

## A new peacock spider from the Cape York Peninsula (Araneae: Salticidae: Euophryini: *Maratus* Karsch 1878)

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**Abstract.** A new species of the peacock spider genus *Maratus* Karsch, 1878 is described from the Cape York Peninsula, Queensland, Australia: *Maratus sagittus* sp. nov., the northernmost known occurring species in the genus.

**Key words.** Australia, euophryine, jumping spider, *Maratus sagittus*, salticid, taxonomy, new species

Adult males of the endemic Australian peacock spiders in the genus *Maratus* Karsch, 1878 can be distinguished from other euophryine genera by the presence of a dorsal opisthosomal plate covered with often brilliantly coloured scales, an elongated and usually ornamented third pair of legs, and also by the behaviour of most species, which elevate the opisthosoma and wave the third pair of legs to display to females (Girard et al. 2011; Hill & Otto 2011; Otto & Hill 2012). A new species of *Maratus* was discovered on a Bush Blitz expedition to Quinkan Country, an indigenous rock art region located within the Cape York Peninsula, Queensland. This region is of significant cultural and traditional importance to indigenous Australians (Cole & Buhrich 2012). Cape York Peninsula is the largest unspoiled wilderness in northern Australia (Mittermeier et al. 2002). Bush Blitz is a species discovery partnership program between the Australian Government, BHP Billiton Sustainable Communities and Earthwatch. The Quinkan Country expedition involved a team of scientists from Queensland Museum, Cairns Tropical Herbarium, Queensland Herbarium, and the University of NSW, working with Quinkan Country indigenous rangers and traditional owners: the Laura Ranger group and the Western Yalanji Aboriginal Corporation.

### Materials and Methods

The spider examined for this study is a single male specimen collected by hand in March 2017 on the Cape York Peninsula, Queensland and longitude coordinates were determined using a GPS receiver. The holotype was examined and photographed utilising a Leica MZ16A microscope and AutoMontage Pro Version 5.2. Photographs of the live spider were produced with a Canon EOS 700D and with an MP-E 65mm lens.

Abbreviations are as follows: ALE anterior lateral eyes; AME anterior median eyes; E embolus; ED embolic disc; PLE posterior lateral eyes; PME posterior median eyes; RSDL retrolateral sperm duct loop; RTA retrolateral tibial apophysis; TL tegular lobe. Total length measurement refers to the distance from the anterior margin of the carapace to the posterior margin of the opisthosoma.

***Maratus sagittus* sp. nov.**

*Type specimen.* The holotype male was collected near Laura, Quinkan Country, Cape York Peninsula, Queensland (15° 35' 18.6202" S, 144° 32' 15.5184" E, coll. J. McLean) on a Bush Blitz expedition on the 12th of March 2017. This has been deposited in the Queensland Museum, Brisbane (QM S107390).

*Etymology.* The specific name (*sagittus*, Latin m., noun, English translation: arrow) refers to the arrow-shaped marking on the dorsal opisthosomal plate of the male.

*Diagnosis.* The male of this species is distinguishable from those of other species of *Maratus* by the presence of a central, arrow-shaped patch of yellow, squamous setae on the dorsal opisthosomal plate and the deep, plum coloured integument of the carapace. The structure of the male pedipalp and the presence of a dorsal opisthosomal plate support its generic placement.

*Description of male* (Figures 1-5). In life: Carapace dark reddish-brown, ocular quadrangle region darker, almost black; central, diamond shaped patch of white setae extends from rear slope of carapace to between the PLE; antero-dorsal carapace thickly covered with band of orange setae; bands of white setae on flanks of carapace extend from edges of ALE almost to rear rim of carapace, surface below these bands pale and glabrous (Figure 1:1). AME and ALE ringed with short, white setae on lower perimeter and short, orange setae on the upper perimeter; long white setae project downwards from below AME forming a triangular shape; two larger, off-white spines project upwards between AME; clypeus otherwise pale-brown and glabrous (Figures 1:3, 2:2); chelicerae dark brown to black and glabrous; paturon with two blunt promarginal teeth and one sharper retromarginal tooth (Figure 3); coxae and labium dark brown and glabrous; endites dark brown with pale upper edges and glabrous; sternum dark brown with light covering of short, white setae (Figure 4:3).

Dorsal opisthosomal plate covered with iridescent blue to blue-purple or green scales (Figure 1:4); centre of dorsal opisthosomal plate with distinctive arrow-shaped patch of short, yellow, squamous setae (Figure 1:2); dorsal opisthosomal plate rounded and sharp-edged without lateral flaps; fringe of long, white setae encircling anterior and lateral opisthosomal plate, but breaking at posterior part of plate; tuft of white setae above black spinnerets (Figure 1:4); lateral and ventral opisthosoma dark brown and scattered with short, cream-coloured setae (Figures 3:3, 3:4).

Legs I and II subequal; legs III and IV longer; legs III by far longest; legs I and II mostly dark brown, almost black; tarsi and metatarsi on all legs pale-brown to orange; all legs with light cover of long light and dark setae; legs III and IV mostly brown, almost black; femora and tibiae on legs III and IV adorned with pale, almost white bands and lightly covered in long white setae (Figure 1:3). Pedipalp covered dorsally with long off-white setae; relatively large palpal bulb with retrolateral sperm duct loop, large retrobasal tegular lobe, finger-like RTA (Figure 2:1), anticlockwise coiled embolus (Figure 2:2).

*Dimensions.* Total length 4.08. Carapace length 2.32. Opisthosoma length 1.76. Leg I length 2.83. Leg II length 2.85. Leg III length 4.37. Leg IV length 3.79.

*Female.* Unknown.

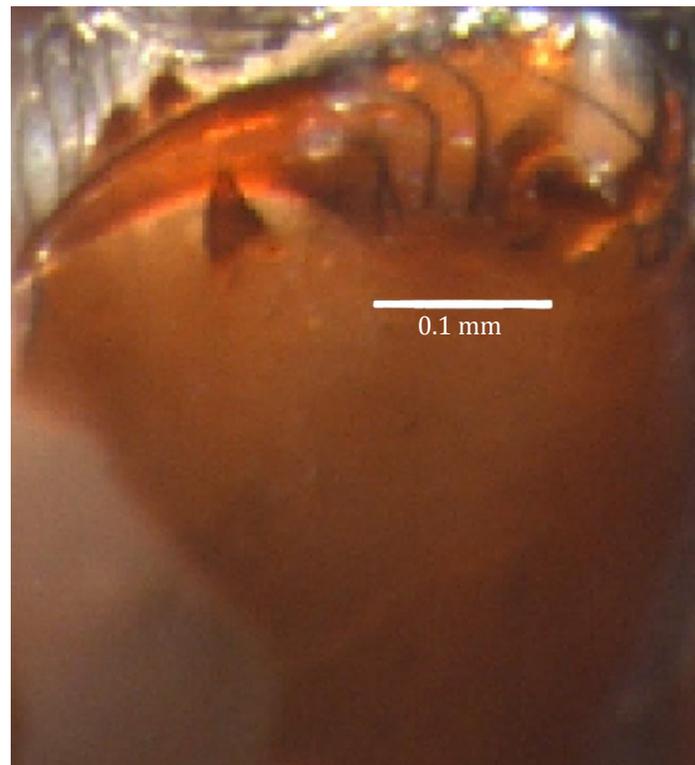
*Remarks.* *Maratus sagittus* sp. nov. is the northernmost occurring species in the genus (Otto & Hill 2017). We predict that *M. sagittus* sp. nov. is endemic to far-northern Queensland and that there may be other undescribed species of *Maratus* that occur in the largely unexplored far-northern Australia.



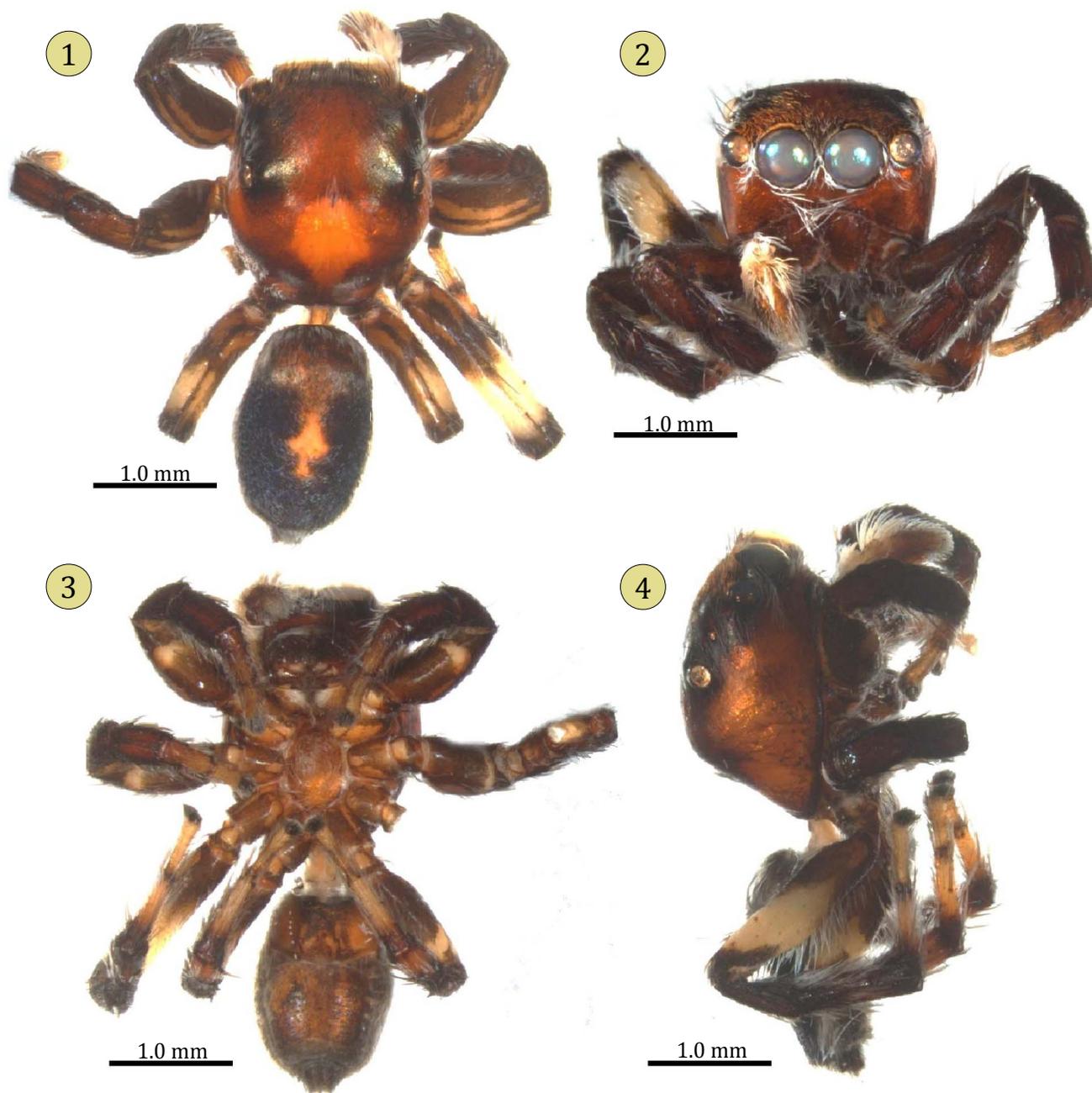
**Figure 1.** Habitus of living holotype male *Maratus sagittus* sp. nov. (Photos 1-6: Robert Whyte). **1**, Note paler integument beneath white setae on carapace, glabrous surface beneath the bands of white setae on flanks of carapace. **2**, Distinctive yellow arrow-shaped patch of setae on dorsal opisthosoma. **3**, Note orange-brown tarsi and metatarsi. Longer leg III ornamented with white banded femur and tibia. **4**, Iridescence of the short, squamous setae on opisthosomal plate visible here. **5**, Note lack of ornamentation on left leg III due to regeneration. **6**, Deep, plum coloured integument of the carapace shown here.



**Figure 2.** Automontage images of left pedipalp of preserved holotype *Maratus sagittus* sp. nov. **1**, Retrolateral view showing finger-like retrolateral tibial apophysis (RTA) and retrolateral sperm duct loop (RSDL). **2**, Ventral view showing embolic disc (ED) and tegular lobe (TL). **3**, Prolateral view.



**Figure 3.** Automontage image of left paturon showing cheliceral dentition. Paturon with two blunt promarginal teeth and one sharper retromarginal tooth.



**Figure 4.** Automontage images of the habitus of holotype. 1, Dorsal view. 2, Anterior view. 3, Ventral view. 4, Lateral view.

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