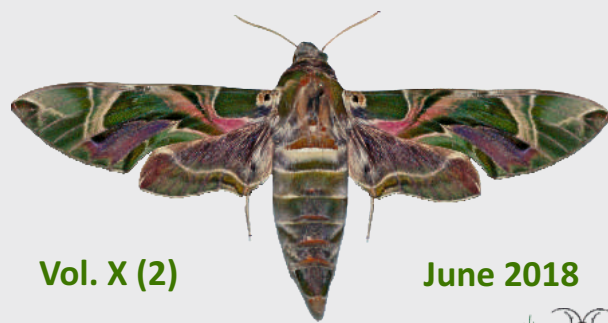


NBAIR Newsletter



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ICAR–National Bureau of Agricultural Insect Resources



Visibility and networking

Honourable Union Minister's visit

Honourable Union Minister of Agriculture and Farmers' Welfare, Mr Radha Mohan Singh, visited NBAIR on 30 June 2018. He addressed the Directors and Heads of Bengaluru-based ICAR institutes in a meeting organised by NBAIR. Later, Mr Singh addressed the staff of NBAIR. He appreciated the work going on in the Bureau on conservation of biodiversity and the non-chemical pest management modules developed, which he emphasised were all integral components of organic farming strategies. He advised all the scientists to set up demonstration trials by utilising their technologies to prove to farmers that increase in yield leading to increase in income is possible through adoption of novel technologies.



Biocontrol Workers' Meet

The most important aspect in biocontrol research is to develop an environmentally sensitive culture of biological control among researchers, students, farmers and the common public through a network mode. If we succeed in this, half the battle is won. The Biocontrol Network in Tennessee, USA, works as an information resource for people interested in bio-intensive pest control and sustainable farming through publication of IPM-related materials, technical papers, reprints of feature articles and provide links to external web pages that discuss non-chemical pest control techniques, as well as reports on the hazards of conventional practices. They display and market IPM products in an innovative and compelling manner exploiting the multi-medium capabilities of the World Wide Web to attract and educate interested

consumers of bio-intensive pest control supplies. If we try to draw parallels, we should say that our AICRP Biocontrol besides providing information on biocontrol techniques, field experiences and successes, also works on documenting the biodiversity of bioagents, generating data on the impact of biocontrol strategies in farmers' fields and building confidence in farmers on the utility of the biocontrol method of pest and disease management.



Till May 2018, the AICRP Biocontrol project comprised 11 regular SAU centres, 4 contingency-funded SAU centres and 15 centres (ICAR and SAU centres) which were zero-



funded. The recent XXVII AICRP workshop, which was held on 17–18 May 2018, saw an interesting aspect quite different from the earlier workshops, that is, the participation of 13 additional centres, which had been provided contingency funds to carry out biocontrol programmes in their respective states. A total of 85 experiments were chalked out for the total 30 centres. Programmes were assigned considering the availability of manpower and funds for each centre. The enthusiasm seen in the new partners is hoped to result in strengthening of programmes, larger area coverage with the utility of bioagents, more biocontrol agents being available commercially and more farmers replacing chemical pesticide rounds with bioagent releases.

Chandish R. Ballal
Director

Research Highlights

New species of *Phlebiaporus*

A new species, *Phlebiaporus supattra* (Fig. 1), was described and illustrated along with the description of the previously unknown male of the genus. This was the first report of the genus from the Oriental region. It was also redescribed with additional characters.

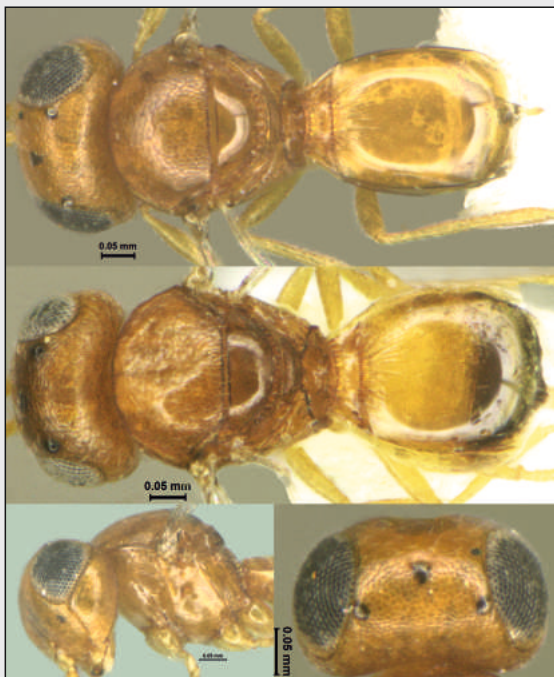


Fig. 1: *Phlebiaporus supattra*

First report of *Sacespalus* from India

The genus *Sacespalus* (Platygastroidea: Platygastrinae), which was first described in 1917 from the Philippines with *S. rugosiceps* as the type species, was recently discovered in India (Fig. 2).



Fig. 2: *Sacespalus* sp.

Revision of *Acrozangis* with description of a new species

The genus *Acrozangis* was revised from India and *A. dakshinae* (Figs 3 & 4) was described from southern India. In addition, a neotype for *A. semiprasina* (Fig. 5) and a lectotype for *Cuspicona antica* were designated. *A. semiprasina* and *C. antica* were found to be subjective synonyms. As the species *C. antica* was not congeneric

to species of *Cuspicona*, it was transferred from *Cuspicona* to *Acrozangis* and a new combination, *A. antica* (Fig. 6), was proposed. *A. semiprasina* was proposed as a new synonymy to *A. antica*. The holotype of *A. dakshinae* has been deposited at NBAIR. The lectotype of *A. antica* is at Naturalis Biodiversity Center, Leiden, The Netherlands (NBC) and the neotype of *A. semiprasina* is at Museum für Tierkunde, Dresden, Germany (MTD).



Fig. 3: *Acrozangis dakshinae*



Fig. 4: Male genitalia of *Acrozangis dakshinae*



Fig. 5: *Acrozangis semiprasina*



Fig. 6: *Acrozangis antica*

New species of *Klabonosa*

The genus *Klabonosa* (Hymenoptera: Pteromalidae) was recorded for the first time from the Oriental region, with both sexes of *K. indica* (Fig. 7) reared from eggs of the assassin bug *Endochus* sp. (Hemiptera: Reduviidae) (Figs 8 & 9) on *Artocarpus heterophyllus*. The male was formally described and illustrated for the first time for the genus.



Fig. 7: *Klabonosa indica*



Fig. 8: Eggs of *Endochus* sp.



Fig. 9: Egg case in lateral view with wasp

Importation of *Smicronyx lutulentus*, the seed-feeding weevil, for potential use against parthenium weed

Parthenium weed (*Parthenium hysterophorus*) is a serious problem in both cultivated and non-cultivated areas in India. The leaf-feeding *Zygogramma bicolorata*, widely known as the Mexican beetle, was imported and propagated in the 1980s, but being a defoliator, its success in management of the weed is just satisfactory.

Therefore, *Smicronyx lutulentus*, the seed-feeding weevil, was chosen as an additional agent for import as it has already shown good results against parthenium weed in Australia (Queensland), and very recently, in South Africa. The 90 adult weevils received from Biosecurity Queensland on 24 April 2018 are undergoing quarantining in the QC-2 facility at NBAIR.



QRT to review the progress made by NBAIR and AICRP – Biocontrol



The QRT – Dr J.H. Kulkarni, Chairman, and members, Dr V.V. Ramamurthy, Dr Mohammad Hayat, Dr R.S. Gill, Dr H.B. Singh and Dr K. Srinivasa Murthy, along with Dr A.K. Singh, Deputy Director-General (Crop Science), Dr P.K. Chakrabarty, Assistant Director-General (Plant Protection & Biosafety) and Dr Chandish R. Ballal, Director, NBAIR.

QRT review meetings at Anand Agricultural University, Anand, and Dr Yashwant Singh Parmar University of Horticulture and Forestry, Solan

The QRT meeting to assess the performance of AICRP centres, viz. AAU (Anand), PAU (Ludhiana) and MPUAT (Udaipur), for the period 2012-17 was held at AAU on 11 April 2018. It was recommended in the meeting that the production of macrobials and microbials, and the area covered by them should be committed as targets to commensurate with the contingency funding. The QRT meeting held at Dr YSPUHF (Solan) on 22 June 2018 to evaluate the work done by the AICRP centres at Dr YSPUHF (Solan), SKUAST (Srinagar) and GBPUAT (Pantnagar) during 2012-17, came up with the suggestion that all proven technologies brought out by the centres should be included in the Package of Practices of the respective universities.



Research Advisory Committee Meeting

The “XXII Meeting of Research Advisory Committee” was held at NBAIR on 18 June 2018. The committee consisting of Dr S.N. Puri (Chairman), Dr P.K. Chakrabarty, Dr V.V. Ramamurthy, Dr Joseph Bagyaraj, Dr Suresh Nair, Dr S. Lingappa and Dr Suraj Singh Rajput (Members) reviewed the research achievements and progress, and gave suggestions for future research. At the outset, Dr Chandish R. Ballal (Director, NBAIR) welcomed the committee and provided a glimpse of last year’s salient findings. The divisional heads, Dr Sunil Joshi, Dr S.K. Jalali and Dr N. Bakthavatsalam, presented the research achievements. The committee opined that an initiative has to be made to document the indirect revenue generated through the use of biocontrol.



Efforts towards international collaboration

Visit of CABI staff

Dr Ulrich Kuhlmann (Executive Director, Global Operations, CABI), Dr Richard Shaw (Country Director, CABI, UK), Mr Gopi Ramasamy (Country Director, CABI, India) and Dr Malvika Chaudhary (Asia Regional Coordinator, Plantwise) visited NBAIR on 12 April 2018 to understand NBAIR's various research activities and to explore future collaborations.



Visit of Bioversity International staff

Dr Simon Attwood, Team Leader of Ecological Intensification of Farming Systems group, Dr Daniel McGonigle, Initiative Manager – Productive and Resilient Farms, Forests and Landscapes, and Dr N.K. Krishna Kumar, Regional Representative, South and Central Asia, Bioversity International, visited NBAIR on 5 May 2018. They had a brief discussion with the Director and scientific staff and deliberated on possibilities and prospects of future collaborative research.

Parliamentary committee visit

The second sub-committee of the Committee of Parliament on Official Language inspected the implementation of official language at NBAIR on 27 June 2018. Dr Prasanna Kumar Patsani, M.P. (Lok Sabha), as the convenor and Dr Sunil Baliram Gaikwad, M.P. (Lok Sabha), as a member of the team went through the official

records, questionnaire, checklist and other relevant documents of the Bureau and appreciated the implementation of official language at NBAIR. Later, they interacted with Director Dr Chandish R. Ballal, Dr S.K. Jalali and other members and certified the satisfactory implementation of official language at NBAIR.



NBAIR technologies in the limelight

A pheromone-based attractant for uzi fly control

A pheromone-based attractant for uzi fly, *Exorista bombycis*, a serious pest of mulberry silkworm, *Bombyx mori*, developed by Dr N. Bakthavatsalam and his team under a project funded by the Central Sericultural Research & Training Institute (CSRTI, Mysuru) of the Central Silk Board, Ministry of Textiles, Government of India, was on display at the National Sericultural Board Exhibition in Hassan, Karnataka.



Controlled release dispenser for delivery of semiochemicals

Dr K. Subaharan received the *DBT Biotech Product, Process Development and Commercialization Award 2018* along with Prof. M. Eswaramoorthy (JNCASR) and Dr Gautam Kaul (ICAR-NDRI) on the 20th Technology Day held at Vigyan Bhavan, New Delhi, on 11 May 2018. The award was handed over by Dr Harsh Vardhan, Honourable Union Minister of Science and Technology; Environment, Forest and Climate Change; and Earth Sciences, for developing a technology on controlled release dispenser for delivery of semiochemicals.

Foldscope workshop for tribal farmers in Tripura

A workshop entitled “Utility of the Foldscope in Crop Protection: Assessment-cum-Training Workshop for Farmers” was conducted on 27 May 2018 at Shivanagar ADC village under Sumili Agri Sector in West Tripura district, by NBAIR in association with Tripura’s College of Agriculture. Eighteen tribal farmers, who generally grow paddy, pineapple, sweet orange, scented lemon besides several vegetables in their smallholdings, participated in the meet at the farmhouse of Mr Sanjit Debbarma, who was recognised in 2016 as the “Best Farmer” under MGNREGA by the Government of India. The farmers received hands-on training on use of the Foldscope, a cheap, paper-based microscope. The techniques of sample preparation, mounting of slides and visualisation of mounted samples under the Foldscope were demonstrated. A field visit was also arranged for the farmers. Dr P. Sreerama Kumar, Principal Scientist at NBAIR, organised this meet in collaboration with Dr Durga Prasad Awasthi, Assistant Professor (Plant Pathology), College of Agriculture, Lembucherra. Mr Kabir Debbarma (Agri Sector Officer of Sumili) and Dr Dharmendra Debbarma (Assistant Professor of Agricultural Extension, College of Agriculture, Lembucherra) participated as extension specialists. This workshop formed part of the twinning component with Tripura’s College of Agriculture under the project funded by the Department of Biotechnology, Ministry of Science and Technology, Government of India. The event was extensively covered by local English and Bengali newspapers.



Employees' day celebration at NBAIR

As a part of the silver jubilee celebrations of NBAIR, "Employees' Day" was celebrated to promote friendship and encourage informal interactions among the staff and family members under the auspices of the Staff Welfare Club of the Bureau on 26 May 2018. The programme included games and cultural events for the staff and their families.



International Day of Yoga at NBAIR

NBAIR celebrated the "International Day of Yoga" on 21 June 2018. Ms Rajalakshmi and team, yoga experts from The Art of Living Foundation, conducted the session. The programme started with practising various *asanas*, *pranayama*, followed by *dhyana* and concluded with *sankalpa*.



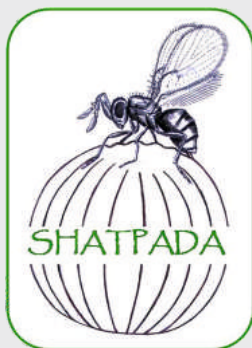
Indian patent granted

Amorphous formulation of entomopathogenic nematodes as biopesticide (Patent No. 295748) (Primary Innovator: Dr M. Nagesh).



Trademark registered

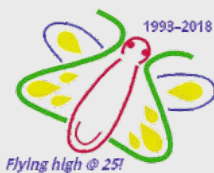
A unique logo carrying the Sanskrit word 'SHATPADAJ' (meaning 'six-legged') was registered as a trademark (No. 2365261) in the name of NBAIR. Dr P. Sreerama Kumar, Principal Scientist, designed this logo, while his father, Dr Prakya S. Subrahmanyam, suggested the word.



Welcome!



Mr B.N. Ramachandrappa, Finance and Accounts Officer, joined NBAIR on 23 May 2018, on promotion from ICAR-ATARI, Bengaluru.



Superannuation

Ms Shashikala S. Kadam, Chief Technical Officer, and **Mr T.A. Vishwanath**, Finance and Accounts Officer, NBAIR, superannuated from service on 31 May 2018. To commemorate their retirement, colleagues at NBAIR organised a farewell function and felicitated them.



Mr T.A. Vishwanath



Selected Publications

- Gupta, A., Yeshwanth, H.M. & Sureshan, P.M. 2018. A new species of *Klabonosa* Boucek (Hymenoptera: Pteromalidae) reared from eggs of *Endochus* sp. (Hemiptera: Reduviidae) from India. *Zootaxa*, 4413(3): 593-600.
- Salini, S. & Schmidt, C. 2018. Revision of genus *Acrozangis* Breddin (Hemiptera: Pentatomidae: Pentatominae) with description of a new species from India. *Zootaxa*, 4413(3): 507-523.
- Veenakumari, K. & Mohanraj, P. 2018. A new species of *Phlebiaporus* (Hymenoptera: Scelionidae: Telenominae) from India, with first description of the male of the genus. *Acta Zoologica Academiae Scientiarum Hungaricae*, 64(3): 217-225.

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