, Congo D.R., Ethiopia, Ghana, Guinea-Bissau, Kenya and South Africa. Field observations indicate that it is a fast-running nocturnal hunter that forages on the bark of trees, with a preference for those with smooth bark. Most of the material was collected by canopy fogging or active searching at night.

Key words: forest, savanna, *Mandaneta*, *Procopius*, *Pronophaea*, taxonomy

Introduction

The genus *Medmassa* Simon, 1887 consists of dark sac spiders distributed in Africa, Australasia and South-East Asia (Platnick 2010), with three species described from juveniles from South America presently considered *nomina dubia* (Bonaldo 2000). The description of the type species, *M. frenata* (Simon, 1877) from the Philippines, from a subadult female, has complicated the taxonomy of the genus and resulted in considerable ambiguity regarding its somatic and genitalic morphological characteristics. No conspecifics have been collected since its description, and thus the crucial genitalic structures needed to define the genus accurately remain unknown. Simon (1898) first recognised the similarities in somatic morphology of *Medmassa* and *Astratea* Thorell, 1890 and synonymised the genera. Deeleman-Reinhold (1995) later removed *Astratea* from synonymy with *Medmassa* and provided the first figures of the genitalia of three *Astratea* species from South-East Asia. She later (2001) synonymised *Astratea* with *Medmassa*, recognising morphological similarities between the type species of the two genera (*M. frenata* and *A. insignis* Thorell, 1890), thereby giving the first indications of the genitalic morphology of species congeneric with *M. frenata*.

Medmassa can be easily recognised from other castianeirine genera. The large number of paired ventral leg spines on the anterior tibiae and large number of cheliceral teeth is atypical for the subfamily, as most castianeirines usually only have two or three pairs of paired ventral spines and two or three cheliceral teeth on both margins. Such heavily spined anterior legs are only known in Castianeirinae from the monotypic South-East Asian genus *Pranburia* Deeleman-Reinhold, 1992 (Deeleman-Reinhold 1992, 2001). The genitalic

structure of males is simple, consisting of an oval-elongate tear-shaped tegulum with the subtegulum exposed prolaterally, usually with a short curved embolus distally, lacking a conductor or median apophysis, and with a well-developed retrolateral tibial apophysis (Deeleman-Reinhold 2001). The shape of the tegulum does not conform to typical Castianeirinae palpal morphology, which usually consists of a pear-shaped tegulum that is distinctly narrowed distally, with the subtegulum exposed retrolaterally, and usually lacking a tibial apophysis (Reiskind 1969; Haddad 2004). In contrast to other castianeirines, the female epigyne has the pair of copulatory openings anteriorly placed, with short copulatory ducts (sometimes absent) and simple oval spermathecae (Deeleman-Reinhold 2001). In most castianeirines the copulatory openings are placed laterally medially, with distinctive copulatory ducts, and usually with spermathecae comprising two distinct sections.

The phylogenetic relationships of *Medmassa* still require clarification. Simon (1897a) placed the genus in the group Corinneae of the subfamily Corinninae (Clubionidae). More recently, some authors have placed it in the Castianeirinae (Deeleman-Reinhold 2001), while others placed the African species in the Corinninae (Dippenaar-Schoeman & Jocqué 1997). However, the latter placement was probably based on the morphology of three misplaced South African species, which in fact belong in *Pronophaea* Simon, 1897. A recent cladistic analysis that aimed to resolve the placement of the Afrotropical tracheline genus *Austrachelas* Lawrence, 1938 (transferred to Gallieniellidae) placed *Medmassa semiaurantiaca* Simon, 1910, an Afrotropical species consistent in somatic and genitalic morphology with the Asian species recognised by Deeleman-Reinhold (2001), basally in the Castianeirinae (Haddad *et al.* 2009), thus supporting her subfamilial placement.

In this paper the currently known Afrotropical *Medmassa* are revised. Examination of the types of seven of the eight species described from the Afrotropical Region indicates that the genus has served as a dumping ground for somewhat unspecialised corinnids and that most species are misplaced. All of the species are transferred to other corinnid genera with the exception of *M. semiaurantiaca*, which is consistent in somatic morphology with the type species. This species occurs virtually throughout the continental Afrotropical Region, but is only known from isolated localities in forest and savanna habitats. Since revisions of most Afrotropical Corinnidae genera are in progress, and as this paper serves mainly to resolve the taxonomy of the Afrotropical *Medmassa*, redescriptions of the misplaced species will be provided when those genera are revised.

Material and methods

Material used in this study was observed in 70% ethanol using a stereomicroscope for all descriptions, digital photographs and measurements. The epigynes and male palps of *M. semiaurantiaca* were dissected, cleaned in a Branson 3200 ultrasonic bath for 10 minutes in 70% ethanol, and drawn. Digital photographs of the dorsal habitus and genitalia of *M. semiaurantiaca*, *M. proxima* Lessert, 1923, *M. vidua* Lessert, 1923 and *Pronophaea natalica* Simon, 1897 were taken using a Nikon Coolpix 8400 mounted on a Nikon SMZ800 stereomicroscope. The left palp of the male lectotype of *M. laurenti* Lessert, 1946 was taken using the same system. The dorsum of the male lectotype of *M. laurenti* was photographed using a Praktica DC42 camera on an Olympus SZX9 stereomicroscope. The female paralectotype of *M. laurenti* and holotype female of *M. lesserti* Strand, 1916 were photographed using a Praktica DC42 camera on a Wild M10 stereomicroscope.

All measurements are given in millimetres (mm). For the redescription of *M. semiaurantiaca* a range of body measurements is given for the smallest and largest specimens of each sex, and eye and leg measurements are given for the largest specimen of each sex. Abbreviations used in the descriptions are as follows: AER— anterior eye row; AL—abdomen length; ALE—anterior lateral eye; AME—anterior median eye; AW— abdomen width; CL—carapace length; CW—carapace width; FL—fovea length; PER—posterior eye row; PLE—posterior lateral eye; PME—posterior median eye; RTA—retrolateral tibial apophysis; SL—sternum length; SW—sternum width; TL—total length. Leg spination follows the format of Bosselaers & Jocqué (2000) and includes the following abbreviations: do—dorsal; pl—prolateral; plv—prolateral ventral; rl—retrolateral; rlv—retrolateral ventral; tr—trichobothria; vt—ventral terminal.

The material examined in this study is deposited in the following institutions (curators given in parenthesis): CAS—California Academy of Sciences, San Francisco, U.S.A. (Charles Griswold); MNHG—

Museum of Natural History, Geneva, Switzerland (Peter Schwendinger); MNHN—Museum National d'Histoire Naturelle, Paris, France (Christine Rollard); MRAC—Royal Museum for Central Africa, Tervuren, Belgium (Rudy Jocqué); NCA—National Collection of Arachnida, Pretoria, South Africa (Ansie Dippenaar-Schoeman); NMSA—Natal Museum, Pietermaritzburg, South Africa (Audrey Ndaba); ZFMK—Zoologisches Forschungsmuseum Koenig, Bonn, Germany (Bernhard Huber); ZMB—Zoologisches Museum, Berlin, Germany (Jason Dunlop).

***Medmassa* Simon, 1887**

Type species: *Medmassa frenata* (Simon, 1877) from the Philippines.

Diagnosis (after Deeleman-Reinhold 2001). Spiders of the genus *Medmassa* can be recognised from other Castianeirinae by the presence of a male palpal RTA that is often forked, the U-shaped sperm duct that lacks an additional loop, and the cymbium with a deep ventral furrow distally. The female epigyne has the copulatory openings located anteriorly and simple large round or oval spermathecae not divided into two distinct regions. Both sexes bear 7–10 pairs of ventral spines on the anterior tibiae, a character shared only with the ant-mimicking genus *Pranburia* Deeleman-Reinhold, 1992.

***Medmassa semiaurantiaca* Simon, 1910**

(Figs 1–15)

Medmassa semiaurantiaca Simon, 1910: 376 (♀ Holotype: GUINÉE-BISSAU: Guinea Portuguese, Bolama, leg. L. Fea, MNHN 18810 – examined).

Medmassa hiekae Berland, 1922: 74, plate A4, fig. 3 (3 juvenile syntypes: ETHIOPIA: Hieka Bourka, 31.III.1904, leg. M. de Rothschild, MNHN – examined). **syn. nov.**

Remarks. *Medmassa hiekae* Berland, 1922 was described from three juveniles from Hieka Bourka in Ethiopia. This locality could not be traced, and is thus presumed to be a misspelling of Burka, east of Addis Ababa. Only one male has subsequently been collected from Ethiopia, and this specimen is *M. semiaurantiaca*. We thus propose the synonymy of *M. hiekae* with *M. semiaurantiaca*.

Diagnosis. This species shares with *M. insignis* (Thorell, 1890) and *M. celebensis* (Deeleman-Reinhold, 1995) the subapical lamellar process on the RTA of the male palp (Fig. 13), but can be distinguished from these two species by the longer, sharp, dorsally directed tip of the RTA. Females of *M. semiaurantiaca* can be recognised by the distinctive copulatory ducts in the female epigyne (Figs 8–11), copulatory openings situated posterior to the anterior margins of the spermathecae, fewer cheliceral teeth, and absence of abdominal markings (see Deeleman-Reinhold 2001).

Female. Measurements: CL 2.80–3.90, CW 2.33–3.16, AL 2.85–3.68, AW 2.00–2.66, TL 5.63–7.72, FL 0.28–0.42, SL 1.40–2.00, SW 1.40–2.02. Interdistances between eyes: AME–AME 0.08, AME–ALE 0.05, ALE–ALE 0.58, PME–PME 0.21, PME–PLE 0.12, PLE–PLE 0.67.

Length of leg segments (sequence from femur to tarsus, and total): I 3.52 + 1.52 + 3.65 + 2.58 + 1.80 = 13.07; II 3.35 + 1.33 + 2.52 + 2.51 + 1.64 = 11.35; III 3.25 + 1.22 + 2.70 + 3.20 + 1.86 = 12.23; IV 4.05 + 1.40 + 3.38 + 4.18 + 1.95 = 14.96.

Carapace deep orange-brown, eye region slightly darker, slightly paler posteriorly, with dark brown mottled markings (Fig. 1); carapace highest posterior to PER, at one-third its length, sloping gently towards posterior margin, with slight depression anterior to fovea; surface finely wrinkled, sparsely covered in short fine straight setae, with several longer erect setae in eye region and along carapace midline; fovea long, distinct, slightly thickened, at two-thirds carapace length. Eyes surrounded by black rings (Fig. 7); AER strongly procurved, AME much larger than ALE; clypeus height slightly larger than AME diameter; AME

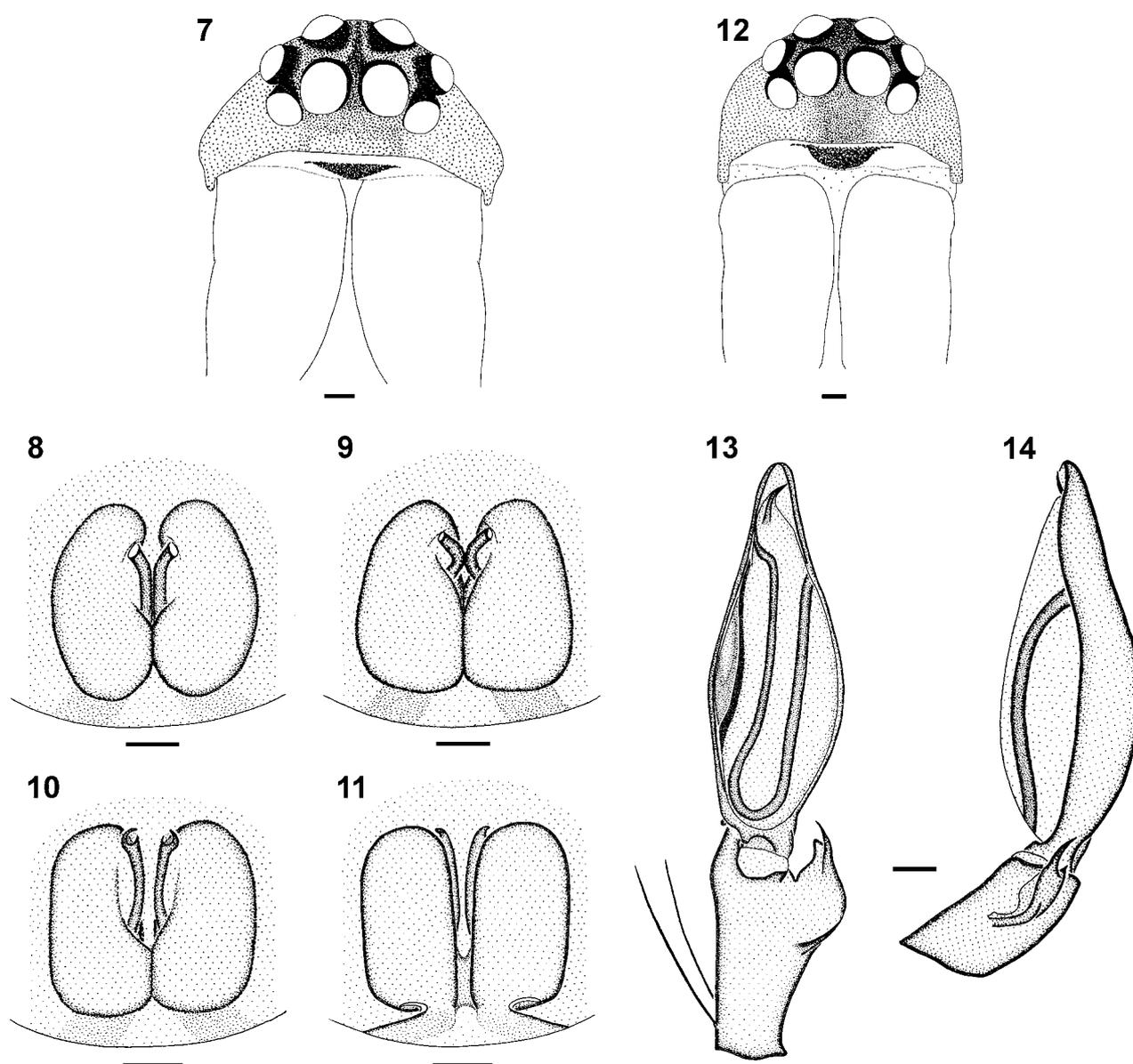


FIGURES 1–6. Digital microscope photographs of *Medmassa semiaurantiaca* Simon, 1910 female (1–3) and male (4–6) male from Botswana. (1, 4) habitus, dorsal view; (2, 5) leg I tibia and metatarsus; (3, 6) pedipalp, lateral view. Abbreviations: AAS–anterior abdominal spines; EVS–erect ventral femoral spines on palp; RLS–retrolateral spines on palp. Scale bars = 1.0mm.

separated by distance slightly less than one-third their diameter; AME separated from ALE by distance approximately one-eighth AME diameter (Fig. 7); PER strongly procurved (Fig. 1), median eyes slightly larger than laterals; PME separated by distance equal to their diameter; PME separated from PLE by distance equal to half PME diameter. Chelicerae dark brown; anterior surface with scattered short and long, fine erect setae; chilum single; promargin with three teeth, median tooth largest, distal tooth smallest, adjacent to median tooth; retromargin with three widely separated teeth, decreasing gradually in size distally. Sternum orange-brown, with slightly darker markings radiating from centre to between coxae; surface smooth, covered in long, fine setae; precoxal triangles present; intercoxal sclerites present between coxae I and II only; anterior pleural bars fused, posterior bars isolated. Abdomen uniform dark grey dorsally, with 3–4 pairs of short spines along anterior margin behind petiole (Fig. 1); abdomen slightly paler grey laterally and ventrally; abdomen oval, broadest at half its length; dorsal scutum absent; surface covered in short fine straight setae; dorsum with two pairs of large weakly sclerotised sigilla, first at one-third and second at two-fifths abdomen length; venter with indistinct small oval sclerites, running in two paired lines from behind epigastric fold to spinnerets; inframamillary sclerite present. Legs I to IV with femora orange-brown, much darker in distal third;

remaining leg segments uniform yellow-brown; retrocoxal hymen present on coxa I; patellar indentation narrow, approximately one-third patellar length; legs strongly spined, especially anterior tibiae and metatarsi (Fig. 2); metatarsi III and IV with dense distal scopulae, tarsi weakly scopulate; remaining leg segments covered in fine, short setae. Leg spination as follows: femora: I pl 2 do 3, II pl 3 do 3, III pl 3 do 3 rl 3, IV pl 2 do 3 rl 2; patellae: spineless, all with 1 proximal and 1 distal dorsal tr; tibiae: I plv 8 rlv 6–7, II pl 2 plv 5 rlv 4, III pl 2–3 rl 2 plv 3 rlv 3 vt 2, IV pl 2 rl 2 plv 2 rlv 2 vt 2; metatarsi: I plv 2 rlv 2, II plv 2 rlv 2, III pl 1 rl 1 plv 2–3 rlv 2 vt 3, IV pl 2 rl 2 plv 2 rlv 2 vt 3; all tibiae, metatarsi and tarsi with numerous dorsal and ventral tr, increasing in size distally. Palpal spination (Fig. 3): femora: pl 1 do 2 plv 1 rlv 6; patellae pl 2 do 2; tibiae pl 3 do 2 rlv 2; tarsi pl 1 plv 1 rlv 1. Epigyne with large ST I and no ST II; copulatory openings situated anteromedially within curved depression; copulatory ducts short, bent or straight, entering ST I medially (Figs 8–11).

Male. Measurements: CL 2.76–3.82, CW 2.30–3.20, AL 3.15–4.10, AW 1.95–2.10, TL 6.03–7.25, FL 0.28–0.48, SL 1.45–2.00, SW 1.48–2.02. Interdistances between eyes: AME–AME 0.07, AME–ALE 0.03, ALE–ALE 0.62, PME–PME 0.19, PME–PLE 0.08, PLE–PLE 0.73.



FIGURES 7–14. *Medmassa semiaurantiaca* Simon, 1910: (7–11) female, (12–14) male. (7, 12) carapace, frontal view; (8–10) epigyne, ventral view from Ghana (8), Congo D.R. (9) and Botswana (10); (11) epigyne, dorsal view from Botswana; (13) palp, ventral view; (14) palp, retrolateral view. Scale bars = 0.1mm.

Length of leg segments (sequence from femur to tarsus, and total): I $4.05 + 1.60 + 3.62 + 3.14 + 2.20 = 14.61$; II $3.74 + 1.45 + 3.08 + 3.10 + 2.10 = 13.47$; III $3.58 + 1.34 + 3.00 + 3.74 + 2.13 = 13.79$; IV $4.31 + 1.41 + 3.66 + 4.91 + 2.17 = 16.46$.

General habitus, colouration and abdominal spines (Fig. 4), intercoxal sclerites, precoxal triangles and eye pattern (Fig. 12) similar to female described above; male less robust than female, with slightly longer legs; legs similarly strongly spined (Fig. 5), with small retrocoxal hymen on coxa I and narrow patellar indentation approximately one-third patellar length; abdomen with narrow elongate dorsal scutum, extending to half abdomen length (Fig. 4). Leg spination as follows: femora: I pl 2 do 3, II pl 3 do 3, III pl 3 do 3 rl 2, IV pl 2 do 3 rl 2; patellae: spineless, all with 1 proximal and 1 distal dorsal tr; tibiae: I plv 7–8 rlv 6, II pl 2 plv 5 rlv 4–5, III pl 2 rl 2 plv 2 rlv 2 vt 2, IV pl 2 rl 2 plv 2 rlv 2 vt 2; metatarsi: I plv 2 rlv 2, II pl 1 plv 2–3 rlv 2–3, III pl 2 rl 2 plv 2 rlv 2 vt 3, IV pl 2 rl 2 plv 2 rlv 1 vt 3; all tibiae, metatarsi and tarsi with numerous dorsal and ventral tr, increasing in size distally. Male palp with convex RTA, attached broadly to tibia, with bifid tip comprising tooth-like subapical prolateral process and hooked retrolateral apophysis (Figs 6, 13, 14); palpal tarsus teardrop-shaped; tegulum drop-shaped with short, slightly curved distal embolus; subtegulum visible prolaterally (Fig. 13). Palpal spination (Fig. 6): femora: pl 1 do 2 plv 1 rlv 6; patellae pl 2 do 1; tibiae pl 2 do 1 plv 1; tarsi pl 1.

Variation. The variation in female epigynal structure in different populations of *M. semiaurantiaca* across the region, particularly the length of the copulatory ducts (Figs 8–11), is not met with any variation in male palpal structure (embolus shape and length, RTA structure), and thus we consider all of these populations to be conspecific.

Additional material examined: BOTSWANA: Maun, Government camp house no. 36, 19°59'S, 23°25'E, XII.1976, leg. A. Russell-Smith, 1♂ (MRAC 224663); Okavango Delta, Near Shakawe, Lesideng Research Camp, 18°25.822'S, 21°53.771'E, 26–29.XI.2006, leg. C. Haddad (night collecting), 4imm. 3♂ (NCA 2007/955); Okavango Delta, Samochima lagoon, Shakawe Fishing Camp, 18°25.749'S, 21°54.035'E, 29.XI.2006, leg. C. Haddad (under tree bark), 1♀ (NCA 2007/1023). CENTRAL AFRICAN REPUBLIC: Prefecture Sangha-Mbaéré, Réserve Spéciale de Forêt Dense de Dzanga-Sangha, 12.7km 326° NW Bayanga, 420m a.s.l., 03°00'18"N, 16°11'36"E, 10–17.V.2001, leg. B.L. Fisher (beating low vegetation, rainforest), 1♀ (CAS BLF4087). CONGO D.R.: Luki Biosphere Reserve, 05°37'S, 13°05'E, 4.XI.2006, leg. D. de Bakker & J.-P. Michiels (canopy fogging, primary forest), 1♀ (MRAC); Same data, 26.IX.2007, 1♂ (MRAC); Same data, 1.X.2007, 1♂ 1♀ (MRAC); Tshopo, Masako, 00°35'N, 25°11'E, 4.VII.2001, leg. J. Juakaly (old *Hevea* plantation), 1♀ (MRAC 212122). ETHIOPIA: Lake Langano, Ras Hotel, 07°38'N, 38°42'E, 24.XI.1982, leg. A. Russell-Smith (under stones, in very short grass), 1♂ (MRAC 224664). GHANA: Kakum forest, 05°20'N, 01°23'W, 21.XI.2005, leg. R. Jocqué, D. de Bakker & L. Baert (primary forest, fogging), 1♀ (MRAC 218275); Same data, 23.XI.2005, 1♂ (MRAC 218282); Same locality, 15.XI.2005, leg. R. Jocqué, D. de Bakker & L. Baert (secondary forest, fogging), 1♀ (MRAC 218252); Same data, 24.XI.2005, 1♀ (MRAC 218286). KENYA: Western region, Kakamega Forest, Lirhandia hills, 00°13'N, 34°54'E, 13.IV.2000, leg. D. Shilabira Smith (malaise trap), 1♀ (MRAC 220499); Same data, 18.V.2002, 1♂ (MRAC 220517); Same locality, 25.V.2000, leg. D. Shilabira Smith (pitfall trap), 1♂ (MRAC 220491); Kakamega Forest, 00°22'N, 34°50'E, 1600m a.s.l., IX–X.2001, leg. W. Freund (fogging, *Teclea nobilis*, middle-aged secondary forest), 1♂ 1♀ (ZFMK Ar1155). SOUTH AFRICA: KwaZulu-Natal Province, iSimangaliso [Greater St Lucia] Wetlands Park, Gwala Gwala Forest, 28°23.042'S, 32°24.436'E, 21.IV.2006, leg. C. Haddad (leaf litter, coastal forest), 1sa♀ (NCA 2008/4277); Same locality, Hell's Gate Block B, 28°00.0'S, 32°28.8'E, leg. J. Esterhuizen (tsetse fly traps), 1♂ (NCA 2009/3478).

Distribution. Currently known from scattered localities throughout the Afrotropical Region, from South Africa in the south to Ethiopia in the north, and from Kenya in the east to Guinée-Bissau in the west (Fig. 15).

Natural History. This is a rapidly-running nocturnally-active hunting spider that was commonly found on the bark of smooth-barked trees in riparian forest in the Okavango Delta, Botswana. Regularly collected during canopy fogging surveys in forests and savanna habitats in tropical Africa, although not an abundant species.

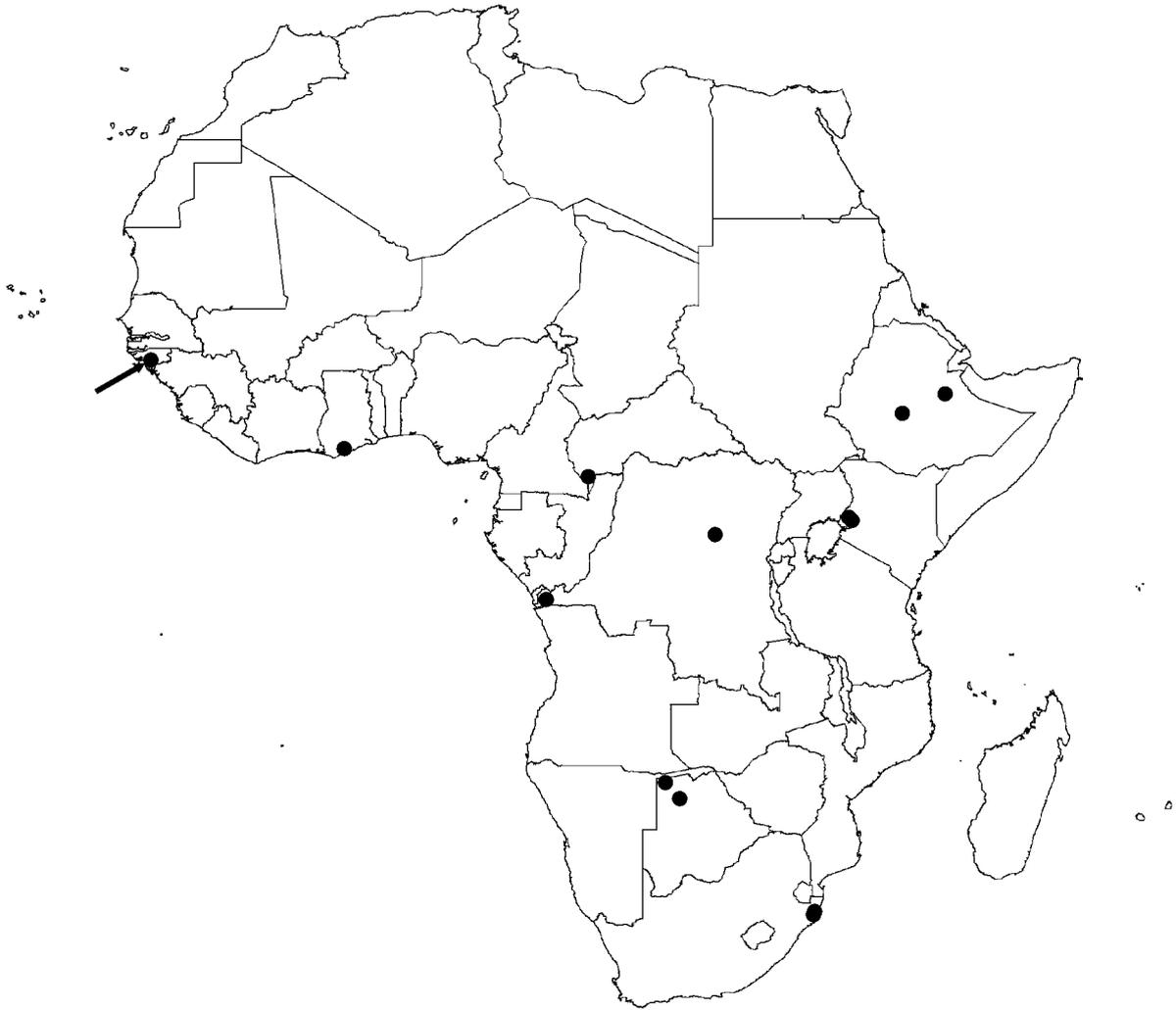


FIGURE 15. Distribution of *Medmassa semiaurantiaca* Simon, 1910 in the Afrotropical Region. Arrow indicates Guinée-Bissau locality.

Misplaced species

Mandaneta sudana (Karsch, 1880)

(Figs 16–19)

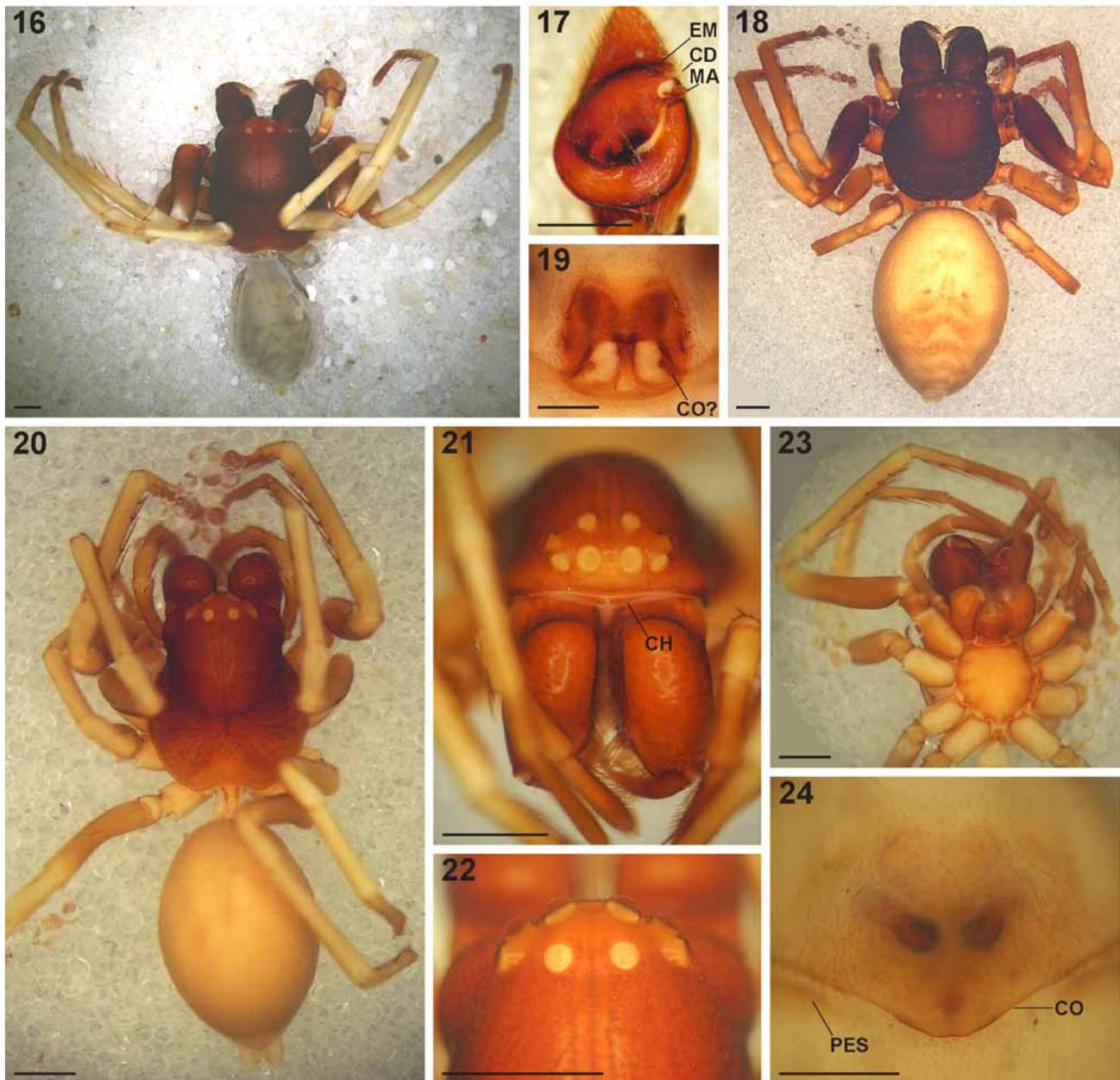
Mandane sudana Karsch, 1880: 377, plate 12, fig. 4 (♂ holotype: GHANA: Adrafoah, leg. Ungar, ZMB 2143 – examined).

Mandaneta sudana Strand, 1932: 140.

Medmassa laurenti Lessert, 1946: 211, figs 10–12 (♂ lectotype and ♀ paralectotype, here designated: CONGO D.R.: Eala, 00°03'N, 18°19'E, leg. H.J. Bredo (MRAC 12419, 12420 – examined; one palp of the male lectotype in MNHG – examined). **syn. nov.**

Remarks. The male lectotype and female paralectotype of *Medmassa laurenti* share the same somatic and genitalic morphology as *Mandaneta sudana* (Karsch, 1880). This species can be recognised by the very broad carapace, as long as wide, distinctive abdominal chevron markings (Figs 16, 18), and heavily spined ventral tibiae and metatarsi of the anterior legs. The male palpal tegulum is oval with a distally curved embolus and conductor, and fine retrolateral median apophysis (Fig. 17), and the female epigyne has distinctive arched

ridges and anteriorly projecting spermathecae (Fig. 19). The specimens are undoubtedly conspecific and their synonymy is here proposed.



FIGURES 16–24. Digital microscope photographs of *Mandaneta sudana* (Karsch, 1880) male (16, 17) and female (18, 19) from Congo D.R. and *Procopius lesserti* (Strand, 1916) female (20–24) from Rwanda. (16, 18, 20) habitus, dorsal view; (17) male palp, ventral view; (19, 24) female epigyne, ventral view; (21) carapace, frontal view; (22) same, dorsal view; (23) cephalothorax and legs, ventral view. Abbreviations: CD—conductor; CH—chilum; CO—copulatory opening; EM—embolus; MA—median apophysis; PES—post-epigastric sclerite. Scale bars: 16, 18, 20–23 = 1.0mm; 17, 19, 24 = 0.5mm.

***Procopius lesserti* (Strand, 1916) comb. nov.**
(Figs 20–24)

Medmassa lesserti Strand, 1916: 96 (♀ holotype: RWANDA: Rugege Wald, 1800m a.s.l., 20.VII.1907, leg. A.F. Herzog, ZMB 28237 – examined; ♀ paratype with same data as holotype, ZMB 28239 – examined; ♀ paratype: CONGO D.R.: Lake Kivu, VIII.1907, leg. S.O. Ufer, ZMB 28238 – examined).

Procopius quaerens Lessert, 1946: 210, fig. 9 (♀ holotype: CONGO D.R.: Lulonga, 00°37'N, 18°23'E, MRAC 12427 – examined). **syn. nov.**

Remarks. The female types of *M. lesserti* are consistent in somatic and genitalic morphology with other members of the Afrotropical genus *Procopius* Thorell, 1899, particularly the raised cephalic region, eye arrangement, strongly spined anterior legs, and simple plate-like epigyne (Figs 20–24). This species can be recognised by the distinctive looping lateral spermathecae and median sclerotised ridge that show through the integument (Fig. 24). Examination of the holotype female of *P. quaerens* Lessert, 1946 from Lulonga, Congo D.R., indicates that this species is a junior synonym of *Procopius lesserti*.

***Pronophaea natalica* Simon, 1897**

(Figs 25–30)

Pronophaea natalica Simon, 1897b: 15 (♀ holotype and ♀ paratype: SOUTH AFRICA: Natal [no specific locality], leg. C. Martin, MNHN 18564 – examined).

Medmassa nitida Lawrence, 1937: 252, fig. 21; Lawrence, 1938: 506, fig. 29 (♂ holotype: SOUTH AFRICA: KwaZulu-Natal Province, Hluhluwe Game Reserve, 28°05'S, 32°03'E, XI.1935, leg. R.F. Lawrence, NMSA 116 – examined). **syn. nov.**

Remarks. Examination of the holotype male of *M. nitida* Lawrence, 1937 and recently collected material of the female indicates that this species shares the same somatic and genitalic morphology as *Pronophaea natalica*, the type species of the hitherto monotypic genus *Pronophaea*. This species can be recognised by the nearly straight posterior eye rows (Figs 25, 28), dome-shaped carapace (Figs 26, 29), the simple epigyne with posterior copulatory openings and spermathecae, and large broad oval depressions that are usually plugged (Fig. 27), and the male palp with wire-like median apophysis, sickle-shaped conductor, short curved distal embolus, and a thick modified seta distally on the cymbium (Fig. 30).

Additional material examined: SOUTH AFRICA: Eastern Cape Province, Kei Mouth, 32°41.280'S, 28°22.484'E, 12.XII.2002, leg. C. Haddad (leaf litter at tree base), 4♂ 2♀ (NCA 2008/575); KwaZulu-Natal Province, Otto's Bluff, 29°29'S, 30°21'E, XII.1936, leg. R.F. Lawrence, 2♂ 2♀ (NMSA 1460).

***Pronophaea proxima* (Lessert, 1923) comb. nov.**

(Figs 31–32)

Medmassa proxima Lessert, 1923: 204, figs 52, 54; Bosselaers & Jocqué, 2002: 250, figs 3I, 4D (misidentification). (♂ holotype: SOUTH AFRICA: KwaZulu-Natal Province, Krantzkloof, leg. H.W. Bell Marley, NMSA 18887 – examined).

Remarks. The holotype male of *Medmassa proxima* is similar to male *P. natalica* in general morphology (Fig. 31), eye arrangement, leg spination, abdominal sclerotisation and general genitalic structure. The fine wire-like median apophysis, sickle-shaped conductor and short distal embolus of the male palp (Fig. 32) are consistent with a placement in *Pronophaea*.

The species identified by Bosselaers & Jocqué (2002) as *M. proxima* is, in fact, a new *Pronophaea* species closely related to *P. proxima*, but with a shorter and curved male palpal tibial apophysis (compare Fig. 32 with fig. 3I in Bosselaers & Jocqué 2002). This same new *Pronophaea* species was recently included in a cladistic analysis including many corinnid genera and was placed as sister to *P. natalica* (Haddad *et al.* 2009), which supports the transfer of *M. proxima* to *Pronophaea*.



FIGURES 25–34. Digital microscope photographs of *Pronophaea natalica* Simon, 1897 female (25–27) and male (28–30), *Pronophaea proxima* (Lessert, 1923) male (31, 32) and *Pronophaea vidua* (Lessert, 1923) female (33, 34), all from South Africa. (25, 28, 31, 33) habitus, dorsal view; (26, 29) habitus, lateral view; (27, 34) epigyne, ventral view, (30, 32) palp, ventral view. Abbreviations: CD—conductor; EM—embolus; EP—epigynal plug; MA—median apophysis; MS—modified distal cymbial seta; PES—post-epigastric sclerite. Scale bars: 25, 26, 28, 29, 31, 33 = 1.0mm; 27, 30, 32, 34 = 0.25mm.

***Pronophaea vidua* (Lessert, 1923) comb. nov.**
(Figs 33–34)

Medmassa vidua Lessert, 1923: 202, fig. 53 (♀ holotype: SOUTH AFRICA: KwaZulu-Natal Province, Krantzklouf, leg. C.B. Cooper, NMSA 18874 – examined).

Remarks. The female holotype of *Medmassa vidua* is consistent in somatic and general genitalic morphology to *P. natalica* (Figs 33, 34). As in female *P. natalica*, a dorsal abdominal scutum is absent and the epigyne is usually plugged (Fig. 34).

Lessert's (1923) description of *M. proxima* and *M. vidua* from the same locality (Krantzkloof) suggests that these species are conspecific. In the description of *M. proxima* he added a note stating "If it were not for the lower cheliceral margin which has five teeth in *M. vidua* and two in *M. proxima*, I would not doubt to consider these two forms as the different sexes of the same species, such is the similarity in their other characteristics" (Lessert 1923: 205). To resolve this matter the senior author examined material of *P. natalica* (both sexes), the male type of *M. proxima*, the female type of *M. vidua*, and material of four new *Pronophaea* species from South Africa and Lesotho for which both sexes are known. In all cases, both males and females had the same number of cheliceral teeth (usually three promarginal and two retromarginal teeth, only three promarginal and five retromarginal in one new species). Thus, *P. proxima* (with two retromarginal teeth) and *P. vidua* (five retromarginal teeth) should be considered separate species, and not synonyms.

Species nomen dubium

Medmassa nyctalops Simon, 1910

Medmassa nyctalops Simon, 1910: 377. (♀ holotype: EQUATORIAL GUINEA: Bioko [Fernando Poo], Musola, leg. L. Fea, MNHN – not examined).

Remarks. This species was described by Simon (1910) from a single female collected at Musola, Bioko (Fernando Poo). The type material could not be traced in MNHN and is presumed lost. The original description is inadequate for its accurate identification. Despite considerable Corinnidae material having recently been collected on Bioko by staff of the CAS, which was examined by the second author, no fresh *Medmassa* specimens could be recognised, and thus the status of this species remains unresolved.

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