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continued on the back inside cover

Cover: Whale Shark *Rhincodon typus* and Reef - made with poster colours. © P. Kritika.



(8.9336N & 77.1922E) of the Shendurney Wildlife Sanctuary (Image 1). The 'Ants of Leaf Litter' (ALL) protocol (Agosti et al. 2000) was used for ant collections. These particular ant samples were collected using handpicking. The current specimens were found under a small rock in an evergreen forest region of the Rosemala region. A whole colony was found under the rock, & the workers, male & alate queen, were collected. The specimens were preserved in 70% ethanol. Identifications were done under a stereomicroscope (Labomed Luxeo 6z). The taxonomic key by Bolton (1994) was used for the identification of the genus. The species was identified using the key by LaPolla (2004). Leica S8AP0 microscope with Leica DFC 295 camera was used to capture images, and measurements were done using the Leica v4.2 software. Soil samples were collected from the site and analysed in the laboratory. The soil pH was analysed using a soil pH meter and soil organic carbon was measured using Walkley & Black method (Page et al. 1982). The soil moisture was measured using the gravimetric method (Kadam & Shinde 2005). The specimens were deposited in the zoological museum at the Department of Zoology, University of Kerala Campus, Kariavattom, Kerala, India.

Measurements

HL: Head Length. Length of the head in full-face view when measured as a straight line from the midpoint of the anterior clypeal margin and to the midpoint of the posterior margin. This excludes the clypeus.

HW: Head width. The maximum width of the head in full-face view.

EL: Eye length. The maximum length of the eye when in the same view as HL.

ML: Mesosomal length. Length of the mesosoma in side view from the posteroventral corner of mesosoma to the farthest point on the anterior face of pronotum, excluding the neck.

GL: Gaster Length. The length of the gaster in lateral view from the anterior point of the first gastral tergite to the posterior-most point of the last gastral tergite, excluding the sting.

SL: Scape Length. Length of the scape in a straight line excluding the basal constriction of the neck close to the condylar bulb.

PTL: Petiole length. Length of the petiole from dorsal view.

PTH: Petiole Height. Height of the petiole in lateral view.

PTW: Petiole Width. Width of the petiole in dorsal view.

TL: Total Length. HL+ML+PTL+GL

OI: Ocular Index. (EL/HW) x 100

CI: Cephalic Index. (HW/HL) x 100

SI: Scape Index. (SL/HW) x 100

DPI: Dorsal Petiole Index. (PTW/PTL) x 100

LPI: Lateral Petiole Index. (PTH/PTL) x 100

RESULTS

Acropyga acutiventris Roger, 1862

Acropyga acutiventris Roger, 1862 Sri Lanka, Indomalaya

Status as species: Mayr, 1862: 769

Material examined: Worker (n = 10): KUDZEN2021.X.12.a, Male (n = 1): KUDZEN2021.X.12.b, Queen (n = 1): KUDZEN2021.X.12.c Rosemala, Shendurney Wildlife Sanctuary, Kollam, Kerala, India. 27 July 2021 at 8.9336N & 77.1922E elevation 340 m, coll. Merin Elizabeth George, handpicking, under a stone in a leaf litter near a small stream in a primary evergreen forest. This is a typical specimen of the species (species typica). Specimen deposited at the reference section of the museum at the Department of Zoology, University of Kerala, Kariavattom, Thiruvananthapuram, Kerala, India.

Worker: Worker Morphometrics (in millimeters): HL: 0.83, HW: 0.987, SL: 0.81, ML: 1.024, GL: 1.50, EL: 0.125, PTL: 0.275, PTW: 0.27, PTH: 0.393, TL: 3.63, OI: 12.6, CI: 118.9, SI: 82, DPI: 98.1, LPI: 142.

Worker description: Head: Dull yellow colour, head slightly longer than broad and rectangular. Posterior margin of the head emarginated. Scape with dense pubescence. Teeth five, mandibles striate from base to the articulation point. Eyes small. Anterior margin of the mandible lined with long hairs. Head as long as wide. Antennae 11 segmented. Eyes placed at the lower half of the head (Image 1).

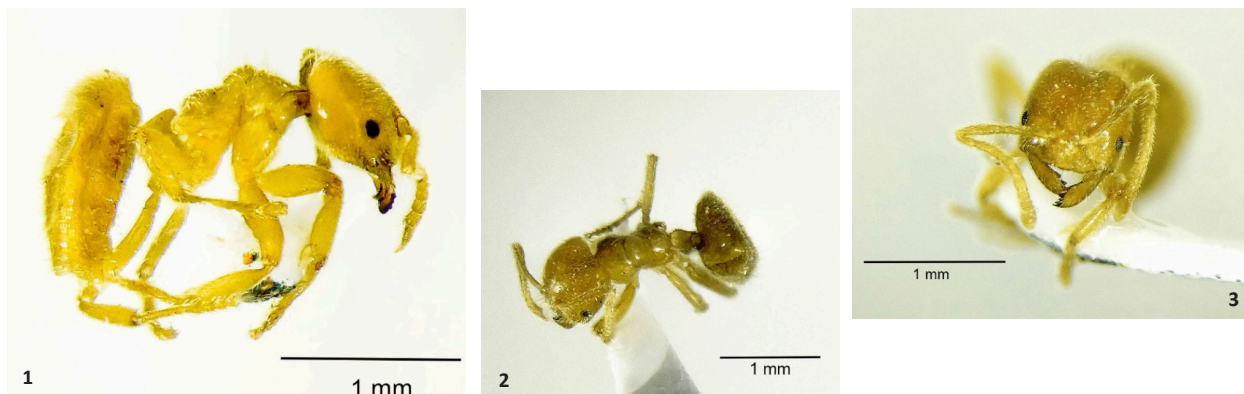
Mesosoma: Smooth and shiny, long erect setae present on alitrunk except propodeum. Propodeum with small recumbent hairs. Mesonotum raised and convex above pronotum when compared to pronotum when viewed in lateral angle (Image 2–3).

Petiole: Dull yellow, thick and erect with short erect hairs. Height about same as propodeum.

Gaster: Five gastral segments present, Smooth and shiny with both long erect hairs and short recumbent hairs.

Male

Male Morphometrics (in millimeters): HL: 0.599, HW: 0.635, EL: 0.423, SL: 0.866, ML: 1.428, PTL: 0.135, PTH: 0.38, PTW: 0.12, GL: 1.458, TL: 3.62, OI: 66.61, CI: 106, SI: 136, DPI: 88.8, LPI: 281



Images 1–3. *Acropyga acutiventris* worker: 1—Lateral view of the body | 2—Dorsal view of the body | 3—Full face view of head.



Images 4–6. 4–5—*Acropyga acutiventris* male | 6—Head (full face view).

Description

Head: Dull yellow. Eyes extremely large, covering most of the head, ocelli large, anterior margin of clypeus lined with long erect hairs. Head as long as wide. Dorsal surface of head smooth and shiny. Scape with dense pubescence. (Image 4)

Mesosoma: Dull yellow. Smooth and shiny. Alitrunk except propodeum with long erect hairs. Propodeum with short recumbent hairs. (Image 5–6)

Petiole: Erect and thick with a rectangular shape. Few short hairs are present on the dorsal surface.

Gaster: Smooth and shiny. Covered in long hairs.

Alate Queen: Queen Morphometrics (in millimeters):

HL: 0.91, HW: 1.20, EL: 0.46, SL: 1.15, ML: 2.08, PTL: 0.182, PTW: 0.292, PTH: 0.65, GL: 2.98, TL: 6.152. OI: 38.3, CI: 131.8, SL: 95.8, DPI: 1.604, LPI: 357.1

Description

Head: Dull yellow. Mandibles with striation. Anterior clypeal margin lined with long erect hairs. Three distinct ocelli are present. Outer margin of head lined with hairs. Eyes large placed in the lower $\frac{1}{4}$ of the head. Head as long as wide. Antennae with 11 segments (including scape) (Image 7–9).

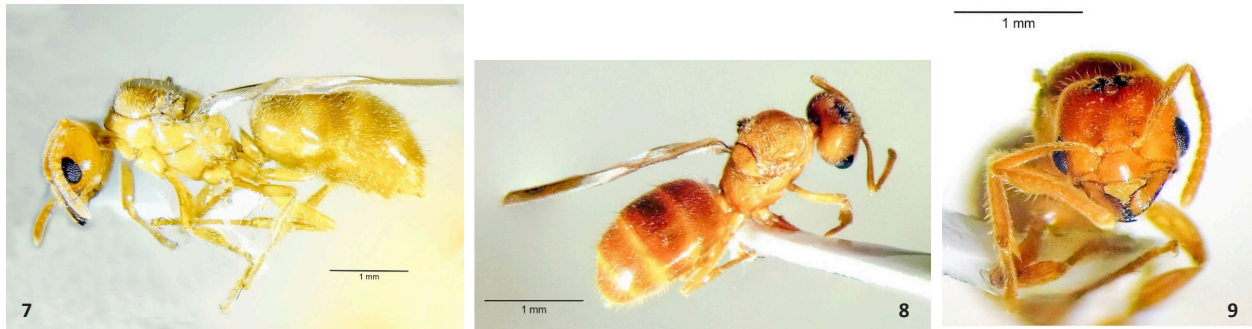
Mesosoma: Dull yellow, smooth, and shiny, covered in small erect hairs.

Petiole: Triangular, erect hairs, and with small erect hairs on the dorsal surface.

Gaster: Dull yellow & five gastral segments. Surface covered in with long recumbent hairs.

Leg: Entire leg covered in short erect hairs.

Differential diagnosis: This species is morphological very similar to *Acropyga rubescens*, but they are



Images 7–9. *Acropyga acutiventris* alate queen: 7—Body – lateral view | 8—dorsal view | 9—head – full face view.

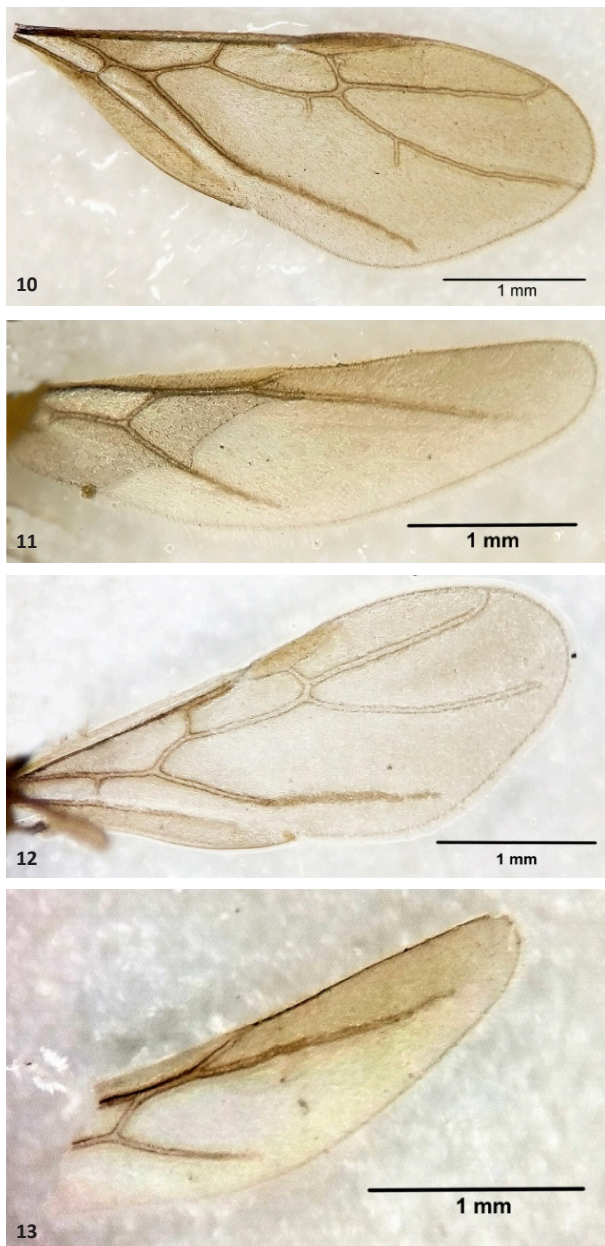


Image 10–13. *Acropyga acutiventris*: 10—Queen forewing | 11—Queen hindwing | 12—Male forewing | 13—Male hindwing.

generally smaller in size and less hairy.

Diagnostic features: Mandibles with striations from base to the articulation point.

Ecology Notes: The ants were found in an evergreen forest, in between two stones in the leaf litter near a small stream with low light conditions and high humidity. There were 30 worker ants, one queen and four males in the colony. The ants were docile upon disturbance showing few movements. There was no nest formation of any type as the ants were found on top of a rock covered by another rock. The ants were handpicked. There were multiple *Anoplolepis gracilipes* ants a few kilometers away from the nest. Soil was collected from where the ants were found. The pH of the soil was measured to be 5.53. The organic matter in the soil was analysed to be 0.04%, and the soil moisture was 24.5%.

DISCUSSION

A total of 10 workers, one male and one alate queen were taken from the site. These ants are relatively less common in collections because of their rarity. This study extends the range of this genus to Kerala. *A. acutiventris* was observed in the Shendurney Wildlife Sanctuary which is a part of the Western Ghats. The collections revealed that there were multiple *Anoplolepis gracilipes* ants near these *Acropyga* ants. The presence of invasive ants has been known to cause lowered species diversity of ants (Berman et al. 2013). *Anoplolepis* ants have also been known to cause a decrease in the diversity of ants (Mezger & Pfeiffer 2011). It can be said that the presence of *Anoplolepis* ants, which act as invaders, can be detrimental to native specialist ants like *A. acutiventris*. It is imperative that the forest be protected and its human interference be lowered so that such invasive ants can be controlled.

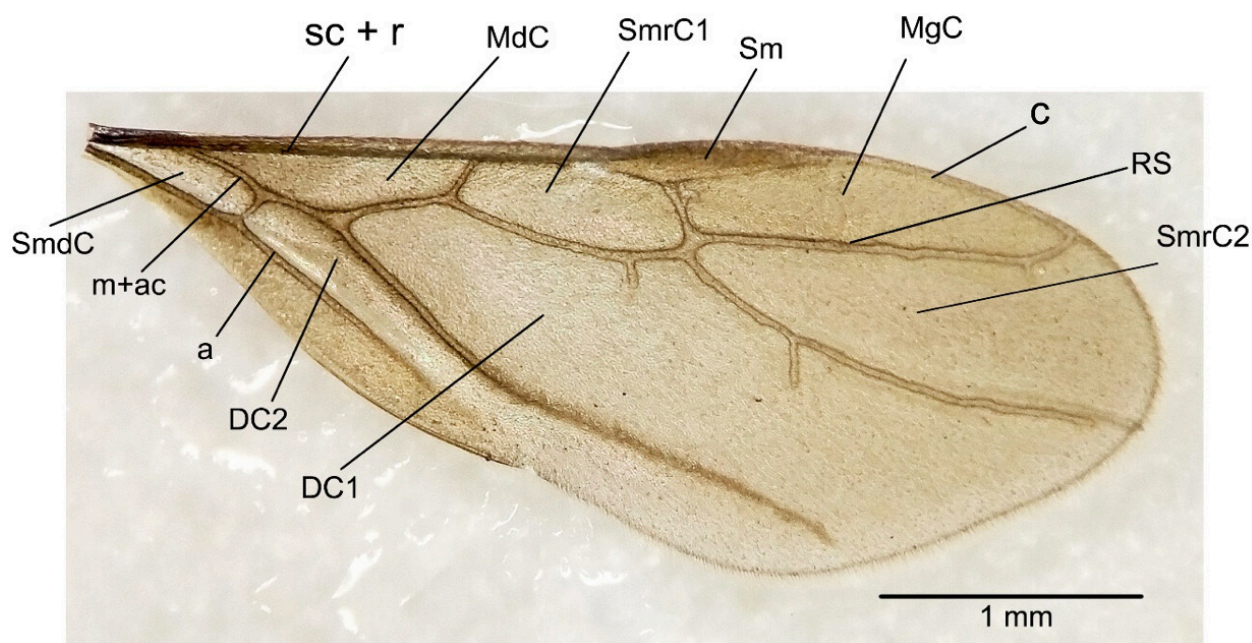


Image 14. Wing venation in *Acropyga acutiventris* Queen forewing. SmdC—Submedian cell | m—Median vein | ac—Anterior cubital vein | a—Anal vein | DC1—1st Discoidal Cell | DC2—2nd discoidal cell | sc—Subcostal vein | r—Radial vein | MdC—Median cell | SmrC1—1st Submarginal cell | Sm—Stigma | MgC—Marginal cell | c—Costal vein | RS—Radial sector | SmrC2—2nd submarginal cell.

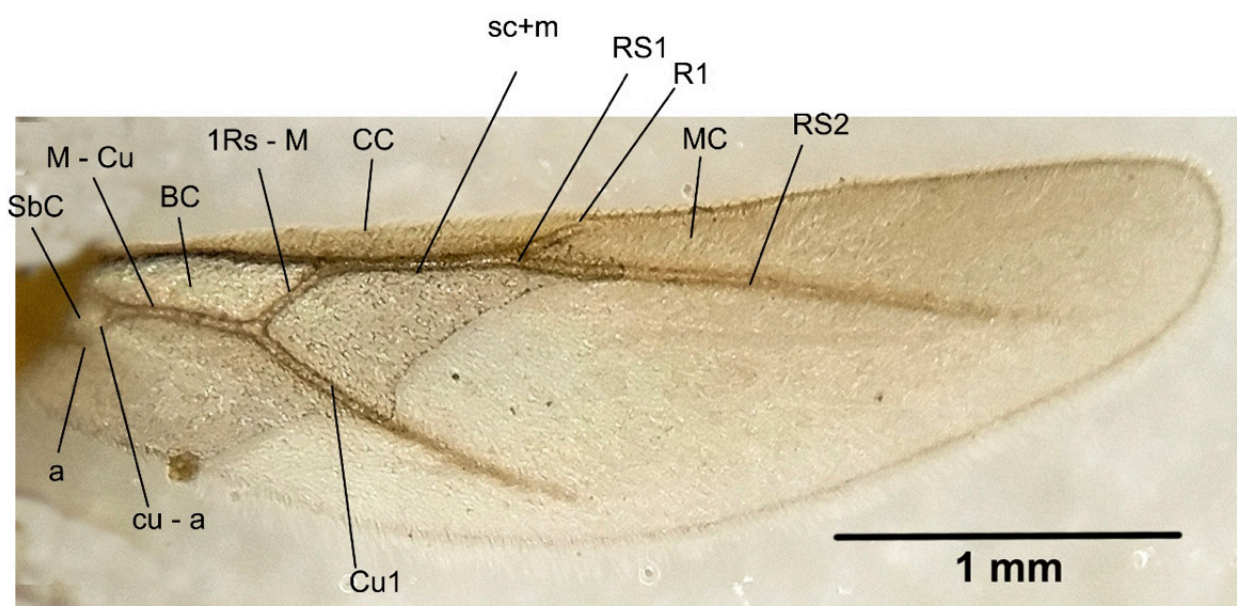


Image 15. Wing venation in *Acropyga acutiventris* Queen hindwing: SbC—Subbasal cell | A—Anal vein | M—C—Media-cubitus | cu—a—Cubitus + anal | BC—Basal cell | 1Rs-M—1 Radial sector-media | Cu1—Cubitus 1 | CC—Costal cell | sc+m—Subcosta + media | RS1—Radial sector 1 | R—Radial1 | MC—Marginal cell | RS2—Radial sector 2.

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Image 16. Previous records and the new record of *Acropyga acutiventris* in India.

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