

The Peacock Spiders (Araneae: Salticidae: *Maratus*) of the Queensland Museum, including six new species

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Abstract

Six new species of the peacock spider genus *Maratus* Karsch, 1878 are described from Australia: *M. eliasi* sp. nov., *M. julianneae* sp. nov., *M. licunxini* sp. nov., *M. michaelorum* sp. nov. and *M. ottoi* sp. nov. from Queensland, and *M. kiwirrkurra* sp. nov. from Western Australia. Five species groups are further documented within the genus and new records, detailed SEM and automontage images are provided for six previously described species: *M. anomalus* Karsch, 1878, *M. chrysomelas* (Simon, 1909), *M. digitatus* Otto & Hill, 2012, *M. pavonis* (Dunn, 1947), *M. speciosus* (O.P.-Cambridge, 1874) and *M. volans* (O.P.-Cambridge, 1874).

Key words: Australia, Bush Blitz, Carnarvon Station, Kiwirrkurra indigenous protected area, taxonomy

Introduction

The endemic Australian peacock spider genus *Maratus* contains 70 species (including these six new species). Sixteen of these *Maratus* species need to be revised to resolve their correct generic placement (Otto & Hill 2016b). Males of *Maratus* can be recognized by a dorsal abdominal plate with a dense cover of setae (Otto & Hill 2012a), with small (sometimes minimal) or large side wings, which can be folded around the sides of the opisthosoma, and by the behaviour of males of most species, which extend their third pair of legs and elevate their opisthosoma to display to females (Otto & Hill 2012a). Outside Australia, only one *Maratus* species is known: *M. furvus* (Song & Chai, 1992) recorded from the Wuling Mountains area in southwestern China. This *Maratus* species was originally described in the genus *Lycidas* and may not be *Maratus*.

This paper is dedicated to people who have documented *Maratus* in the last decade, utilising a diverse range of skills and incredible patience watching and photographing courtship behaviour. It is through their work that the world has come to learn of the amazing peacock spider fauna of Australia.

Material and methods

The spiders examined for this study included unidentified *Maratus* specimens from the collection of the Queensland Museum. The study also included a new species from Western Australia. This will be lodged in the Western Australian Museum, Perth (WAM). The remaining specimens will remain in the Queensland Museum's collection (QM).

Three of the six new species were collected on Bush Blitz expeditions, firstly Carnarvon Station Queensland (conducted by the Queensland Museum in October 2014) and subsequently Kiwirrkurra indigenous protected area Western Australia (conducted by the Western Australian Museum in September 2015). Specimens of these new Bush Blitz species were collected with pitfall traps, shallow plastic dishes with ethylene glycol, and by hand. Latitudes, longitudes and elevation were determined by GPS.

Specimens were examined using a Leica MZ16A microscope. Images were produced using a Leica DFC 500

with AutoMontage Pro Version 5.2. The left male palp of each species was imaged with a Hitachi TM_1000 table top SEM.

All measurements are in millimetres. Abbreviations used in the text are as follows: ALE anterior lateral eye; AME anterior median eye; CO copulatory opening; E embolus; ED embolic disc; K retrobasal knee-shaped structure on embolic disc; LP lateral process of embolic disc; LTS lamella on tegular shoulder; ol/ow opisthosoma length/opisthosoma width; pl/pw prosoma length/prosoma width; PLE posterior lateral eye; PME posterior median eye; RSDL retrolateral sperm duct loop; RTA retrolateral tibial apophysis; sl/sw sternum length/sternum width; TL tegular lobe.

Scale bars for habitus images are 1.0 mm, for palps and epigynes 0.1 mm.

Taxonomy

Family SALTICIDAE Blackwall, 1841

Tribe EUOPHRYINI Simon, 1901

Genus *Maratus* Karsch, 1878

Maratus Karsch, 1878: 27. Type species designated by monotypy: *Maratus amabilis* Karsch, 1878, *in* Bonnet, 1957: 2713.

The endemic Australian Jumping spider genus *Maratus* belongs to the *Saitis* clade together with the salticid genera *Saitis*, *Jotus*, *Prostheclina*, *Hypoblemum*, ‘*Lycidas*’, *Maileus*, *Barraina* and possibly *Margaromma* (Zhang & Maddison, 2015). Zhang and Maddison (2015) suggested merging the genera of this clade into *Saitis*. To explore this notion further it may be worthwhile to take a closer look into the ultrastructure of the embolic disc and the embolus which appear to have a lot of hidden characters not visible with a normal microscope (Figs 1, 7, 11, 15); however this paper does not aim to explore the monophyly of these genera, rather it is to describe a number of new species of the endemic Australian Peacock spider genus *Maratus* found in the Queensland Museum Collection, obtained on Bush Blitz expeditions and elsewhere.

Diagnosis. Members of the genus *Maratus* share with other genera of the *Saitis* clade a relatively large male palpal bulb with a retrolateral sperm duct loop (RSDL), a large retrobasal tegular lobe (TL), a finger-like retrolateral tibial apophysis (RTA), an anticlockwise coiled embolus (E) and a lamella on the tegular shoulder (LTS) of the male palp (Zhang & Maddison, 2015).

Maratus can be separated from other *Saitis* clade genera by males having an opisthosomal plate (often with lateral wings, flaps or a wide lateral fringe) covered with a dense layer of colourful iridescent setae (Otto & Hill, 2012a), elevated to display to the female during courtship. Lateral ornamentation in the species here can be a minimal edge (Figs 8E) as in *M. anomalus*, *M. julianae*; a larger flap which nearly always remains folded around the opisthosoma (Fig. 12B) as in *M. eliasi*; or a big flap running along the whole side of the opisthosoma (Fig. 16E), as in *M. pavonis* var. *nornalup*, *M. volans* and *M. speciosus*. Some *Maratus* species have inflatable spinnerets which are used in the courtship dance [described in detail in Otto & Hill, 2012b] and shown here in (Figs 12A, 13A) in the cases of *M. eliasi* and *M. ottoi*.

The *Maratus* species groups

Species groups suggested by Waldock (2013) and Otto & Hill (2014b, 2015) take into account differentiation of abdominal patterns and lateral ornamentation, inflatable spinnerets, and behaviour, especially male courtship.

In this paper the male embolic discs of all examined species, studied by Scanning Electron Microscopy (SEM), revealed microstructures of the embolic disc and the adjacent lateral process of the embolic disc, suggesting the following species groups.

The *Maratus chrysomelas* group

(FIGURES 1A, B, D, E, G, H)

Otto & Hill (2016a) described the *Maratus chrysomelas* group (*M. chrysomelas* and *M. nigromaculatus*) as having a wide fringe at the sides of the opisthosoma and similar courtship displays. We find also this group contains species which have an embolic disc with a wide rim covered with frontal ridges and a flat retrolateral groove (Fig. 1G); the embolus opening is at the tip of the embolus (Figs 1D, E); and there is no lateral process of the embolic disc (Fig. 1G).

Species: *Maratus chrysomelas* from Western Australia to New South Wales, Victoria and Queensland, *Maratus nigromaculatus* (Keyserling, 1883) plus the new species *Maratus kiwirrkurra* from the Gibson Desert.

Maratus chrysomelas (Simon, 1909)

(FIGURES 1B, E, H)

Habrocestum chrysomelas Simon, 1909: 201.

Lycidas chrysomelas: Žabka, 1987: 457, figs 19–22; Waldock, 2002: 228, figs 1–10.

Material examined. MALE (QM-S96329) from Australia, central Queensland, Emerald, 23°31'S, 148°09'E, L. Sanders, 26 Sep. 2015, hand coll.

Distribution. Previously known from Western Australia to New South Wales and Victoria (Otto & Hill, 2016a), now also recorded from central Queensland.

Maratus kiwirrkurra Baehr & Whyte, sp. nov.

(FIGURES 1A, D, G, 2A–K, 3)

Material examined. MALE HOLOTYPE (WAM-T138587) from Australia, Western Australia, Bush Blitz, Kiwirrkurra indigenous protected area, S03, Lake Mackay, salt lake, 22°29'S, 128°22'E, 367 m, B. Baehr, 8–18 Sep. 2015, pitfall traps.

Etymology. The specific name in apposition refers to the type locality and recognises the community of the Kiwirrkurra indigenous protected area.

Diagnosis. This small species belongs to the *Maratus chrysomelas* group, having a wide rimmed embolic disc covered with frontal ridges. There is no retrolateral process of the embolic disc. *M. kiwirrkurra* can be separated from other species of this group by the prosoma and opisthosoma being covered with cinnamon and white setae in a mottled manner, an adaptation for crypsis in the sand of the Gibson Desert (Fig. 2C).

Description. Male (Holotype, WAM-T138587). Total length 2.84. Prosoma 1.49 long, 1.13 wide, pl/pw 1.11; sternum 0.63 long, 0.47 wide, sl/sw 1.34; opisthosoma 1.35 long, 1.06 wide; opisthosoma longer than wide, ol/ow 1.27. Ocular quadrangle 0.67 long. Anterior eye row 0.95, posterior eye row 1.01 wide. AME largest; posterior eye group width 0.99 of caput width; AME 0.31; ALE 0.19; PME 0.16; PLE 0.06; AME–AME 0.03; AME–ALE 0.04; PME–PME 0.91; PME–PLE 0.14; ALE–PLE 0.16. Clypeus 0.21 high. Paturon with no promarginal teeth and one retromarginal tooth. Length of leg III, femur: 1.08, patella: 0.45, tibia: 0.70, metatarsus: 0.61, tarsus: 0.43, length of metatarsus III 0.87 the length of tibia III. Leg formula: 3421. Dorsal part and sides of prosoma cinnamon brown, with faint reticular pattern, margin black. Ocular quadrangle darker around eyes black, covered with white and cinnamon setae. AME and ALE with cinnamon fringe (Figs 2A, C, E, F). Endites, labium, chelicerae pale and sternum pale; opisthosoma cinnamon with darker patches, covered with white and cinnamon setae, with longer white setae posteriorly; venter cinnamon with darker brown book-lung covers, covered with white setae. Leg III pale cinnamon covered with white setae. Male palp (Figs 1A, D, G, 2H–K): cymbium short, 1.6 times longer than wide, covered with long black setae at prolateral margin and white setae dorsally, tip stout with distal scopula. Embolic disc longer than wide (Fig. 1D), with narrow retrolateral groove (Fig. 1G), frontally a few half-moon shaped ridges at anterior part and longitudinal ridges at posterior part reaching the end of the embolus (Fig. 1D); embolus broad, flattened, embolus tip twisted, opening at frontal part (Fig. 1A); retrobasal tegular lobe (TL) broad (Fig. 2I); retrolateral tibial apophysis broadly conical (Fig. 2K).

Female. Unknown

Distribution. Known only from Lake Mackay (Fig. 3) at Kiwirrkurra indigenous protected area, in the Gibson Desert, Eastern Western Australia.

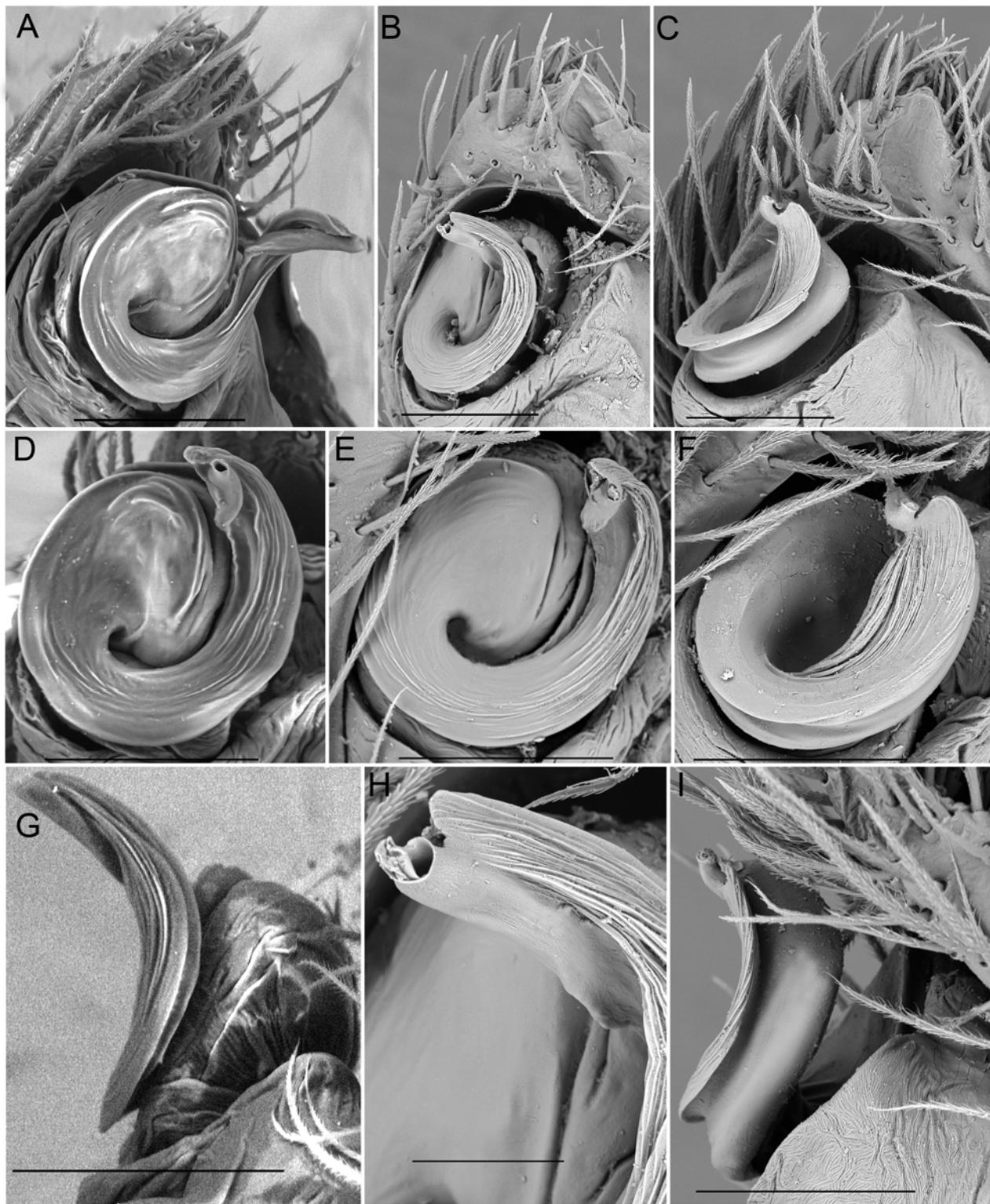


FIGURE 1 (A–I). *Maratus* species groups males: A, D, G, *M. kiwirrkurra* Baehr & Whyte, sp. nov. holotype (WAM-T138587); B, E, H, *M. chrysomelas* (QM-S96329); C, F, I, *Maratus licunxini* Baehr & Whyte, sp. nov. holotype (QM-S96330); A–C, palpal tip with embolic disc; D–F, embolic disc frontal view; G, I, embolic disc retrolateral view; H, embolus tip.



FIGURE 2 (A–K). *Maratus kiwirrkurra* Baehr & Whyte, sp. nov. male holotype (WAM-T138587): A, prosoma, lateral view (dry); B, opisthosoma, dorsal view (dry); C, habitus, dorsal view; D, opisthosoma, ventral view; E, prosoma, anterior view; F, habitus, lateral view; G, right III leg, prolateral view; H, male palp (expanded), prolateral view; I, same, ventral view; J, embolus, dorsal view; K, male palp, retrolateral view.



FIGURE 3. Lake Mackay: 22°29'25.0"S, 128°22'53.0"E, 367 m, salt lake.

The *Maratus fimbriatus* group

(FIGURES 1C, F, I, 4A–I, 5A–F)

Otto & Hill (2016a) described *Maratus fimbriatus* after which this group is named. It contains species which have a shiny black opisthosoma with two longitudinal stripes of white setae at the anterior edge and a long dense fringe of white bluish iridescent setae along the sides, an embolic disc with a wide front, covered with frontal ridges and a deep lateral groove like a wheel rim. There is no retrolateral process of embolic disc. The shiny black opisthosoma and the enormous white bluish iridescent setae along the sides separate this group from any other *Maratus* group.

Dance: You tube Peacock Spider 14 (*Maratus fimbriatus*)

(<https://www.youtube.com/watch?v=Bf8d2rgGEME>)

Species: *Maratus fimbriatus* from the Darling Riverina Plains Bioregion in New South Wales, plus the new species *Maratus licunxini* from Carnarvon Station.

***Maratus licunxini* Baehr & Whyte, sp. nov.**

(FIGURES 1C, F, I, 4A–I, 5A–F, 6)

Material examined. MALE HOLOTYPE (QM-S96330) from Australia, Queensland, Bush Blitz, Carnarvon Station Homestead, 24°48'S, 147°45'E, 755 m, B. Baehr, 10 Oct. 2014, hand coll. PARATYPES: 2 male, 1 female (QM-S96331), same data as holotype, S. Wright, J. Wilson, 12 Oct. 2014, shallow pit fall pans.

Etymology. The specific name is a patronym in honour of the artistic director of the Queensland Ballet Li Cunxin, who is well known for his passionate dancing performances, now motivating his dancers, giving them guidance and vision.



FIGURE 4 (A–I). *Maratus licunxini* Baehr & Whyte, sp. nov. male holotype (QM-S96330). A, habitus, dorsal view; B, habitus, lateral view; C, habitus, ventral view; D, prosoma, anterior view; E, right I leg, prolateral view; F, right III leg, prolateral view; G, male palp, prolateral view; H, same, ventral view; I, same, retrolateral view.

Diagnosis. *M. licunxini* belongs to the *Maratus fimbriatus* group with a shiny black opisthosoma and enormous white bluish iridescent setae along the sides. *M. licunxin* can be separated from *M. fimbriatus* by the shiny black opisthosoma with an inverted Y-shaped patch of dense white setae at the anterior edge and a chimney-like embolus opening at the prolateral part of the embolus (Fig. 1F).

Description. Male (holotype, QM-S96330). Total length 3.94. Prosoma 1.99 long, 1.45 wide, pl/pw 1.37; sternum 0.87 long, 0.57 wide, sl/sw 1.52; abdomen 1.95 long, 1.60 wide; abdomen longer than wide, ol/ow 1.21. Ocular quadrangle 0.81 long. Anterior eye row 1.16, posterior eye row 1.11 wide. AME largest; posterior eye

group width 0.86 of caput width; AME 0.38; ALE 0.24; PME 0.20; PLE 0.05; AME–AME 0.05; AME–ALE 0.04; PME–PME 1.11; PME–PLE 0.20; ALE–PLE 0.33. Clypeus 0.21 high. Paturon with no promarginal teeth and one retromarginal tooth. Length of leg III, femur: 1.44, patella: 0.60, tibia: 0.82, metatarsus: 0.77, length of metatarsus III 0.94 the length the length of tibia III, tarsus: 0.49. Leg formula: 3421. Prosoma dark brown, margin black, covered with black and white setae. Ocular quadrangle dark brown; AME with white fringe, frontally with a line of long black setae, sides of prosoma with a band and an elongated central patch of white setae. Endites, labium and chelicerae pale, sternum cinnamon with dark reticular pattern; opisthosoma black, shiny, sparsely covered with long, erect black setae; at the anterior corner of the opisthosoma an inverted Y-shaped patch of dense white setae; venter cinnamon, with reticulated bands along the sides; sides with long dense fringe of bluish iridescent setae. Leg I–IV cinnamon with dark reticular pattern, femur I thickly covered with black setae (Fig. 4E). Male palp (Figs 4G–I): cymbium short, 1.6 times longer than wide, thickly covered with long white setae, prolateral margin with long black setae; tip stout with dark distal scopula. Embolic disc as long as wide, with deep lateral groove; dorsally with broad flat front, embolus with wide area of ridges retrolaterally; embolic tip chimney-shaped; without lateral process of embolic disc (Figs 1C, F, I); retrobasal tegular lobe (TL) with long, broad v-shaped tip only prolateral side concave (Fig. 4H); Palpal femur dorsally covered with long black setae, base of patella with shorter black setae, distal part and tibia, densely covered with white setae; retrolateral tibial apophysis long and finger-shaped (Fig. 4I).

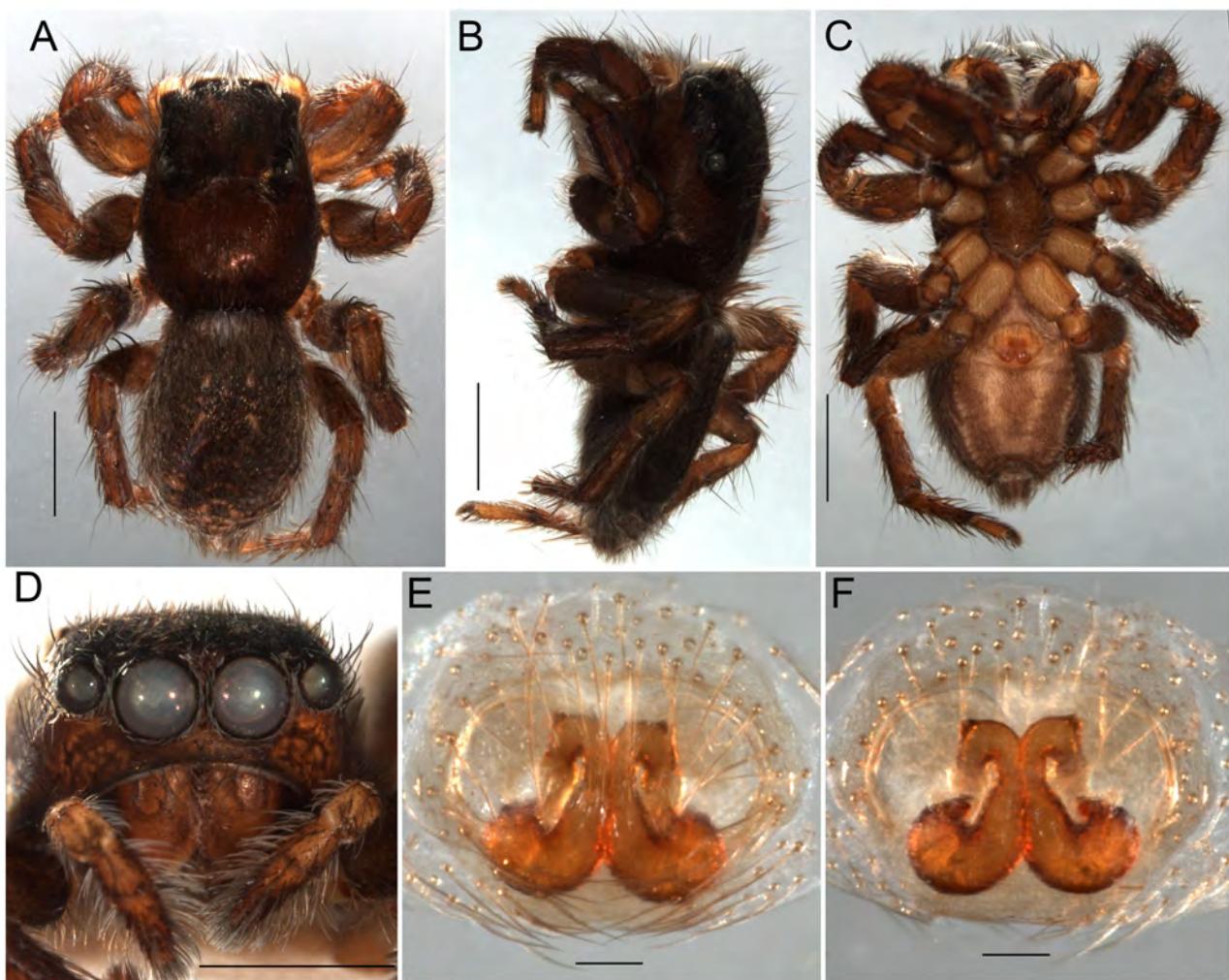


FIGURE 5 (A–F). *Maratus licunxini* Baehr & Whyte, sp. nov. female paratype (QM-S96331). A, habitus, dorsal view; B, habitus, lateral view; C, habitus, ventral view; D, prosoma, anterior view; E, epigyne, ventral view; F, epigyne, dorsal view.

Female (Paratype, QM-S96331). Total length 4.73. Prosoma 2.46 long, 1.78 wide, pl/pw 1.38; sternum 1.09 long, 0.64 wide, sl/sw 1.52; abdomen 2.28 long, 1.64 wide; abdomen longer than wide, ol/ow 1.39. Ocular quadrangle 0.86 long. Anterior eye row 1.39, posterior eye row 1.41 wide. AME largest; posterior eye group width

0.89 of caput width; AME 0.43; ALE 0.26; PME 0.23; PLE 0.07; AME–AME 0.05; AME–ALE 0.04; PME–PME 1.12; PME–PLE 0.21; ALE–PLE 0.32. Clypeus 0.12 high. Paturon with two promarginal teeth and one retromarginal tooth. Prosoma dark brown covered with black setae. Ocular quadrangle black; AME with white fringe. Endites, labium and chelicerae, sternum medium brown with dark reticular pattern; opisthosoma dark brown with lighter reticular pattern; venter cinnamon, with reticulated bands along the sides. Leg I–IV cinnamon with dark reticular pattern. Epigyne (Figs 5E, F) with large semicircular windows and median septum, copulatory opening (CO) close to median septum, primary spermatheca sausage-shaped. Accessory glands at anterior part of copulatory ducts; fertilisation ducts to the side of primary spermathecae.

Remarks. Males and a female have been collected together but no courtship behaviour has been observed. The conspecificity may be established when the courtship of this species is observed and the DNA is tested.

Distribution. Known only from Carnarvon Station (Fig. 6) in Central Queensland.



FIGURE 6. Carnarvon Station Homestead, 24°48'S, 147°45'E, 755 m.

The *Maratus anomalus* group (FIGURES 7A–I, 8A–N, 10A–I)

This group contains species with a pair of large patches of white setae on the posterior sides of the prosoma (Figs 8A, E, 10B), with an embolic disc which has a smooth narrow front with a retrobasal knee-shaped structure and a long narrow embolic tip with the embolic opening at the posterior distal part (Figs 7A–F) and a thin semicircular lateral process. Embolic tip with a narrow retrolateral fold (Figs 7G–I).

This group contains at least *Maratus anomalus* from NSW and Queensland plus the new species *Maratus julianae* from Carnarvon Station and *Maratus michaelorum* from Central Queensland.

***Maratus anomalus* (Karsch, 1878) (FIGURE 7A, D, G)**

Lycidas anomalus Karsch, 1878d: 26; Prószyński 1984a: 159 (removed m from S of *Saitis nigriceps*); Źabka, 1987: 471, figs 50–51.

Maratus anomalus Otto & Hill, 2012a: 23, figs. 28.1–12, 29.1–4, 30.1–8, 31.1–8, 32.1–8, 33.1–12, 34.1–6, 35.1–4, 36.1–6,

37.1–6. [Type locality: New South Wales. So far known from Bribie Island, Mareeba and Cairns in Queensland (Otto & Hill, 2012a; Atlas of living Australia)].

Material examined. 1 male (QM-S56347), Australia, south-east Queensland, North Stradbroke Is. Enterprise, Blackbutt, 27°35'S, 153°28'E, 80 m, QM party, 9 Jan. 2002, day hand coll.; 1 male (QM-S56273), same data as previous Scribbly Gum, 27°37'S, 153°26'E, 70 m, D. Cook, 8–10 Jan. 2002, dung trap; 1 male (QM-S56331), same data as previous Mallee, 27°35'S, 153°27'E, 100 m, QM party, 11 Jan. 2002, day hand coll.

Distribution. Known only from New South Wales, and Queensland.

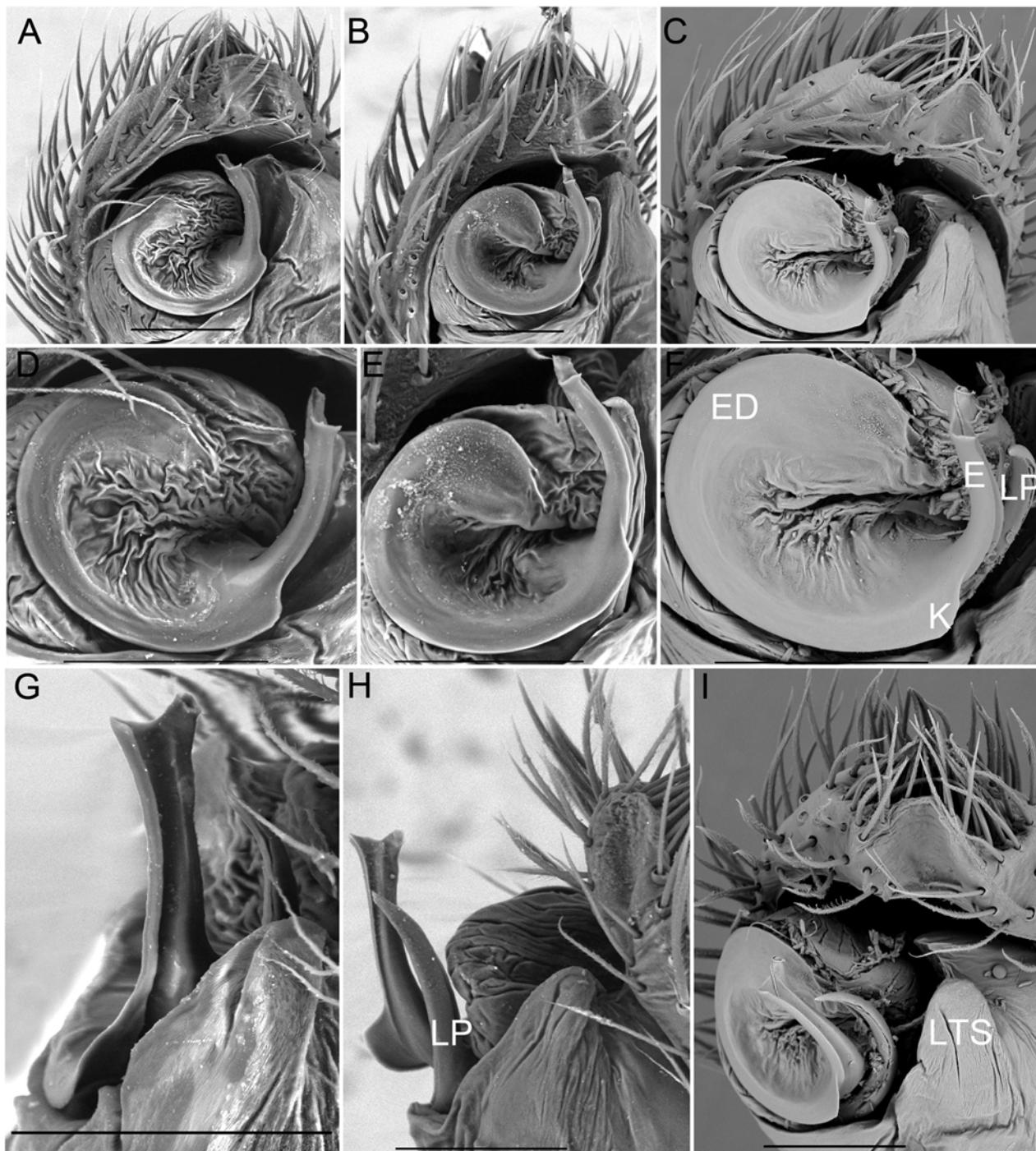


FIGURE 7 (A–I). *Maratus anomalous* group males: A, D, G, *M. anomalous* (Karsch, 1878) (QM-S56273); B, E, H, *M. julianae* Baehr & Whyte, sp. nov. holotype (QM-S96325); C, F, I, *Maratus michaelorum* Baehr & Whyte, sp. nov. holotype (QM-S80074); A–C, palpal tip with embolic disc; D–F, embolic disc frontal view; G–I, palpal tip retrolateral view, with retrolateral groove at embolic tip and semicircular lateral process of embolic disc.

***Maratus julianae* Baehr & Whyte, sp. nov.**

(FIGURES 7B, E, H, 8A–N, 9)

Material examined. MALE HOLOTYPE (QM-S96325) from Australia, Queensland, Bush Blitz, Carnarvon Station Tussock grass with Silver-leaved Ironbark (*Eucalyptus melanophloia*), 783 m, 24°45'S, 147°44'E, 783 m, B. Baehr, 9–16 Oct. 2014, hand coll. PARATYPES: 1 male (QM-S96326), same data as holotype, pitfall; 1 male (QM-S96327), Bush Blitz, Carnarvon Station Lyons Rd., Callitris grass, Cycad, 24°50'S, 147°45'E, 884 m, C. Lambkin, 8–9 Oct. 2014, yellow pans; 1 male (QM-S96328), same as previous, C. Lambkin, N. Starick, B. Hawkins, 13 Oct. 2014, hand coll.

Etymology. The specific name is a patronym in honour of Julianne Waldock, for her contributions to *Maratus* systematics over more than two decades. She also provided excellent support for Madeline Girard in finding *Maratus* localities.

Diagnosis. This species belongs to the *Maratus anomalus* group, sharing a pair of large patches of white setae on the posterior sides of the prosoma, with an embolic disc which has a smooth narrow front with a retrobasal knee-shaped structure and a long narrow embolic tip with the embolic opening at the posterior distal part and a thin semicircular lateral process of embolic disc with a narrow retrolateral fold.

Maratus julianae can be separated from *M. michaelorum* and *M. anomalus* by the pattern of the opisthosoma. *M. michaelorum* has a pattern of a heart-shaped circle and two elongated patches of golden orange setae in the centre and *M. anomalus* has a completely bluish iridescent opisthosoma, whereas *Maratus julianae* has a grey-whitish opisthosoma with bluish iridescent sides at the posterior third.

Description. Male (QM-S96325). Total length 4.21. Prosoma 2.05 long, 1.60 wide, pl/pw 1.28; sternum 1.01 long, 0.71 wide, sl/sw 1.42; opisthosoma 2.16 long, 1.56 wide; opisthosoma longer than wide: ol/ow 1.38. Ocular quadrangle 0.77 long. Anterior eye row 1.35, posterior eye row 1.49 wide. AME largest; posterior eye group width 0.97 of caput width; AME 0.40; ALE 0.24; PME 0.19; PLE 0.06; AME–AME 0.05; AME–ALE 0.05; PME–PME 1.30; PME–PLE 0.18; ALE–PLE 0.29. Clypeus 0.22 high. Paturon with no promarginal teeth and one retromarginal tooth. Length of leg III, femur: 1.65, patella: 0.71, tibia: 0.99, metatarsus: 0.73, tarsus: 0.58, length of metatarsus III 0.74 the length of tibia III. Leg formula: 3421. Dorsal part of the prosoma dark brown, sides pale with dark reticular pattern, margin black. Ocular quadrangle covered with white setae. Front and half of the sides covered with golden setae. Posterior sites of the prosoma with large patches of white setae. Endites, labium and chelicerae pale with dark markings, sternum pale; opisthosoma pale, dotted with black and with one larger pair of black dots posteriorly, sparsely covered with longer black setae and white setae, bluish iridescent at posterior 1/3 of the opisthosoma laterally. Lateral shoulders with longer white setae, venter pale. Male palp (Figs 7B, E, H, 8H–N): cymbium short, 1.6 times longer than wide, covered with long black setae, tip stout with distal scopula. Embolic disc as wide as long with smooth rim and no tooth-like projections centrally, embolus with narrow v-shaped tip, opening at the posterior part (Fig. 7E); lateral process of embolic disc a long semicircular spur fitting into the retrolateral groove of the embolus (Fig. 7H); tegular shoulder with cone-shaped lamella (LTS); retrobasal tegular lobe (TL) with narrow tip both sides concave (Fig. 8J); tibia about as long as wide, prolaterally with long white setae covering 2/3 of the cymbium; retrolateral tibial apophysis (RTA) triangular (Fig. 8K).

Female. Unknown

Distribution. Known only from Carnarvon Station in central Queensland.

***Maratus michaelorum* Baehr & Whyte, sp. nov.**

(FIGURES 7C, F, I, 10A–I)

Material examined. MALE HOLOTYPE (QM-S80074) from Australia, Queensland Moolayember Creek National Park site 3, Ironbark woodland, 25°14'S, 148°37'E, 410 m, Wright, Burwell, 3–10 Mar. 2006, yellow pan traps.

Records. 1 male, Carnarvon Gorge National Park, 25°03'S, 148°13'E, M. Girard, 19 Oct. 2015, hand coll.

Etymology. The specific name is a patronym in honour of Michael Duncan and Michael Doe, who are experts at finding new members of the *Maratus anomalus* group mostly in “tussock grass” and who provided excellent live photography for this paper.



FIGURE 8 (A–N). *Maratus julianae* Baehr & Whyte, sp. nov. male holotype (QM-S96325). A,D,E, live images (photos: Robert Whyte); A, B, habitus, dorsal view; C, habitus, ventral view; D, prosoma, anterior view; E, habitus, lateral view; F, opisthosoma frontal view; G, right III leg, prolatateral view; H, I, male palp, prolateral view; J, same, ventral view; K, same, retrolateral view; L, embolic disc, prolateral view; M, same, ventral view; N, same, retrolateral view.



FIGURE 9. Carnarvon Station Tussock grass with *Eucalyptus melanophloia*, 24°45'S, 147°44'E, 783 m.

Diagnosis. This species belongs to the *Maratus anomalus* group sharing a pair of large patches of white setae on the posterior sides of the prosoma, an embolic disc which has a smooth narrow front with a retrobasal knee-shaped structure and a long narrow embolic tip with the embolic opening at the posterior distal part and a thin semicircular lateral process of the embolic disc with a narrow retrolateral fold.

M. michaelorum can be separated from the other two species in the group by the special embolic tip with an elongated embolic opening (Figs 7C, F) and the green bluish colour of the opisthosoma with a pattern of a heart-shaped circle and two elongated patches of golden orange setae in the centre (Fig. 10A).

Description. Male (Holotype, QM-S80074). Total length 3.85. Prosoma 1.86 long, 1.50 wide, 1.03 high, pl/pw 1.24; sternum 0.75 long, 0.50 wide, sl/sw 1.50; opisthosoma 1.99 long, 1.37 wide; opisthosoma longer than wide, ol/ow 1.45. Ocular quadrangle 0.60 long. Anterior eye row 1.05, posterior eye row 1.17 wide. AME largest; posterior eye group width 0.97 of caput width; AME 0.36; ALE 0.23; PME 0.18; PLE 0.07; AME–AME 0.04; AME–ALE 0.05; PME–PME 1.19; PME–PLE 0.15; ALE–PLE 0.19. Clypeus 0.19 high. Paturon with no promarginal teeth and one retromarginal tooth. Length of leg III, femur: 1.57, patella: 0.60, tibia: 0.98, metatarsus: 0.86; length of metatarsus III 0.88 the length of tibia III, tarsus: 0.51. Leg formula: 3421. Dorsal part of the prosoma dark brown, sides cinnamon with dark reticular pattern, margin black. Ocular quadrangle covered with white setae, sides around ALE with golden setae, clypeus and AME with white fringe, posterior sites of prosoma with large pair of patches of white setae. Endites, labium and chelicerae pale, sternum pale; opisthosoma bluish iridescent with a heart-shaped circle and two elongated patches of golden orange setae in the centre, sparsely covered with longer black setae and with longer white setae at the anterior edge of the opisthosoma; venter pale, dotted with dark spots along the sides and with one patch in front of the spinnerets. Leg III: coxa, trochanter, base and ventral side of femur, metatarsus and tarsus pale; femur, patella and tibia thickly covered with black setae, metatarsus and tarsus covered with a thick layer of white setae. Male palp (Figs 7C, F, I, 10G–I): cymbium short, 1.6 times longer than wide, covered with long black setae, tip stout with distal scopula. Embolic disc wider than long, with smooth, narrow rim, with elongated embolic opening (Figs 7F, I); lateral process of embolic disc a long

semicircular spur fitting into the retrolateral groove of the embolus; tegular shoulder with cone-shaped lamella (LTS); retrobasal tegular lobe (TL) with broader tip than *M. julianae*, tip only prolateral side concave (Fig. 10H); Femur, patella and tibia covered prolaterally with long white setae covering 1/2 of the cymbium; retrolateral tibial apophysis triangular (Fig. 10I).

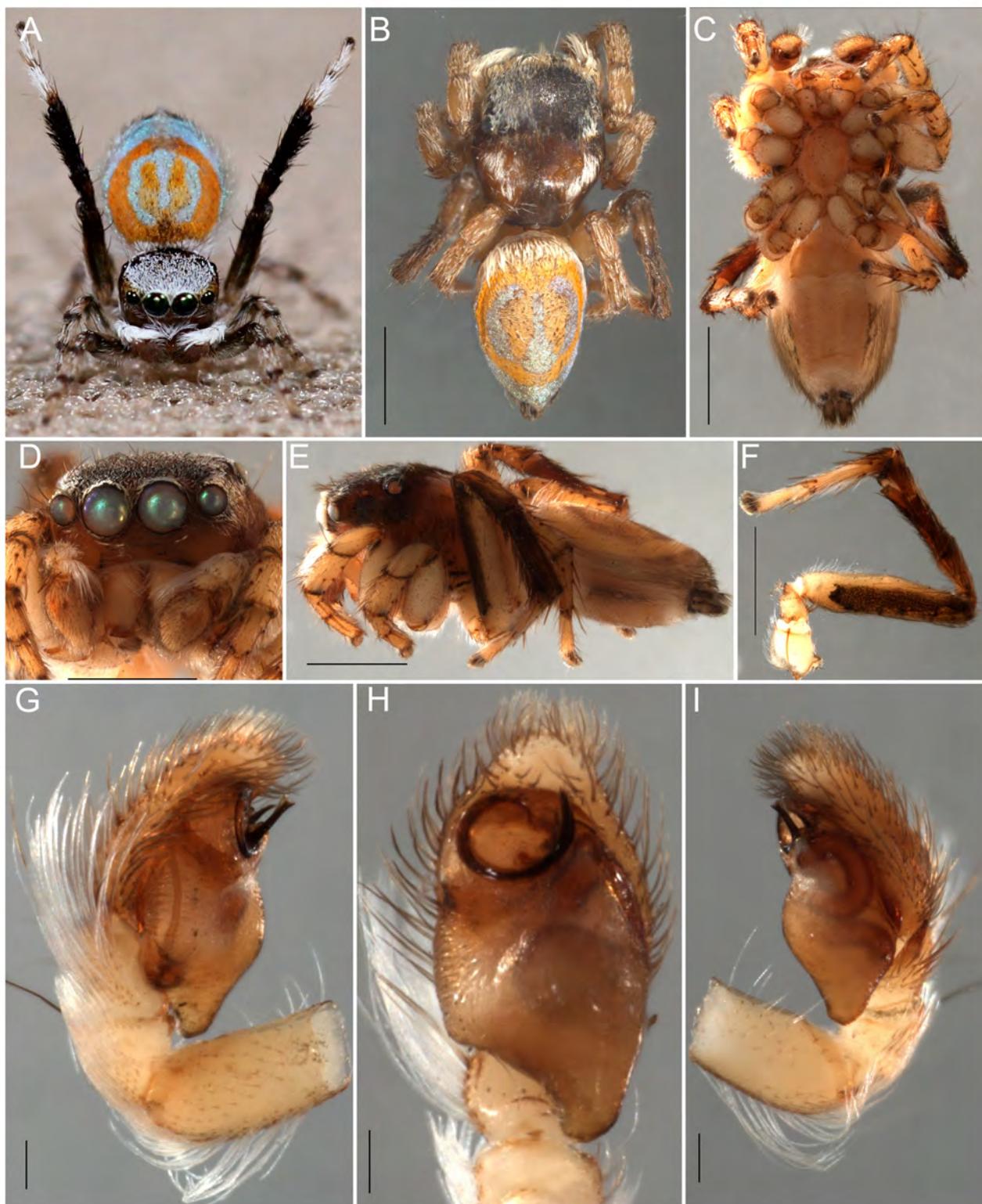


FIGURE 10 (A–I). *Maratus michaelorum* Baehr & Whyte, sp. nov. male. A, life image male in displaying position (photo: Madeline Girard); B–I, male holotype (QM-S80074): B, habitus, dorsal view; C, habitus, ventral view; D, prosoma, anterior view; E, habitus, lateral view; F, right III leg, prolateral view; G, male palp, prolateral view; H, same, ventral view; I, same, retrolateral view.

Female. Unknown.

Distribution. Known only from Moolayember Creek National Park and Carnarvon Gorge National Park in Central Queensland.

The *Maratus digitatus* group

(FIGURES 11A–I, 12A–I, 13A–I)

This group contains species with small flaps, displaying with one leg to one side and with inflated spinnerets (J. Otto, pers. comm.). They have an embolic disc with a broad smooth front and a broad spatulate embolic tip with the embolic opening at the frontal distal part enclosed by a hole (Figs 11A–F) and a finger-like lateral process of embolic disc with pancake-stack shaped retrolateral ridges (Figs 11G–I).

The group includes *Maratus digitatus* from northern NSW and south eastern Queensland, plus the new species *Maratus eliasi* from Queensland and *Maratus ottoi* from the Brisbane area.

Further SEM examination of the embolic disc will clarify if the *Maratus digitatus* group is the same as the *Maratus calcitrans* group (Otto & Hill, 2015).

Maratus digitatus Otto & Hill, 2012

(FIGURES 11C, F, I)

Maratus digitatus Otto & Hill, 2012b: 10, figs 12–27. Type locality: Mount Kaputar near Narrabri, northern New South Wales.

Material examined. AUSTRALIA: 2 males (QM-S47268), south-east Queensland, Nipping Gully, site 5, Rainforest, 25°42'S, 151°26'E, 200 m, Monteith & Gough, 9 Oct.–18 Dec. 1998, intercept; 1 male (QM-S57424), south-east Queensland, East Woodmillar, Vine Scrub, 25°41'S, 151°36'E, 250 m, Monteith & Gough, 10 Oct.–17 Dec. 1998, intercept; 1 male (QM-S46992), south-east Queensland, Koy Property at Brigooda (Top site), Vine Scrub, 26°16'S, 151°25'E, 250 m, Monteith & Gough, 10 Oct.–17 Dec. 1998, intercept. (These localities were mentioned in Otto & Hill, 2015: fig. 37).

Distribution. Northern New South Wales and south-eastern Queensland.

Maratus eliasi Baehr & Whyte, sp. nov.

(FIGURES 11A, D, G, 12A–I)

Material examined. MALE HOLOTYPE (QM-S96335) from Australia, Queensland, Nuga Nuga National Park, 24°59'S, 148°40'E, M. Girard and D. Elias, 20 Oct. 2015, hand coll. PARATYPES: 1 male (QM-S73641) from Australia, Queensland, Boomer Ra. Mongrel Scub, 23°12'S, 149°46'E, G. Monteith, 16 Dec. 1999–22 Mar. 2000, intercept.

Records. 1 male, Australia, Queensland, Tregole National Park, 26°29'S, 147°06'E, M. Girard and D. Elias, 20 Oct. 2015, hand coll, deposited in M. Girard's collection.

Etymology. The specific name is a patronym in honour of Dr Damian Elias, who helped to discover new populations of *M. eliasi* while assisting his wife, Madeline Girard who was collecting specimens for her PhD work.

Diagnosis. *M. eliasi* belongs to the *digitatus* group in having inflatable spinnerets (Fig. 12A). *M. eliasi* is closely related to *M. digitatus* (mentioned in Otto & Hill, 2015: fig. 37 as *Maratus cf. digitatus*) sharing a nearly identical prosomal colour pattern and in having a larger pair of semicircular, iridescent, flaps which are uniformly dark green in *M. digitatus*.

M. eliasi can be separated from *M. digitatus* by its opisthosomal colour pattern (golden and striped flaps) (Fig. 12A) and its shorter embolic tip (Figs 11B, E).

Description. Male (Holotype, QM-S96335). Total length 3.98. Prosoma 2.12 long, 1.60 wide, pl/pw 1.32; sternum 0.91 long, 0.52 wide, sl/sw 1.75; abdomen 1.86 long, 1.44 wide; abdomen wider than long when inflated, (ol/ow 0.68; QM-S73641). Ocular quadrangle 0.93 long. Anterior eye row 1.51, posterior eye row 1.54 wide. AME

largest; posterior eye group width 0.92 of caput width; AME 0.47; ALE 0.27; PME 0.23; PLE 0.08; AME–AME 0.04; AME–ALE 0.03; PME–PME 1.19; PME–PLE 0.180; ALE–PLE 0.22. Clypeus 0.22 high. Paturon with no promarginal teeth and one retromarginal tooth. Length of leg III, femur: 1.54, patella: 0.65, tibia: 0.88, metatarsus: 0.75, tarsus: 0.52; metatarsus III 0.85 the length of tibia III. Leg formula: 3421. Prosoma dark brown; ocular quadrangle covered with golden setae scattered with white setae forming three bands, sides with a fringe, a posterior median patch and two lateral patches of white setae; AME and ALE dorsally with a fringe of golden

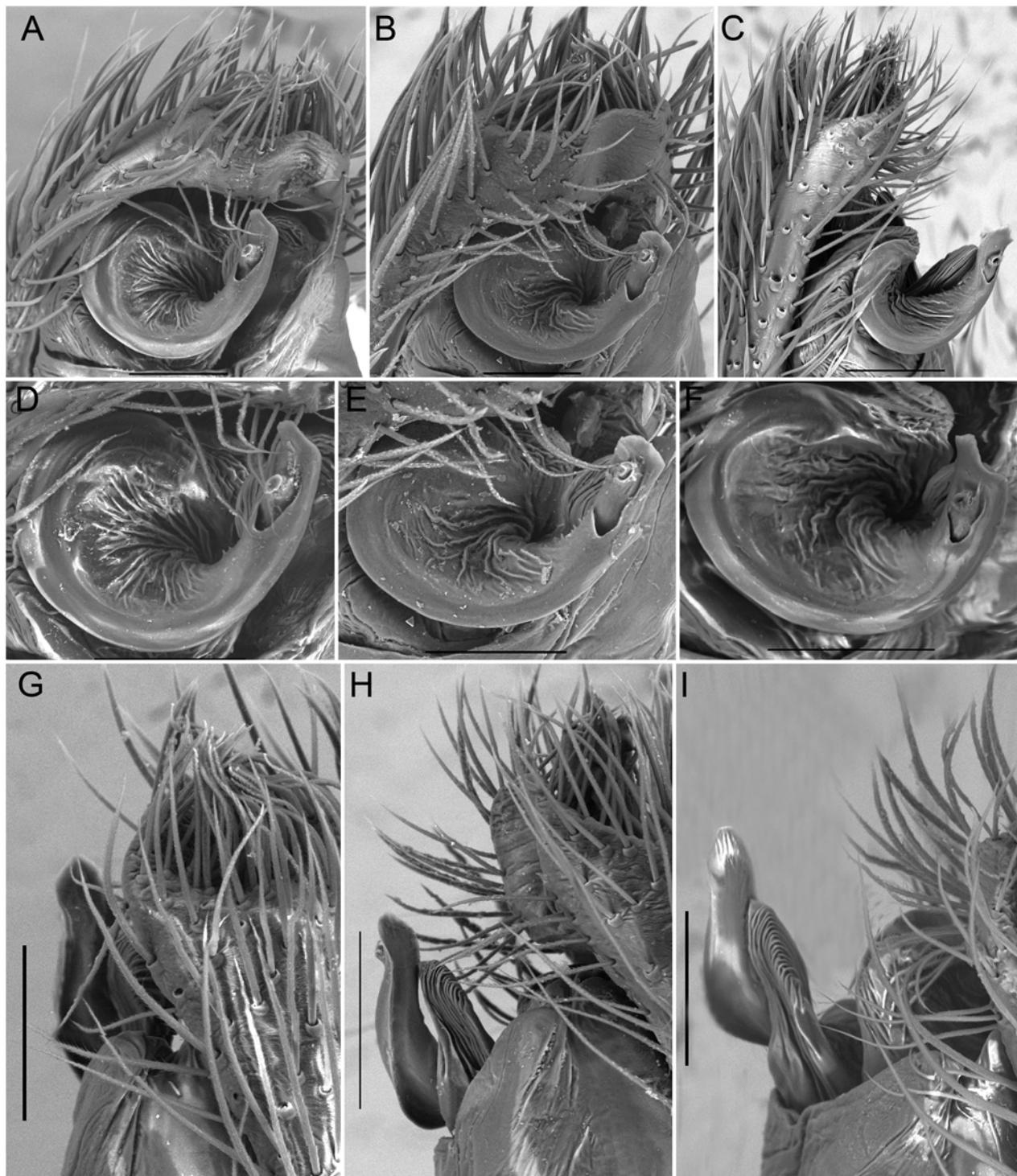


FIGURE 11 (A–I). *Maratus digitatus* group males: A, D, G, *M. eliasi* Baehr & Whyte, sp. nov. holotype (QM-S96335); B, E, H, *M. ottoi* Baehr & Whyte, sp. nov. holotype (QM-S96332); C, F, I, *Maratus digitatus* Otto & Hill, 2012 (QM-S47268); A–C, palpal tip with embolic disc; D–F, embolic disc frontal view; G–I, palpal tip retrolateral view, embolic disc with flat retrolateral groove and finger shaped lateral process of embolic disc with pancake-stack shaped retrolateral ridges.



FIGURE 12 (A–I). *Maratus eliasi* Baehr & Whyte, sp. nov. male holotype (QM-S96335). A, live photo (photo: Michael Duncan); B, habitus, dorsal view (QM-S73641); C–I, (QM-S96335), C, habitus, ventral view; D, prosoma, anterior view; E, habitus, lateral view; F, right III leg, prolatateral view; G, male palp, prolateral view; H, same, ventral view; I, same, retrolateral view.

setae, ventrally with a fringe of white setae. Endites distally pale; labium, chelicerae and sternum medium brown with darker reticulation; opisthosoma bluish iridescent, a dancing monster with a red head and arms and blue eyes when seen from the front, flaps golden with one black and two white stripes; venter pale. Leg I–IV covered with white setae; tibiae and metatarsi I–IV dark brown tarsi I–IV pale. Male palp (Figs 11A, D, G, 12G–I): cymbium short, 1.6 times longer than wide, covered with white setae, prolateral distal half with stronger dark setae; tip stout with distal scopula. Embolic disc wider than long, with broad, flat front and flat retrolateral groove; with few small tooth-like denticles at the retrocentral part of the disc; embolus tip with triangular retrolateral ridge embolic opening pipe or chimney-shaped; finger-like lateral process of embolic disc with pancake-stack shaped retrolateral ridges; tegular shoulder with cone-shaped lamella (LTS); retrobasal tegular lobe (TL) with broader tip only prolateral side concave (Fig. 12H); patella and tibia covered with long white setae covering 1/2 of the cymbium retrolaterally; retrolateral tibial apophysis narrow, finger-shaped.

Female. Unknown.

Distribution. Known only from Queensland.

***Maratus ottoi* Baehr & Whyte, sp. nov.**

(FIGURES 11B, E, H, 13A–I)

Material examined. MALE HOLOTYPE (QM-S96332) from Australia, south-east Queensland, Venman Bushland National Park, 27°37'S, 153°12'E, M. Doe, 10 Nov. 2015. ALLOTYPE: 1 female (QM-S96333), same data as previous, M. Duncan. PARATYPE: 1 female (QM-S96334), same data as previous; 1 male (QM-S35068), south-east Queensland, Rochedale State Forest, 27°37'S, 153°09'E, V. Davies, R. Raven, 6 Sep. 1979.

Remarks. *Maratus ottoi* was known from black and white drawings in a publication by Davies & Žabka (1989: 237, fig. 40), based on a male, collected by Val Davies and Robert Raven in 1979 in the Rochedale State Forest (QM-S35068). At that time it was not named. In 2015 live individuals were found by Madeline Girard, Michael Doe and Michael Duncan in the Venman Bushland National Park (QM-S96333, S96334).

Dance: You tube Peacock Spider 15 (<https://www.youtube.com/watch?v=my5AqKpC-Rs>).

Etymology. The specific name is a patronym in honour of Dr Jürgen Otto, one of Australia's most accomplished *Maratus* experts.

Diagnosis. *M. ottoi* is closely related to *M. eliasi* sharing a nearly identical prosomal colour pattern (Figs 12A, 13A) and a similar embolic disc (Figs 11A, B). *M. ottoi* can be separated from *M. eliasi* by having a different opisthosomal colour pattern with no red posterior markings but an octopus-like pattern anteriorly (this species had the nickname "Mr Octopus") (Fig. 13A) with tooth like denticles at the retrocentral part of the embolus (Fig. 11B) and a slightly rounded embolic tip (Fig. 11E).

Description. Male (Holotype, QM-S96332). Total length 4.11. Prosoma 2.11 long, 1.74 wide, pl/pw 1.21; sternum 1.00 long, 0.56 wide, sl/sw 1.78; abdomen 2.00 long, 1.40 wide, not inflated. Ocular quadrangle 0.99 long. Anterior eye row 1.53, posterior eye row 1.52 wide. AME largest; posterior eye group width 0.87 of caput width; AME 0.47; ALE 0.28; PME 0.20; PLE 0.08; AME–AME 0.05; AME–ALE 0.04; PME–PME 1.26; PME–PLE 0.20; ALE–PLE 0.31. Clypeus 0.16 high. Paturon with two promarginal teeth and one retromarginal tooth. Length of leg III, femur: 1.72, patella: 0.70, tibia: 0.91, metatarsus: 0.87, tarsus: 0.53; metatarsus III 0.94 the length of tibia III. Leg formula: 3421. Prosoma dark brown sides cinnamon with dark reticulation; ocular quadrangle covered with golden setae scattered with white setae, sides with a fringe, and two lateral patches of white setae just behind the PME; AME and ALE dorsally with a fringe of golden setae, ventrally with a fringe of white setae. Endites, labium, chelicerae and sternum pale with darker reticulation; opisthosoma dark with patterns of bluish iridescent setae forming an "octopus pattern", with two red lateral arms when seen from the front; venter pale with irregular black dots. Leg I, II, IV pale with darker spots, covered with white setae; leg III: femur medium brown, patella cinnamon, tibia and metatarsus dark brown tarsus white. Male palp (Figs 11B, E, H, 13G–I): cymbium short, 1.6 times longer than wide, covered with long white setae; tip stout with distal scopula. Embolic disc wider than long, with smooth flat rim, no longitudinal ridges but tooth-like denticles at the retrocentral part of the embolus; embolus tip with rounded retrolateral ridge, embolus opening at dorsal part of the ridge; (Fig. 11E); lateral process of embolic disc compact with longitudinal pancake-stack shaped lamellae (Fig. 11H); tegular shoulder with cone-shaped lamella (LTS); retrobasal tegular lobe (TL) with narrow tip only prolateral side strongly concave (Fig. 13H); retrolateral part of patella and tibia covered with long white setae covering 1/2 of the cymbium; retrolateral tibial apophysis narrow, finger-shaped (Fig. 13I).

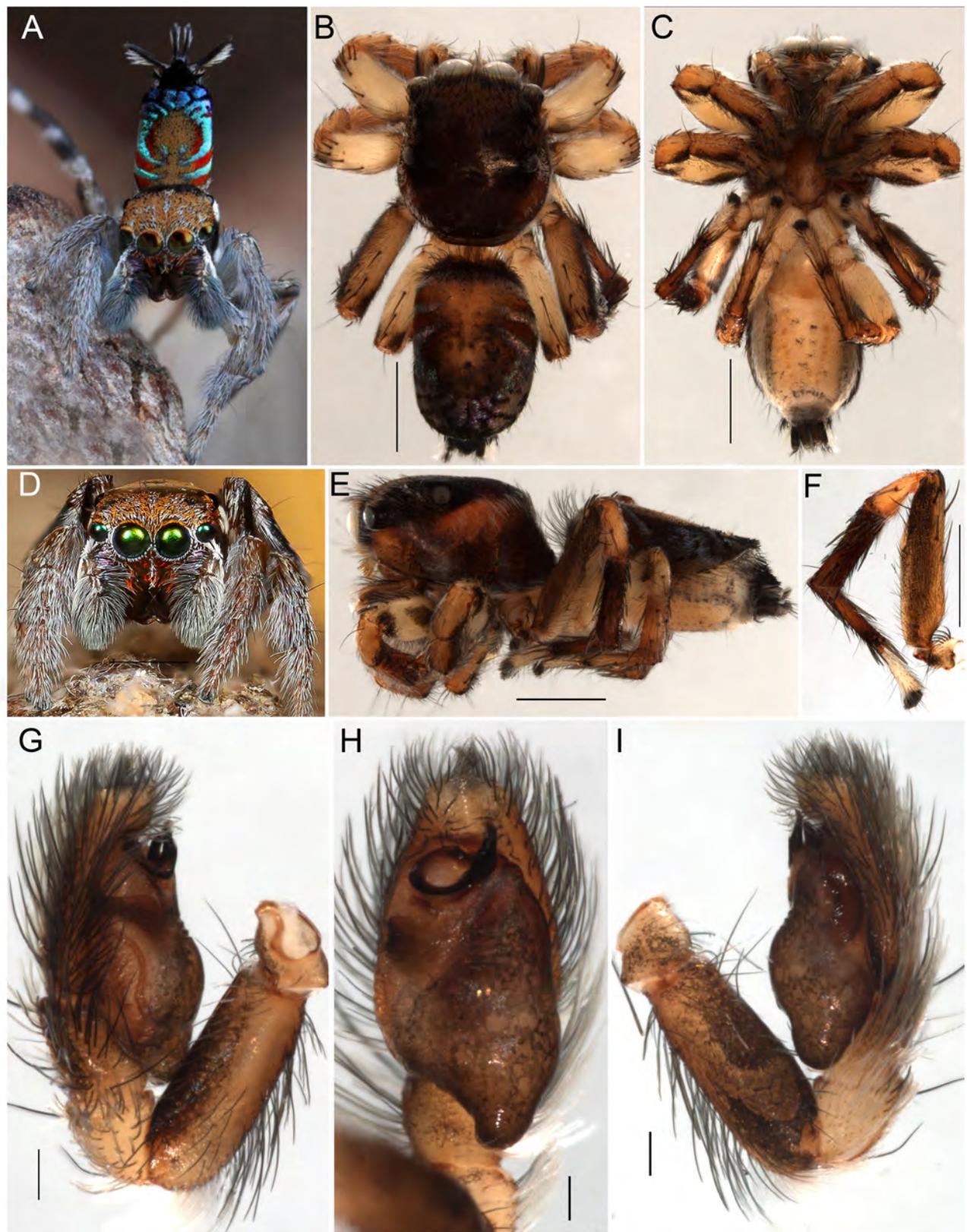


FIGURE 13 (A–I). *Maratus ottoi* Baehr & Whyte, sp. nov. male holotype (QM-S96332). A, live photograph of a male in display position (photo: Michael Doe); B, habitus, dorsal view; C, habitus, ventral view; D, prosoma, anterior view (photo: Michael Duncan); E, habitus, lateral view; F, right III leg, prolateral view; G, male palp, prolateral view; H, same, ventral view; I, same, retrolateral view.

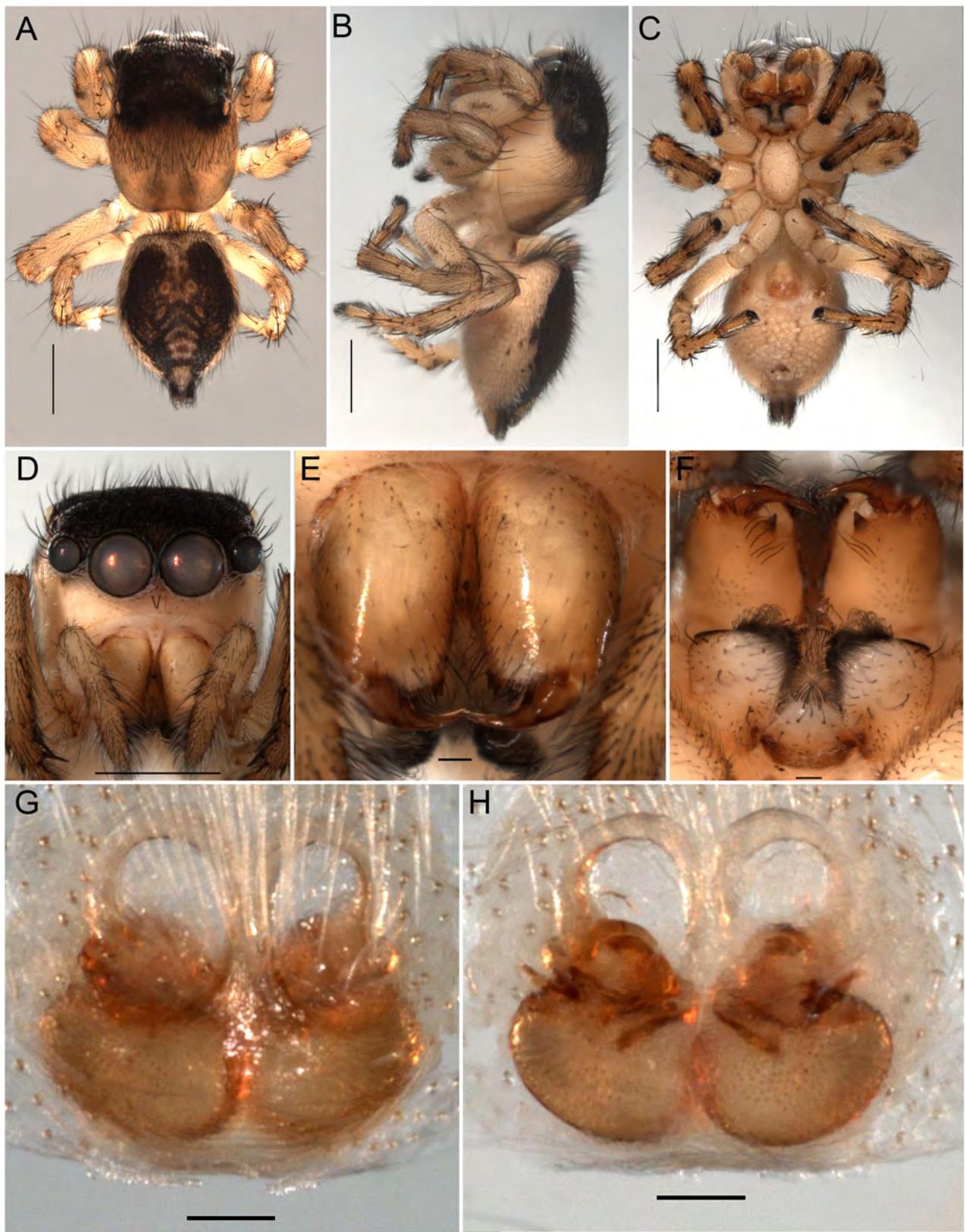


FIGURE 14 (A–H). *Maratus ottoi* Baehr & Whyte, sp. nov. female allotype (QM-S96333). A, habitus, dorsal view; B, habitus, lateral view; C, habitus, ventral view; D, prosoma, anterior view; E, chelicerae, anterior view; F, chelicerae, posterior view; G, epigyne, ventral view; H, same, dorsal view.

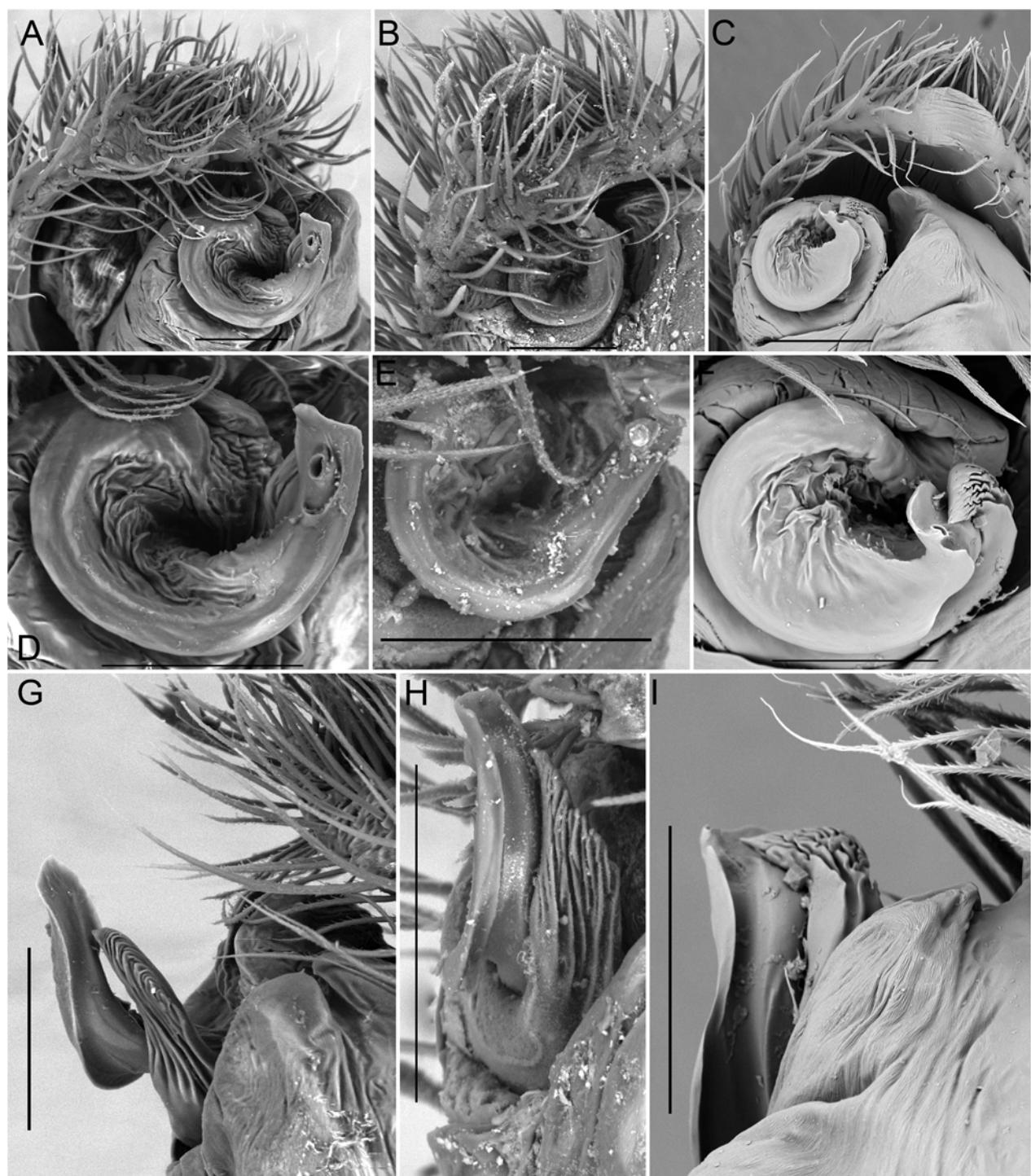


FIGURE 15 (A–I). *Maratus* males: A, D, G, *M. volans* (O. Pickard-Cambridge, 1874) (QM-S 54112); B, E, H, *M. speciosus* (O. Pickard-Cambridge, 1874) (QM-S26034); C, F, I, *Maratus pavonis* var. *nornalup* (WAM-T136127); A–C, palpal tip with embolic disc; D–F, embolic disc frontal view; G–I, palpal tip retrolateral view, with flat retrolateral groove and differently shaped lateral process of embolic disc.

Female (Allotype, QM-S96333). Total length 4.54. Prosoma 2.36 long, 1.82 wide, pl/pw 1.30; sternum 0.92 long, 0.58 wide, sl/sw 1.58; abdomen 2.17 long, 1.73 wide; abdomen longer than wide, ol/ow 1.56. Ocular quadrangle 0.93 long. Anterior eye row 1.73, posterior eye row 1.70 wide. AME largest; posterior eye group width 0.93 of caput width; AME 0.52; ALE 0.29; PME 0.26; PLE 0.07; AME–AME 0.05; AME–ALE 0.05; PME–PME 1.45; PME–PLE 0.19; ALE–PLE 0.20. Clypeus 0.14 high. Paturon with two promarginal teeth and one retromarginal tooth. Prosoma cinnamon with darker reticulation covered with black setae. Ocular quadrangle

black, indented at middle; AME and ALE with white fringe. Endites, labium, chelicerae and sternum pale; opisthosoma dark brown with cinnamon sides and inverted v-shaped pattern dorsally; venter pale. Leg I–IV cinnamon with darker spots. Epigyne (Figs 14G, H) with large semicircular windows, and a median septum, copulatory opening (CO) close to median septum, primary spermatheca large nearly circular, secondary spermatheca much smaller, circular. Accessory glands at anterior part of secondary spermatheca, fertilisation ducts laterally of primary spermathecae.

Distribution. Known only from the greater Brisbane area in Queensland.

The *Maratus pavonis* group

(FIGURES 15C, F, I, 16A–I)

This group contains those species with an embolic disc which has a broad smooth rim and a broad bent embolic ridge with the embolic opening at the frontal end (Fig. 15F). The lateral process of the embolic disc has a pointed tip and zig-zag longitudinal ridges (Fig. 15I).

Further SEM examination of the embolic discs of known and other putative *M. pavonis* specimens will clarify if the palpal characters shown in *M. pavonis* var. *nornalup* are also present elsewhere in the *Maratus pavonis* group.

Maratus pavonis* (Dunn, 1947) var. *nornalup

(FIGURES 15C, F, I, 16A–I)

Saitis pavonis: Dunn, 1947, 1957

Maratus pavonis, Žabka, 1991;

Maratus pavonis Otto & Hill, 2014b.

Material examined. 1 male (WAM-T136127) from Australia, Western Australia Nornalup Inlet, 35°01'S, 116°44'E, B. & M. Baehr, 1–2. Dec. 1987, hand coll.

Etymology. The var. name refers to the location Nornalup Inlet.

Diagnosis. *Maratus pavonis* var. *nornalup* shares with *maratus pavonis* the uniform colouration of the eye region, a similar opisthosomal pattern and the relatively translucent legs I, II, and IV, with no white banding (Otto & Hill, 2014b), but can be separated from *M. pavonis* by having a pale femur III, a metatarsus III 1.08 x longer than tibia III and the whole venter of the opisthosoma covered with tiny knobs (like goosebumps).

Description. Male (Holotype, WAM-T136127). Total length 4.46. Prosoma 2.03 long, 1.54 wide, pl/pw 1.32; sternum 0.99 long, 0.71 wide, sl/sw 1.39; opisthosoma 2.43 long, 2.00 wide; opisthosoma longer than wide, ol/ow 1.21. Ocular quadrangle 0.90 long. Anterior eye row 1.42, posterior eye row 1.37 wide. AME largest; posterior eye group width 0.96 of caput width; AME 0.40; ALE 0.26; PME 0.22; PLE 0.07; AME–AME 0.05; AME–ALE 0.06; PME–PME 1.15; PME–PLE 0.19; ALE–PLE 0.34. Clypeus 0.18 high. Paturon with no promarginal teeth and one retromarginal tooth. Length of leg III, femur: 1.71, patella: 0.61, tibia: 1.11, metatarsus: 1.12, tarsus: 0.43; length of metatarsus III 1.08 the length of tibia III. Leg formula: 3421. Prosoma dark brown; ocular quadrangle covered with golden setae, sides with a fringe and a posterior median stripe of white setae; AME and ALE with a fringe of golden setae. Endites, labium and chelicerae pale with darker reticulation, sternum dark brown with lighter reticulation; opisthosoma bluish iridescent with an inverted heart-shaped circle and two elongated patches of golden orange setae in the centre; venter covered with goosbumps, cinnamon, dotted with dark spots forming lines. Leg I, II, IV uniform pale, III: coxa, trochanter, and femur pale, distal end darker, patella, tibia and metatarsus dark brown, tarsus pale; tibia and metatarsus thickly covered with black setae in fan-like position, tarsus covered with a thick layer of white setae. Male palp (Figs 15C, F, I, 16G–I): cymbium short, 1.6 times longer than wide, covered with white setae, prolateral distal half with stronger dark satae; tip stout with distal scopula. Embolic disc wider than long, with broad front, centre with field of cusps, embolus tip with ridge, embolus opening at anterior part of the ridge; (Fig. 15F); lateral process of embolic disc with retrolateral ridges and a spear-shaped tip close to the retrolateral groove of the embolus (Fig. 15I); tegular shoulder with cone-shaped lamella (LTS); retrobasal tegular lobe (TL) with broader tip only prolateral side concave (Fig. 16H); Distal half of femur, patella and tibia

covered with long white setae covering half of the cymbium; retrolateral tibial apophysis narrow, finger-shaped (Fig. 16I).

Female. Unknown.

Distribution. Nornalup Inlet, south Western Australia.

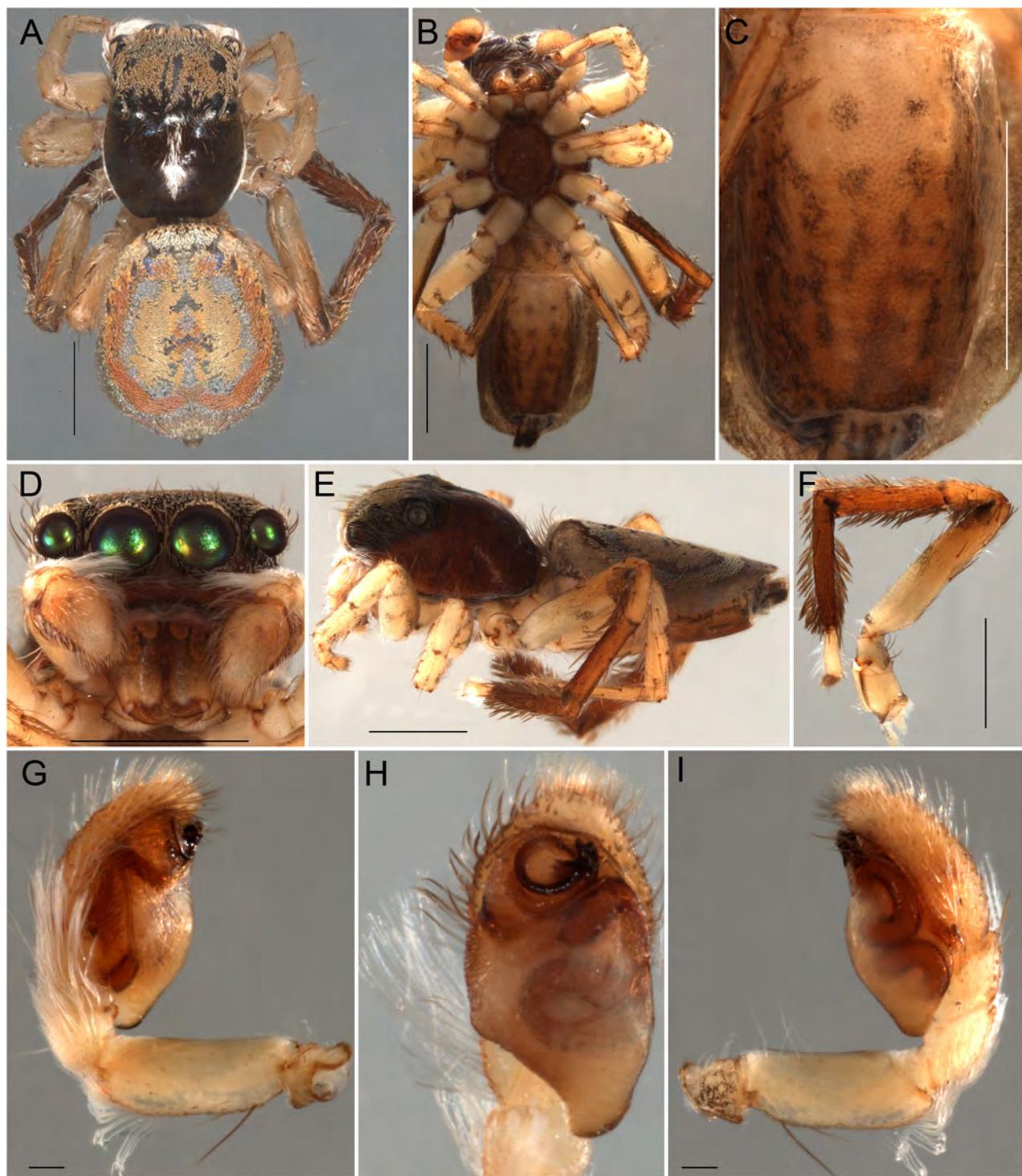


FIGURE 16 (A–I). *Maratus pavonis* var. *nornalup* male (WAM-T136127). A, habitus, dorsal view; B, habitus, ventral view; C, opisthosoma, ventral view; D, prosoma, anterior view; E, habitus, lateral view; F, right III leg, prolateral view; G, male palp, prolateral view; H, same, ventral view; I, same, retrolateral view.

***Maratus speciosus* (O. Pickard-Cambridge, 1874)**

(FIGURES 15B, E, H)

Salticus speciosus O. Pickard-Cambridge, 1874c: 180, pl. 17, fig. 5 (Dm). Type locality: Swan River, Perth, Western Australia.

Habrocestum speciosum: Keyserling 1883b: 1468, pl. 123, fig. 8 (Df).

Saitis speciosus: Simon 1901: 564.

Maratus speciosus: Otto & Hill 2012a: 42, figs 52.1–6, 53.1–4, 54.1–9, 55.1–8, 56.1–3, 57.1–9, 58.1–6, 59.1–5 (Tmf from *Saitis*).

Material examined. 1 male, 1 female (QM-S26034), Western Australia, Mosman Beach, 32°01'S, 115°45'E, 10 Sep. 1994, S. Wilson, hand coll. during courtship.

Distribution. Previously known only from Perth Western Australia; this record is from nearly the same area.

Dance: You tube Peacock Spider 7 (*Maratus speciosus*) (https://www.youtube.com/watch?v=d_yYC5r8xMI).

The *Maratus volans* group

(FIGURES 15A, D, G)

Otto & Hill (2014a) described the *Maratus volans* group (*M. pardus* and *M. volans*) as having a wide fringe at the sides of the opisthosoma and similar courtship displays.

***Maratus volans* (O. Pickard-Cambridge, 1874)**

(FIGURES 15A, D, G)

Salticus volans O. Pickard-Cambridge, 1874c: 178, pl. 17, fig. 4

Maratus amoenus Karsch, 1878d: 28.

Saitis volans: Simon 1901: 559, 563, figs 677–679; Butler 1933: 291, pl. 17, fig. 6; Prószyński 1984: 126 (m).

Maratus amoenus Źabka, 1987: 479, fig. 67–69 (Dm; N.B.: a primary junior homonym and an objective junior synonym of *M. amoenus* Karsch, as per Waldock, 1995: 169).

Maratus volans: Źabka 1991: 39 (Tm from *Saitis*, S); Otto & Hill 2014a: 16, figs 8, 9.3–4, 16–21, 25, 29, 32, 36, 41; Zhang & Maddison, 2015: 77, figs 485–490.

Material examined. AUSTRALIA: 8 males (QM-S44771), south-east Queensland, Binjour Plateau, Swains Road, vine scrub, 25°32'S, 151°30'E, 340 m, 23 Sep.–21 Dec. 1997, Monteith, Cook, intercept trap; 7 males (QM-S44428), same as previous; 1 male (QM-S60108), same as previous, 20–26 Apr. 1998; 1 male (QM-S31979), south-east Queensland, Jack Smith E.P. on Boat Mountain, vine scrub, 26°08'S, 151°58'E, 340 m, 15 Dec. 1994–26 Jan. 1995, G. Monteith, intercept trap; 12 males (QM-S59966), south-east Queensland, Hurdle Gully 10.8 km WSW Monto, vine scrub, 24°54'S, 151°01'E, 320 m, 23 Sep.–20 Dec. 1997, Monteith, Cook, intercept trap; 1 male (QM-S31690), south-east Queensland, Hurdle Gully, 13 km WSW Monto, vine scrub, 24°54'S, 151°01'E, 350m, 23 Sep.–20 Dec. 1997, Monteith, Cook, intercept trap; 2 males (QM-S33357), south-east Queensland, Nangur State Forest 26°08'S, 151°58'E, 320 m, 24 Oct.–24 Nov. 1995, G. Monteith, intercept trap; 1 male (QM-S49213), same as previous, 29 Jul.–23 Oct. 1995; 1 male (QM-S73640), south-east Queensland, Perrys Knob, vine scrub, 27°36'S, 152°36'E, 200 m, 11 Nov. 1998–13 Jan. 1999, Monteith, Cook, Thompson, intercept trap; 1 male (QM-S54112), NEQ, High Falls, 16°24'S, 145°18'E, 500 m, 25 Jan.–12 Feb. 1996, R. Werz, pitfall traps.

Distribution. Queensland, New South Wales, Victoria.

Dance: You tube Peacock Spider 1(*Maratus volans*) (<https://www.youtube.com/watch?v=9GgAbyYDFeg>).

Acknowledgements

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