

Catalogue of the Australian peacock spiders (Araneae: Salticidae: Euophryini: *Maratus*, *Saratus*), version 3

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Presently the Australian peacock spiders are assigned to two genera, *Maratus* Karsch 1878 and *Saratus* Otto & Hill 2017 (see Otto & Hill 2017a). Whereas only a single species of *Saratus* has been described, the genus *Maratus* includes a diverse variety of at least 77 described species endemic to Australia. After we synonymized the genus *Lycidas* Karsch 1878 with *Maratus* (Otto & Hill 2012c) a number of species previously associated with *Lycidas* by Žabka (1987) have been carried under *Maratus* with an unresolved status. Recently four of these species names (*dialeucus*, *griseus*, *karschi*, *scutulatus*) were transferred to the genus *Hypoblemum* Peckham & Peckham 1885 (Otto et al. 2019). None of the remaining unresolved species are listed here. This catalogue should be viewed as a *work in progress*. Only adult males are illustrated. Each range map shows areas that have been identified in prior publications (white circles), or by unpublished observations and posted photographs that we consider reliable (yellow circles). Each marked area may include multiple localities of record.

The *anomalous* group

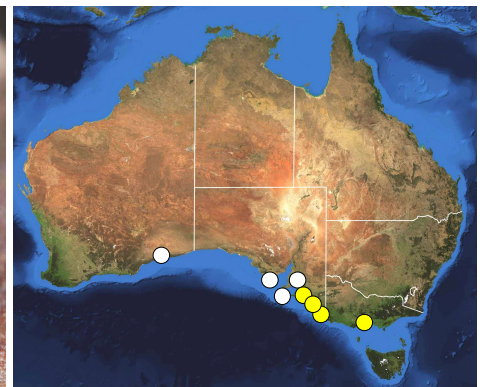
This proposed clade includes relatives of *M. anomalous* that can be distinguished by the presence of a blunt, bifurcated apex of the outer ring of the embolus above a shorter, sharply pointed inner apex of the male pedipalp. The female epigynum has heavily sclerotized (darker) ducts at the lateral and medial posterior margin of each fossa. Most have a pair of black spots toward the rear of the fan, and courtship display tends to be simple for most species. Recently a series of *grassland peacock spiders* from eastern Australia have been added (Baehr & Whyte 2016, Otto & Hill 2017a). Should the genus *Maratus* be divided in the future, members of this group may be associated with the genus group name *Lycidas*.

Maratus albus

Otto & Hill 2016

Maratus albus Otto & Hill 2016b; Whyte & Anderson 2017

Males of this coastal species extend their long legs III but do not elevate their fan during courtship display.

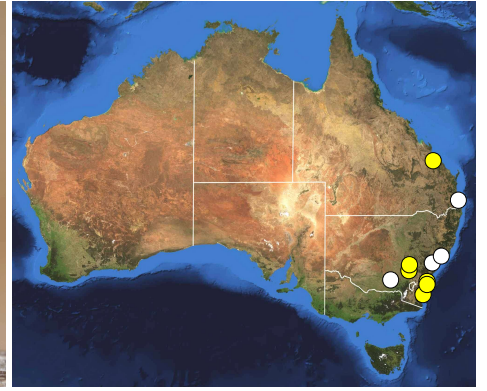


Maratus anomalus

(Karsch 1878)

Lycidas anomalus Karsch 1878; Prószyński 1984; Żabka 1987, 1991; Hill 2010; *Maratus*-like salticid Hill 2009 (Figures 28-29); *Maratus anomalus* : Otto & Hill 2012c, 2012e, 2016b, 2017; Baehr & Whyte 2016; Whyte & Anderson 2017

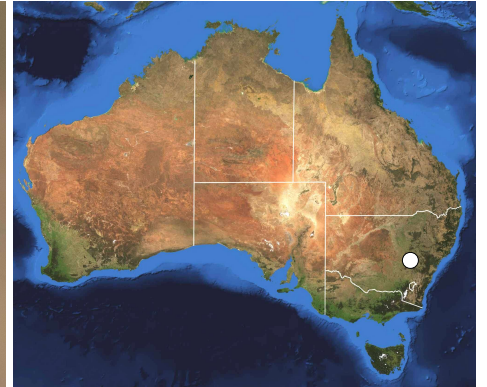
This species, the type for *Lycidas* Karsch 1878, has been redescribed from the type specimen twice (Żabka 1987; Otto & Hill 2012c).

***Maratus aurantius***

Otto & Hill 2017

Maratus aurantius Otto & Hill 2017a; *Maratus* sp. Whyte & Anderson 2017

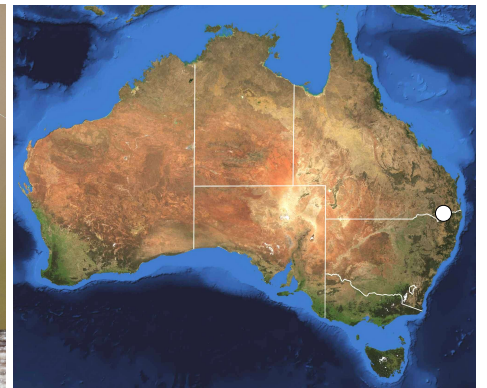
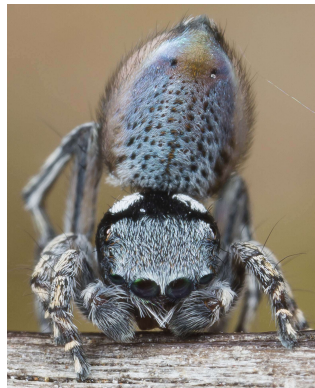
This is one of the grassland peacock spiders, known only from one locality near Orange, New South Wales.

***Maratus cinereus***

Otto & Hill 2017

Maratus cinereus Otto & Hill 2017a

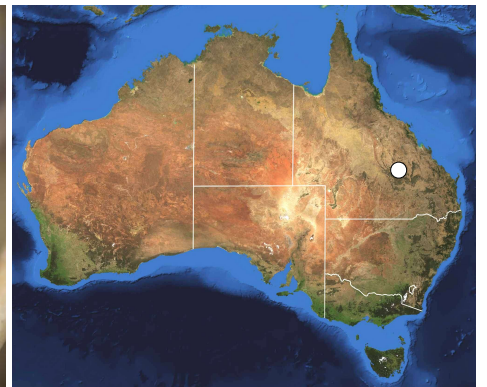
This grassland species from the vicinity of Stanthorpe, Queensland is closely related to *M. lentus* which also pulls one pedipalp to the side to expose the underlying chelicera when displaying to a female. Both of these species have distinctive cuffs of long setae around each proximal tarsus I and II.

***Maratus julianneae***

Baehr & Whyte 2016

Maratus julianneae Baehr & Whyte 2016; Whyte & Anderson 2017

This grassland species has been found only at Carnarvon Station, Queensland. The fan of the male resembles that of *M. cinereus* but legs III resemble those of *M. anomalus* and are displayed in a similar manner.

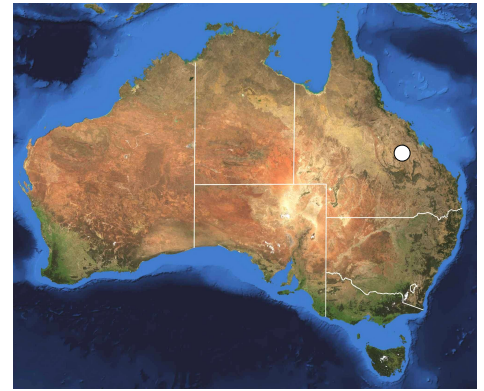


Maratus kochi

(Žabka 1987)

Lycidas kochi Žabka 1987, 1991; Hill 2010; *Maratus kochi* : Otto & Hill 2012c, 2012e

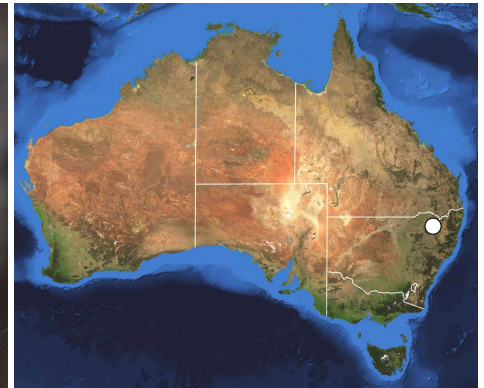
The holotype female from "Peak Downs" described by Žabka resembles the female of *M. cinereus* or *M. lentus* and we consider this to be a member of the grassland group. The male is not known.

***Maratus lentus***

Otto & Hill 2017

Maratus lentus Otto & Hill 2017a

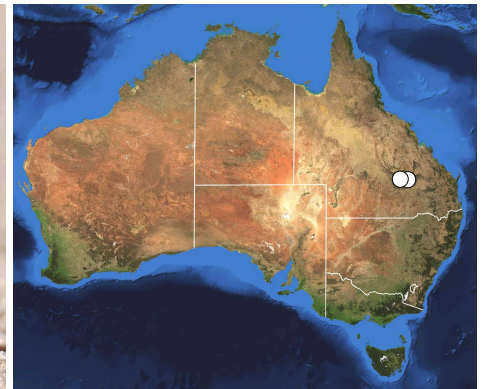
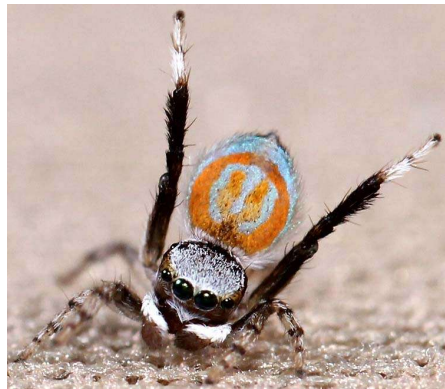
M. lentus males resemble the closely related *M. cinereus*, but have a different colour and a broad grey lateral margin on each side of the dorsal opisthosoma. They have only been found on grasses near Copeton, New South Wales.

***Maratus michaelorum***

Baehr & Whyte 2016

Maratus michaelorum Baehr & Whyte 2016

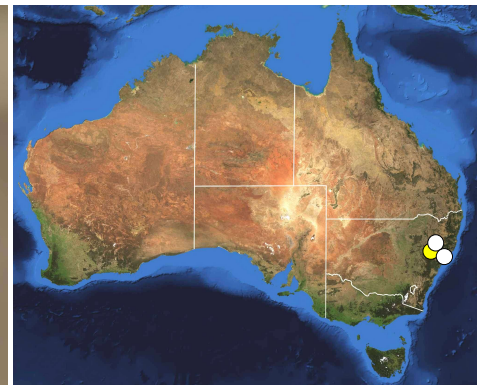
This species is known from Moolayember Creek National Park and nearby Carnarvon Gorge National Park in Queensland. The male resembles a small (3-4 mm long) *M. pavonis*. The female is unknown. Photo by Madeline Girard.

***Maratus neptunus***

Otto & Hill 2017

Maratus neptunus Otto & Hill 2017a; *Maratus* sp. Whyte & Anderson 2017

The fan of the male of this grassland species bears three prominent black stripes on a background of iridescent blue or purple scales. It has been found near Tamworth and the lower Hunter Valley in New South Wales.

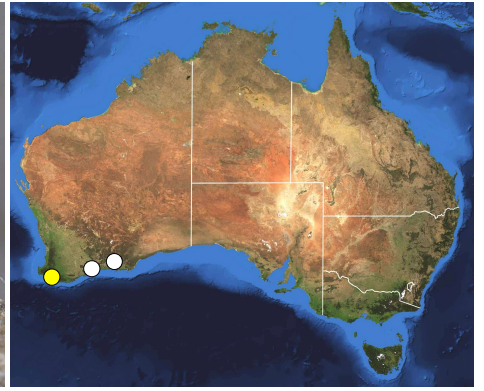


Maratus vultus

Otto & Hill 2016

Maratus vultus Otto & Hill 2016b; Whyte & Anderson 2017

The fan of the male of *M. vultus* displays a distinctive face-like figure on a background of iridescent blue-green and light brown scales. This is the western-most species within the *anomalous* group. The female is not known.

**The *calcitrans* group**

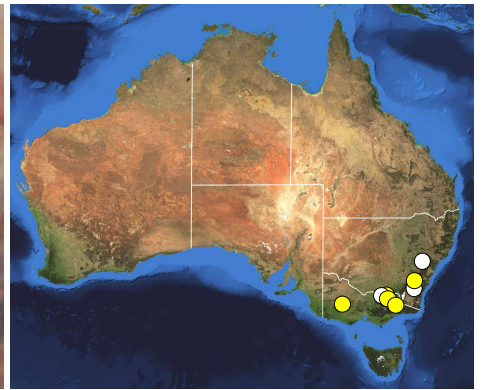
This group is widely distributed in eastern Australia with many colourful species, yet it was only recently discovered. Davies and Žabka (1989) figured a male *M. ottoi* from the vicinity of Brisbane, but did not give it a name. The most widely distributed species is *M. plumosus*, first found near Sydney. The male *M. plumosus* is also the most atypical of the group, with feathery plumes that it extends to the rear above its elevated and partly expanded fan. Males of all other species in the group inflate their spinnerets as they display to females. All members of the group have an asymmetric display in which they alternately extend or kick one leg III to one side, then the other leg III to the other side.

Maratus calcitrans

Otto & Hill 2012

Maratus calcitrans Otto & Hill 2012d; Whyte & Anderson 2017

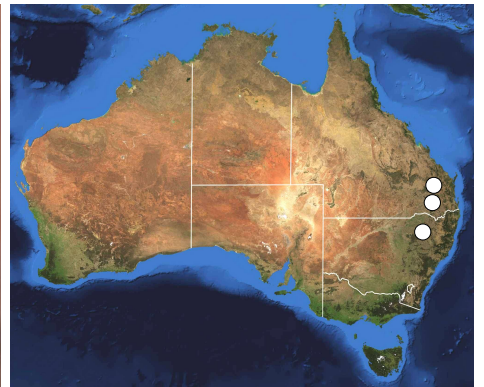
Dorsally each pedipalp of the male is covered with white setae, and behind each pedipalp, on either side, a stripe of white setae extends to the rear of the eye region. The species name *calcitrans* is a reference to the kicking display of the male.

***Maratus digitatus***

Otto & Hill 2012

Maratus digitatus Otto & Hill 2012d; Baehr & Whyte 2016; Whyte & Anderson 2017

The male of this species has prominent, dull-green lateral flaps that can be extended but they are not part of the usual courtship display. The inflatable spinnerets are fringed with long white setae.

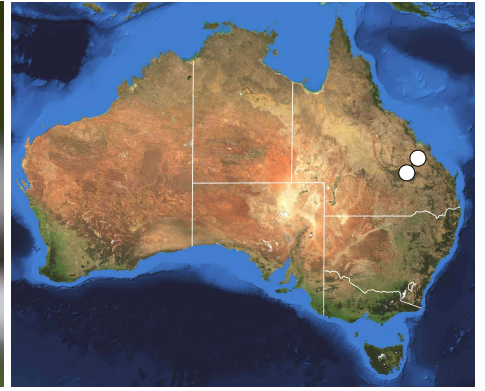


Maratus eliasi

Baehr & Whyte 2016

Maratus eliasi Baehr & Whyte 2016

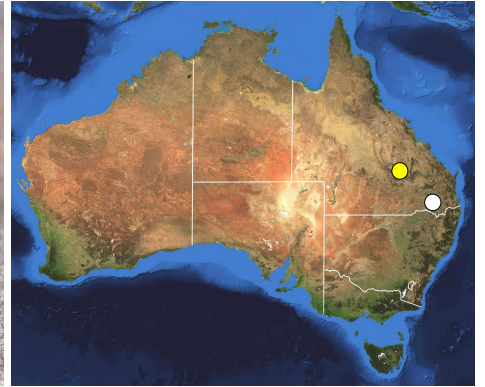
Males have a lateral flap on either side of the fan and prominent fringes of long, off-white setae on the inflatable spinnerets. Expansion of these flaps has not yet been observed. *M. eliasi* appears to be a close relative of *M. otto* and *M. digitatus*.

***Maratus jactatus***

Otto & Hill 2015

Maratus jactatus Otto & Hill 2015a; Whyte & Anderson 2017

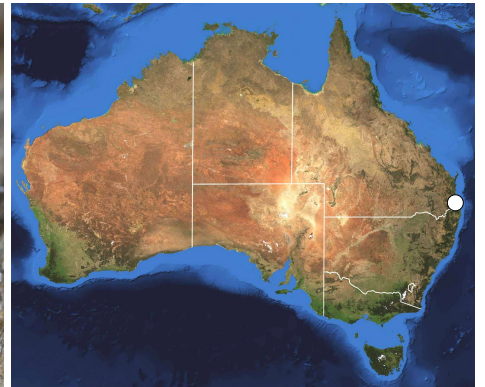
Popularly known as *Sparklemuffin*, the male of this brightly coloured species has a very fast kicking display, and a relatively wide fan with three prominent, red transverse stripes.

***Maratus otto***

Baehr & Whyte 2016

Maratus sp. Davies & Žabka 1989; *Maratus otto* Baehr & Whyte 2016; Whyte & Anderson 2017

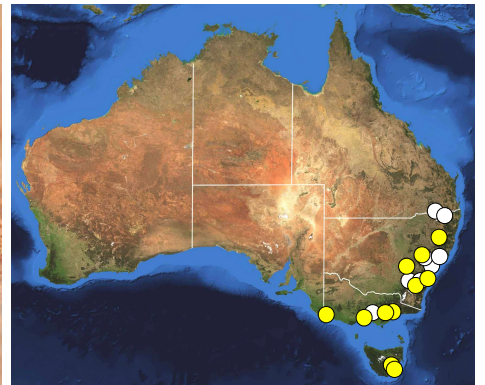
Known only from the Brisbane area, the male *M. otto* has an octopus-like figure on the fan and the common name *Octopus Peacock Spider*.

***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; Whyte & Anderson 2017

This species is widely distributed in southeastern Australia. Males display plumes of setae instead of spinnerets, first on one side and then on the other. The front of each femur III is bright blue.

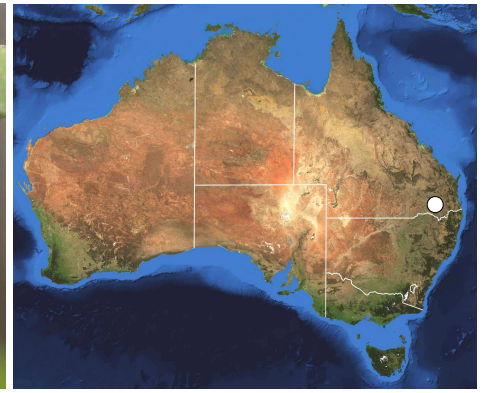


Maratus sceletus

Otto & Hill 2015

Maratus sceletus Otto & Hill 2015a; Whyte & Anderson 2017

Popularly known as *Skeletorus*, males raise their fan and inflated spinnerets as they circle around stems to safely approach a female.

**The *chrysomelas* group**

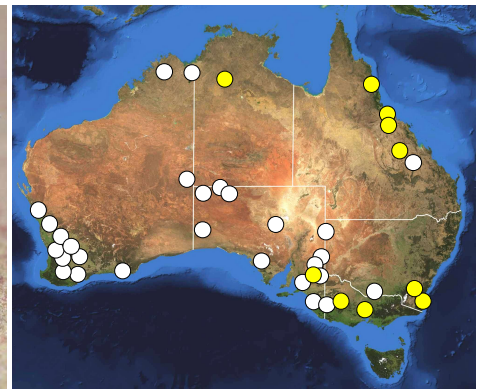
This group includes the widely-distributed *M. chrysomelas* and the closely related *M. nigromaculatus* that is known only from the southern coast of Queensland. Unlike most other *Maratus*, *M. chrysomelas* can be found in the arid interior and the tropical north. In some parts of eastern Queensland *M. nigromaculatus* genes associated with the series of paired black spots of the fan may appear in some Queensland populations of the closely related *M. chrysomelas* as a result of introgression.

Maratus chrysomelas

(Simon 1909)

Habrocestum chrysomelas Simon 1909; *Lycidas chrysomelas* : Žabka 1987, 1991; Waldock 2002; Hill 2010; *Maratus chrysomelas* : Otto & Hill 2012c, 2012e, 2016a; Hsiung et al. 2014, 2017b; Baehr & Whyte 2016; Whyte & Anderson 2017; McCoy et al. 2019

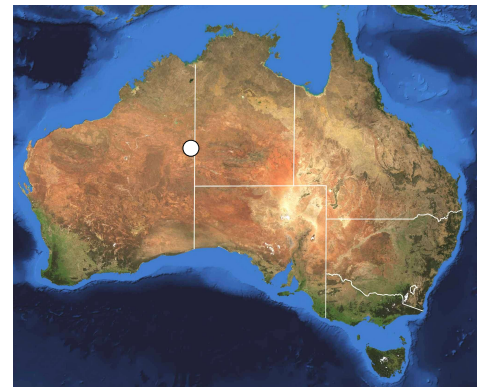
This species can be identified by the presence of two elongated black spots at the front of the fan.

***Maratus kiwirrkurra***

Baehr & Whyte 2016

Maratus kiwirrkurra Baehr & Whyte 2016

This small species is known only from a single male collected at Lake Mackay in the Kiwirrkurra indigenous protected area of the Gibson Desert, near the eastern boundary of Western Australia. A photograph of a dead individual that has lost most of its scale cover is included in the original description, but no photograph of a live animal has been published.

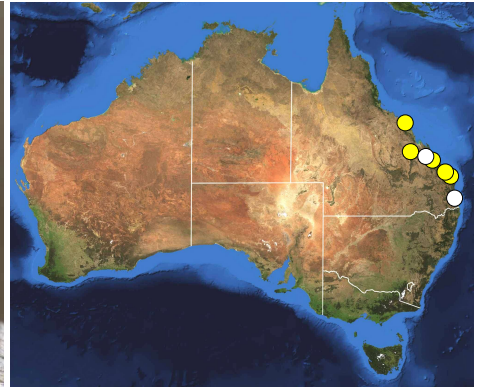


Maratus nigromaculatus

(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; Whyte & Anderson 2017; McCoy et al. 2019

The male has large, paired black spots and a wide fringe of long iridescent blue to white setae.

**The *fimbriatus* group**

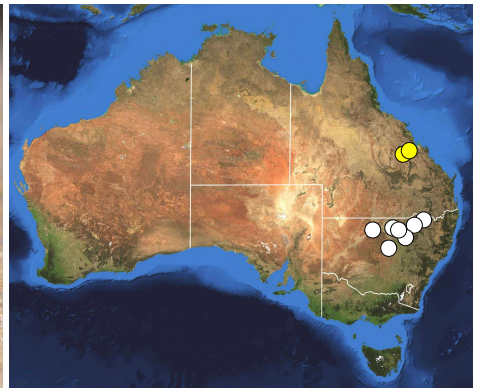
This small group includes three species, all with an embolus that is shaped like a wheel rim. *M. fimbriatus* has been found at a number of locations in the grazed interior of New South Wales. The closely related *M. licunxini* was collected at Carnarvon Station Homestead in the interior of Queensland. These spiders are quite different from any other known *Maratus*, and their display includes the use of extended legs I. Male *M. fimbriatus* and *M. licunxini* have a spectacular fringe surrounding the fan, and a pair of bright white stripes interrupting its dark, glossy dorsal surface. The fan of the western *M. speculifer* is also dark and glossy, but smaller.

Maratus fimbriatus

Otto & Hill 2016

Maratus fimbriatus Otto & Hill 2016a; Baehr & Whyte 2016; Whyte & Anderson 2017

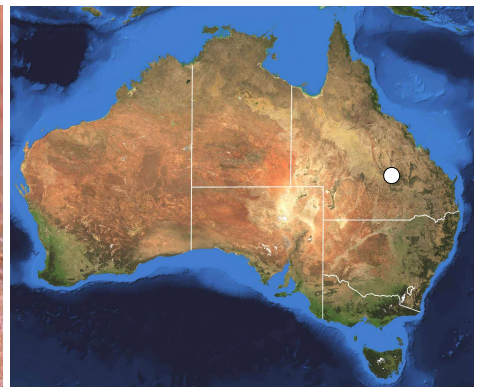
Males extend and separate legs I to reveal the smooth anterior surfaces of the femora. Unlike most *Maratus*, they do not use legs III as part of this display. Found in grazed areas of the dry interior of north-central New South Wales and Queensland, with some variation between the two areas.

***Maratus licunxini***

Baehr & Whyte 2016

Maratus licunxini Baehr & Whyte 2016

This species, named after Li Cunxin, artistic director of the Queensland Ballet, is very similar to *M. fimbriatus* with more convergence of the medial stripes toward the anterior of the fan. Photo by Joseph Schubert.

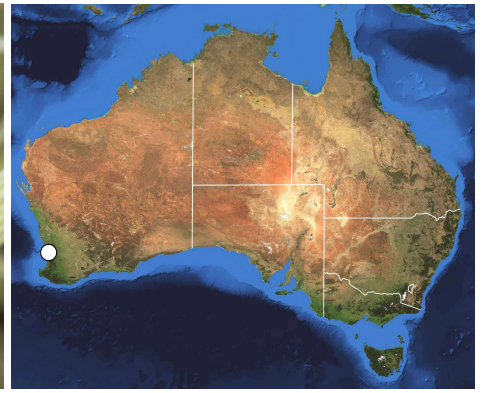


Maratus speculifer

(Simon 1909)

Habrocestum speculiferum Simon 1909; *Lycidas speculifer* : Žabka 1987, 1991; Hill 2010; *Maratus speculiferus* : Otto & Hill 2012c, 2012e; Whyte & Anderson 2017

Little-known, males display with both legs I and their longer legs III. Each femur I is light green on the underside.

**The *flavus* group**

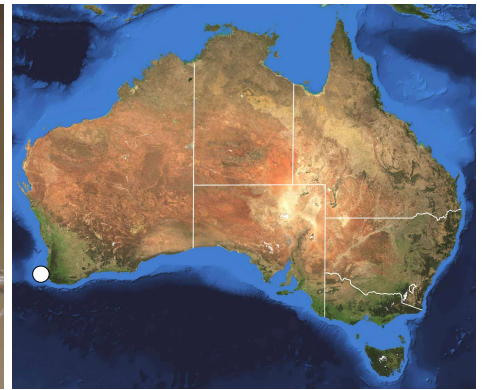
This group includes three species, all endemic to the southwestern corner of Western Australia. Structure of the male pedipalp and the epigynum indicates that these are related to other endemic groups from that region, including the *linnaei* and *vespa* groups.

Maratus boranup

Otto & Hill 2018

Maratus boranup Otto & Hill 2018a

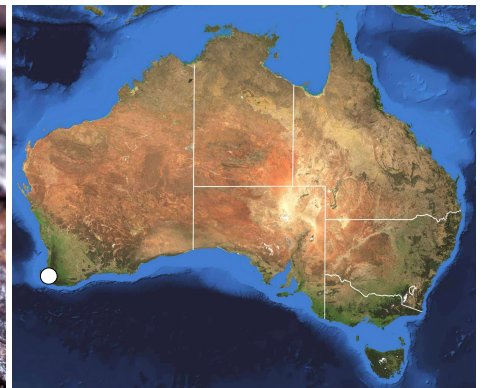
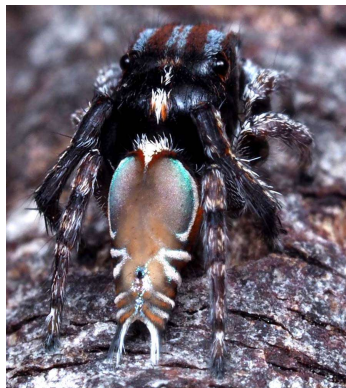
Courtship of the male *M. boranup* includes opisthosomal bobbing and semaphore signaling with their extended legs III, but no elevation or display of the dorsal opisthosoma (fan). However, as shown here, males do elevate the opisthosoma when they mate.

***Maratus felinus***

Schubert 2019

Maratus felinus Schubert 2019a

This species is known only from the vicinity of Lake Jasper in Western Australia. The name *felinus* is based on the cat-like appearance of the markings of the dorsal opisthosoma (fan). When elevated, the two tufts at the rear of the fan look like the ears of an exotic cat. Photo by Joseph Schubert.

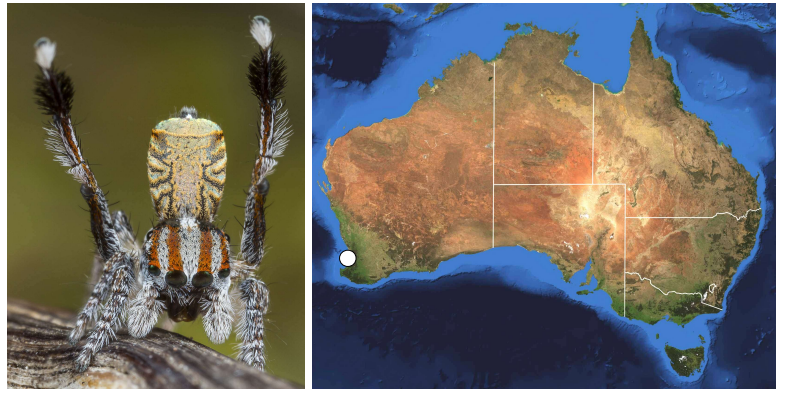


Maratus flavus

Otto & Hill 2018

Maratus flavus Otto & Hill 2018a

This spider is known only from Tims Thicket, south of Perth near the coast. Like *M. boranup*, *M. flavus* males rely greatly on semaphore signaling with legs III when they display to females, but unlike that species they also display their distinctive, mustard yellow opisthosoma. Legs III of the male are highly ornamented, with tufts of long black setae surrounding each metatarsus, and a thin red-brown line set off by a fringe of white setae on the front of each patella and tibia.

**The *harrisi* group**

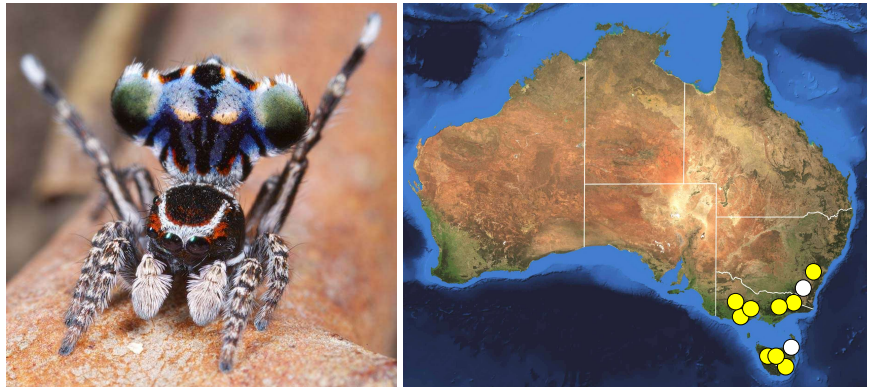
This small group includes two closely related species with a lobate or rounded flap on either side of the fan. The discovery and later rediscovery of *M. harrisi* by Stuart Harris was the subject of an award-winning documentary entitled *Maratus: A Documystery*.

Maratus harrisi

Otto & Hill 2011

Maratus harrisi Otto & Hill 2011b, 2016b; Hoyer & McQuillan 2014; Waldock 2015; Whyte & Anderson 2017

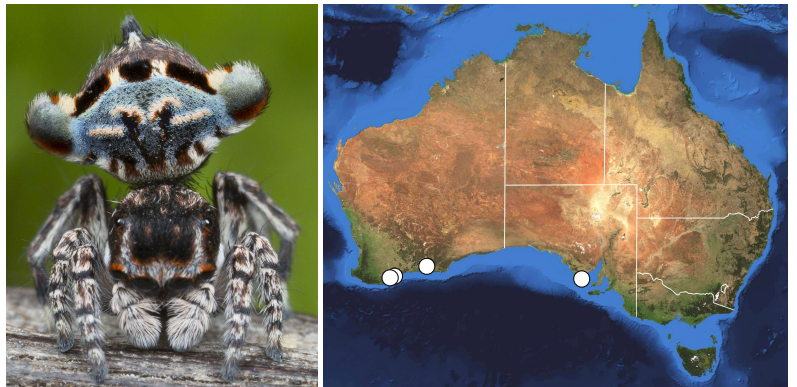
Ornamentation of the eye region varies across the range of *M. harrisi*. This male is from New South Wales.

***Maratus lobatus***

Otto & Hill 2016

Maratus lobatus Otto & Hill 2016b; Whyte & Anderson 2017

This close relative of *M. harrisi* from the southern coastal region of Australia has a slightly different pattern of white stripes across the fan. Unlike *M. harrisi*, male *M. lobatus* do not raise legs III as they display their elevated and expanded fan to females.



The *linnaei* group

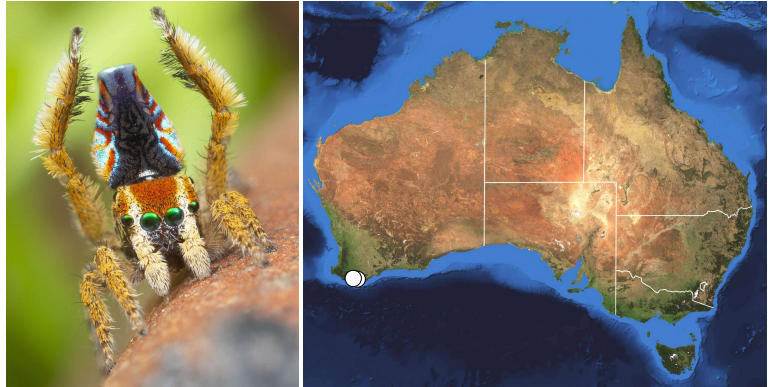
This group contains three closely related species from the southwestern corner of Western Australia, an area of extraordinary biodiversity. Males lack flaps and rotate their opisthosoma toward one side and then to the other as they display to attentive females at a distance of less than 4 mm. The opisthosoma of *Maratus linnaei* is more tapered or conical, more cylindrical in *M. electricus*. The opisthosoma bears a darker central pattern and is truncated at the rear in *M. cuspis*. This group is most closely related to the *vespa* group, also endemic to this corner of Australia, but members of that group have prominent, lobate flaps.

Maratus cuspis

Otto & Hill 2019

Maratus cuspis Otto & Hill 2019

The species name *cuspis* refers to the appearance of a dark "spearhead" surrounded by flames on the dorsal opisthosoma. As males display, they rotate the fan on one side and then the other while holding legs III in a bracketing position around the fan. When they switch the side to which they are rotating the fan, they execute a very fast kick with one of their legs III. At times they bring legs III close together to tightly bracket the "spearhead."

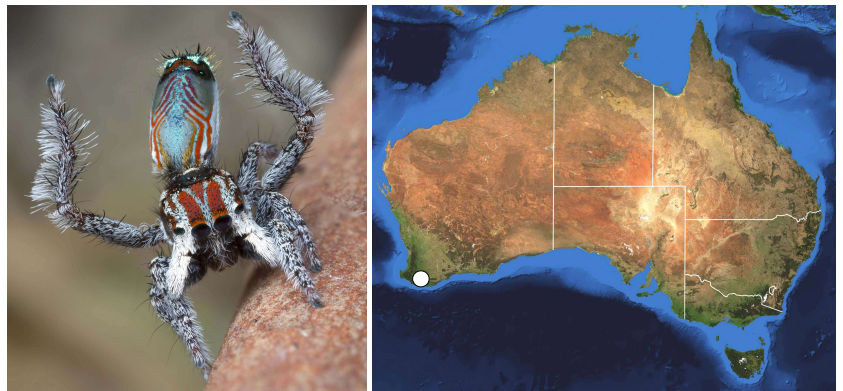


Maratus electricus

Otto & Hill 2017

Maratus electricus Otto & Hill 2017b

This striking species is known from a single locality near Lake Muir. The species name *electricus* is based on the resemblance of parallel lines of red pigmented scales on the opisthosoma to electrical wiring on a circuit board. As in *M. linnaei*, bright white setae of the pedipalps align with tracts of white setae between the AME and ALE as well as lines of white setae that traverse the eye region.

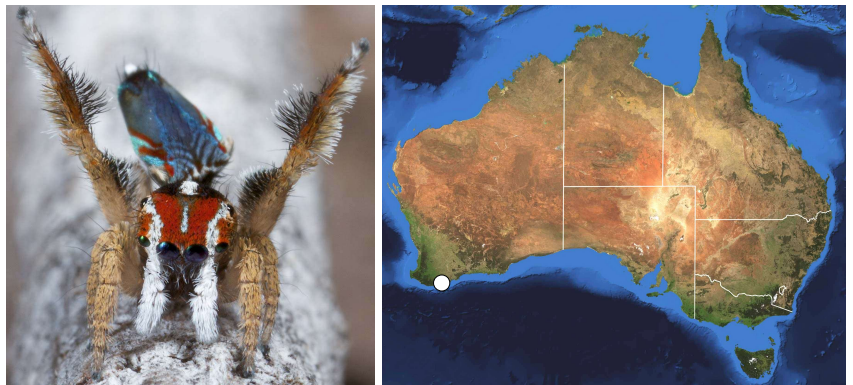


Maratus linnaei

Waldock 2008

Maratus linnaei Waldock 2008; Hill 2009, 2010; Otto & Hill 2011b, 2016b, 2017b; Whyte & Anderson 2017

Male *M. linnaei* have long bristle-like setae on legs III and hold their bright white pedipalps to the front. Until recently all published records of this species were from Two Peoples Bay Nature Reserve in Western Australia.



The *mungaich* group

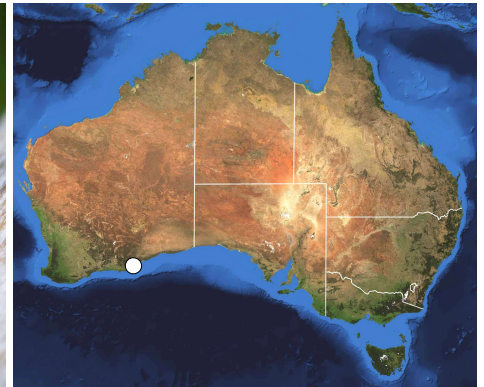
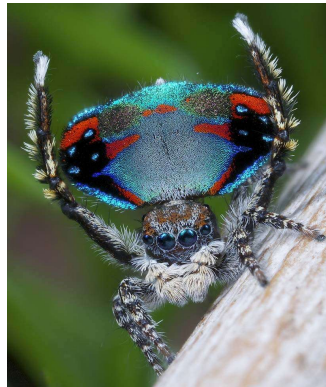
This large group, endemic to the southern part of Western Australia, includes species with very wide, brightly-coloured fans covered with a pattern of bright red scales on a background of iridescent scales. All males in the group extend legs III, but several (*M. avibus*, *M. bubo*, *M. caeruleus*, and *M. madelineae*) closely bracket the fan with legs III as they display. In all species the expanded fan figures most prominently in courtship display, characterized by side to side rotation of the fan with legs III held in place. We recognize four distinct clades within this group: 1) *M. bubo* with a unique owl-like figure and bright orange lateral margins on the fan, 2) *M. avibus* + *M. caeruleus* + *M. madelineae* with a large unmarked area of iridescent scales toward the front of the fan, 3) *M. karrie* and *M. sarahae* with a wide central black patch and large black spots on the flaps and 4) *M. gemmifer* + *M. hortorum* + *M. melindae* + *M. mungaich* with a narrower central black patch and (if present) a small black or iridescent blue-white spot at the center of each flap.

Maratus avibus

Otto & Hill 2014

Maratus avibus Otto & Hill 2014a, 2016b; Whyte & Anderson 2017; McCoy et al. 2019

This is the mainland counterpart to the closely related *M. caeruleus*. Mating by *M. avibus* with *M. caeruleus* can result in viable hybrids. In the laboratory one male hybrid mated with a female *M. caeruleus* that laid eggs, resulting in several juvenile offspring. However two hybrid females that mated with hybrid males failed to produce any eggs.

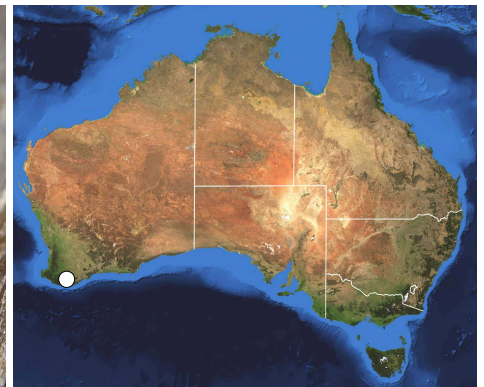


Maratus bubo

Otto & Hill 2016

Maratus bubo Otto & Hill 2016b; Whyte & Anderson 2017

The pattern of the fan of *M. bubo* differs considerably from that of other members of this group, and resembles a primitive sketch of a horned owl (genus *Bubo*). Note how the fan is bracketed by the extended legs III.

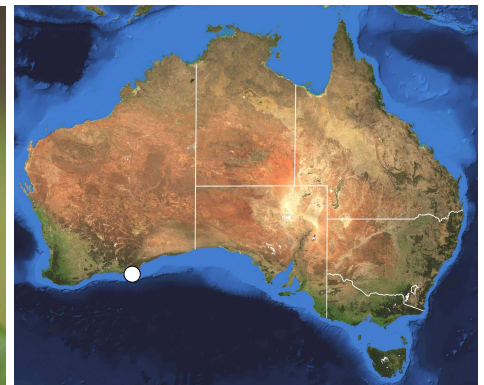


Maratus caeruleus

Waldock 2013

Maratus caeruleus Waldock 2013, 2014; Otto & Hill 2014a, 2016b; Whyte & Anderson 2017

This large species is known only from Middle Island in the Recherche Archipelago just off the southern coast of Western Australia where the closely related *M. avibus* is found. It resembles *M. madelineae* but lacks the large central spot on the fan.

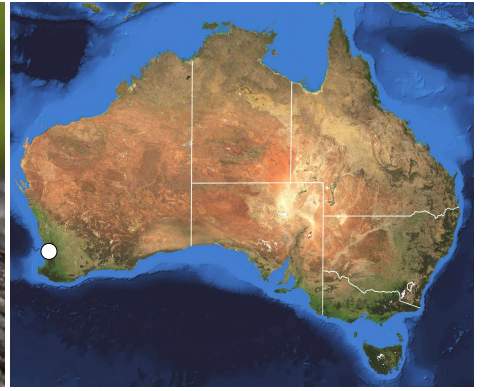


Maratus gemmifer

Otto & Hill 2017

Maratus gemmifer Otto & Hill 2017b

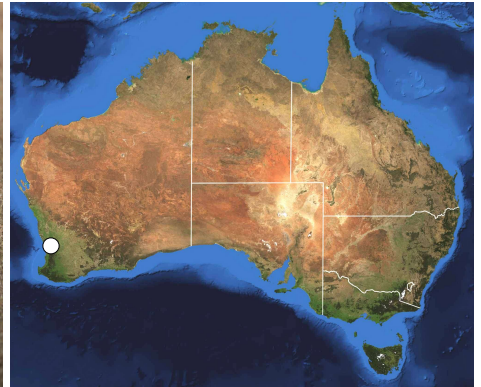
M. gemmifer males have a small bright spot comprised of iridescent white-blue scales at the center of each flap of the fan, and a single blue spot toward the rear of the central black patch.

***Maratus hortorum***

Waldock 2014

Maratus mungaich : Waldock 1995 (in part); Otto & Hill 2012b (in part), 2014a (in part); *Maratus hortorum* Waldock 2014; McCoy et al. 2019

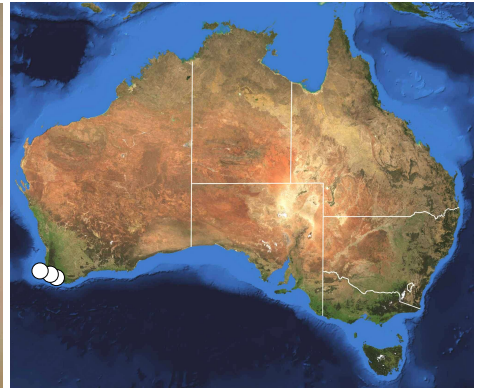
This species is distinguished from *M. mungaich* by the presence of two small blue spots in the black central spot of the fan.

***Maratus karrie***

Waldock 2013

Maratus mungaich Waldock 1995 (in part); *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; McCoy et al. 2019

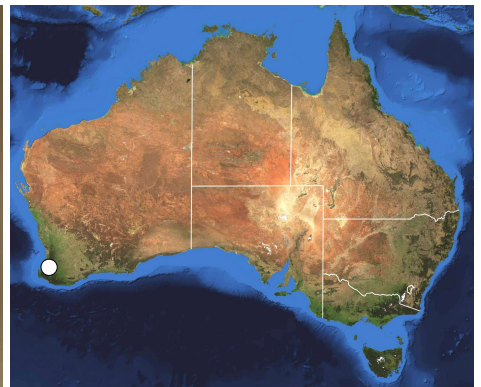
Males have a large black spot on each flap of the fan. They are similar to *M. sarahae* but much smaller and they occur in a different habitat.

***Maratus madelineae***

Waldock 2014

Maratus madelineae Waldock 2014; Otto & Hill 2016b; Whyte & Anderson 2017

Males resemble *M. avibus* and *M. caeruleus* with respect to their colouration, but have a prominent posteromedian black spot and a more complex pattern of red scales on the fan.

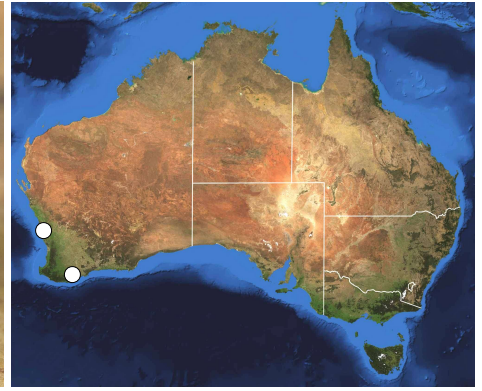


Maratus melindae

Waldock 2013

Maratus mungaich : Waldock 1995 (in part); *Maratus melindae* Waldock 2013, 2014; Otto & Hill 2014a, 2017b; *Maratus* sp. Whyte & Anderson 2017

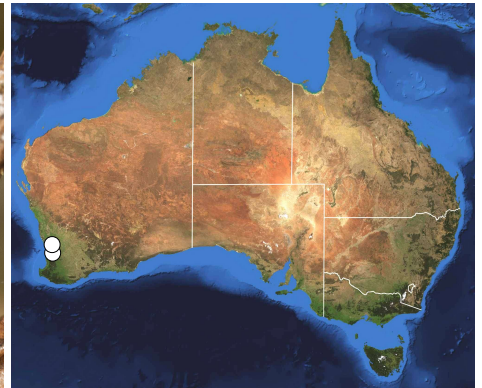
This species has a dark brown eye region and lacks a black patch on each flap of the fan. It was first found near the Stirling Ranges. This male (*M. melindae corus* Otto & Hill 2017) was found at the Banksia Reserve, Verne Hill, east of Cervantes.

***Maratus mungaich***

Waldock 1995

Maratus mungaich Waldock 1995, 2013, 2014; Hill 2009, 2010a; Otto & Hill 2011b, 2012b, 2014a, 2016b; Girard & Endler 2014; Hsiung et al. 2014; Whyte & Anderson 2017

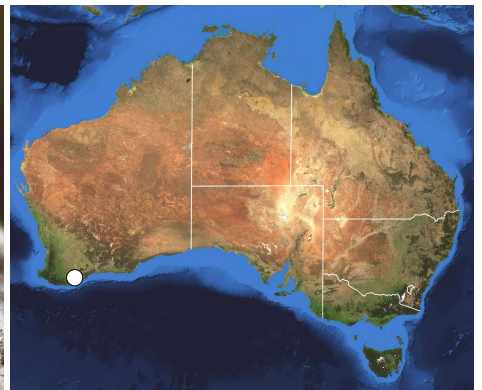
Male *M. mungaich* have a small black spot surrounded by red on each flap, and a single small blue spot at the center of the central black spot of the fan. Found inland from Perth.

***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; Girard & Endler 2014; Whyte & Anderson 2017

This is a relatively large species, known only from the two highest peaks in the Stirling Ranges, Bluff Knoll and Ellen Peak.

**The pavonis group**

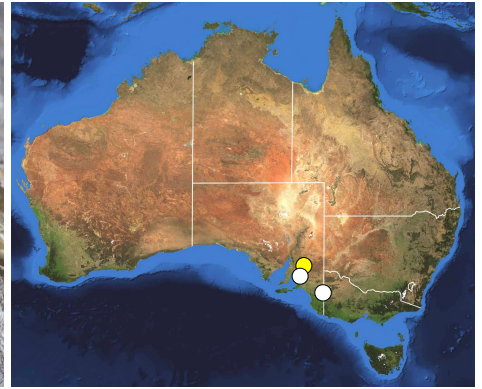
Dunn first used the Latin word for "peacock" (*pavo*) when he described *M. pavonis* in 1947. He later wrote an account of the display of this spider in a now-defunct Australian magazine, *Walkabout* (Dunn 1957). At the time, only two species in this group were known, *M. pavonis* and *M. splendens*. Males within this group can often be identified by the presence of a large red circle or "target" on the fan, but this is often obscured or replaced by a covering of light brown scales. Some males do not even raise their fan as they display. Spiders of Western Australia presently identified as either *M. pavonis*, *M. pavonis* var. *brunneis*, or *M. pavonis* var. *normalup* (Otto & Hill 2012c, 2012e; Baehr & Whyte 2016) are included here with *M. pavonis* but need further study. Unlike the eastern *M. pavonis*, the fan of these western spiders may have large lateral flaps or more light-brown scale cover, and the legs may have fewer markings.

Maratus leo

Otto & Hill 2014

Maratus leo Otto & Hill 2014d; Whyte & Anderson 2017

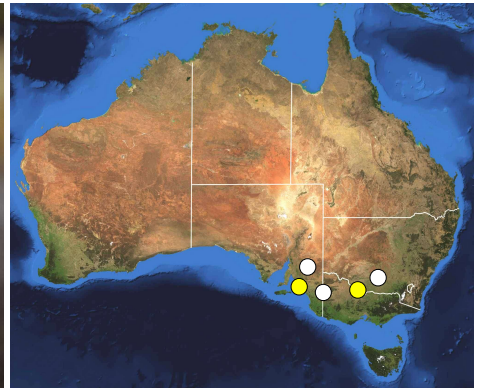
M. leo males are relatively cryptic and do not raise their fan when they display to females, but there are nonetheless a few iridescent blue-green scales on the dorsal opisthosoma. In some males the scales that form the circular figure of the fan are dark brown rather than dull red as shown here.

***Maratus literatus***

Otto & Hill 2014

Maratus pavonis var. *m-insignitis* Otto & Hill 2012c, 2012e; *Maratus literatus* Otto & Hill 2014d; Whyte & Anderson 2017

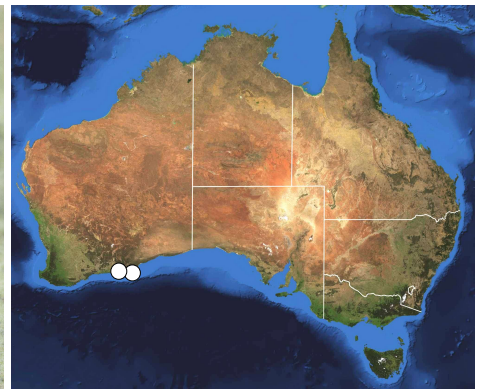
Unlike the eastern *M. pavonis*, male *M. literatus* have a wide fan with flaps, and a red m-shaped figure across the eye region.

***Maratus maritimus***

Otto & Hill 2014

Maratus maritimus Otto & Hill 2014d; Whyte & Anderson 2017

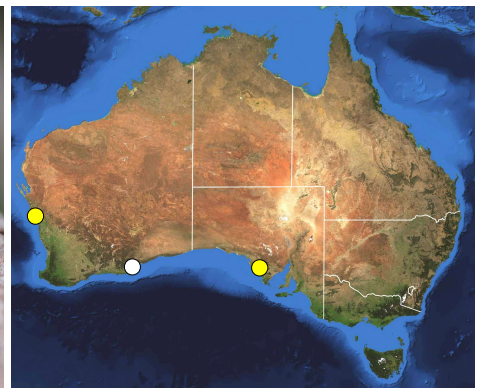
Males of this western species have only a narrow median line of iridescent scales on the fan. Like *M. leo*, they are cryptic and rely on movements of legs III to court females. They are found at lower elevations near the southern coast.

***Maratus montanus***

Otto & Hill 2014

Maratus montanus Otto & Hill 2014d; Whyte & Anderson 2017

This species was originally described from Mt. Ragged in Western Australia but has since been found also at Geraldton (Western Australia) and the Eyre Peninsula (South Australia), both far from the original location. Males are similar to *M. maritimus* but they elevate their fan as they display to females.

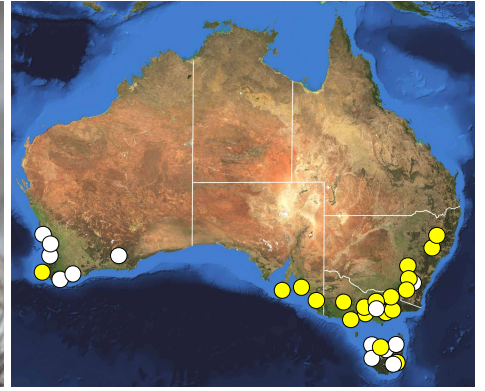


Maratus pavonis

(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; Whyte & Anderson 2017; *Maratus pavonis* var. *nornalup* Baehr & Whyte 2016;

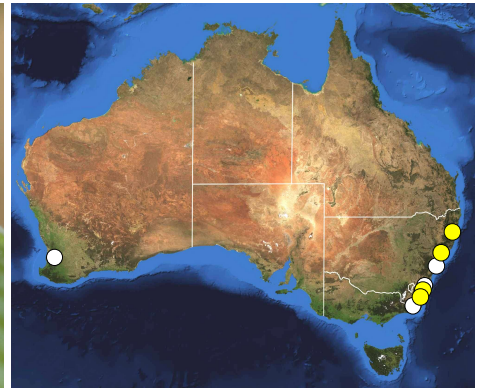
This male is from Kangaroo Island. Western males have a wider fan with flaps and fewer bands on the legs.

***Maratus splendens***

(Rainbow 1896)

Attus splendens Rainbow 1896; *Saitis splendens* : Simon 1901a; Dunn 1947; *Saitis rainbowi* Roewer 1951; *Maratus rainbowi* : Waldock 2008; Hill 2009, 2010; *Maratus splendens* : Žabka 1991; Hill & Otto 2011; Otto & Hill 2011b, 2012c, 2012e, 2013b, 2014d; Girard *et al.* 2011; Foelix *et al.* 2013; Zhang & Maddison 2013; De Angelis *et al.* 2013; Girard & Endler 2014; Hsiung *et al.* 2014; Stavenga *et al.* 2016; Whyte & Anderson 2017

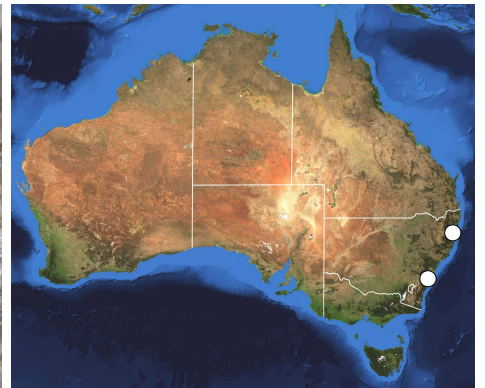
Males of this smaller species have a band of dark, iridescent blue scales between the PLE.

***Maratus sylvestris***

Otto & Hill 2019

Maratus sylvestris Otto & Hill 2019

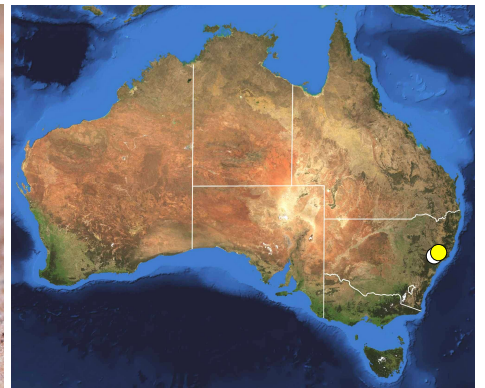
Males have a broad, red band on either side of the eye region, and relatively long legs III. Like *M. watagansi*, these are unusual as they are found in wet sclerophyll or rainforest habitats.

***Maratus watagansi***

Otto & Hill 2013

Maratus watagansi Otto & Hill 2013b, 2014d; Whyte & Anderson 2017

Males of this cryptic eastern species also do not raise the fan as they display to females. Note the broad dorsal, median band of light brown scales. From the Watagans of eastern New South Wales. One of the only peacock spiders known to inhabit rainforest.



The *spicatus* group

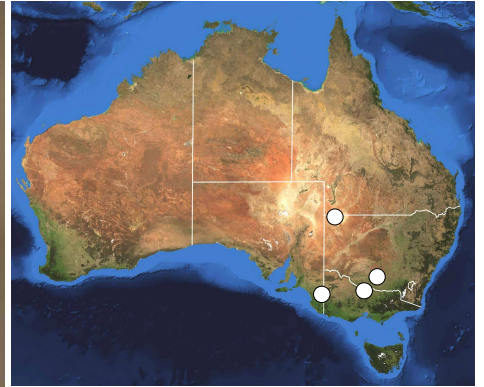
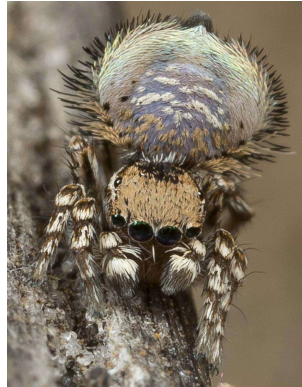
This group includes four small (2.5-4 mm in body length) species. Males rear their colourful fan and wave it from side to side. Except for *M. nimbus* they do not extend legs III as they display to females. Legs III have no special markings and are close to legs IV in length. The male pedipalp of each species has a conical proximal tegulum, an inward projection on the medial side of the relatively large circular ring of the embolus, and the apex of the embolus has a convergent inner and outer edge that resembles that seen in members of the *chrysomelas* group, a group that may be closely related. The male of each of these species is nonetheless quite distinct.

Maratus nimbus

Otto & Hill 2017

Maratus nimbus Otto & Hill 2017c; *Maratus* sp. Whyte & Anderson 2017

The fan of *M. nimbus* males has a distinctive pattern of scales and setae on the fan, mostly in subdued hues. This resembles a pastel painting of the sky at dawn with white cirrus clouds against a sky of iridescent blue scales, hence the species name *nimbus*. The elliptical fan has no flaps and when it is fully expanded as shown here it is surrounded by an array of large bristle-like setae. These have been found under *Iris* in a well-watered garden at Bordertown, but also in the dry interior.

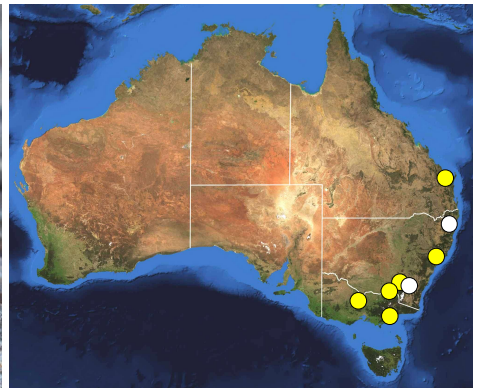


Maratus purcellae

Otto & Hill 2013

Maratus purcellae Otto & Hill 2013a; Whyte & Anderson 2017

M. purcellae was first discovered in a Canberra garden. The dorsum of each pedipalp of the male is covered by a bright white line of scales, and the legs of the male are off-white with a cover of white setae.

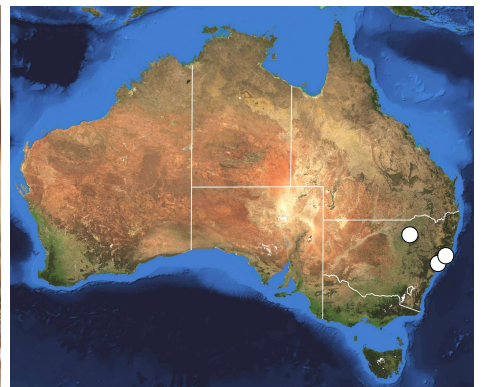


Maratus robinsoni

Otto & Hill 2012

Maratus robinsoni Otto & Hill 2012c, 2012e; Hsiung et al. 2014, 2017b; McCoy et al. 2019; Whyte & Anderson 2017

These small spiders can quickly bury themselves under sand grains. The iridescent scales of their fan are remarkable as they can produce all of the colours of the rainbow, depending on the relative direction of incident and reflected light.

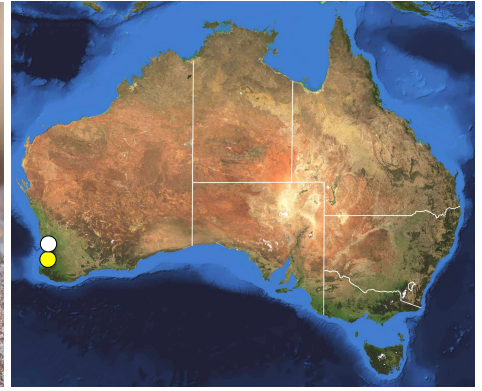
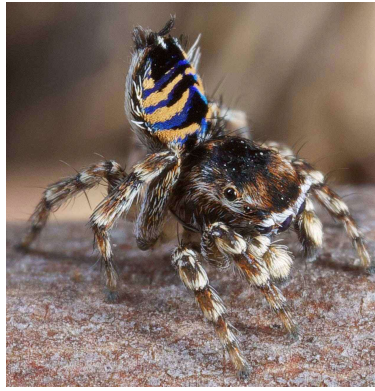


Maratus spicatus

Otto & Hill 2012

Maratus spicatus Otto & Hill 2012c, 2012e; Hsiung et al. 2014; Whyte & Anderson 2017

Males of this small species have large spike-like setae fringing a fan marked with bright yellow chevrons on a blue background. These are frequently seen in and around Perth.

**The *tasmanicus* group**

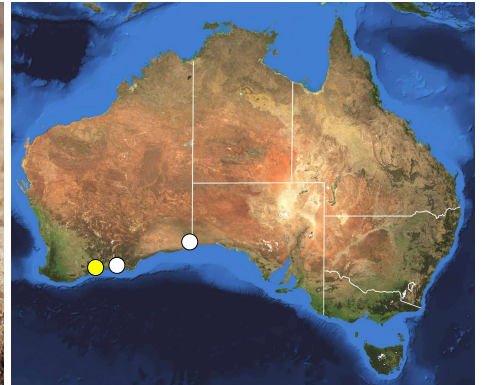
This group includes three closely related but parapatric species. Males have a large triangular fan with lobate flaps, each flap bearing a large black spot.

Maratus australis

Otto & Hill 2016

Maratus australis Otto & Hill 2016b; Whyte & Anderson 2017; Schubert 2019b

Males of this western species have a narrow black line running along the front of each pedipalp.

***Maratus occasus***

Schubert 2019

Maratus occasus Schubert 2019b

Unlike the other species in this group, male *M. occasus* lack a middorsal tract of red or orange scales on the opisthosoma. Their pedipalps are neither striped as in *M. australis*, nor banded as in *M. tasmanicus*. Found near Lake Broadwater in Queensland. Photo by Joseph Schubert.

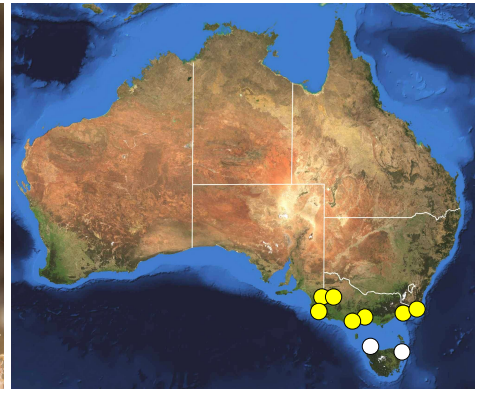


Maratus tasmanicus

Otto & Hill 2013

Maratus sp. C Otto & Hill 2011b; *Maratus tasmanicus* Otto & Hill 2013b; Waldock 2015; Otto & Hill 2016b; Whyte & Anderson 2017; Schubert 2019b

M. tasmanicus males are more orange in colour and their pedipalps are not striped. Some males have much brighter colours than the Tasmanian male shown here.

**The *velutinus* group**

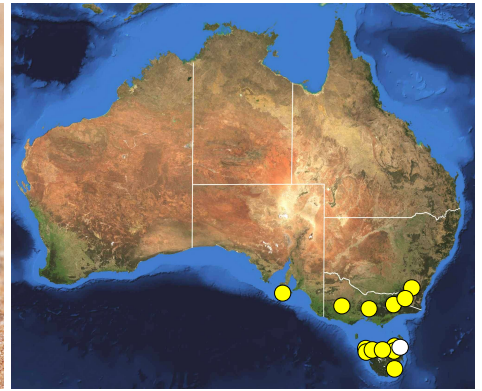
The two members of this group are similar but can be separated by the stripes on the carapace of *M. velutinus*. Males of both species have a velvety-black fan with elongated, black dorsal scales (or *squamous setae* after Waldock 2015) that extend to the rear. The fan is raised and moved from side to side but they do not raise legs III as they display to females.

Maratus prozyskii

Waldock 2015

Maratus prozyskii Waldock 2015

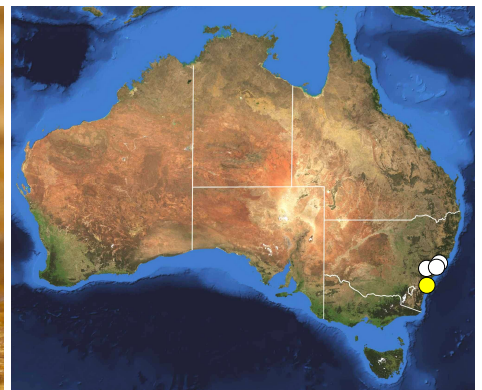
Waldock (2015) noted the similarity of this species to *M. velutinus*. The fan bears a short, narrow anteromedian stripe comprised of iridescent scales bounded by brown scales. This species was recently described from Tasmania but has also been found at several other locations. The male shown here is from Canberra.

***Maratus velutinus***

Otto & Hill 2012

Maratus velutinus Otto & Hill 2012c, 2012e; Waldock 2015; Whyte & Anderson 2017

The male of this species has a stripe behind each AME.



The *vespa* group

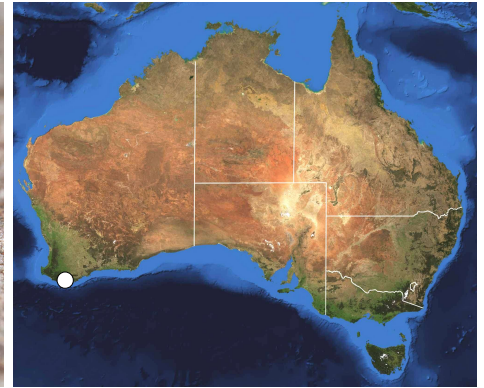
This group is closely related to the *linnaei* group and it is also endemic to the southwestern corner of Australia. As do members of that group, *vespa* group males move their fan from side to side in front of attentive females at a distance of only a few millimeters, framed by their elevated and heavily fringed legs III. However *vespa* group males have prominent lobate flaps, and the lateral margins of these flaps are ornamented in a manner that attract a female when they are rotated far to the left or right behind the legs III. This remarkable and diverse group was only recently discovered.

Maratus aquilus

Schubert 2019

Maratus aquilus Schubert 2019a

The species name *aquilus* is a reference to the fact that, when viewed upside-down, the fan of the male resembles the head of an eagle with its beak wide open. In one mode of display males tightly bracket the small "beak" on the fan between their extended legs III, and attending females look at this closely.

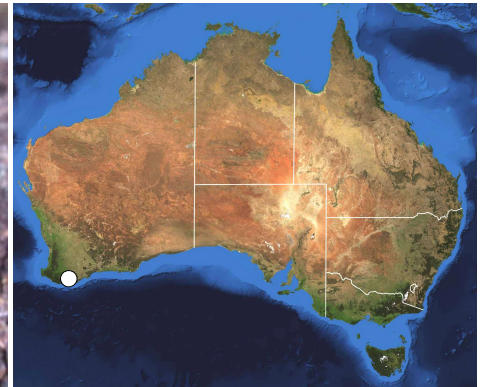


Maratus combustus

Schubert 2019

Maratus combustus Schubert 2019a

This close relative of *M. cristatus* has a fiery or burnt-orange colour on the fan, hence the name *combustus*. Although not shown here, males of this species also extend and display lateral opisthosomal flaps to females during courtship. Photo by Joseph Schubert.

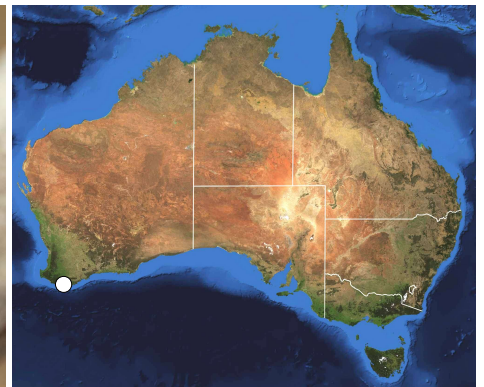
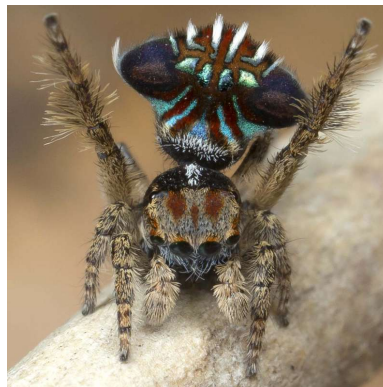


Maratus cristatus

Otto & Hill 2017

Maratus cristatus Otto & Hill 2017b; *Maratus* sp. Whyte & Anderson 2017

M. cristatus males come in two colours, brown as shown here and white. The pattern and colour of setae on the fan resembles the Union Jack, and the eight tufts of long white setae that extend behind the posterior margin of the fan make it easy to recognize this species. The name *cristatus* means "tufted" and this is also the species name of the Peacock (*Pavo cristatus*).

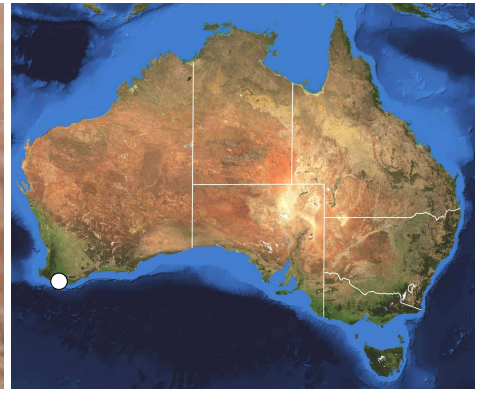
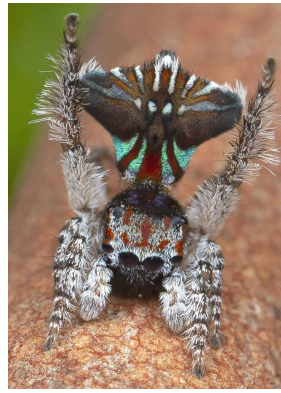


Maratus icarus

Otto & Hill 2019

Maratus icarus Otto & Hill 2019

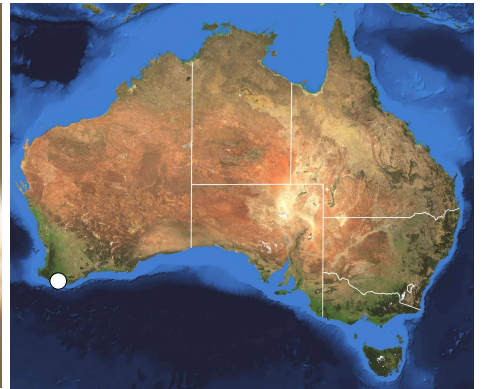
This species, a very close relative of *M. cristatus*, was named for the Icarus of Greek mythology, based on the appearance of a "winged figure" on the fan. It can be distinguished from *M. cristatus* by the division of the red anteromedial tract of the fan in that species, as well as by several details of the courtship display.

***Maratus tortus***

Otto & Hill 2018

Maratus tortus Otto & Hill 2018b

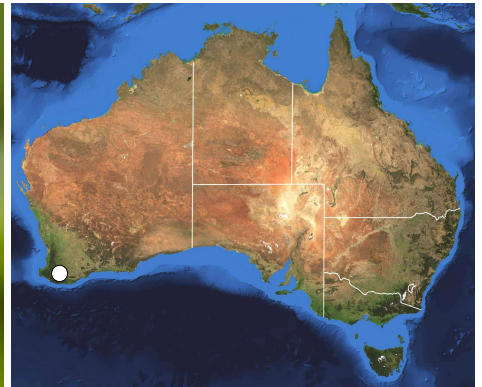
The courtship display of the *M. tortus* male is very unusual in that only one ornamented side of the fan is displayed to a female at a time, even when the fan is held at the center as shown here. Rotation of the fan, twisted (hence the name *tortus*) from one side to the other and then back again, is complicated but follows a regular pattern that is described in detail with the published description of this species.

***Maratus unicip***

Otto & Hill 2018

Maratus unicip Otto & Hill 2018b

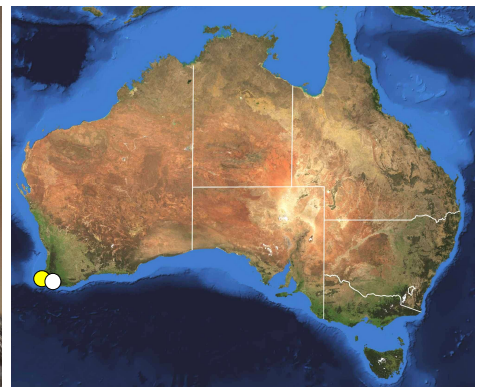
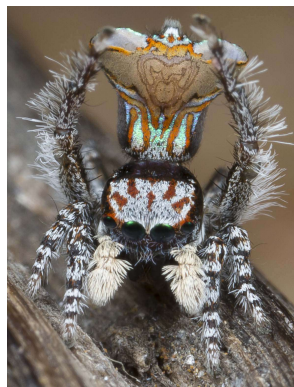
M. unicip resembles a *M. cristatus*, but without the posterior tufts. The lateral flaps of the opisthosoma are not rounded, but triangular and pointed. This species is known only from the Unicip Nature Reserve in Western Australia.

***Maratus vespa***

Otto & Hill 2016

Maratus vespa Otto & Hill 2016b; Whyte & Anderson 2017

M. vespa males have a remarkable pattern of fine lines on the fan that resembles the front of a wasp. The male moves his fan to one side, then to a vertical position as shown here, and then to the other side as a watching female turns to follow his movement.



The *vespertilio* group

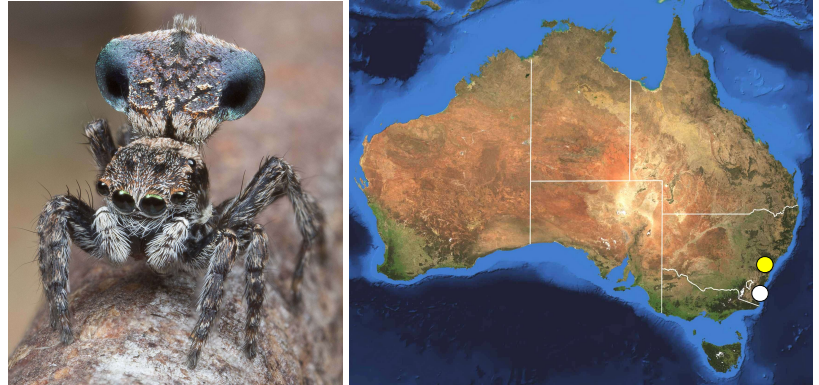
This includes the widely-distributed *M. vespertilio* and a second species, *M. sapphirus*, known from only two localities on the southern coast of New South Wales. These are similar in appearance but *M. sapphirus* has a more elliptical fan with a well-defined pattern of pigmented scales on a background of iridescent scales at the center. In *M. vespertilio* males the fan is more lobate, legs I and II have a dense cover of off-white to light yellow setae, and legs III are decorated with dark anterior femora and a fringe of long white setae extending below the patella to metatarsus. This agrees with the observation that legs III figure prominently in both courtship and agonistic displays of *M. vespertilio*.

Maratus sapphirus

Otto & Hill 2017

Maratus sapphirus Otto & Hill 2017c

This species was first found near Barraga Bay on the "Sapphire Coast" of New South Wales, but has now been found near Sydney. The tightly packed iridescent scales on the flaps of the males are thought to resemble sapphires, hence the name *sapphirus*. During courtship display the fan is rotated from side to side at irregular intervals at a low amplitude (only several degrees in either direction). Except for side-stepping, leg and pedipalp movement is not important to this display.

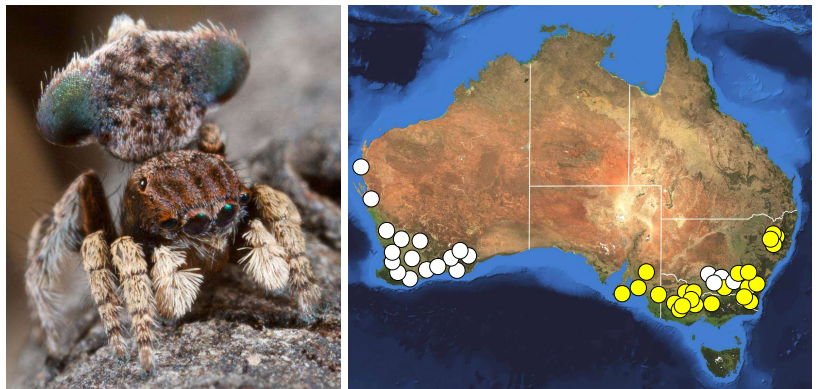


Maratus vespertilio

(Simon 1901)

Saitis vespertilio Simon 1901b; *Saitis vespertilis* Dunn 1947 (misspelled); *Maratus vespertilio* : Žabka 1991; Waldoock 2008; Hill 2009, 2010; Otto & Hill 2011a, 2011b, 2012a, 2017c; Whyte & Anderson 2017

Males of this cryptically coloured species engage in prolonged ritual contests, something not seen in any other *Maratus*. The *Bat Peacock Spider* is widely distributed and is found in drier habitats or on gravel.



The *volans* group

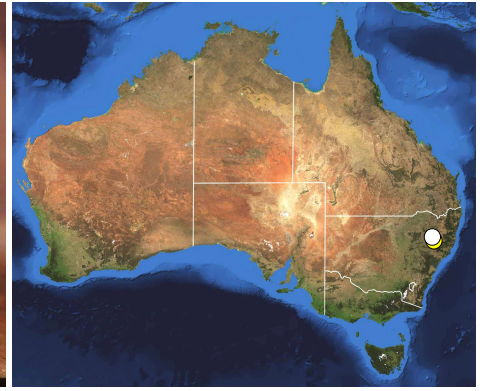
This group contains three of the most colourful peacock spiders. Males of all three species have a large, fringed fan with distinctive figures comprised of pigmented scales on a background of iridescent scales. Courtship display of all three is similar, but *M. pardus* tends to display the fan behind the extended legs III, *M. volans* in front of legs III, and *M. elephants* with one leg III in front of the fan and one leg III behind it. *M. elephants* and *M. pardus* are known from only a few localities, but *M. volans* is widely distributed along the east coast of Australia and is easily the best-known of all peacock spiders. The species name *volans* relates to the fact that Pickard-Cambridge (1874) was told that this spider used its flaps to fly (although he also guessed that they had a "sexual" function). A black and white sketch of a *Maratus volans* specimen was figured in an early guide to flying animals of the British Museum (Ridewood 1912). This was the only peacock spider featured in a popular guide to Australian spiders by Mascord (1970), who still thought that it might fly.

Maratus elephants

Otto & Hill 2015

Maratus elephants Otto & Hill 2015c; Whyte & Anderson 2017

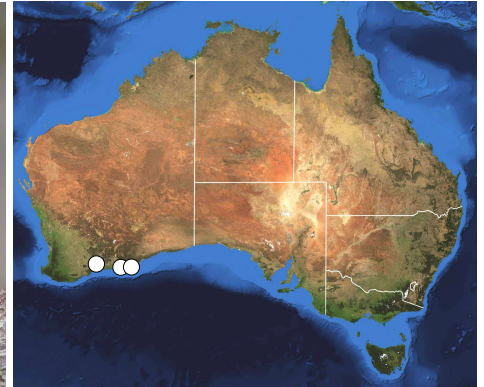
M. elephants has an unusual and finely-drawn figure on the front of the fan, resembling the head of an elephant with one ear on either flap. It is known from only a few sites in the interior of northeastern New South Wales.

***Maratus pardus***

Otto & Hill 2014

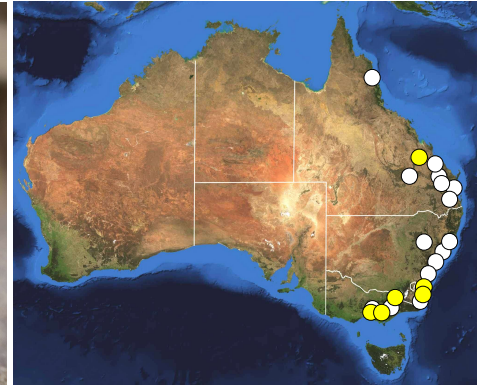
Maratus pardus Otto & Hill 2014b; Whyte & Anderson 2017

The male has prominent spots like a leopard, hence the name. Note the pair of vertical yellow-orange stripes on each flap of the fan. This species is known only from areas near the southern coast of Western Australia.

***Maratus volans***

(O. Pickard-Cambridge 1874)

Salticus volans O. Pickard-Cambridge 1874; *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, 2015, 2018a, 2018b; Foelix et al. 2013; Girard & Endler 2014; Hsiung et al. 2014, 2017a; Baehr & Whyte 2016; Whyte & Anderson 2017



Each large flap of the fan of *M. volans* has three wide stripes comprised of brilliant yellow, pigmented scales.

Species not assigned to a group

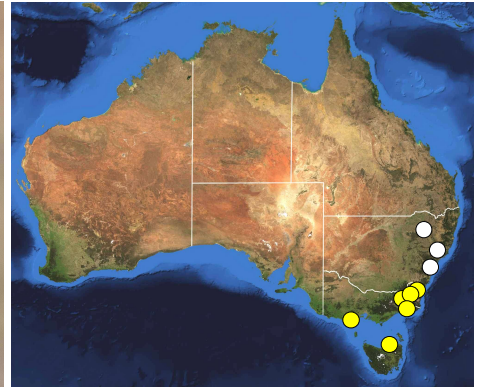
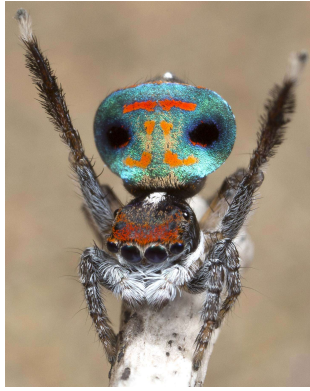
Each of the species shown here, including the type for *Maratus* (*M. amabilis*) is quite distinct and as a group they represent the great diversity of the Australian peacock spiders. *Saratus hesperus* is the only representative of a second genus of peacock spiders.

Maratus amabilis

Karsch 1878

Maratus amabilis Karsch 1878; Žabka 1987, 1991; Waldock 1995, 2007, 2008; Hill 2009, 2010a; Otto & Hill 2010, 2011b, 2016b; Whyte & Anderson 2017

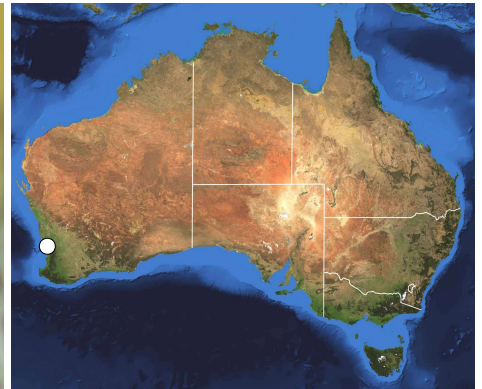
Type species for the genus *Maratus*. The large black spots on the flaps of this species were mentioned in the original description. Ornamentation of the eye region and fan differs in each location where *M. amabilis* is found. This male is from Sydney.

***Maratus clupeatus***

Otto & Hill 2014

Maratus sp. nov. Waldock 2007; *Maratus* species D Otto & Hill 2012c, 2012e; *Maratus clupeatus* Otto & Hill 2014c; Whyte & Anderson 2017

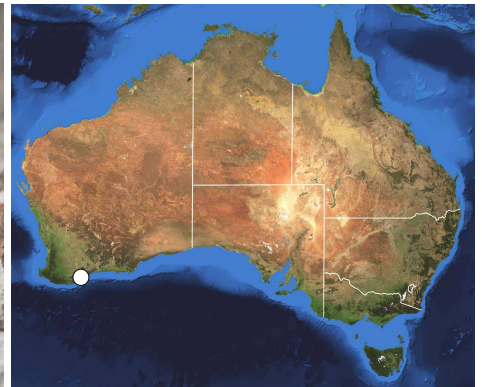
We have called this the *Gnangara Peacock Spider*, with reference to its occurrence in the Gnangara Mound north of Perth in Western Australia. The species name is a reference to the shield-like shape of the fan.

***Maratus personatus***

Otto & Hill 2015

Maratus personatus Otto & Hill 2015d; Whyte & Anderson 2017

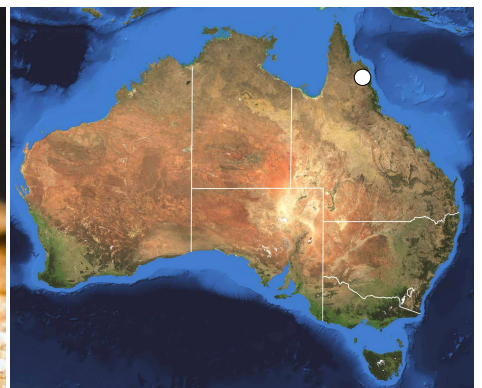
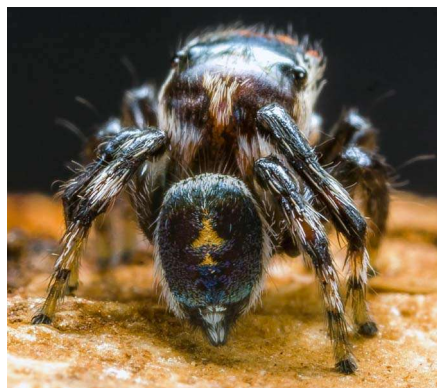
Male *M. personatus* have a bright blue mask and attract females with the active movement of legs III, but do not raise the opisthosoma as part of this display.

***Maratus sagittus***

Schubert & Whyte 2019

Maratus sagittus Schubert & Whyte 2019

Only a single male specimen of this species is known, from the Cape York Peninsula of northern Queensland. The species name, *sagittus*, refers to the arrow-shaped pattern on the dorsal opisthosoma. Dull-red scales (not shown) are present on the front of the eye region. Photo by Robert Whyte.

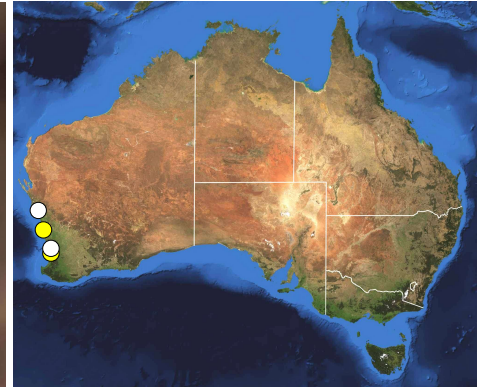


Maratus speciosus

(O. Pickard-Cambridge 1874)

Salticus (Attus) speciosus O. Pickard-Cambridge 1874; *Habrocestum speciosum* : Keyserling 1883; *Saitis speciosus* : Simon 1901a; Dunn 1947; Žabka 1991; Hill 2009, 2010; Hill & Otto 2011; *Maratus speciosus* : Otto & Hill 2012c, 2012e, 2015b; Hill & Otto 2014; Girard & Endler 2014; Hsiung et al. 2014; Baehr & Whyte 2016; Whyte & Anderson 2017; McCoy et al. 2019

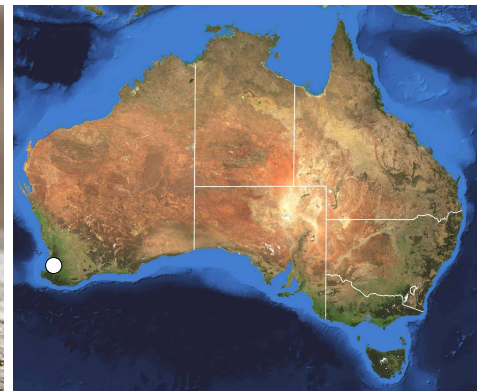
Known as the *Coastal Peacock Spider*, this spider is common on plants in coastal sand dunes in the vicinity of Perth. Males have a fringe comprised of long, bicoloured setae around the fan.

***Maratus tessellatus***

Otto & Hill 2016

Maratus tessellatus Otto & Hill 2016b; Whyte & Anderson 2017

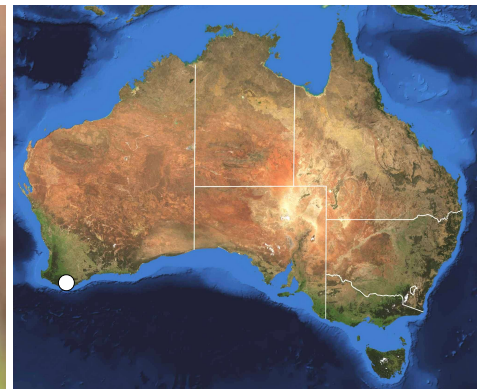
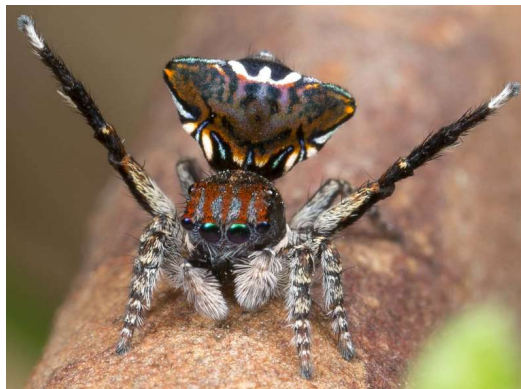
Males have a distinctive tessellated pattern of dark scales on their fan, but do not use this fan in courtship display, a display in which legs III are extended and rapidly waved in front of a female. This species is known only from Bunbury, Western Australia.

***Maratus trigonus***

Otto & Hill 2017

Maratus trigonus Otto & Hill 2017b; *Maratus* sp. Whyte & Anderson 2017

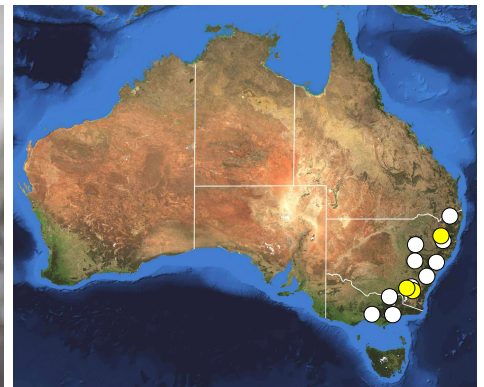
Known only from the summit of Mt. Lindesay, males can be identified by a white "crown" at the top of a triangular fan. In one display both legs III are waved as the fan is rotated from side to side. In a second display the fan is twisted to one side and a single leg is kicked.

***Saratus hesperus***

Otto & Hill 2017

Saratus hesperus Otto & Hill 2017a; *Maratus* sp. Whyte & Anderson 2017

Similar to other peacock spiders in many respects, the genitalia of *S. hesperus* males and females are quite different. Emergent instars are boldly spotted and the deep blue or purple of the fan is based on layering of the cuticle rather than scale structure. The species name, *hesperus*, is based on the Greek name for the Evening Star (*Εσπερος*).



Acknowledgements

We thank Carole Anderson, Jacqueline Anderson, Tim Andrews, Barbara Baehr, Michelle Barnes, Tessa Barratt, Jonas Bellschambers, Farhan Bokhari, Nick Burr, Chausino, David de Angelis, Diane Deans, Jordan de Jong, Michael Doe, John Douglas, Linda Downing, Alexander Dudley, Michael Duncan, Jason Dunlop, Dave Edmunds, G. B. Edwards, Damian Elias, Kristi Ellingson, Norm Farmer, Adam Fletcher, Volker Framenau, Anja Friederichs, Tim Gamblin, Madeline Girard, Shane Graves, Stuart Harris, Mark Harvey, Mark Helle, Val Hogan, Fred Hort, Jean Hort, Anita Hotker, Glenn Hoye, Paul Irvine, Joan P. Jass, Bradley Jenner, Richard Jones, Jade Kennedy, Eddie Aloise King, Beth Kinsey, Ron Kinsey, David Knowles, Allan Lance, Andrew Leo, Elan Lewinsohn, Laura Leibensperger, John Lizamore, Stephanie Lizamore, Iain Macaulay, Karl Magnacca, Stephen Mahony, Chris Martinez, Oscar Mendez, Peter McHugh, Peter McQuillan, Graham Milledge, Charlotte Miller, Julie Morgan, Jeff Morley, Tali Moyle, Mark Newton, Jason O'Connell, Chris O'Toole, Jane Plant, Norman I. Platnick, Jerzy Prószyński, Michaela Purcell, Nicole Quittner, Tomas Rak, Helen Ransom, Robert Raven, David B. Richman, Michael Rix, Martyn Robinson, Peter Robinson, Christine Rollard, Bob Rogers, Tim Rudman, Donna Sanders, Laurence Sanders, Michael Sanders, Thomas Sayers, Joseph Schubert, Kai Schütte, Owen Seeman, June Shields, Kevin Shields, Helen Smith, Kerry Stuart, Geoff Urbas, Monique Urbas, Julianne Waldock, Robert Whyte, Jacqui Wilson, Graham Wise, Marek Żabka and Junxia Zhang for their important contributions to our study of peacock spiders in recent years. We also would like to acknowledge the Australian Capital Territory Environment, Planning and Sustainable Development Directorate, the Brisbane City Council, the Department of Environment, Water and Natural Resources, South Australia, the Department of Parks and Wildlife, Western Australia, the Ku-ring-gai Wildflower Garden, the New South Wales Department of Industry, the New South Wales National Parks and Wildlife Service, and Water New South Wales. Without their support the collection and documentation of many species would not have been possible. Unless otherwise credited all photographs are copyright © Jurgen C. Otto. Range maps are based on a satellite image supplied by the NASA Visible Earth project.

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