



Short Communication

FIRST REPORT OF *ENICOSPILUS SHINKANUS* UCHIDA, 1928 FROM ANDAMAN AND NICOBAR ISLANDS, INDIA

*Manish Chandra Patel & Chandrakasan Sivaperuman

Zoological Survey of India, Andaman Nicobar Regional Centre, Port Blair -744102, Andaman & Nicobar Islands

*Corresponding author email: manishchpatel@gmail.com

ABSTRACT

The Family Ichneumonidae of the order Hymenoptera is a parasitoid wasp family. They are important parasitoids of other invertebrates mainly larvae and pupae of Coleoptera, Hymenoptera, and Lepidoptera. *Enicospilus shinkanus* Uchida, 1928 is reported for the first time from Andaman Islands based on collected sample and observation from South Andaman.

KEYWORDS: Ichneumonidae, Ophioninae, Hymenoptera, *Enicospilus*, Andaman Islands.

INTRODUCTION

The Andaman and Nicobar Islands are known for rich biodiversity resources (Mathur and Padalia, 2010). The archipelago comprises 572 islands and extending over 800 km. The topography of the Andaman and Nicobar Islands are hilly and undulating, the elevation in Andamans is from 0 to 732 m and Saddle Peak is the highest in North Andaman Island. In the Nicobars the elevation rises from 0 to 568 m, Mt Thuillier being the highest peak on Great Nicobar Island. The habitats represented in the islands include bays, mangroves, moist deciduous forests and evergreen forests. These islands are tropical, that is, warm, moist and equable. The proximity of the sea and the abundant rainfall prevent extremes of heat. The mountainous parts of the southern group of islands get about 300 cm of rain annually whereas the islands of north get lesser rainfall. Flora and fauna in Andaman bear close bio geographical affinities with Myanmar and Thailand while Nicobar has affinities with Indo-Mayan regions (Ekman, 1953). The members of family ichneumonidae are solitary koinobiont endoparasitoids of the larvae of other holometabolous insects. Virtually most of them rearing from Lepidoptera. The ichneumonids includes the large to medium sized orange-brown species that are commonly found at night flying around lights. All are nocturnal and active during night; the ichneumonids are pale, slender with long antennae and legs. The members of Subfamily Ophionines can be found at night because they come to light, they are easily observed in quite large numbers. Though there are 33 genera were reported worldwide, the majority of species reported in the New World belongs two genera. The *Ophion* generally predominates in temperate areas and on tropical mountain tops. The *Enicospilus* are primarily tropical genus.

MATERIAL & METHODS

During the regular field surveys as a part major ecological studies on terrestrial fauna of Andaman & Nicobar Islands,

we have recorded *Enicospilus shinkanus* Uchida, 1928 (Hymenoptera: Ichneumonidae: Ophioninae) a parasitic ichneumon wasp from Port Blair Airport campus. Only few studies have been carried out on the taxonomy of ichneumonidae in India. Moorley (1912 and 1913) carried out studies on taxonomy of ichneumonidae. Townes and Gupta (1961) reported *Enicospilus* from Indo-Australian region. Rao (1970) contributed a revised key of this genus. Nikam (1972, 1975 and 1980) described 49 species of *Enicospilus* from India.

Material Examined

1 ex, collected from Port Blair Airport Campus, South Andaman (Latitude. 11° 37.371' N; Longitude. 92° 43.130 'E) on 31st January 2014 at Night by C. Sivaperuman & Party the specimen was collected and dry preservation was made and deposited (Reg. No. T-3307) in National Zoological Collection of Zoological Survey of India, Port Blair, Andaman & Nicobar Islands.

Morphometric Analyses

Morphometric Analyses of the specimen was done firstly with hand lens and measurement of forewing indices was done on Leica M 205 Stereozoom Microscope. The specimen is medium sized orange-brown insect with slender body. Eyes and ocelli are large and black in colour. Flagellum is very long and slender with 40-50 segments. Interocellar area of lower face is brown. Discosubmarginal cell has a large fenestra with a proximal sclerite having very fine appendix Distal Sclerite absent. Size of insect is 25 mm. The length of forewing is 12.10 mm and hind wing 9.0 mm. Forewing's indices: AI - 0.60, CI - 0.24, SDI - 1.19 and ICI - 0.58; Hind wing's index: NI - 2.3 Legs are slender and claws are strong. Gaster elongate, dark brown terminally darker to blackish (Note: AI - Alar index; CI - Cubital index; SDI - Second Discoidal Index; ICI-Intercubital index; NI - Nervellar index

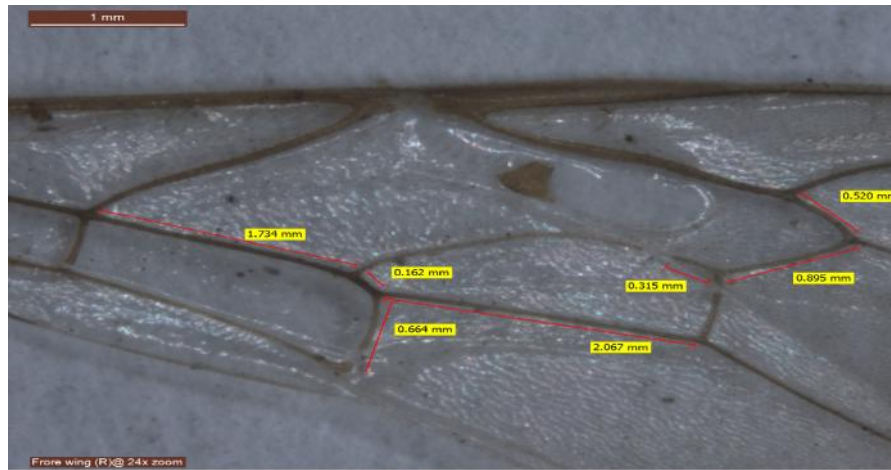


FIGURE 1. Morphometric Analyses Right forewing *Enicospilus shinkanus* Uchida, 1928

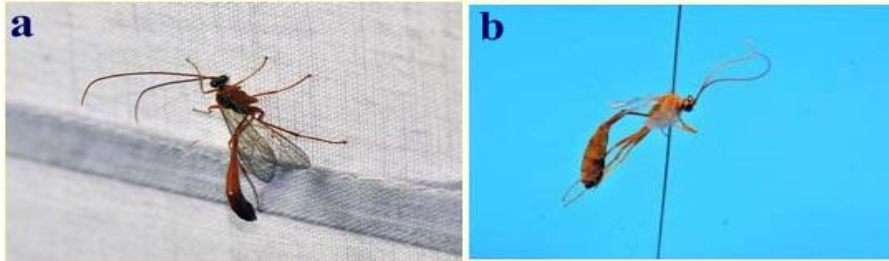


FIGURE 2. *Enicospilus shinkanus* Uchida, 1928(a) In Habitus (b) Dead Pinned Insect

RESULTS

According to the available literature, this species is identified as *Enicospilus shinkanus* Uchida, 1928 using keys given by Nikam, P. K. (1980) and this has not been reported earlier from Andaman and Nicobar Islands, hence this is the first report of a Ichneumonidae from this archipelago.

Systematics

Class: Insecta

Order: Hymenoptera

Suborder: Apocrita (Parasitica)

Family: Ichneumonidae

Subfamily: Ophioninae

Genus: *Enicospilus*

Species: *Enicospilus shinkanus* Uchida, 1928

***Enicospilus shinkanus* Uchida, 1928 (Fig 1 a-c)**

Uchida T. 1928 *Zweiter Beitrag zur Ichneumoniden- Fauna Japans. Journal of Faculty of Agriculture, Hokkaido University*, 21: 177-297

Synonyms:

Enicospilus bindus Nikam, 1972

Enicospilus relictus Chiu, 1954

Enicospilus pankumensis Cheesman, 1936

Distribution: Mostly reported from Tropical and Subtropical Countries with high annual rainfall.

India: Assam, Bihar, Jharkhand, Delhi, Uttar Pradesh, Uttarakhand.

Elsewhere: China, Fiji, Japan, Taiwan, Korea, Malaysia, Palau, New Guinea, Philippines, Solomon Islands, Vanuatu, Vietnam and Western Samoa.

ACKNOWLEDGEMENTS

We are thankful to the Ministry of Defence, Government of India for financial support for this study. The authors

are grateful to the Officer-in-Charge, Andaman and Nicobar Regional Centre, Zoological Survey of India, Port Blair and the Commander, Stations Flight Safety Officer (SFSO), INS Utkrosh, C/o. Navy, Port Blair for their support and encouragement during the field survey.

REFERENCES

- Ekman, S. (1953): *Zoogeography of the Sea*, XIV + 417 p.
- Mathur, V.B. and Padalia, H. (2010): Protected area network in Andaman and Nicobar islands: a gap analysis for biodiversity representation and conservation status. In: *Recent Trends in Biodiversity of Andaman and Nicobar Islands*, (Eds.) Ramakrishna, Raghunathan, C. and Sivaperuman, C., *Zool. Surv. India*, Kolkata. Pp. 519-532.
- Moorley, C. (1913): *Fauna of British India including Ceylon and Burma. Hymenoptera, Ichneumonidae Part 1* (London) 3: 1-531
- Moorley, C. (1914): Zoological results of the Arbour Expedition, 1911-12 xxiii Ichneumonidae: Hymenoptera, IV. *Record of Indian Museum* 8: 323-328
- Nikam, P.K. (1975): Studies of Indian Ichneumonidae, Four New Species of *Enicospilus Stephens* (Ophioninae) From Marathwada. Marathwada University. *J. Res.* 14(7): 193-202
- Nikam, P.K. (1980): Studies of Indian species of *Enicospilus Stephens* (Hymenoptera: Ichneumonidae). *Oriental Insects* 14(2): 131-219.
- Nikam, P.K. (1972): Studies of Indian Ichneumonidae, Four New Species of *Enicospilus Stephens* (Ophioninae) From Marathwada. Marathwada University. *J. Res.* 11(4): 193-293.