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Cover: Pseudo-flying animals and wind-dependent seed & spore dispersers – made with digital painting in Krita. © Melito Prinson Pinto



NOTE

First report of the fairyfly *Schizophragma mitai* Triapitsyn (Hymenoptera: Mymaridae) from India with notes on *S. indica* Rehmat & Anis

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The genus *Schizophragma* Ogloblin, belongs to the *Anagrus* group of genera (Athithya & Manickavasagam 2022) in the family Mymaridae, consists of nine species described worldwide, with seven species occurring in the Nearctic and Neotropical regions in the Western hemisphere (Huber 1987), one species reported from India (Rehmat & Anis 2014) and one from Japan (Triapitsyn 2021). *Schizophragma* is closely related to *Stethynium* Enoch but differs by the presence of clava with two segments in females (one in *S. saltensis* Ogloblin), anterior scutellum with single pair of setae, the second phragma notched posteriorly, body colour dark brown and males having simple encapsulated genitalia (Huber 1987). In the present study, *Schizophragma mitai* Triapitsyn is added to the Indian fauna with redescription and notes on *S. indica* Rehmat & Anis have been provided. In addition, illustrations and distribution map (Image 1) have also been provided for the Indian species.

Mymarid specimens included in this study were sorted out from the hymenopteran collections in the National Zoological Collection (NZC), Zoological Survey of India, Kolkata, West Bengal, India. The specimens were collected using a yellow pan trap, dissected and

mounted in Canada balsam on a micro slide following the standard protocol given by Noyes (1982). The card mounted specimens were studied using a Nikon SMZ25 stereo zoom microscope and Leica DM1000 compound microscope for studying morphology of slide mounted specimens and measurements. The habitus photographs were obtained using a Nikon DS-Ri2 camera attached to the stereo zoom microscope and processed by the NIS-Elements BR Analysis v5.20.00. Stacking of individual images and processing was done using Adobe Photoshop CS4. Distribution map was prepared using Google Earth Pro based on the coordinates from collection sites. Vouchered specimens have been deposited with their appropriate registration numbers at NZC, Zoological Survey of India, Kolkata.

1. *Schizophragma mitai* Triapitsyn, 2021 (Image 2A–F)

Schizophragma mitai Triapitsyn, 2021: 93, Holotype, female, Japan, Fukuoka (ELKU)

Female: Body length 0.79 mm; body dark brown; antennal pedicel and flagellum pale brown; clava dark brown. Frenum pale brown than anterior scutellum. Fore wing subhyaline except behind venation slightly infusate; hind wing hyaline. Legs pale brown except

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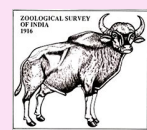
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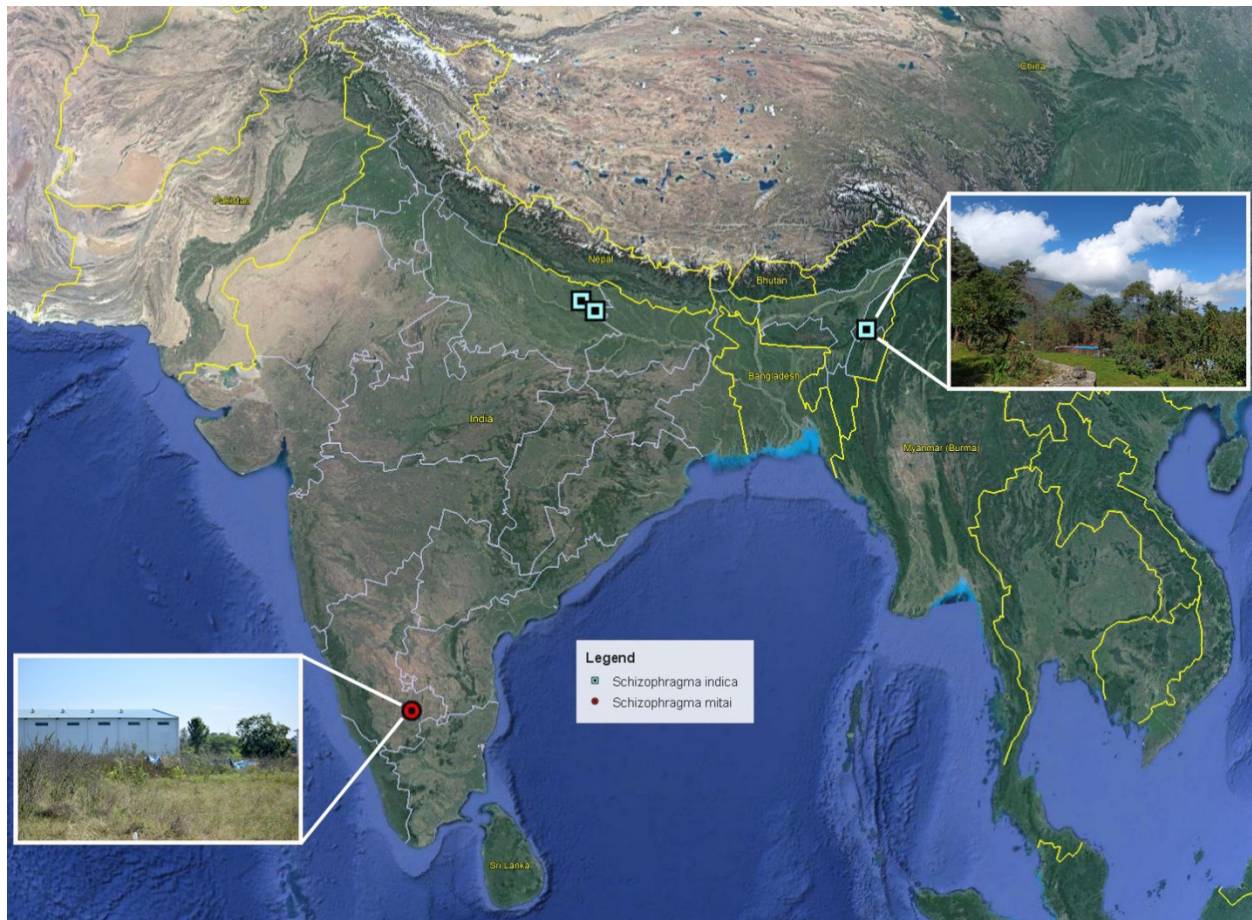


Image 1. Map showing the distribution of *Schizophragma* in India with images of collection sites.

meso & meta coxa and metafemur darker.

Head: Head in frontal view about 1.3× higher than wide; below anterior ocellus with horizontal striation; genae with vertical striation; between torulus and above torulus with polygonal sculpture; sub-torular grooves present; mandible with single tooth. Antennal scape 2.8× as long as wide, with 10-12 transverse ridges extending all way from apex to base; pedicel longer than F1; F4 longer and F5 shortest; mps on F4 (2) and F6 (2); clava 3.7× as long as broad, with longitudinal ridges; clava with seven mps; clava longer than F3-F6 combined.

Mesosoma: Mesosoma 0.8× of metasoma; mesophragma barely notched; mesocutum and scutellum with longitudinal striation. **Wings:** fore wing 3.3× as long as broad; longest marginal seta 0.4× wing width; distal macrochaeta slightly longer than proximal macrochaeta; hind wing about 14× as long as broad; longest marginal seta 1.8× of wing width.

Metasoma: Ovipositor slightly exerted, 1.8× of metatibia; ovipositor extending anteriorly almost to margin of propodeum.

Measurements (µm): Head width 176; head height 246; pedicel length & width 139:49; antennal segments length: scape 124; pedicel 30; F1 30; F2 31; F3 32; F4 46; F5 19; F6 43; clava length & width 178:48. Fore wing length: width 801:239; hind wing length: width 714:51; mesosoma length: 334; metasoma length 427; longest marginal seta 101; ovipositor length 458; hind tibia length 257.

Material examined: 2 females, India, Karnataka, Virananjipura, 13.1269°N, 77.3622°E, 10.xii.2020, coll. A. Rameshkumar.

Distribution: Japan (Triapitsyn 2021), India: Karnataka (new record).

Comments: The specimens collected from Karnataka are identified as *S. mitai* based on the original description and illustrations provided by Triapitsyn (2021). This species is known only from the Palaearctic region (Japan). Hence, the range of the species is extended to the Oriental region. There is no significant variation observed between original type specimen and Indian material.

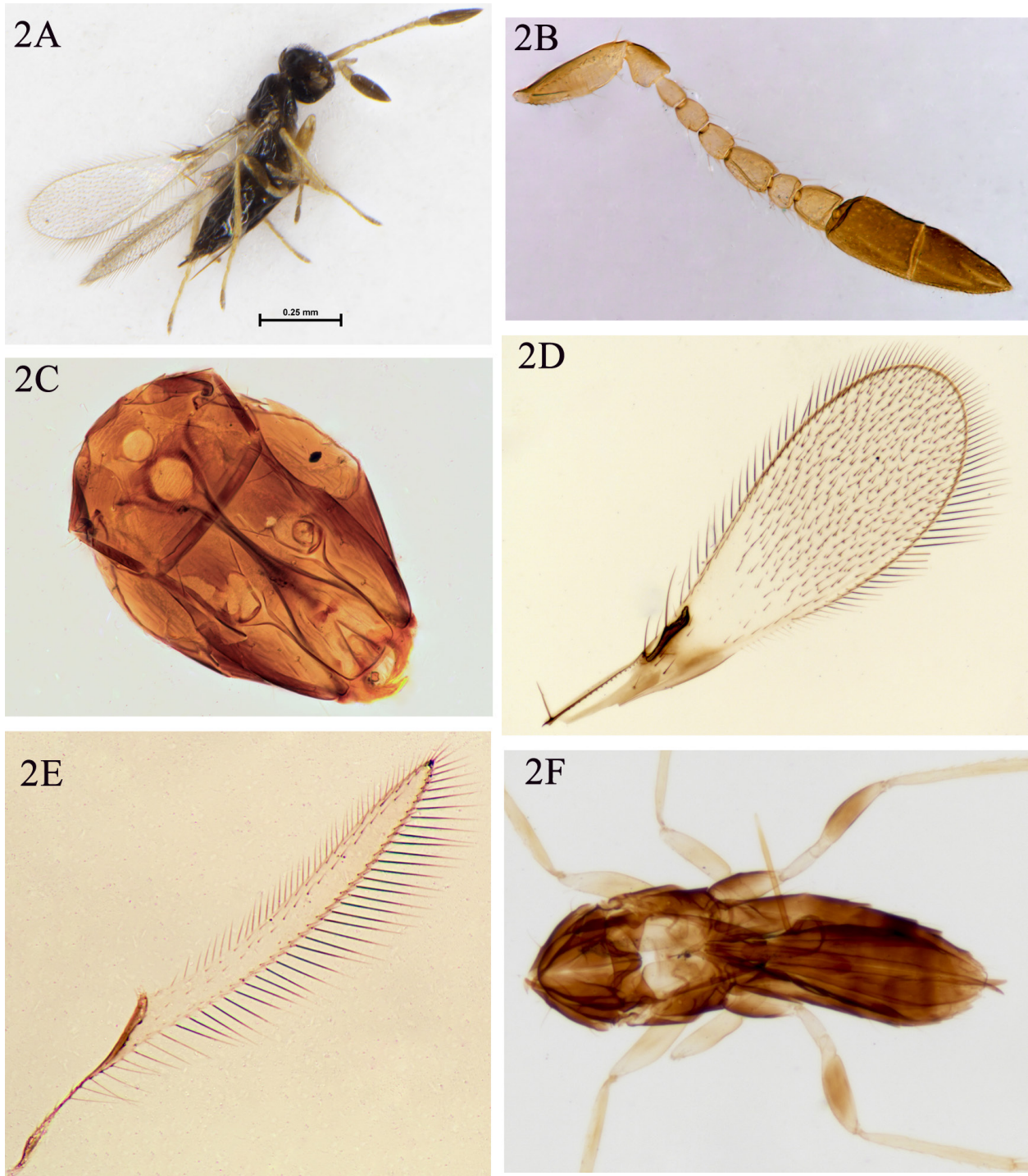


Image 2. *Schizophragma mitai* Triapitsyn, female: A—Habitus | B—Antenna | C—Head frontal view | D—Fore wing | E—Hind wing | F—Meso and metasoma. © Authors.

2. *Schizophragma indica* Rehmat & Anis, 2014 (Image 3A–E)

Schizophragma indica Rehmat & Anis, 2014: 306–311, female. Holotype, female, India, Uttar Pradesh (ZDAMU)

Diagnosis: Female. Length ranges 0.61–0.84 mm

(Image 3A). Head dark brown, as long as wide; vertex with fine, rugose and reticulate sculptures (Image 3C); antenna yellowish, scape with 7–8 transverse ridges extending from the apex only up to midway towards base; clava 2 segmented with longitudinal striations, mps on F3(1) and F5(1) (Image 3B); clava with six mps. Wings

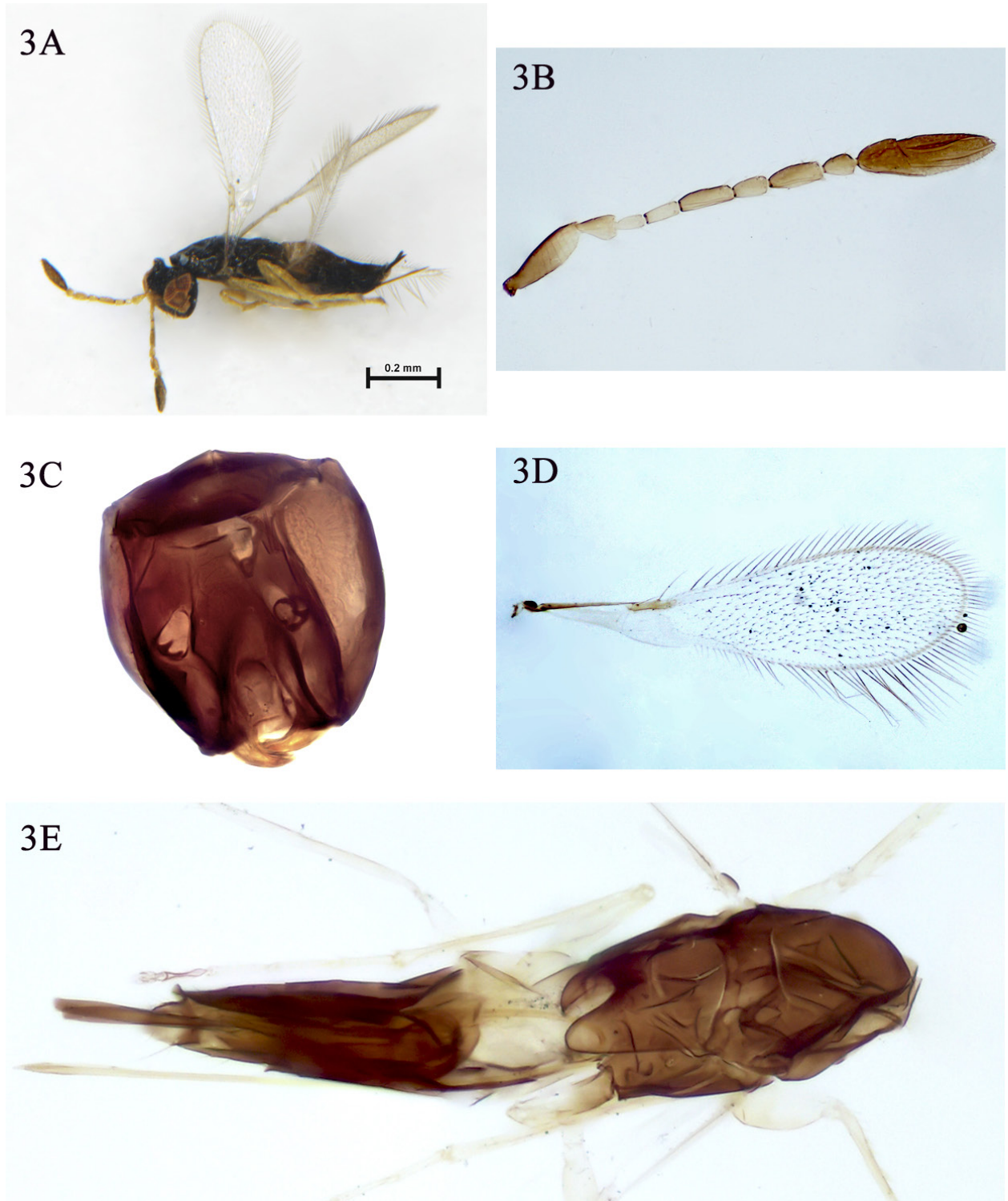


Image 3. *Schizophragma indica* Rehmat & Anis, female: A—Habitus | B—Antenna | C—Head, frontal view | D—Fore wing | E—Meso and metasoma. © Authors.

hyaline (Image 3D); mesosoma dark brown; midlobe of mesoscutum with reticulate sculpture; frenum with lineolate sculpture; mesophragma with deep V-shaped notch. T1 and T2 (partly white), T3–T6 brownish-black;

legs light brown; ovipositor shortly exerted from base of metasoma (Image 3E).

Material examined: 8 females, India, Nagaland, Kohima, Basa Khonoma, 25.6453°N, 94.0236°E,

04.xi.2021, coll. A. Rameshkumar.

Distribution: India: Uttar Pradesh (Rehmat & Anis 2014), Nagaland (new record).

Comments: Within the eight specimens collected from Nagaland (Northeastern India) observed, some variations, i.e., size of funicle segments and body colouration, may be due to the habitus and climatic variations.

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