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New data on the spider genus *Pionothele* (Araneae: Nemesiidae), with description of a new species from South Africa

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ABSTRACT

The formerly monotypic African genus *Pionothele* Purcell is shown to comprise two members, the type species *P. straminea* Purcell, 1902 and *P. capensis* n. sp., described here. The distribution of both sympatric species is confined to the Cape Peninsula and adjacent territories. The new species differs from *P. straminea* by having a noticeably better developed cheliceral rastellum, more numerous maxillary cuspules (80–90 *vs* 15–20) and triangular (not domed) apical segment of the posterior lateral spinnerets, as well as by the short-cylindrical (not swollen) male palpal tibia and a paddle-like embolus slightly dilated apically (thorn-like in the latter species). To compare diagnostic characters directly, the type species is also redescribed from a conspecific male. The relationships of *Pionothele* are briefly discussed.

KEYWORDS: Araneae, Mygalomorphae, Nemesiidae, Afrotropical, wishbone spiders, new species, taxonomy.

INTRODUCTION

The South African genus *Pionothele* Purcell, 1902 is a poorly known member of the Nemesiidae. It has been known hitherto from only a few specimens belonging to the type species, *P. straminea* (WSC 2015). The holotype male was described by Purcell (1902) from Cederberg Mountains in South Africa. Later, a conspecific female collected together with a single male was described by Tucker (1917) from St Helena Bay, along the coast north-northwest of Cape Town. The genus has since been restudied only once, in the course of a general taxonomic revision of the Mygalomorphae (Raven 1985). The present treatment is based on examination of several nemesiid specimens collected on the Cape Peninsula, in the coastal zone south-southwest of Cape Town. This material contained two sympatric species of *Pionothele*, viz. *P. straminea* and a new member of the genus, described below.

MATERIAL AND METHODS

All the specimens of *Pionothele* treated during the present study were borrowed from the spider collection of the Royal Museum for Central Africa, Tervuren, Belgium (MRAC).

Photographs were taken using a Zeiss Discovery V20 stereomicroscope with a Canon PowerShot G9 camera (structures), and a Canon EOS-500D camera with Canon EF-100mm f2.8 USM macro lens (totals), and prepared using the Helicon

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Focus 6.3.2 Pro (http://www.heliconsoft.com) and CombineZP (http://hadleyweb.pwp.blueyonder.co.uk) image stacking software. Illustration of dissected vulva placed into a small Petri dish filled with a 85% lactic acid was made after maceration of the object in 20% potassium hydroxide aqueous solution and exposure for a few minutes in an ethanol/water solution of Chlorazol Black. A background map was obtained from the public Internet source http://www.maps-for-free.com.

Measurements were taken through the above-mentioned microscope to an accuracy of 0.01 mm. All measurements are given in millimetres. Total body length, as accepted for mygalomorph spiders (see Raven & Schwendinger 1995), includes chelicerae but not spinnerets. Diameter of the anterior median eyes (AME) is given usually as a diameter of a sharply edged AME pupil. When the eye dome is mounded well and also could be measured, the corresponding data follow then being placed in brackets. Any measurements counting this parameter also are given in brackets. The length of the sternum was measured along the straight line between the posterior tip of the sternum and the hindmost part of the labium. Lengths of leg and palp segments were measured on the dorsal side, and lengths of spinneret segments on the ventral side, from the midpoint of the anterior margin to the midpoint of the posterior margin.

The following abbreviations are used in the text: ALE – anterior lateral eyes, AME – anterior median eyes, b – bristle, d – dorsal, PLE – posterior lateral eyes, PLS – posterior lateral spinnerets, PME – median lateral eyes, PMS – posterior median spinnerets, p – prolateral, pd – prodorsal, r – retrolateral, rd – retrodorsal, v – ventral.

TAXONOMY

Family Nemesiidae Simon, 1889

Genus *Pionothele* Purcell, 1902

Pionothele Purcell, 1902: 381; Simon 1903*a*: 907; Raven 1985: 93; Dippenaar-Schoeman 2002: 97.

Type species: *Pionothele straminea* Purcell, 1902, by monotypy.

Diagnosis: *Pionothele* can be distinguished from most genera of the Nemesiidae in having a very small unpaired claw on tarsi I–IV. Within the family, only some members and their groups possess those claws similarly reduced or even lost – many Diplothelopsinae, *Spiroctenus* Simon, 1889, *Mexentypesa* Raven, 1987, *Swolnpes* Main & Framenau, 2009, and some *Nemesia* Audouin, 1826. All these taxa, however, differ from *Pionothele* in either possessing a keeled embolus (diplothelopsine genera), claw tufts (*Mexentypesa*), a swollen and deeply modified male metatarsus and tarsus I (*Swolnpes*), a uniseriate S-shaped dentition of the paired tarsal claws in males (*Spiroctenus*), or a recurved thoracic fovea and the presence of a ventral process on male tibia I (*Nemesia*) (see Raven 1985, 1987; Goloboff 1995; Main & Framenau 2009). The combination of biserially-dentate paired tarsal claws in males, a reduced unpaired tarsal claw and a short straight thoracic fovea in both sexes, an almost unmodified male tibia I, the bulb lacking

embolic keels, and a very short (domed or triangular) apical segment of PLS, is not known to occur in any nemesiid taxon other than *Pionothele*.

Description: Small to medium-sized nemesiids with carapace 3–6 mm long. Carapace oval to broad-oval, hirsute, with caput slightly to noticeably elevated over thoracic part. Thoracic fovea short, transverse, more or less straight. Eye tubercle carrying eight eyes, relatively low. Clypeus narrow. Chelicerae with weak rastellum composed of thickened setae. Male intercheliceral tumescence not evident. Labium short, without cuspules. Sternum weakly domed, cordate. All six sternal sigilla small, submarginal or set distantly from sternal margin. Maxillae broad rectangular. Few to numerous maxillary cuspules. Serrula absent. Male palpal tibia relatively short, with few to numerous spines. Cymbium relatively long and aspinose. Palpal bulb pyriform. Embolus long and tapering. Leg formula 4123 or 4312. Male tibia I weakly thickened, with one sessile retroventral megaspine. Male metatarsus I nearly straight. Metatarsal preening combs absent. Posterior leg tarsi with or without spines. Scopula scarce on tarsi I–II, divided to absent on tarsi III–IV. Paired tarsal claws biserially dentate, similarly in males and females, unpaired claw small and vestigial. Spermathecae undivided. Two pairs of spinnerets: PMS relatively large, PLS short with apical segment domed to triangle.

Composition: *P. straminea* Purcell, 1902 and *P. capensis* n. sp.

Distribution: South-westernmost South Africa (Western Cape Province).

Pionothele straminea Purcell, 1902

(Figs 1–8)

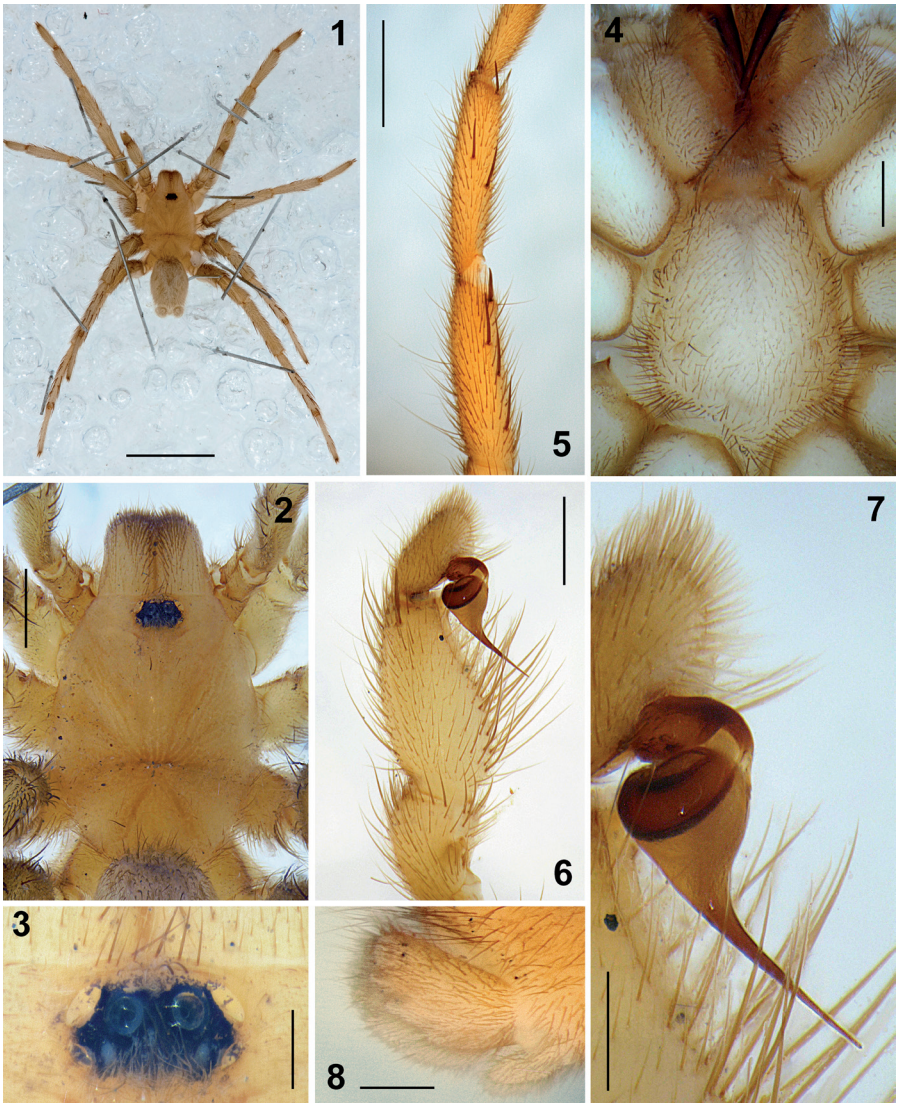
Pionothele straminea Purcell, 1902: 381 (Holotype ♂ from Rondegat, Cederberg Mts; SAMC, according to Raven (1985) bleached while kept; not examined); Tucker 1917: 117 (♀); Raven 1985: 93, figs 73–78 (♂).

Diagnosis: The species differs from *P. capensis* n. sp. in a considerably paler coloration of the body and legs, a lesser development of the cheliceral rastellum, a smaller number of the maxillary cuspules (<20 *vs* >80), and stouter PLS with domed (*vs* triangular) apical segment. Additionally, males of *P. straminea* differ from those of *P. capensis* n. sp. in a swollen (*vs* subcylindrical) palpal tibia and a gradually procurved and tapering embolus (Figs 6, 7).

Description: Male (Fig. 1). Body length 8.30.

Color in alcohol: carapace and chelicerae light sandy yellow; eye tubercle black; ventral part of prosoma, palps, legs and spinnerets uniformly pale greyish yellow; abdomen light yellowish grey, dorsally with only slightly darker and almost indistinct pattern consisting of few pairs of lateral diffuse chevrons.

Prosoma as shown in Figs 2, 4. Carapace 3.46 long, 2.50 wide. Eye tubercle as in Fig 3. Eye diameters and interspaces: AME 0.12(0.16), ALE 0.19, PLE 0.14, PME 0.10, AME–AME 0.10(0.06), ALE–AME 0.06(0.04), ALE–PLE 0.05, PLE–PME 0.02, PME–PME 0.25. Chelicerae: furrow with 5 small promarginal teeth



Figs 1–8. *Pionothele straminea*, male (MRAC 173693/A): 1 – spider in dorsal view; 2 – prosoma dorsally; 3 – eye tubercle dorsally; 4 – prosoma ventrally; 5 – tibia and metatarsus I retrolaterally; 6 – distal segments of pedipalp, showing bulb and embolus, retrolateraly; 7 – bulb and embolus close up, retrolateraly; 8 – spinnerets laterally. Scale bars for Fig. 1 – 5.0 mm, for Figs 2 and 5 – 1.0 mm, for Figs 4, 6 and 8 – 0.5 mm, and for Figs 3 and 7 – 0.25 mm.

and without mesobasal denticles; very weak rastellum consists of 7–10 slightly thickened bristles in front of cheliceral fang. Labium 0.26 long, 0.62 wide. Sternum 2.01 long, 1.49 wide. All three pairs of small sternal sigilla set distantly from sternal margin. Maxillae: with 10–12 tiny cuspules confined to inner maxillary heel.

Palp and leg structures. Tibia and metatarsus I unmodified (Fig. 5). Tarsus I short and slightly swollen, tarsi III and IV elongate and somewhat curved altough not pseudosegmented. Spines (tarsi I–III aspinose). Palp: femur d1–1–1, pd1, rd1; patella p0–1; tibia p1–0–1, p0–1–1, r0–1–1. Leg I: femur d1–1–1–1–1, pd1–1–1, rd1–1–1; patella p1–1; tibia p0–1–0, v2(1)–1–1–M; metatarsus p0–1–0, v0–2(1)–2. Leg II: femur d1–1–1–1–1, pd1–1–1, rd1–1–1; patella p1–1; tibia p0–1–1, r0–1–0, v0–2–2; metatarsus p0–1–0, v2–0–3(2). Leg III: femur d1–1–1–1–b, pd1–1–1, rd1(0)–1–1; patella p1–1, r1; tibia d0–1, p1–1, r1–1, v2–2–2; metatarsus d1–0–1–0, p1–1–1–1, r1–1–1, v0–2–3; tarsus p0–1–0, r0–1–0. Leg IV: femur d1–1–1–1–1, pd1–1–1, rd0–1–1; patella r1; tibia p0–1–1(0)–1, r0–1–1; v2(1)–2–2; metatarsus pd1(0)–1–1–1(0)–1–1, pd0–1–1–1, r0–1–1–1–1, v0–2–1–3; tarsus p0–1–1, r0–1–0. Scopula: composed of few apical scopuliform hairs on metatarsi I–II; entire and scarce on tarsus I; very scarce and medially mixed with setae on tarsus II; elsewhere absent. Trichobothria: 2 rows of 9–10 on tibiae, 10–12 on metatarsi, 10–12 on tarsi, 7 on cymbium. Paired tarsal claws with 8–10 teeth on inner margin and with 10–12 teeth on outer margin. Unpaired tarsal claw very small and sharply curved. Leg measurements (palp–legs I–II–III–IV):

Femur	1.47	2.92	2.68	2.53	3.19
Patella	0.85	1.56	1.46	1.22	1.70
Tibia	1.14	1.95	1.88	1.61	3.04
Metatarsus	–	2.04	2.04	2.34	3.23
Tarsus	0.66	1.23	1.39	1.92	2.38
Total	4.12	9.70	9.45	9.62	13.54

Copulative organs. Palpal tibia swollen (Fig. 6). Bulb with long, thin, tapered and apically acute embolus (Figs 6, 7).

Spinnerets (Fig. 8). PMS: length 0.48; diameter 0.19. PLS: maximum diameter 0.48; length of basal, medial and apical segments 0.71, 0.20, 0.11; total length 1.02; apical segment domed.

Female was described in detail by Tucker (1917). Although being noted by this author as poorly preserved, in many aspects it conforms to the holotype male. A shape of the spermathecae for this species remains unknown.

Material examined: 1♂ (MRAC 173693/A) **South Africa:** Western Cape Province, Cape Peninsula, dunes north of Muizenberg, 32°17'S 19°10'E, pitfall traps, 21.iv–5.v.1991, R. Legg.

Distribution: This species is currently known to inhabit a relatively small subcoastal area from St Helena Bay and Cederberg Mts in the north to the Cape Peninsula in the south (Fig. 21).

Pionothele capensis n. sp.

(Figs 9–20)

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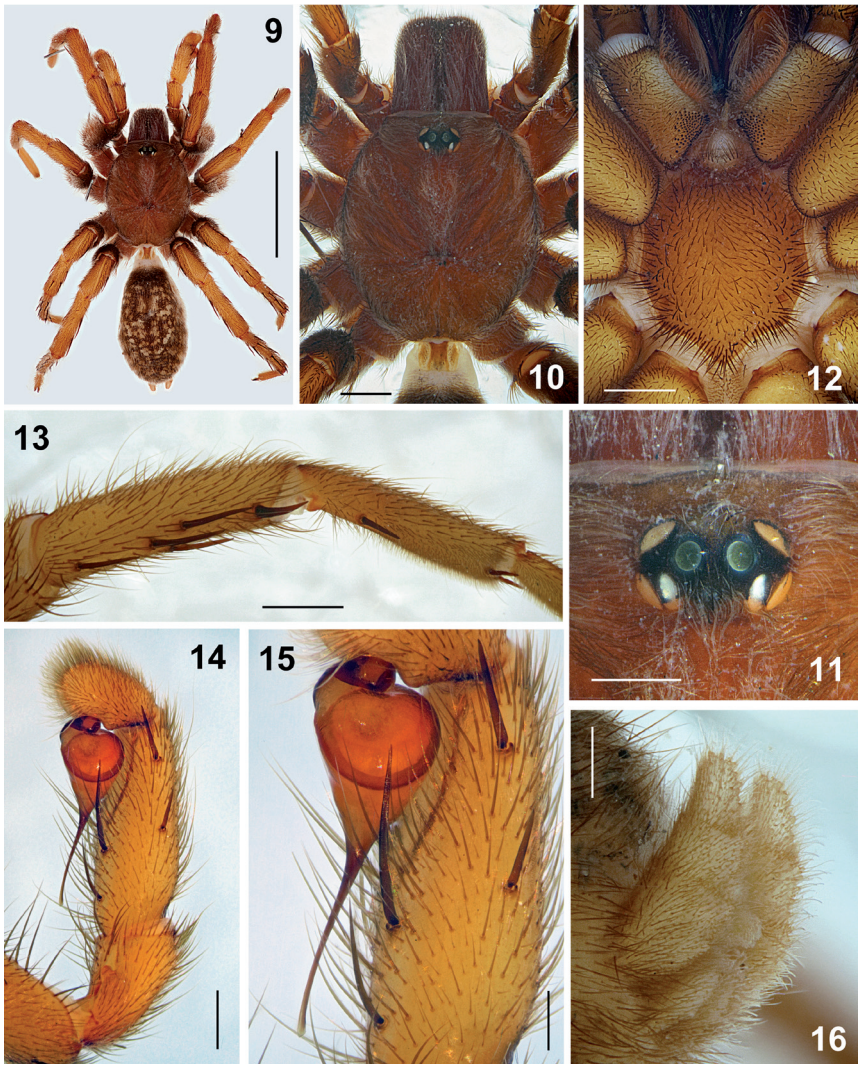


Figs 9–16. *Pionothele capensis* n. sp., holotype male (MRAC 173693/B): 9 – spider in dorsal view; 10 – prosoma dorsally; 11 – eye tubercle dorsally; 12 – prosoma ventrally; 13 – tibia and metatarsus I retrolaterally; 14 – distal segments of pedipalp, showing bulb and embolus, retrolateraly; 15 – bulb and embolus close up, retrolateraly; 16 – spinnerets laterally. Scale bars for Fig. 9 – 5.0 mm, for Figs 10, 12 and 13 – 1.0 mm, for Figs 11, 14 and 16 – 0.5 mm, and for Fig. 15 – 0.25 mm.

Diagnosis: The species differs from *P. straminea* in having a more intensely colored body and legs (cf. Figs 1 and 9), a better developed cheliceral rastellum, a larger number of maxillary cuspules (>80 *vs* <20) and longer PLS with triangular (*vs* domed) apical segment. Additionally, males of *P. capensis* n. sp. differ from those of *P. straminea* in a subcylindrical (*vs* swollen) palpal tibia and a recurved embolus, slightly dilated apically (Figs 14, 15).

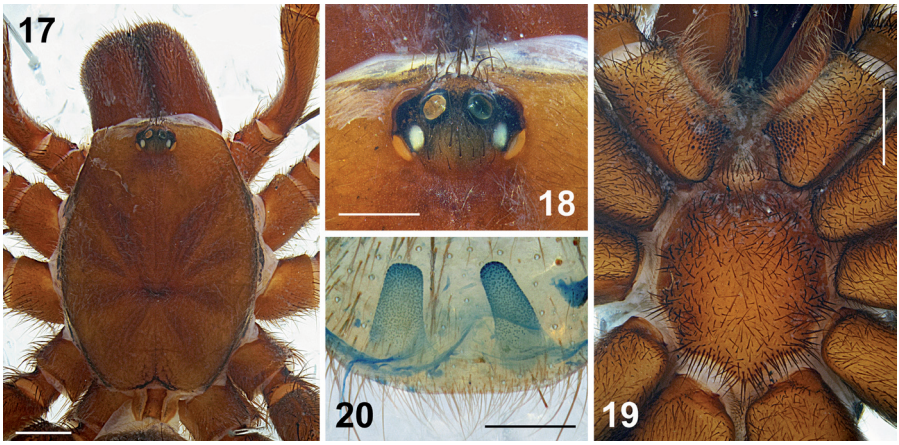
Description: Male (holotype MRAC 173693/B). Habitus as in Fig. 9. Body length 13.65.

Color in alcohol: carapace medium dull orange-brown, chelicerae dark cherry-brown; ventral part of prosoma, palps and legs medium yellowish orange (sternum and labium more intensely coloured), abdomen dorsally dark brown with spotted light brown pattern; ventrally, include light yellow spinnerets, but genital area and book-lungs more intensely colored (medium to dark yellow).

Prosoma as shown in Figs. 10, 12. Carapace 4.86 long, 4.19 wide. Eye tubercle as shown in Fig. 11. Eye diameters and interspaces: AME 0.18(0.26), ALE 0.30, PLE 0.26, PME 0.24, AME–AME 0.14(0.08), ALE–AME 0.11(0.08), ALE–PLE 0.11, PLE–PME 0.04, PME–PME 0.41. Chelicerae: furrow with 6 promarginal teeth and 1 large mesobasal denticle; rastellum consists of 20–25 stout bristles. Labium 0.38 long, 0.86 wide. Sternum: length 2.55, width 2.32. All three pairs of sternal sigilla small submarginal. Maxillae: with about 80 cuspules arranged in wide triangle area.

Palp and leg structures. Tibia and metatarsus I unmodified (Fig. 13), tarsi I–IV aspinose and without modifications. Spines. Palp: femur d1–1–1, pd1, rd1; patella p1–1; tibia p0–1–1, r0–1–1, v1–1–1. Leg I: femur d1–1–1–1, pd1–1–1, rd1–1–1; patella p1–1; tibia p0–1–0, r0–1–0; v1–2–1–M; metatarsus p0–1–0, v2–0–2. Leg II: femur d1–1–1–1, pd1–1–1, rd1–1–1; patella p1–1; tibia p1–1, v0–2–2; metatarsus p0–1–0, v2–0–2. Leg III: femur d1–b–b–b, pd1–1–1, rd1–1–1; patella p1–1–1, r1; tibia d0–1, p1–1, r1–1, v2–2–3; metatarsus pd1–1–1, p1–1–1, r1–1–1, v2–2–3. Leg IV: femur d1–b–b–b–b, pd1–1–1, rd0–1–1; patella r1; tibia p1–1, r1–1–1; v2–2–3; metatarsus pd1–1–1, p1–1–1, r1–0–1, v2–2–1–3. Scopula: entire on metatarsi I–II and tarsi I–II; mixed with setae on tarsi III–IV. Trichobothria: 2 rows of 9–10 on tibiae, 10–14 on metatarsi, 10–12 on tarsi, 7–8 on cymbium. Paired tarsal claws with 8–9 teeth on inner margin and with 9–11 teeth on outer margin. Unpaired tarsal claw very small and sharply curved. Leg measurements (palp–legs I–II–III–IV):

Femur	2.21	4.18	3.79	3.31	4.16
Patella	1.47	2.38	1.94	1.90	2.29
Tibia	1.96	2.84	2.56	2.19	3.37
Metatarsus	–	2.84	2.86	3.24	4.26
Tarsus	1.04	1.93	1.84	1.77	2.24
Total	6.68	14.17	12.99	12.41	16.32



Figs 17–20. *Pionothele capensis* n. sp., paratype female (MRAC 173745): 17 – prosoma dorsally; 18 – eye tubercle dorsally; 19 – prosoma ventrally; 20 – spermathecae dorsally (inside view). Scale bars for Figs 17 and 19 – 1.0 mm, and for Figs 18 and 20 – 0.5 mm.

Copulative organs. Palpal tibia shortly subcylindrical (Fig. 14). Bulb with long, thin and tapered embolus, slightly dilated apically as in Figs 14 and 15.

Spinnerets (Fig. 16). PMS: length 0.63; diameter 0.26. PLS: maximum diameter 0.53; length of basal, medial and apical segments 0.72, 0.33, 0.44; total length 1.49; apical segment triangle.

Female (paratype MRAC 173745). Body length 16.85. Color in alcohol as in ♂.

Prosoma as in Figs 17 and 19. Carapace 5.69 long, 4.32 wide. Eye tubercle as shown in Fig. 18. Eye diameters and interspaces: AME 0.17(0.23), ALE 0.26, PLE 0.23, PME: 0.16, AME–AME 0.14(0.08), ALE–AME 0.14(0.11), ALE–PLE 0.12, PLE–PME 0.03, PME–PME 0.44. Chelicerae: furrow with 6 promarginal teeth and 1 large mesobasal denticle; rastellum consists of approximately 30 stout bristles. Labium 0.39 long, 0.92 wide. Sternum: length 2.58, width 2.39. All three pairs of sternal sigilla small submarginal. Maxillae: with 80–90 cuspules arranged in wide triangular area.

Palp and leg structures. Spines: Palp: femur d1–b–b, pd1, rd1; patella p1; tibia v1–2–3, tarsus 2–0. Leg I: femur d1–b–b–b, pd0–0–1; patella p1; tibia p1–1, v0–2–2; metatarsus v2–0–2. Leg II: femur d1–b–b–b, pd1–1–1; patella p1–1; tibia p1–1, v0–2–2; metatarsus p0–1–0, v2–0–2. Leg III: femur d1–b–b–b, pd0–0–1, rd0–0–1; patella p1–1, r1; tibia d2, p1–1, r1–1, v2–2–3; metatarsus pd1–1–1, p1–1–1, r1–1–1, v2–2–3. Leg IV: femur d1–b–b–b–b, pd0–0–1, rd0–0–1; patella r1; tibia r1–1; v2–2–3; metatarsus d2–1–2, p1–1–1, r2(1)–1–1, v2–2–3. Scopula: entire on metatarsi I–II, entire on tarsi I–II and palpal tarsus; scarce and mixed with setae on tarsi III–IV. Trichobothria: 2 rows of 9–11 on tibiae, 12–15 on metatarsi I–II, 16–19 on metatarsi III–IV, 11–15 on tarsi I–IV, 10–11 on palpal tarsus. Paired tarsal claws with 6–8 teeth on inner margin and with 8–10 teeth on outer

margin. Unpaired tarsal claw very small and steeply curved. Palpal claw with 4 promarginal teeth. Leg measurements (palp–legs I–II–III–IV):

Femur	2.79	3.79	3.56	3.26	3.88
Patella	1.48	2.29	1.90	1.63	2.28
Tibia	1.65	2.40	2.09	1.68	2.95
Metatarsus	–	2.35	2.26	2.55	3.66
Tarsus	2.04	1.84	1.79	1.70	2.17
Total	7.96	12.67	11.60	10.82	14.94

Copulative organs. Spermathecae wide, flattened and undivided, as in Fig. 20.

Spinnerets. PMS: length 0.71; diameter 0.27. PLS: maximum diameter 0.67; length of basal, medial and apical segments 0.96, 0.39, 0.48; total length 1.83; apical segment triangle.

Material examined: Holotype ♂ (MRAC 173693/B) **South Africa:** Western Cape Province, Cape Peninsula, dunes north of Muizenberg, 34°06'S 18°27'E, 21.iv–5.v.1991, R. Legg (MRAC 173693). Paratypes (5♂, 2♀): same data as in the holotype, 5–19.v.1991, 1♂ (MRAC 173704); 2–16.v.1991, 1♂, 2♀ (MRAC 173745); 16–30.vi.1991, 1♂ (MRAC 173762); 11–29.viii.1991, 1♂ (MRAC 173814); 29.ix–10.x.1991, 1♂ (MRAC 173839).

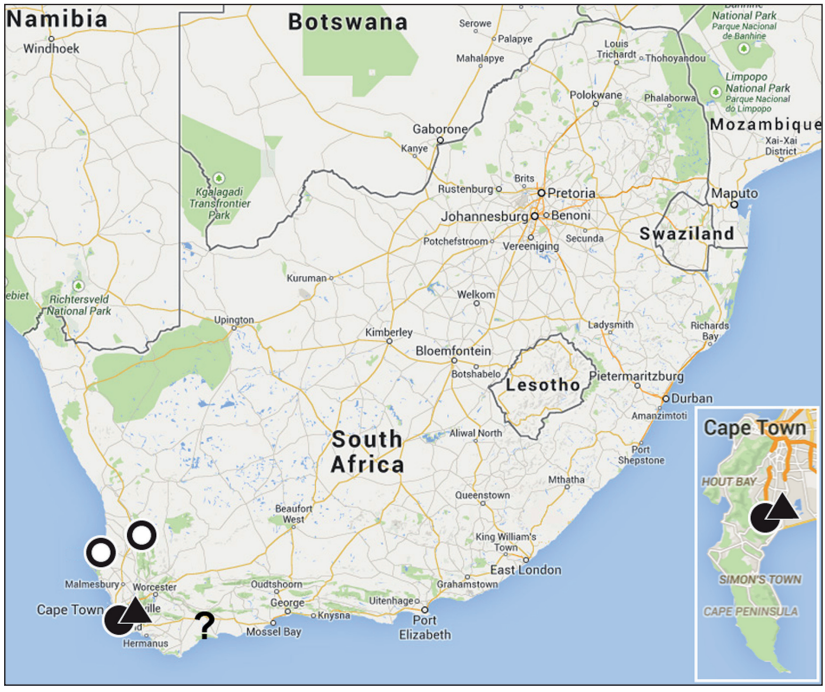


Fig. 21. Distribution of *Pionothele* species: circles – *P. straminea* (empty – previous records, solid – current record), triangle – *P. capensis* n. sp., question mark – unidentified congener (Haddad & Dippenaar-Schoeman 2009).

Distribution: The new species is known only from the type locality (Fig. 21). It may also include specimens (not identified to the species level) recorded from the De Hoop Natural Reserve by Haddad and Dippenaar-Schoeman (2009).

Etymology: The species is named after the Cape Peninsula, from where it is currently known.

DISCUSSION

The genus *Pionothele* was originally described by Purcell (1902) as a member of the family Ctenizidae *sensu lato*. Simon (1903) specified the position of the genus, placing it within his ctenizid tribe Nemeseae Simon, 1889. Raven (1985) in his monograph, among other taxonomic and nomenclatural actions, elevated this tribe to its current family rank, the Nemesiidae. Within this family, he grouped several Paleotropical genera—*Atmetochilus* Simon, 1887, *Damarchus* Thorell, 1891 and *Spiroctenus*—and placed them in the Bemmerinae Simon, 1903 (another Simon's tribe, elevated to the subfamily rank). Raven concomitantly included *Pionothele* in this group, because *P. straminea* was found to possess the sternal sigilla located distantly from the sternal edge (as in the bemmerine genera). However, this genus does not share another important bemmerine character, paired tarsal claws with uniseriate S-shaped dentition (usually biserially toothed in male nemesiids) in males. The current taxonomic position of *Pionothele* as probably a bemmerine genus is therefore still questionable.

Since females of both *Pionothele* and *Spiroctenus* possess the same biserially-dentate paired tarsal claws and non-marginal sternal sigilla, they have no distinctive characters of generic significance that could separate them in the absence of their conspecific males. This problem was noted by Raven (1985), who indicated that some species described only from females under *Spiroctenus* may actually belong to *Pionothele*. Theoretically, there is a possibility that *P. capensis* n. sp. was described from a female and placed within *Spiroctenus*.

To test this, comparable data from descriptions based on exclusively female characters were assembled and listed below. To reiterate, females of *P. capensis* n. sp. have the following characters: the coloration is mostly medium yellowish brown; the carapace is covered with hairs (hirsute); the chelicerae possess 6 prolateral teeth and 1 (if present) mesobasal denticle; the maxillae bear 80–100 cuspules; the labium is always without cuspules; the sternal sigilla are either submarginal or certainly distant from the sternal margin, but they have never been observed occupying a central part of the sternum; paired tarsal claws have 6–8 teeth on the inner margin and 8–10 teeth on the outer margin.

A brief analysis of the same structures in *Spiroctenus* spp., described only from females, is provided below:

S. broomi Tucker, 1917 – carapace and legs dark brown, upper abdomen dull purplish black; labium with 4–5, maxillae with *ca* 40 cuspules (Tucker 1917: 101).

S. flavopunctatus Purcell, 1903 – labium with 28–32, maxillae with 38–52 cuspules; paired tarsal claws with 2–4 teeth on inner margin and with 2–3 teeth on outer margin (Purcell 1903: 98).

S. fossorius (Pocock, 1900) – labium and maxillae with approximately 20 cuspules each; paired tarsal claws with 3–4 teeth on inner and outer margins; posterior sternal sigilla subcentral (Pocock 1900: 320; Raven 1985: fig. 71).

S. fuligineus (Pocock, 1902) – body and legs very dark, uniformly blackish grey (Pocock 1902: 15).

S. lignicolus Lawrence, 1937 – cheliceral furrow with 12 promarginal teeth and 7–8 denticles; labium with 16, maxillae with about 50 cuspules; paired tarsal claws IV with 4–5 teeth on inner margin and with 0–1 teeth on outer margin (Lawrence 1937: 216).

S. pardalina (Simon, 1903) – carapace almost glabrous, eye group twice as wide as long, labium with 4 cuspules (Simon 1903*b*: 42).

S. pectiniger (Simon, 1903) – carapace almost glabrous, AME and ALE are subequal in size, labium with 4–5 cuspules (Simon 1903*b*: 42–43).

S. pilosus Tucker, 1917 – cheliceral furrow with 9 promarginal teeth and 9–10 denticles; labium with few spine-like hairs, maxillae with *ca* 30 cuspules (Tucker 1917: 103).

S. punctatus Hewitt, 1916 – cheliceral furrow with 11–12 promarginal teeth and 6 denticles; labium with 31 cuspules (Hewitt 1916: 222).

S. schreineri Purcell, 1903 – labium with 5–8, maxillae with 16–30 cuspules (Purcell 1903: 96).

It should be noted that females of all the listed species, with the possible exception of *S. fuligineus*, have cuspules on the labium. For *S. fuligineus* the state is uncertain, since this character is not mentioned in the original description, but this species, like *S. broomi*, possesses very dark coloration. Additionally, some of the considered species have fewer maxillary cuspules (*S. broomi*, *S. schreineri*), a stronger dentition of the cheliceral furrow (*S. pilosus*), or an almost glabrous carapace (*S. pardalina*, *S. pectiniger*), or can be characterised by a combination of several features dissimilar to those of *Pionothele* (*S. flavopunctatus*, *S. fossorius*, *S. lignicolus*, *S. pilosus*). Hence, none of the *Spiroctenus* species listed above can be considered as a potential senior synonym of *P. capensis* n. sp.

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