

What’s in a name? Or: why *Maratus volans* (Salticidae) cannot fly



by Julianne M. Waldock, Western Australian Museum, Locked Bag 49, Welshpool D.C., Western Australia, 6986



Maratus volans (O. P.-Cambridge, 1874), male, dorsal view of abdomen, pinned specimen (photo: D. Elford, W.A. Museum)

The first description of *Salticus volans* by O.P.-Cambridge referred to the collector’s comments that he "has observed them elevating and depressing the [abdominal] flaps, and also actually using them as wings or supporters to sustain the length of their leaps", and led to the creation of the specific epithet ‘*volans*’ for this spider. This has lead to a belief that these spiders actually fly or glide, and has permeated into the general literature on Australian spiders.



Maratus volans, male dorsal view of expanded abdomen (R. Ott, W.A.Museum)



Maratus volans male ventral view of folded abdominal flaps (R. Ott, W.A.Museum)

Salticus volans (also known as *Saitis volans*) has since been transferred to the genus *Maratus* Karsch by Marek Zabka in 1991.



Maratus pavonis (Dunn, 1947), male displaying to female (photo: D. Elford, W.A. Museum)

During an on-going systematic revision of the genus *Maratus*, the behaviour of several members of this genus has been observed. In all cases, the courtship behaviour involves the male ‘dancing’ around the drab female (which has no abdominal extensions) with the abdomen raised and abdominal flaps expanded in display to the receptive female.



Maratus pavonis (Dunn, 1947), male abdomen expanded and third legs raised (photo: D. Elford, W.A. Museum)



Maratus pavonis (Dunn, 1947), male abdomen expanded and third legs raised (photo: D. Elford, W.A. Museum)



Maratus pavonis (Dunn, 1947), male ventral view of abdomen with flaps folded (photo: D. Elford, W.A. Museum)

For example, the mating ‘dance’ of *Maratus pavonis* entails the male approaching a female if she is receptive. He stops briefly to raise a third leg vertically which is then lowered jerkily and the other third leg is raised and lowered in the same manner. If the female is still interested, the male then moves forward and becomes more excited, eventually raising both third legs at the same time and jerking them down stiffly onto the substrate (this can be heard as a tap when the substrate is a dried leaf or other hard substance), at this point he jumps forward. This is repeated many times.

When the male is about three centimetres away from the female he suddenly raises his abdomen and unfolds the side flaps, thus creating an almost circular, brightly coloured ‘target’. This is flanked by the third legs, held aloft, erect and straight. In addition the male vigorously shakes his flared abdomen at the female, jerking from side to side and imperceptibly closing the distance between them. Receptive females appear to be entranced by this performance and when the male finally is within touching distance, the female is immobile and allows him to climb over her cephalothorax, turn her abdomen over and insert a pedipalp. This entire procedure can take up to two hours and when the male has discharged both pedipalps he quickly moves away from the immobile female which seems to take several seconds to recover and move off herself.

The gliding or flying function attributed to the abdominal flaps has never been corroborated, and it seems highly likely that the brightly coloured abdominal flaps are solely used in courtship behaviour.



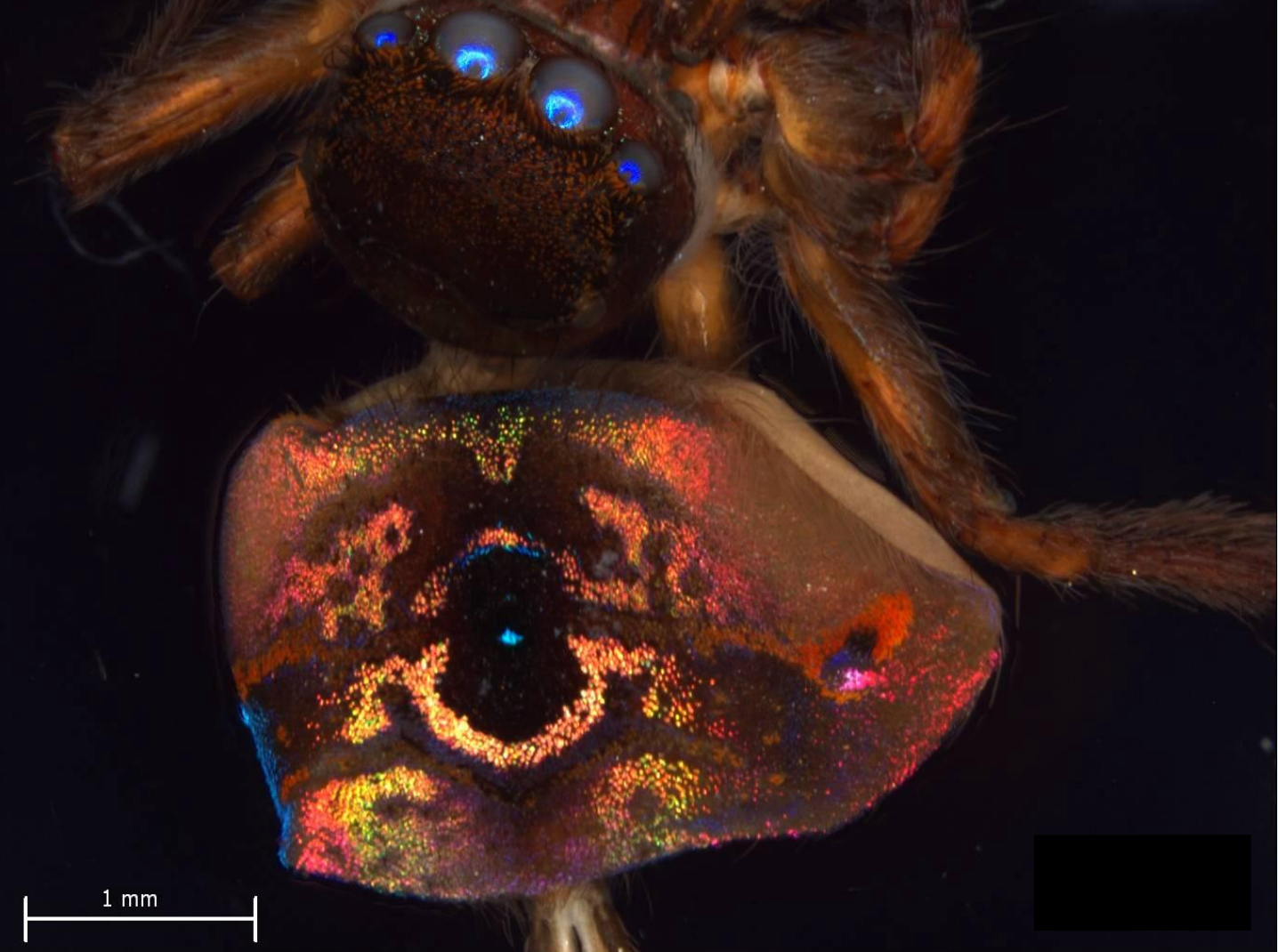
Maratus mungaich Waldock, 1995, male, dorsal view of abdomen (R. Ott, W.A.Museum)



Maratus mungaich Waldock, 1995, male, posterior view of abdomen showing folded flaps (R. Ott, W.A.Museum)



Maratus mungaich Waldock, 1995, male, ventral view of expanded abdomen (R. Ott, W.A.Museum)



Maratus mungaich Waldock, 1995 male, dorsal view of partially expanded abdomen (R. Ott, W.A.Museum)



Maratus amabilis Karsch, 1878 male, dorsal view of abdomen, pinned specimen (photo: D. Elford, W.A. Museum)

There are at least 20 species in the genus *Maratus*, here are images of some of them.



Maratus sp. nov., male, near Ravensthorpe, W.A. (photo: D. Elford, W.A. Museum)



Maratus sp. nov., male, dorsal view, Neerabup National Park, W.A. (photo: M. Rix)



Maratus sp. nov., male, ventral view, Neerabup National Park, W.A. (photo: M. Rix)

Truly these spiders are Peacock Spiders rather than ‘flying spiders’.