

Seven new peacock spiders from Western Australia and South Australia (Araneae: Salticidae: Euophryini: *Maratus*)

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Abstract: Seven new jumping spiders of the genus *Maratus* are described from Western and South Australia: *M. albus*, *M. australis*, *M. bubo*, *M. lobatus*, *M. tessellatus*, *M. vespa*, and *M. vultus*. This brings the number of confirmed *Maratus* species to 48, with an additional 16 *Maratus* species that require further study to resolve their correct generic placement. Distinctive features of the courtship display of these species are also illustrated.

Key words: courtship, euophryine, jumping spider, *Maratus albus*, *Maratus amabilis*, *Maratus anomalus*, *Maratus australis*, *Maratus avibus*, *Maratus bubo*, *Maratus caeruleus*, *Maratus karrie*, *Maratus lobatus*, *Maratus madelineae*, *Maratus mungaich*, *Maratus sarahae*, *Maratus tasmanicus*, *Maratus tessellatus*, *Maratus vespa*, *Maratus vultus*

In recent years many new peacock spiders (*Maratus* Karsch 1878) have been described from Australia (World Spider Catalog 2016). Here we describe seven new species from areas near the southern coast of Western Australia and South Australia (Figure 1), increasing the total number of confirmed species in *Maratus* to 48, with an additional 16 species presently placed in that genus that require further study before they can be confirmed or placed in a different genus (Appendix 1).



Figure 1. Localities for seven new *Maratus* species from the southern coast of Western Australia and South Australia. *Maratus albus* and *M. lobatus* are widely distributed. *M. australis* and *M. vultus* are each known from two localities near the southern coast of Western Australia. Each of the other three species (*M. bubo*, *M. tessellatus*, and *M. vespa*) has been found at a single locality in the southwestern corner of Australia, south of Perth.

***Maratus albus*, new species**

Type specimens. The holotype male (♂ #1), six paratype males (♂ #3-6, 8-9), and four paratype females (♀ #2, 4, 6-7) were collected at Eyre Bird Observatory, Nuytsland Nature Reserve, WA (32.24788 °S, 126.30167 °E, 2 OCT 2013, coll. J. Otto, coastal sand dune vegetation). Three paratype males (♂ #K5, K6, and one unnumbered) and two paratype females (♀ #K1, K3) were collected at Flinders Chase National Park, Kangaroo Island, SA [either Cape Du Couedic at 36.0599 °S, 136.70585 °E, 24 OCT 2015, coll. J. Otto, coastal heath, or Weirs Cove at 36.0546 °S, 136.71752 °E, 28 OCT 2015, coll. J. Otto, coastal heath]. One paratype male (♂ #K8) was collected at D'Estrees Bay, Kangaroo Island, SA (35.939679 °S, 137.59777 °E, 25 OCT 2015, coll. J. Otto, 'pig face' [*Carpobrotus* sp.] and other beach vegetation). One paratype male was collected at Port Lincoln, SA (34.7325 °S, 135.88333 °E, 12-13 NOV 2014, coll. A. Fletcher and M. Doe). The WA specimens will be deposited in the Western Australian Museum, Perth, and the SA specimens will be deposited in the South Australian Museum, Adelaide.

Etymology. The species group name (*albus*, Latin, m., adjective, English translation *white*) refers to the many prominent white setae of the adult male.

Diagnosis. The adult male has a distinctive cover of long white setae on the legs, pedipalps, lower half of the carapace including the clypeus, and the dorsal opisthosoma (Figures 2-3). The dorsal opisthosoma is marked with a dark 'V' shape, pointed toward the front. The colouration of females varies greatly, from mostly white to white and black or brown. We place *M. albus* in the *anomalus* group within the genus *Maratus*, along with *M. anomalus* and *M. vultus*. In all three species the apex of the outer ring of the embolus of the male pedipalp is blunt and bifurcated.

Description of male (Figures 2-6). Males from Eyre Bird Observatory (N=7) ranged from 3.32 to 4.18 mm in length. Males from Kangaroo Island (N=3) ranged from 3.73 to 4.20 mm in length. One male from Port Lincoln was 3.56 mm in length. The chelicerae are black and glabrous. Long, dense white setae extend from the lower sides of the carapace to cover the clypeus, where they extend over the proximal part of each chelicera. In front, this field of white setae extends from the AME to the chelicerae. In front, the pedipalps are also covered with these long white setae. On the sides of the carapace, the white setae are oriented upward, separate from a relatively narrow marginal band of shorter white setae. The top half of the carapace, including the eye region and areas surrounding the eyes, has a uniform cover of brown to red-brown setae. A more or less distinct lateral band of white scales extends behind each PLE, in some cases extending to the rear margin of the carapace. The PME are closer to the PLE than to the ALE.

The dorsal plate of the opisthosoma is also covered with long, white setae, except for dark areas at the center that tend to take the form of a 'V' pointed to the front. Some males from Kangaroo Island had brown scales in these dark areas (Figure 3:7-12). Long, stout white setae extend forward from the anterior margin of the opisthosoma, and long white setae also cover the sides of the opisthosoma. The underside of the opisthosoma is brown with black lateral stripes (Figure 6:3). The sternum bears long white setae to the rear, but is otherwise dark and glabrous. The endites are dark and glabrous. The legs are generally brown with many long white setae. Legs I and II are shorter than legs III and IV, and legs III are by far the longest. As viewed from the front the distal patella and femur of each leg III is black with a prominent ventral fringe of black setae. The proximal femur, and the metatarsus and tarsus are covered and fringed with long white setae. In many males the cover of long white setae on legs I, II, and IV, as well as the fringe of white setae of the anterior femur III, is very well developed (Figure 2:11). The pedipalps (Figure 5) are typical for *Maratus* in most respects. The two apices of the embolus are well-developed. The inner apex is shorter, thinner, and pointed. The outer apex is longer and thicker, and is bifurcated and flattened at the tip.



Figure 2. Four adult male *Maratus albus* types from Eyre Bird Observatory. 1-4, Holotype.



Figure 3. Nine adult male *Maratus albus* from Eyre Bird Observatory (1-6) and Kangaroo Island (7-12).

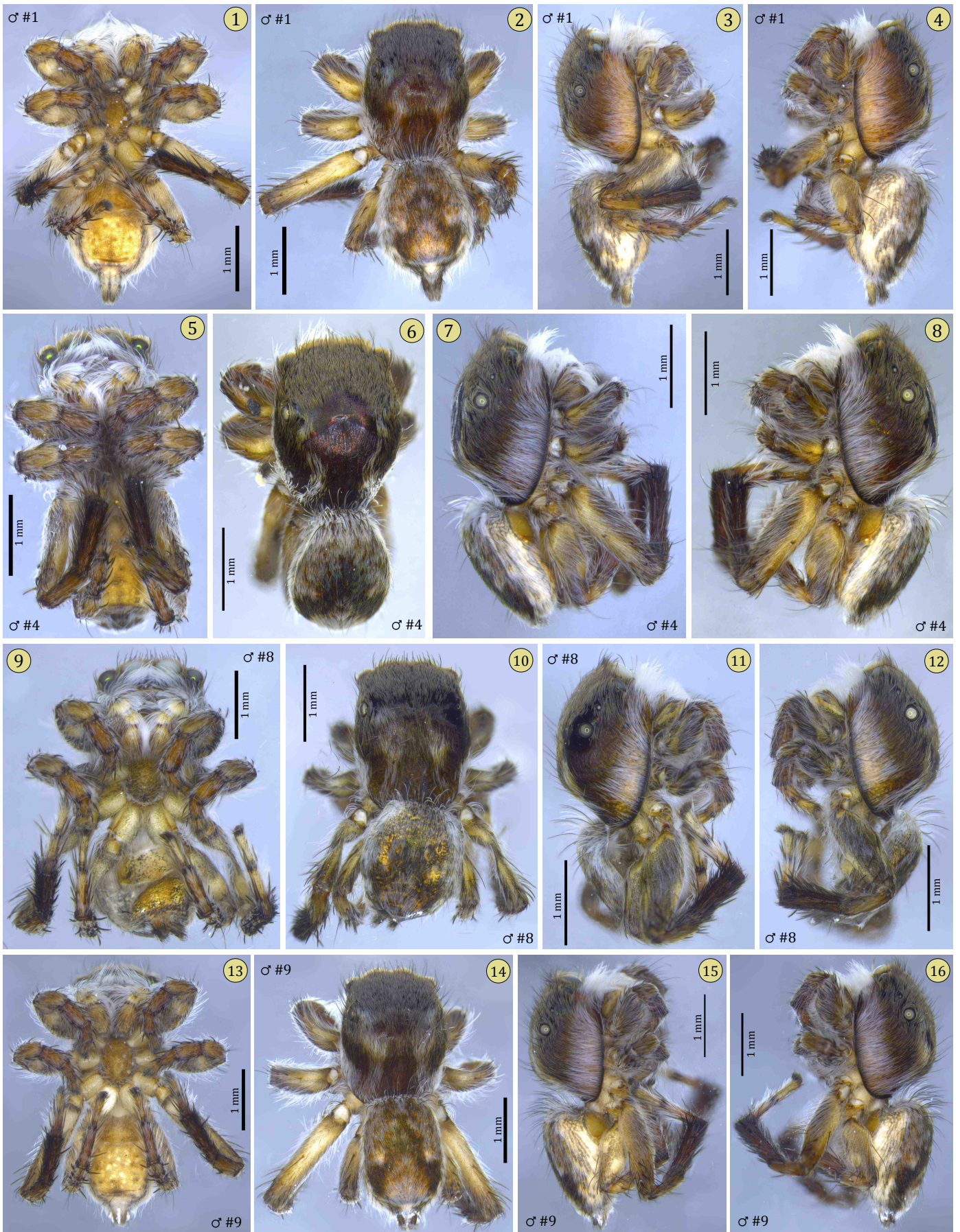


Figure 4. Four adult male *Maratus albus* from Eyre Bird Observatory in alcohol. 1-4, Holotype.

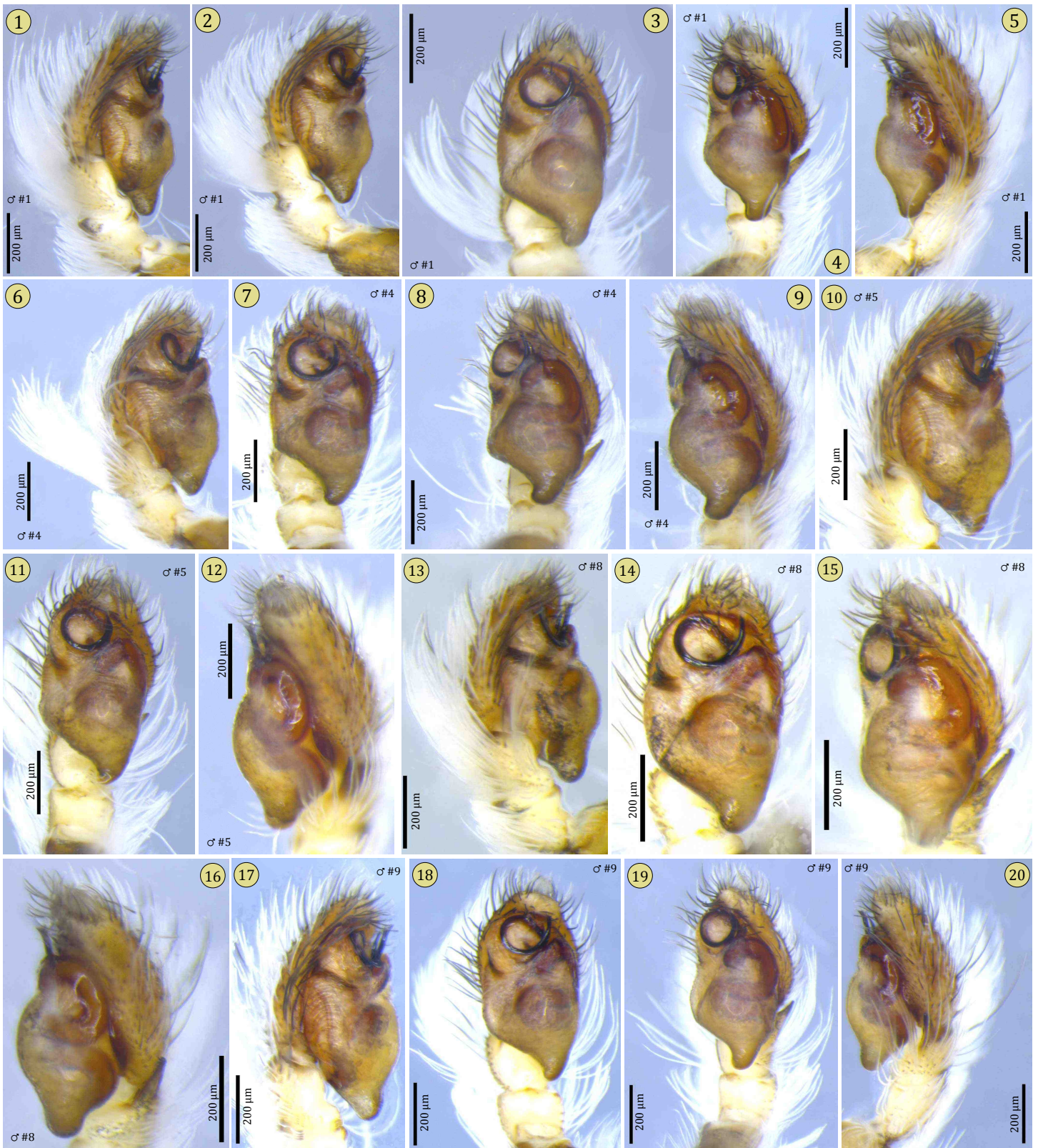


Figure 5. Medial to lateral views of the left pedipalp of five adult male *Maratus albus* from Eyre Bird Observatory, all types. 1-5, Holotype.

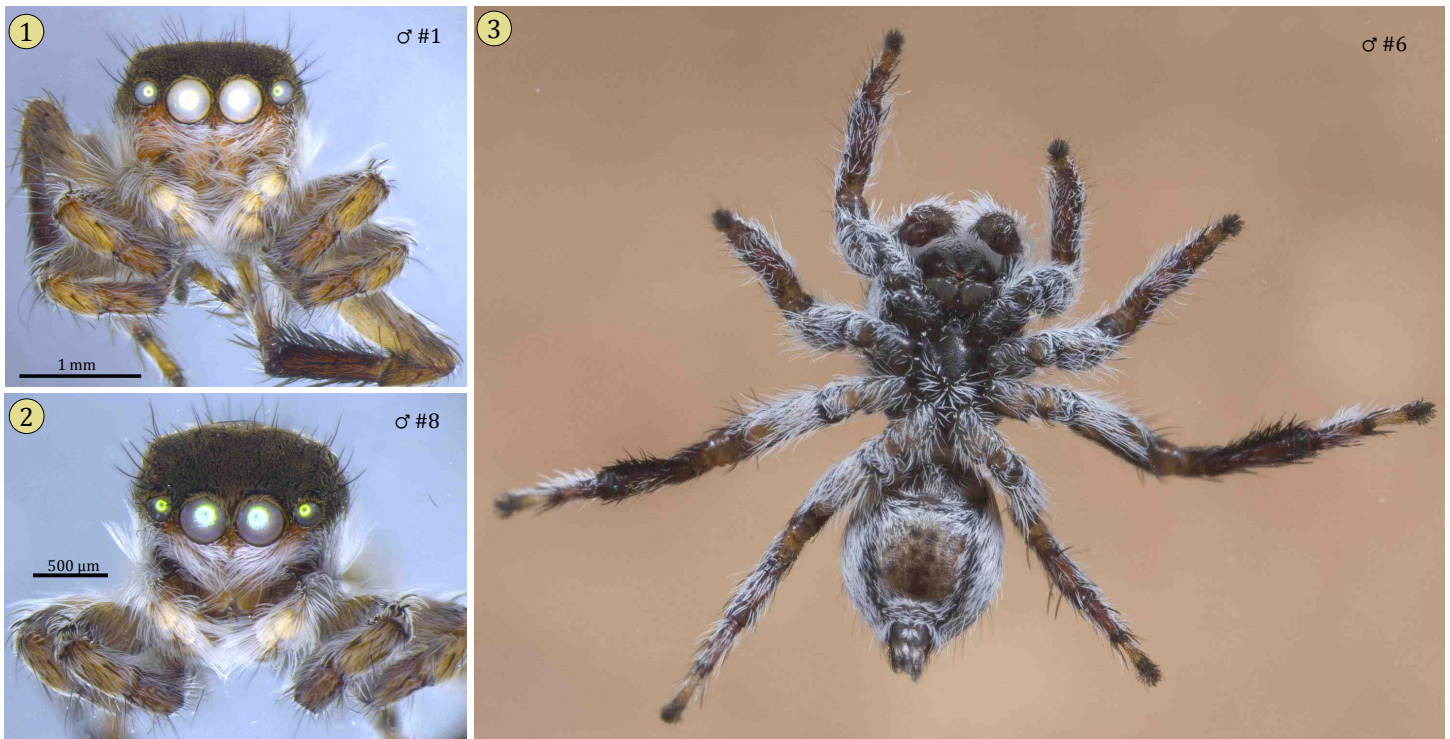


Figure 6. Frontal views of two adult male *Maratus albus* from Eyre Bird Observatory in alcohol (1-2), and ventral view of living male *M. albus* (3).

Description of female (Figures 7-10). Females from Eyre Bird Observatory (N=3) ranged from 4.39 to 4.53 mm in length. Females from Kangaroo Island (N=2) ranged from 4.83 to 5.86 mm in length. Adult females are highly variable in appearance, from white to white and black to brown, but share many features with adult males. They have many long, white setae covering the lower sides of the carapace and the clypeus. Their chelicerae are dark brown and glabrous but not black as in the males. They also have wide lateral bands of white setae extending to the rear behind the PLE. In some individuals off-white or brown setae are mixed with the white setae, and as with the males the females from Kangaroo Island (Figure 8) tend to have many more brown setae. The eye region has a covering of white (Eyre Bird Observatory) to brown (Kangaroo Island) setae. The PME are almost equidistant between the ALE and the PLE. Directly behind the eye region, between the lateral bands, the carapace is dark brown or black. Although the long white scales that cover the sides of the carapace extend almost to the margin, there is no distinct marginal band as in the males. The dorsal opisthosoma has a covering of white or brown setae and often (but not always) has a prominent, dark central figure that varies greatly in shape and appearance (Figures 7-8). Several pairs of white or brown spots may be present along the margins of this dark region, or embedded in a uniform cover of brown setae. The ventral opisthosoma is covered with shorter white or brown setae, and a pair of indistinct, dark lateral stripes may be present. The coxae, sternum, and endites are translucent white or brown, with a fringe of white setae around the margins of the sternum.

All four legs, and the pedipalps as viewed from the front, are covered with white or light brown setae, interrupted by a dark, more or less distinct ring at each joint. Legs I and II are shorter than legs III and IV, and leg III is the longest. The epigynum (Figure 9: 13-16) varies greatly with respect to the relative size of the fossae (fenestrae) and posterior spermathecae, and the separation of the fossae (wide to very narrow septum). Between each fossa and each spermatheca a pair (lateral and medial) of heavily sclerotized ducts of variable width can be seen.

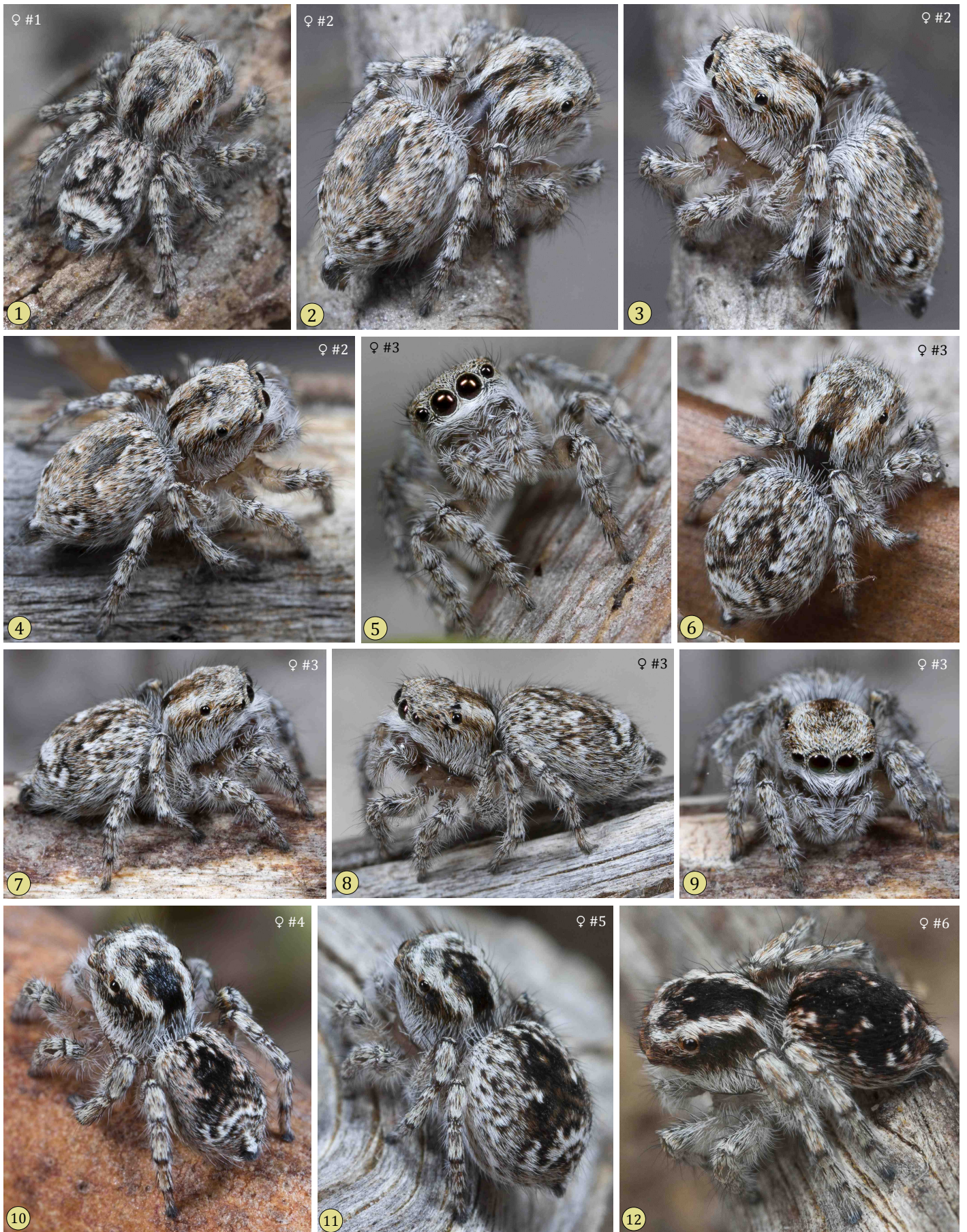


Figure 7. Six female *Maratus albus* from Eyre Bird Observatory.



Figure 8. Four female *Maratus albus* from Kangaroo Island. Compared to the black and white females from Eyre Bird Observatory (Figure 7), these had many more brown setae.

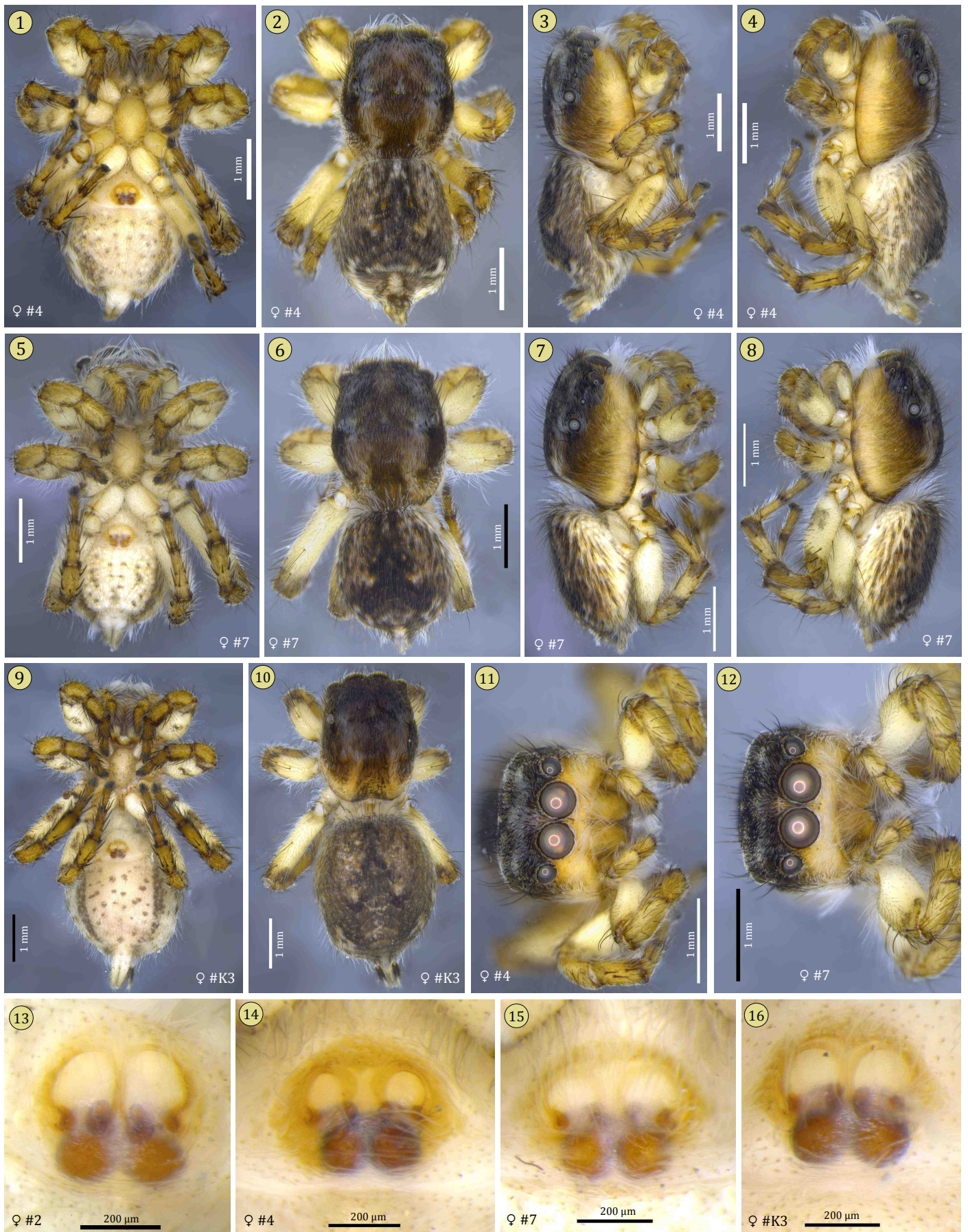


Figure 9. Female *Maratus albus* in alcohol. **13-16**, Epigyna of four females.

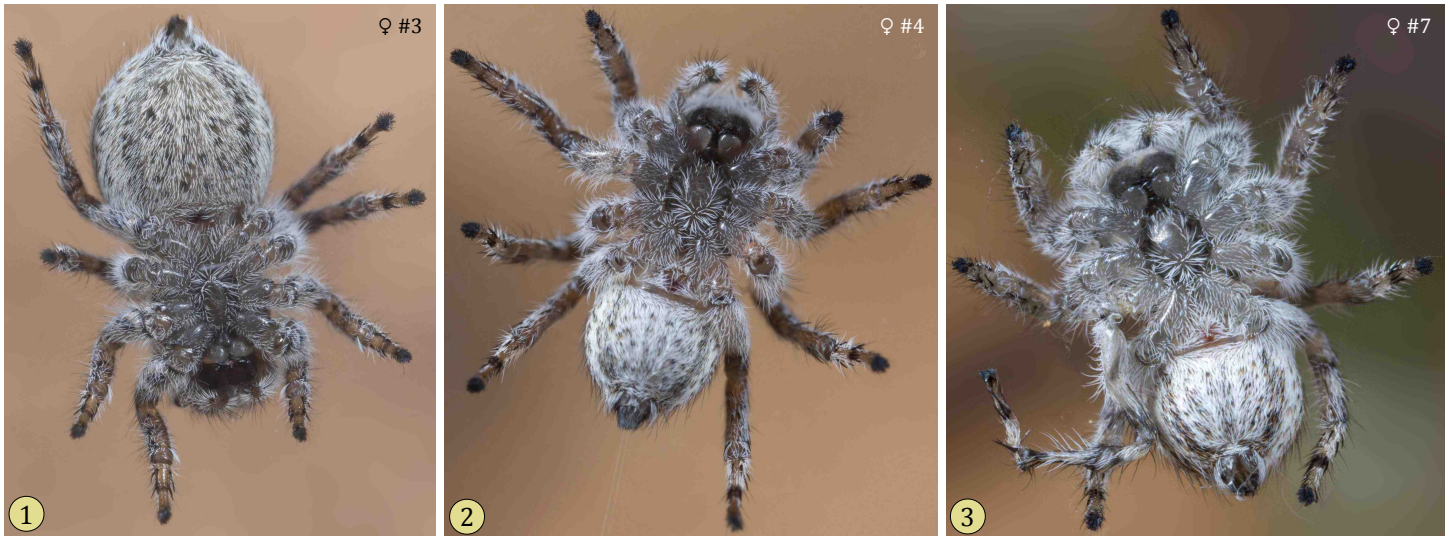


Figure 10. Ventral views of three female *Maratus albus*. **3**, This female had a deformed right rear leg.

Immatures (Figures 11-12). Immature *Maratus albus*, like adult females, have many long white setae on the legs and sides of the carapace, with no marginal band, and with red-brown to black markings on the dorsum and around the eyes. Even the second (emergent) instars have these setae (Figure 11:1-3).



Figure 11. Immature *Maratus albus*, offspring of spiders collected at Kangaroo Island. **1-2**, Second or emergent instar. **3**, Different second instar with more red-brown colouration of the legs and dorsal markings. **4-6**, Three views of an older immature *M. albus*.

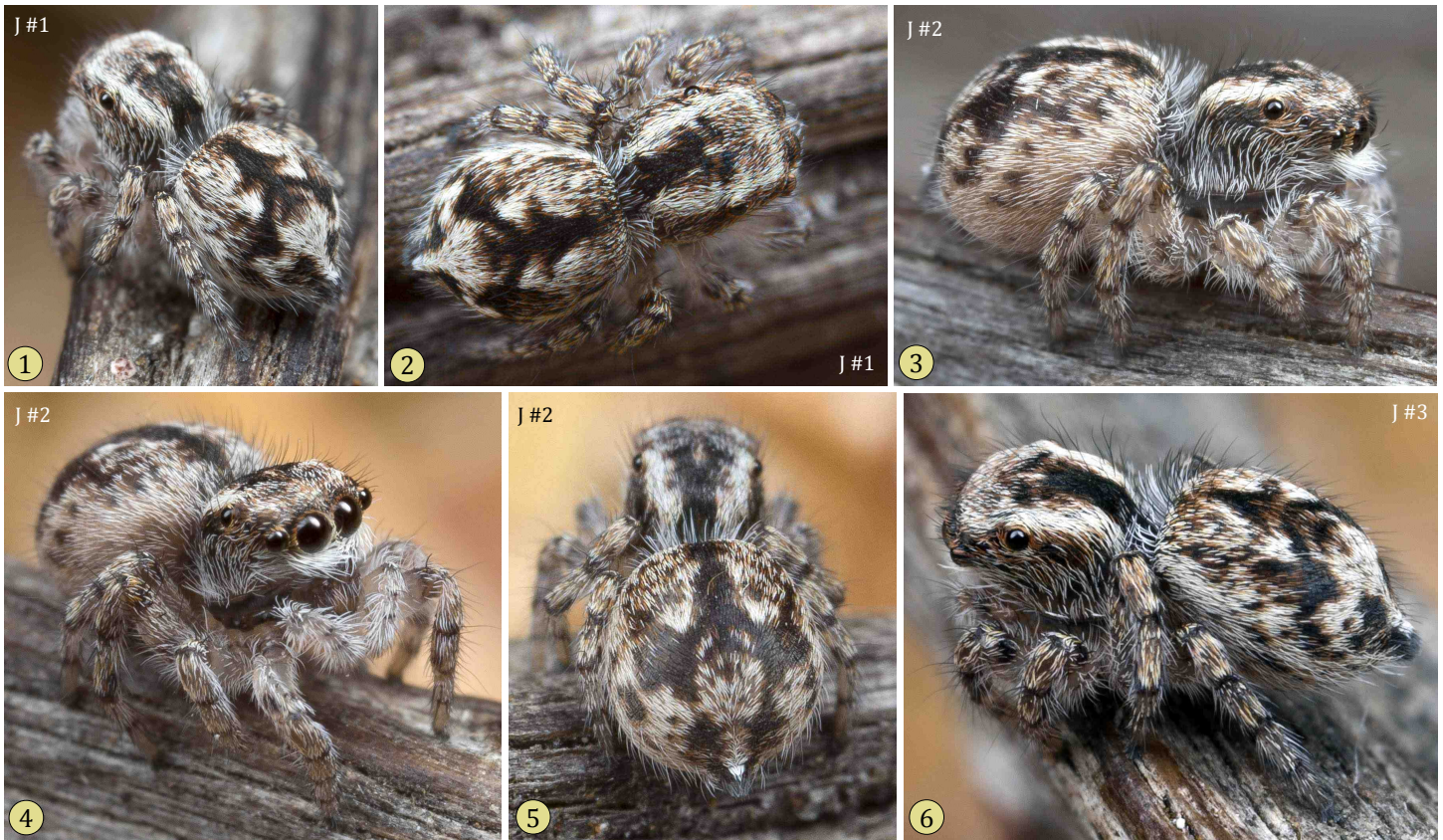


Figure 12. Views of three different immature *Maratus albus*, offspring of spiders collected at Kangaroo Island.

Courtship display (Figures 13-15). The display of a male *Maratus albus* in front of a sighted female was observed in a simulated natural setting in the laboratory. This display is relatively simple, consisting of assymmetric semaphore signalling with extended legs III, slightly flexed at the patellar-tibial joint. From a symmetrical position with both legs held upright, the leg III of one side is first lowered to a horizontal position in several discrete steps, then returned to an upright position in several discrete steps. Then the opposite leg III is moved in the same manner, lowered and then raised in several discrete steps. This alternating leg III semaphore may be continued through a series of cycles (one cycle: left down, left up, right down, right up) of 2-3s duration. The opisthosoma is not raised or displayed to the female during this display.

As noted for other *Maratus*, a female may indicate rejection of a male by rearing and waving her abdomen. Two females that engaged in this behaviour mated with males in subsequent encounters.

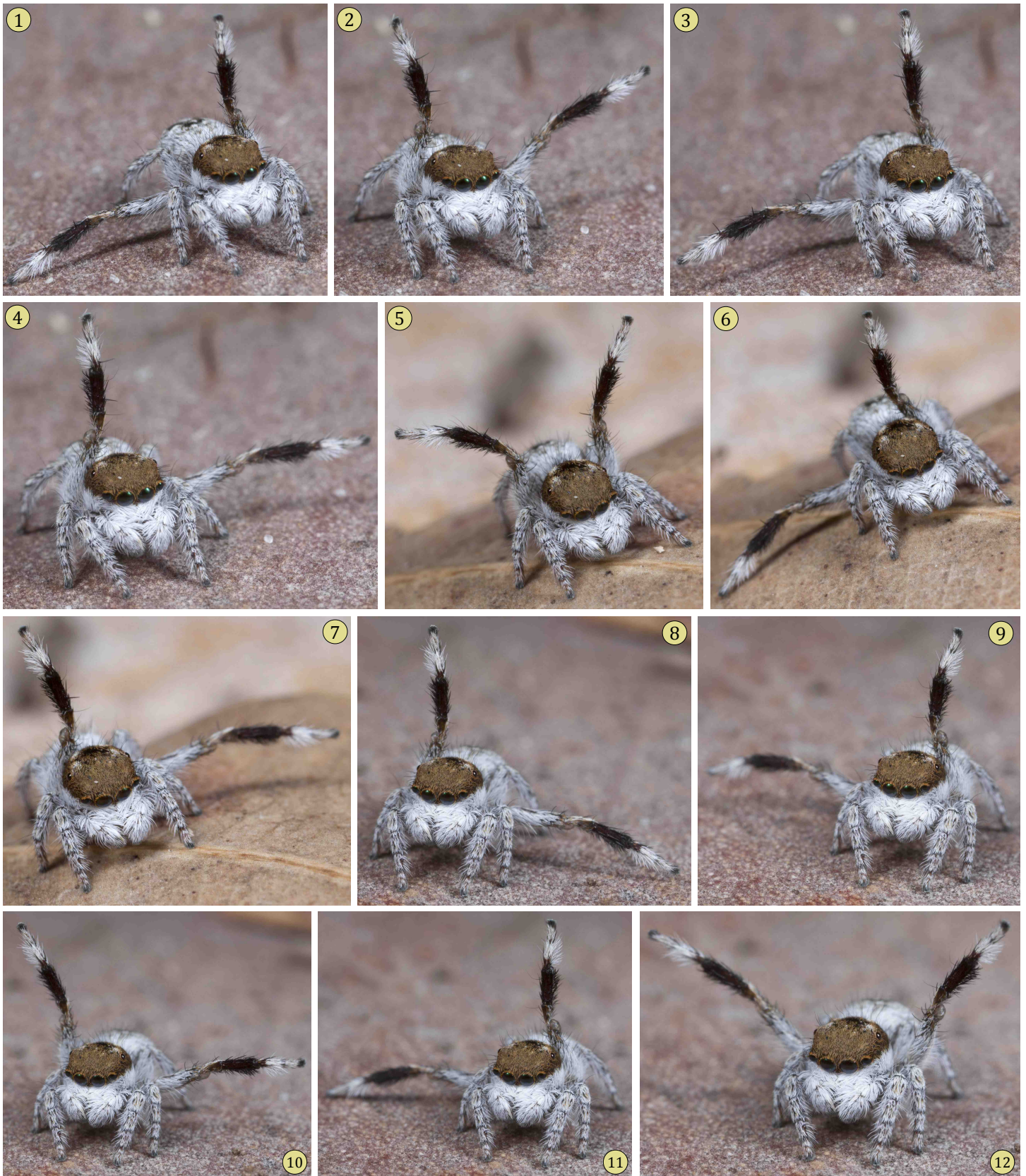


Figure 13. Series of positions assumed by the holotype male *Maratus albus* (σ #1) during courtship of a female.

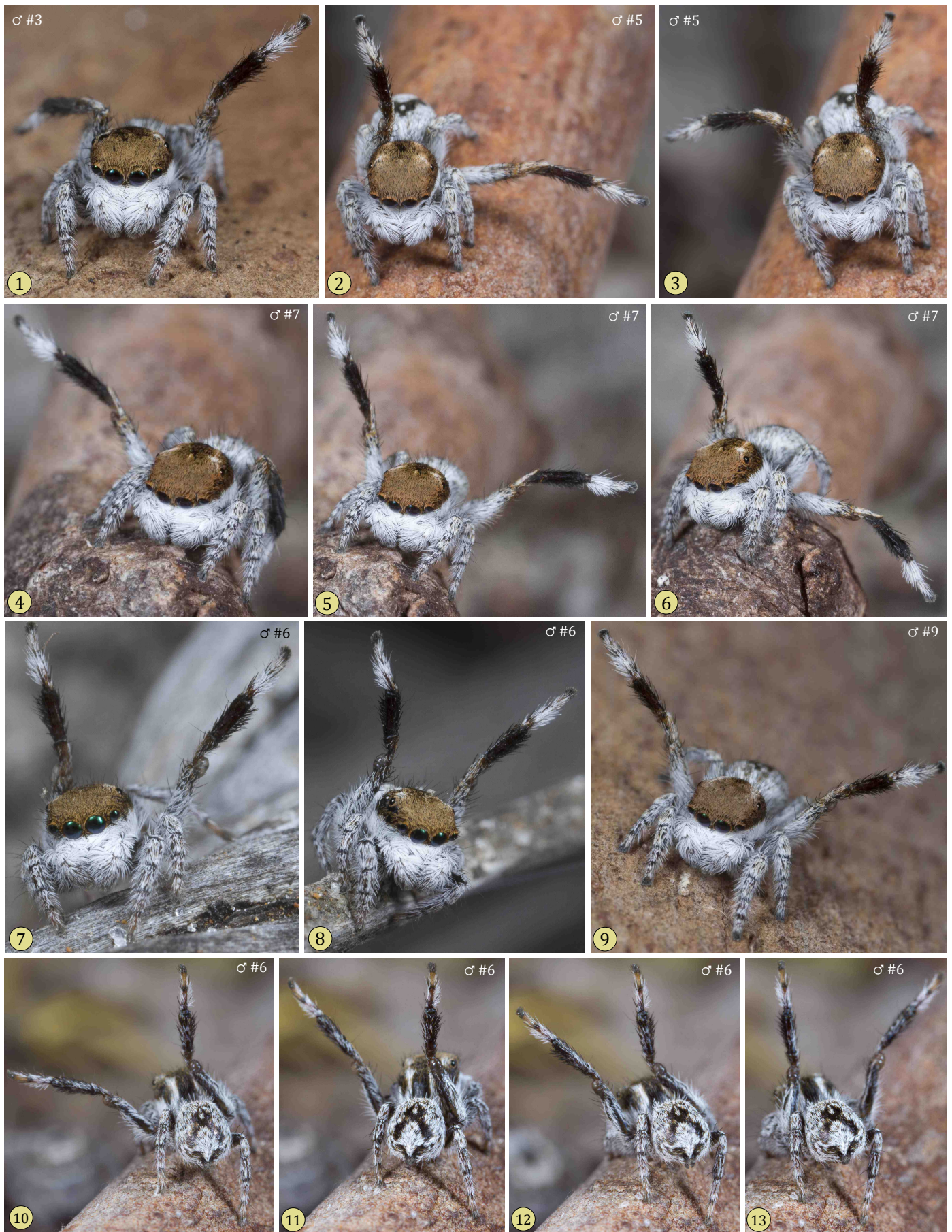


Figure 14. Courtship display positions of five different male *Maratus albus* from Eyre Bird Observatory.



Figure 15. Selected frames from a 25fps video showing sequential positions held during the display of a male *Maratus albus*.

Jumping. As do other *Maratus*, *M. albus* power their jumps primarily through extension of their legs III (Figure 16).



Figure 16. Three different male *Maratus albus* preparing to jump (1-2), or just after take-off (3). 1-2, Note the elevation of legs I and II and the flexion of legs III in preparation for a jump. 3, In this more vertical jump, legs III are shown in a completely extended position just after take-off.

Habitat and distribution. Localities where *Maratus albus* was found are shown in Table 1 and on the map (Figure 1). These spiders were found on low coastal vegetation, along beach paths running through sand dunes (Eyre Bird Observatory, Figure 17:1), on a sandy beach (D'Estrees Bay, Kangaroo Island), or on rocky terrain (Flinders Chase NP, Kangaroo Island, Figure 17:2).

Table 1. Localities for *Maratus albus*.

Locality	Map coordinates	Date	Attribution
Eyre Bird Observatory, Nuytsland Nature Reserve, WA	32.24788 °S, 126.30167 °E	2 OCT 2013	collected by J. Otto
Cape Du Couedic, Flinders Chase National Park, Kangaroo Island, SA	36.0599 °S, 136.70585 °E	24 OCT 2015	collected by J. Otto
Weirs Cove, Flinders Chase National Park, Kangaroo Island, SA	36.0546 °S, 136.71752 °E	28 OCT 2015	collected by J. Otto
D'Estrees Bay, Kangaroo Island, SA	34.75919 °S, 117.49637 °E	25 OCT 2015	collected by J. Otto
Port Lincoln, SA	34.73250 °S, 135.88333 °E	12-13 NOV 2014	collected by A. Fletcher and M. Doe
Thompson Beach, Postcode 5501, SA			photographed by M. Newton



Figure 17. Coastal vegetation at Eyre Bird Observatory (1) and Flinders Chase NP, Kangaroo Island (2).

***Maratus australis*, new species**

Type specimens. The holotype male (♂ #9), nine paratype males (♂ #1-8, 11), and five paratype females (♀ #1-3, 5-6) were collected at Pine Grove Holiday Park, Esperance, WA (33.83208 °S, 121.8904 °E, 8 OCT 2013, coll. J. Otto, leaf litter behind park cabin). One paratype male was collected later (33.85 °S, 121.77417 °E, 15-17 NOV 2014, coll. M. Doe and A. Fletcher). These will be deposited in the Western Australian Museum, Perth.

Etymology. The species group name (*australis*, Latin, m., adjective, English translation *southern*) refers to the distribution of this species at the southern margin of the Australian continent.

Diagnosis. *Maratus australis* is a close relative of the eastern *M. tasmanicus* Otto & Hill 2013 (Figure 18). We previously identified a peacock spider from Eucla in a photograph of a male posted by Framenau (2009) as *M. tasmanicus* (Otto & Hill 2013), but now consider this to be a *M. australis*. Male *M. australis* can be distinguished by the appearance of the pedipalps from the front, each with a dark dorsal stripe fringed with white setae, black metatarsi III, the presence of a wider median thoracic band behind the eye region, separation of the median stripes of the fan, and separation of the two lateral red-orange stripes at each anterior lateral margin of the fan. The male pedipalps of the two species are similar, with a larger outer apex and a shorter inner apex associated with each embolus. In the *M. australis* that we have examined the two apices are separated, whereas these were heavier and contiguous in *M. tasmanicus* (Otto & Hill 2013). Female *M. australis* resemble *M. tasmanicus*, but are darker with less orange colour and more distinct separation of a dark brown dorsal opisthosoma from the tan lateral margins by irregular black lateral lines. The epigyna of both species are similar, with darker or sclerotized ducts visible through the posterior half of the fenestrae (fossae).



Figure 18. Comparison of two male *M. tasmanicus* from Tasmania (1-2) with a male *M. australis* from Esperance (3)

Description of male (Figures 19-25). Males (N=10) ranged from 3.95 to 4.59 mm in length. The chelicerae are black. Long white setae project anteriorly near the median of the clypeus. The pedipalps are distinctive when viewed from the front, marked with a prominent, dark dorsal stripe surrounded by fringes of long white setae. The carapace is dark. The eye region is covered with grey setae, interrupted by a stripe of red-brown setae behind each anterior eye, and often with a fifth median stripe of red-brown setae. Scattered white to grey setae occur on the sides of the carapace, and there is a distinct marginal band of white setae. Behind the eye region a wide median thoracic band of white setae tapers and ends about halfway to the posterior margin of the carapace.

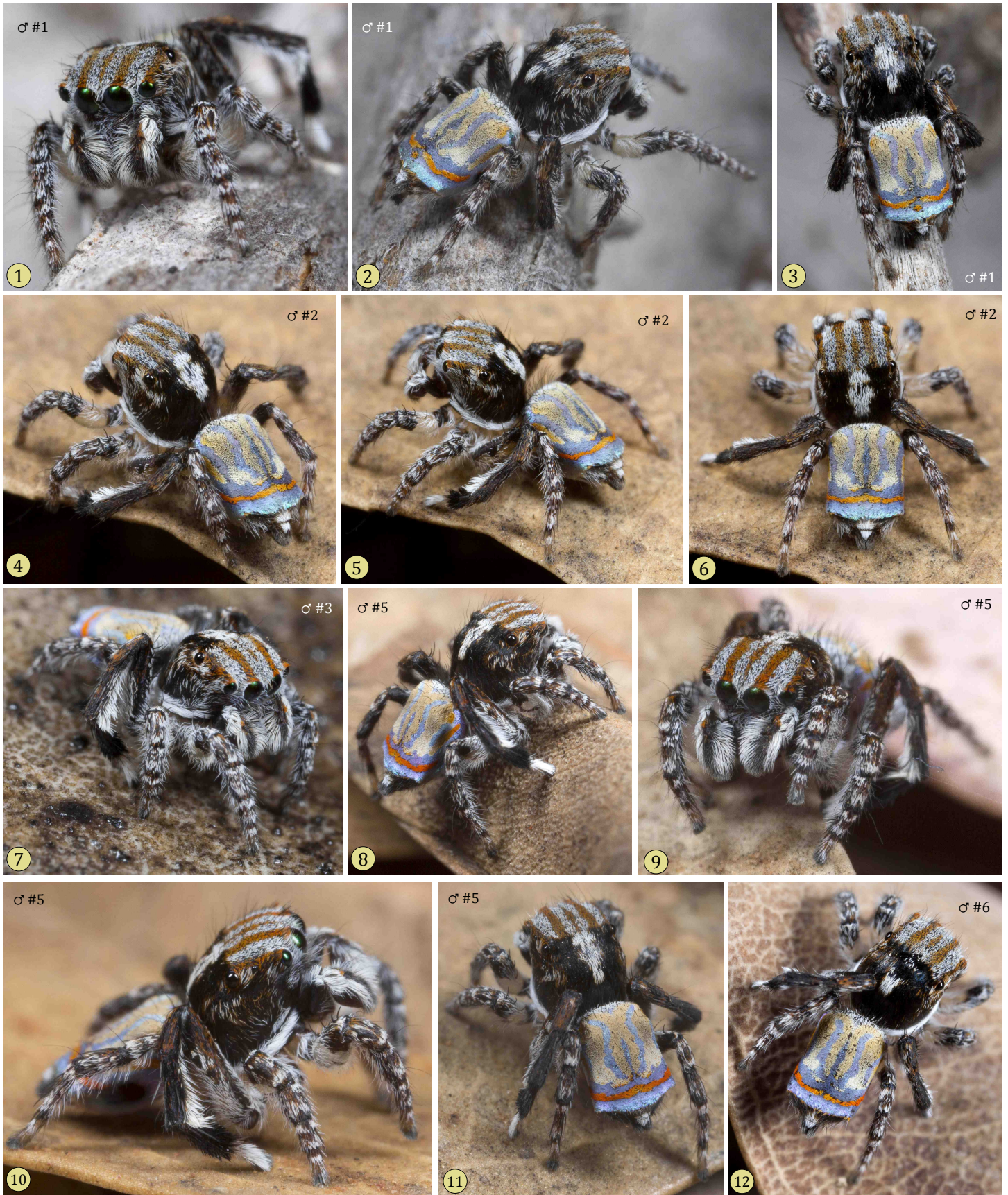


Figure 19. Five different adult male *Maratus australis*.



Figure 20. Six different adult male *Maratus australis*. 4, Holotype (♂ #9).

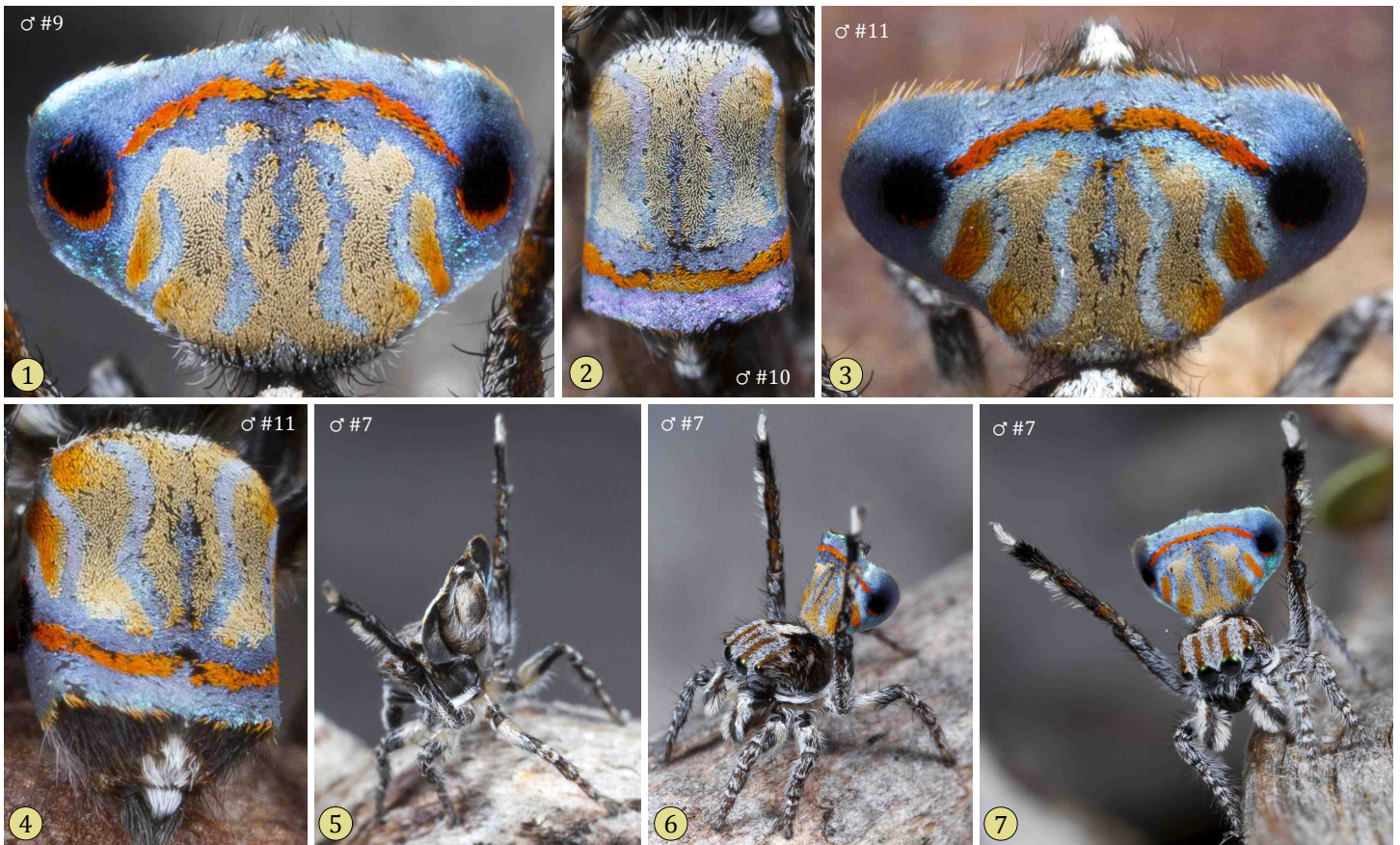


Figure 21. Adult male *M. australis*. 1, 3, Extended fan of two males. 2, 4, Folded fan of two males. 5-7, Three views of a male displaying to a female.

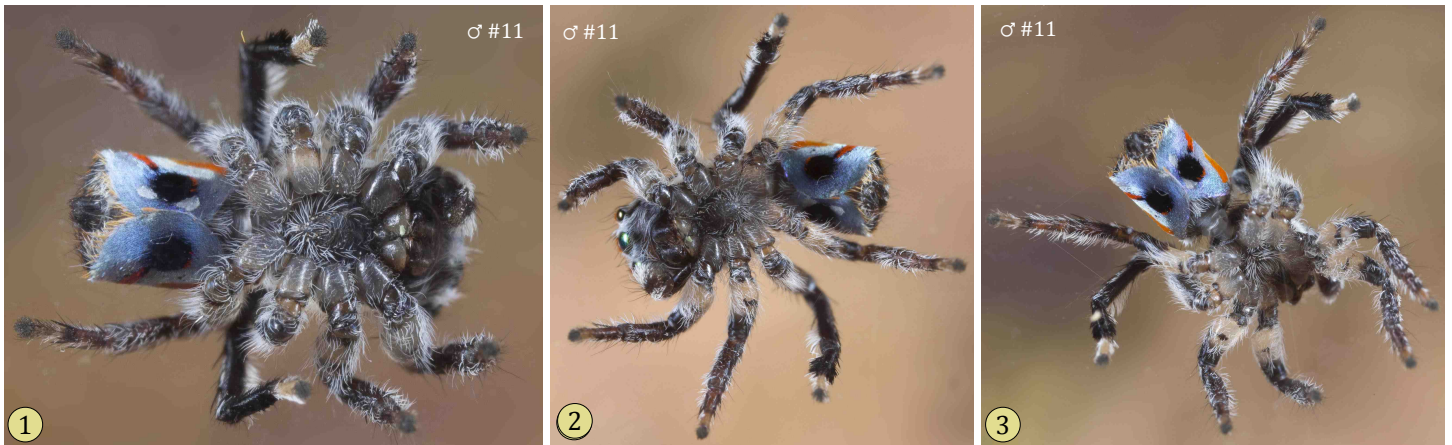


Figure 22. Three ventral views of an adult male *Maratus australis*. Note the overlap of the lobes of the fan when they are folded around the opisthosoma.

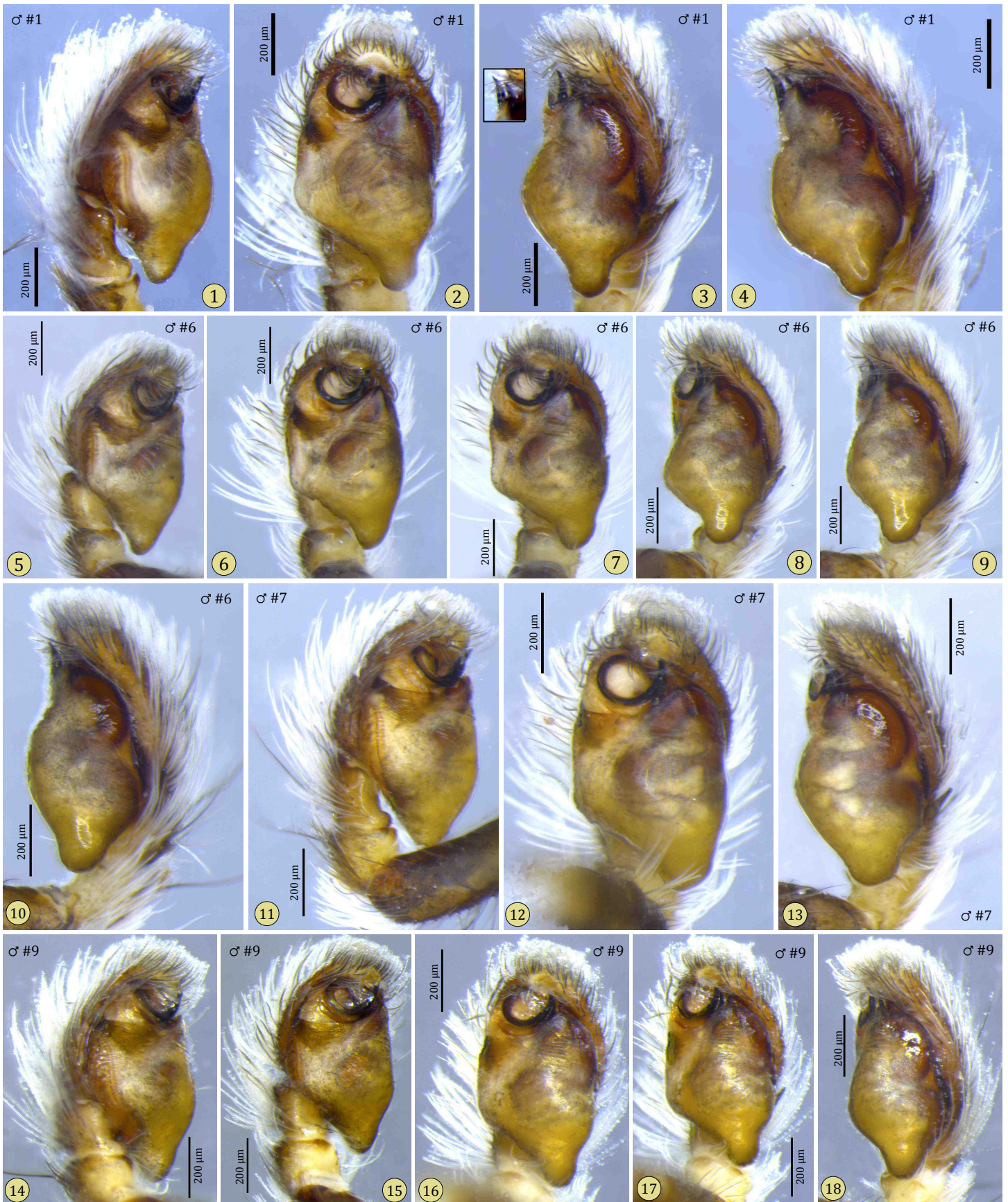


Figure 23. Medial to lateral views of the left pedipalp of four adult male *Maratus australis*. 14-18, Holotype (♂ #9).

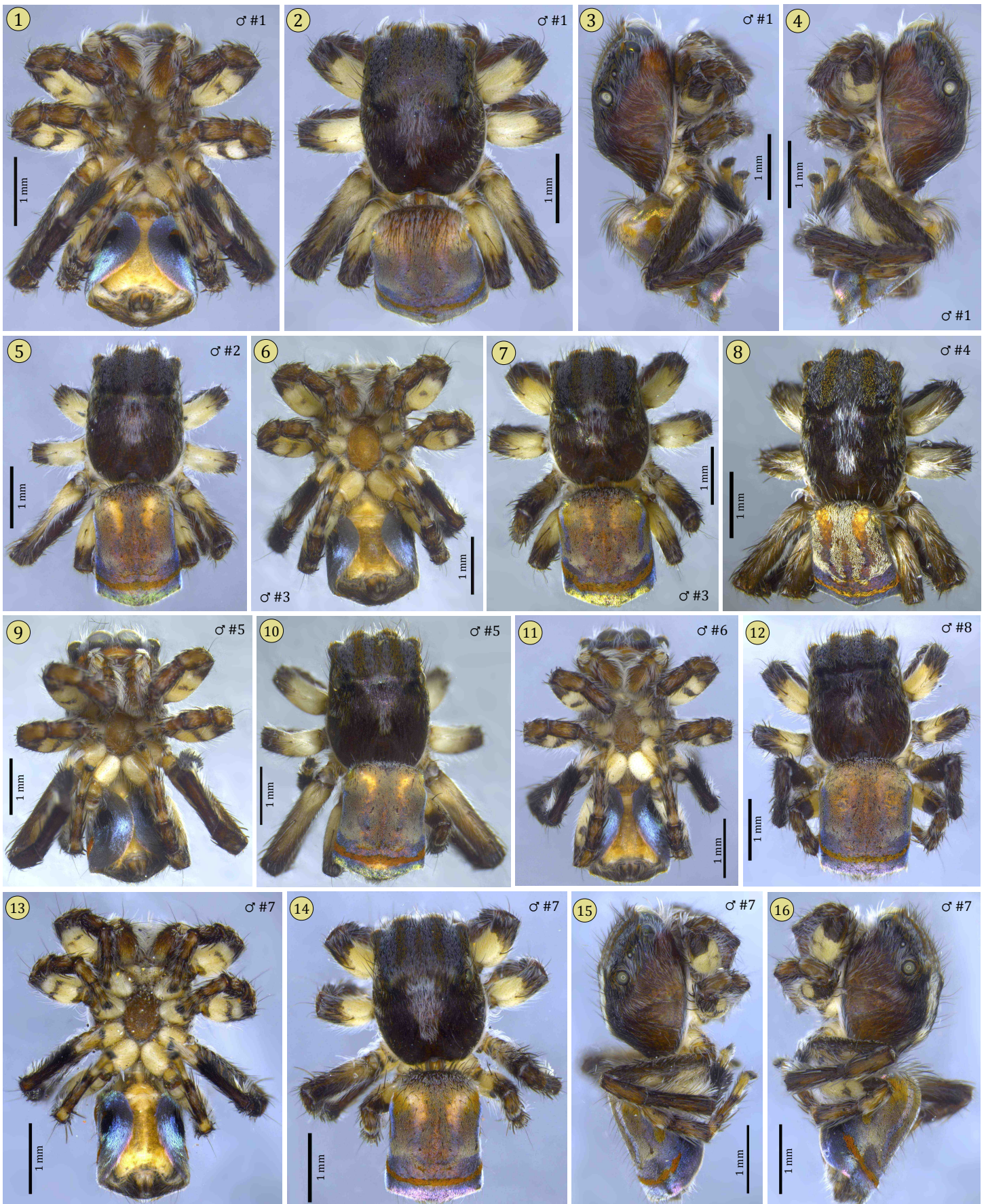


Figure 24. Four adult male *Maratus australis* in alcohol. **8**, This specimen was air-dried before placement in alcohol gel. The other specimens were first preserved in ethanol.

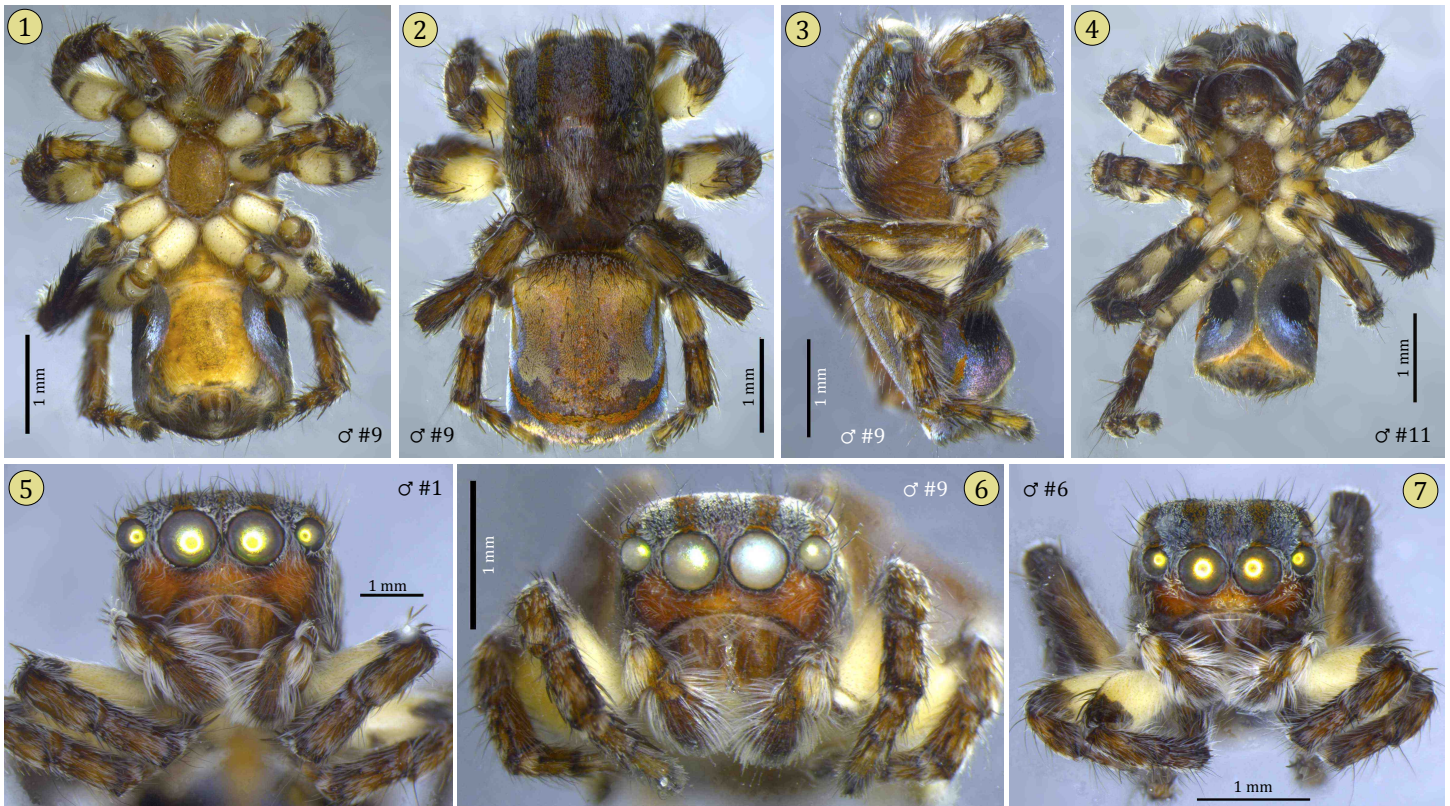


Figure 25. Three adult male *Maratus australis* in alcohol. 1-3, 6, Holotype (♂ #9).

The dorsal opisthosoma (Figure 21) is thinly fringed with long, stout black and white setae extending to the front. The fan is distinctly lobed with a large black spot centered on each lobe, with a cover of iridescent blue to purple scales. At the center lies a complex figure comprised of three irregular bands of light to dark orange scales on either side. A narrow band of bright red-orange scales runs parallel to the posterior margin of the fan, joining the large black spots of the lateral lobes. When retracted the lobes of the fan overlap slightly below the abdomen. Behind and under the fan to the rear the dorsal opisthosoma is dark, with a median patch of white setae contiguous with a smaller patch of white colular setae to the rear. From below, the opisthosoma is light brown anteriorly, with a large dark brown patch toward the rear, flanked laterally by dark brown stripes (Figure 30:4). Viewed from below the coxae, sternum, labium, and endites are mostly glabrous with a few scattered setae, particularly at the rear of the sternum.

Legs I and II are shorter than legs III and IV, and legs III are by far the longest. Legs I, II and IV are ringed with bands of white setae alternating with darker bands. Legs III are dark brown with a light cover of white setae on the femora, a white fringe under each tibia, black metatarsi with a black fringe below, and bright white setae covering the tarsi. The pedipalps (Figure 23) are typical for *Maratus*. Each embolus has two distal apices that are slightly separated, both sharply pointed. The outer apex is larger and longer.

Description of female (Figures 26-29). Females (N=5) ranged from 3.84 to 5.88 mm in length. The chelicerae are brown and glabrous. A fringe of long white setae projects forward from the clypeus. The carapace is dark brown dorsally, lighter at the sides. The eye region is covered with light brown or grey setae, interrupted by an indistinct darker stripe behind each anterior eye. Behind the eye region, a wide median thoracic band of off-white setae tapers to the rear, centered in a glabrous, dark brown to black area that extends to the rear of the carapace. White to light brown setae cover the otherwise translucent, light to dark, sides of the carapace, but no marginal band is present.



Figure 26. Five adult female *Maratus australis*.

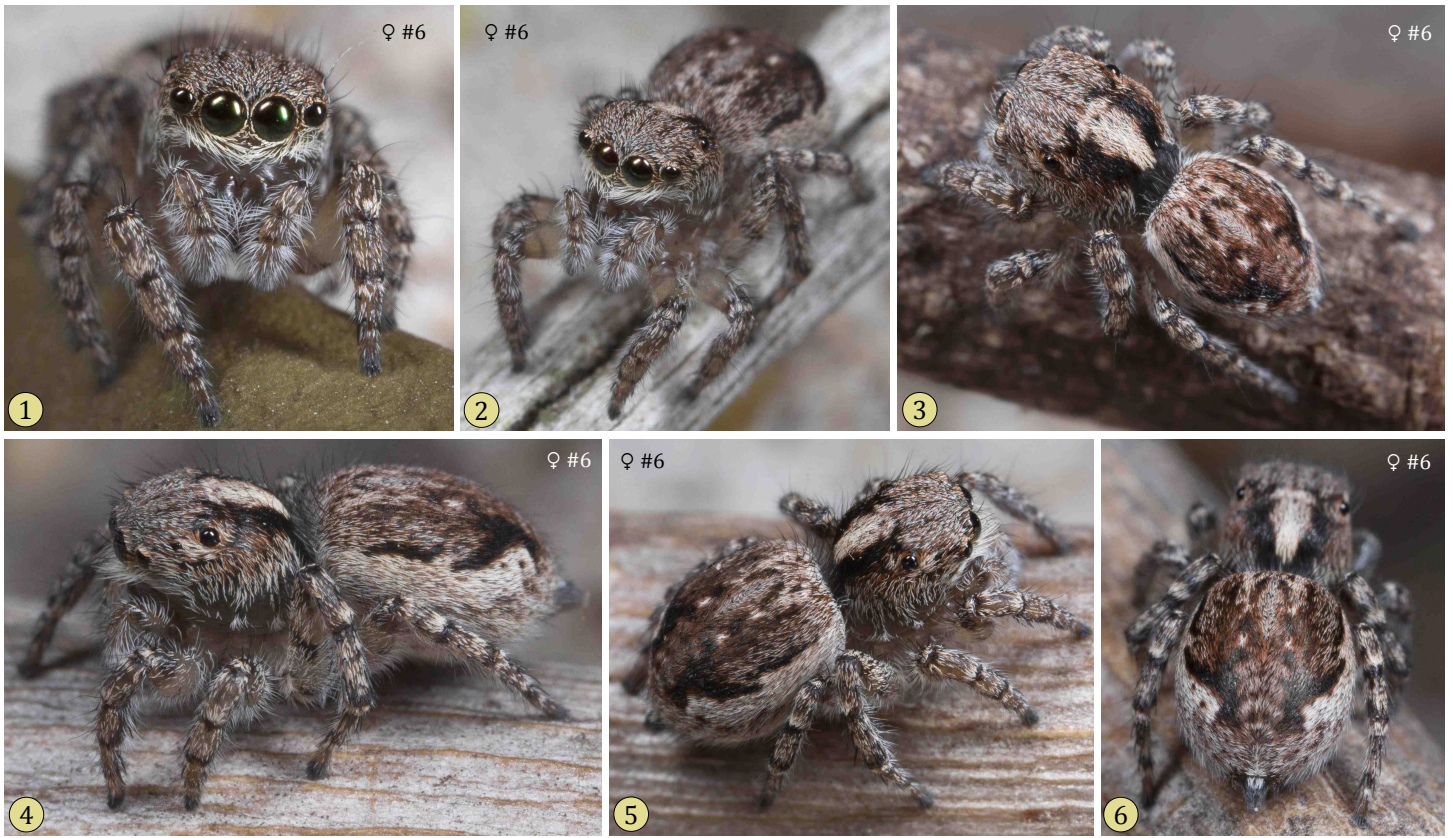


Figure 27. Views of an adult female *Maratus australis*. **3**, Note the sharp definition of the tapering median thoracic band on a black background.

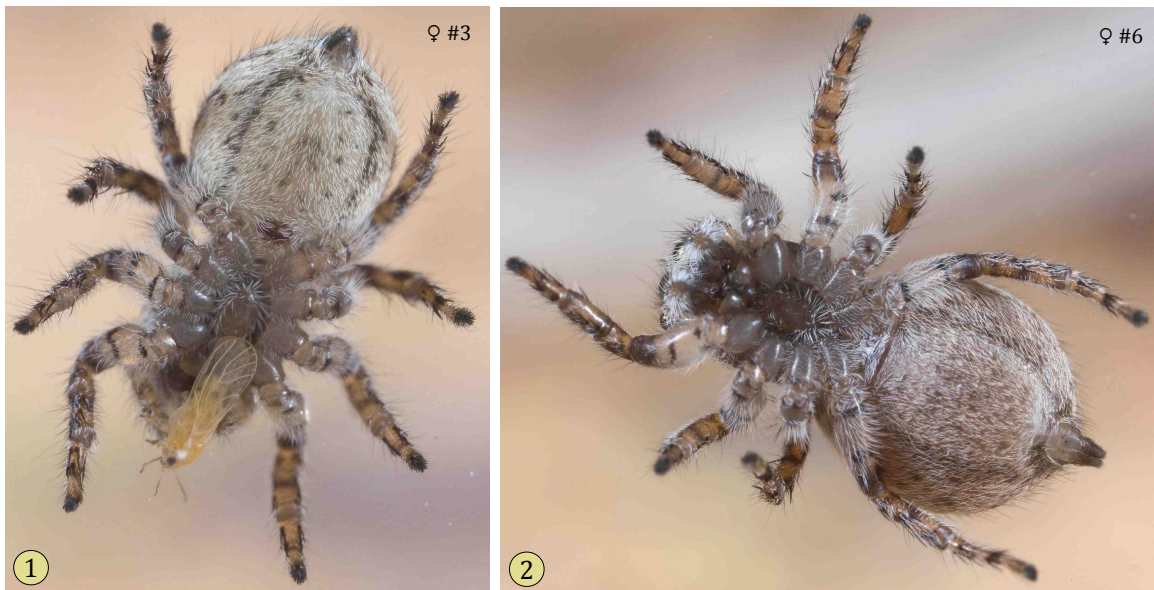


Figure 28. Ventral views of two adult female *Maratus australis*.

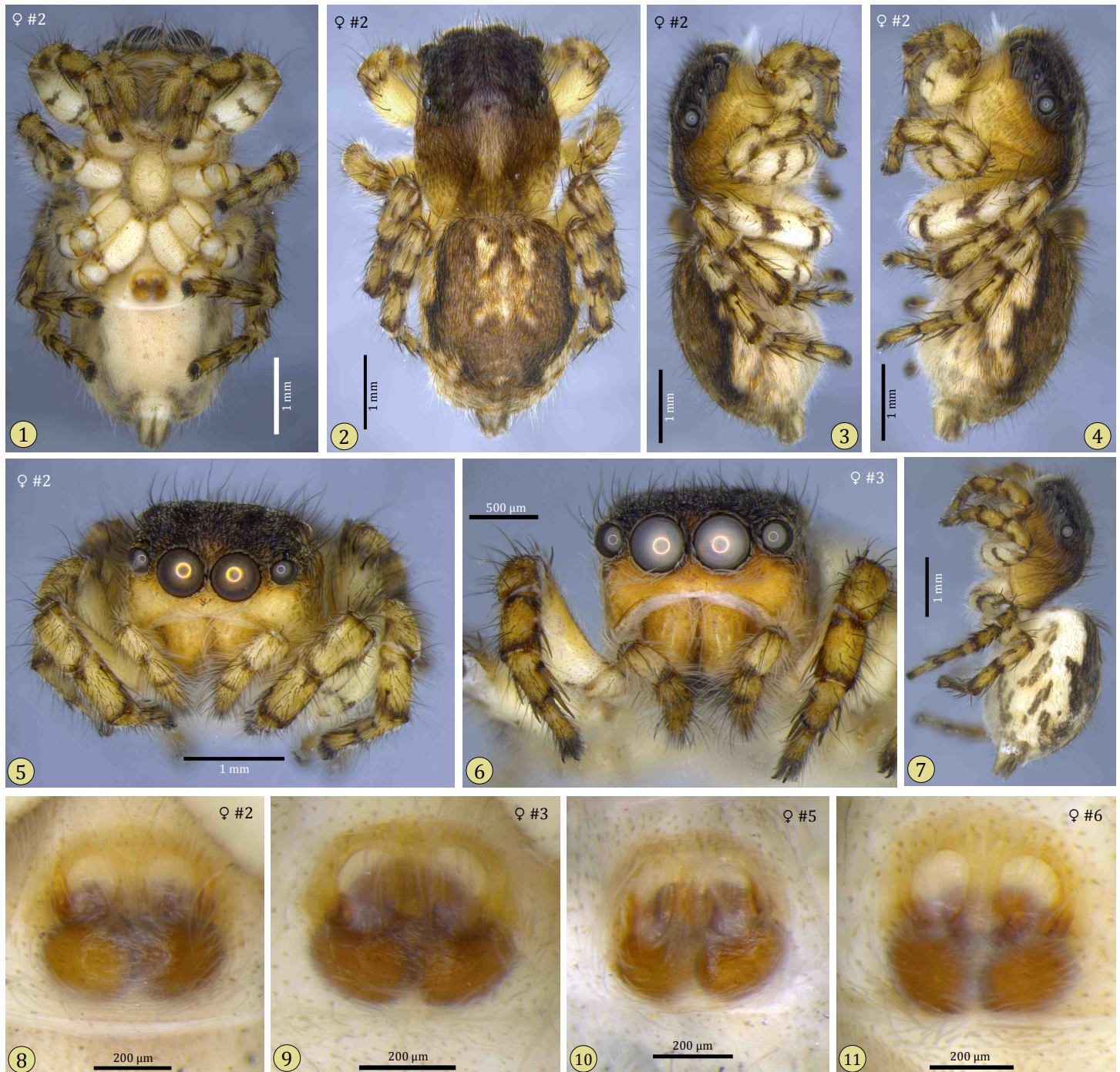


Figure 29. Adult female *Maratus australis* specimens in alcohol. **8-11**, Details of epigynum of four different females. Note variation in the extent of the sclerotized ducts visible through the fenestrae.

The dark brown dorsum of the opisthosoma is bordered by black lateral bands that separate this from the light-brown setae that cover the lateral margins and underside of the opisthosoma. Paired tracts or spots of lighter setae may also be present on the dorsum. Legs I and II are shorter than legs III and IV. From below the legs, sternum, labium and endites are mostly glabrous and translucent. From above the legs are indistinctly banded with alternating bands of light brown scales and dark pigment. The epigynum (Figure 29:8-11) has sclerotized (dark) ducts that may occupy most of the fenestrae when viewed from below.

Courtship display (Figures 30-31). The courtship display of male *Maratus australis*, with legs III extended and waved, and the fan elevated and expanded, resembles that of *M. tasmanicus* (Otto & Hill 2013).

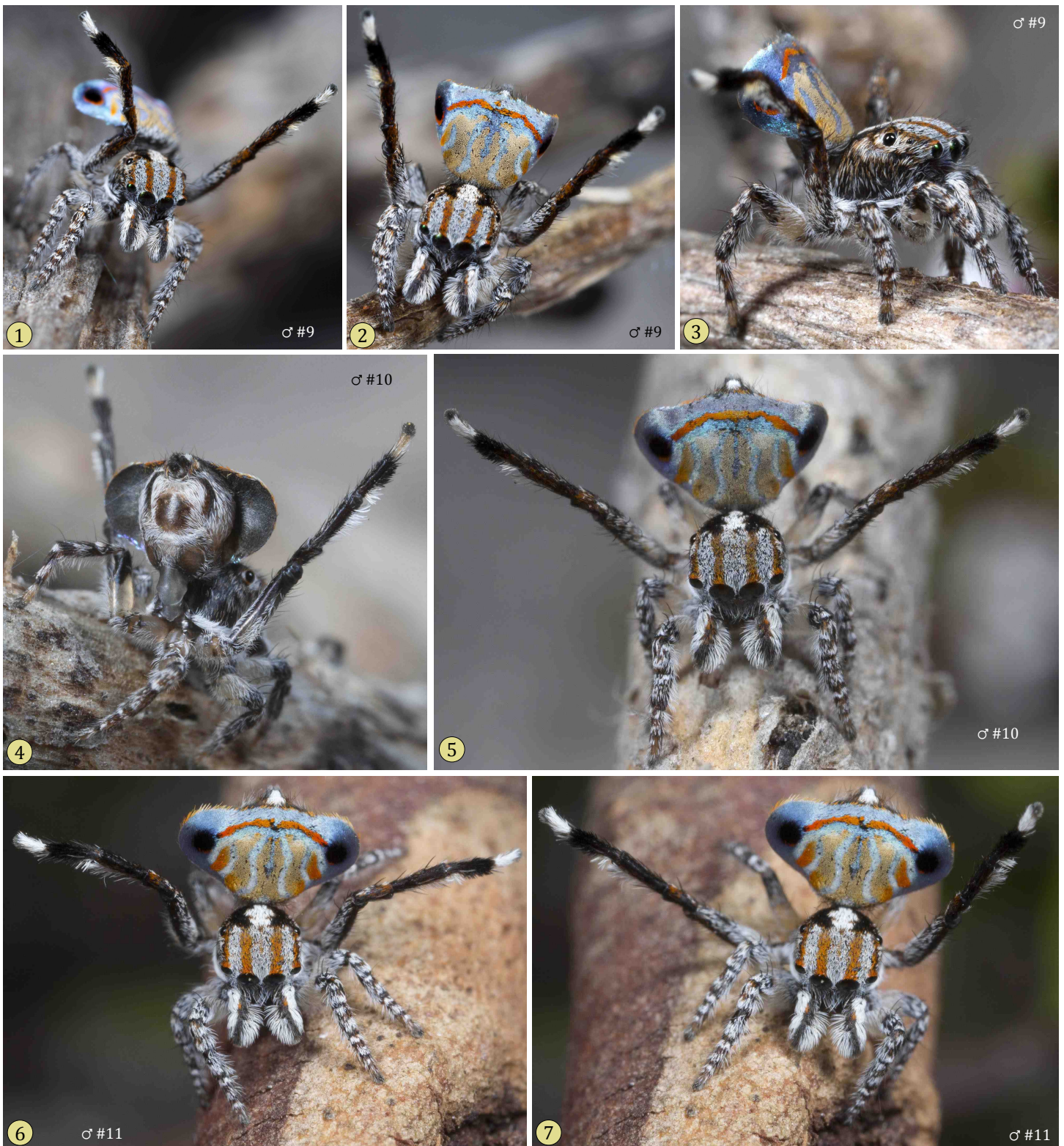


Figure 30. Positions assumed by three different male *Maratus australis* while facing and courting a female.

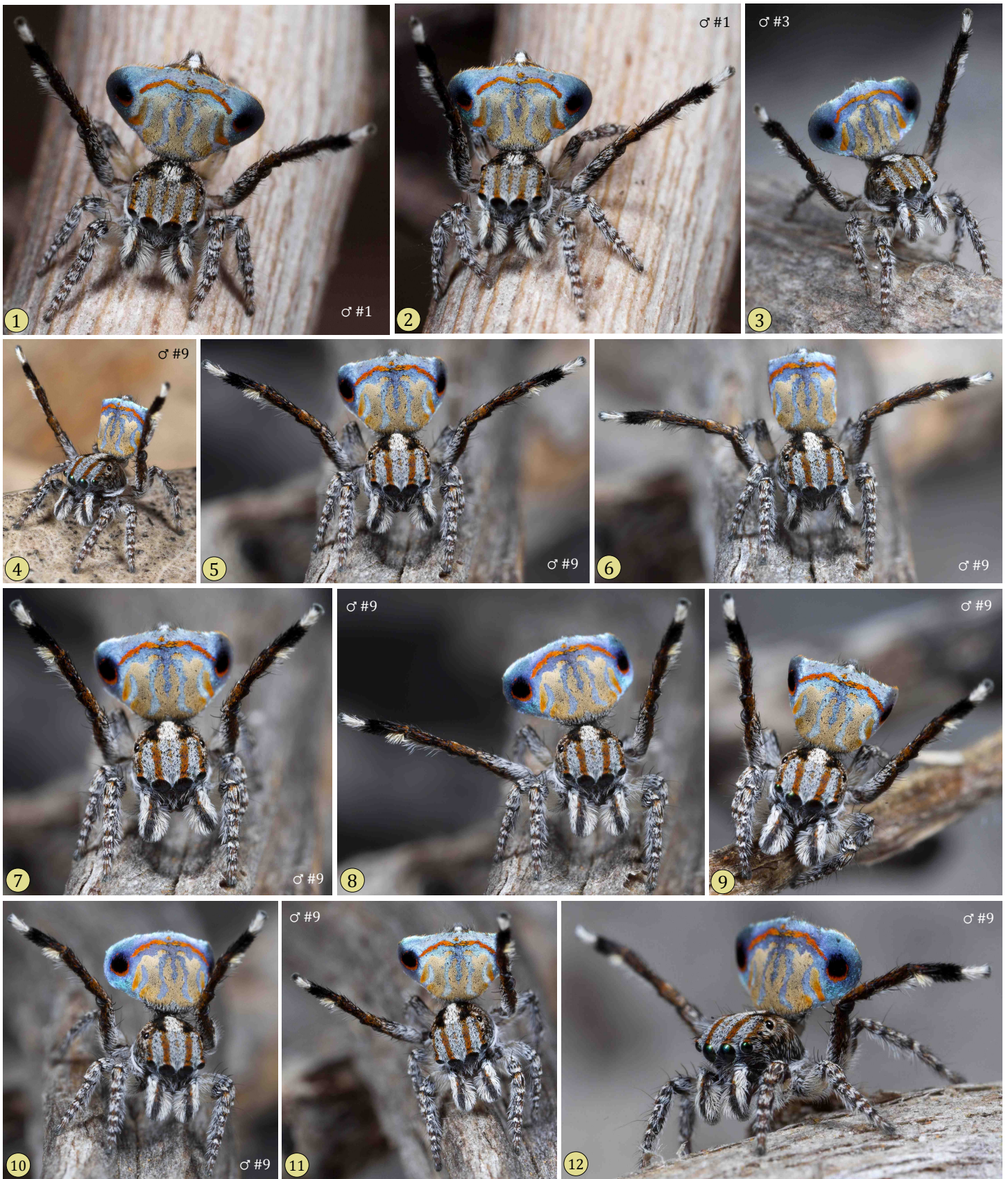


Figure 31. Positions assumed by three different male *Maratus australis* while facing and courting a female. The bold stripes of the pedipalps, held toward the front, appear to extend the stripes of the carapace in this species.

Mating. As noted for other *Maratus* species, the female *M. australis* can rotate her opisthosoma by 180° to facilitate mating (Figure 32). While mating, inflation of the tegulum (bulb) of the male pedipalp is accompanied by an increase in internal fluid pressure in both the legs and pedipalps, something that can be observed directly through the simultaneous extension of leg spines or macrosetae (Figure 33).



Figure 32. Three views of mating by a *Maratus australis* pair.

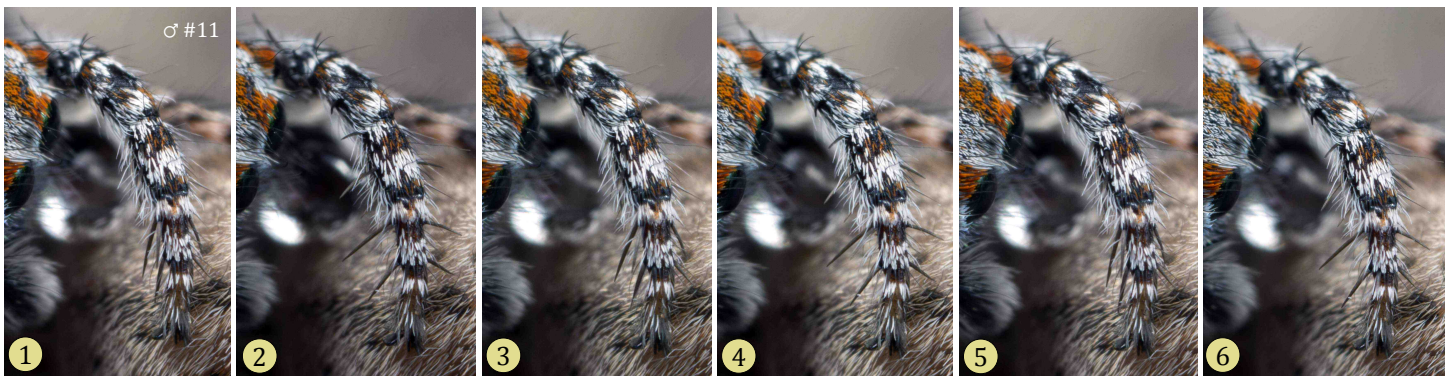


Figure 33. Sequential photographs showing alternating retraction (1, 3, 5) and extension (2, 4, 6) of leg I spines of a mating male *Maratus australis*. Extension coincides with inflation, and retraction coincides with deflation, of the tegulum.

Habitat and distribution. Two views of the leaf litter habitat where *Maratus australis* was found at Esperance are shown in Figure 34. Localities where this species has been found are shown in Figure 1.



Figure 34. Leaf litter habitat of *Maratus australis* behind a cabin at Esperance.

Maratus bubo, new species

Type specimens. The holotype male (♂ #1), one paratype male (♂ #2), and three paratype females (♀ #1-3) were collected 14.5 km NNW of Walpole, WA (34.86057 °S, 116.66612 °E, 16 NOV 2015, coll. J. Otto and D. Knowles, edge of sandy track bordering a swamp). These will be deposited in the Western Australian Museum, Perth.

Etymology. The species group name (*bubo*, Latin, m., noun, based on the name for the genus of horned owls) refers to the vivid and abstract image that is suggestive of a horned owl on the dorsal opisthosomal plate or fan of the adult male.

Diagnosis. The male *Maratus bubo* shares many characters with other members of the (*Maratus*) *mungaich* group, particularly with the three species within that group (*M. avibus*, *M. caeruleus*, and *M. madelineae*) that also bracket their elevated and expanded fan with legs I during courtship display (Figure 35). The bold, 'owl like' figure of bright red scales, bracketed by lateral bands of bright orange scales on the fan of *M. bubo*, readily distinguishes this species from other members of the group. Females within the *mungaich* group are not well known, but when compared to published photographs of female *M. mungaich* and *M. sarahae* (Otto & Hill 2014), female *M. bubo* have better defined bands of light coloured setae on the lateral margins of the opisthosoma, strongly contrasting with the dark dorsum. In addition female *M. bubo* have three posterior extensions of the dark area of the dorsal opisthosoma that resemble the three posterior projections of the 'owl like' figure on the fan of the male.

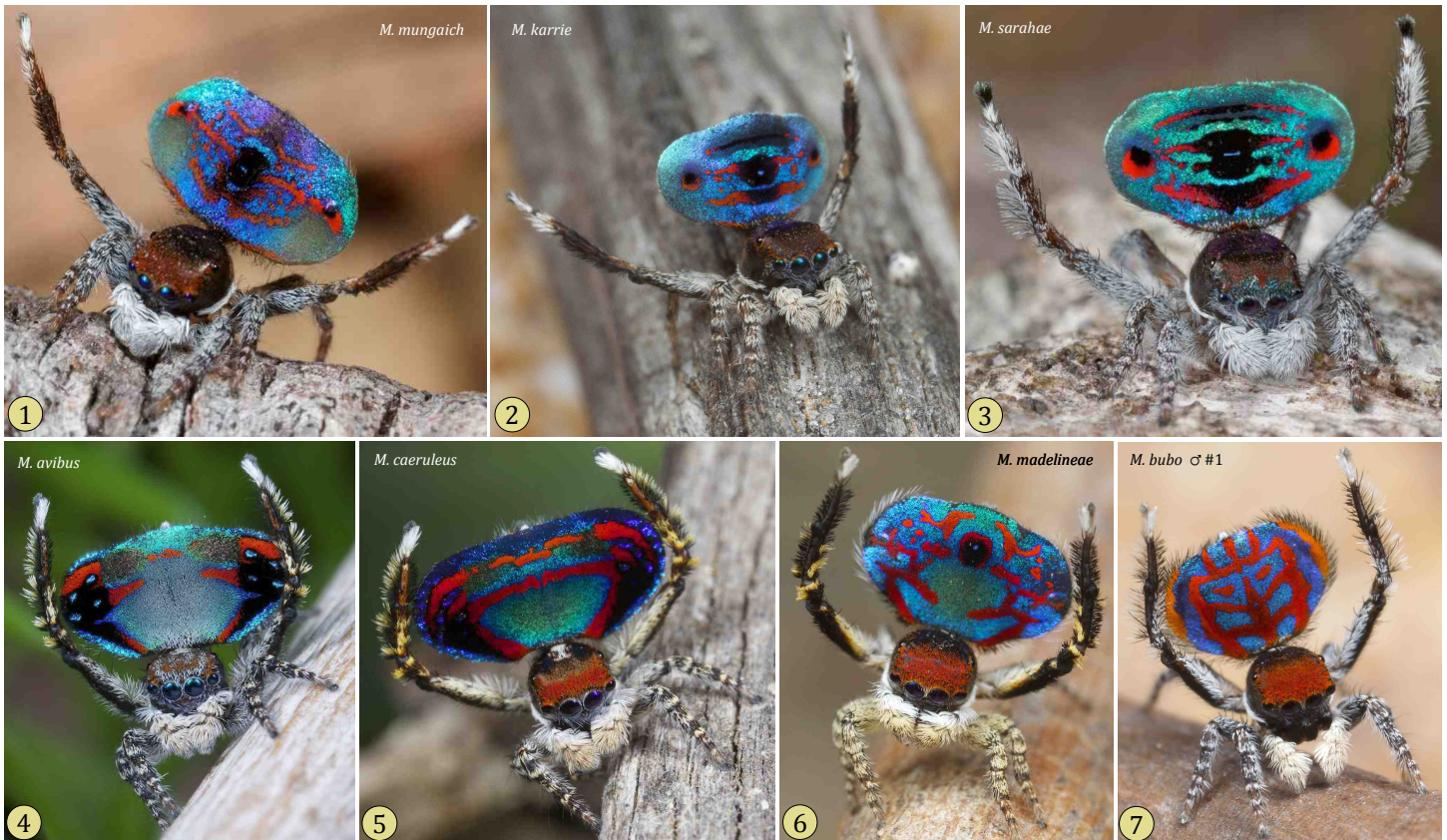


Figure 35. Comparison of a male *Maratus bubo* (7) with six other members of the *mungaich* group (1-6). Setation or decoration of the legs and pedipalps of all members of this group is similar. 1, *M. mungaich* Waldock 1995 from Mt. Dale. 2, *M. karrie* Waldock 2013 from Mt. Lindesay. 3, *M. sarahae* Waldock 2013 from Stirling Range NP. 4, *M. avibus* Otto & Hill 2014 from Cape Arid NP. 5, *M. caeruleus* Waldock 2013 from Middle Island. 6, *M. madelineae* Waldock 2014 from Collie.

Description of male (Figures 36-37). Males (N=2) ranged from 4.02 to 4.10 mm in length.

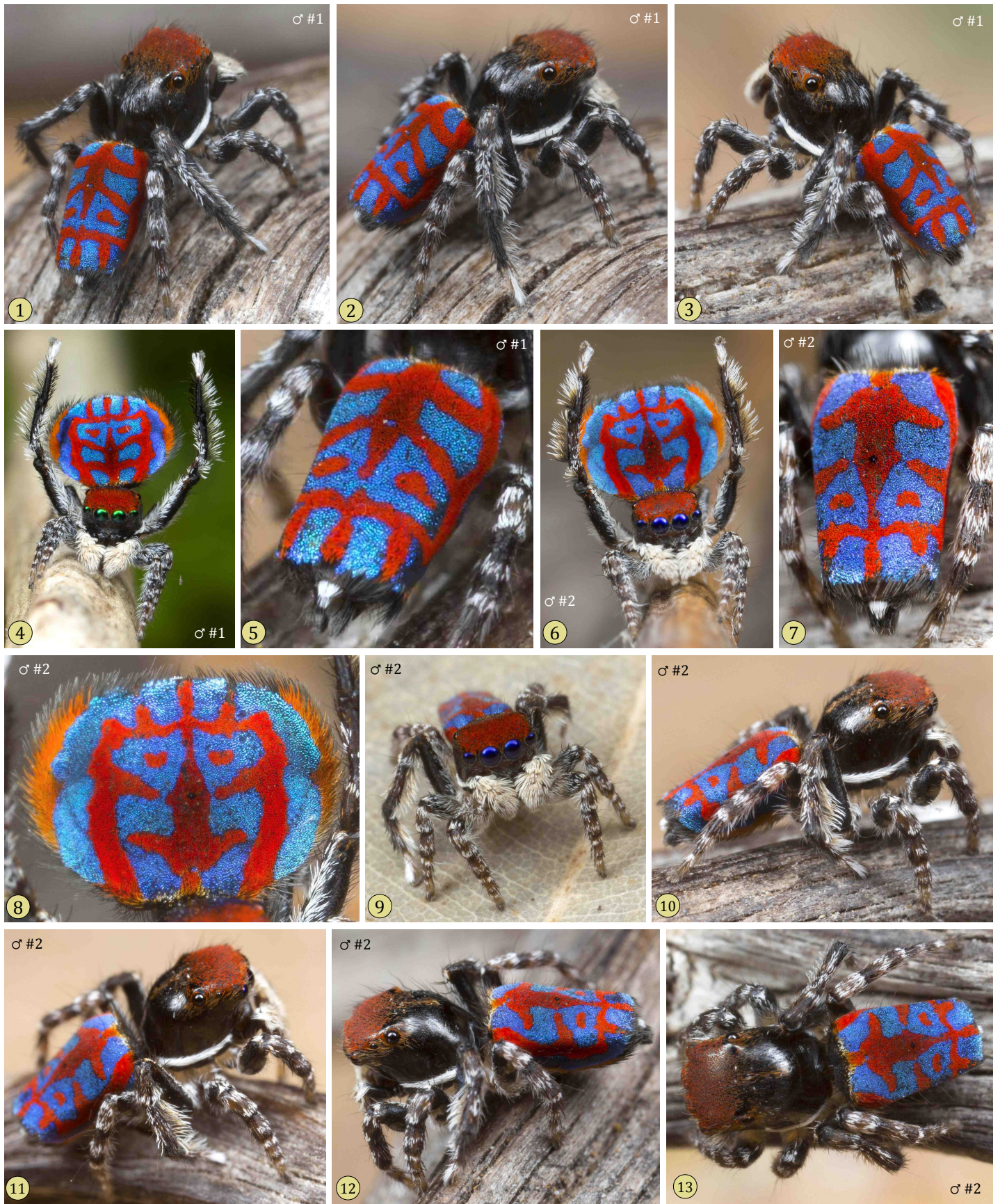


Figure 36. Views of the two male *Maratus bubo* types. 1-5, Holotype.

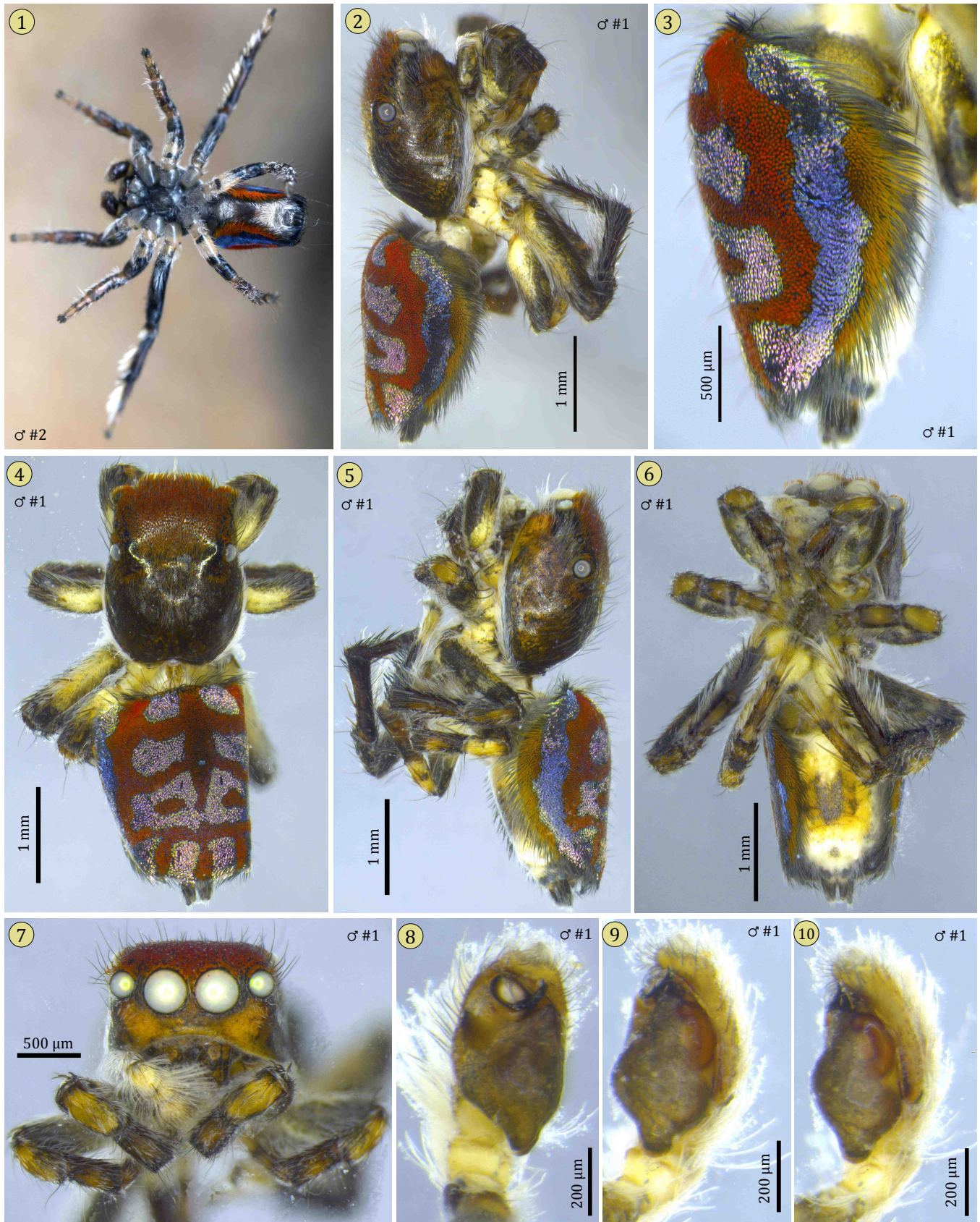


Figure 37. Male *Maratus bubo*. 1, Ventral view of living paratype. 2-7, Holotype in alcohol. 8-9, Mirror images of right pedipalp of holotype.

The clypeus is black, with a few white setae projecting forward. The chelicerae are black and glabrous. The entire carapace is black and glabrous except for the uniform field of dark red setae that cover the eye region and the white setae of the well-defined marginal bands. A few dark red setae may be present in the median thoracic region, and directly behind each PLE. The PME are slightly closer to the PLE than to the ALE. The dorsal opisthosomal plate (fan) is densely covered with a background of iridescent blue to purple scales. On this background is a distinctive 'stick drawing' that resembles an owl, comprised of bright red pigmented scales (Figure 36:4-8). When the semi-circular lateral flaps of the fan are expanded, they reveal a bright orange, strongly fringed margin on either side. A small triangular patch of bright white colular setae is present, behind the fan and above the black spinnerets. Below, the opisthosoma is covered with shorter, light coloured setae, with a prominent antero-median black spot. The coxae, sternum, labium, and endites are mostly glabrous and translucent.

All of the legs have a generally black or dark brown appearance. Legs I and II are almost the same length, much shorter than legs III and IV. Legs III are by far the longest. Legs I, II and IV are ringed with bands of white setae, alternating with black or dark brown bands where these setae are absent. Each leg III is black, with a covering of white setae on the dorsal femora, prominent fringes of longer white setae below the tibia and metatarsus, and long white setae covering the tarsus. The pedipalp, covered dorsally with long white to off-white setae, is similar to that of other *Maratus*, and closely resembles the pedipalp of other members of the *mungaich* group with two distinct, pointed apices of the embolus (Figure 37:8-10).

Description of female (Figures 38-40). Females (N=3) ranged from 4.69 to 5.11 mm in length. The chelicerae are light brown, glabrous, and translucent. Long white setae project forward toward the midline from the clypeus. The top of the carapace is mostly dark with few setae, except for light to dark brown setae around the eyes. An indistinct line of lighter scales may be present along the midline behind the eye region. Scattered off-white setae are present on the sides of the carapace, which is otherwise brown and translucent. There is no marginal band. The dorsal opisthosoma is mostly dark brown, bordered by broad marginal bands of light brown setae on the sides. The dark brown area of the dorsal opisthosoma extends to the rear as three to five more-or-less distinct but short stripes, reminiscent of the posterior part of the bright red figure on the fan of the male. Below the opisthosoma is light-coloured with a cover of shorter off-white setae and indistinct, small brown spots. The coxae, sternum, labium, and endites are brown, translucent, and mostly glabrous except for a cluster of off-white setae emerging from the posterior sternum.

Legs I and II are of similar length, shorter than legs III and IV. Legs III are the longest with femora that are longer than those of legs IV. All legs are dark brown, with segmental bands of off-white setae. The epigynum (Figure 40) is similar to that of other *Maratus*, particularly members of the *mungaich* group, with dark or heavily sclerotized ducts visible beneath the posterior half of each fenestra.



Figure 38. Views of the three type females for *Maratus bubo*.



Figure 39. Female *Maratus bubo*. 1-3, 5-7, 9-11, 13-15, In alcohol. 4, 8, 12. Ventral views of living individuals.

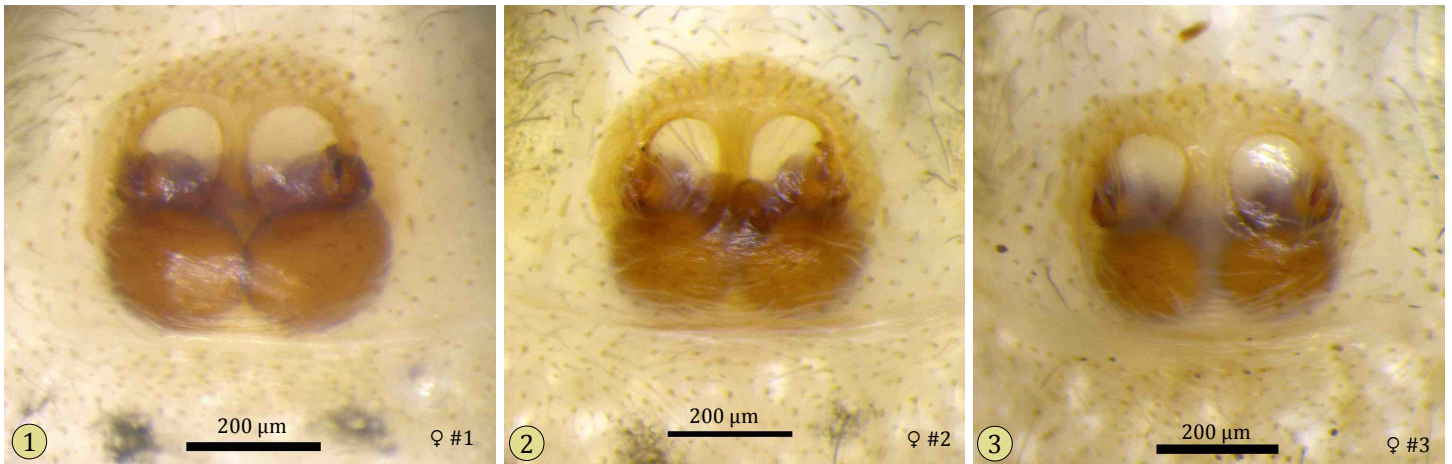


Figure 40. Epigyna of the three paratype females for *Maratus bubo*.

Immatures. Emergent (or second instar) juveniles that were reared are shown in Figure 41. These are mostly translucent, light brown, with a fair number of off-white to red-brown scales on the dorsal carapace and opisthosoma. Penultimate females (Figure 42:1-6) are close to adults in appearance, also with three posterior projections of the dark dorsal region of the opisthosoma. Penultimate males (Figure 42: 7-12) are similar to the females except for their bulbous, light-coloured pedipalps, often with better definition of the dorsal opisthosomal pattern that will appear as a pattern of bright red scales in the adult.



Figure 41. Emergent or second instar *Maratus bubo*. This is the first instar to emerge from the brood sac.



Figure 42. Four penultimate female (1-6) and four penultimate male (7-12) *Maratus bubo*.

Courtship (Figures 43-44, 45:1). Courtship display by the male *Maratus bubo* is similar to that previously described for *M. avibus* (Figure 9 in Otto & Hill 2014). In *M. avibus*, legs III were held upright in a similar position, bracketing the elevated and extended fan, as the centered fan was first rotated to one side, then returned to the center, then rotated to the other side, then returned to the center in a cycle of about 1.7s. During this display the pedipalps were held in front of the chelicerae. In *M. bubo* we observed faster cycles for rotation of the fan ($\sim 6/s$) with periodic side-stepping at a lower rate ($\sim 1.5/s$).

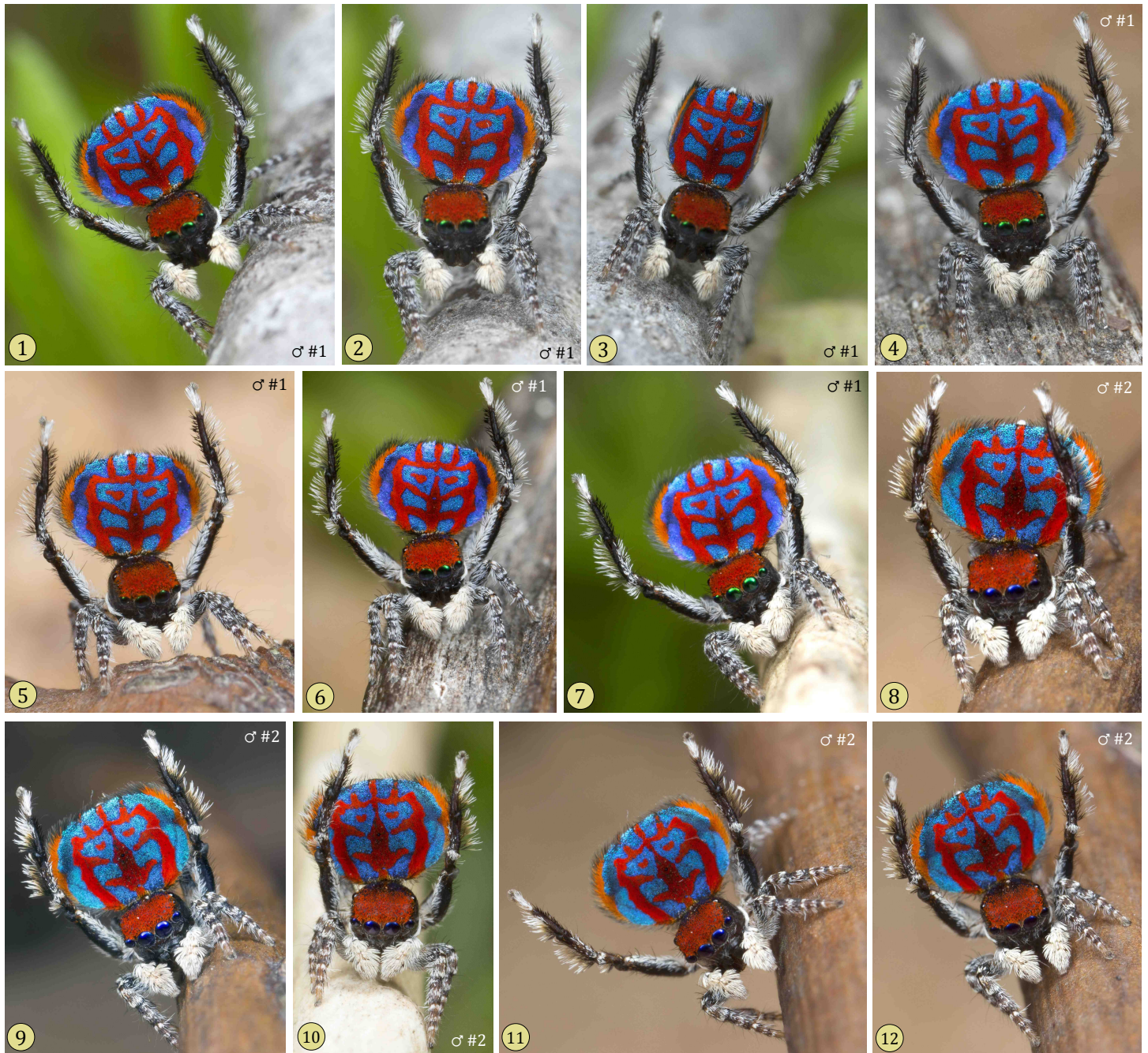


Figure 43. Positions assumed during courtship display by male *Maratus bubo*.

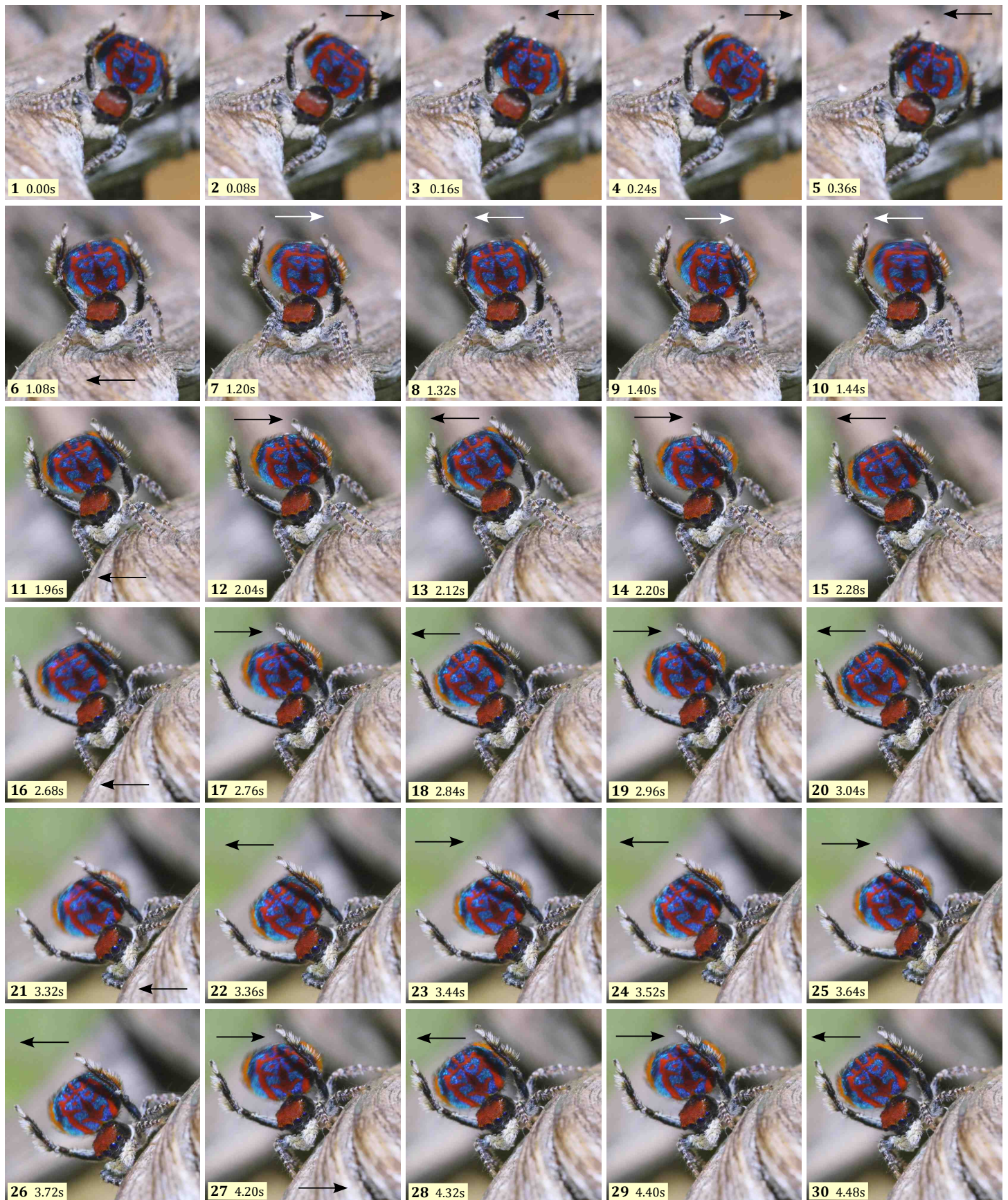


Figure 44. Selected sequential frames from a 25 fps video showing the courtship display of a male *Maratus bubo*. Rotation of the fan relative to the previous frame is indicated by upper arrows. Side-stepping relative to the previous frame is indicated by lower arrows.

Mating. Mating positions of the two male types for *Maratus bubo*, including extreme rotation of the opisthosoma by the female, are shown in Figure 45:2-6.



Figure 45. Rear view of male displaying to female (1), and mating positions (2-6) of *Maratus bubo*.

Habitat and distribution. *Maratus bubo* has been found only on low plants at the edge of a sandy track bordering a swamp at the type locality near Walpole in Western Australia (Figure 46, map Figure 1).



Figure 46. Habitat of *Maratus bubo* about 14.5 km NNW of Walpole, WA.

***Maratus lobatus*, new species**

Type specimens. Five paratype females (♀ #1-3, 5-6) were collected at Helms Arboretum, 15 km NNW of Esperance (33.72556 °S, 121.84250 °E, 15-17 NOV 2014, coll. A. Fletcher and M. Doe). The holotype male (♂ #1), two paratype males (♂ #2-3), and one paratype female (♀ #4) were raised from eggs produced by one of these females. These will be deposited in the Western Australian Museum, Perth.

Etymology. The species group name (*lobatus*, Latin, m., adjective, English translation *lobed* or *having lobes*) refers to the lobate shape of the lateral flaps of the dorsal opisthosomal plate of the male.

Diagnosis. This species closely resembles the eastern *Maratus harrisi* Otto & Hill 2011, and we place both in a *harrisi* group within the genus *Maratus*. The fan of the male *M. harrisi* has a single pair of white spots associated with the central figure, whereas *M. lobatus* has one pair of straight lines and one pair of curved white lines, also comprised of white scales, in this position (Figure 47). The male *M. harrisi* that we have examined have two contiguous apices of the embolus of each pedipalp, and these are separate in *M. lobatus*. The female *M. lobatus* resembles many other species of *Maratus*, and cannot be compared here with the female *M. harrisi* which has not been described. The epigynum of female *M. lobatus* that we have examined varies greatly between individuals.



Figure 47. Comparison of a male *Maratus lobatus* from Port Lincoln, South Australia (4-5) with three male *M. harrisi* from New South Wales (1), Tasmania (2), and Victoria (3). Photographs (4) © Michael Doe, (5) © Adam Fletcher, both used by permission.

Description of male (Figures 48-52). Males (N=2) ranged from 4.92 to 5.07 mm in length.



Figure 48. Holotype (1-3) and two paratype (4-12) male *Maratus lobatus* reared from eggs deposited by a female collected at the type locality (Helms Arboretum NNW of Esperance).

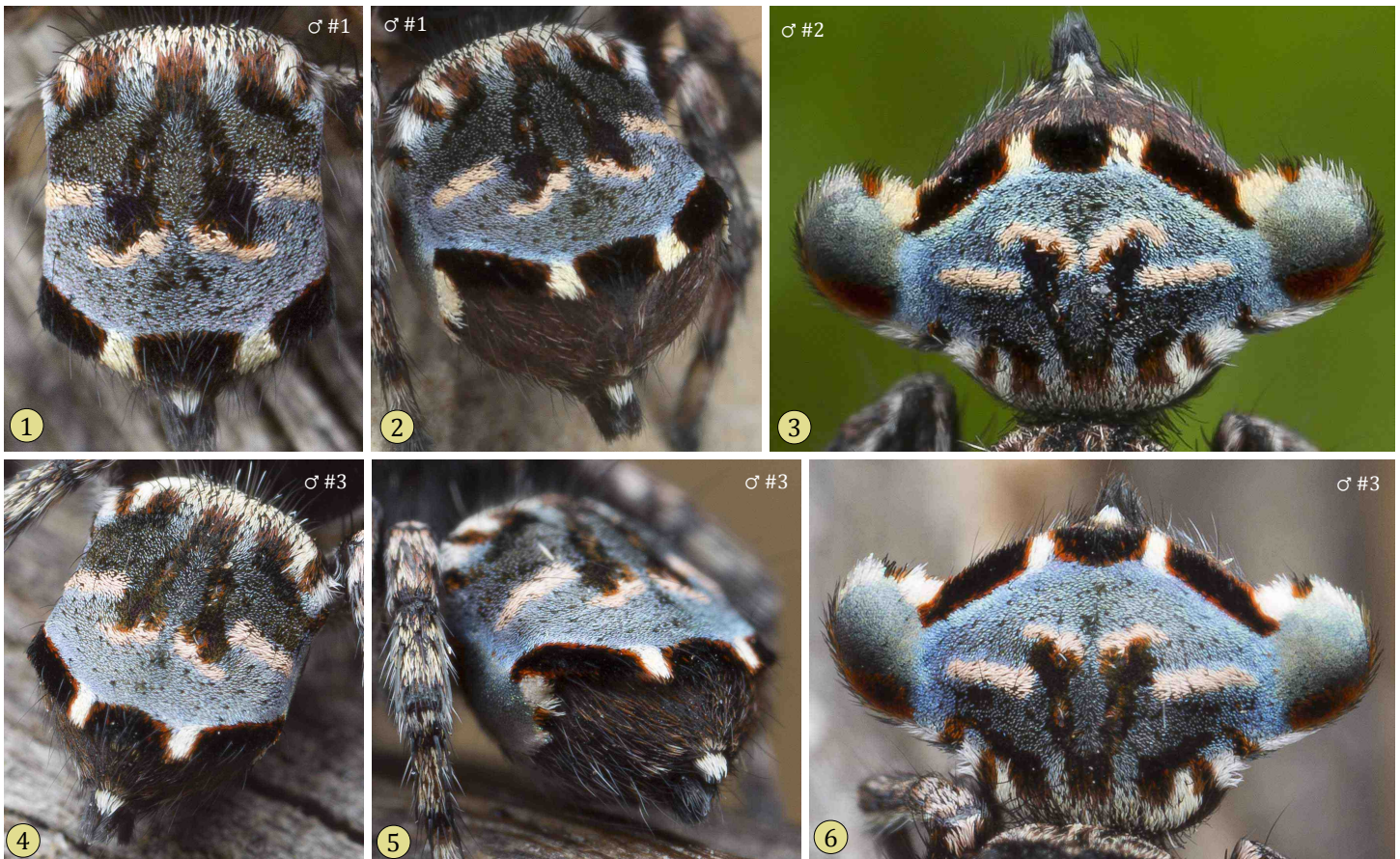


Figure 49. Details of dorsal opisthosoma of the three male *Maratus lobatus* types. **3, 6**, Fan expanded and raised during courtship to reveal the flaps (lobes, or extensions of the dorsal opisthosomal plate) that are otherwise folded under the opisthosoma.



Figure 50. Male *Maratus lobatus*. **1**, Detail of face, showing black clypeus, chelicerae, and sides of carapace. **2-3**, Two ventral views, showing flaps folded under the opisthosoma.

The clypeus is black, almost devoid of setae. The carapace is almost entirely black, with dark red and grey setae around the eyes or the anterior and lateral margins of the eye region. The sides of the carapace are black and glabrous, but there is a prominent marginal band comprised of bright white setae. Behind the posterior eye row a narrow median and two wider lateral tracts of off-white setae extend less than half-way to the posterior margin of the carapace, merging anteriorly. These may be more distinct in recently molted individuals (Figure 48:10). The PME are clearly closer to the PLE than to the ALE.

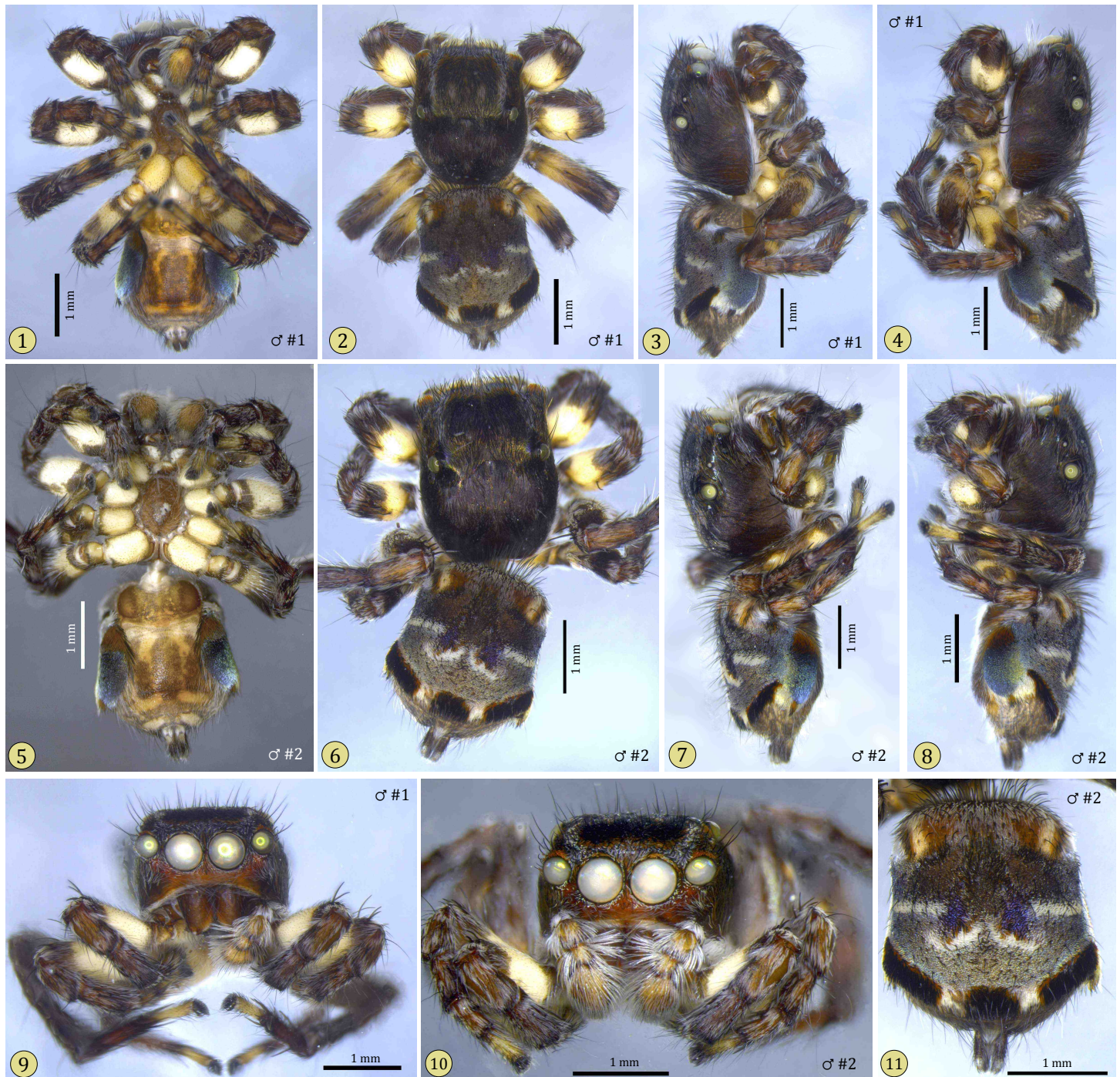


Figure 51. Two male *Maratus lobatus* in alcohol.

The fan bears a distinctive pattern of black to red-brown and white scales on a light blue (toward the rear) or grey (toward the front) background comprised of densely packed scales. On this background lies a large 'V' figure pointed toward the front, flanked by a smaller pair of 'U' figures, open toward the front. These figures are dark red-brown and surrounded by white setae toward the front. There is a transverse line of bright white scales extending laterally from each side of the large 'V' figure, and two curved lines of bright white scales surround the posterior ends of this figure (Figures 47:4-5, 49). The anterior margin of the opisthosoma is black or dark grey, with many long black setae projecting anteriorly. The rear margin of the fan is defined by a broad black band interrupted by a tract of white setae on either side. Black areas of the fan may be outlined with dark red-orange scales. The lateral margins of the dorsal plate are lobate

flaps that are normally wrapped around the opisthosoma, but extended during courtship display. The dorsal surface of these flaps is dark anteriorly and dull blue-green posteriorly, fringed with bright white setae. To the rear of and beneath the dorsal plate the opisthosoma is black with a cover of black setae (Figure 49:2, 5). A small white triangle of colular setae is present above the black spinnerets. From below, the opisthosoma, coxae, sternum, labium, and endites are mostly grey and glabrous, except for a cover of short setae toward the front of the opisthosoma, and a group of setae originating with the posterior sternum.

Legs I and II are shorter and of similar length. Legs III and IV are longer, and legs III are by far the longest. Legs I, II, and IV are dark with irregular rings comprised of white or off-white setae. Legs III are dark brown with scattered setae, but the metatarsi are completely black and the tarsi are bright white. From the front (Figure 50:1) the pedipalps are covered with long white setae. The embolus of the pedipalp is typical for *Maratus*, with two distinct and sharply pointed apices, the outer one larger (Figure 52).



Figure 52. Medial to lateral views of the left pedipalp of two male *Maratus lobatus* in alcohol. Insets (5, 10) and one lateral view (1) show the clear separation of the larger outer and the smaller inner apices of the embolus, both sharply pointed.

Description of female (Figures 53-56). Females (N=3) ranged from 6.16 to 6.46 mm in length. The chelicerae and lower part of the clypeus are dark, almost black, and glabrous, but long white setae project forward from the upper clypeus beneath the anterior eye row. The carapace is also dark, with regular brown setae in the eye region and fewer setae to the sides and rear. The margin of the carapace is black and glabrous and a regular marginal band is not present. The PME are midway between the ALE and PLE. The dorsal opisthosoma is covered with dark brown setae and an indistinct pattern of several paired spots, but is flanked at the posterolateral margins by a wide and distinctive marginal band of light brown or off-white setae. There is a small white, triangular colular patch of setae, and the spinnerets are grey or light brown. The underside of the opisthosoma is almost uniform light brown. The coxae, sternum, labium, and endites are light grey with scattered setae.



Figure 53. Four different female *Maratus lobatus*. Note the wide bands of light-coloured (light brown to off-white) setae on the posterior margins of the opisthosoma, in some cases offset from the dark brown dorsum by a black line (9).

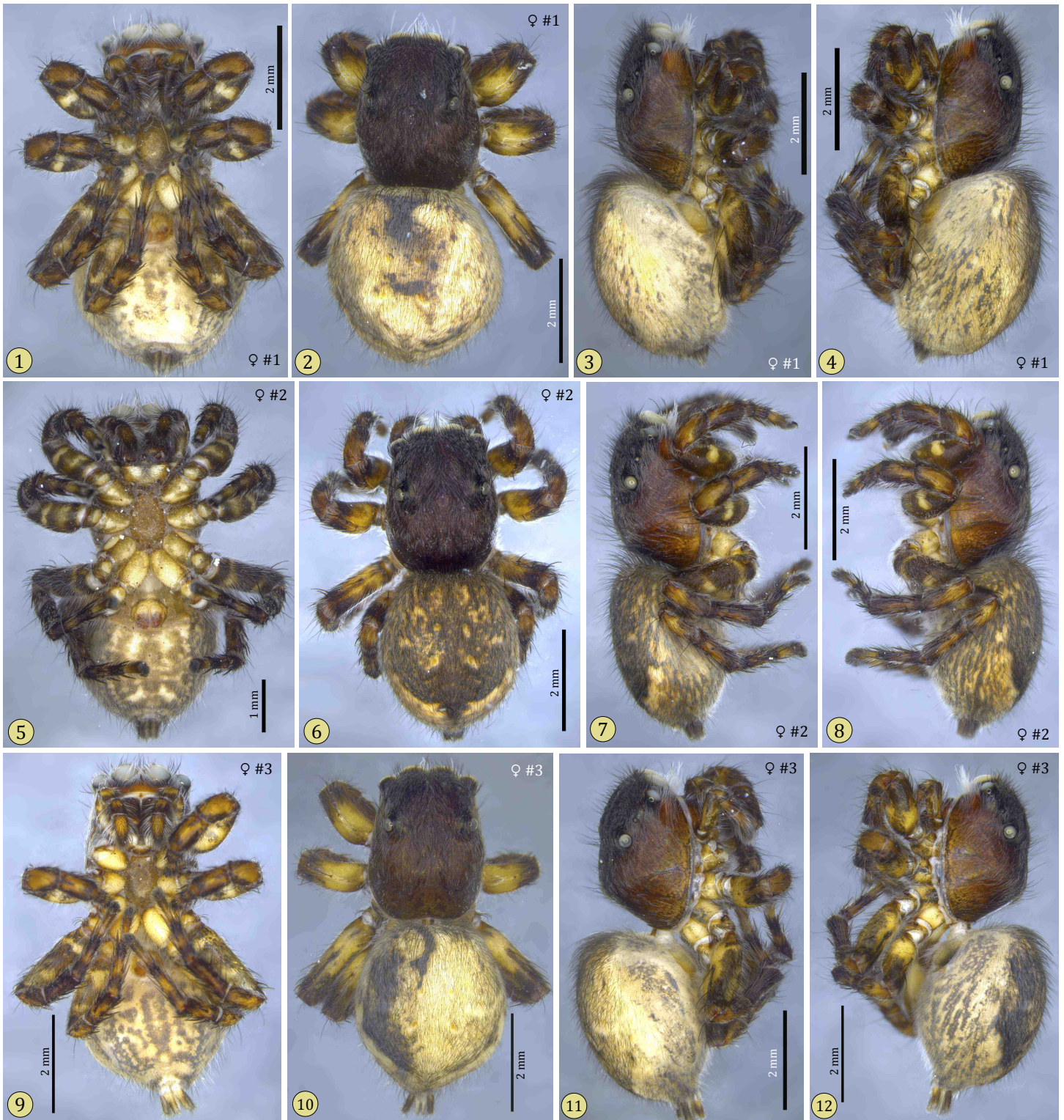


Figure 54. Three different female *Maratus lobatus* in alcohol.



Figure 55. Female *Maratus lobatus* in alcohol. 9-13, Detail of epigynum of five different females. Note variability in width of septum and sclerotization of ducts visible behind the posterior portion of each fenestra.

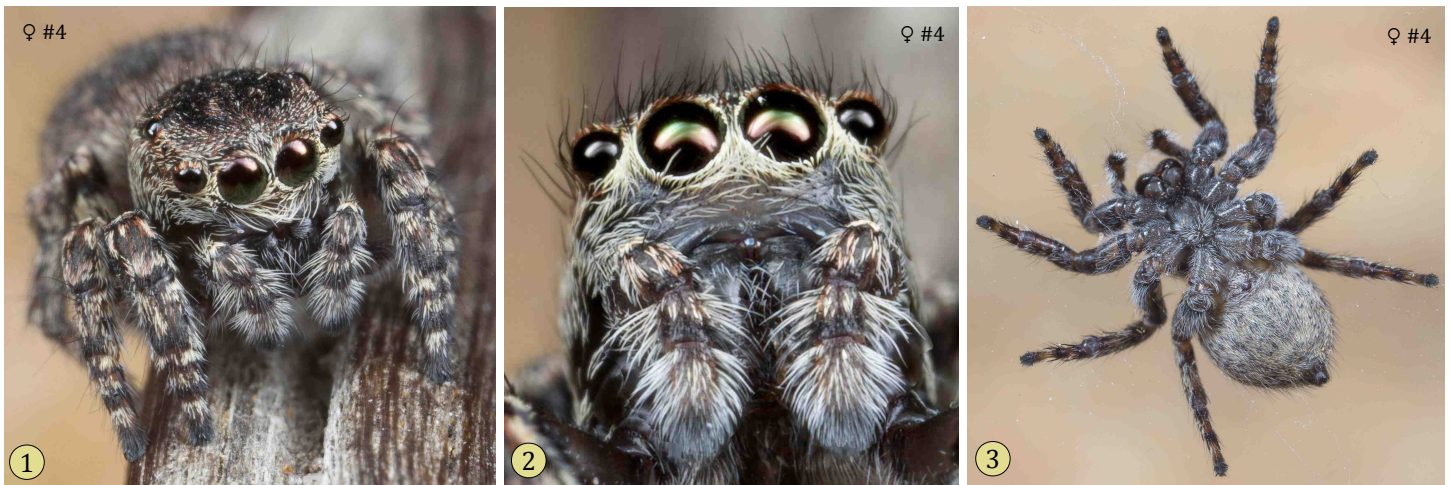


Figure 56. Female *Maratus lobatus*. 2, Detail of face. 3, Ventral view.

Legs I and II are shorter and similar in length and legs III and IV are longer. The legs and pedipalps are dark brown. The legs and pedipalps bear scattered patches of light brown setae and are dark at the joints. The pedipalps are fringed along their length with longer, light brown setae, with distal grey setae (Figure 56:2). The epigynum (Figure 55:9-13) is variable with respect to the width of the septum separating the fenestrae, and the extent of sclerotization of the ducts visible as dark objects beneath the posterior fenestrae.

Immatures. Penultimate male and female *Maratus lobatus* are shown in Figure 57. These are similar in general appearance and closely resemble the adult female, except for the narrow marginal band and the inflated and light-coloured developing pedipalps of the male. At this stage the two-tone pattern of the dorsal opisthosoma of both sexes includes elements that appear in colour on the fan of the adult male.

Courtship display (Figures 58-59). Courtship was observed indoors in a naturalistic setting. Although rapid waving of legs III is an important part of the courtship display of *Maratus harrisi* (unpublished observation), this appears to play no part in the display of *M. lobatus*. *M. lobatus* simply raise and extend the fan, and then intermittently (at irregular intervals from about 0.15 to 2.5s) vibrate the fan by moving it from side to side. This vibration is so rapid that it occurs within a single frame of a 25fps video (Figure 59). The pedipalps are also vibrated at a similar, irregular frequency, but this is not always synchronous with fan vibration.

Distribution. Localities where *Maratus lobatus* has been found are shown in Table 2 and in the map (Figure 1).

Table 2. Localities where *Maratus lobatus* has been found.

Locality	Map coordinates	Date	Attribution
Helms Arboretum 15 km NNW of Esperance, WA	33.72556 °S, 121.84250 °E	15-17 NOV 2014	collected by A. Fletcher and M. Doe
39 km NW of Esperance, WA	33.69778 °S, 121.51917 °E	15-17 NOV 2014	collected by A. Fletcher and M. Doe
62 km NE of Albany, WA	34.62703 °S, 118.38639 °E	15-17 NOV 2014	collected by A. Fletcher and M. Doe
20 km SW of Mt. Barker, WA	34.75919 °S, 117.49637 °E		photographed by D. Knowles
Port Lincoln, SA	34.73250 °S, 135.88333 °E	12-13 NOV 2014	photographed by A. Fletcher and M. Doe

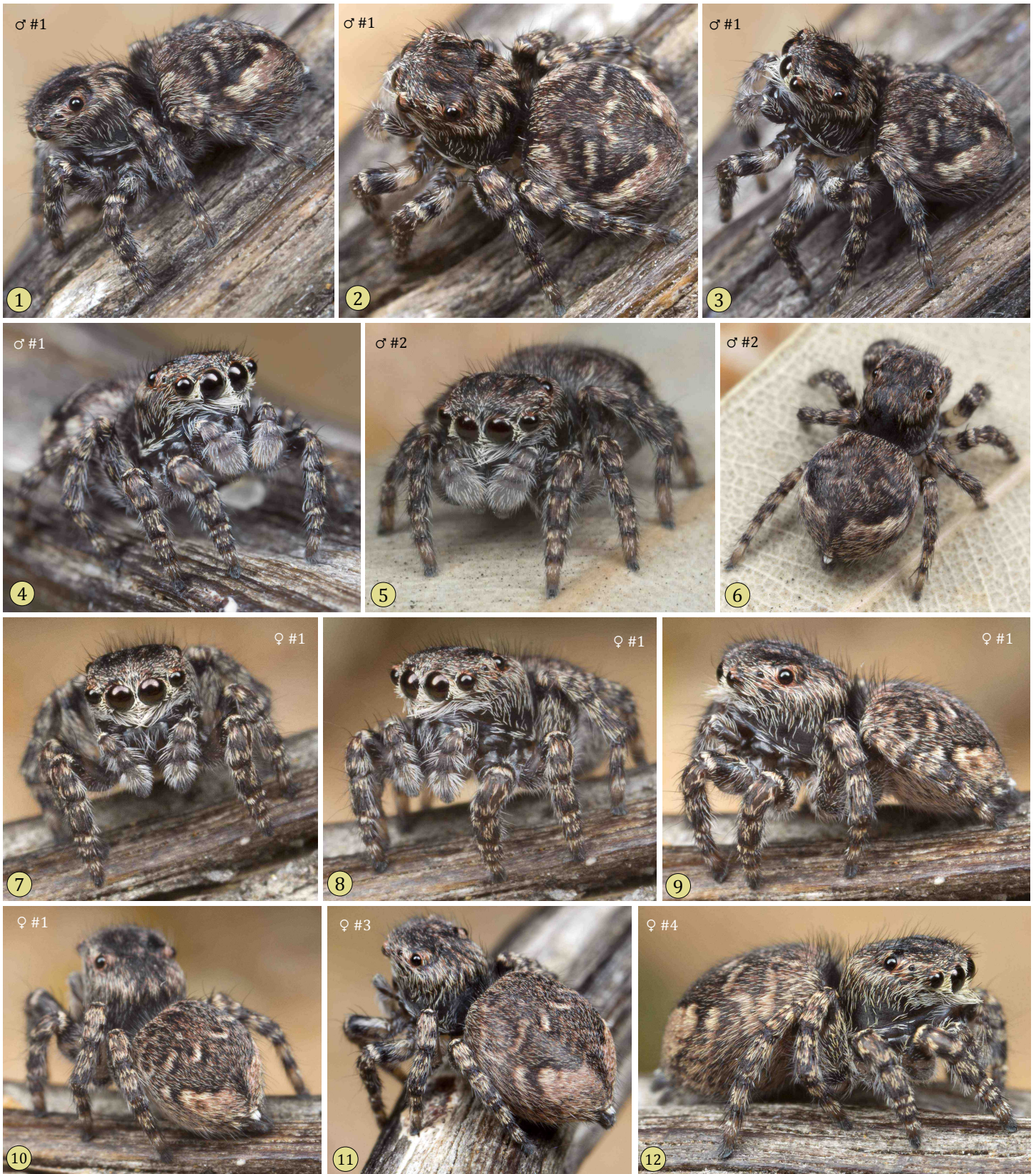


Figure 57. Views of two penultimate male (1-6) and three penultimate female (7-12) *Maratus lobatus*. The pattern of four light-brown areas across the dorsal opisthosoma of both males and females corresponds to the position of the four patches of white scales on the fan of the adult male (Figure 49).



Figure 58. Display positions of two different male *Maratus lobatus* facing a female.

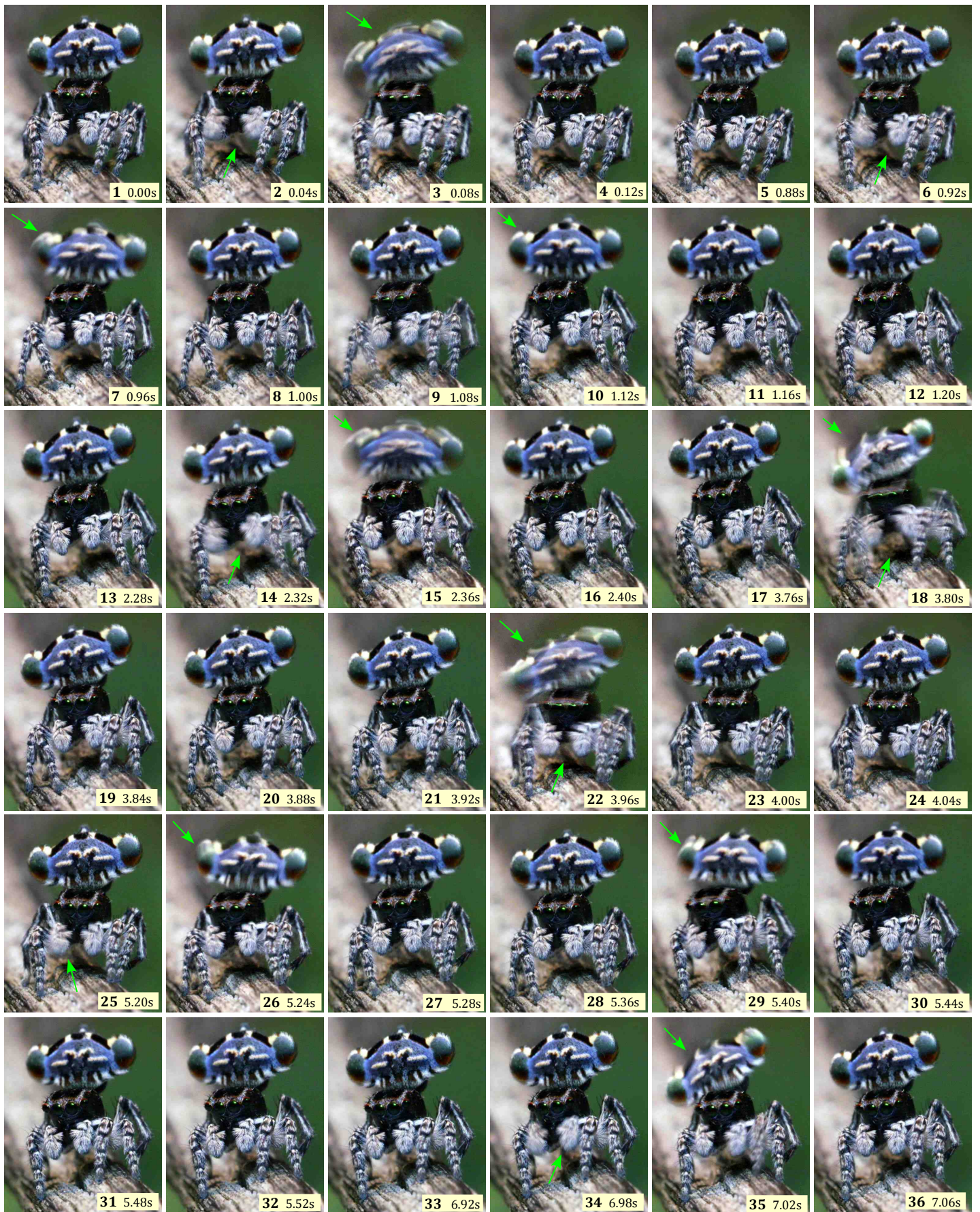


Figure 59. Sequential frames from a 25fps video showing the display of a male *Maratus lobatus* in front of a female. Omitted frames represent intervals when the male did not move. Vibration of the fan and pedipalps is indicated with arrows.

***Maratus tessellatus*, new species**

Type specimens. The holotype male (♂ #1), two paratype males (♂ #2-3), and two paratype females (♀ #1-2) were collected at Bunbury, WA (33.36683 °S, 115.62243 °E, 31 AUG 2014, coll. J. Otto and D. Knowles, among vegetation and on coastal sand dunes). Two paratype males (♂ #4-5) and four paratype females (♀ #3-6) were raised from eggs laid by females collected at that location. These will be deposited in the Western Australian Museum, Perth.

Etymology. The species group name (*tessellatus*, Latin, m., adjective, English translation *tessellated*) refers to the presence of a distinctive tessellated or mosaic pattern on the dorsal opisthosoma of the adult male.

Diagnosis. Male *Maratus tessellatus* have a variable but distinctive pattern of dark red to brown spots on a background of grey scales on the dorsal opisthosomal plate that cannot be confused with any other *Maratus*. The male pedipalp and the female epigynum are typical for the genus, however, and cannot be used as a reliable basis for identification. The colouration of females is also similar to other *Maratus*, but females have a subtle pattern of lighter scales and light cuticle on the posterodorsal opisthosoma in the shape of four or five stacked chevrons (herringbone), pointing toward the front and decreasing in size toward the rear.

Description of male (Figures 60-63). Males (N=4) ranged from 4.05 to 4.27 mm in length. The clypeus is black, with long white setae projecting anteromedially over the black and glabrous chelicerae. The carapace is black. The eye region is covered with grey setae, interrupted by stripes of dark red-brown setae behind each of the anterior eyes, with a fifth median stripe. These stripes do not completely cross the eye region toward the front. Behind the eye region the dorsal carapace is mostly black and glabrous, except for dorsolateral patches of grey or dark red-brown scales behind the posterior eye row on either side, and a prominent median thoracic stripe of bright white scales that extends halfway to the posterior margin. The sides of the carapace are also black and mostly glabrous, with scattered white setae mostly toward the front. A well-defined marginal band of bright white scales is present. The PME are much closer to the PLE than to the ALE. The dorsal opisthosoma has a well-defined plate that is decorated with a distinctive but variable pattern of dark red to dark brown spots or patches on a uniform background of grey scales (Figures 60-61). The posterior margin of the plate is divided or indented at the median, and fringed with no flaps. It is not raised or expanded during courtship display. Behind this plate the dorsal opisthosoma is dark brown, lighter at the median where a more-or-less distinct stripe of lighter setae joins the rear of the plate to the colulus, and a small triangular, white colular patch of setae is present above the dark grey or black spinnerets. Curiously, the posterodorsal opisthosoma just behind the plate can appear bright yellow in alcohol (Figures 62:2, 63:4), a colour that has no relationship to its colour in life. The sides of the opisthosoma are light brown with a series of indistinct, darker longitudinal lines. Below, the opisthosoma is light brown, with a large dark brown central patch. The coxae, sternum, labium, and endites are mostly glabrous and translucent grey, with scattered setae.

Legs I and II are of similar length, legs III and IV longer, and legs III by far the longest. Legs I, II, and IV are banded with dark rings alternating with rings of off-white setae. The front of each femur III is covered with shorter, light off-white setae. Each tibia and metatarsus III is black, with prominent fringes of black setae on the metatarsus. The tarsus is covered with bright white setae. Above or in front the pedipalps are covered with long off-white to light brown or tan setae. The pedipalps are typical for *Maratus*, with two sharply pointed apices of the ebolus (Figure 63). The outer apex is larger, the inner smaller. The two apices are barely separated in the individuals that we examined.

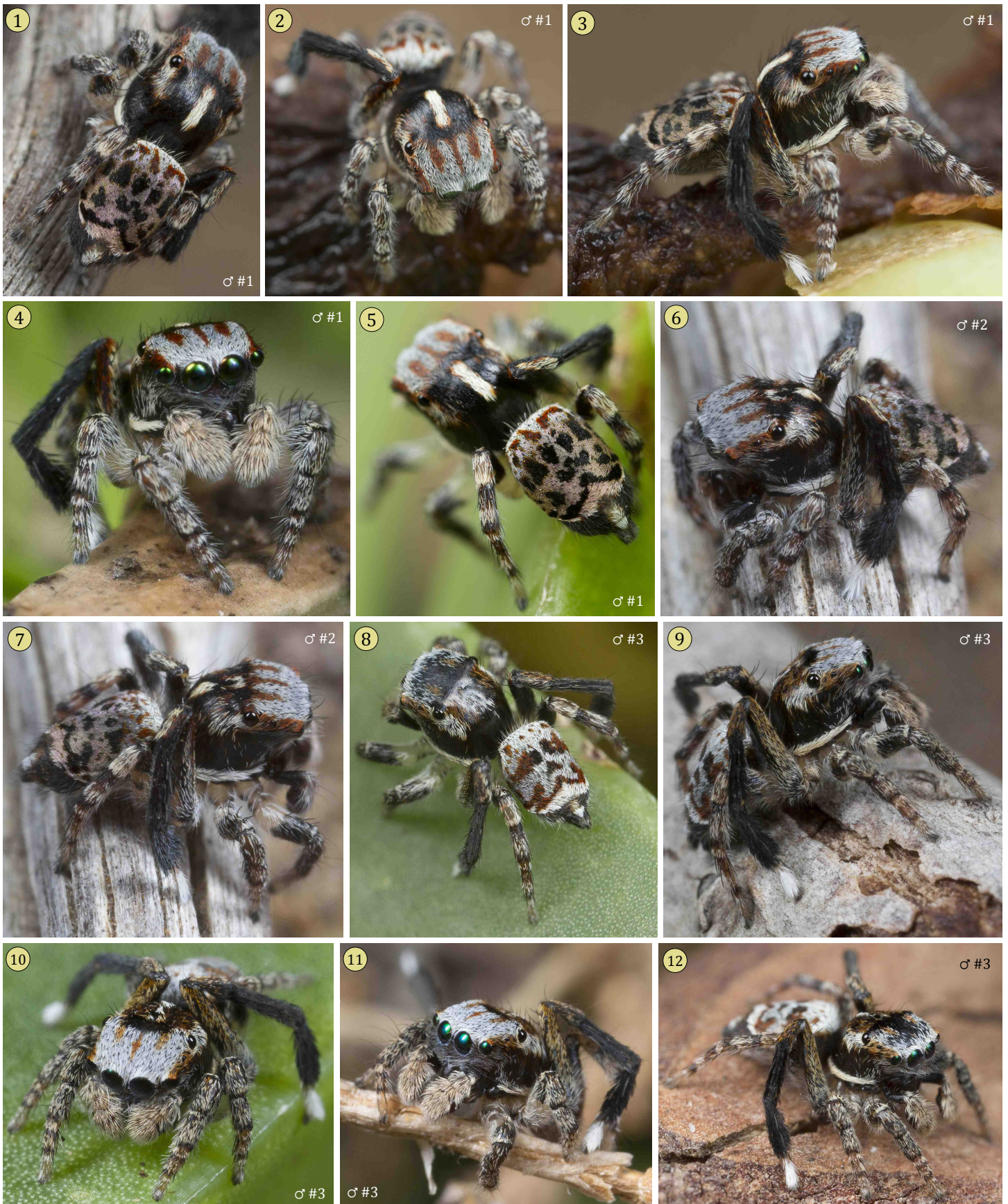


Figure 60. Views of three different adult male *Maratus tessellatus*.



Figure 61. Adult male *Maratus tessellatus*. **1-10**, Views of two different males. **10**, This male has a distinct off-white, median stripe extending from the rear of the dorsal plate to the colulus. In other males this stripe is present, but not as distinct. **11-12**, Ventral views.



Figure 62. Four different adult male *Maratus tessellatus* in alcohol.

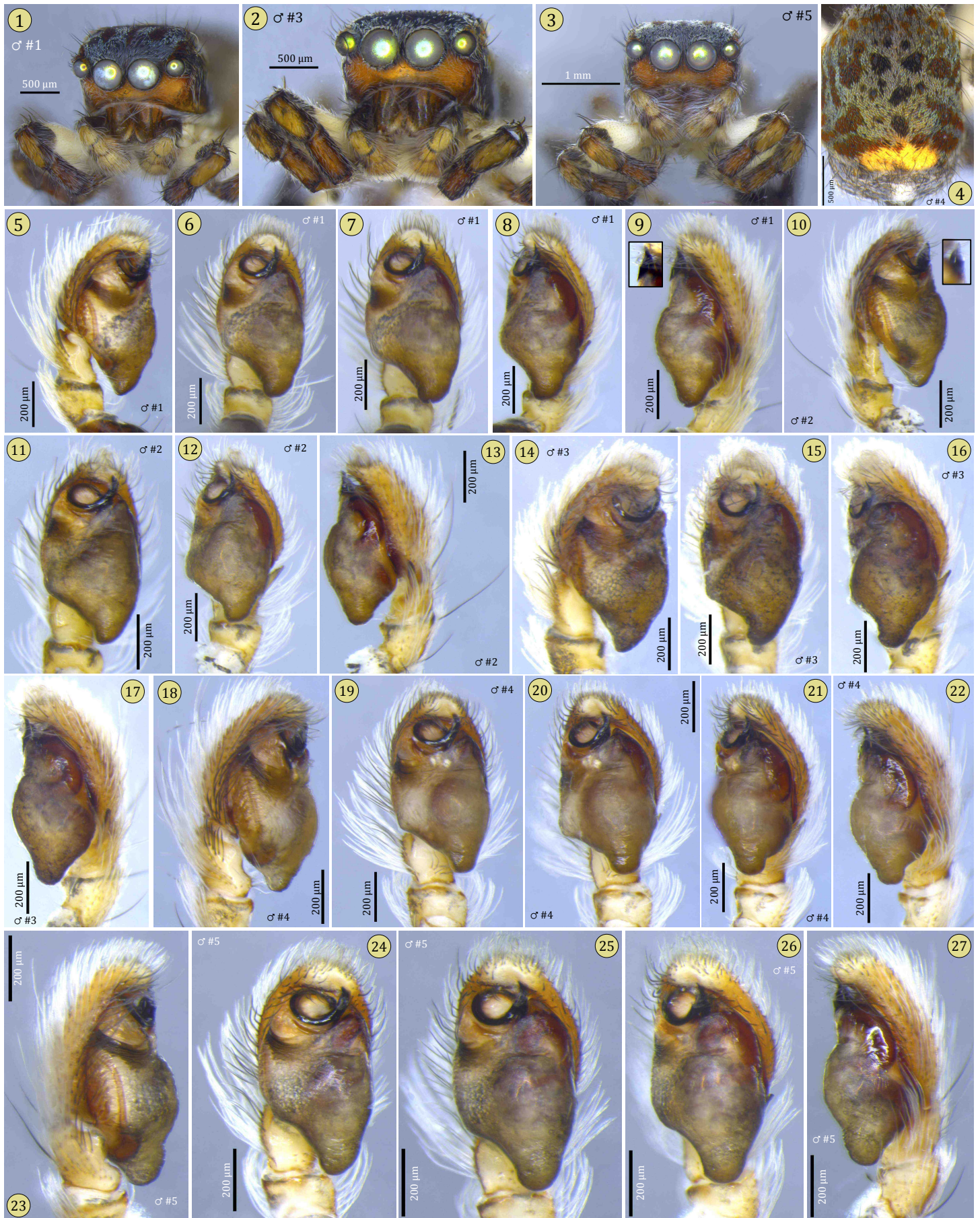


Figure 63. Adult male *Maratus tessellatus* in alcohol. 4, Dorsal opisthosoma. 5-27, Medial to lateral views of left pedipalp.

Description of female (Figures 64-68). Females (N=2) ranged from 4.91 to 4.92 mm in length.

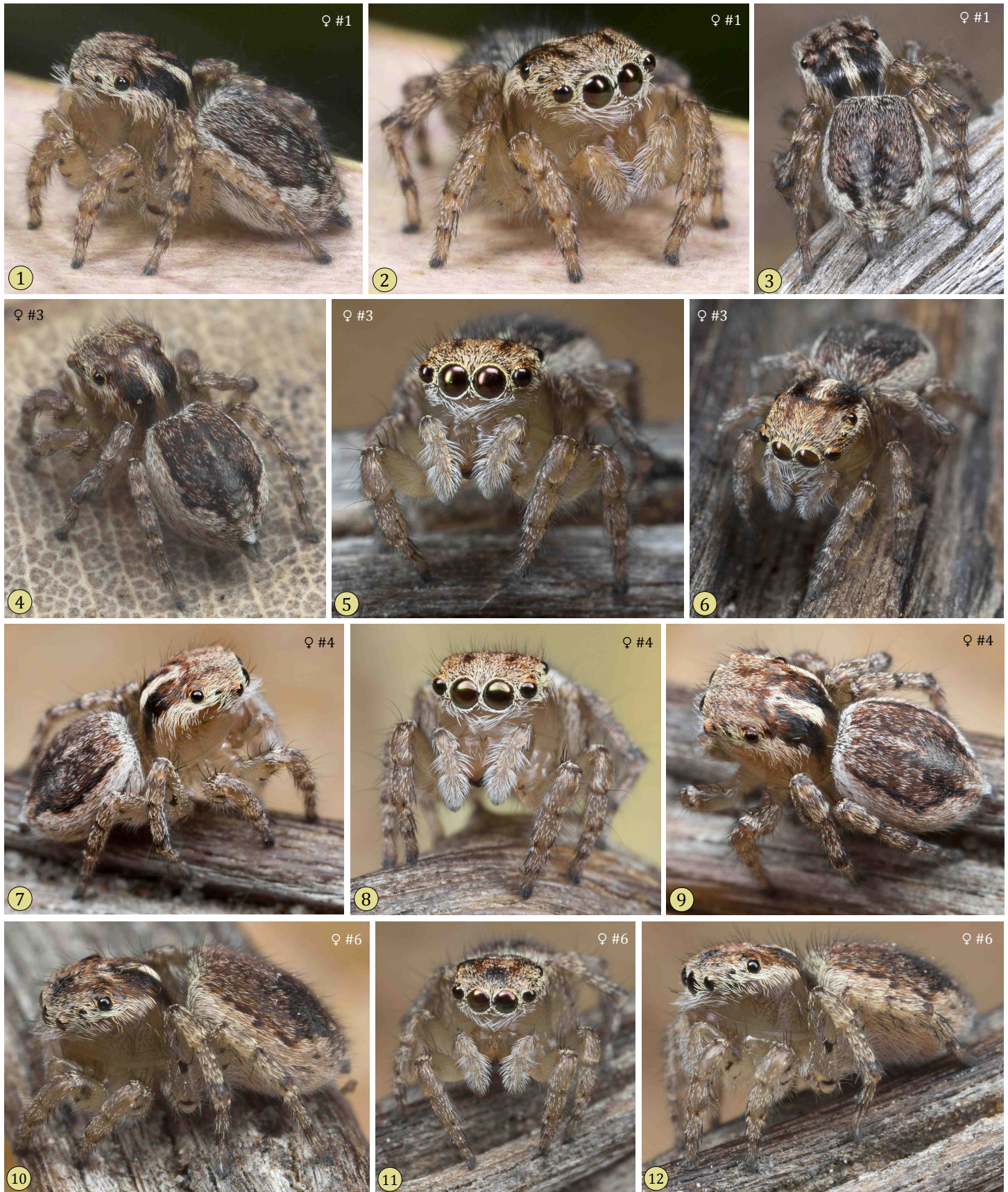


Figure 64. Four different female *Maratus tessellatus*.



Figure 65. Views of a female *Maratus tessellatus*.

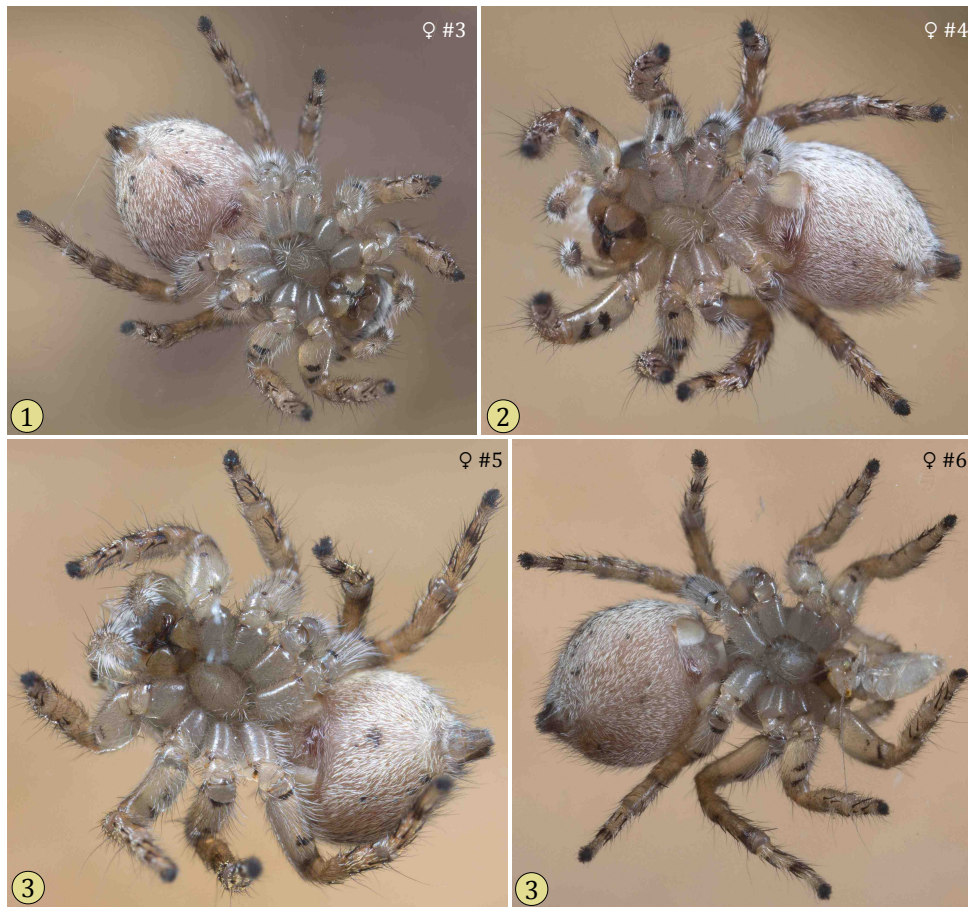


Figure 66. Ventral views of four female *Maratus tessellatus*.

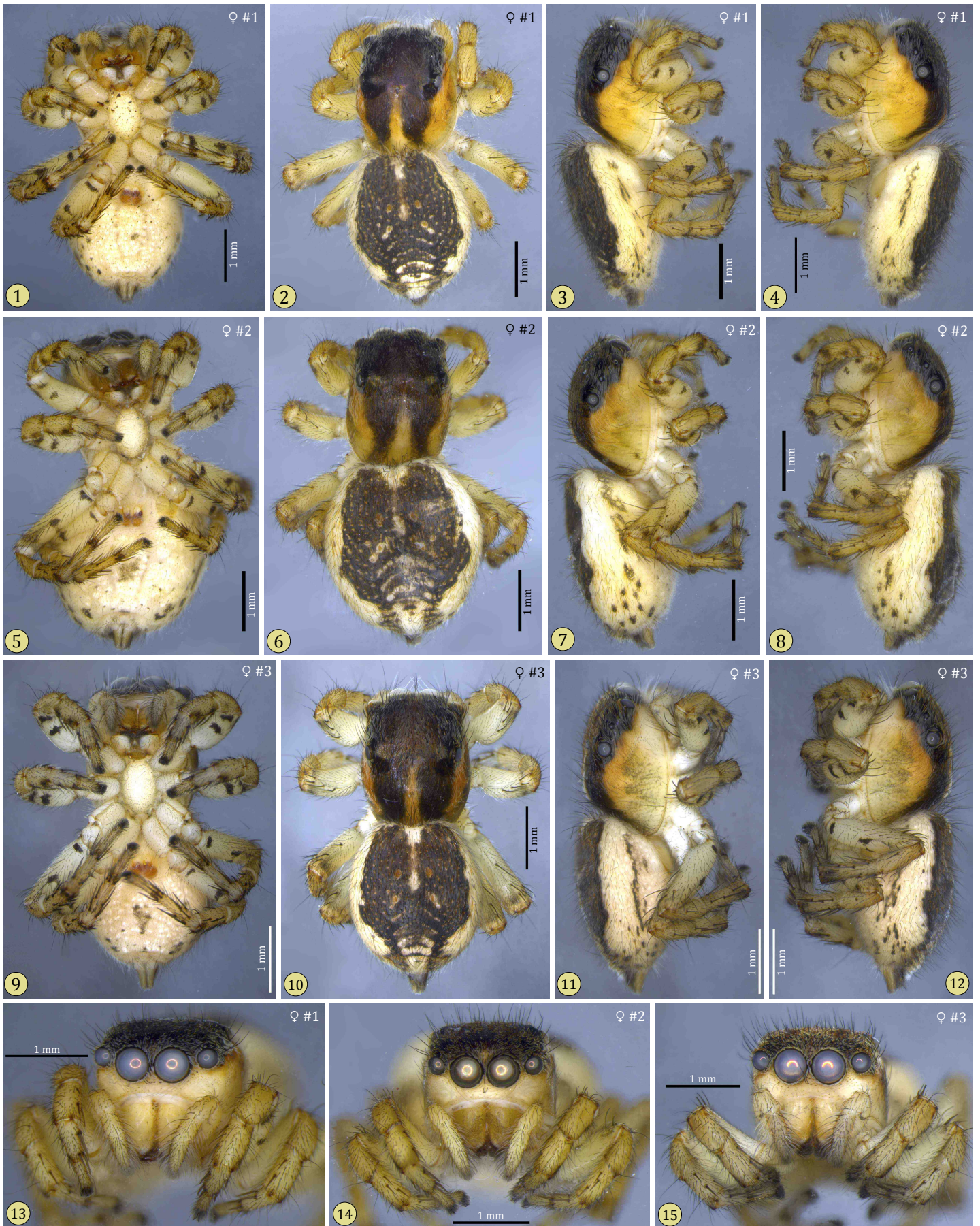


Figure 67. Three female *Maratus tessellatus* in alcohol.

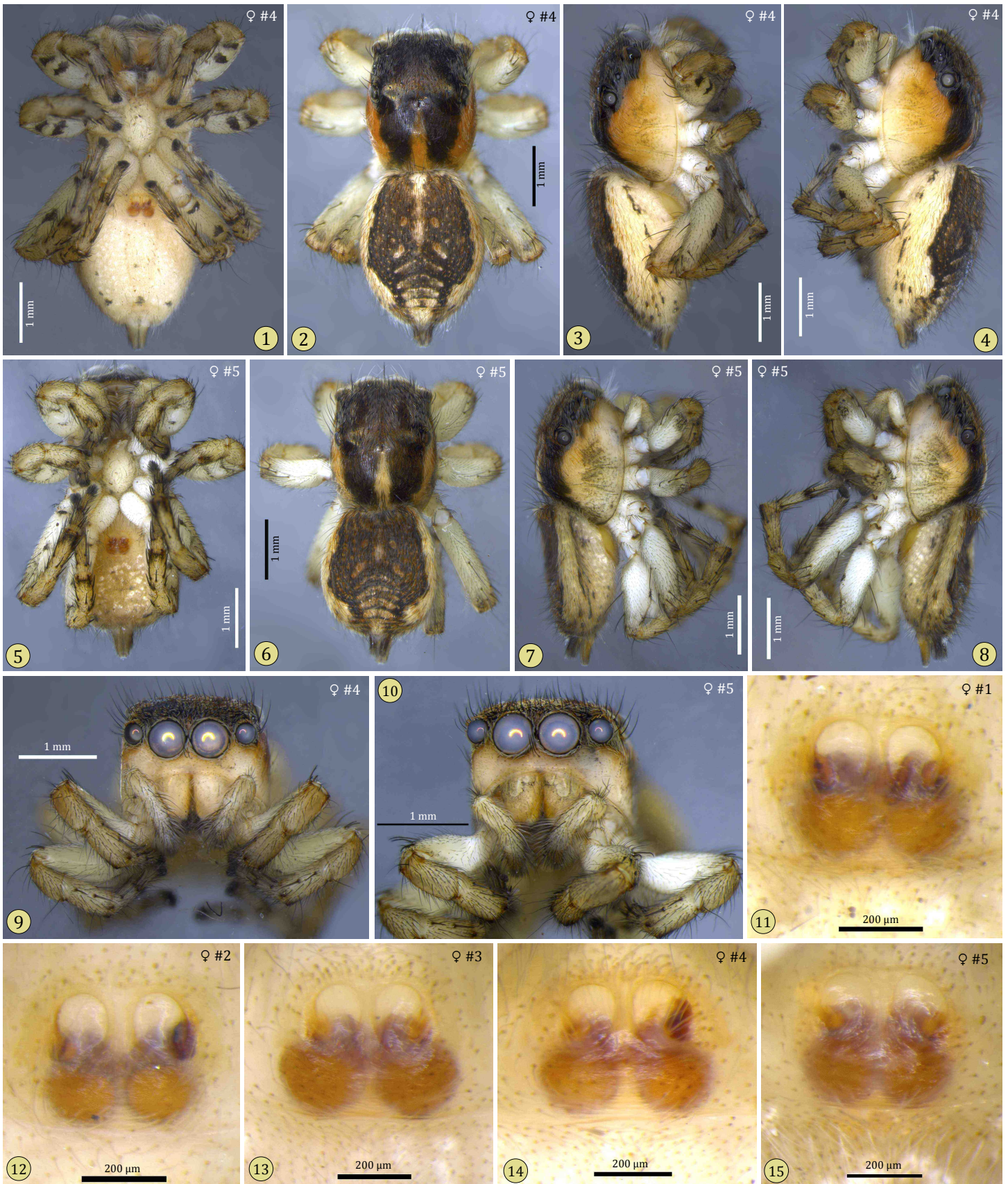


Figure 68. Female *Maratus tessellatus* in alcohol. 1-10, Two females. 11-15, Epigynum of five different females.

The clypeus is light brown and translucent, with long white setae projecting anteromedially over the light brown, translucent, glabrous chelicerae. The pedipalps are light coloured and covered with longer off-white setae. The eye region is covered with light brown setae, interrupted at the rear by a darker, indistinct stripe behind each AME. These setae surround the eyes, and extend below and behind the PLE half-way to the rear margin of the carapace. The PME are closer to the PLE than to the ALE. The dorsal carapace, including cuticle of the eye region and two broad bands extending from the eye region to the rear of the carapace, is dark brown (Figure 68:2). The sides of the carapace are mostly light brown, glabrous, and translucent, and there is no marginal band. A prominent median thoracic tract of light brown setae, with light cuticle beneath, extends behind the eye region half way to the rear margin. The underlying stripe of light cuticle extends to the rear margin. The opisthosoma is marked with a dark brown dorsum flanked by wide, light brown to off-white marginal bands. At the rear of the dark brown dorsum a lighter, herringbone pattern is present, comprised of four to five chevrons pointed forward, each decreasing in width toward the rear. The underside of the opisthosoma is covered with off-white setae. The coxae, sternum, labium, and endites are glabrous, translucent and grey, except for scattered longer off-white setae emerging from the posterior sternum.

Legs I and II, of similar length, are shorter than legs III and IV. Legs III are longer than legs IV. The legs are light brown to yellow brown and bear scattered off-white setae, interrupted by dark pigment near the joints that give these a ringed appearance. The epigynum (Figure 68:11-15) has extensive but variable sclerotization of ducts visible through the posterior part of each fenestra, a septum of variable width between the fenestrae, and large posterior spermathecae of variable diameter.

Immatures. Early instars (Figure 69:1-4) have a pattern of setae and pigmentation that resembles that of the adult female, with a distinct herringbone pattern on the posterodorsal opisthosoma. Penultimate females (Figure 69:5-12) are close to adult females in appearance. Penultimate males (Figure 69:13-19) resemble the females, but have bulbous, developing pedipalps, an entirely dark brown to black carapace, narrow marginal bands of off-white scales, and darker but indistinct transverse bands on the dorsal opisthosoma that suggest some features of the pattern seen in the adult male.

Courtship and mating. Display by a male facing a female (Figures 70-72) is relatively simple in *Maratus tessellatus* and does not involve the elevation or display of the opisthosoma. During this display the male faces the female with legs III extended and elevated to either a near-vertical position, or to a lower (V-shaped configuration) position. From this position, the legs III may be symmetrically lowered and then raised again almost continuously, or at intervals ranging from 0.1-1.0s. High speed (1000fps, Figure 68) analysis of this motion reveals that the legs are vibrated at a very high rate of ~ 30 cycles/s when they are moved, each cycle consisting of lowering of the legs followed by return to their original position. As observed in other *Maratus*, males lower their extended legs III and touch the carapace of the female with legs I during their final approach (Figure 73). Also as in other *Maratus*, the female can rotate her opisthosoma by 180° to facilitate mating (Figure 74).

Display by females. Several sequences of female display to courting males, apparently a sign of rejection by the female observed in many *Maratus* species, are shown in Figures 75 and 76. When displaying in this manner, females usually turn away from the courting male and raise their opisthosoma, intermittently rotating it from side to side. They may also extend one or both legs III and wave these. In one trial with a reared male and female (27 FEB 2016), the virgin female initially displayed rejection in this manner to the male. Minutes later the male followed her to a position beneath a branch and they mated. Since a male does not appear to have the ability to distinguish between a virgin and a mated female, the persistence that males exhibit in response to this display is warranted.



Figure 69. Immature *Maratus tessellatus*, reared from broods produced by females collected at the type locality. **1-4**, Early instars already exhibit much of the adult female pattern. **5-12**, Penultimate females are very similar to the adults. **13-19**, Penultimate males have a dark carapace with a narrow marginal band and dark transverse stripes on the dorsal opisthosoma.

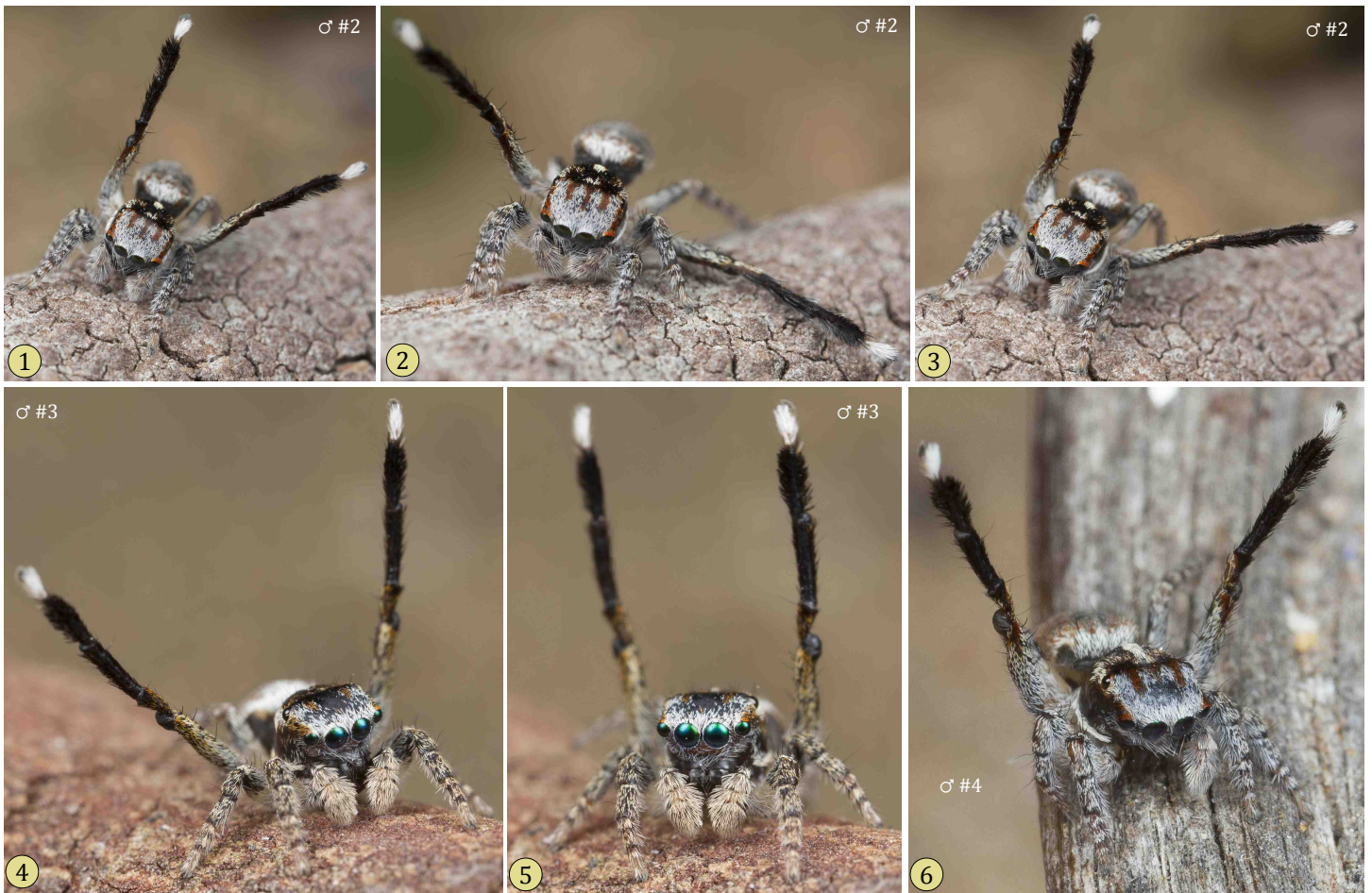


Figure 70. Positions assumed during the courtship display of three different male *Maratus tessellatus*.

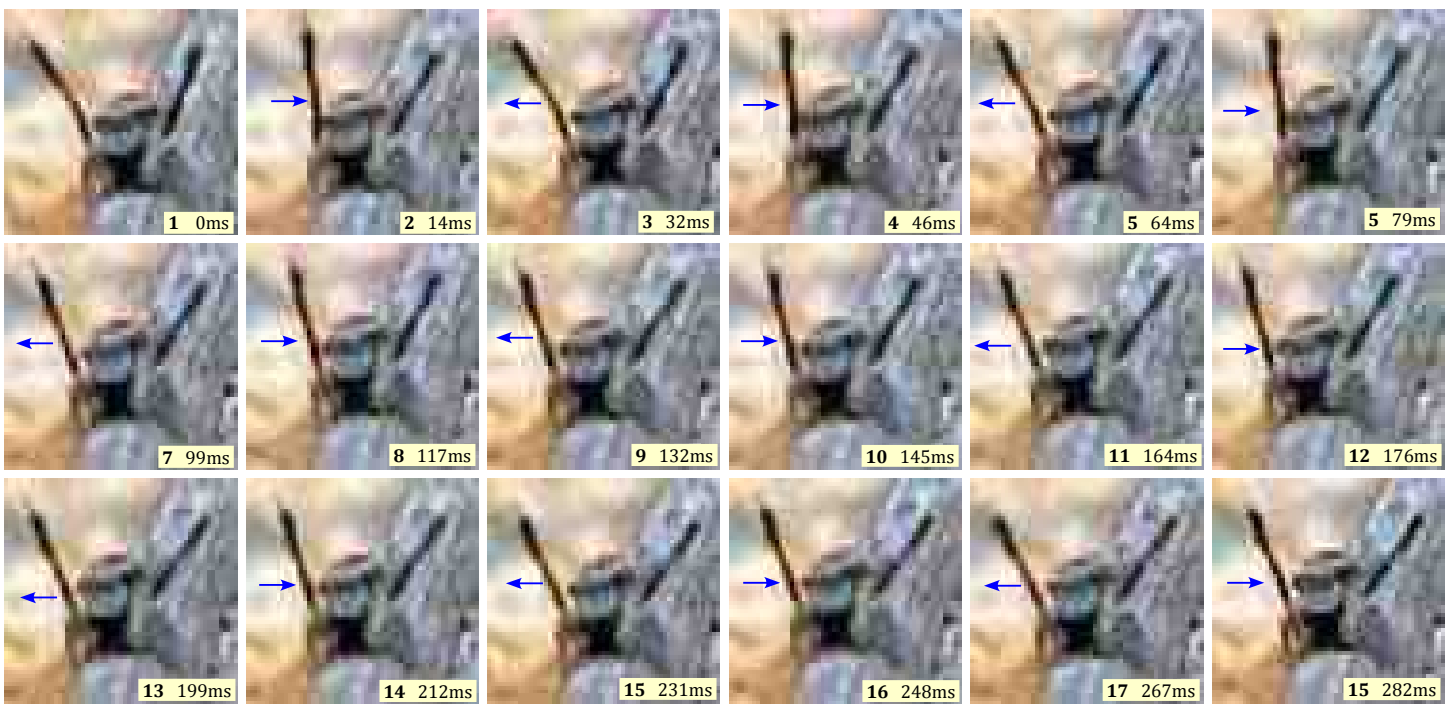


Figure 71. High speed (1000fps) analysis of leg III movement during courtship display by a male *Maratus tessellatus*. Each cycle of left/right leg movement (arrows) takes about 33msec, for a frequency of about 30/s. This movement appears only as a blur in 25fps video recordings (Figure 68).

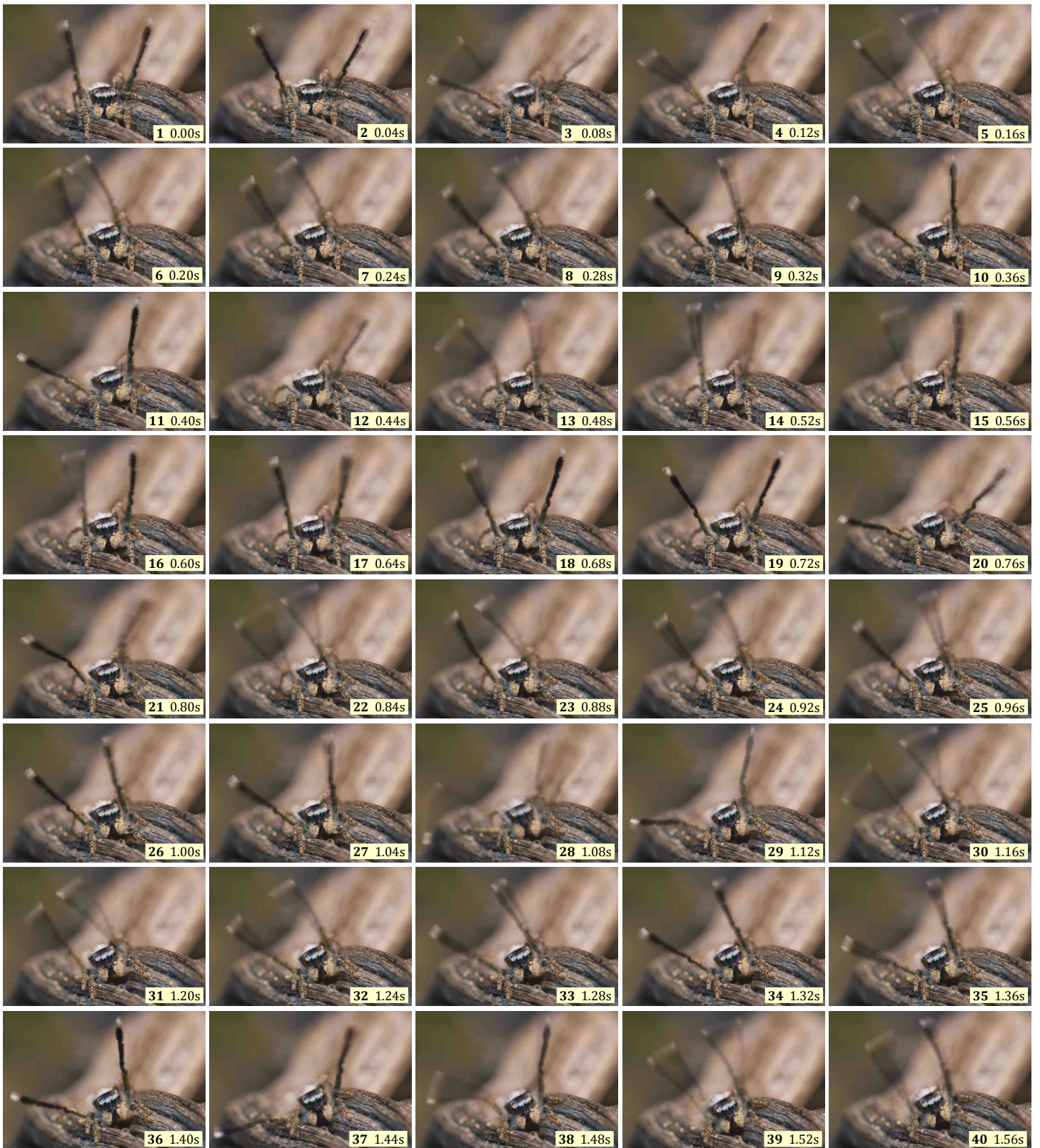


Figure 72. Consecutive frames from a 25fps video recording of courtship display by a male *Maratus tessellatus*. Movement and vibration during this entire 1.56s interval was almost continuous. In other records there was less movement of legs III accompanied by intermittent vibration (~30/s vibrations at 0.5-1.0s intervals with legs III in a near vertical position).



Figure 73. Final approaches of two different male *Maratus tessellatus* to a courted female.

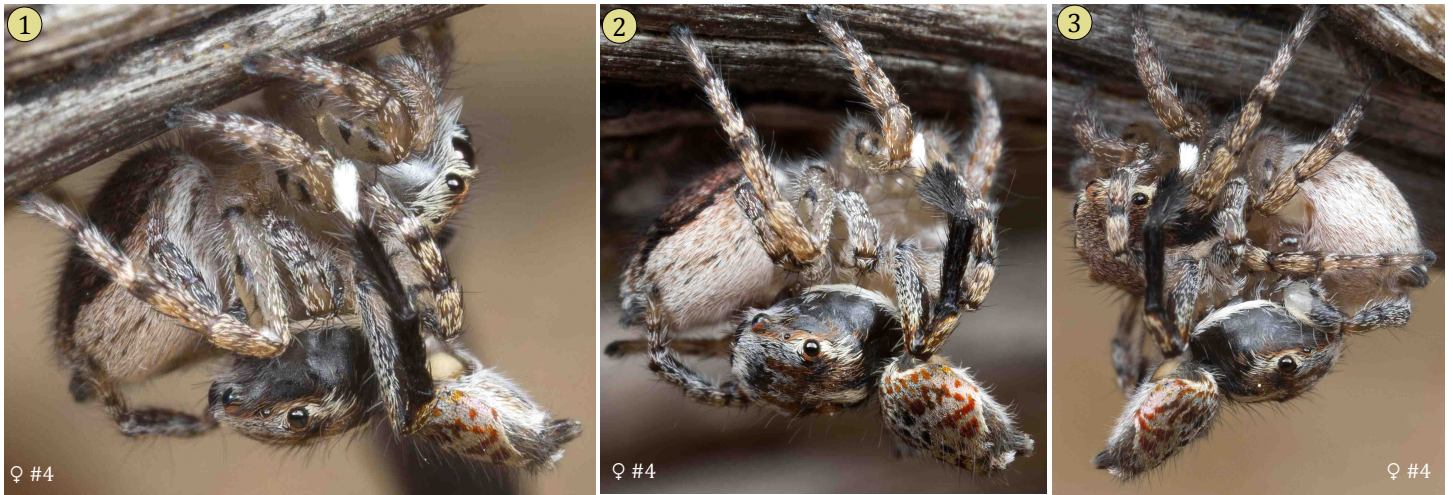


Figure 74. Mating by a *Maratus tessellatus* pair.



Figure 75. Three views of the elevated position of a female *Maratus tessellatus* during a rejection display.

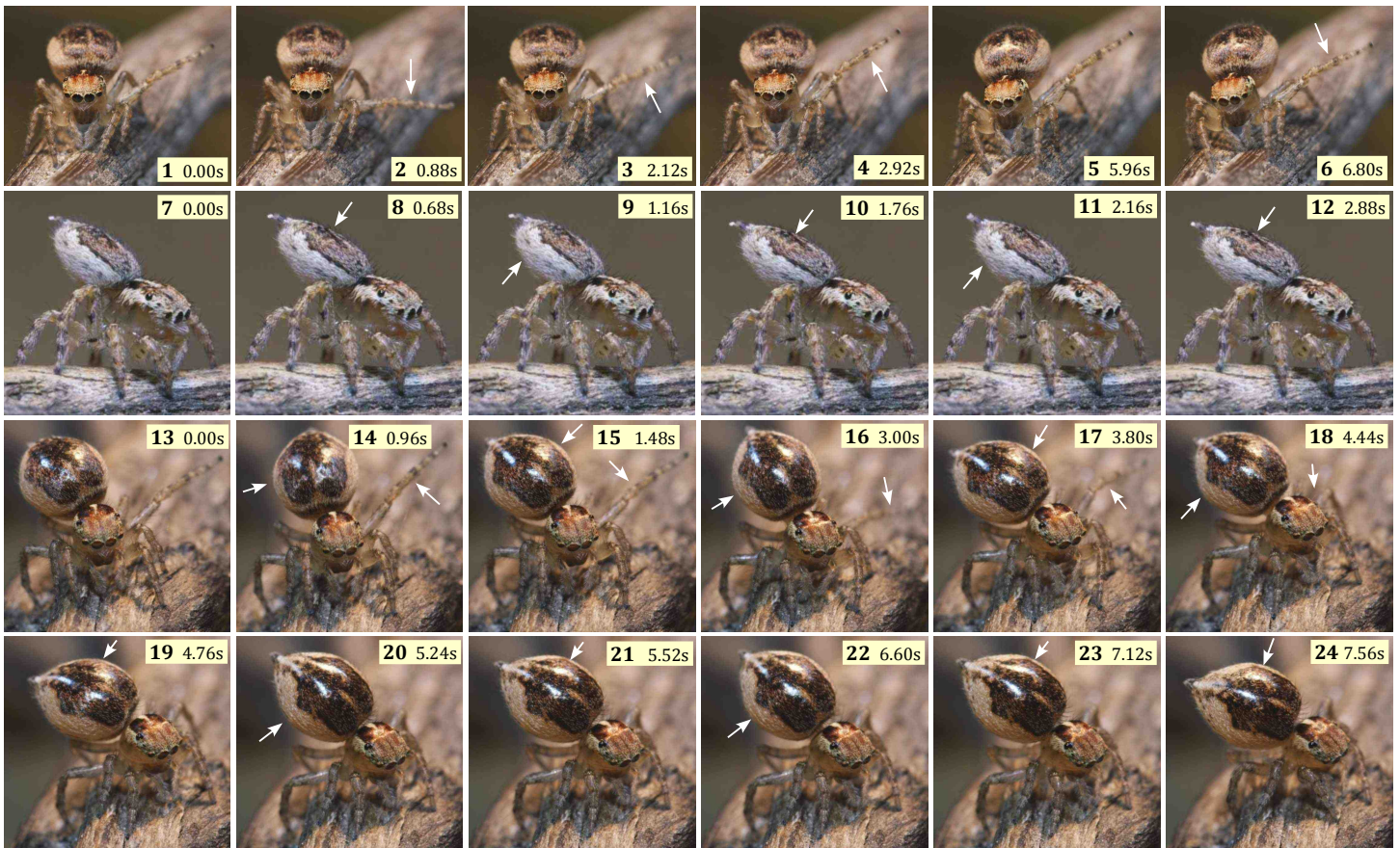


Figure 76. Selected frames from three 25fps video recordings of rejection display by female *Maratus tessellatus*. **1-6**, Arrows indicate slow waving of the extended leg LIII. **7-12**, Arrows indicate movement of the opisthosoma as it was waggled. **13-24**, Arrows indicate both wagging of the opisthosoma and waving of the extended leg LIII.

Habitat and distribution. *Maratus tessellatus* males and females were found as they patrolled irregular, dry branches and stems in vegetation on top of old coastal sand dunes near Bunbury (Figure 77, map Figure 1).



Figure 77. *Maratus tessellatus* male (2) and female (3) in their habitat in vegetation on top of old coastal sand dunes (1).

***Maratus vespa*, new species**

Type specimens. The holotype male (♂ #7), eight paratype males (♂ #1-3, 5-6, 8-10), and seven paratype females (♀ #1-7) were collected at Lake Jasper, D'Entrecasteaux National Park, WA (34.42018 °S, 115.69467 °E, 17 NOV 2015, coll. J. Otto and D. Knowles, edge of sand track). These will be deposited in the Western Australian Museum, Perth.

Etymology. The species group name (*vespa*, Latin, f., noun, English translation *wasp*) refers to the presence of an unusual and detailed pattern of scales on the fan of the adult male that resembles the outline of a wasp (genus *Vespa*) as seen from the front.

Diagnosis. Males have a distinctive pattern of scales on the fan, drawn with fine lines, that is unlike that of any other *Maratus*. The courtship display most resembles that of *M. linnaei* Waldock 2008, with extended legs III held in a vertical position, often touching at the midline as the fan is rotated from side to side and its movement is followed closely by the female (Otto 2013). But, the two species differ greatly in appearance, and male *M. linnaei* have no flaps or lateral extensions of the fan. Both the male pedipalp and the female epigynum of *M. vespa* resemble those of other *Maratus* species and are of little use in identification. Females are also very similar to other *Maratus* species, but may have three indistinct to well-defined dark lines toward the rear of the eye region, and they also have a characteristic but subtle pattern consisting of a large forward pointing 'V' flanked anteriorly by two lines, all comprised of lighter grey or brown scales that can be distinguished from the dark brown scales that cover the dorsum of the opisthosoma. A series of indistinct dark lines may also radiate across the wide marginal bands of the female opisthosoma, toward the rear.

Description of male (Figures 78-86). Males (N=9) ranged from 3.57 to 4.05 mm in length. The entire carapace is black and glabrous, except for setae around the eyes, in the eye region, and the marginal band. Scattered white setae project forward from the clypeus, below the anterior eye row. The chelicerae are black and glabrous. The eye region is covered with grey setae, interrupted by five lines or tracts of dark red setae. The median line may cross the entire eye region, flanked by a pair of lines that occupy only the rear half of the eye region. Flanking these is a pair of diagonal lines or spots, also dark red. A prominent marginal band of white setae is present. An indistinct median thoracic tract and a lateral tract behind each PLE of scattered off-white setae may be present if not worn. The PME are closer to the PLE than to the AME. The fan of the dorsal opisthosoma is well-developed, with a complex and distinctive pattern of fine lines that resembles a drawing of a wasp as seen from the front, drawn in light brown on a background of light brown or yellow-brown (Figure 78:6). Six longitudinal tracts of brighter red-orange scales, the medial pair shorter and joining and appearing like a pair of wasp mandibles, are surrounded by iridescent blue-green scales toward the front of the fan. The fan has a pair of posterolateral, lobate flaps that are extended during courtship display. Blue-green iridescent scales are also present at the rear of the fan, where they are interrupted by three orange spots, and on the posterior margin of each flap. White setae are present at the dorsal midline behind the fan, and a patch of white colular setae is present behind these, above the black spinnerets fringed with long grey setae (Figures 78:3, 79:8). Beneath, the opisthosoma is brown with scattered light setae. From below, coxae III and IV are grey and glabrous, and coxae I and II, the sternum, the labium, and endites are dark and glabrous.

Legs I and II are of similar length, shorter than legs III and IV, and legs III are by far the longest. Legs I, II and IV are dark brown to black, with irregular bands of white scales on each segment. Legs III are dark brown to black with scattered white setae and prominent ventral fringes of long white setae extending from each femur to the metatarsus. The tarsus is covered with white setae. The pedipalps are typical for *Maratus*, with two pointed apices of the embolus, the outer longer and larger (Figures 85-86).



Figure 78. Views of four male *Maratus vespa*. **3**, Rear view of opisthosoma. **6**, Partly expanded fan. **8**, The right lobe of the fan of this male was permanently damaged and could not be retracted.



Figure 79. Views of four male *Maratus vespa*. **8**, Left posterolateral view of opisthosoma. The posterior edge of the flap is iridescent.

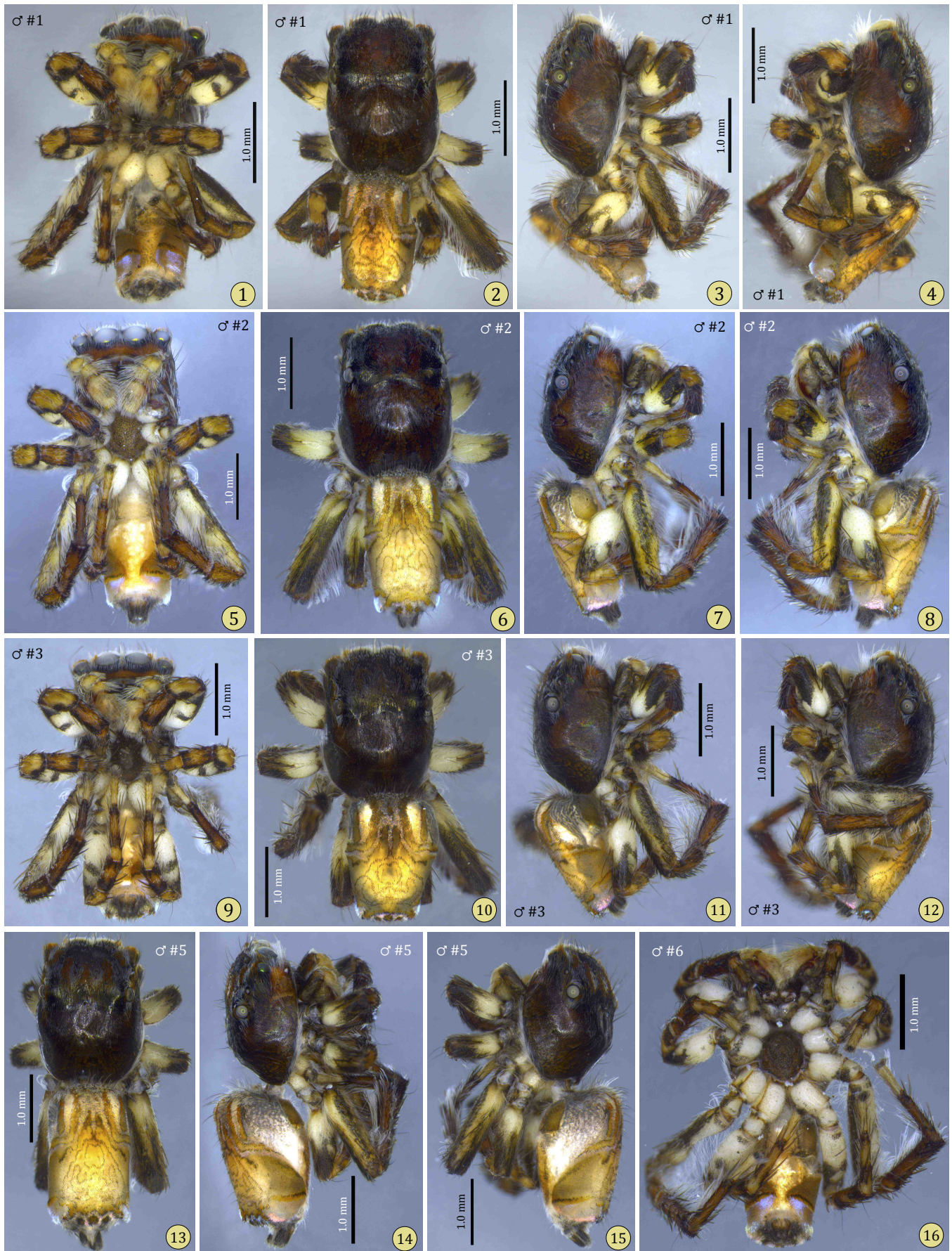


Figure 80. Five male *Maratus vespa* in alcohol.

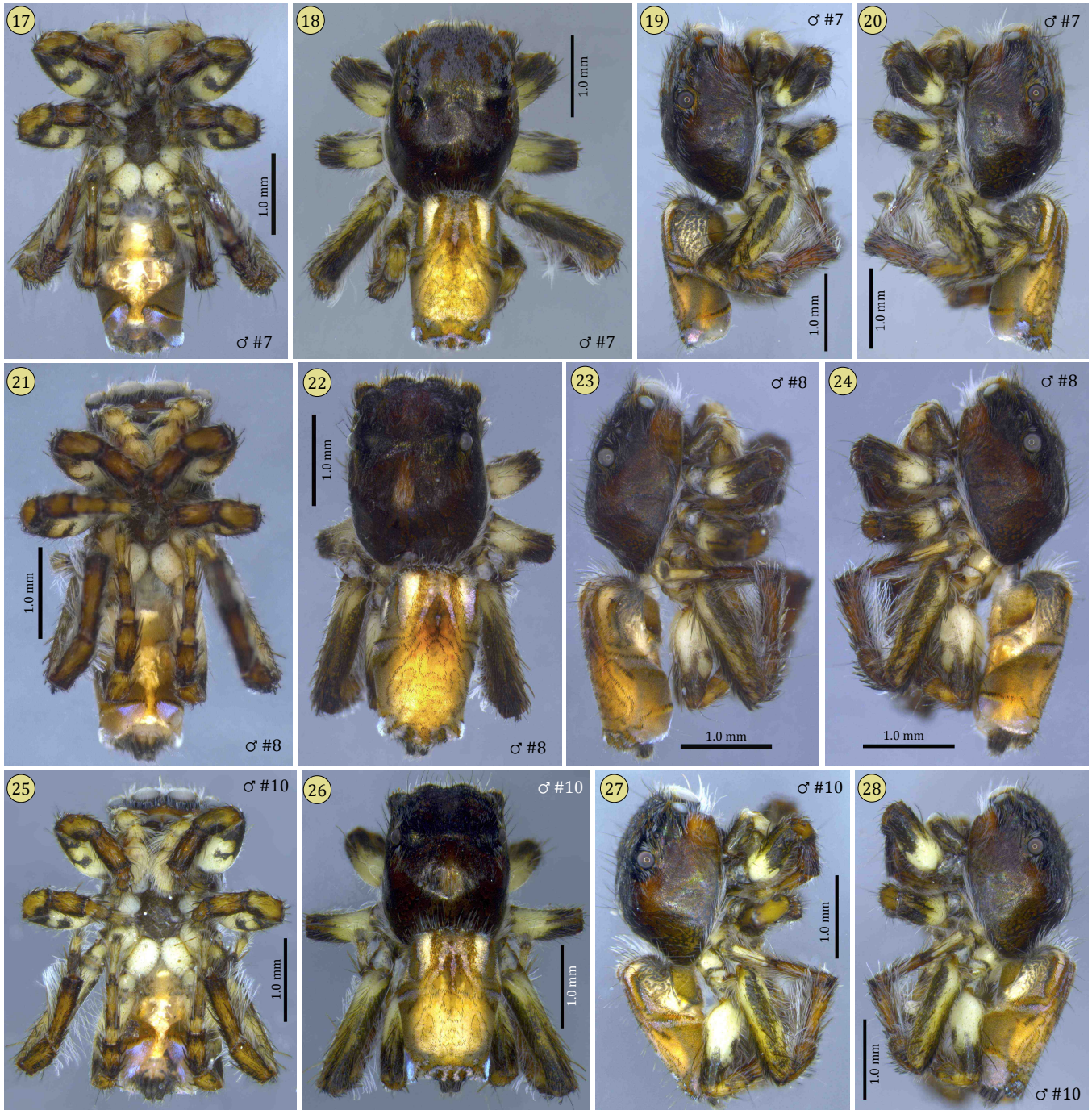


Figure 81. Three male *Maratus vespa* in alcohol.

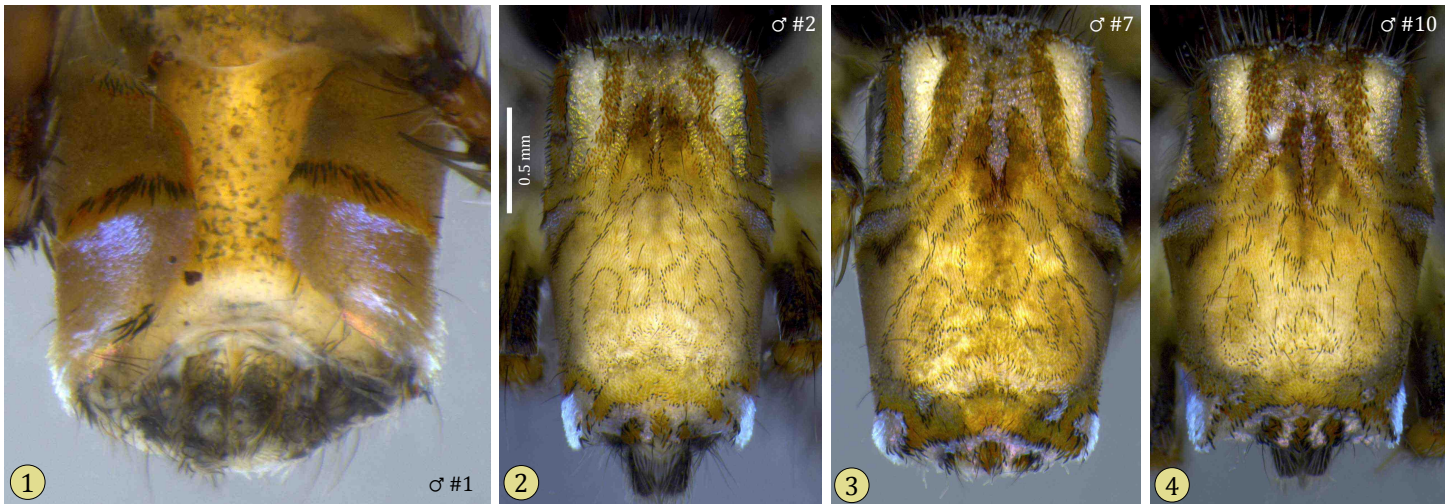


Figure 82. Detailed views of the opisthosoma of male *Maratus vespa* in alcohol. Some of the iridescence of the posterior part of the lateral flaps can be seen. **1**, Ventral view. **2-4**, Dorsal views, showing pattern of fine, dark lines.

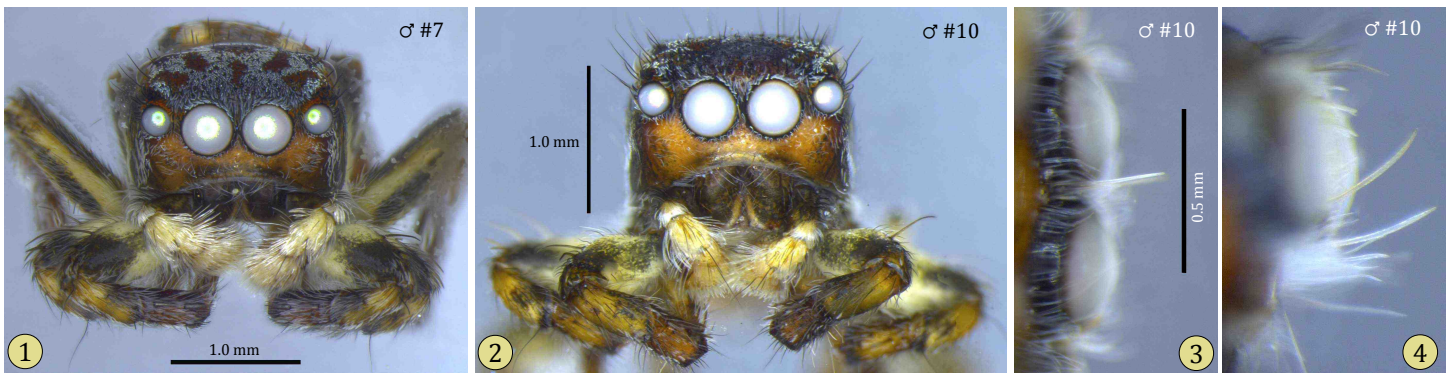


Figure 83. Male *Maratus vespa* in alcohol. **1-2**, Front views. **3-4**, Dorsal (**3**) and lateral (**4**) views of the stout setae that project forward between the AME. One or more of these setae is typical for both male and female *Maratus*.



Figure 84. Ventral views of three living male *Maratus vespa*. A prominent white ventral fringe extends from the femur to the metatarsus.

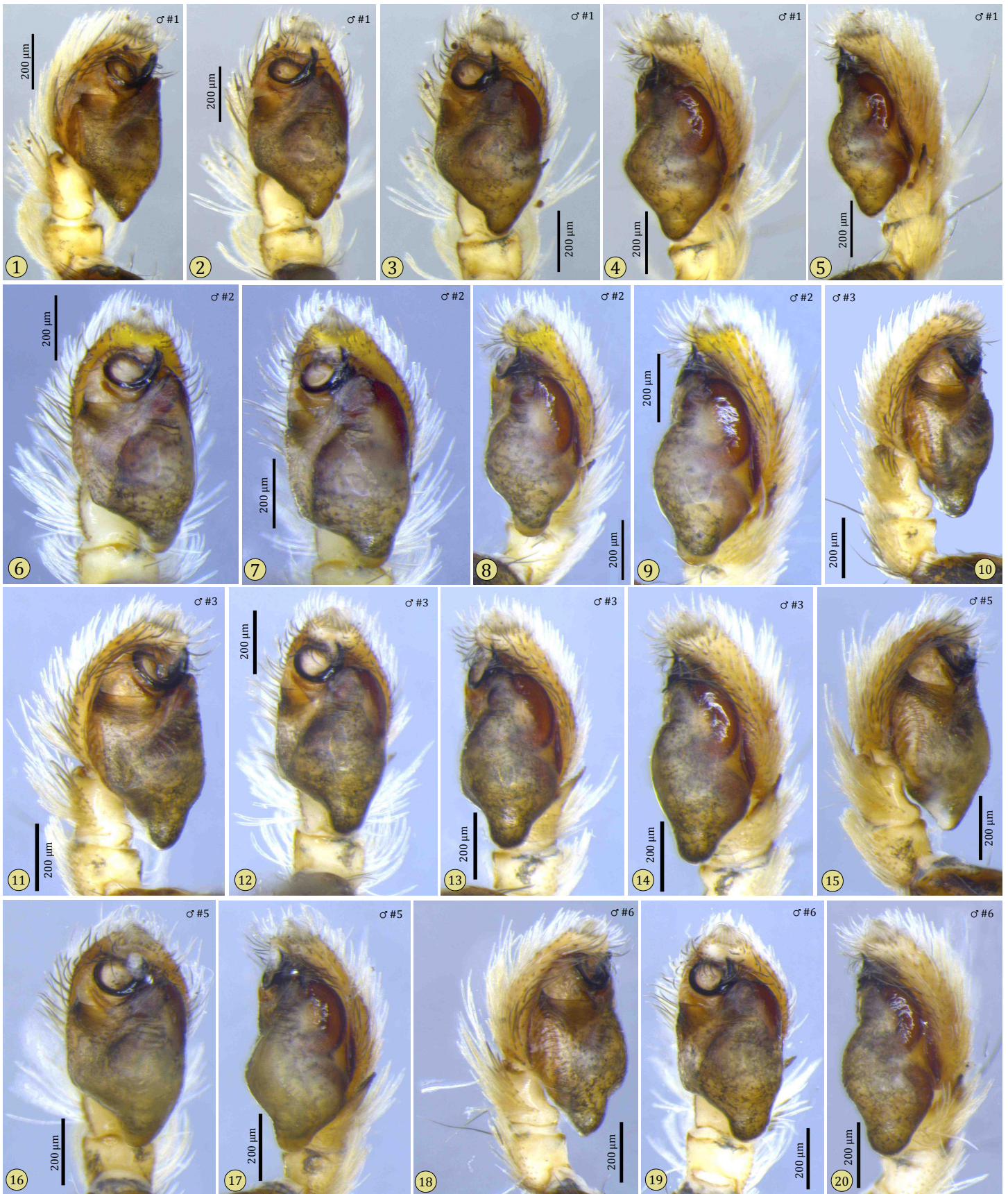


Figure 85. Medial to lateral ventral views of the left pedipalp of five male *Maratus vespa* in alcohol.

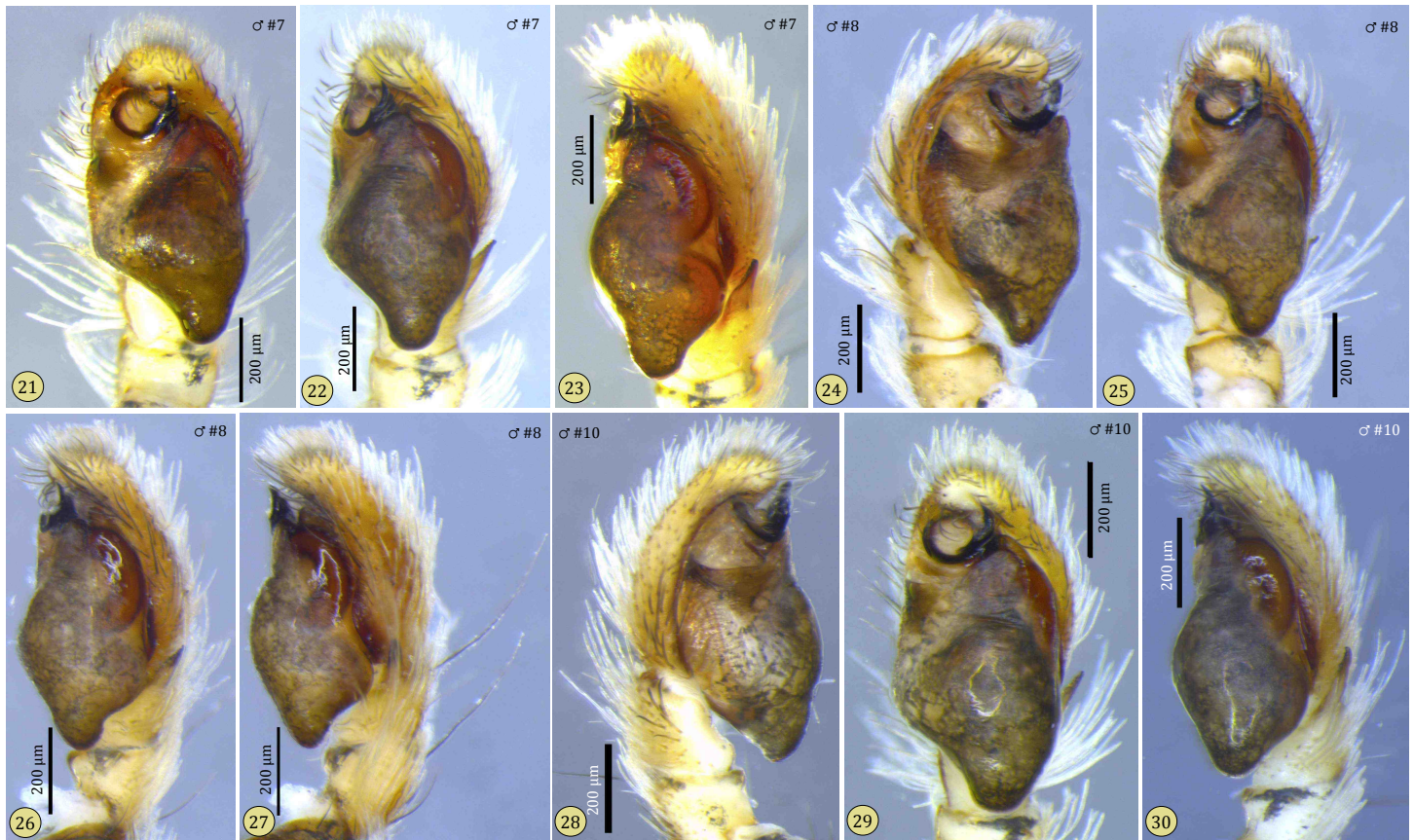


Figure 86. Medial to lateral ventral views of the left pedipalp of three male *Maratus vespa* in alcohol.

Description of female (Figures 87-92). Females (N=6) ranged from 4.67 to 5.31 mm in length. The clypeus is brown with long, anteromedially directed, off-white setae. The chelicerae are brown and glabrous. The eye region is covered by four indistinct tracts of mixed off-white to light brown and red-brown scales, one behind each anterior eye. Scales of the medial tracts, behind the AME, are oriented in a posterolateral direction. The dorsal carapace is black, the sides of the carapace are brown and translucent. The PME are slightly closer to the PLE than to the ALE. Long, off-white to light brown setae form a large, indistinct band extending from below the PLE to the rear, at the top of the carapace. Some of these setae may also comprise a short median thoracic spot or stripe behind the eye region. The lower half of the carapace, on either side, is mostly brown and glabrous with a few scattered scales. A marginal band is not present. The dorsal opisthosoma is dark brown to red-brown, flanked with broad marginal bands of off-white to light brown setae. An indistinct pattern of lighter setae, appearing as a forward-pointing 'V' flanked by two shorter bands at the anterior margin, may be present within the dark dorsal area. A small triangular patch of white colular setae is present. Below, the opisthosoma is brown with a cover of short off-white to light brown setae. From below, the coxae, sternum, labium, and endites are brown, translucent, and mostly glabrous except for scattered setae.

Legs I and II are shorter, legs III and IV longer and of similar length with legs III the longest. All legs are brown and irregularly banded with rings of off-white to light brown setae. The pedipalps are light brown to brown and translucent, covered with off-white setae. The epigynum (Figure 92) is typical for *Maratus*, with sclerotized ducts visible through the posterior half of each fenestra (window). The large posterior spermathecae vary from about the size of the fenestrae to significantly larger.



Figure 87. Four different female *Maratus vespa*.



Figure 88. Three different female *Maratus vespa*.

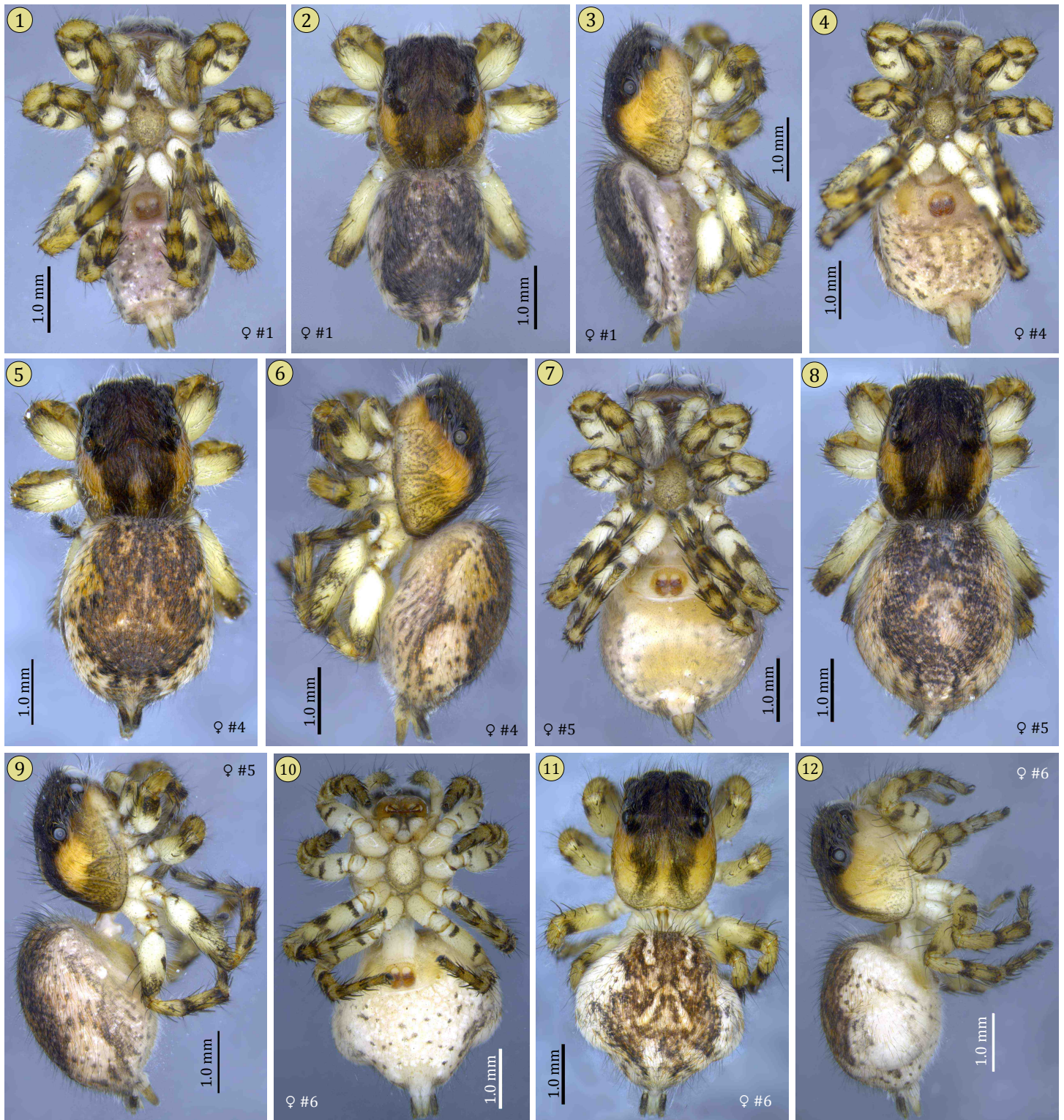


Figure 89. Four different female *Maratus vespa* in alcohol.

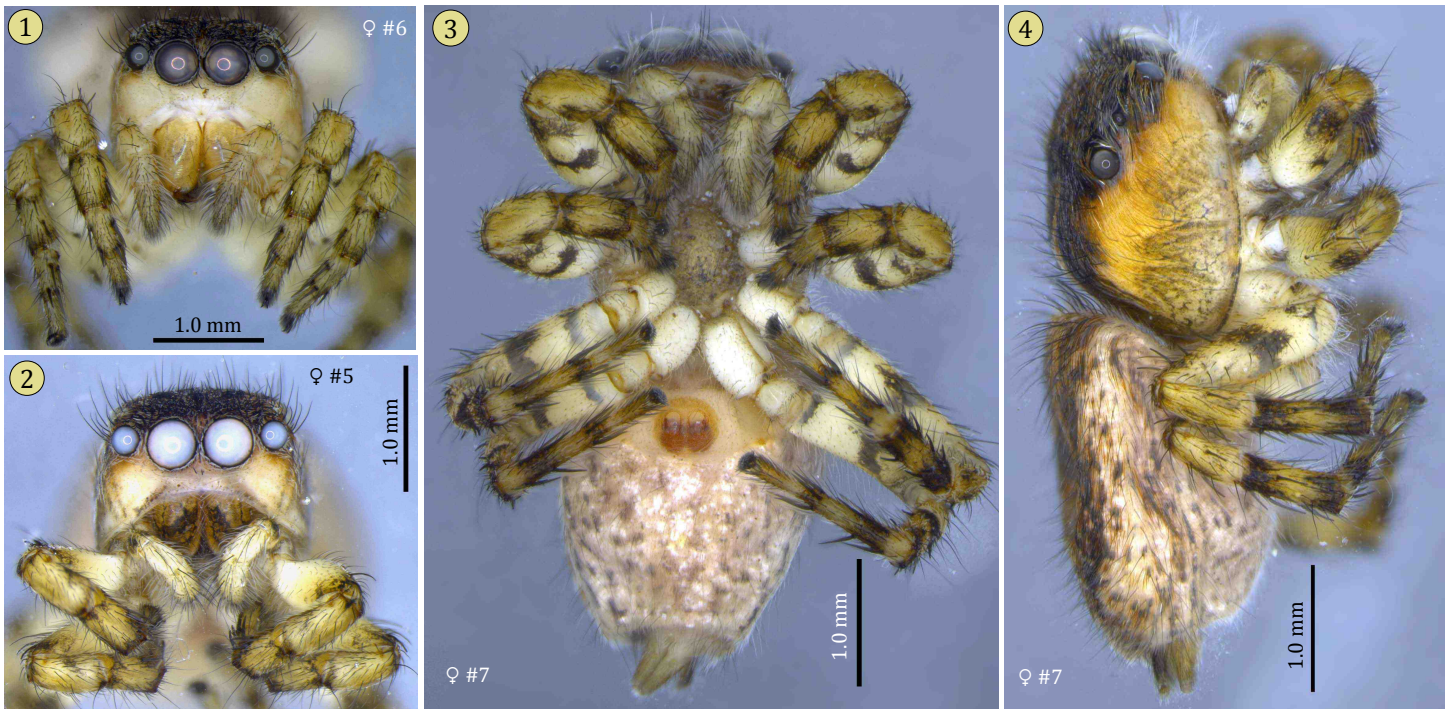


Figure 90. Female *Maratus vespa* in alcohol.

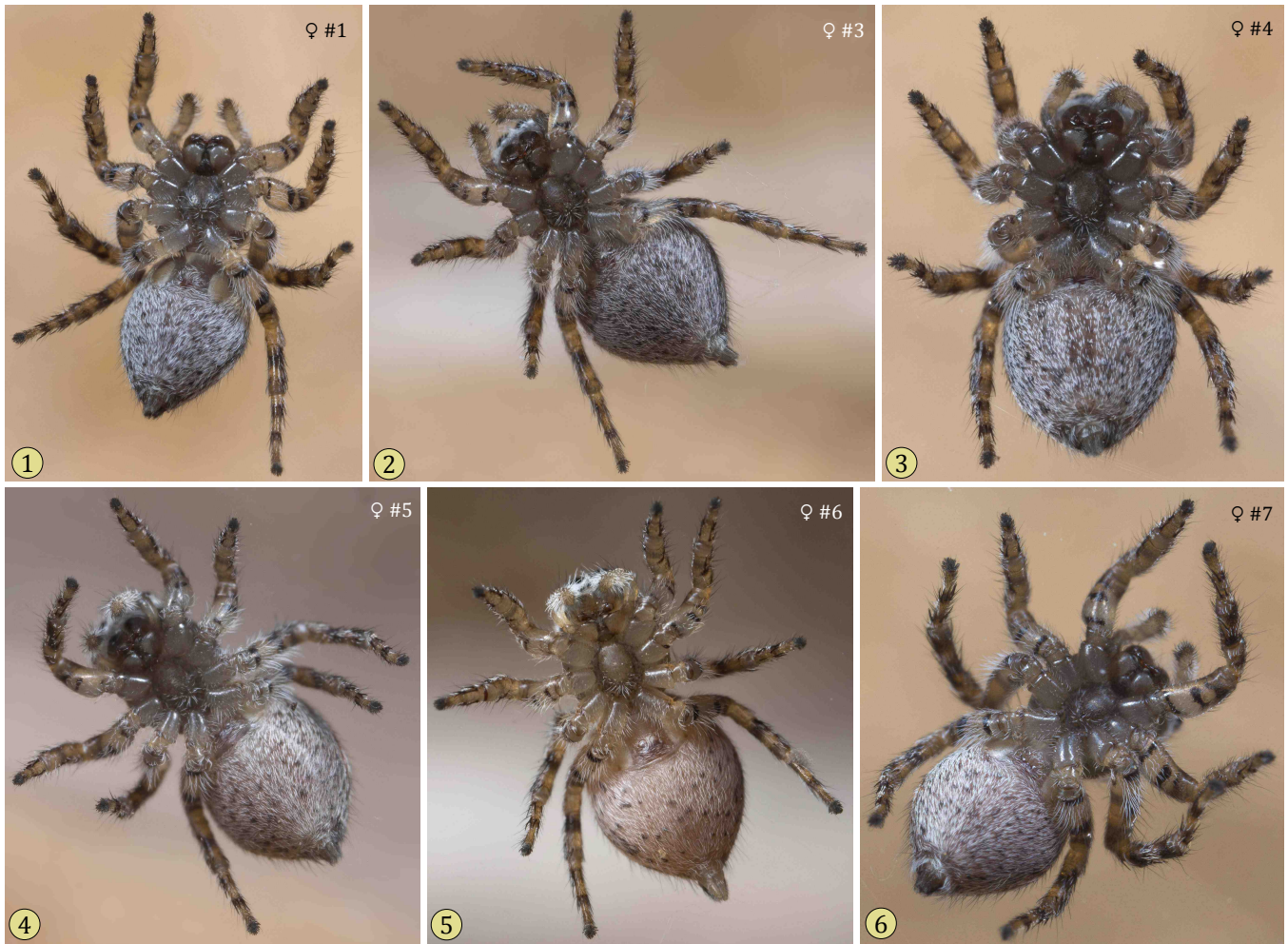


Figure 91. Ventral views of six living female *Maratus vespa*.

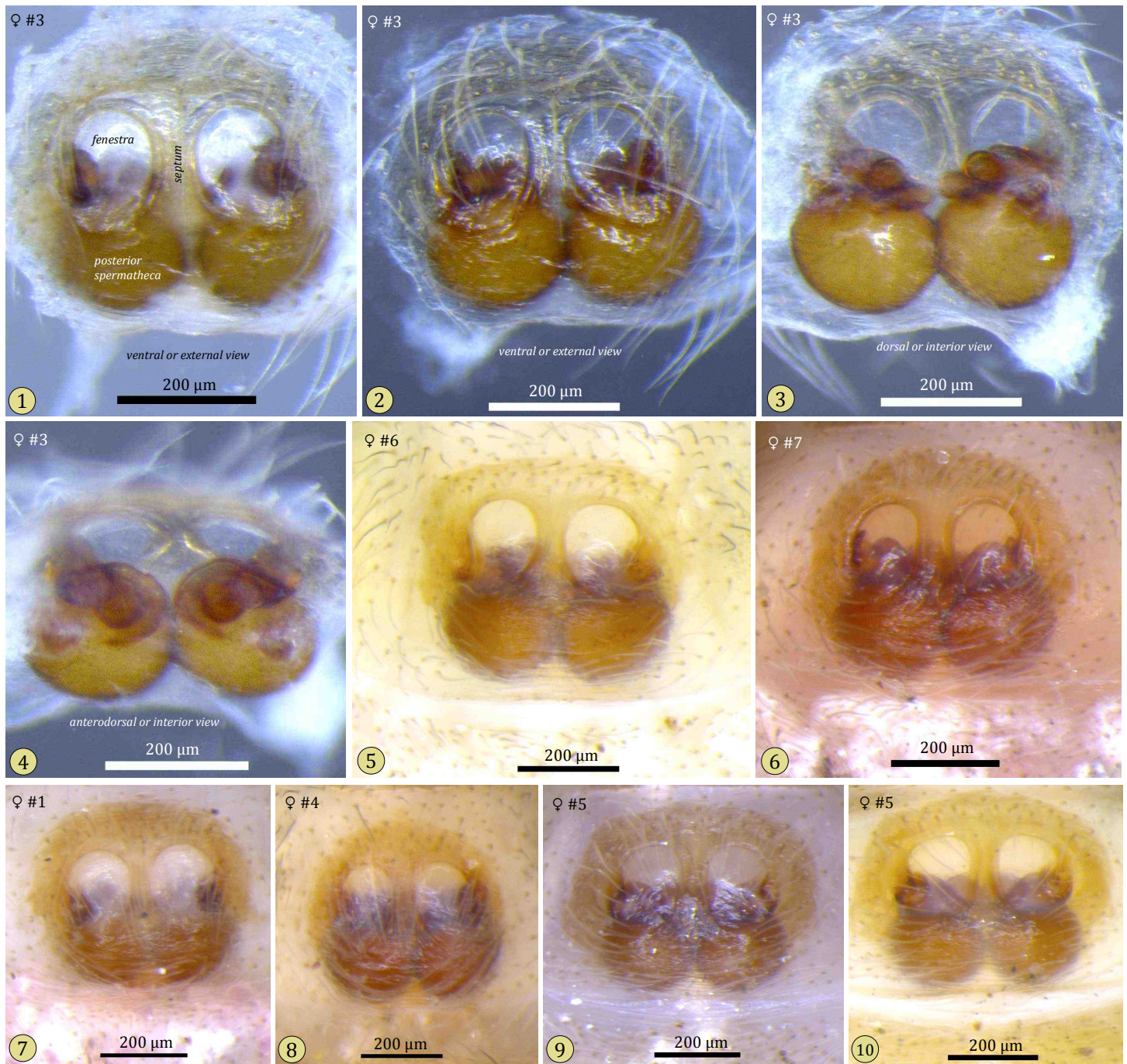


Figure 92. Ventral views of the epigynum of six female *Maratus vespa*, in alcohol. **1-2**, Ventral view of dissected epigynum. **3**, Dorsal (interior) view of dissected epigynum, showing the extensive, sclerotized ducts posterior to the large posterior spermathecae. **4**, Anterodorsal (oblique interior) view, showing how the sclerotized ducts lie above the posterior spermathecae. **5-10**, Normal, ventral views of the epigyna of intact specimens.

Immatures (Figure 93). Emergent (second instar) young are light brown and translucent, with dark pigment at the top of the carapace. They have a cover of red-brown scales in the eye region, off-white scales around the eyes, and several transverse bands across the opisthosoma. Penultimate females resemble the adults. In addition to their bulbous pedipalps, penultimate males have an entirely black carapace and a pattern of light to dark, brown to red-brown setae on the dorsal opisthosoma that suggests the distinctive pattern of coloured scales of the adult male.



Figure 93. Reared immature *Maratus vespa*. 1-3, Emergent or second instar. 4-6, Penultimate female. 7-12, Two different penultimate males.

Courtship (Figures 94-100). In their courtship display, male *Maratus vespa* hold their extended legs III in position directly above the posterior carapace, in front of their elevated fan, with lateral flaps alternately expanded and retracted. During this display, the male would first rotate the fan to one side, then bring it back to a centered position, then rotate it to the other side, then bring it back to a centered position once again. In a video recording the duration of each cycle of rotation (center-right-center-left-center) averaged ~ 13.5 s, and regular cycles of display were repeated for more than four minutes (Figure 97). As the male displayed, a female closely observed the male from the front at a distance of only 4-5 mm, following the movements of the fan as it was rotated from side to side. Bright iridescent scales displayed on the striped anterior part of the fan (ventral part when elevated) when centered, and displayed on the outer part of each flap when turned to the side, may play an important role in eliciting the turning response of the female. A second variant on this display was also observed in which the fan was elevated and expanded but rotated to a lesser degree over a smaller arc, and the elevated legs III were separated and then brought together again in a series of 'pincher' movements (Figure 100). During each cycle of this movement, legs III were separated in ~ 0.25 s, then brought together more rapidly in ~ 0.08 s.

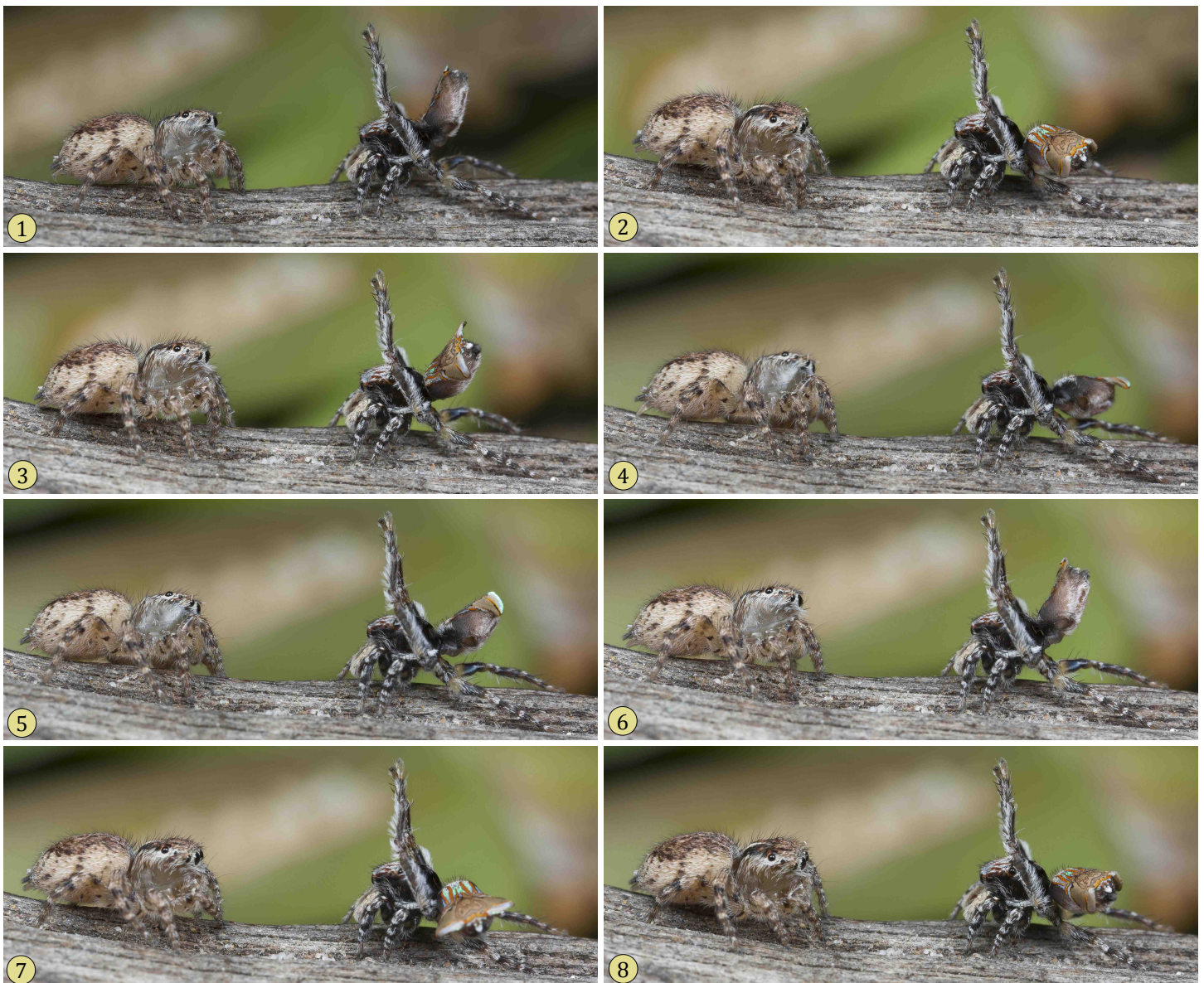


Figure 94. Sequential photographs showing display by a male *Maratus vespa* (#7), at right, in front of a female at a distance of 4-5 mm. Note turns by the female to follow movements of the fan behind the elevated and extended legs III of the male.



Figure 95. Display positions of two different male *Maratus vespa*.



Figure 96. Display positions of a male (#7) *Maratus vespa*. Note the bright iridescent scales visible when the fan was centered (1), and display of the iridescent posterior part of the flap of the fan was turned to the side (2, 5, 10). The flaps of the fan were retracted as the fan was rotated (3, 6, 7).

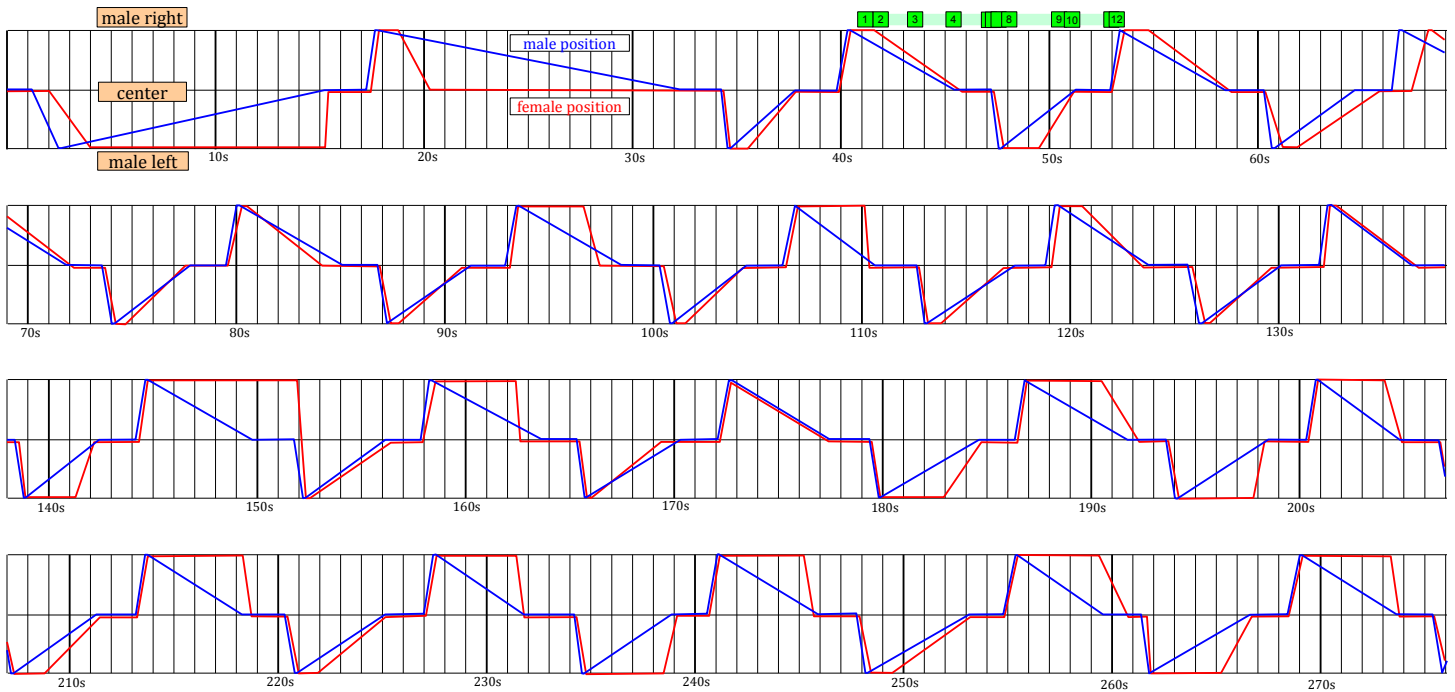
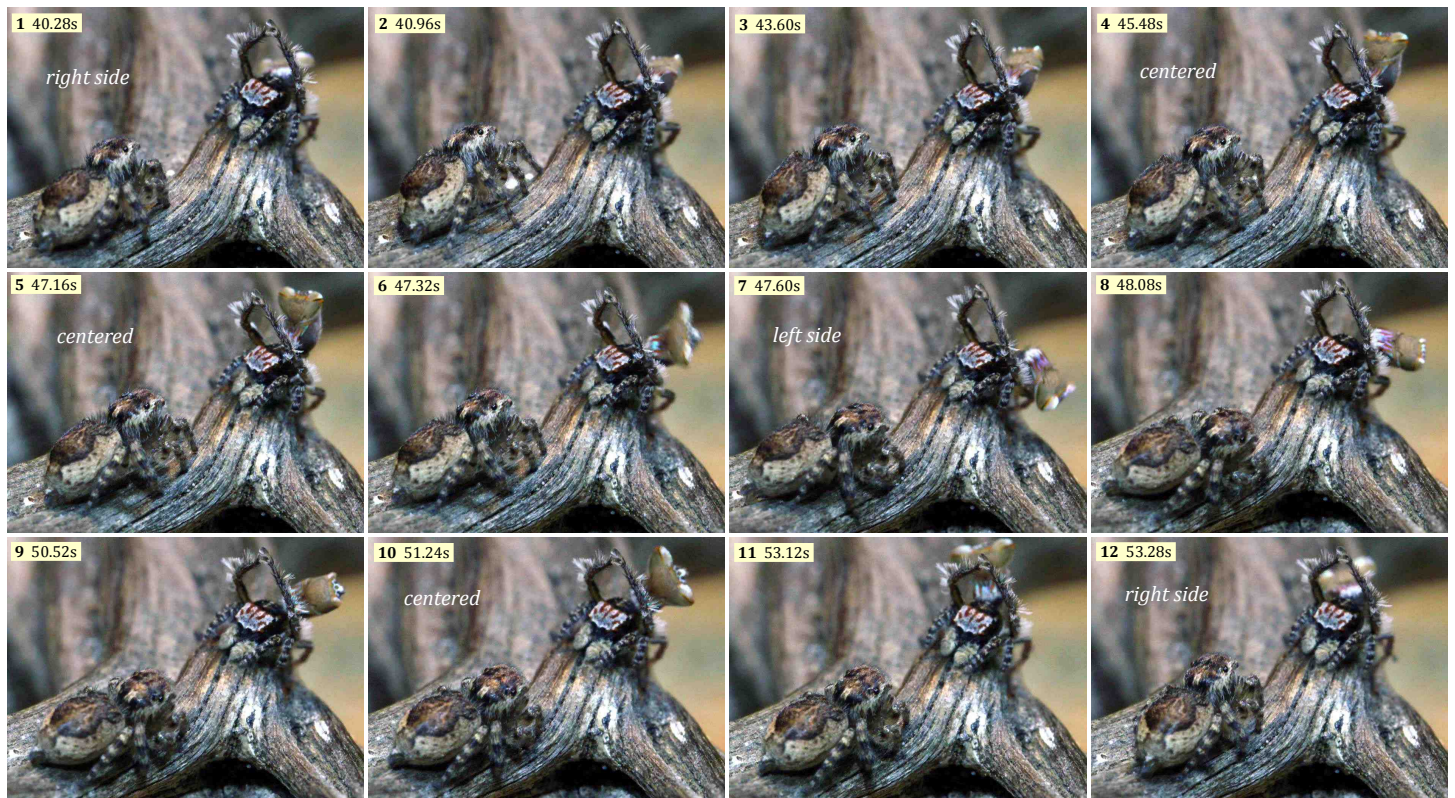


Figure 97. Interaction of male and female *Maratus vespa* during courtship. **1-12**, Selected, sequential frames from a 25fps video of courtship, identified by numbered green rectangles at the top of the chart. Respective positions of the male and female during 276s of this courtship are shown in the chart. Male positions with the fan turned to the extreme left, elevated and centered, and then turned to the extreme right were plotted and connected with blue lines. Female positions facing the fan in each of these positions were also plotted and connected with red lines. Female turns to face the fan (either the center or one of the flaps exposed to the side) tended to lag movements of the fan by several seconds.

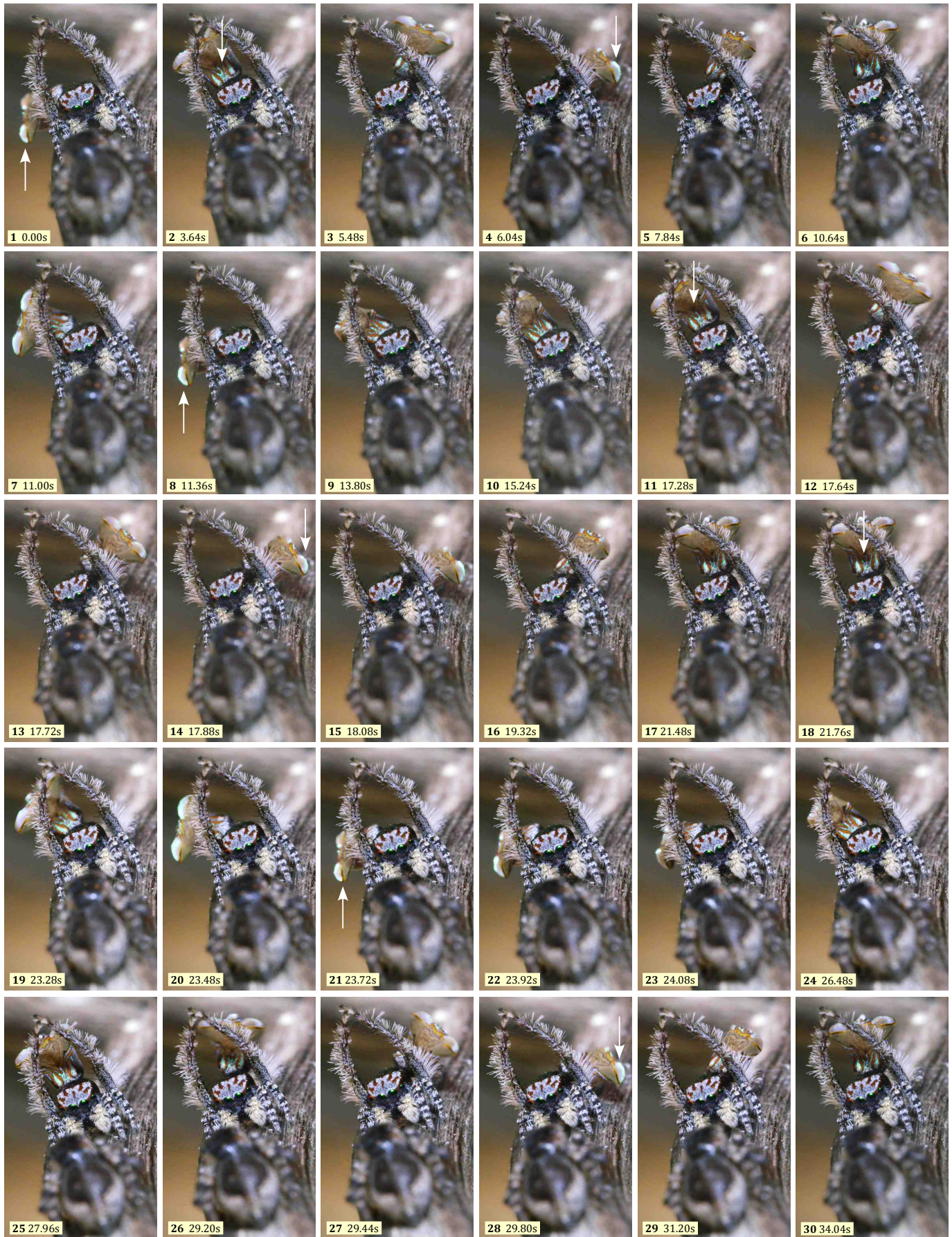


Figure 98. Selected frames from 25fps video showing turns of a female *M. vespa* to face the center and flaps of a male fan. Arrows identify iridescent scales of the lobes or the anterior fan that the female appeared to follow with each turn.

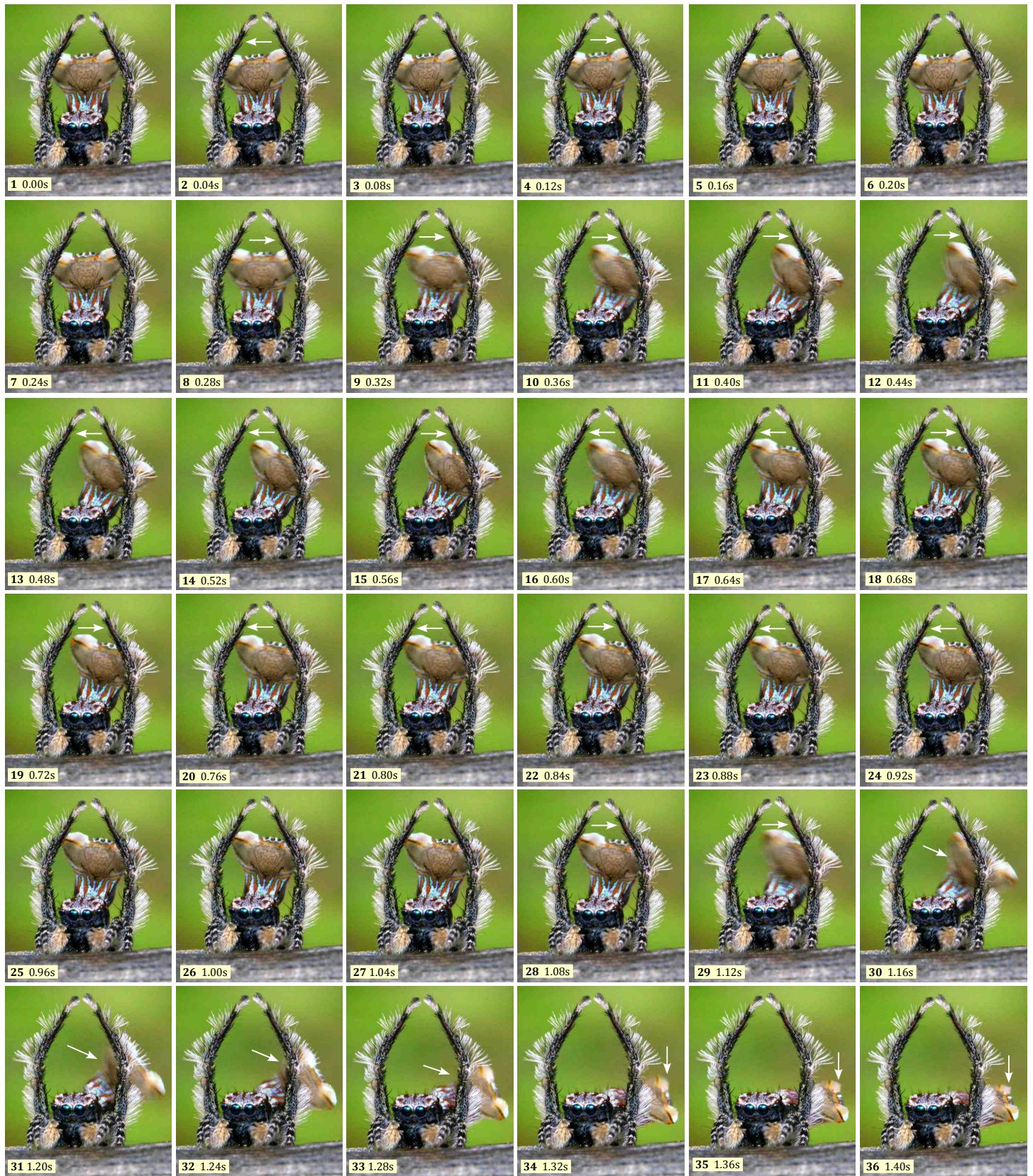


Figure 99. Consecutive frames from a 25fps video showing movement of the fan (arrows) by a male *Maratus vespa* during display in front of a female. Before the fan was rotated to the side (28-36), it was rotated from side to side in a more vertical position (1-24). During this sequence only the fan was moved. Each pedipalp was held to the side to display the black face and chelicerae.

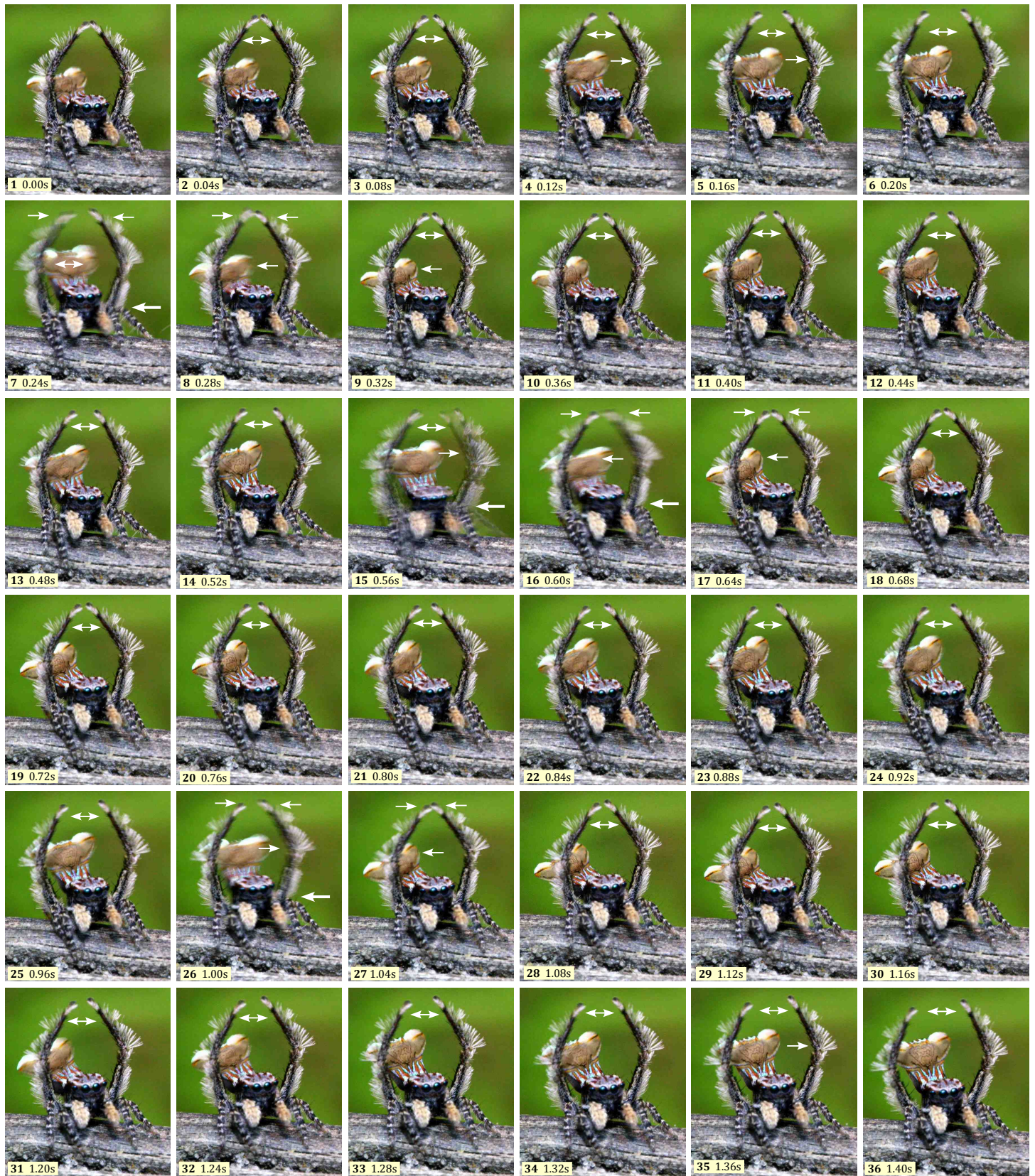


Figure 100. Consecutive frames from a 25fps video of display by a male *Maratus vespa*, showing 'pincher' movement of legs III above the carapace (double or paired arrows at top), accompanied by limited movement of the fan from side to side (arrows) and some side-stepping (large arrows in 15, 16, 26). All arrows indicate movement relative to the previous frame. The pedipalps were held apart to reveal the black face and chelicerae during this display.

Habitat and distribution. *Maratus vespa* were collected on low plants and debris at the edges of a sand track at Lake Jasper, D'Entrecasteaux National Park, WA (Figure 101, map Figure 1). Figure 102 includes field photographs of these spiders at that site.

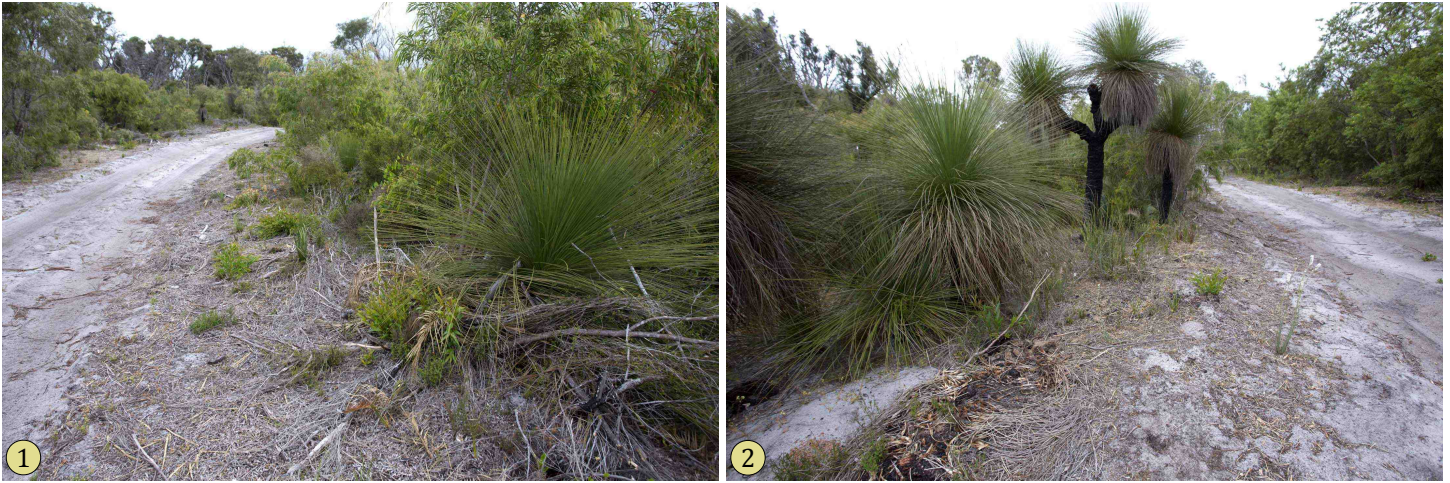


Figure 101. *Maratus vespa* habitat at D'Entrecasteaux National Park, WA.

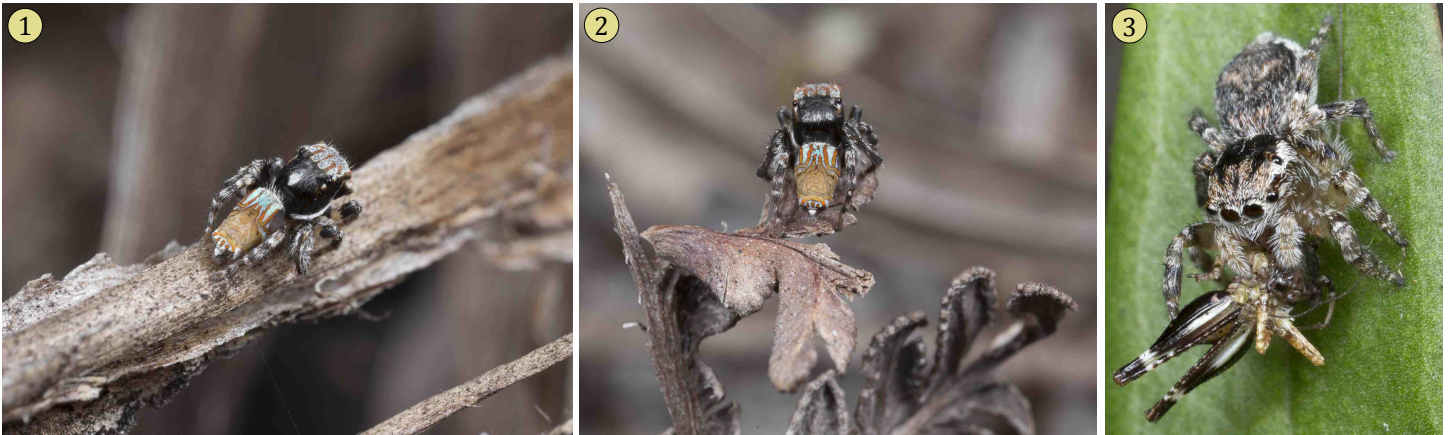


Figure 102. Field photographs of a *Maratus vespa* male (1-2), and a female (3), feeding on a grasshopper.

***Maratus vultus*, new species**

Type specimens. The holotype male (♂ #1) and one paratype male (♂ #2) were collected at Point Ann, Fitzgerald River National Park, WA (34.16954 °S, 119.5794 °E, 17 OCT 2013, coll. J. Otto and D. Knowles, coastal heath). These will be deposited in the Western Australian Museum, Perth.

Etymology. The species group name (*vultus*, Latin, m., noun, English translation *face* or *expression*) refers to the face-like pattern of setae on the fan of the adult male.

Diagnosis. Male *Maratus vultus* resemble *M. amabilis* Karsch 1878, *M. anomalus* (Karsch 1878) and two spiders that are closely related to these but presently unclassified (Figure 103). The outer apex of the embolus of *M. vultus*, like that of *M. anomalus* and *M. albus*, is bifurcated or blunt and wider at the end with two tips. On the carapace males of both *M. vultus* and *M. anomalus* have a uniform cover of scales in the eye region, surrounded by red-brown scales around the eyes, two dorsolateral bands of lighter scales behind the eye region instead of a single median thoracic band, and no marginal band. Both species also have a fan covered with blue to blue-green or purple iridescent scales, bearing a single pair of black spots. Like the male *M. albus*, the male *M. vultus* has a cover of long white setae on the lower half of the sides of the carapace, and an abundance of white setae under the anterior eyes. A distinctive orange figure on the posterior fan (Figure 105:1-2, 4) distinguishes the male *M. vultus*. The female *M. vultus* is presently not known. We place *M. vultus* with *M. albus* in the *anomalus* group of the genus *Maratus*.

Description of male (Figures 104-107). Males (N=2) ranged from 3.8 to 4.3 mm in length. The carapace is completely black. Long white setae below the anterior eye row project anteromedially above the black and glabrous chelicerae. The eye region is covered with uniform brown scales, surrounded by brighter red-brown or dark orange scales at the front and sides where these scales surround the eyes. Behind the eye region, on either side, a dorsolateral band of light brown to white scales extends most of the way to the rear of the carapace. The PME are closer to the PLE than to the ALE. The middorsal carapace behind the eye region, and most of the upper half of the carapace on either side, is black and glabrous. There is no marginal band, but the lower half of the carapace on either side is covered loosely with long white scales. The dorsal opisthosomal plate is rounded and sharp-edged but not fringed, covered with iridescent blue to blue-green or purple scales. On this background is a distinctive orange figure toward the front, and a single pair of small black spots toward the rear, bordered by red-orange scales (Figure 105:1-2, 4). Although the lateral edges of the fan are distinct, flaps are either small or not present, and lateral expansion of the fan during display is accomplished by flattening out the opisthosoma and the otherwise curved dorsal plate. There is an anterior marginal band of off-white setae, and longer, stout white setae project forward over the pedicel from this. Behind the dorsal plate the dorsal opisthosoma is black, with a patch of white colular setae above the black spinnerets. The sides of the opisthosoma are off-white, and the underside is brown with scattered light setae. The coxae are brown or grey with scattered white setae, and the sternum, labium, and endites are dark brown and glabrous.

Legs I and II are shorter, legs III and IV longer, and legs III by far the longest. Legs I, II, and IV are uniformly covered with white to off-white setae, with indistinct dark rings where these are absent at the joints. On legs III the front of each femur is covered with white to off-white setae, while each patella, tibia, and dorsal metatarsus is dark brown to black with black setae. The ventral metatarsus to tarsus of each leg III is covered with long, bright white setae. From the front (dorsal aspect) the pedipalps are covered with long, bright white setae. The structure of the pedipalp (Figure 106) is typical for *Maratus* in most aspects, but the outer apex of the embolus is wide and blunt or bifurcated at the end, a feature also observed in *M. anomalus* (Žabka 1987, Otto & Hill 2012) and *M. albus*.



Figure 103. Comparison of male *Maratus vultus* (1-3) with other male *Maratus*. 4, *M. amabilis* from Mt. Kaputar NP, NSW. 5, *M. cf. amabilis* from Barrington Tops NP, NSW. 6-8, *M. anomalus* from Ku-ring-gai Chase NP, NSW. 9-11, *M. cf. anomalus* from Warby-Ovens NP, Victoria.



Figure 104. Two male *Maratus vultus* (types).

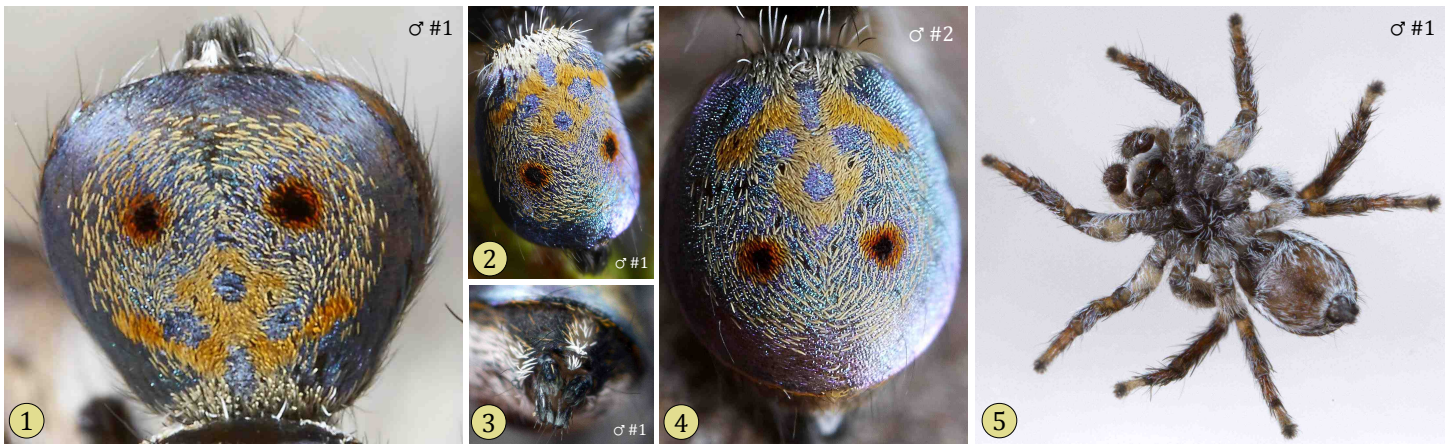


Figure 105. Living male *Maratus vultus*. **1**, Expanded fan during display. **2, 4**, Detail of dorsal opisthosoma from the rear. **3**, Rear view of opisthosoma, showing small median tract of white scales behind and below the dorsal plate, continuous with a small triangular, colular patch of white scales, above the black spinnerets. **5**, Ventral view.

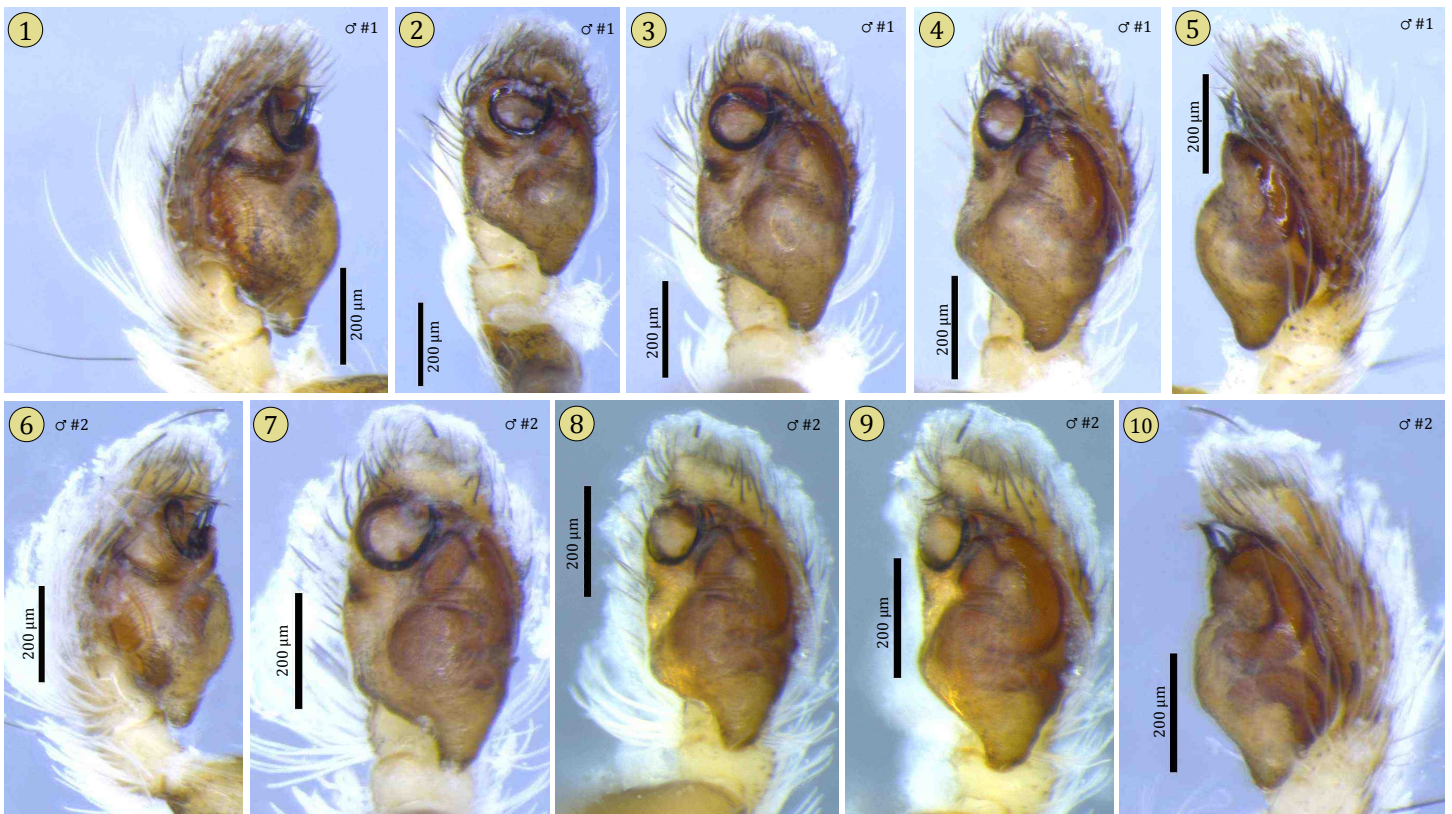


Figure 106. Medial to lateral views of the left pedipalp of two male *Maratus vultus* (types) in alcohol. In a lateral view (**5, 10**), bifurcation of the wide tip of the outer apex of the embolus can be seen. The inner apex is much shorter, smaller, and sharply pointed. This configuration is characteristic of the *anomalus* group.

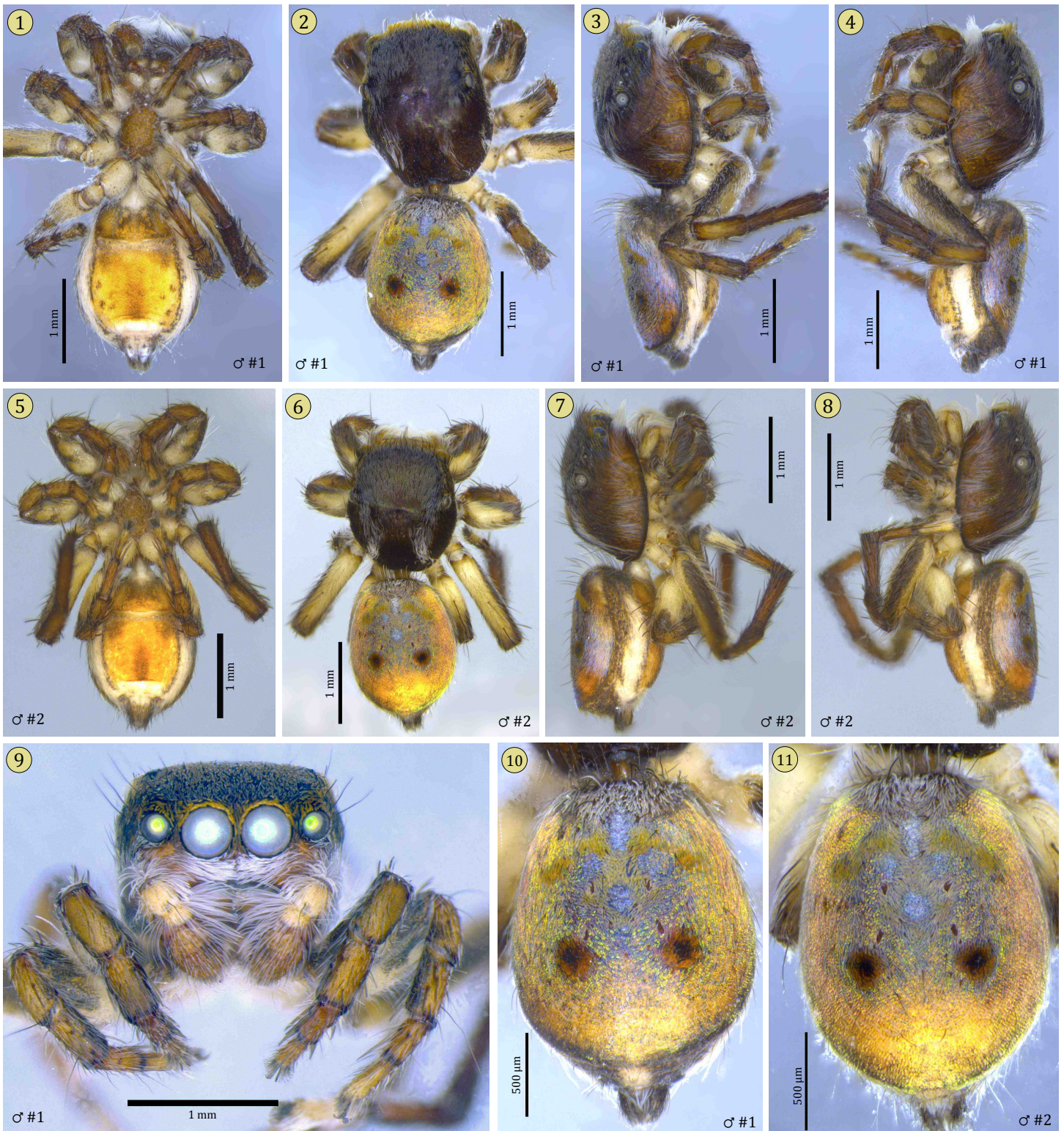


Figure 107. Two male *Maratus vultus* (types) in alcohol.

Courtship display. When placed with a female *Maratus fimbriatus*, male *M. vultus* raised their opisthosoma and extended legs III in a 'V' shape, and their pedipalps were held together in front of the chelicerae (Figure 108). Little movement was associated with this display, mostly occasional flexing and extending of the legs, included flexion at the femuro-patellar and tibio-metatarsal joints when the spider was stepping from side to side.



Figure 108. Display positions of a male *Maratus vultus* (♂ #1, holotype) in front of a female *Maratus fimbriatus*.

Habitat and distribution (Figure 109, for map see Figure 1). Presently *Maratus vultus* is known from the type locality at Point Ann in Fitzgerald River National Park, WA and from Esperance, WA, where it has been photographed (photograph supplied by David Knowles) but not collected.



Figure 109. Habitat of *Maratus vultus* at Point Ann.

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Appendix 1: Reference list of described *Maratus* species

The *interim placement* group at the end of this list contains a number of species that have not been recently collected, or that are known only from a few female specimens. Their interim placement in *Maratus* is the result of the synonymy of the genus to which they had been assigned, *Lycidas* Karsch 1878, with *Maratus* (Otto & Hill 2012c). Based on our examination of the female type for *M. kochi* (Žabka 1987) we think that this should be a *Maratus*, but further study of this species is required.

Maratus Karsch 1878

anomalous group

***Maratus albus* Otto & Hill 2016**

Maratus albus Otto & Hill 2016b

***Maratus anomalous* (Karsch 1878)** (type species for *Lycidas*)

Lycidas anomalous Karsch 1878; Prószyński 1984; Žabka 1987, 1991; Hill 2010; *Maratus*-like salticid Hill 2009 (Figures 28-29); *Maratus anomalous* : Otto & Hill 2012c, 2012e, 2016b

***Maratus vultus* Otto & Hill 2016**

Maratus vultus Otto & Hill 2016b

calcitrans group

***Maratus calcitrans* Otto & Hill 2012**

Maratus calcitrans Otto & Hill 2012d

***Maratus digitatus* Otto & Hill 2012**

Maratus digitatus Otto & Hill 2012d

***Maratus jactatus* Otto & Hill 2015**

Maratus jactatus Otto & Hill 2015a

***Maratus plumosus* Otto & Hill 2013**

Maratus-like salticid Hill 2009 (Figures 26-27); *Maratus* sp. B Otto & Hill 2011b, 2012d; *Maratus plumosus* Otto & Hill 2013b

***Maratus sceletus* Otto & Hill 2015**

Maratus sceletus Otto & Hill 2015a

chrysomelas group

***Maratus chrysomelas* (Simon 1909)**

Habrocestum chrysomelas Simon 1909; *Lycidas chrysomelas* : Žabka 1987, 1991; Waldock 2002; Hill 2010; *Maratus chrysomelas* : Otto & Hill 2012c, 2012e, 2016a

***Maratus nigromaculatus* (Keyserling 1883)**

Ergane nigromaculata Keyserling 1883; *Thorellia nigromaculata* : Rainbow 1911; *Spilargis nigromaculata* : Simon 1903; *Lycidas nigromaculatus* : Žabka 1987, 1991; Hill 2010; *Maratus nigromaculatus* : Otto & Hill 2012c, 2012e, 2016a

harrisi group

***Maratus harrisi* Otto & Hill 2011**

Maratus harrisi Otto & Hill 2011b, 2016b; Hoye & McQuillan 2014; Waldock 2015

***Maratus lobatus* Otto & Hill 2016**

Maratus lobatus Otto & Hill 2016b

mungaich group

***Maratus avibus* Otto & Hill 2014**

Maratus avibus Otto & Hill 2014a, 2016b

***Maratus bubo* Otto & Hill 2016**

Maratus bubo Otto & Hill 2016b

***Maratus caeruleus* Waldock 2013**

Maratus caeruleus Waldock 2013, 2014; Otto & Hill 2014a, 2016b

***Maratus hortorum* Waldock 2014**

Maratus mungaich : Otto & Hill 2012b (in part), 2014a (in part); *Maratus hortorum* Waldock 2014

***Maratus karrie* Waldock 2013**

Maratus sp. 'Darlington's Peacock Spider' Hill & Otto 2011 (Darlington specimens in MCZ only); *Maratus* sp. A Otto & Hill 2011b, 2012b (Darlington specimens in MCZ only); *Maratus karrie* Waldock 2013, 2014; Otto & Hill 2014a, 2016b

Maratus melindae Waldock 2013*Maratus melindae* Waldock 2013, 2014; Otto & Hill 2014a**Maratus madelineae Waldock 2014***Maratus madelineae* Waldock 2014; Otto & Hill 2016b**Maratus mungaich Waldock 1995***Maratus mungaich* Waldock 1995, 2013, 2014; Hill 2009, 2010a; Otto & Hill 2011b, 2012b, 2014a, 2016b**Maratus sarahae Waldock 2013**'Darlington's Peacock Spider' Hill & Otto 2011 (photo by Framenau 2007 only); *Maratus* sp. A Otto & Hill 2011b, 2012b (all but Darlington MCZ specimens); *Maratus sarahae* Waldock 2013, 2014; Otto & Hill 2014a, 2016b**pavonis group****Maratus leo Otto & Hill 2014***Maratus leo* Otto & Hill 2014d**Maratus literatus Otto & Hill 2014***Maratus literatus* Otto & Hill 2014d**Maratus maritimus Otto & Hill 2014***Maratus maritimus* Otto & Hill 2014d**Maratus montanus Otto & Hill 2014***Maratus montanus* Otto & Hill 2014d**Maratus pavonis (Dunn 1947)***Saitis pavonis* Dunn 1947, 1957; *Maratus pavonis*: Žabka 1991; Waldock 1993, 2007, 2008, 2015; Hill 2009, 2010; Otto & Hill 2010, 2011b, 2012c, 2012e, 2014d, 2013b; Hill & Otto 2011; Girard *et al.* 2011**Maratus splendens (Rainbow 1896)***Attus splendens* Rainbow 1896; *Saitis splendens*: Simon 1901a; Dunn 1947; *Saitis rainbowi* Roewer 1951; *Maratus splendens*: Žabka 1991; Hill & Otto 2011; Otto & Hill 2011b, 2012c, 2012e, 2013b, 2014d; Girard *et al.* 2011; Zhang & Maddison 2013; De Angelis *et al.* 2013; *Maratus rainbowi*: Waldock 2008; Hill 2009, 2010**Maratus watagansi Otto & Hill 2013***Maratus watagansi* Otto & Hill 2013b, 2014d**tasmanicus group****Maratus australis Otto & Hill 2016***Maratus australis* Otto & Hill 2016b**Maratus tasmanicus Otto & Hill 2013***Maratus* sp. C Otto & Hill 2011b; Prószyński 2013; *Maratus tasmanicus* Otto & Hill 2013b; Waldock 2015; Otto & Hill 2016b**volans group****Maratus elephans Otto & Hill 2015***Maratus elephans* Otto & Hill 2015c**Maratus volans (O. Pickard-Cambridge 1874)***Salticus volans* O. Pickard-Cambridge 187; *Maratus amoenus* Karsch 1878; Žabka 1987; *Saitis volans*: Simon 1901a; Ridewood 1913; Butler 1933; Dunn 1947; Mascord 1970; Prószyński 1984; *Maratus volans*: Žabka 1991; Waldock 1995, 2007, 2008; Nieuwenhuys 2008; Hill 2009, 2010; Otto & Hill 2010, 2011a, 2011b, 2014b; Girard *et al.* 2011**Maratus pardus Otto & Hill 2014***Maratus pardus* Otto & Hill 2014b**not assigned to a group****Maratus amabilis Karsch 1878** (type species for *Maratus*)*Maratus amabilis* Karsch 1878; Žabka 1987, 1991; Waldock 1995, 2007, 2008; Hill 2009, 2010a; Otto & Hill 2010, 2011b, 2016b**Maratus clupeatus Otto & Hill 2014***Maratus clupeatus* Otto & Hill 2014c**Maratus fimbriatus Otto & Hill 2016***Maratus fimbriatus* Otto & Hill 2016a**Maratus linnaei Waldock 2008***Maratus linnaei* Waldock 2008; Hill 2009, 2010; Otto & Hill 2011b, 2016b**Maratus personatus Otto & Hill 2015***Maratus personatus* Otto & Hill 2015d

Maratus proszynskii Waldock 2015*Maratus proszynskii* Waldock 2015**Maratus purcellae Otto & Hill 2013***Maratus purcellae* Otto & Hill 2013a**Maratus robinsoni Otto & Hill 2012***Maratus robinsoni* Otto & Hill 2012c, 2012e**Maratus speciosus (O. Pickard-Cambridge 1874)***Salticus (Attus) speciosus* O. Pickard-Cambridge 1874; *Saitis speciosus* : Simon 1901a; Dunn 1947; Hill 2009, 2010; Hill & Otto 2011; *Maratus speciosus* : Hill & Otto 2014; Otto & Hill 2012c, 2012e, 2015b**Maratus speculiferus (Simon 1909)***Habrocestum speculiferum* Simon 1909; *Lycidas speculifer* : Żabka 1987, 1991; Hill 2010; *Maratus speculiferus* : Otto & Hill 2012c, 2012e**Maratus spicatus Otto & Hill 2012***Maratus spicatus* Otto & Hill 2012c, 2012e**Maratus tessellatus Otto & Hill 2016***Maratus tessellatus* Otto & Hill 2016b**Maratus velutinus Otto & Hill 2012***Maratus velutinus* Otto & Hill 2012c, 2012e; Waldock 2015**Maratus vespa Otto & Hill 2016***Maratus vespa* Otto & Hill 2016b**Maratus vespertilio (Simon 1901)***Saitis vespertilio* Simon 1901b; *Saitis vespertilis* : Dunn 1947 (misspelled); *Maratus vespertilio* : Żabka 1991; Waldock 2008; Hill 2009, 2010; Otto & Hill 2011a, 2011b, 2012a**interim placement (? Maratus)****Maratus anomaliformis (Żabka 1987)***Habrocestum nigriceps* Keyserling 1882; *Lycidas anomaliformis* Żabka 1987; Hill 2010; *Maratus anomaliformis* : Otto & Hill 2012c, 2012e**Maratus bitaeniatus (Keyserling 1882)***Thorellia bitaeniata* Keyserling 1882; *Lycidas bitaeniatus* : Żabka 1987, 1991; Hill 2010; *Maratus bitaeniatus* : Otto & Hill 2012c, 2012e**Maratus chlorophthalmus (Simon 1909)***Eugasmia chlorophthalmus* Simon 1909; *Lycidas chlorophthalmus* : Żabka 1987, 1991; Hill 2010; *Maratus chlorophthalmus* : Otto & Hill 2012c, 2012e**Maratus dialeucus (L. Koch 1881)***Ergane dialeuca* L. Koch 1881; Keyserling 1883; *Hasarius lineatus* Keyserling 1881; *Sigytes dialeuca* : Simon 1903; *Lycidas dialeucus* : Żabka 1991; Hill 2010; *Maratus dialeucus* : Otto & Hill 2012c, 2012e**Maratus furvus (Song & Chai 1992)***Lycidas furvus* Song & Chai 1992; Song & Li 1997; Song, Zhu & Chen 1999; *Maratus furvus* : Otto & Hill 2012c, 2012e**Maratus griseus (Keyserling 1882)***Cytaea grisea* Keyserling 1882; *Lycidas griseus* : Żabka 1987, 1991; Hill 2010; *Maratus griseus* : Otto & Hill 2012c, 2012e**Maratus heteropogon (Simon 1909)***Saitis heteropogon* Simon 1909; *Lycidas heteropogon* : Żabka 1987, 1991; Hill 2010; *Maratus heteropogon* : Otto & Hill 2012c, 2012e**Maratus karschi (Żabka 1987)***Lycidas karschi* Żabka 1987, 1991; Hill 2010; *Maratus karschi* : Otto & Hill 2012c, 2012e**Maratus kochi (Żabka 1987)***Lycidas kochi* Żabka 1987, 1991; Hill 2010; *Maratus kochi* : Otto & Hill 2012c, 2012e**Maratus michaelsoni (Simon 1909)***Saitis Michaelsoni* Simon 1909; *Lycidas michaelsoni* : Żabka 1987, 1991; Davies & Żabka 1989; Hill 2010; *Maratus michaelsoni* : Otto & Hill 2012c, 2012e**Maratus nigriceps (Keyserling 1882)***Thorellia nigriceps* Keyserling 1882; *Saitis nigriceps* : Rainbow 1911; Dunn 1947; *Lycidas nigriceps* : Żabka 1987, 1991; Hill 2010; *Maratus nigriceps* : Otto & Hill 2012c, 2012e**Maratus obscurior (Simon 1909)***Saitis Michaelsoni obscurior* Simon 1909; *Lycidas obscurior* : Żabka 1987, 1991; Hill 2010; *Maratus obscurior* : Otto & Hill 2012c, 2012e**Maratus piliger (Keyserling 1882)***Cytaea piligera* Keyserling 1882; *Lycidas piliger* : Żabka 1987, 1991; Hill 2010; *Maratus piliger* : Otto & Hill 2012c, 2012e

Maratus pilosus (Keyserling 1882)

Habrocestum pilosum Keyserling 1882; *Lycidas pilosum* : Żabka 1987, 1991; Hill 2010; *Maratus pilosus* : Otto & Hill 2012c, 2012e

Maratus scutulatus (L. Koch 1881)

Ergane scutulata L. Koch 1881; *Sigytes scutulata* : Simon 1903; *Lycidas scutulatus* : Żabka 1987, 1991; Hill 2010; *Maratus scutulatus* : Otto & Hill 2012c, 2012e

Maratus vittatus (Keyserling 1881)

Hasarius vittatus Keyserling 1881; Prószyński 1984; *Lycidas vittatus* : Żabka 1991; Hill 2010; *Maratus vittatus* : Otto & Hill 2012c, 2012e

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