Cover: Common Keeled Skink Eutropis carinata in oil pastels, colour pencils, & micron pen adapted from photograph by H. Byju © Pooja Ramdas Patil.

For Focus, Scope, Aims, and Policies, visit https://threatenedtaxa.org/index.php/JoTT/aims_scope
For Article Submission Guidelines, visit https://threatenedtaxa.org/index.php/JoTT/about/submissions
For Policies against Scientific Misconduct, visit https://threatenedtaxa.org/index.php/JoTT/policies_various

continued on the back inside cover
A new record of genus *Synedrus* Graham, 1956 with description of male of *Synedrus kasparyani* Tselikh, 2013 from India

Mubashir Rashid¹,⁵ & Arvind Kumar²

¹,² Forest Entomology Discipline, Forest Research Institute, Dehradun, Uttarakhand 248006, India.
¹ mubashirchappoo10@gmail.com, ² arvind.ento@gmail.com (corresponding author)

Abstract: The genus *Synedrus* Graham, 1956 is recorded from India for the first time. The male of *Synedrus kasparyani* Tselikh, 2013 is described. Additional characters and images of female are also provided.

Keywords: Biocontrol, citrus, diversity, Pteromalidae, parasitoids, Rutaceae, taxonomy.

The genus *Synedrus* Graham, 1956 based on the type species *Synedrus cavigena* Graham, 1956 was described from France. The genus is represented by only three species, viz: *Synedrus cavigena* Graham, 1992 (from France); *Synedrus kasparyani* Tselikh, 2013 (from Russia & South Korea), and *Synedrus transiens* (Walker, 1835) (from Bulgaria, Czech Republic, Czechoslovakia, Netherlands, Sweden, United Kingdom, and Russia). As such there is no host record for the species of *Synedrus* Graham, 1956 except *Synedrus transiens* (Walker, 1835) has been found to be associated with Fagaceae family (*Quercus* sp.) (Noyes, 2019). In the present study, both male and female specimens of *Synedrus kasparyani* Tselikh, 2013 were found to be associated with Rutaceae family (*Citrus* sp.).

**MATERIALS AND METHODS**

The specimens were collected during field survey from Jammu & Kashmir in June 2021 with aspirator from Citrus and preserved in 80% alcohol. Specimen were examined under MAGNUS MSZ-Bi binocular microscope at FRI, Dehradun and genus level identification was done with the key of Bouček & Rasplus (1991); species level identification was done with that of Tselikh (2013) and Graham (1969). For the better description of the characters, photographs have been taken under Leica M-205C trinocular stereo zoom microscope fitted with HD camera, and images were analyzed with LAC-16 image analyzing software at systematic laboratory, Forest Entomology Discipline, ICFRE-FRI, Dehradun.

Morphological terminology follows Gibson (1997). Following abbreviations used in this paper are: POL—posterior ocellar line, the minimum distance between the posterior ocelli | OOL—ocello-ocular line, the minimum distance between the posterior ocellus and eye | F1–F6, funicular segments (antennal segments between anelli and clava); FW—forewing | SMV—submarginal vein | MV—marginal vein | PMV—postmarginal vein | STV—stigmal vein | T1–T6—tergum 1 to 6.

Specimen deposition: The specimens were deposited in National Forest Insect Collection (NFIC), Forest Research Institute, Dehradun, India and accession number was obtained.
**Result and Discussion**

**Synedrus Graham, 1956**

Genus *Synedrus* Graham, 1956 can be identified by the combination of characters: antennal formula 11353, while 11263 in male, 3rd anelli quadrate in female with micropilosity extending up to base of clava; pronotal collar carinate in both sexes; scutellum convex in profile/lateral view. Nucha reticulate and long, median carina absent; traces of transverse carina are present; petiole transverse; stigma of FW moderately capitulate; PMV longer than MV.

The male specimen of *Synedrus kasparyani* Tselikh, 2013 has been described here and the notes and illustrations of female specimen has been provided.

**Synedrus kasparyani** Tselikh, 2013


*Synedrus kasparyani* has been described from Russia based on the female type. It is first time recorded from India and its detailed morphological diagnostic note is provided here.

**Female:** (Image 1A–L). Body length 2.3 mm.

**Coloration:** Head, mesosoma golden yellow, gaster green with golden reflection; Eyes cupreous, ocelli silvery white; mandibles yellowish except teeth testaceous; palpi yellowish; antennae with scape and pedicel yellowish, anelli & flagellum brownish; FW hyaline, veins brown. Legs with all coxae concolorous with mesosoma, rest of legs yellowish except tips of tarsal segments brown. Gaster bluish blackish or brownish with median part yellowish.

**Sculpture:** Head and mesosoma strongly and uniformly reticulate exceptclypeal region smooth with striae radiating from mouth margin, reticulation on malar region finer, axillar edges smooth; frenal area and nuchal reticulation same; metanotum, dorsellum, and callus smooth.

**Additional characters**

Head: white curved hairs present on head; Antennae 11353, 3rd anelli quadrate; maxillary palp 4-segmented; genal suture prominent.

Mesoroma: pronotal collar much narrower than mesoscutum, hind margin of mid lobe of mesoscutum produced, prepectus small, median carina absent, metanotum including dorsellum smooth & shiny; plicae sharply present, traces of transverse carina are present, spiracles oblong are of normal size, a spine or fingernail like structure is present on both the sides of callus, long white hairs present on both sides of callus; FW bare in basal part, basal setal line present, cubital setal line absent, SMV 0.36x as long as FW length, stigma of FW moderately capitulate, uncus present, short marginal fringes also present.

Metasoma: T1 longest, its hind margin slightly produced; hind margin of each tergite with at least one row of white setae, hypopygium reaching half of gaster (base of T4); ovipositor, exerted outside last tergite.

**Material examined:** 2 female, India: Jammu & Kashmir: Hidyal; 23.vi.2021; coll. Mubashir Rashid; Accession number-FRI/NFIC/22304-A,B.

**Biology:** Specimens were collected from *Citrus* sp.

**Synedrus kasparyani** Tselikh, 2013

**Description:** Male: (Image 2A–I). Body length 1.97 mm.

**Color:** (Image 2A–I). Head, mesosoma metallic green with diffuse coppery lustre, mandibles yellowish-brown except teeth brownish, eyes dark brown; antennae brownish with scape yellowish and pedicel testaceous; FW hyaline, veins brown. Legs with all coxae concolorous with mesosoma, proximal part of hind femur testaceous, rest of legs yellowish, tips of tarsal segments brown. Gaster bluish blackish or brownish with median part yellowish.

**Sculpture:** Head and mesosoma strongly and uniformly reticulate exceptclypeal region smooth with striae radiating from mouth margin, reticulation on malar region finer, axillar edges smooth; frenal area and nuchal reticulation same; metanotum, dorsellum, and callus smooth.

**Head:** (Image 2B–E). Clypeal margin with broad and short tooth, clypeal region distinctly separated from face with striae radiating from face, clypeal region comparatively smoother from rest of face, reticulation on gena finer; mesosoma strongly but nonuniformly reticulate, mesoscutum and scutellum with deep & strong reticulation, axillar reticulation broader but superficial, axillula with small reticulation; mesoscutum & dorsellum smooth & shiny, nucha strongly reticulate, callus smooth.

**Material examined:** 2 female, India: Jammu & Kashmir: Hidyal; 23.vi.2021; coll. Mubashir Rashid; Accession number-FRI/NFIC/22304-A,B.

**Biology:** Specimens were collected from *Citrus* sp.
New record of genus *Synedrus* from India

Rashid & Kumar


as broad; pronotum short, carinate, 0.11x as long as mesoscutum; mesoscutum 0.56x as long as broad, notauli incomplete; scutellum 1.08x as long as broad, axillary groove anteriorly wide apart so that scutellum broadly borders on mesoscutum. Propodeum (Image 2G) with median carina absent, pilcae sharply present, traces of transverse carina are present, spiracular sutures broad and oval; spine like structure (Image 2G) present on both sides of callusas in female; nucha reticulated long. FW (Image2H) hyaline, veins brown, 2.15x as long as broad; SMV 0.35x as long as FW; MV longer than STV (1.16X) but shorter than PMV, MV 0.76x as long as PMV; STV 0.65x PMV; stigma of FW moderately capitate and brown. Basal cell with few setae; costal cell with few scattered setae; speculum broad and closed below.

Metasoma: (Image 2). Gaster elongate (4.02x as long
New record of genus *Synedrus* from India

Rashid & Kumar


**Material examined:** 2 males, India: Jammu & Kashmir: Hidyal; 23.vi.2021; coll. Mubashir Rashid; Accession number- FRI/NFIC/22304-C, D.

**Distribution:** Russia (only female); South Korea; India: Jammu & Kashmir (new record both male and female).

**Biology:** Not known. Associated with citrus plant and collected with the help of aspirator.

**DISCUSSION**

The female specimen of *Synedrus kasparyani* Tselikh was described by Tselikh in 2013 from Russia and the male specimen of *Synedrus kasparyani* Tselikh is described for the first time, collected from Jammu & Kashmir, India, and the genus *Synedrus* Graham is recorded first time from India.

**REFERENCES**


The Journal of Threatened Taxa (JoTT) is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at www.threatenedtaxa.org. All articles published in JoTT are registered under Creative Commons Attribution 4.0 International License unless otherwise mentioned. JoTT allows unrestricted use, reproduction, and distribution of articles in any medium by providing adequate credit to the author(s) and the source of publication.

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

February 2024 | Vol. 16 | No. 2 | Pages: 24615–24818

Date of Publication: 26 February 2024 (Online & Print)

DOI: 10.11609/jott.2024.16.2.24615-24818

Articles

Unearthing calf burials among Asian Elephants *Elephas maximus*
Linnaeus, 1758 (Mammalia: Proboscidea: Elephantidae) in northern Bengal, India
– Parveen Kaswan & Akashdeep Roy, Pp. 24615–24629

Coexistence of Indian Pangolin *Manis crassicaudata* (Geoffroy, 1803) (Mammalia: Pholidota: Manidae) and Indian Crested Porcupine *Hystrix indica* (Kerr, 1792) (Mammalia: Rodentia: Hystricidae) in Purulia District, west Bengal, India
– Debosmita Sikdar, Shwetadri Bhandari & Sanjay Paiera, Pp. 24630–24645

Avifaunal assemblage patterns in Bharathapuzha River basin, Kerala, India

Desmids of Brahmaputra valley, a major southern Asian river basin
– Soumin Nath & Partha Pratim Baruah, Pp. 24658–24693

Communications

Distribution status and roost characteristics of Indian Flying Fox *Pteropus medius* Temminck, 1825 (Mammalia: Chiroptera: Pteropodidae) in Kurukshetra district, Haryana, India
– Ritu Devi & Parmesh Kumar, Pp. 24694–24706

Avifauna of four protected areas of Terai-Arc Landscape, India: significant records and a checklist of species

Monitoring observations of the southernmost breeding population of Long-billed Vultures *Gyps indicus* (Scopoli, 1786) (Aves: Accipitriformes: Accipitridae) in the Nilgiri Biosphere Reserve, India
– S. Manigandan, H. Byju & P. Kannan, Pp. 24730–24736

Observations on Indian Skimmer *Rynchops albicollis* Swainson, 1838 (Aves: Charadriiformes: Laridae) breeding colonies in Middle Ganges stretch, India
Kumar Ankit, Mujahid Ahamad, Vivek Ranjan, Sanjay Kumar, Syed Ainiul Hussain & Govindan Veerawswami Gopi, Pp. 24737–24745

Avifaunal diversity in urban greenspaces within Cotentato city, Mindanao Island, Philippines
– Joan Rhea Mae L. Baes, Peter Jan D. de Vera, John Paul A. Catipay, Marian Dara T. Tagoon & Elsa May Delima-Baron, Pp. 24746–24751

Waterbird count at Narathali waterbody, Buxa Tiger Reserve in northern Bengal for a decade (2009–2019) with a note on raptors
– Sachin Ranade & Soumya Sundar Chakraborty, Pp. 24752–24759

First confirmed reproduction by a translocated female Siamese Crocodile *Crocodylus siamensis* (Crocodylidae: Crocodylia) with observations of nest attendance and nest-associated fauna

Erode Ground Gecko *Cyrtodactylus speciosus* (Beddome, 1870) (Squamata: Gekkonidae) from peri-urban common-lands of Coimbatore, India, with comments on habitat associations

Assessment of diversity of Odonata fauna in selected sites of Purba Barddhaman district, West Bengal, India
– Sulagna Mukherjee & Rabindranath Mandal, Pp. 24775–24785

A preliminary assessment of butterfly diversity from Mehkliganj town, Cooch Behar District, West Bengal, India
– Abhirup Saha, Prapti Das & Dhiraj Saha, Pp. 24786–24794

Utilization of *Afzelia africana* Sm. ex Pers. (Magnoliopsida: Fabales: Fabaceae) in Nigeria and its implications for conservation

Short Communications

Gastrointestinal parasites of the Indian Flying Fox *Pteropus medius* in Nagpur City: a seasonal study through faecal sample analysis

*Plagiochilaceae* not *Plagiochila javanica* (Sw.) Nees & Mont. (Marchantiophyta: Plagiochilaceae) rediscovered from the Western Ghats after 180 years

A new record of genus *Synedrus* Graham, 1956 with description of male of *Synedrus kaspayarei* Tselikh, 2013 from India
– Mubashir Rashid & Arvind Kumar, Pp. 24812–24815

Note

*Hunteria zeylanica* (Retz.) Gardner ex Thwaites (Magnoliopsida: Gentianales: Apocynaceae)—new addition and first genus record to the flora of Karnataka