



A new species of prowling spider in the genus *Miturgopelma* (Araneae: Miturgidae) from semi-arid South Australia

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Abstract

Miturgopelma personatum sp. nov., a distinctly marked prowling spider (Araneae, Miturgidae) is described from Bakara Conservation Park, an area of semi-arid mallee in South Australia.

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Introduction

Miturgopelma Raven, 2023 is part of a group of miturgid spiders referred to as the "stripe-less group", along with the genera *Knotodo* Raven, 2023, *Xistera* Raven, 2023, *Miturgiella* Raven, 2023 and *Xeromiturga* Raven, 2023 (Raven *et al.* 2023). This group of spiders consists mostly of small or medium-sized, ground-dwelling species which actively hunt prey without use of a web or retreat. This is in contrast to *Miturga* Thorell, 1880, the only other described genus in the Australian Miturginae Simon, 1886, which usually hunts out of a thickly webbed retreat constructed underneath objects or in soil cavities. Both *Miturga* and members of the "stripe-less group" are abundant, highly speciose and widespread in xeric regions of Australia. Until recently, the stripe-less group had only three described species placed in three families. Raven *et al.* (2023) described the five aforementioned genera along with 48 new species, for a total of 51 species, with *Miturgopelma* being the most speciose with 31 species described. In this paper, *Miturgopelma personatum* sp. nov. is described, which brings the total number of species in *Miturgopelma* to 32.

Methods

All specimens in this study were preserved and examined in 75% ethanol and are deposited at the South Australian Museum, Adelaide (SAM). Female genitalia were dissected and then cleared in 10% KOH for 30 minutes. Specimens were examined using an Olympus SZX10 stereomicroscope. Measurements are given in millimetres and were taken using an eyepiece graticule. Live and preserved habitus images were taken with an Olympus m.zuiko 60 mm macro lens, connected to an Olympus OM-D E-M1mkII digital camera. Images of the genitalia were taken with a Laowa 25 mm f2.8 2.5–5x ultra macro lens connected to the same camera. Forty to sixty images were taken at differing focal lengths and combined with Helicon Focus 8.3.0, method B. Figures were compiled using Adobe Photoshop v26.11.2. Details of colour and pattern in the description are based on appearance in ethanol. Spine notation formula is standard and follows Raven *et al.* (2023).



Figure 1. Live habitus of *Miturgopelma personatum* sp. nov. **A**, holotype male (SAM NN-33255), total length 7.9 mm; **B**, female (SAM NN-33257), total length 9.8 mm.

Taxonomy

Family Miturgidae Simon, 1886

Subfamily Miturginae Simon, 1886

Genus *Miturgopelma* Raven, 2023

Type species: *Miturgopelma alanyeni* Raven, 2023

Miturgopelma personatum sp. nov.

Figures 1A–B, 2A–E, 3A–B

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Holotype ♂, Australia, South Australia, Bakara Conservation Park, 34°28'38.7"S, 139°55'06.0"E, on sand dune, 14 July 2025, coll. Cael Gallery (SAM NN-33255).

Paratype ♀, same data as holotype (SAM NN-33256).

Other material examined: 1 ♀, same data as holotype (SAM NN-33257).

Diagnosis

Males of *Miturgopelma personatum* sp. nov. are most similar to those of *Miturgopelma echidna* Raven, 2023, from which they can be readily distinguished by the fewer, yet stronger spines on the dorsal pedipalp cymbium, and the more slender, gracile median apophysis with an elongated basal part, which constricts medially in *M. echidna* but not in *M. personatum* sp. nov. (Fig. 2A–C). Females with roughly rectangular epigyne, lateral ridges forming hourglass shape anteriorly (Fig. 3A).

Both sexes of *Miturgopelma personatum* sp. nov. can also be distinguished from all other known miturgids in aspects of the habitus, in the shape of the black 'sash' on the caput which is extensive and forms a 'mask', the centre of the carapace consists of numerous broken dark and pale lines in a circular or radiating pattern, and the abdomen consists of strongly contrasting transverse bars. (Fig. 1A–B, Fig. 2D).

Description

Male (based on holotype, SAM NN-33255); good condition, right leg IV missing and left leg IV amputated at tibia.

Medium-sized miturgid spider. Carapace 3.9 long, 2.9 wide. Abdomen 4.0 long, 2.5 wide.

Carapace: Yellowish-tan, clypeus, ocular area and most of caput covered in black 'sash' or mask, extending from chelicerae through ocular region, but with pale U-shaped cutout from posterior margin of posterior median eyes (PME) to prolateral margin of posterior lateral eyes (PLE) and small pale trianguloid patch on either side of the anterior lateral eyes (ALE). Margins of carapace with about 8 dark trianguloid markings. Fovea marked with a dark spot, with 2 large dark streaky markings and 2 narrow ones positioned anteriorly, 2 laterally

and 2 large dark spots overlaid with a white V-shaped marking at the posterior margin. Numerous short pale streaks interspersed between dark markings (Fig. 2D). Chelicerae dark.

Opisthosoma: Dorsally cream, marked with scattered dark freckles, laterally marked with strong black wavy streaks. A dark medio-dorsal stripe extends posteriorly from the anterior margin, with blotchy edges centrally and numerous black transverse bands extending out, which are angled towards the posterior. Intervening area between dark transverse stripes light yellowish anteriorly, becoming rich sandy-orange posteriorly. Short white chevrons overlay some dark transverse stripes posterior half (Fig. 2D). Venter entirely pale yellowish (Fig. 2E).

Legs: Long, concolorous with carapace, dorsal femora of all legs marked with faint dark annulations. Coxae with numerous small blunt spinules basally on ventral surface. Trochanters with notches about as long as wide. Maxillae mostly quadrate. Paired tarsal claws with 4–6 teeth. Spines: Leg I: fe p2d3r2, pa 0, ti p2v6, met v2r1; II: fe p3d3r2, pa 0, ti p2v6, met p1v2r1; III: fe p4d3r4, pa 0, ti p2v6d2r1, met p3v2d2r2.

Eyes: Subequal. Anterior eyes dark and arranged in a recurved row. Posterior eye row with grate-shaped tapetum, strongly recurved (Fig. 2E).

Genitalia: Cymbium of pedipalp with numerous strong spines dorsally (Fig. 2C). Median apophysis hook-shaped, with short unsclerotised basal lobe (Fig. 2A–B). Retrolateral tibial apophysis (RTA) with inner and outer lobes, with inner lobe slightly blunted apically (Fig. 2C).

Female (based on paratype, SAM NN-33256); good condition.

Carapace 3.9 long, 2.9 wide. Abdomen 5.9 long, 3.5 wide.

Carapace, eyes, legs, opisthosoma: Similar to male holotype in colouration.

Legs: Lacks spinules on ventral coxa.

Genitalia: Epigyne externally rectangular, anteriorly with hourglass shaped fossa (Fig. 3A). Internally with simple coiled insemination ducts connecting to two circular openings on lateral edges of fossa. Spermathecae circular (Fig. 3B).

Etymology

The species epithet is a Latin adjective in apposition, *personatus*, meaning "masked"; in reference to the striking colouration of this species, particularly the black colouration on the pars cephalica.

Remarks

Miturgopelma personatum sp. nov. is a member of the genus *Miturgopelma* based on the embolus originating

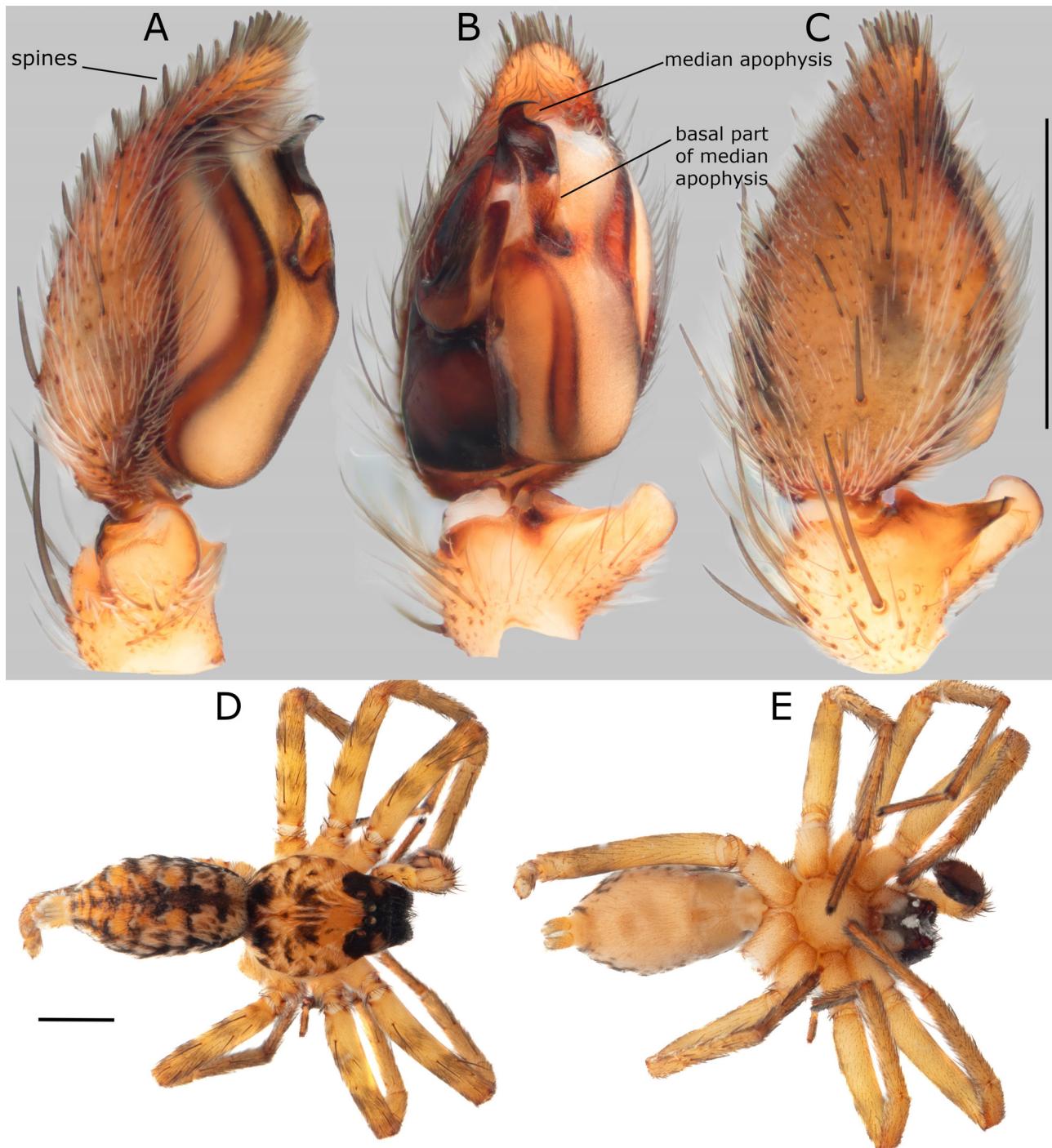


Figure 2. *Miturgopelma personatum* sp. nov., holotype male (SAM NN-33255). **A**, right pedipalp, retrolateral view; **B**, right pedipalp, ventral view; **C**, right pedipalp, retrolatero-dorsal view; **D**, dorsal habitus in ethanol; **E**, ventral habitus in ethanol. Scale bars: 1 mm (A-C), 2 mm (D-E).

prolaterally, rather than basally or retrolaterally as in other genera of the stripe-less group (Raven et al. 2023).

Miturgopelma personatum sp. nov. is known only from the type locality, Bakara Conservation Park. The habitat at this location is a mix of gently rolling sandhills covered with low mallee eucalypts and *Triodia* grass and low-lying mallee woodland on dense red loam. The species has been found only in sand dune habitat where they shelter deep inside *Triodia* tussocks. At this locality, *M. personatum* sp. nov. occurs sympatrically with many

other members of the stripe-less group, including *Miturgopelma echidna*, *M. buckaringa* Raven, 2023, *M. alanyeni*, *Knotodo narelleae* Raven, 2023 and *Xistera coventryi* Raven, 2023. It appears to be both the least common and most specialised species of the group.

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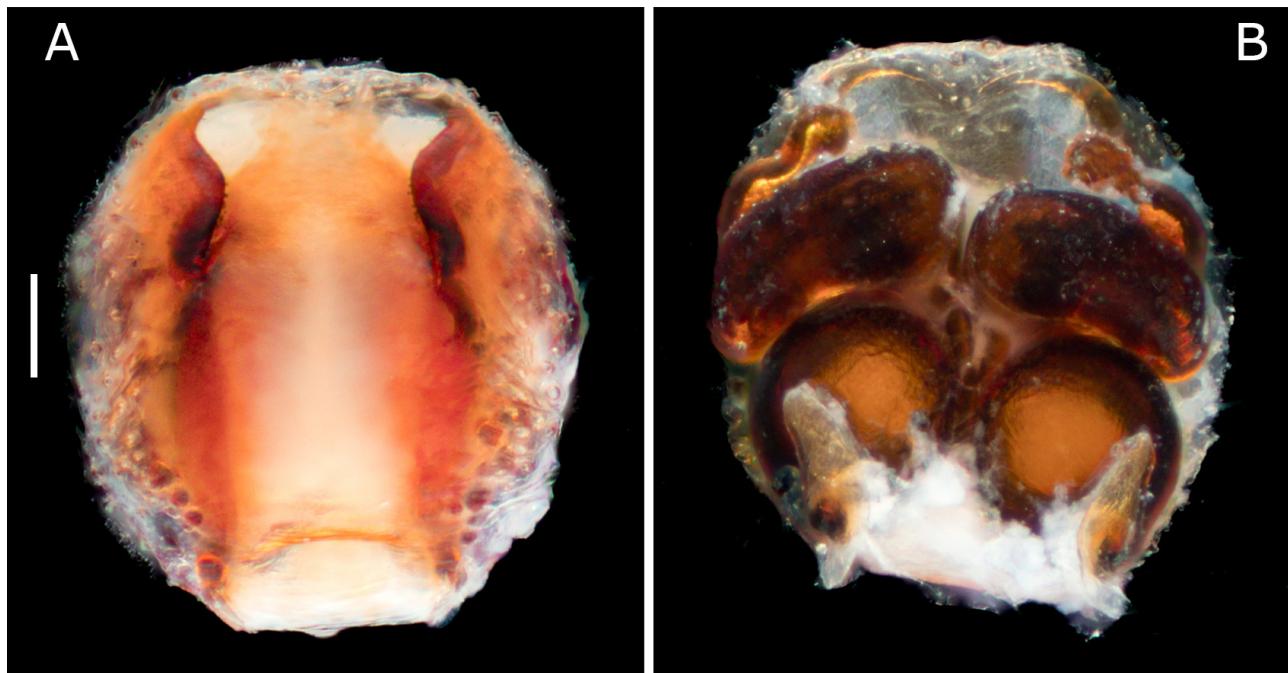


Figure 3. *Miturgopelma personatum* sp. nov., female paratype (SAM NN-33256). **A**, epigyne, ventral view; **B**, internal genitalia, dorsal view. Scale bar: 0.1 mm.

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References

Raven, R. J., Hebron, W. & Williams, K. (2023). Revisions of Australian ground-hunting spiders VI: five new stripeless miturgid genera and 48 new species (Miturgidae: Miturginae). *Zootaxa* 5358, 11–17. doi:10.11646/zootaxa.5358.1.1



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