

ISSN 0972- 1800



VOLUME 22, NO. 2

QUARTERLY

APRIL-JUNE, 2020



Date of Publication: 28th June, 2020

BIONOTES

**A Quarterly Newsletter for Research Notes and News
On Any Aspect Related with Life Forms**

BIONOTES articles are abstracted/indexed/available in the Indian Science Abstracts, INSDOC; Zoological Record; **Thomson Reuters (U.S.A); CAB International (U.K.); The Natural History Museum Library & Archives, London; Library Naturkundemuseum, Erfurt (Germany)** etc. and online databases.

Founder Editor

Dr. R. K. Varshney, Aligarh, India

Board of Editors

Peter Smetacek, Bhimtal, India

V.V. Ramamurthy, New Delhi, India

Jean Haxaire, Laplune, France

Vernon Antoine Brou, Jr., Abita Springs,
U.S.A.

Zdenek F. Fric, Ceske Budejovice, Czech
Republic

Stefan Naumann, Berlin, Germany

R.C. Kendrick, Hong Kong SAR

Publication Policy

Information, statements or findings
published are the views of its author/ source
only.

Manuscripts

Please E-mail to petersmetacek@gmail.com.

Guidelines for Authors

BIONOTES publishes short notes on any
aspect of biology. Usually submissions are
reviewed by one or two reviewers.

Kindly submit a manuscript after studying the
format used in this journal
(<http://www.entosocindia.org/>).

Editor reserves the right to reject articles that do not
adhere to our format. Please provide a contact
telephone number. Authors will be provided
with a pdf file of their publication.

Address for Correspondence

Butterfly Research Centre, Bhimtal,
Uttarakhand 263 136, India. Phone: +91
8938896403.

Email: butterflyresearchcentre@gmail.com

From Volume 21

**Published by the Entomological Society of India (ESI), New Delhi (Nodal Officer: V.V.
Ramamurthy, ESI, New Delhi)**

And

Butterfly Research Centre, Bhimtal

Executive Editor: Peter Smetacek

Assistant Editor: Shristee Panthee

Butterfly Research Trust, Bhimtal

Published by Dr. R.K. Varshney, A Biologists Confrerie, Raj Bhawan, Manik Chowk,
Aligarh (up to volume 20 (2018)) R.N.I. Registration No. 71669/99.

Cover Photo by Roshan Upadhaya of *Yamamotozephyrus kwangtungensis*.

TABLE OF CONTENTS

ADDITION OF A BUTTERFLY GENUS AND SPECIES TO THE INDIAN FAUNA by Roshan Upadhyay, Minom Pertin, Peter Smetacek & Motoki Saito	34
FIRST ENCOUNTER OF INDIGENOUS PREDATORS ON NEW INVASIVE PEST OF GUAVA, WOOLLY WHITEFLY <i>ALEUROTHRIXUS FLOCCOSUS</i> (MASKELL) IN TAMIL NADU, INDIA by K. Elango, S. Jeyarajan Nelson, S. Sridharan & A. Aravind	36
FURTHER ADDITIONS TO THE BUTTERFLY FAUNA OF CHHATTISGARH, INDIA by Anupam Sisodia & Nileshkumar Kshirsagar (I.A.S.)	38
CONFIRMATION OF <i>GRAPHIUM DOSON ELEIUS</i> (INSECTA: LEPIDOPTERA: PAPILIONIDAE) IN DELHI, INDIA by Akash Gulalia	41
NEW RECORD OF <i>PSEUDONEOPONERA RUFIPES</i> (INSECTA: HYMENOPTERA: FORMICIDAE) FROM JHARKHAND, INDIA by Ashirwad Tripathy	43
<i>SAPINDUS LAURIFOLIUS</i> VAHL, 1794 AS A NEW HOST PLANT FOR THE COMMON GUAVA BLUE BUTTERFLY <i>VIRACHOLA ISOCRATES</i> IN GUJARAT, INDIA by Mayur H. Variya	46
CHECKLIST OF BUTTERFLIES (INSECTA: LEPIDOPTERA) FROM MUKUNDARA HILLS TIGER RESERVE, RAJASTHAN by Rohan Bhagat	50
A PRELIMINARY REPORT ON COLEOPTERA FAUNA OF KALYANI (A SUBURBAN CITY), WEST BENGAL, INDIA by Bhim Prasad Kharel, Udipta Chakraborti Kakali Bhadra & Subhankar Kumar Sarkar	55
SEVEN TYPICALLY FRUIT AND SAP FEEDING NYMPHALID BUTTERFLIES RECORDED AT FLOWERS IN THE KUMAON HIMALAYA, INDIA by Rajashree Bhuyan, Shristee Panthee & Peter Smetacek	65
MODIFICATIONS TO THE KNOWN EXPANSE OF INDIAN BUTTERFLIES by Shristee Panthee & Peter Smetacek	69
FIRST RECORD OF BANDED ROYAL BUTTERFLY <i>RACHANA JALINDRA</i> (INSECTA: LEPIDOPTERA: LYCAENIDAE) FROM JHARKHAND, INDIA by Tanya Garg	75
TWO NEW LYCANIDAE SPECIES FOR BHUTAN: <i>BOTHRINIA CHENNELLI</i> (DE NICÉVILLE, [1884]) AND <i>UNA USTA</i> DISTANT, 1886 by Piet Van Der Poel	77
THE ELUSIVE PRINCE <i>ROHANA TONKINIANA</i> IN ARUNACHAL PRADESH: AN ADDITION TO THE BUTTERFLY FAUNA OF INDIA by Minom Pertin, Antonio Giudici, Roshan Upadhyay, Sonam Dorji & Peter Smetacek	79
	32

- INDIVIDUAL ABERRATIONS OF THE COMMON BLUEBOTTLE BUTTERFLY *GRAPHIUM SARPEDON SARPEDON* (INSECTA: LEPIDOPTERA: PAPILIONIDAE) IN INDIA
by Shristee Panthee, Peter Smetacek & Parixit Kafley 81
- TWO INDIAN BILATERAL GYNANDROMORPH BUTTERFLY SPECIMENS
by Rosalynd Moore Wankhar 84
- LESTES PATRICIA TAAMPATTI* **SSP. NOVA** (INSECTA: ODONATA: LESTIDAE) FROM MAHARASHTRA, INDIA
by Shriram Dinkar Bhakare, Sunil Hanmant Bhoite & Pratima Ashok Pawar 85
- DISTRIBUTIONAL RANGE EXTENSION OF THE MOTHS *SOMATINA ROSACEA* (SWINHOE), *PTEROGONIA AURIGUTTA* (WALKER) AND *CARRIOLA FENESTRATA* (HAMPSON) (INSECTA: LEPIDOPTERA) TO THE EASTERN GHATS OF ODISHA
by J.M. Samraj, Sandeep Mishra & H. Sankararaman 92
- A PLAIN TIGER BUTTERFLY *DANAUS CHRYSIPPUS* (INSECTA: NYMPHALIDAE) WITH DYSFUNCTIONAL PROBOSCIS IN CAPTIVITY
by Shantanu Dey & Samarth Khanna 95
- CURRENT STATUS OF THE CHINESE PANGOLIN IN SOME COMMUNITY FORESTS OF ARUNACHAL PRADESH, INDIA
by Chiging Pilia, Neeroj Mossang, Dongche Boni, Minam Taggu & Daniel Mize 98
- BUTTERFLY VISITORS TO TWO INVASIVE PLANTS IN THE INDIAN AND BHUTANESE HIMALAYA
by Daya Shanker Sharma, Gyeltshen, Ambica Agnihotri & Peter Smetacek 101

FIRST ENCOUNTER OF INDIGENOUS PREDATORS ON NEW INVASIVE PEST OF GUAVA, WOOLLY WHITEFLY *ALEUROTHRIXUS FLOCCOSUS* (MASKELL) IN TAMIL NADU, INDIA

K. ELANGO¹, S. JEYARAJAN NELSON², S. SRIDHARAN³ & A. ARAVIND⁴

^{1, 2, 3 & 4}Department of Agricultural Entomology, Centre for Plant Protection Studies, Tamil Nadu Agricultural University, Coimbatore - 641 003, Tamil Nadu, India.

*¹elaento@gmail.com

Reviewer: Peter Smetacek

Introduction

Woolly whitefly, *Aleurothrixus floccosus* (Maskell) (Hemiptera: Aleyrodidae) was first described from Jamaica in 1896 (Martin & Mound, 2007) and later it was noticed in Florida in 1909. This whitefly is native to the Neotropical region but is now found throughout the warmer parts of the world, wherever citrus is grown (Malumphy *et al.*, 2015). Recently, the highly polyphagous woolly whitefly, *Aleurothrixus floccosus* (Maskell) (Hemiptera: Aleyrodidae) was recorded in India on guava (*Psidium guajava* L.) (Sundararaj *et al.*, 2019). This whitefly is an invasive species and it is reported to feed on more than 20 plant families and exhibits a strong preference for citrus species. But until now there are no reports on the natural enemies of this invasive whitefly in India.

Methodology

Distribution and documentation of natural enemies of woolly whitefly (*A. floccosus*) was studied in a guava orchard (11°07'N, 76°59' E) in the Coimbatore district of Tamil Nadu. The woolly whitefly affected leaves were closely observed for the presence of natural enemies. The affected samples were collected from the guava orchard and kept under observation at the biological control laboratory for the emergence of parasitoids and predators. The process was then repeated to observe the further emergence of natural enemies. Insects collected from the different guava plants were

transferred to 70% ethyl alcohol and identified in the Department of Agricultural Entomology, Tamil Nadu Agricultural University, Coimbatore.

Results

Earlier, scientists from different parts of the world were documented a few predators such as *Acletoxenus* sp. Malloch (Diptera: Drosophilidae) and *Scymnus (Pullus)* nr. *utilis* Hoang (Coleoptera: Coccinellidae) was found associated with *A. floccosus* colony under field conditions. Yu *et al.* (2011) recorded the predaceous drosophilid *Acletoxenus indicus* Malloch preying on larvae of *A. dispersus* Russell and *Aleurocanthus* Ashby sp. in South China. In woolly whitefly, nymphal stages were vulnerable and cause much damage to the guava leaves by sucking sap from undersurface. Woolly whitefly was segregating more honeydew in the leaves of guava comparing to the other whiteflies. The observation showed that there is nil parasitoid emergence from collected whitefly nymphs samples and fortunately we have documented three indigenous predators which are feeding on nymphal instars of woolly whitefly. Two of the predators belong to coccinellids, namely *Scymnus* sp. (Coleoptera: Coccinellidae) and *Cryptolaemus montrouzieri* Mulsant (Coleoptera: Coccinellidae). The third one is from the order Neuroptera, *Mallada desjardinsi* (Navas) (Neuroptera: Chrysopidae). We documented different life

stages of these predators on woolly whitefly. The present study reported the first encounter of three indigenous predators on this new invasive woolly whitefly, *A. floccosus*.

References

Malumphy, C, S. Radonjic, S. Hrcic & M. Raicevic. 2015. New data on the whiteflies (Insecta: Hemiptera: Aleyrodidae) of Montenegro including three species new for the country. *Acta Entomologica Serbica* 20: 29-41.

Martin, J. H. & L. A. Mound. 2007. An annotated check list of the world's whiteflies

(Insecta: Hemiptera: Aleyrodidae). *Zootaxa* 1492: 1- 84.

Sundararaj, R., K. Selvaraj, C.M. Swamy, M. Ranjith & B.V. Sumalatha. 2020. First record of the invasive woolly whitefly *Aleurothrixus floccosus* (Maskell) from India. *Indian Journal of Entomology* 82(1): 88-91.

Yu, G., L. Wu, J. Lu & H. Chen. 2012. Discovery of a predaceous drosophilid *Acletoxenus indicus* Malloch in South China, with descriptions of the taxonomic, ecological and molecular characters (Diptera: Drosophilidae). *Journal of Natural History* 46 (5-6): 349-354.



Fig.1: *Scymnus* sp grub feeding on woolly whitefly



Fig.2: *Cryptolaemus montrouzieri* grub feeding on woolly whitefly



Fig.3: *Mallada desjardinsi* grub feeding on woolly whitefly



Fig.4: Stalked eggs of *Mallada desjardinsi* on guava leaves (Under surface)