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A remarkable rediscovery and range extension from Australia to South India with the description of two new species of the genus *Shortia* Gauld, 1984 (Hymenoptera: Ichneumonidae)

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Abstract. The monotypic banchine ichneumonid genus *Shortia* is rediscovered after 39 years, based on two new species from India, far away from the type locality in Australia: *S. karumban* Ranjith sp. nov. and *S. manjapulli* Ranjith sp. nov., collected from the Western Ghats, India. The generic concept of *Shortia* is revised. Both new species and the type species of the genus, *S. siccula* Gauld, 1984, are illustrated. A taxonomic key for the identification of species of *Shortia* is provided and the possible causes for the disjunct distribution are discussed.

Keywords. Distribution range extension, taxonomic key, Banchinae, Atrophini.

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Introduction

The Banchinae Wesmael, 1845 is one of the largest subfamilies of Darwin wasps (Ichneumonidae) with more than 1760 described species classified in 64 genera (Broad *et al.* 2018). The subfamily is divided into three tribes, Banchini Wesmael, 1845, Glyptini Cushman & Rohwer, 1920 and Atrophini Seyrig, 1932 (Gauld 1984a; Broad *et al.* 2018). Only 205 species of banchines in 20 genera are known from the Oriental region (Yu *et al.* 2016; Sheng *et al.* 2018; Watanabe & Sheng 2018; Riedel 2022) and among these, 15 genera and 82 species have been reported from India (Yu *et al.* 2016). Several banchine genera such as *Glypta* Gravenhorst, 1829 (454 spp.), *Lissonota* Gravenhorst, 1829 (410 spp.) and *Exetastes* Gravenhorst, 1829 (166 spp.) are large and have cosmopolitan distributions (Yu *et al.* 2016). The majority of the banchines can be easily identified by the dorsally notched ovipositor, often pectinate tarsal claws, absence of dorsal propodeal carinae and anteriorly expanded submetapleural carina (Broad *et al.* 2018). Additionally, the presence of a strong posterior transverse carina on the propodeum distinguishes most from the majority of other ichneumonids (Gauld 1984a). Banchines are endoparasitoids of lepidopteran larvae (Broad *et al.* 2018).

The genus *Shortia* Gauld, 1984 belongs to the tribe Atrophini and is distinct from all the other 41 atrophine genera by having a very short, upcurved, ovipositor that barely projects beyond the apex of the metasoma (Gauld 1984a). Furthermore, species of *Shortia* can be recognised by the apically truncated scape (forming an angle of 55–60°) and the presence of a weak hind wing vein Cu1 (Gauld 1984a). *Shortia siccula* Gauld, 1984, the only previously known species of *Shortia*, is endemic to Australia based on the published record, although Gauld (1984a) noted the presence of one additional, undescribed species from New Guinea. The genus was confirmed to be endemic to the Australian region. While the biology remains unknown, the short ovipositor suggests a potential association with exposed lepidopteran caterpillars.

Since its discovery in 1984 in the Australian Capital Territory, no new information about *Shortia* has become available until now. Here, we report a remarkable range extension of this genus to the Oriental region, specifically to the Western Ghats of south India, with the description of two new species, *S. karumban* Ranjith sp. nov. and *S. manjapulli* Ranjith sp. nov. The generic diagnosis of *Shortia* has been revised based on the characters present in the new species, and an illustrated taxonomic key is given to all known species.

Material and methods

Specimens were collected by sweeping the understorey of primary forests of Kozhippara, Kerala and Malaise traps placed at ground level in a primary forest in Kalakad Mundanthurai Tiger Reserve (KMTR), Tamil Nadu. These locations are situated on the western and eastern sides of the Southern Western Ghats, respectively. Alcohol preserved specimens were later card mounted. Images were taken with Keyence VHX-6000 digital microscope. Type specimens are deposited in the ATREE Insect Museum (AIMB), Bengaluru, India. Holotype images of *Shortia siccula* Gauld, 1984 are copyright of the Australian National Insect Collection (ANIC), Commonwealth Scientific and Industrial Research Organization (CSIRO).

Abbreviations for morphological terms

Morphological terminology and wing venation follows Broad *et al.* (2018). For cuticular sculpture we follow Eady (1968).

OD = diameter of posterior ocellus
OOL = minimum distance between posterior ocellus and eye
POL = minimum distance between posterior ocelli.

Results

Taxonomic

Class Insecta Linnaeus, 1758
Order Hymenoptera Linnaeus, 1758
Superfamily Ichneumonoidea Latreille, 1802
Family Ichneumonidae Latreille, 1802
Subfamily Banchinae Wesmael, 1845

Genus ***Shortia*** Gauld, 1984

Shortia Gauld 1984a: 247–248.

Type species

Shortia siccula Gauld, 1984.

Diagnosis

Head slightly wider than long in anterior view (Figs 1B, 3B, 6B). Antenna with more than 30 flagellomeres, flagellomeres unicolourous (Figs 1A, 3A, 6A). Face medially convex (Figs 1B, 3B, 6B). Frons flat (Fig. 1C) or depressed (Figs 3C, 6D). Clypeus small, convex (Figs 1B, 3B, 6B). Temple short (Figs 1D, 3E). Mandible bidentate, upper tooth longer than lower tooth (Figs 3D, 6C). Subocular sulcus indistinct (Figs 1B, 3B, D, 6B–C). Occipital carina complete (Figs 1C, 3C). Genal carina complete (Figs 1C, 3C, 6D), joining hypostomal carina above base of mandible (Fig. 3E). Pronotum with transverse sulcus dorsally (Figs 1C, F, 3C). Epomia absent (Figs 1D–E, 3F, 6E). Notauli absent (Figs 1F, 4A, 6F). Scuto-scutellar groove smooth without crenulations (Figs 1F, 4A, 6F). Scutellum with lateral carina restricted basally (Figs 1F, 4A, 6F). Epicnemial carina straight laterally (Figs 1E, 3F, 6E). Speculum smooth (Figs 1E, 3F, 6E). Propodeum with posterior transverse carina (Figs 2A, 4B, 7A). Pleural carina present (Figs 3F, 6E, 7A), rarely interrupted medially (Fig. 1E). Fore wing without areolet (Figs 2E, 5A). Fore wing vein 1cu-a postfurcal (Figs 2E, 5A). Tarsal claw pectinate basally (Fig. 5B). First metasomal tergite without latero-median carina (Figs 2C, 4D, 7B). Spiracle on first tergite situated basal ⅓ (Figs 2B, 4C, 7C). Tergites 2–4 convex (Figs 1A, 2B, 3A, 4C, 6A, 7C). Ovipositor barely projecting beyond apex of metasoma with a dorsal notch subapically (Figs 1A, 2B, 3A, 4C, 5C, 6A, 7C).

Distribution

Australasian and Oriental region (present study).

Host

Unknown.

Key to the species of *Shortia* Gauld, 1984

1. Mesopleuron largely black (Fig. 1E); pleural carina interrupted medially (Fig. 1E); mesoscutum with a pair of yellow marks medially (Fig. 1F); mesopleuron coarsely punctate (Fig. 1E); first metasomal tergite with a transverse black band subapically (Fig. 2C); POL 2.0 × as long as OOL; pronotum granulate laterally (Fig. 1D–E) ....***Shortia karumban*** Ranjith sp. nov.
– Mesopleuron largely reddish (Figs 3A, F, 6A, E); pleural carina complete without interruptions (Figs 3F, 6E, 7A); mesoscutum without yellow marks medially (Figs 4A, 6F); mesopleuron minutely punctate (Figs 3F, 6E); first metasomal tergite without transverse black band subapically (Figs 4D, 7B); POL less than 2.0 × as long as OOL; pronotum with longitudinal wrinkles laterally (Figs 3E–F, 6E) 2

2. Dorsal head with a pair of yellow spots (Fig. 6D, F); scutellum black, punctate (Fig. 6F); second metasomal tergite with black transverse band occupied basal ⅔ of the tergite (Fig. 7B); pterostigma blackish brown (Fig. 6A) ....***Shortia siccula*** Gauld, 1984
– Head with two pairs of yellow spots dorsally (Fig. 3C); scutellum reddish, coriaceous (Fig. 4A); second metasomal tergite with black transverse band occupying medial ⅓ of the tergite (Fig. 4D); pterostigma yellowish brown (Fig. 5A ....***Shortia manjapulli*** Ranjith sp. nov.

Shortia karumban Ranjith sp. nov.
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Figs 1–2

Differential diagnosis

Among the three species of *Shortia*, *S. karumban* Ranjith sp. nov. appears closer to *S. manjapulli* Ranjith sp. nov. by its general body colouration. However, the new species differs from the latter by the following characters: antenna with 33 flagellomeres (36 in *S. manjapulli*), head 2.5 × as wide as long in dorsal view (1.8 × in *S. manjapulli*), transverse diameter of eye 4.2 × as long as temple (4.9 × in *S. manjapulli*) and pterostigma 3.5 × as long as wide (4.8 × in *S. manjapulli*).

Etymology

The species name '*karumban*' means 'one with a black coloured body' in the Malayalam language, denoting the black colouration of the scutellum and mesopleuron of the new species. Malayalam is the vernacular language of Kerala State of India, located on the western side of the Western Ghats, from where this species was collected, noun in apposition.

Material examined

Holotype

INDIA • ♀; Kerala, Kozhikode, Kozhipara; 11°33′62″ N, 76°11′02″ E; 27 Jan. 2018; A.P. Ranjith leg.; sweep net; AIMB.

Description

Female (holotype)

Measurements. Length of body 5.2 mm, fore wing 3.5 mm.

Head. 1.1 × as wide as high in anterior view (Fig. 1B), 2.5 × as wide as high in dorsal view (Fig. 1C). Eyes glabrous (Fig. 1A–D), almost parallel sided at level of antennal socket (Fig. 1B). Face 1.6 × as wide as high, coriaceous, setose (Fig. 1B), convex medially in lateral view (Fig. 1D). Clypeus 1.9 × as wide as high, coriaceous, sparsely setose, lower margin distinctly convex (Fig. 1B). Subocular sulcus indistinct (Fig. 1B, D). Malar space 1.4 × as long as basal width of mandible. Mandible bidentate, upper tooth longer than lower tooth. Transverse diameter of eye 4.2 × as long as temple (Fig. 1C). Frons flat, coriaceous, sparsely setose (Fig. 1C). Ocellar area slightly elevated (Fig. 1C). Vertex and occiput coriaceous, setose (Fig. 1C). Occipital carina complete medio-dorsally (Fig. 1C). Ratio of OOL: OD: POL = 1.1: 1.0: 1.4. Antenna with 33 flagellomeres, first flagellomere 8.0 × as long as wide and 1.5 × as long as second, second flagellomere 4.7× as long as wide.

Mesosoma. 1.5 × as long as high. Pronotum coriaceous, punctate anteriorly with a transverse sulcus dorsally with transverse rugae posteriorly (Fig. 1D–E). Epomia absent (Fig. 1D–E). Mesoscutum moderately convex, bordered by lateral carina, punctate, setose, interspace between punctures coriaceous (Fig. 1F). Scuto-scutellar groove shallowly impressed, smooth without crenulations (Fig. 1F). Scutellum punctate, coriaceous medially with lateral carina on its anterior ¼, sparsely setose (Fig. 1F). Epicnemial carina straight (Fig. 1E). Mesopleuron punctate, interspace coriaceous (Fig. 1E). Speculum smooth anteriorly (Fig. 1E). Metapleuron coarsely punctate, juxtacoxal carina complete, strongly broadened anteriorly and forming a lobe, pleural carina present, interrupted medially (Fig. 1E). Propodeum punctate, setose with coriaceous area antero-medially, medially and postero-medially, posterior transverse carina complete, spiracles round (Fig. 2A).

Wings. Fore wing 3.2 × as long as wide (Fig. 2E). Pterostigma 3.5 × as long as wide. Vein 1cu-a postfurcal (Fig. 2E). Vein 2rs-m slightly longer than M between 2rs-m and 2m-cu (Fig. 2E). Hind wing vein CU+cu-a curved to the wing base, without vein CU. Vein RA with 4 distal hamuli.

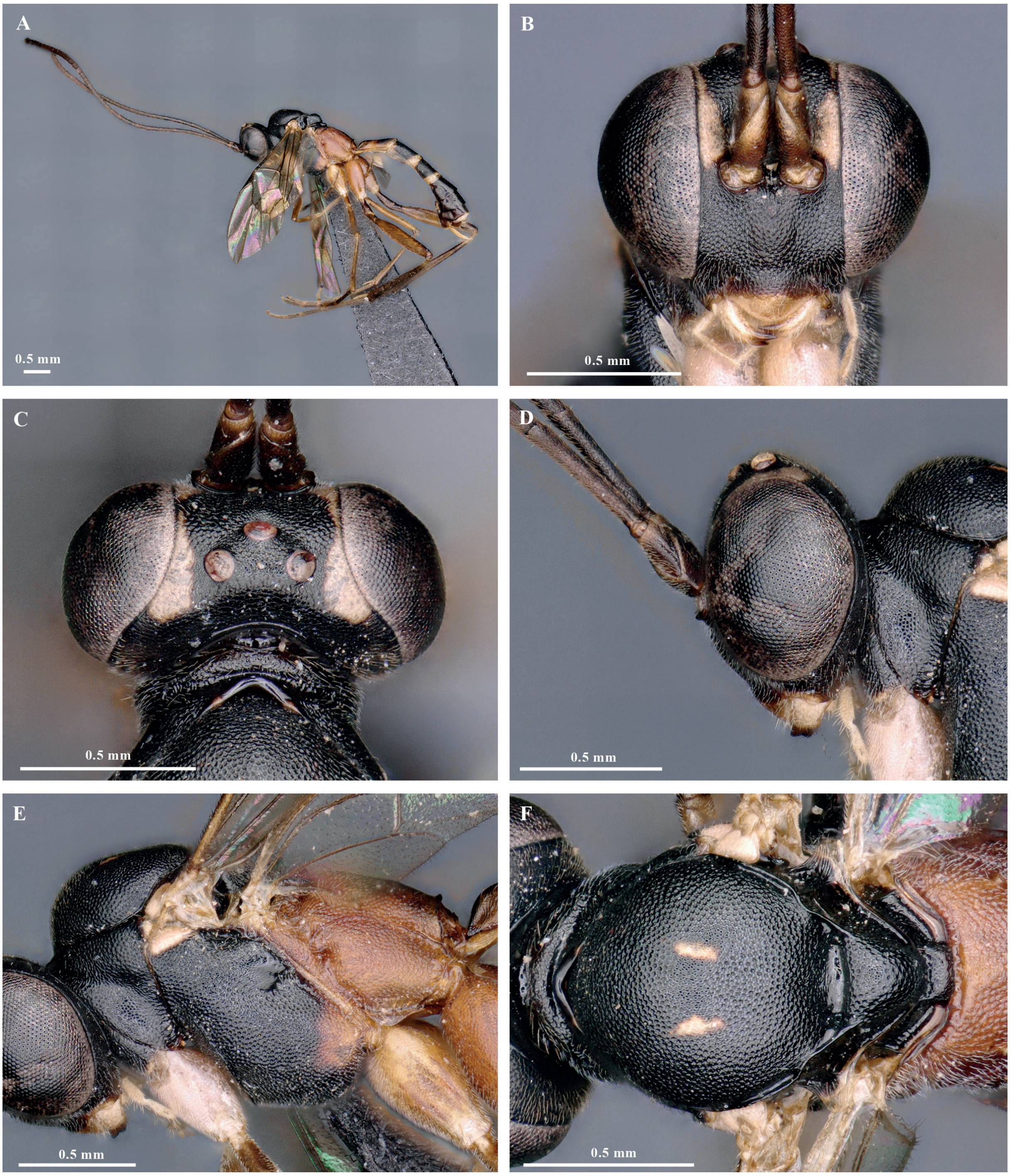

Fig. 1. *Shortia karumban* Ranjith sp. nov., holotype, ♀ (AIMB). **A**. Habitus, lateral view. **B**. Head, anterior view. **C**. Head, dorsal view. **D**. Head, lateral view. **E**. Mesosoma, lateral view. **F**. Mesosoma, dorsal view.

Legs. Fore femur 6.3 × as long as wide. Fore tibia 7.2 × as long as wide. Fore tarsus 1.6 × as long as fore tibia. Hind coxa punctate (Fig. 2B). Hind femur 5.8 × as long as wide and 0.8 × as long as hind tibia. Hind tibia 10.0 × as long as wide. Hind basitarsus 10.3 × as long as wide. Second hind tarsomere 5.8 × as long as wide. Hind tarsus shorter than tibia (Fig. 1A). Tarsal claws pectinate basally.

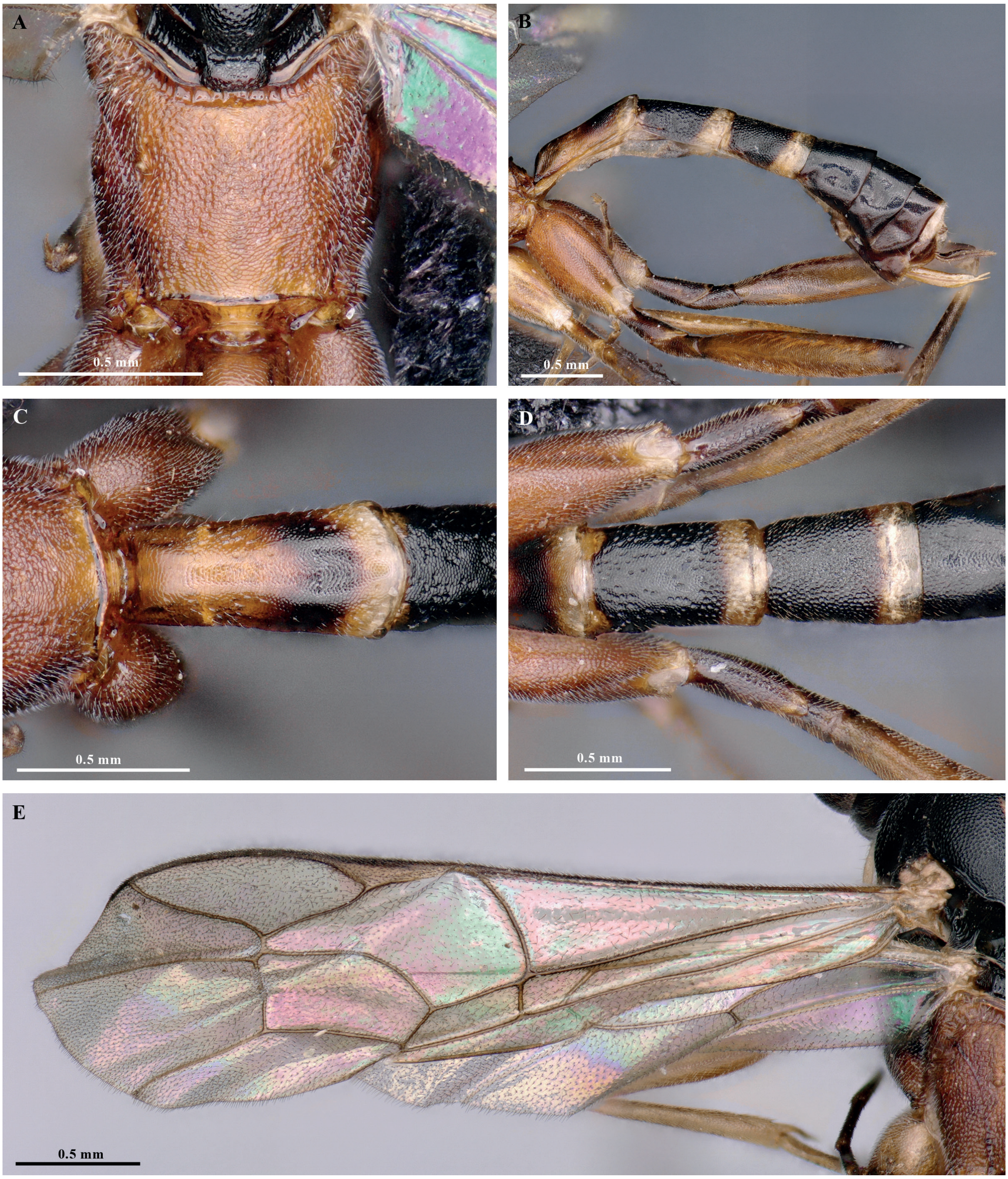

Fig. 2. *Shortia karumban* Ranjith sp. nov., holotype, ♀ (AIMB). **A**. Propodeum, dorsal view. **B**. Metasoma, lateral view. **C**. First metasomal tergite, dorsal view. **D**. Metasomal tergite 2–3, dorsal view. **E**. Fore wing.

Metasoma. Metasomal tergites coriaceous to punctate (Figs 1A, 2B–D). T1 2.0 × as long as maximum width, coriaceous, sparsely setose laterally, 1.4 × as long as T2 (Fig. 2C), spiracle situated at anterior ⅓ (Fig. 2B). T2 1.7 × as long as maximum width, punctate laterally and posteriorly, rest coriaceous, sparsely setose (Fig. 2D). T3 1.2 × as long as maximum width, coarsely punctate, sparsely setose (Fig. 2D). T4–6 coriaceous, sparsely setose (Fig. 2B). Ovipositor sheath 0.3 × as long as hind tibia. Ovipositor stout with dorsal notch subapically (Fig. 2B).

Colour. Body black except clypeus apical half, mandible except apically, maxillary and labial palps, scape ventrally, frons and vertex laterally, ocelli, pair of spots medially on mesoscutum, tegula, fore coxa, mid coxa basally and apically, T1–3 posteriorly, T7 and ovipositor yellow, fore leg except coxa, mesopleuron posteriorly, propodeum, metapleuron, mid leg except coxa, mid coxa medially, hind coxa, hind tibia, T1 basal ½ reddish brown, antenna, hind trochanter, hind tibia, hypopygium brown.

Male

Unknown.

Biology

Unknown.

Distribution

India (Kerala).

Shortia manjapulli Ranjith sp. nov.

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Figs 3–5

Differential diagnosis

The new species, *S. manjapulli* Ranjith sp. nov. is close to *S. siccula* by a reddish mesopleuron, pleural carina complete without interruptions, mesoscutum without yellow marks medially. But it differs from *S. siccula* in having the following differences: antenna with 36 flagellomeres (33 in *S. siccula*), upper tooth of mandible 1.3 × as long as lower tooth (1.6 × in *S. siccula*), POL 1.6 × OOL (1.3 in *S. siccula*), pterostigma 4.8 × as long as wide (3.4 × in *S. siccula*) and face 1.4 × as wide as long (1.8 × in *S. siccula*).

Etymology

The species name '*manjapulli*' means 'yellow spots' in the Tamil language due to the presence of four isolated yellow spots on the dorsal side of the head. Tamil is the vernacular language of Tamil Nadu State of India, located on the eastern side of the Western Ghats, where the type locality is situated, noun in apposition.

Material examined

Holotype

INDIA • ♀; Tamil Nadu, Kalakad Mundanthurai Tiger Reserve (KMTR); 5 Oct. 2008; D.R. Priyadarsanan leg.; primary forest; understorey, Malaise Trap; AIMB.

Description

Female (holotype)

Measurements. Length of body 7.3 mm, fore wing 5.2 mm.

Head. 1.2 × as wide as high in anterior view (Fig. 3B), 1.8 × as wide as high in dorsal view (Fig. 3C). Eyes glabrous (Fig. 3A–E), almost parallel sided at level of antennal socket (Fig. 3B). Face 1.4 × as wide as high, coriaceous, setose, convex medially in lateral view with short longitudinal sulcus antero-medially (Fig. 3B). Clypeus 1.8 × as wide as high, coriaceous, sparsely setose, lower margin distinctly convex (Fig. 3B). Subocular sulcus indistinct (Fig. 3B, D–E). Malar space as long as basal width of mandible.

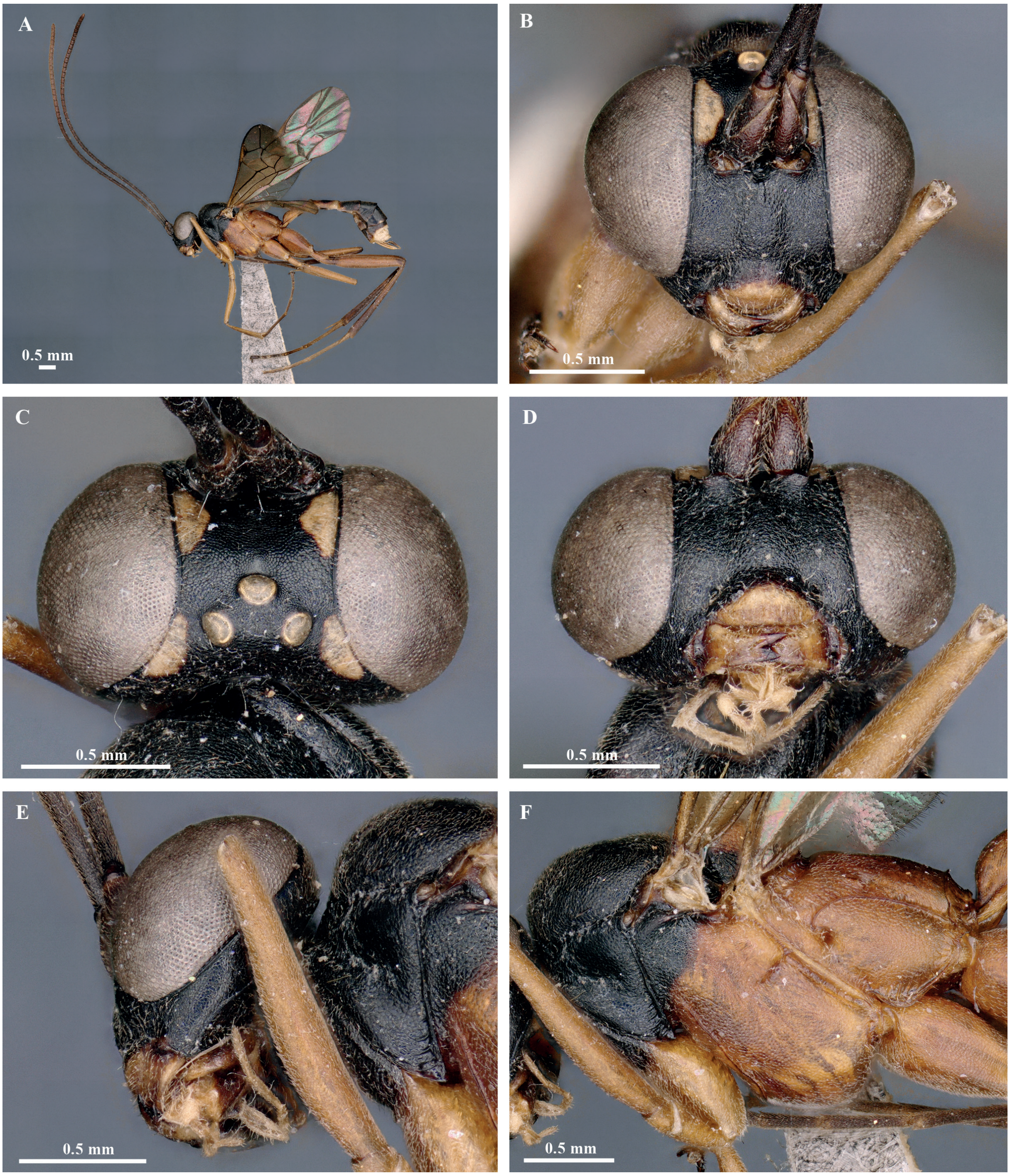

Fig. 3. *Shortia manjapulli* Ranjith sp. nov. , holotype, ♀ (AIMB). **A**. Habitus, lateral view. **B**. Head, anterior view. **C**. Head, dorsal view. **D**. Head, ventral view. **E**. Head, oblique view. **F**. Mesosoma, lateral view.

Mandible bidentate, upper tooth longer than lower tooth (Fig. 3D). Transverse diameter of eye 4.9 × as long as temple (Fig. 3C). Frons slightly depressed, coriaceous, sparsely setose (Fig. 3C). Ocellar area slightly elevated (Fig. 3C). Vertex and occiput coriaceous, setose (Fig. 3C). Occipital carina complete medio-dorsally (Fig. 3C). Ratio of OOL: OD: POL = 1.0: 1.2: 1.6. Antenna with 36 flagellomeres. First flagellomere 6.4 × as long as wide and 1.5 × as long as second one. Second flagellomere 4.7 × as long as wide.

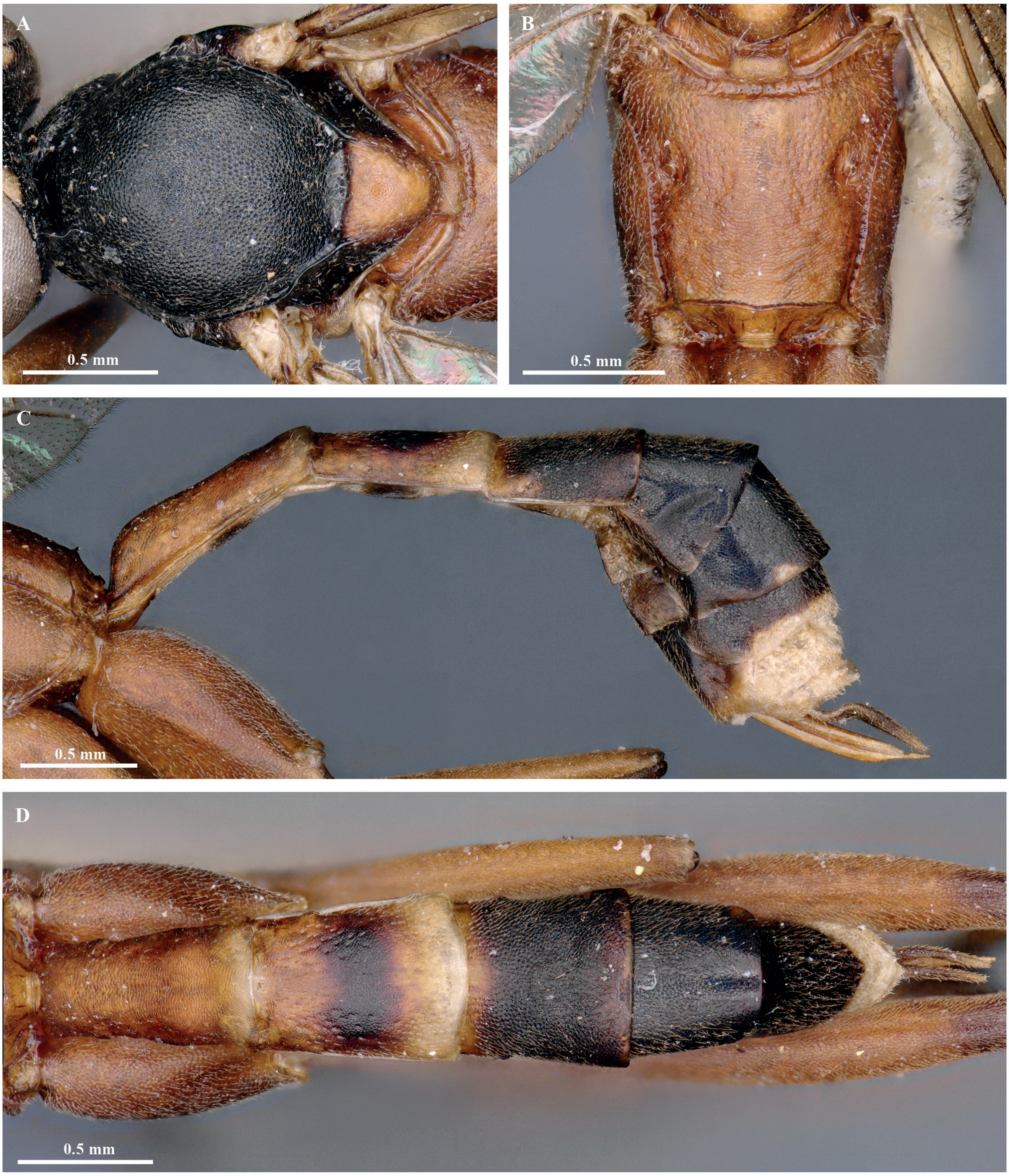

Fig. 4. *Shortia manjapulli* Ranjith sp. nov., holotype, ♀ (AIMB). **A**. Mesosoma, dorsal view. **B**. Propodeum, dorsal view. **C**. Metasoma, lateral view. **D**. Metasoma, dorsal view.

Mesosoma. 1.6 × as long as high. Pronotum coriaceous, punctate anteriorly with a transverse sulcus dorsally with transverse rugae posteriorly (Fig. 3E–F). Epomia absent (Fig. 3E–F). Mesoscutum moderately convex, bordered by lateral carina, punctate, setose, interspace between puncture coriaceous (Fig. 4A). Scuto-scutellar groove shallowly impressed, smooth without crenulations (Fig. 4A). Scutellum mostly coriaceous medially with lateral carina on its anterior ¼, sparsely setose (Fig. 4A). Epicnemial carina straight (Fig. 3F). Mesopleuron coriaceous anteriorly, punctate medially, interspace coriaceous (Fig. 3F). Speculum smooth anteriorly (Fig. 3F). Metapleuron coriaceous, juxtacoxal carina complete, strongly broadened anteriorly and forming a lobe, pleural carina present, complete without interruptions (Fig. 3F). Propodeum mostly coriaceous, setose punctate laterally, posterior transverse carina complete, spiracles round (Fig. 4B).

Fig. 5. *Shortia manjapulli* Ranjith sp. nov., holotype, ♀ (AIMB). **A**. Wings. **B**. Tarsal claw. **C**. Apex of metasoma, lateral view.

Wings. Fore wing 3.3 × as long as wide. Pterostigma 4.8 × as long as wide. Vein 1cu-a postfurcal (Fig. 5A). Vein 2rs-m shorter than M between 2rs-m and 2m-cu (Fig. 5A). Hind wing vein CU+cu-a curved to the wing base, without vein CU (Fig. 5A). Vein RA with 4 distal hamuli.

Legs. Fore femur 4.9 × as long as wide. Fore tibia 8.2 × as long as wide. Fore tarsus 2.1 × as long as fore tibia. Hind coxa mostly coriaceous (Fig. 4C–D). Hind femur 5.7 × as long as wide and 0.7 × as long as hind tibia. Hind tibia 11.0 × as long as wide. Hind basitarsus 12.5 × as long as wide. Second hind tarsomere 6.1 × as long as wide. Hind tarsus shorter than tibia (Fig. 3A). Tarsal claws pectinate basally (Fig. 5B).

Metasoma. Metasomal tergites coriaceous to punctate (Figs 4C–D, 5C). T1 2.1 × as long as maximum width, coriaceous, punctate laterally, sparsely setose laterally (Fig. 4D), 1.4 × as long as T2, spiracle situated at anterior ⅓ (Fig. 4C). T2 1.7 × as long as maximum width, punctate laterally and posteriorly, rest coriaceous, sparsely setose (Fig. 4D). T3 0.9 × as long as maximum width, minutely punctate, sparsely setose (Fig. 4D). T4–6 coriaceous, sparsely setose (Fig. 4D). Ovipositor sheath 0.3 × as long as hind tibia. Ovipositor stout with dorsal notch subapically (Fig. 5C).

Colour. Body reddish except head except yellow spots dorsally, pronotum, mesoscutum, lateral lobes of scutellum, mesopleuron anteriorly, second metasomal tergite medially, third metasomal tergite except basally and apically, fourth metasomal tergite, fifth metasomal tergite except lateral yellow spots, sixth metasomal tergite except apically black, ocelli, lateral spots on frons and vertex, maxillary and labial palps, first metasomal tergite apically, second metasomal tergite apically, postero-lateral spots on fifth metasomal tergite, sixth metasomal tergite apically, apical metasomal tergites yellow.

Male

Unknown.

Biology

Unknown.

Distribution

India (Tamil Nadu).

Shortia siccula Gauld, 1984
Figs 6–7

Shortia siccula — Gauld 1984: 248.

Diagnosis

Female

Antenna with 33 flagellomeres (Fig. 6A). Head slightly wider than high (Fig. 6B). Lower margin of clypeus distinctly convex (Fig. 6C). Frons punctate laterally (Fig. 6D). Vertex minutely punctate with a pair of lateral yellow spots (Fig. 6D). Pronotum with crenulate groove laterally (Fig. 6E). Mesoscutum punctate (Fig. 6F). Scuto-scutellar groove smooth, without crenulations (Fig. 6F). Scutellum punctate (Fig. 6F). Epicnemial carina wavy (Fig. 6E). Mesopleuron minutely punctate (Fig. 6E). Speculum smooth (Fig. 6E). Metapleuron minutely punctate (Fig. 6E). Pleural carina complete without interruptions (Figs 6E, 7A). Propodeum coriaceous punctate (Fig. 7A). T1 punctate postero-laterally, mostly unicolourous (Fig. 7A–C). T2 with black transverse band occupying basal ⅔ of the tergite (Fig. 7B). T3 minutely punctate (Fig. 7C). T4–6 coriaceous (Fig. 7B–C).

Male

Same as female.

Biology

Unknown.

Distribution

Australia.

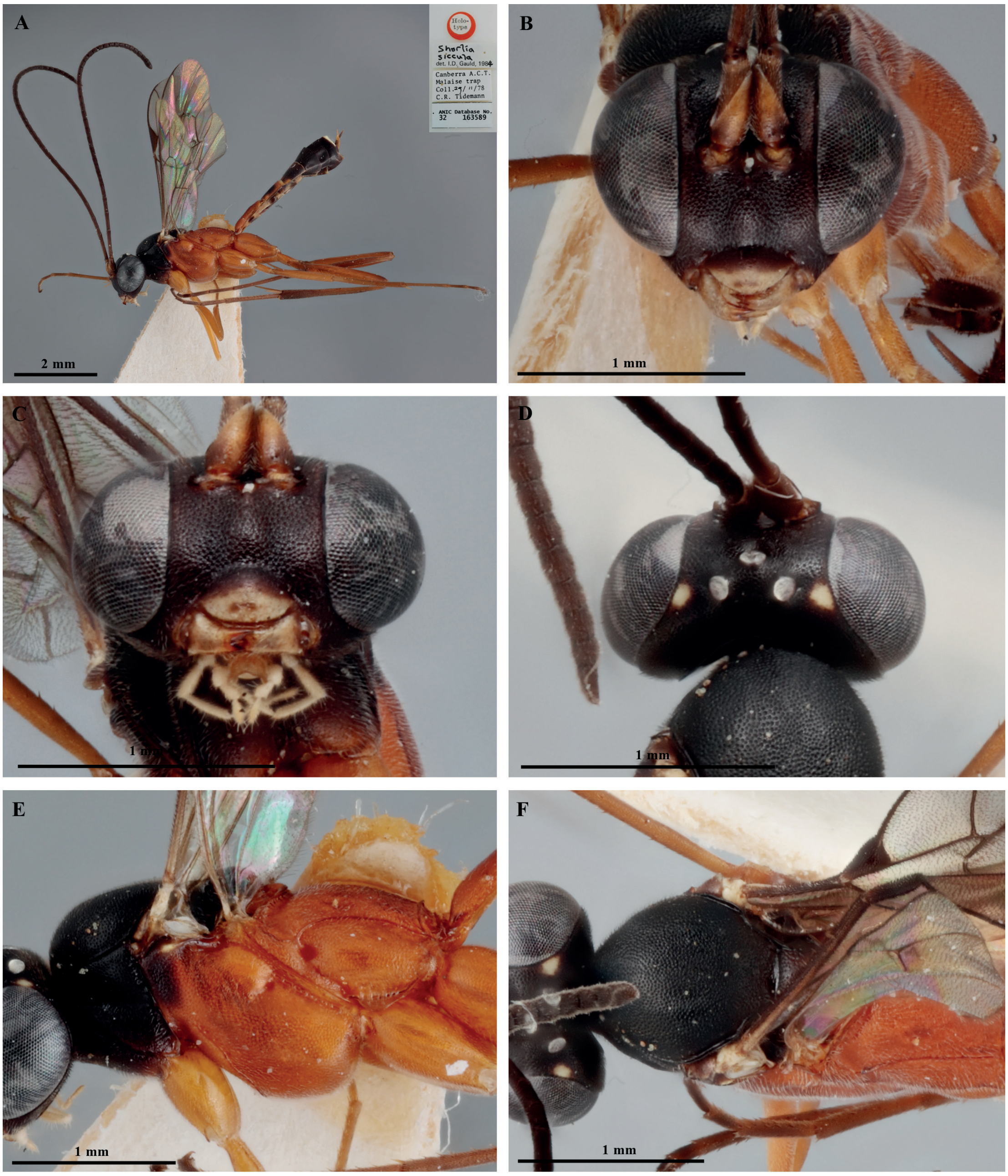

Fig. 6. *Shortia siccula* Gauld, holotype, ♀ (ANIC database no. 32 163589). **A**. Habitus, lateral view. **B**. Head, antero-dorsal view. **C**. Head, ventral view. **D**. Head, dorsal view. **E**. Mesosoma, lateral view. **F**. Mesosoma, dorsal view.

Discussion

The present study reveals a remarkable range extension of the genus *Shortia*, with its discovery in the Western Ghats, one of the biodiversity hotspots of India (Myers *et al.* 2000). The lack of information about the existence of this genus since its discovery in 1984 has led to the assumption that this genus could be an endemic to Australian region or even extinct (Gauld 1984a). However, many recent studies indicate that many genera in parasitic Hymenoptera Linnaeus, 1758 show a similar disjunctive distribution across Oriental and Australian regions. This pattern is evident in the chalcidoid family Pteromalidae (Binoy & Sureshan 2019), where the distribution of species of *Neapterolelaps* Girault, 1913 and *Thaumasura* Westwood, 1868 has extended from Australia to India. The disjunct distribution of ichneumonid wasps is known in the subfamilies of Ophioninae Shuckard, 1840 and Xoridinae Shuckard, 1840 (Gauld 1984b; Varga *et al.* 2014). Additionally, recent studies have reported on similar extended distributions, as seen in the chelonine genus *Wushenia* Zettel, 1990 (family Braconidae), which was originally described from Taiwan, but has now been reported from the Australian region (Kittel & Austin 2013). This disjunctive distribution could be genuine but it might also be that they actually occur in between but have simply not yet been recorded as there is no evidence on the faunal relationship between Australian and India at least for the ichneumonid subfamily Ophioninae rather than sharing widespread taxa (Gauld 1984b). In addition to this, the apparent distribution gap of parasitoids between Australia and India may be a result of insufficient exploration and the parasitoid wasps of South East Asia being exceedingly poorly known (Gauld 1984b; Butcher & Quicke 2023). Extended distributions of several parasitic hymenopteran groups like Chalcididae Latreille, 1817 between Oriental and Afrotropical regions has also been described recently (Ranjith *et al.* 2022).

Fig. 7. *Shortia siccula* Gauld, holotype, ♀ (ANIC database no. 32 163589). **A**. Propodeum, dorsal view. **B**. Metasoma, dorsal view. **C**. Metasoma, lateral view.

An interesting point to note is that, unlike the distribution pattern between Oriental and Afrotropical regions, which are connected by a geographical bridge through the Arabian Peninsula (Ranjith *et al.* 2022), the main landmasses between south India and Australia have not been connected in the recent geographic history, with Wallace's line marking a very well-defined faunal boundary. The possibility that *Shortia* in Australia was accidentally introduced cannot be ruled out but it seems highly unlikely given that the host is probably an exposed lepidopteran and there have long been rather stringent quarantine controls. Although the biology of *Shortia* is not yet fully known, based on their short ovipositor, it can be assumed that the possible host groups include exposed lepidopteran caterpillars and not wood boring beetles. This assumption is further supported by the fact that the known host association of banchines are only with lepidopteran caterpillars (Broad *et al.* 2018). Hence, we can safely exclude the chance of introduction of parasitoids of wood boring insects through timber import. It is also hypothesised that there could be a minimum difference between the possible hosts of species of *Shortia* distributed in Australian and Oriental regions. This is supported by the fact that there are a few morphological differences between the three species of *Shortia,* which points to a narrow host spectrum of the genus. Accidental introduction in the other direction also seems unlikely as the Indian fauna includes two separate species. This distribution extension could be due to the presence of shared floral distribution on which hosts of *Shortia* feed between Peninsular India and Australia (Mani 1974). Altogether the possible explanation for the range extension is more related with the food web systems (hosts of *Shortia* and their host food plants) rather than anthropogenic activities between Peninsular India and Australia.

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