

First National Stakeholders Consultation Workshop
“CONSERVATION AND MANAGEMENT OF POLLINATORS FOR SUSTAINABLE AGRICULTURE, THROUGH AN ECOSYSTEM APPROACH”

G.B. Pant Institute of Himalayan Environment and Development, Almora, Uttarakhand, India

October 8-9, 2004.

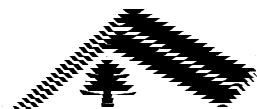
The Ministry of Environment and Forest, Government of India, identified the G.B. Pant Institute of Himalayan Environment and Development (GBPIHED), as the national executing agency for the PDF-B project (Project Development Facility-B), project on “Consultation workshop for conservation and Management of pollinators for sustainable Agriculture, through ecosystem approach” that is being implemented by UNEP, approved by GEF and executed by FAO. The institute, under the leadership of Dr. Upendra Dhar, Director, GBPIHED organized the first National Stakeholders Consultation meeting during October 8-9, 2004 in Almora.

The objective of the PDF-B project is to further the understanding of the issues related to the decline of pollinators that will lay the basis for activities in the Full-size project, and to design the full size project. The preparatory requirements to achieve this will focus on information collection, and analysis, establishment of local/national/regional/global priorities, and development of implementation strategies. Participating countries (Brazil, Ghana, India, Kenya, Nepal, Pakistan, and South Africa) and other stakeholders in the Full-size Project will be identified, collaborative effects will be established, and the donor co-financing will be mobilized during the PDF-B stage. This project aims to provide the added global benefits of information exchange, the dissemination of good practice, capacity building and exchanging knowledge at the farm, country, regional and global levels.

On the first day of the two day workshop, Dr. Upendra Dhar, welcomed the chief guest Ms. Linda Collette, Senior Officer (Crop Biodiversity) FAO, Italy, and the diversified gathering from the different sectors, like academists, scientist, NGO's and farmers (see Annexure II. List of participants). While addressing the gathering he highlighted 'Pollinators' as the focus of the workshop. In the keynote address he explained how human welfare is linked with pollinators. He explained how agriculture, conservation, wild species and sustainable development, four major phases of pollinators, are linked and emphasized the need for a holistic approach for conservation. In context to the workshop theme on mountains he said that the Himalayan mountain has a unique geographical setting and has diverse biological and cultural practices but has an extreme vulnerability. He also said that the Indian Himalayan region is unique that beats geological formation and the mountain people are largely dependent on biological sources, so maintenance of biological resources are very important. He also pointed out with details on Indian Himalayan region agricultural crop and community diversity. At the end he briefed about the work plan of the workshop process.

Ms. Collette Linda, in the inaugural address appreciated the Nodal agency GBPIHED for coordinating this workshop in a short notice. She was delighted to see diverse gathering across the region and country. While explaining the GEF frame work she said FAO, will be responsible for the implementation of the project to fulfill the objectives. UNEP, as the GEF Implementing Agency, will be responsible for overall project supervision to ensure consistency with GEF and UNEP policies and procedures, and will provide guidance on linkages with related UNEP and GEF-funded activities. The inaugural ended with the vote of thanks by Dr. P.P. Dhyani.

The technical session after the inaugural chaired by Dr. Subadra Devy, started with a session of presentation by Ms. Collette Linda about full size project include PDF-B phase and its implementation process at international and national level. She also presented about the preliminary Global Log Frame for the Full-size project.



Dr. B.A. Daniel chaired the second technical session that had nine presentations (Box.1). The trend and status of fruit and crop pollinators, the practice of traditional knowledge practiced was reviewed by the presenters.

In continuation of the second session, the participants were divided into three working groups viz., Eastern Himalaya, Central Himalaya and the Western Himalaya to discuss and draw the matrix of activities, gaps, opportunities on the following topics: Review / Status of pollinators in your area; Inventory of local management practices and traditional knowledge; Identify target pollinator groups; Pollinator – plant interaction; Capacity building mechanism. Participants from other than Himalayan region joined with the groups to share their experience. The groups were asked to present their points of discussion. The discussion details will be published as a proceeding by the host institute. As a concluding remark of the first day's meeting, Linda pointed out that the work that is being done in the workshop will be presented at the International Steering Committee meeting in December 2004 by the National Nodal agency. She also briefed the global work plan and explained how this information will be utilized for the development of the Full-size project.

The second day of the meeting started with two short presentations: 1. Role of traditional agriculture in conservation and management of pollinators and, 2. Dispersal ecology of pine seed in Uttaranchal: formula used for pollen dispersal studies.

One of the main objectives of the workshop is stocktaking of current status of pollinators in different parts of Indian Himalaya. Linda Collette explained the details of this exercise and the following topics were addressed:

1. Assessment of the status, habits and interactions of pollinators/reasons for pollinator decline
2. Local management practices and traditional knowledge
3. The enabling environment (market incentives, economic valuation, policy frameworks, capacity, etc)
4. Review current on-going activities and collect baseline data on related initiatives,
5. Current knowledge/capacity on pollinator conservation and sustainable use and
6. Existing databases and other information networks.

Ms. Linda Collette, briefed the guidelines that has to be followed while doing the stocktaking exercise and explained that the GEF is a co-financer and the GEF pay for the portion of the cost of the Full-size project.

The session on work plan was chaired by Dr. O.P. Agarwal. The participants, based on their expertise committed to provide information to a regional point person (see Annexure I. for format). Accordingly, S.S. Samant for the Western Himalaya, Uma Melkania and R.K. Maikhuri for the Central Himalaya, K.K. Singh for the Eastern Himalaya and B.A. Daniel for the rest of India, were identified as coordinators. The following will be the resource persons for the region: Western Himalaya – J.K. Gupta, H.K. Sharma, V.K. Mattu, Patiyal, V.P. Uniyal, and S.S. Thakur; Central Himalaya – P.C. Joshi, M.S. Khan, M. Arif, C.M. Sharma, S.N. Sushil, U. Melkania, and progressive farmers; Eastern Himalaya – R. Varatharajan, and H. Dhattatreya; Rest of India – M. Soubadra Devy, B.A. Daniel, Daisy Thomas and O.P. Agrawal.

It was decided that reports from the regional point persons should reach the Nodal agency by 25th October 2004. It was also decided by the workshop participants that the National partners will be identified by the Nodal agency after the completion of the stocktaking exercise and the date of the second workshop will be finalized and announced later. In the concluding session Dr. Upendra Dhar thanked all participants for attending the meeting. Ms. Linda appreciated the involvement and commitment that she observed from the participants. Dr. R. Varatharajan thanked the GBPIHED, Director and all the staff for hosting and thanked Ms. Linda for leading the workshop.

Box 1. Technical presentation by the workshop participants

Pollination ecology of temperate fruit crops in Shimla Hills. Dr. V.K. Mattu.
Insect pollinators and their conservation. J.K. Gupta.
Pollinators for sustainable agriculture. Dr. S.N. Sushil.
Pollinators: Issues in fruit and vegetable crops. Dr. Harish K. Sharma.
Landscape approach to pollination. Dr. Subadra Devy.
Conservation and management of insect pollinators. On going Research Programme on pollinator conservation. Dr. M.S. Khan.
Ecosystem approach for conservation and Management of pollinators through understanding structure and function. Dr. Uma mallkania.
Role of small insects in pollination. Dr. R. Varatharajan.
Status of Insect biodiversity and pollinations and their sustainable use for crop production. Dr. Momd Arif.
Role of traditional agriculture in conservation and management of pollinators.
Dispersal ecology of pine seed in Uttaranchal: formula used for pollen dispersal studies.



**ICINSA Network member
DIRECTORY on line**

The second edition of *Invertebrate Conservation and Information Network of South Asia* member directory is available at:
<http://www.zooreach.org/Networks/Invertebrate/ICINSA%20Directory%20II.pdf>

Annexure I: Proposed content on report preparation

Status of pollinators

- Brief summary
- Description of Agro-ecosystems/farming systems (crop types, other land uses including NTFFP, cropping system/cycle)
- Proportion of different crops and pollinators
- Ecology of the important pollinators for important crops
- Analyse - Status of pollinators, habits, whether decline (threats at local level)
- Analyse - missing Information, gaps
- Conclusions/Recommendations/issues and areas for further activities in the Full-size Project
- References with full documents (reprints, reports etc.)
- Ways and means: Annexes, tables, maps, database

Local management practices and traditional Knowledge

- Traditional knowledge & management practices by agro-ecosystems/farming systems/NTFFP (cereals, vegetables, oil seeds, horticulture), crop types, other land uses
- Effectiveness - still in practices
- Assessment of knowledge erosion
- Annexes, tables, maps, database
- Ways and means: find experts/farmers/museums/interview

Enabling environment

- National/State Policies and Acts (Agriculture, Environment, landuses, Biodiversity, etc.)
- Support Programmes (Agriculture Research & Extension: Taxonomical and Ecological research)
- Support for Conservation
- Existing Market Forces
- Annexes, tables, maps, database
- Ways and means: find experts/farmers/museums/interview

Review current on going activities and collect baseline data

- Listing of organizations and activities (Objectives and Outcomes)
- Published Information
- Annexes, tables, map, database
- Ways and means: find experts/farmers/museums/interview

Current knowledge / capacity on pollinators

- State of Scientific Acknowledge
- Review of studies on pollination biology of crops
- Inventory of personnel involved in pollinator studies and their level of training
- Level of pollination studies (school/university curriculum)
- Level of public awareness
- Annexes, tables, map, database
- Ways and means: find experts/farmers/museums/interview

Existing database and other information networks

- Pollinator catalogues, datasets, specimen databases, identification keys
- Website, means of conveying with farmers and public
- Existing networks
- Annexes, tables, map, database
- Ways and means: find experts/farmers/museums/interview.

Annexure II. List of participants

Ms. Collette Linda, FAO, Rome.
Dr. Upendra Dhar, GBPIHED, Almora.
Dr. Harish K. Sharma, Y.S. Parmar Univ. of Horti & Forestry, Kullu.
Dr. J.K. Gupta, Y. S. Parmar University of Hort. & Forestry, Solan.
Dr. Nirupama Sharma, Y. S. Parmar Univ. of Hort. & Forestry, Solan.
Dr. Soubadra Devy, ATREE, Bangalore.
Dr. V.K. Mattu, Himachal Pradesh University, Shimla.
Dr. V.P. Uniyal, Wildlife Institute of India, Dehradun.
Dr. B. N. Pandey, State Honey Bee Keeping Center, Uttaranchal.
Dr. C. M. Sharma, H. N. B. Garhwal University, Srinagar.
Dr. K. K. Singh, GBPIHED, Sikkim.
Dr. O. P. Agarwal, Jiwaji University, Gwalior.
Dr. P.C. Joshi, Gurukul Kangri University, Uttaranchal.
Dr. R. K. Maikhuri, GBPIHED, Uttaranchal.
Dr. R. Varatharajan, Manipur University, Imphal.
Dr. S. S. Samant, GBPIHED, Himachal Pradesh.
Mr. Y. K. Rai, GBPIHED, Sikkim.
Dr. S. N. Sushil, VPKAS, Almora.
Dr. A. K. Mandal, Forest Research Institute, Dehradun.
Mr. B. S. Gaira, Central Himalayan Rural AG, Mukteshwar.
Ms. Daisy Thomas, Central Bee Res. & Training Institute, Pune.
Mr. Dhiren Kapil, Organic Farmer, Nauchi, Sikkim.
Dr. H. Dhattatreya, IIRM, B.S. Road, Sonitpur.
Mr. G. Sharma, SAVE, Kullu & UNA.
Mr. H. K. Bora, State honey bee keeping center, Nainital.
Dr. K. Kothari, GBPIHED, Almora.
Dr. M. Arif, Defense Agriculture Research Laboratory, Uttaranchal.
Mr. M. C. Mittal, KVIC, MDTC, Nainital.
Dr. M. S. Khan, G.B. Pant University, Pantnagar.
Mr. N. S. Rawat, Bee Keeper, Jeolikot, Nainital.
Dr. P. Bujarbarua, GBPIHED, NE Unit, Vivek Vihar, Itanagar.
Dr. P.P. Dhyani, GBPIHED, Almora.
Mr. Pushkar Singh, Himalayan Foundation, Uttaranchal.
Dr. R. C. Sundriyal, GBPIHED, Almora.
Dr. R. S. Rawal, GBPIHED, Almora.
Dr. S. S. Chandel, Nav Bahr, Shimla.
Dr. S. S. Patial, Directorate of Horticulture, Nav Bahar, Shimla.
Dr. S. S. Thakur, C.S.K. Himachal Pradesh University, Palampur.
Mr. Suresh Sharma, Progressive farmer, HP.
Mr. T. C. Pandey, Uttarakhand Maun Palan Co-operative society Ltd, Haldwani.
Ms. Uma Melkania, GB Pant University of Agri and Tech., Almora.
Prof. Vir Singh, GB Pant University of Agri and Tech., Pantnagar.
Dr. B. A. Daniel, Zoo Outreach Organisaion, Coimbatore.

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The institute was established in 1988 as an autonomous Research and Development Institute of the Ministry of Environment and Forest, government of India, New Delhi, for sustainable development in the Indian Himalayan Region (IHR). Off late, it has emerged as a leading institution for fostering scientific knowledge, formulation of policy guidelines, and development of efficient strategies for conservation and management of natural resources.

The Institute has also been recognized as a Nodal agency for R&D programmes in the Indian Himalaya by the MoEF-India, and many international organizations. The area of operation is about 5,91,000 sq km (geographical) covering around 53 million people, spread over twelve states of India, Viz. Jammu & Kashmir, Himachal Pradesh, Uttaranchal, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, Assam and West Bengal Hills. All the R&D activities of the Institute are of multi-disciplinary nature, interlinking natural and social sciences. Through IERP (Integrated Eco-development Research Programme), the Institute is also providing extramural funds for promoting of region specific R&D.

Core programmes of GBPIHED:

- Land and water resource management
- Sustainable development of rural ecosystems
- Conservation of Biological diversity
- Ecological economics and environmental impact analysis
- Environmental physiology and biotechnology
- Institutional networking and human investment
- Indigenous knowledge system

Incredible World of Insects: Education through exhibition

From the rich tropical forests to scorching desert to the cold Arctic and the Antarctic, there is absolutely no place on this planet where these ancient group of animals 'insects' have not occupied. They crawl, chirp, buzz, and swarm all around us. Some live even inside plants and animals.

The diversity of insects is so vast and rich that even individuals and species of insects beat all other groups of animals combined. There are more than a million species of insects are named and more than 10 million species yet to be discovered.

Six legs, distinct head, thorax and an abdomen with a pair of highly sensitive antennae, compound eyes and as in most insects one or two pair of wings set these beautiful creatures apart from other organisms.

Butterflies and moths belonging to order Lepidoptera and beetles belonging to order Coleoptera are very popular for their sheer beauty and unimaginable colours. But insects also include cockroaches, dragonflies, grasshoppers, locusts, stick insects, praying mantis, bees, ants, wasps, white ants, lice, bugs, mosquitoes, sliver fish, fleas and a whole lot of unfamiliar ones.

Insects are seen as harmful for the devastation they cause on our crops but we also derive a lot of benefits from them, like honey, silk, lac and not to forget that what ever we eat all are pollinated day and night by these 'hard-workers'. It is but 'human nature' to see more of 'harmful' than 'beneficial' from insects. Our ever-increasing population and demand on land has taken us right next to the forests pressuring insects to migrate from farm land to the forests and *vice versa*.

Insects play a vital role in our lives but we are ignorant of their help. They maintain the ecological balance in nature. Earlier, before the advent of pesticides it was some of these insects that preyed on the pests and kept them in check. Termites and other insects help in reducing the dead wood and other organic matter without a trace; not even the smell of the dead, just imagine if all the dead organic matter were to be collected around us.

Since most of the insects are small they are unnoticed, unlike big mammals, failing to realize the ecological as well as economical importance of them. Pollination by insects is of immense economical value probably many may not realize that crop pollinated by insects have better results than the other modes used. Termites are rich source of proteins. Insects are bio-indicators; presence of stonefly and mayfly indicates the purity of water, lac is used in shoe polish, electrical equipments and also jewelries are made out of it. Dyes too are extracted; cochineal insects yield cantherdine and of course aesthetically beetles have always fascinated and have been used as jewels and have inspire many artists, poets and architects.

Insects have always been a neglected subject and unlike for the birds and butterflies there is no 'field guide' to help identify insects in field.

Amazing facts about insects:

While gathering food, a bee may fly up to 60 miles a day

Queen termite can lay 40,000 eggs per day.

Adult Mayfly lives only for a day.

The grasshopper can hear strident call of his mate, but unable to hear anything else.

The honeybee dies immediately after it stings for the first time.

During the ever first insect exhibition, many facts about insects were revealed. The exhibit named "KEETA PRAPANCHA 2004" was organised in Mysore under the joint venture of Sri Chamarajendra Zoological Gardens, Mysore and Green Club, NGO from Mysore, from 18-24th April 2004. Over 500 insects in 43 display cabinet boxes, more than 70 species of *beetles*, including many varieties of Jewel beetles, dung beetles varying in sizes (from as big as 2 ½ inch to a miniscule 2mm), different species of lady bird beetles, many species of ground beetles along with more than 20 species of ants, more than 30 species of bugs, more than 15 species of grasshoppers, 11 types of praying mantis, more than 8 species of wasps, more than 15 species of flies, 7 types of cockroaches, more than 50 species of butterflies, more than 20 species of moths, 6 different types of dragonflies, 4 types of damselflies, 3 species of honey bees, lac insects and its products, queen termite, different types of silk moths and their products, stamps and photographs on insects were on display. Insects were classified as Food insects, Social insects, Pollinators, Aquatic insects, Social Insects, Sound Producing Insects, Medicinal insects, Fast running insects, Predators etc. The display also included 66 posters; insect stamps from Mr. Laximnarayan's collections and beautiful photos on insects. Four different insect nests along immature phases were also on display.

Students and the public were requested to make use of the opportunity to learn more about the incredible world of insects.

Mr. Kumar Pushkar, Director of Mysore Zoo on the occasion of the exhibition said that "With so many insects and their products on display we hope to reach the public and help understand insects better. If only we realize the importance of insects we can make our lives better. We will be happy if we able at least to evince interest and curiosity in the public".

Mr. Sadanad, one of the botanist about the exhibition opines "Insects play vital role in economy, ecology and environment. Basic knowledge of these creatures even from the layman's point view is essential because insects are all around us so to say. They have close association with plants be it crops, forest species, ornamental. To realise their importance these kind of exhibitions are very essential also it its one of the best to introduce a layman to the mysterious world of insects".

Mr. Mahesh Kumar delighted about the exhibition commented "I never there were so many amazing facets about insects. I wish they had taught us about them in my school, so that we would have developed respects to these creatures. But now I'm sure not only I but even my children know there is very big world of insects out there".

The organizers wish to thank ATREE, Bangalore, University of Agricultural Sciences, Bangalore, and Zoo Outreach Organisers, Comibatore.

-D.H.Tanuja

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Common Name	Scientific Name	Status
Lycaenidae		
Pea Blue	<i>Lampides boeticus</i>	U
Dark Cerulean	<i>Jamides bochus</i>	C
Peacock Royal	<i>Tajuria cippus</i>	U
Hesperiidae		
Brown Awl	<i>Badamia exclamationis</i>	R
Indian Palm Bob	<i>Status gremius</i>	R
Rice swift	<i>Borbo cinnara</i>	U

C - Common, U - Uncommon, R - Rare.

Butterflies of Pohara Malkhed Reserve Forest, Amravati District (Maharashtra)

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A study was carried out for documenting the diversity of Butterflies of Amravati District of Maharashtra from August 2001 to May 2003. Pohara Malkhed Reserve forest was studied which is proposed under consideration for sanctuary status by the state Government.

Pohara range of hills in Amravati district (Maharashtra) is located between 20° 57' N and 77° 57' E. The total area is about 80² km. This includes five protected forests and six reserve forests. Pohara Malkhed Reserve forest encompasses 750 to 800 hect. From this forest 193.704 hec is a 'A' class forest and 424.506 hec. is 'C' class forest and is bordered from western side by Amravati city. Annual rain fall is 1500 to 1600mm. Minimum and Maximum temperature of this is 10°C and 44°C respectively. During May, the hottest month of the year the temperature goes upto 45°C.

Vegetation of the Pohara Malkhed Reserve forest is semi evergreen, dry deciduous and shrub forest. Mainly Teak (*Tectona grandis*), Khair (*Acacia catechu*), Palas (*Butea monosperma*) and Salai Plantation. Type of soil is Black cotton type and Basaltic Rock somewhere is Ioni and Red soil. There are so many grassland patches in this forest and various Watlands available in and around the forest, i.e. Indla, Wadali, Chhatri, Pohara, Bhiwapur, Sawanga, Baslapur, Amravati University, Kondeshwar, Mardi, Virgawhan and Ghatkhed Reservoir,

Pohara Malkhed Reserve forest has no consolidated and authentic record of Butterflies. A number of surveys were made from August 2001 to May 2003 and samples were collected. Nets were used for collecting the specimens. Some specimens were narcotized with menthol crystal and were air-dried for identification. Some species were identified by observation.

Observations were made during morning hours and mostly upto 10 meter distance. All the specimens were examined carefully and identified by using various reference book. (Krushnamegh Kunte, 2000; Gey, *et al.*, 1992). Fifty three species belonging to five families were recorded (Table.1). Of the total 24 species (45.2%) were uncommon and seven species (13.2%) were rare in occurrence in the study area.

The largest family is represented by Nymphalidae with 24 species, followed by Lycaenidae with 10 species. Family Papilionidae and Pieridae were represented 6 and 10 species respectively and family Hesperidae was represented by three species only.

Acknowledgement:

Authors are very much thankful to Dr. G.N. Vankhede, Head, Deptt. of Zoology, Amravati University, for their cooperation and valuable suggestion time to time.

Reference:

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Table 1. List of Butterflies of Pohara Malkhed Reserve forest.

Common Name	Scientific Name	Status
Papilionidae		
Common Mormon	<i>Papilio polytes</i>	C
Crimson Rose	<i>Pachliopta hector</i>	C
Tailed Jay	<i>Graphium agamemnon</i>	C
Spot Swordtail	<i>Graphium nomius</i>	R
Common Bluebottle	<i>Graphium sarpedon</i>	R
Lime Butterfly	<i>Papilio polymnestor</i>	U
Pieridae		
Common Emigrant	<i>Catopsilia pomona</i>	C
Mottled Emigrant	<i>Catopsilia pyranthe</i>	C
Common Grass Yellow	<i>Eurema hecabe</i>	U
Spotless Grass Yellow	<i>Eurema laeta</i>	C
Common Jezebel	<i>Delias eucharis</i>	R
Common Gull	<i>Cepora nerissa</i>	C
Pioneer	<i>Anaphaeis aurota</i>	U
Common Albatross	<i>Appias albina</i>	C
Yellow Orange Tip	<i>Ixias marianne</i>	U
Small Orange Tip	<i>Colotis etrida</i>	U
Nymphalidae		
Common Evening		
Brown	<i>Melanitis leda</i>	C
Common Bushbrown	<i>Mycalasis perseus</i>	C
Common Five Ring	<i>Ypthima baldus</i>	U
Common Three Ring	<i>Ypthima baldus</i>	U
Tawny Coster	<i>Acraea violae</i>	U
Common Leopard	<i>Phalantia phalantha</i>	U
Baronet	<i>Euthalia nais</i>	C
Common Sailer	<i>Neptis hylas</i>	R
Common Castor	<i>Ariadne merione</i>	C
Lemon Pansy	<i>Junonia lemonias</i>	C
Yellow Pansy	<i>Junonia hierta</i>	C
Blue Pansy	<i>Junonia orithya</i>	C
Peacock Pansy	<i>Junonia almana</i>	U
Grey Pansy	<i>Junonia atlites</i>	U
Chocolate Pansy	<i>Precis iphita</i>	R
Painted Lady	<i>Cynthia cardui</i>	U
Danaid Eggfly	<i>Hypolimnas misippus</i>	U
Great Eggfly	<i>Hypolimnas bolina</i>	U
Blue tiger	<i>Triumala limniace</i>	C
Glassy Tiger	<i>Parantica aglea</i>	C
Plain Tiger	<i>Danais chrysippus</i>	C
Striped Tiger	<i>Danais genutia</i>	C
Common Indian Crow	<i>Euploea care</i>	C
Angled Castor	<i>Ariadne ariadne</i>	U
Lycaenidae		
Rounded Pierrot	<i>Tarucus nara</i>	C
Tiny Grass Blue	<i>Zizula hylax</i>	U
Dark Grass Blue	<i>Zizeeria karsandra</i>	U
Lesser Grass Blue	<i>Zizina otis</i>	C
Grass Jewel	<i>Freyeria trochylus</i>	C
Gram Blue	<i>Euchrysops cnejus</i>	U
Plains Cupid	<i>Chilades pandava</i>	U

**Invertebrate articles published in
ZOOS' PRINT JOURNAL (Jan 2003 - July 2004)**

- R.M. Sharma**, New records of Lasiopterine midge galls (Diptera: Cecidomyiidae: Cecidomyiinae: Lasiopteridi) from Maharashtra. (2003). 18(1): 993.
- P.R. Arun**, Butterflies of Siruvani Forest of Western Ghats, with notes on their seasonality. (2003). 18(2): 1003-1006.
- R. Sunil Kumar**, A checklist of polychaete species in some mangrove areas of Asia. (2003). 18(2): 1017-1020.
- B.N. Putatunda and D.P. Abrol**, Mites associated with bees in Jammu & Kashmir, India. (2003) 18(2): (1021-1024).
- T. C. Narendran and P. A. Sinu**, A new genus and species of Eulophidae (Hymenoptera: Chalcidoidea) from India. (2003). 18(3): 1031-1033.
- Pawan Gajbe**, Description of a new species of spider of the genus *Castianeira* Keyserling (Araneae: Clubionidae) from Madhya Pradesh. (2003). 18(3): 1034-1036.
- H. V. Ghate, Nilesh Rane and S. G. Patil**, New record of Conchostracha (Crustacea) from Pune, Maharashtra. (2003). 18(3): 1046.
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Sightings of *Argiope anasuja* Thorell 1887 and *Argiope aemula* (Walckenaer, 1842) (Araneae: Araneidae) in Andhra Pradesh, India

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During the course of our surveys in different parts of Andhra Pradesh and through this note we put on record the sightings of the two species *Argiope* (Araneae: Araneidae) hitherto unreported from Andhra Pradesh.

On 11 August 1998, CS sighted a specimen of *Argiope* sp., that was later identified as *Argiope anasuja* Thorell 1887 based on its pentagonal abdomen that was truncate in front, broadest in the middle and abruptly narrowed, on the underside of the roof of the Guest House at Corangi in Coringa Wildlife Sanctuary (c' 15°17'N & 76°26'E) in East Godavari district. Further search in the vicinity yielded its presence from two more locations in the Guest House Complex and a few more localities in the mangroves near Boddu Venkatayapalem village. The photo voucher of the first specimen (NHM.OU/ARACH 1998 1P) has been deposited in the Natural History Museum of Department of Zoology, Osmania University, Hyderabad. This species was later sighted at two different localities in Pocharam Wildlife Sanctuary (18°10' N & 78°15' E) Medak district between 1998 and 1999.

Subsequently on 6 June 2003, CS and MS sighted one specimen of *Argiope anasuja* Thorell 1887 and a few female specimens of another species of *Argiope* near Shikaram (16°02' N & 78°55' E) in Kurnool district part of Nagarjunasagar Srisailem Tiger Reserve. The later spiders were identified as *Argiope aemula* (Walckenaer, 1842) basing on their longer than wide, oval and lightly rounded abdomen with numerous black and yellow/golden horizontal lines. The photo voucher of one of the specimen (NHM.OU/ARACH 2003 1P) has been deposited in the Natural History Museum of Department of Zoology, Osmania University.

Again on 25 September 2004, CS and BS sighted a mature female of *Argiope aemula* (Walckenaer, 1842) sitting on a web with its head down stretched between two guy lines supporting an electric pole near Environment Education Centre at Jannaram in Kawal Wildlife Sanctuary (19°15' N & 78°55' E). This specimen was collected and deposited in the Natural History Museum of Department of Zoology, Osmania University, Hyderabad (NHM.OU/ARACH 2004 1S). On 26 September 2004 another individual of the same species was sighted on web on a very low bush within teak forest near Rampur. The photo voucher of this specimen (NHM.OU/ARACH 2004 1P) has been deposited in the Natural History Museum of Department of Zoology, Osmania University, Hyderabad.

Both the species of the *Argiope* reported here are wide-spread species in India. Levi (1983) opined that the representatives of the genus *Argiope* are found in the

tropics and sub tropics from Japan, China, India to Indonesia as far as Papua New Guinea. *Argiope anasuja* Thorell 1887 has been so far reported from Tamil Nadu (Ramnadpuram, Chingleput, Ootacamund, Tuticorin); Karnataka (Bangalore); Kerala (Palakkad); Maharashtra (Nasik); Orissa (Barkuda Island in Chilka Lake); Bihar (Chota Nagpur, Chakradharpur); Gujarat (Navsari, Dangs); Chattisgarh and West Bengal (Koch Bihar, Calcutta) (Pocock, 1900; Tikader, 1982; Biswas and Biswas, 1992; Gajbe, 2003; Patel, 2003a, b; Siliwal *et al.*, 2003). We report for the first time the presence of *Argiope anasuja* Thorell 1887 from Andhra Pradesh.

Argiope aemula (Walckenaer, 1842) has been so far reported from Kerala (Trivandrum), Tamil Nadu (Nilgiri Hills), Maharashtra (Pune, Jalgaon), Madhya Pradesh (Seoni, Mandla, Jabalpur), Chattisgarh (Bastar), Gujarat (Balasar), West Bengal (Darjeeling), Bihar, Rajasthan and Andaman & Nicobar Islands (Pocock, 1900; Tikader, 1977, 1982; Biswas & Biswas, 1992; Gajbe, 2003, 2004a, b). We put on record the first report of the occurrence of *Argiope aemula* (Walckenaer, 1842) from Andhra Pradesh.

Acknowledgements

We thank Chief Wildlife Warden, Andhra Pradesh Forest Department and other concerned officer for permission and encouragement. We also thank the Head, Department of Zoology for providing us necessary facilities. The first two authors (CS & BS) acknowledge individual research grants to them from CSIR, New Delhi.

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Project on Invertebrate Assessing and Redlisting

Greetings from IUCN SSC South Asian Invertebrate Specialist Group / Invertebrate Conservation and Information Network of South Asia.

As one of the fulfillment of the objectives of the South Asian Invertebrate Specialist Group we are on the process of collecting information of selected invertebrates that face threat of extinction. The objective is to prioritise the threatened species and to assign a status to it utilizing the existing information about the species. The ultimate intention of this project is to include highly threatened invertebrate species in the IUCN Red List of Threatened Species.

Through invertebrates dominate all forms of life by their sheer numbers and diversity, very little attention is being paid to them and they are grossly neglected. The primary reason for this kind of attitude is lack of information or ready availability of existing information. When compared to mega vertebrates like big cats and other mammals, very little is known about invertebrates. Life history, ecology, distribution, population dynamics etc. are known for only a few species. Information on invertebrates, if at all existing, is scattered. The actual status of these invertebrates in the wild is not known. There is an absolute need to know the status of some select groups of invertebrates so as to understand the threats impinging on the entire group. Although different groups are under different threats, a fair representation will allow planning future conservation measures to protect these lesser-known organisms.

As part of the South Asian Invertebrate Specialist group mandate, we have undertaken red listing of at least 250 taxa for this year. As per the guidelines of the red listing process, information will be processed at our office, evaluated as per the Red List Criteria and submitted by March 2005. For this we are soliciting information from experts who have taxonomic, ecological, distribution, and other knowledge on either one or a group of species / taxa, including the threats affecting their habitat or populations. The information will be peer-reviewed, compiled in the Red List format, edited and submitted for the 2005 IUCN Red

List of Threatened Species.

All contributors will be designated authors of the information, while the South Asian Invertebrate Specialist Group officers (Dr. B.A. Daniel and Dr. T.N. Ananthkrishnan, Co-chairs and Sanjay Molur, Red List Focal Point) will coordinate, evaluate the assessment and edit the information for style, content and details. The final information will be sent out to the Red List authorities and also be published as an official IUCN SSC document for the region.

With an invitation to participate in this important venture. Given with this sheet are the details required in assessing the status of a taxon. You could contribute information in all sections or to the sections you are most familiar with. In case you are interested, please let us know by return mail along with the list of species you would like to provide information on and wish to assess. This is an open list and you can include any native South Asian endemic species for assessment. Please provide a systematic list along with recommendations of taxa you wish to provide information or wish to be assessed.

In case there is more than one author for a species, information will be circulated to all authors for finalization before the assessment.

Please remember that this process is time consuming for the authors as well as the editors/compilers. The earlier you can provide information, the faster and better it is for proper peer-review and submission. We have enclosed an example (not a perfect one), but something similar to what is expected from this exercise.

Importantly, this exercise is restricted to only macro invertebrates, not microbial forms or single-celled organisms. Please write to <icinsa@vsnl.net> to join this project.

With regards
B.A. Daniel, T.N. Ananthkrishnan, Sanjay Molur, Sally Walker

Instructions to contributors:

PROJECT ON INVERTEBRATE STATUS ASSESSMENT AND REDLISTING

Information needed for the species and Instructions for the contributors

Scientific name (current, valid name with authority and date):

Synonyms: (Notes on taxonomy if any to include comments on uncertainty: ambiguity in synonyms, commonly confused mimics, sympatric species)

Sub species: (List all sub species with authority, date and location)

Common Name: English, Vernacular

Family:

Distribution: *Global:* List by countries

Within South Asia: Country: State, District, Taluk, Location, Specific area or locality and coordinates. (Notes on distribution: include references, broader areas or countries if occurring outside of South Asia, abundance or rarity in location, sympatric associations if any).

Habitat: Include notes on dominant primary habitat in which the species occur along with notes on adaptations in other habitats. Add other general information on temperature, rainfall and altitude range of the species.

Habitat quality: in terms of changes in quality of habitat if any due to human factors and its effect on population, if known. Disturbance, threats to the habitat should be elaborated.

Life History: egg, larva, pupa and adult. Breeding season and seasonality; Food/host plants; Population decline/relative abundance.

Threats: To habitat, to population, including aspects such as human interference, deforestation, loss of host food plant, diseases etc.,

Recommendations: List recommendations on Research, *in situ* and *ex situ* conservation requirements, etc.

Illustrations: 1. Provide a detailed map on the distribution of this species / taxon; 2. any relevant photos; 3. illustrations on its host plants, habitat, life history, disease etc.

Literature: Provide a list of complete references for this species.

Author(s): Provide full name, address and email of the contributor. The information will be quoted as based on the Author and not on the Editor of this compilation.

Mr Steven Chew Kea Foo is a new ICINSA member. He is a researcher, based at East Malaysia and his Geographic area of study is Croker Range, Mt. Trus Madi, Ranau, Near Mt. Kinabalu area. He has a collection list of species belonging to Family Lucanidae, Cetonidae and Cerambycidae that may be of some interest to the readers..

Family Lucanidae

Genus Allotopus
Allotopus frustifer

Genus Aesalus

Aesalus sp 1.*
Aesalus sp 2.*
Aesalus sp 3.*
Aesalus timidus*

Genus Aegus

Aegus acuminatus
Aegus acutangulus*
Aegus arcuatus*
Aegus acervus*
Aegus brevimandibularis*
Aegus bigibbosus
Aegus chelifer
Aegus cervicornis
Aegus chewi*
Aegus dusunorum*
Aegus exilis *
Aegus eximus*
Aegus falcicornis*
Aegus hamatus*
Aegus impressicollis
Aegus kinabaleansis*
Aegus longiusculus*
Aegus lachaumei*
Aegus nobuyuki*
Aegus oxygenus*
Aegus puntipennis
Aegus rungusnorum*
Aegus rigouti*
Aegus sabanus*
Aegus sakaii*
Aegus satoi*
Aegus schenki*

Genus Bartolozzilucanus

Bartolozzilucanus
kadazanorum*
Bartolozzilucanus ohbayashii*

Genus Cardanus

Cardanus sp 1.*
Cardanus sp 2. *
Cardanus sulcithorax

Genus Chewlucanus

Chewlucanus ikeada* (New Genus)

Genus aegotypus

Aegotypus acantinus*
Aegotypus trilobatus

Genus Cyclommatus

Cyclommatus chewi*
Cyclommatus consanguineus
Cyclommatus giraffa
Cyclommatus insingnis
Cyclommatus lunifer
Cyclommatus martini
Cyclommatus magnificus
Cyclommatus montanellus*
Cyclommatus muruti*
Cyclommatus titanus

Genus Dorcus

Dorcus axis

Dorcus mineti

Dorcus mirabilis
Dorcus parryi
Dorcus reichei
Dorcus taurus
Dorcus titanus
Dorcus thoracicus*

Genus Eulipidius

Eulipidius luridus

Genus Figulus

Figulus sp 1.*
Figulus sp 2.*
Figulus sp 3.*
Figulus schenki*

Gnapholoryx

Gnapholoryx dilaticollis
Gnapholoryx capreolus
Gnapholoryx opacus
Gnapholoryx sabanus
Genus Hexarthurius
Hexarthurius elongatus
Hexarthurius mandibularis

Genus Neolucanus

Neolucanus muntjac

Genus Nigidius

Nigidius helleri
Nigidius obesus

Genus Novonigidius

Novonigidius fujitai *
Novonigidius nagaii *

Genus Odontolabis

Odontolabis brookeanus
Odontolabis casternaudi
Odontolabis chewi *
Odontolabis cephalotes
Odontolabis cypri *
Odontolabis dalmani
Odontolabis femoralis
Odontolabis gazelle
Odontolabis hitam *
Odontolabis imperialis
Odontolabis katsurai *
Odontolabis latipennis
Odontolabis leuthneri *
Odontolabis lowei
Odontolabis martini *
Odontolabis schenki *
Odontolabis striata
Odontolabis vollenhoveni *

Genus Penichrolucanus

Penichrolucanus sp.

Genus Prosopocoilus

Prosopocoilus anaea
Prosopocoilus attenuatus
Prosopocoilus erici *
Prosopocoilus femoratus
Prosopocoilus flavidus
Prosopocoilus forceps
Prosopocoilus kannegieteri
Prosopocoilus mohnikei
Prosopocoilus occipitalis
Prosopocoilus rubens

Prosopocoilus sericeus

Prosopocoilus squamilateris
Prosopocoilus tigrinus*
Prosopocoilus zebra

Family: Cetonidae

Thaumastopeus borneensis,
Thaumastopeus higginsii
Thaumastopeus agni
Thaumastopeus chicheryi
Theodosia chewi
Thaumastopeus viridiarata
Thaumastopeus miyashita
Thaumastopeus howoiti
Thaumastopeus katsurai,
Thaumastopeus magnifica
Pseudochalcothe planiscula
Pseudochalcothe spathuliferi
Pseudochalcothe viridipes
Pseudochalcothe auripes
Pseudochalcothe stadigeri
Pseudochalcothe pomacea
Taenidera kinabaluana
Taenidera bisignata
Taenidera chewi
Taenidera jurouxi
Taenidera cervina
Taenidera cordata
Taenidera monac
Taenidera trusmadiana
Chewia minata (New genus 2004)

Dicheros borneensis,
Heterhina borneensis
Heterhina simula
Agestrata belitugana
Agestrata paryyi, orichalcea
Xenoloba nagai
Xenoloba specosa
Chalcotheomima laevis
Chalcotheomima macrophly
Protaetia chewi
Protaetia distincta
Protaetia acutissima
Protaetia spectabilis
Protaetia ciliata

Family: Cerambycidae

Pachyteria ruficoilis
Pachyteria ochracea
Pachyteria chewi
Pachyteria basalis
Pachyteria, n sp.
Rosalia oberthuri
Rosalia borneensis
Utopia casternaudi
Parandara sp
Nigidalis itoi, etc (n.sp)

*Endemic species of Sabah

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Attempts to smuggle Rare beetles, Butterflies abroad from Gudalur area: one arrested.

Gudalur, Oct, 17. *Dhina Thanthi*

Rare beetles and butterflies from Gudalur area attempted to smuggled abroad has been seized. One person has been arrested in this regard.

Secret information:

District Police superintendent Makes Vardayal received a secret message that in Gudalur area illegal weapons are in use and rare wildlife are poached and smuggled abroad by some anti social elements. By his order under Ooty Police under the leadership of Inspector Raman, made detailed enquires to catch the illegal weapon holders.

The police intelligence received a message that some people are roaming with illegal weapons at Keelnaadukani near Gudalur. Police rushed to the spot and found some people with boxes. The police seized one person while the rest fled. On enquiry he was identified as Amsa (29) and on examination the police found rare beetles, butterflies and some American dollars. He also confessed that these are to be smuggled to foreign countries.

The inspector Raman handed over the case to DFO Seva Singh. On this base ranger Varatharana, forested Rangan and their team made a detailed investigation. Amsa confessed that they collect rare beetles and butterflies using torch, put them in small packets, tie it in boxes and then pass it on to agents in Kerala. They sell it for higher prices abroad. He also said they are used to prepare medicines abroad.

From Amsa 68 beetles, 31 butterflies and 2 American Dollar currency notes were seized. The forest Department is in search of the rest.

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ANNOUNCEMENTS

National Symposium on Aphids in Agriculture and Forestry

November 24-27, 2004

The Department of Zoology, University of Kalayani, in collaboration with the Aphidological Society of India, DDU Gorakhpur Univeristy, Gorakhpur is organising the next national symposium on "Aphids in Agriculture and Forestry" to be held at the Department of Zoology, University of Kalayani during November 24-25, 2004.

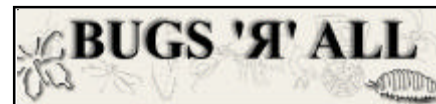
The tentative areas of discussions are: Biodiversity, Biosystematics and Zoogeography; Ecology and Physiology; Aphid-host plant interaction; Natural enemies of aphids; Aphids as vector of plant; Management of aphids. For more details contact:

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VII SOUTH ASIAN SYMPOSIUM OF ODONATOLOGY

With great pleasure we inform you that is to be organised and held during the month of JANUARY 2005 at our department. Therefore, it is requested to SPECALISE YOUR RESEARCH PROGRAMMES ON ODNATES so as to enable you to present articles at the International Symposium at our place. We expect your kind co-operation.

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Newsletter of the Invertebrate Special Interest Group (ISIG) of Conservation Breeding Specialist Group, India and South Asia. ISIG is coordinated by Dr. B.A. DANIEL, Scientist, Zoo Outreach Organisation.

Editor: B.A. Daniel
Advisor: Sally Walker & Molur, S.
Any queries must be addressed to the Editor. The Newsletter is bi-annual.

BUGS 'R' ALL is published by Zoo Outreach Organisation and Conservation Breeding Specialist Group, India & South Asia as a service to invertebrate conservation community.

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