Pablo Liedo
The winner of the National Award for Plant Health 2014
FRUIT FLY NEWS

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In 2012, the National Bureau of Agricultural Insect Resources (NBAIR) initiated the biosystematics of Tephritidae programme to study the tephritid fauna of India. Flies are collected from various parts of India with more emphasis on unexplored regions of Western Ghats, Northeastern Himalayas, the Andaman and Nicobar Islands.

Presently, the NBAIR Museum houses about 5000 specimens of fruit flies in four subfamilies, namely Dacinae, Phytaiinae, Tephritinae and Trypetinae. Of the 260 species reported from India, about 80 species representing various subfamilies are deposited in the NBAIR Museum. Basic taxonomic research of Tephritidae is currently the prime focus.

New Species
Several species of fruit flies have been described and newly recorded from India in the past two years. Five species of fruit flies (Tephritidae), genus *Euphranta* Loew, subfamily Trypetinae, which are pri-
arily monophagous and associated with seeds of tropical rainforest trees and magroves, have been described from India and Sri Lanka. These include:

*E. diffusa* David (*Fig. 1*),
*E. dysoxyli* David (*Fig. 2*),
*E. hyalipennis* David & Freidberg (*Fig. 3*),
*E. thandikudi* David (*Fig. 4*) from India and
*E. neochrysopila* David, Freidberg, Hancock & Goodger (*Fig. 5*) from Sri Lanka (David et al., 2013).

*Acidoxantha galibeedu* David & Ramani (*Fig. 6*) and
*Philophylla lachung* Singh & David (*Fig. 7*) have also been described from India, which breed on flower buds and fruits respectively (David et al., 2014).

*Ortalotrypeta isshikii* (Matsumura) (David & Hancock, 2013) (*Fig. 8*) specimens collected from Sikkim represents a first record of the subfamily Tachiniscinae in India.

These specimens are also known to occur in China, Nepal and Japan (David & Hancock, 2013).

An updated key to identify fruit flies of the genus *Euphranta* of India, *Acidoxantha* Hendel of the world and

*Philophylla Rondani* were published in the past two years (David et al., 2013; David et al., 2014). Apart from adult tephritids, immatures are also being investigated for diagnostic characters, in order to develop a key. Third instar larvae of several species have been collected and are being examined for morphological characterisation.

Studies on the morphology of adults and immatures of the *Bactrocera dorsalis* complex have been initiated to address the complexities in the identification of this complex.

Schutze *et al.* (2014) synonymised the most difficult species in the complex, namely *B. invadens* Drew, White and Tsuruta, *B. papayae* Drew and Hancock and *B. philippinensis* Drew and Hancock with *B. dorsalis* (Hendel) based on 20 years of integrative morphological, molecular, cytogenetic, behavioural and chemocological data.

**Selected References**


David, K. J. and Hancock, D. L. 2013. The first record of *Ortalotrypeta isshikii* (Matsumura) and subfamily Tachiniscinae (Diptera: Tephritidae) from India, with redescription of the species. Australian Entomologist, 40 (3): 131–135.


A poignant news for the fruit fly community.

**In Memoriam: Peter Teal**

Peter Teal, research leader of the Chemistry Research Unit at the USDA's Center for Medical, Agricultural and Veterinary Entomology in Gainesville, Florida passed away in February 2015. Dr. Teal was active in technology transfer efforts related to protecting plants and honey bees from devastating pests while protecting the environment.

*ESA Newsletter*
following the basis of the call for the National Award for Plant Health 2014, published in the Federal Official Daily on July 15, 2014, the qualifying jury, integrated by national experts on plant protection, decided to acknowledge Dr. Pablo Liedo for his efforts in the prevention, control and eradication of plant pests.

Dr. Liedo has carried out work on preventing and eradicating the Mediterranean fruit fly from Mexico, specifically in the implementation of the Sterile Insect Technique (SIT) and the optimization of the mass rearing process and release methods of sterile flies.

He has driven research on the biology and ecology of Anastrepha fruit flies that has supported the implementation of the SIT for species of economic importance, including the Mexican fruit fly Anastrepha ludens.

Also, he has contributed in the teaching and training of integrated pest management with emphasis on biological methods for ecosystem conservation.

Together with researchers at the University of California in Davis and the Max Planck Institute for Demographic Research, he has carried out biodemographic research to better understand the population dynamics of fruit flies.

Published on September 29, 2014 by SENASICA/SAGARPA

COOL VIDEO OF PABLO LIEDO SINCE CHILDHOOD!

PABLO LIEDO IS AN EXPERT IN MEDITERRANEAN FRUIT FLY PREVENTION, CONTROL AND ERADICATION, AND IN ANASTREPHA FRUIT FLIES.
What’s up in the news: the Oriental fruit fly

*Bactrocera dorsalis*

Four devastating fruit flies pests are one and the same species

**28 November 2014 - IPPC**

What difference could it possibly make if a bunch of scientists decided that what were once thought of as four different species of fruit fly actually belong to the same single species? [More..]

Four in one – new discovery on pest fruit flies

**28 October 2014, Rome/Vienna**

Four of the world’s most destructive agricultural pests are actually one... [More]

UN-backed study on fruit flies to prompt better pest controls, renewed trade

**28 October 2014 – UN News Centre**

What was long thought to be four distinct agricultural pests is actually one and the same fruit fly, a new study spearheaded by the United Nations Food and Agriculture Organization (FAO) has shown, ... [More..]

A destructive crop pest with many different names!

**13 November 2014 - Plant Biosecurity Cooperative Research Centre - Australia**

A global research effort has finally resolved a major biosecurity issue: four of the world’s most destructive agricultural pests are actually one and the same.

For 20 years, some of the world’s most damaging pest fruit flies have been almost impossible to distinguish from each other. The ability to identify pests is central to quarantine, trade, pest management and basic research. [More..]
Taxonomy and systematics of African Fruit flies

This bi-annual training course will take place in Tanzania and is being organized by the Royal Museum for Central Africa in collaboration with the Sokoine University of Agriculture (Tanzania)

Deadline for applying is **February 20th, 2015**

[Application form](#)
[Call for application](#)
Ph.D. OPPORTUNITY

EU funded 3yr PhD position
in the Joint FAO/IAEA Insect Pest Control Laboratory
Starting date: May-July 2015

Secure and sustainable food production in terms of quantity and quality is a major challenge facing human societies. However, food security is continuously threatened by established and invasive pest species. Regulations for the use of pesticides are getting stricter to ensure food safety and protect ecosystem health. Population control of agricultural pests by utilising Area-Wide Integrated Pest Management (AW-IPM) biocontrol approaches (including Sterile Insect Technique and/or natural enemies) has great potential to deal with these two demands. [More..]

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PROJECT FUNDING OPPORTUNITY

Invasive alien species

NEXT DEADLINE FOR SUBMISSION OF FUNDING PROPOSALS: 17 JULY 2015

RECENT THEMATIC ACTIVITIES

Facilitating Safe Trade
Regional and country reports documenting the findings of research work in Southeast Asia are now available.

Invasive Alien Species

SPS Market Access Prioritization
The STDF is developing a guide to help countries prioritize different SPS investment options for market access, based on the use of MCDA.

Public-Private Partnerships
Governments and the private sector are increasingly working together in the SPS area to address related capacity constraints and take advantage of market opportunities.
Development of a probiotic larval diet for mass-reared Queensland fruit flies

*Bactrocera tryoni* (Froggatt)

Last Year in September Dr Ania Deutscher joined Drs Olivia Reynolds and Toni Chapman as a research fellow at the Elizabeth Macarthur Agricultural Institute, a Centre of Excellence for Plant and Animal Health (New South Wales Department of Primary Industries) in Australia. Ania is a molecular biologist, with a background primarily in veterinary research and brings to the project a valuable skill set. During her PhD, completed at the University of Wollongong, Australia, Ania characterised several surface proteins of the swine pathogen *Mycoplasma hyopneumoniae*. In addition she has worked with the cattle and buffalo haemoprotezoan (*Theileria orientalis*), vibrios from Pacific Oysters, and in veterinary bacteriology diagnostics. Ania’s work focuses on the development of a probiotic larval diet, designed to increase the efficiency and quality of mass-reared Queensland fruit flies (Q-flies), *Bactrocera tryoni* (Froggatt). This work is part of an Area Wide Integrated Pest Management project incorporating the Sterile Insect Technique funded by Horticulture Innovation Australia Limited (HIA) with matching funding from the Australian Federal Government. This project is also a part of the collaborative 5-year international FAO/IAEA Coordinated Research Project on ‘The Use of Symbiotic Bacteria to Reduce Mass-Rearing Costs and Increase Mating Success in Selected Fruit Pests in Support of SIT Application’. Ania is currently utilising next generation sequencing to investigate the gut microbiota of mass-reared reared Q-fly larvae fed different diets, compared to wild larvae from a number of host fruits in order to identify potential probiotic candidates.
Protocols for Cytogenetic Mapping of Arthropod Genomes

Edited by Igor V. Sharakhov

Tephritid fruit flies are well represented in the book.
October 28, 2014 by CRC Press
Reference - 526 Pages - 91 B/W Illustrations ...
ISBN 9781466598157
3rd MEETING OF THE TEPHRITID WORKERS OF EUROPE, AFRICA & THE MIDDLE EAST (TEAM 2016), 11-14 APRIL 2016, STELLENBOSCH, SOUTH AFRICA.

9th MEETING OF THE TEPHRITID WORKERS OF THE WESTERN HEMISPHERE (TWWH 2016), OCTOBER 2016, BUENOS AIRES, ARGENTINA.

1st MEETING OF THE TEPHRITID WORKERS OF ASIA, AUSTRALIA, AND OCEANIA (TAAO 2016), 15-18 AUGUST 2016, KUALA LUMPUR, MALAYSIA.

10th INTERNATIONAL SYMPOSIUM ON FRUIT FLY OF ECONOMIC IMPORTANCE (ISFFEI 2018), TAPACHULA, CHIAPAS, MEXICO.

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Need help?