

# Zoo Outreach Organization Wildlife Information Liaison Development Activity Report 2011-2012



**Zoo Outreach Organization (ZOO)/**

**Wildlife Information Liaison Development (WILD)**

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## **Zoo Outreach Organization (ZOO) Wildlife Information Liaison Development (WILD) Activity Report from 1 April to 31 March 2012**

### **Organisational Structure**

Zoo Outreach Organisation (ZOO) engages in active holistic conservation of species through its unique principles of conservation network engineering; providing a platform to organisations and individuals to share and promote issues and concerns that help improve policies for conservation in South Asia. ZOO's commitment of promoting education and training provides a sound scientific basis for networking and gathering information for assessments of species in the wild in South Asia and help with prioritization and development of action plans for individual species conservation.

ZOO works with other institutions and individuals to link captive facilities with wildlife activities for the purpose of education, research, animal welfare and conservation action. ZOO is registered under Karnataka Society's Act in 1985 and moved from Mysore to Coimbatore, Tamil Nadu by 1987. In 2006 ZOO Founder/Secretary Ms. Sally Walker registered a Trust in the same name, Zoo Outreach Organization Trust, in Tamil Nadu to insure the activities could go in a better way. ZOO is also registered in USA as a charity with 501c3 status. Wildlife Information Liaison Development WILD is a registered society in India working along with ZOO and with its own activities. ZOO and WILD publish two monthly periodicals, ZOOS' PRINT Magazine and Journal of Threatened Taxa JoTT respectively. In keeping with the names ZOO has attempted to focus on *ex situ* conservation and WILD on *in situ* conservation but in actual practice it seems one continuum, as promoted by IUCN SSC Conservation Breeding Specialist Group. ZOO and WILD support the various taxon and thematic networks. ZOO also hosts the South Asian Zoo Association for Regional Cooperation, SAZARC and raises financial support for activities.

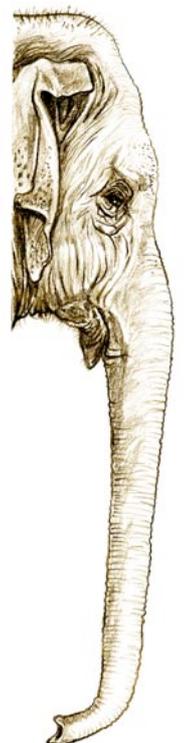
### **Activities**

#### **Promoting Human-elephant Coexistence among HEC area inhabitants of Coimbatore, South India**

**Principal Investigator:** Sally Walker. **Project Coordinators:** B.A. Daniel and R. Marimuthu

In the year 2007 USFWS sponsored a series of workshops on HECx in India (West Bengal), Bangladesh, Bhutan and Nepal. The focus of the project was reduction of death and injury by teaching people that they should be careful! As part of the project a survey was conducted in and around Coimbatore Human Elephant Conflict areas (Varapalayam, Jammukandi, Thoomanoor, Sembukarai, Aanaikatti, Aalanthurai, Siruvani and Madathur) to understand peoples attitude towards the issues. Interviews of villagers indicated that many of the encounters with elephants which turned into conflict, death and injury, could be avoided entirely with the application of a bit of discipline and common sense. The interview also revealed that HEC in Coimbatore is on the raising side and the intensity of the problem varied from place to place. Utilizing all the information through the interviews and also information gathered by the partners of the Getting along with Elephants project, a teaching guide was developed.

A series of three educator skills training workshops, funded by IEF was conducted in the fringe areas of Western Ghats, Coimbatore where villagers (Thoovaipathy, Vadivelampalayam and Ramanathapuram near Chinnatadagam) experience severe human-elephant conflict HEC. The objective of these workshops is to train people in



HEC localities to bring in attitudinal change in the mindset by avoiding confrontation with the elephant if possible and there by avoid conflicts. The training method promotes Human Elephant coexistence HECx with elephants by way of learning behavioural and biological facts of the animal, which aid their understanding of elephant psychology, intrinsic worth and unbeatable strength. HECx stresses wildlife conservation and habitat protection by teaching about elephant decline and ecosystem degradation and theft, which instill a more sensible attitude among the people who live in elephant areas. It also conveys traditional methods used by villagers when they had no help at all, which promote coexistence.

The first workshop was organised at Nilgiri Biosphere Nature Park from 18-19 June 2011, the second at Vadivelampalayam near Alandurai from 2-3 July 2011 and the third workshop at Ramanathapuram near Chinnatadagam from 9-10 July 2011. The coordinators of the workshops were Nilgiri Biosphere Nature Park, The Tulsi Trust and South India Consumer & Human Rights Organisation, Coimbatore Chapter and Iyaragaj-Pathukappu Nala Sangam respectively. A total of 76 participants were trained. During the programme each participant was provided with 50 ele-kit packets, 1 drama kit and a teaching manual "Getting along with Elephants" developed exclusively for Tamil Nadu. ZOO arranged one-day follow-up refresher course to evaluate the training for the selected participants and it was held at Panchayat Union Middle School in Vadivelampalayam, Coimbatore on 10 December 2011. Twenty-two participants from the previous three workshops attended this workshop.

To view the full report please visit the url

<http://www.zoosprint.org/ZooPrintMagazine/2011/October/9-12.pdf>



## **Getting along with Elephant workshops at Thailand**

**Principal Investigator:** Sally Walker. **Project Coordinators:** B.A. Daniel and R. Marimuthu

US Fish and Wildlife Service along with Columbus Zoo and Koln Zoo sponsored a series of three educators skills training workshop at Kanchanaburi, Thailand. ZOO organized these trainers training programmes in collaboration with Elephant Conservation Network (ECN) from 15-24th August 2011 at Pavilion Rim Kwai Resort, Kanchanaburi. The participants represented four key provinces from different parts of Thailand, namely, Kanchanaburi (west), Prachinburi (east), Petchaburi (upper south) and Prachuab Kirikhan (upper south). These provinces are considerably well known for their human-elephant conflict for the last few decades. The participants can be generally catergorised into five groups: educators from Department of National Park, Wildlife and Plant Conservation (DNP), Ministry of Education (schools & provincial educational office), Community leaders at village and sub-district levels, Wildlife Conservation NGO and students involved in research and education. All three workshops had a very good mixture of participants from different background and it helped to keep up with the dynamics of the programme. A total of 89 trainees and 6 interns were trained during this workshop series.

The workshop was inaugurated by the Director, Department of Wildlife, Kanchanaburi. The objective of this trainers training programme is to 1. To empower educators to confront the issue of HEC and a partial 'solution' e.g., HECx (Human-elephant Co-eXistence), and 2. To demonstrate innovative teaching and learning techniques designed to change human attitudes and behaviour for the better.



**A participant explaining his illustrations on elephant history**

ECN members involved fully during the programme. As per their observation the participants from every workshop apparently kept alert throughout the workshop period. Hence they were evidently keen to learn and enthusiastic to take part in the classroom lessons and outdoor activities. During the training all the trainees received HECx teaching guide, a set of 50 elekit packets and drama kit for them to do programmes at local level. As part of this project a refresher course has been planned early 2012 so as to understand the impact of this programme at HEC areas of Kanchanaburi. Until the time of refresher course ECN had worked

with enthusiastic schools, protected areas and local communities to put HECx teaching methods in practice. ECN also reviewed and, together with Thai practitioners, adopt the HECx teaching manual to best suit entire Thailand.

View the full report at:

<http://www.zoosprint.org/ZooPrintMagazine/2011/December/16-17.pdf>



**A mini drama performance on rescuing elephants**



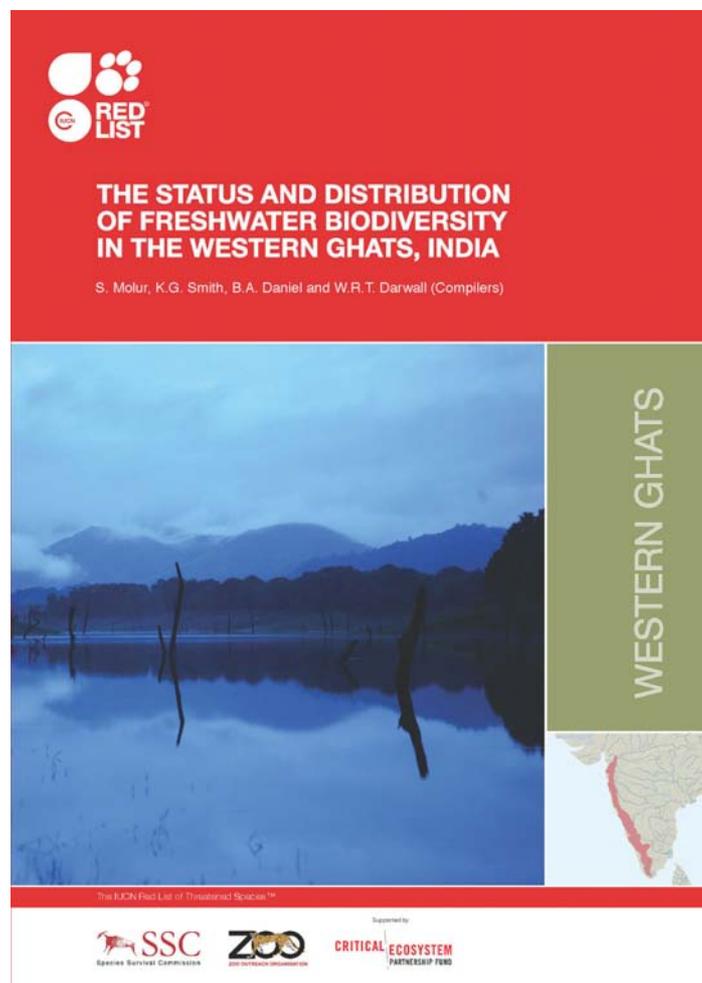
**Ms. Sally Walker, Director, ZOO/WILD distributing certificates and Ele-kit packets**

## **Freshwater Biodiversity in the Western Ghats, India Report Western Ghats assessments**

The aim of this project was to provide resources that are essential for guiding decisions on the conservation and sustainable management of freshwater biodiversity in the Western Ghats region of the Western Ghats and Sri Lanka Biodiversity Hotspot. This has been achieved by (i) training specialists (principally from the Western Ghats region) in internationally recognized techniques for assessing the conservation status of species; (ii) collecting data on the distribution, abundance, ecology, and utilization by humans for several groups of species that are reliable indicators of the biological structure and function of freshwater ecosystems in the Western Ghats region; (iii) evaluating the risk of extinction for the species according to the IUCN Red List Criteria; (iv) analysing the results for geographic patterns of species richness, endemism, and existing or impending threats to the species; and (v) making the collected data and the results of the analyses widely and freely available to conservation practitioners and developers alike via print publications, data DVDs, and the internet. The importance and urgency of this work is underscored by the concentration of species found in the freshwaters of the Western Ghats region, the ecosystem services that are supplied to humanity by these freshwaters and their biodiversity, and the increasing threats to the ecosystems.

This project has been funded by the Critical Ecosystem Partnership Fund (CEPF).

Copies of the report *The Status and Distribution of Freshwater Biodiversity in the Western Ghats, India* is available for download here: <http://data.iucn.org/dbtw-wpd/edocs/RL-540-001.pdf>.



### **Small Mammal Field Techniques Training, 10-14 November 2011, Kerala**

ZOO/WILD and its networks Chiroptera Conservation Information Network of South Asia (CCINSA) and Rodentia, Insectivora & Scandentia Conservation and Information Network of South Asia (RISCINSA) organized five-days hands on training workshop hosted by Department of Wildlife, College of Forestry, Kerala Agricultural University. Thirty-five bat and rodent researchers from India (Andhra Pradesh, Arunachal Pradesh, Assam, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Sikkim, Tamil Nadu, Himachal Pradesh), Sri Lanka and Nepal attended this programme. Prof. Paul A. Racey, Visiting Professor, Department of Exeter in Cornwall; Co chair, Bat Specialist Group of IUCN's SSC and Dr. Mike Jordon, Senior Conservation Advisor, National Zoological Gardens of South Africa, Regional Chair IUCN SSC Reintroduction Specialist Group were the lead trainers of the workshop. Ms. Sally Walker, Managing Trustee, ZOO, Dr. Sanjay Molur, Executive Director, ZOO, Dr. P.O. Nameer, Associate Professor, KAU and Dr. Singaravelan took part as resource persons.

The training which had equally classroom and field activities covered the following: Introduction to small mammals, introduction to field techniques, standard techniques in inventory and monitoring, identification of habitat and sampling methodologies, catching techniques, why and how to survey, demo on setting of traps, traps and techniques, care of traps and field practice, animal handling, examining of caught small mammal, identification in field, key to identification, samples for DNA analysis, recording data, collection of pollen / feces, marking techniques, skinning and skulling methods, animal welfare and field research ethics, pollination ecology of rodents and bats, Survey protocol and Volant and non-volant small mammal conservation. The SMFT training was sponsored by Chester Zoo, Knowsley Safari Park, Columbus Zoo and Conservation Breeding Specialist Group, USA.

To see the full report:

<http://www.zoosprint.org/ZooPrintMagazine/2011/December/13-15.pdf>



**Dignitaries on the dias during inaugural**



**Demo on dry skin preservation technique by Dr. P.O. Nameer**

**A wildlife researcher handling a bat**



**Dr. Paul Racey setting up mistnet**



**A session on rodent handling and sexing by Dr. Mike Jordan**



**Participants of Small Mammal Field Techniques Training workshop**

**Refresher Course following Getting Along With Elephants HECx Training Workshops, 15-16 Feb 2012, Kanchanaburi, Thailand**

ZOO and ECN with the support of USFWS, Columbus Zoological Gardens and Koln Zoo organized a series of workshops Aug 2011 to train educators from human elephant conflict areas to introduce the concept of Human elephant coexistence HECx with active learning methodology. A refresher course was organized six months after the training for selected educators. Refresher objectives are to determine attitudinal and/or behavioural changes among the trainees after the HECx training programme and to teach new games and activities.

To view the full report please visit the url

<http://www.zoosprint.org/ZooPrintMagazine/2012/March/16-18.pdf>



**Trainees feed back about the education materials**



**Participant presenting SWOT analysis**



**Participant working on SWOT analysis**

## Red Panda Population Habitat Viability Assessment Workshop

A Population and Habitat Viability Assessment (PHVA) and Species Conservation Strategy (SCS) Workshop for the Red Panda (*Ailurus fulgens*) in Nepal was held from 2-6 September 2010, in the offices of the National Trust for Nature Conservation, NTNC, in Kathmandu. This was one of the first PHVAs to incorporate elements of the IUCN Species Conservation Strategy approach into the workshop process developed by the Conservation Breeding Specialist Group (CBSG). The workshop was organized by Rotterdam Zoo of The Netherlands, Zoo Outreach Organization of Coimbatore, India and National Trust for Nature Conservation of Kathmandu, Nepal. It was hosted by Government of Nepal, Department of National Parks and Wildlife, Department of Forests, and the National Trust for Nature Conservation, NTNC. The PHVA was facilitated by a joint team of CBSG South Asia and CBSG Europe. Funding was provided by WWF Germany, Rotterdam Zoo and members of the European Association of Zoos and Aquaria (EAZA). Workshop participants included representatives of three range countries – Nepal, India and Bhutan as well as from USA and Europe. The vision expressed by the participants was to “Secure viable populations of Red Panda distributed in contiguous natural habitat throughout the Himalaya regardless of national boundaries where this flagship species brings benefits to the region and is valued and protected by all stakeholders”.

One working group focused on the status and distribution of the wild population and used GIS technology to map the confirmed and possible occurrence of Red Pandas in Nepal. They identified 11 subpopulations and concluded that the meta-population was likely to hold roughly between 230 to 1060 individuals. A second working group developed a Vortex computer model, which helped to establish that the majority of the subpopulations are so small that they have a high probability of extinction, even in the absence of human threats. Larger subpopulations also have a high risk of extinction in the short to medium term if current levels of threat persist. A third working group identified the threats and prioritized them for each of six regions.

### The Workshop Process

CBSG’s PHVA and Strategic Planning workshop processes provide an objective environment, expert knowledge, and neutral facilitation that support the sharing of information across institutions and stakeholder groups, fostering agreement on the issues and information, and enabling stakeholder groups to make useful and practical management recommendations for the taxon and habitat system under consideration. This approach has been successful in unearthing and integrating previously unpublished information that is frequently of great value to the decision-making process. This interactive and participatory workshop approach supports and promotes effective conservation by fostering the creation of species management plans and the political and social support of the local people needed to implement these plans. In addition, PVA simulation modeling is an important tool in this process, and provides a platform for testing assumptions, data quality, and alternative management scenarios.



In the current year 2011 the Red Panda PHVA has been published and distributed to the participants, policy makers, zoos that are holding Red Panda and also to the donors. Three more PHVAs are envisioned for the next three years, e.g. China, India and Bhutan. These workshops are being initiated by Dr. Angela Glatston, Red Panda Specialist of Rotterdam Zoo.

**Population status, mapping and quantitative assessment of available habitat of Western Hoolock Gibbon in Langlakso-Mikir Hills-Koliyoni and Borjuri-Jungthung-Western Mikir Hills landscape, Assam, India.**

**Principal Investigators:** Dr. Jihusuo Biswas and Dr. Jayanta Das

**Field survey to estimate Hoolock gibbon density and habitat assessment** The field survey for Gibbon population estimation and habitat assessment began on September, 2011 after a short bout of pilot work. So far we have completed 50-55% of the field work on this aspect. We followed fixed point count method or auditory method at few randomly placed sample sites ( $n = 8$ ) in the Karbi Anglong East sanctuary to estimate the group density combined with modified line transect method to know the demographic structure. Out of 130 call bouts, a total 42 calls were confirmed originating from different social groups from 8 listening post across the sanctuary. The mean density of gibbon group in 1- km radius area in the listening post were calculated to be  $0.915 \pm 0.24$  (range = 0.88 to 2.14). A total 41 individuals in 15 groups (average group size:  $2.71 \pm 0.26$ , range: 2 - 4) were observed during the survey.

**Habitat characterization and mapping.** Baseline survey for habitat characterization and mapping has been carried out for ground truthing and so far we have covered 50% of the schedule task. The mapping will be done at the end of the project after completion of survey work as per schedule.

**Conservation education campaign** Two three days long outdoor nature orientation camp on 'Gibbon Conservation' was organized for high school and college students where different modules on gibbon habit and habitat was taught through different participatory activities, dramas, debates and through slide shows.

The Margot Marsh Biodiversity Foundation is the supporter of the project.



**Prof. W. Y. Brockelman explaining the methods to the project investigators and other participants in the field at the Khao Yai NP, Thailand**

## ZOO/WILD's Critical Ecosystem Partnership Fund (CEPF) Projects

CEPF is a joint program of [l'Agence Française de Développement](#), [Conservation International](#), the [Global Environment Facility](#), the Government of Japan, the [MacArthur Foundation](#) and the [World Bank](#). A fundamental goal is to ensure civil society is engaged in biodiversity conservation.

**CRITICAL ECOSYSTEM  
PARTNERSHIP FUND**

### Enhancing Knowledge about the Conservation Status of Globally Threatened Species in the Western Ghats, with a Particular Emphasis on Reptiles (through WILD)

**Principal Investigator:** Dr. Sanjay Molur

**Grant Term:** 10/09-04/13

Assess the global conservation status of all 265 reptile species found in the Western Ghats, compile detailed information on each species and make the results freely available through the IUCN Red List site and other online portals. Solicit and publish articles on Western Ghats biodiversity in an open-access, peer-reviewed journal, provide tutoring to authors and disseminate widely among key stakeholders.



i) Last year the reptiles specialist was provided a training by the IUCN and ZOO for entering data into the species database, digital mapping techniques for creating species distribution maps, application of the IUCN Red List Categories and Criteria to evaluate the risk of extinction. Post training, specialist compiled the reptile species list and the information, by gathering the data from literature, museum records, existing databases, unpublished



information through consultation with experts, in the SIS database. Last March 2011 WILD had organised the 5 day Global Reptile Assessment for Western Ghats Reptiles utilizing the CAMP process as well as other tools. Current year post workshop, the reviewed documents are once again sent to selected experts from the workshops to edit for consistency, english and standardization. The WILD and IUCN reptile assessment has checked the database and maps and ratified it for public release. Distribution maps are released as JPEG images on iucn site. Soon the database and maps available on public domain. The report is ready for publication.

ii) Journal of Threatened Taxa is continuously encouraging all Western Ghats CEPF Grantees to publish at least 2 scientific papers from their small grants programme and 4 papers from the large grants programme. Till now JoTT published 7 number of articles with a special theme "Western Ghats". WILD also encouraging all participants, collaborators and organizers to reach out to the important stakeholders in their areas to follow up on the actions needed and identified by the project.

**Protected Area Analysis With Respect to Freshwater Biodiversity and Reptile Assessments, and Development of National Policy for Inclusion in Legislation. (through ZOO)**

**Principal Investigator:** Dr. Sanjay Molur

**Grant Term:** 01/12-03/13

Develop a policy framework and strategies for linking the IUCN Red List assessments to the Indian Wildlife (Protection) Act. Evaluate the current effectiveness of the protected area network in the Western Ghats for the conservation of globally threatened reptiles and freshwater taxa. Strengthen national legislation on conservation with regard to import of alien freshwater species and export of threatened fishes.

Dr. Sanjay Molur has been visiting the policy makers at the central and state governments since December 2011. The researcher started collecting various literatures that are needed to develop a policy framework.



**Involving Community, Stakeholders and Journalists for the Conservation of Freshwater Biodiversity and Reptiles of Western Ghats through Education, Training and Follow up of the Assessment Projects (through WILD).**

**Project Investigator:** Dr. B.A. Daniel

**Grant Term:** 01/12-06/13

This project is a follow up of the CEPF funded status assessments of freshwater ecosystem and reptiles in the Western Ghats. The objective of the project is to disseminate the results of the CEPF projects on freshwater and reptiles species of Western Ghats and to create awareness among local communities involving a range of stakeholders. The project will cover all the five states of the Western Ghats. The target group will include local communities and community heads, school teachers, educators at schools, NGOs, and community level, forest personnel, and polity makers. The project along with IUCN Freshwater Biodiversity Unit and the Global Reptile Assessment Unit, will coordinate all scientific data and analysis into easily useable format for the target group.



Freshwater fishes, odonates, molluscs, aquatic plants and also reptiles of Western Ghats were assessed and reports were published in February 2011. As per the recommendations of the project, local community, stakeholders and journalists of all five states will be sensitized for the conservation of freshwater biodiversity and reptiles of Western Ghats through training, conservation education and awareness programmes. The project was initiated in January 2012 with the support of CEPF. The results of the Assessment reports are collaged to develop education materials. The draft education materials are in progress.



### **Western Ghats Biodiversity Open Collaborative Information System (through ZOO)**

Create an open-access, web-based portal on the biodiversity and ecosystem service values of the Western Ghats, populated and maintained by an active community of data-holders. Leverage Web 2.0 technologies to facilitate a transformation in data availability that facilitates mainstreaming of biodiversity into development sectors, empowers citizen engagement in public policy development, and fosters citizen science initiatives by amateur naturalists.

**Grant Term:** 11/10-06/13

**Grantee:** French Institute of Pondicherry

Zoo Outreach Organisation collaborates with the French Institute of Pondicherry for the collection and the curation of the scientific data.

### **Establishing Community Conservation Reserves in the Anamalai Corridor (through WILD)**

**Principal Investigator:** Arun Kanagavel

**Grant Term:** 01/12-12/12

The Project proposes to set up Community and Conservation Reserves in the Anamalai Corridor (Theni and Palni Hills) to integrate local communities into biodiversity conservation. The management at existing reserves will be assessed, reserve management plans will be prepared for nominated reserves through the participation of multiple key stakeholders and a suitable reserve management committee will be identified. Multi-stakeholder surveys were conducted at existing community and conservation reserves across Karnataka, Kerala and Tamil Nadu to understand existing management and interaction between stakeholders. Following this we pursued to understand issues around Korangani and Kumbakarai, two potential community and conservation reserves in the Theni-Palni Hills. Forest department officials, panchayath, plantation owners, indigenous and non-indigenous communities have been introduced to the project, its goals and objectives. We are currently working out a waste disposal strategy for Korangani.

### **Assessing the Status and Distribution of Large Mammals in Highway Mountains and Its Environs, Southern Western Ghats (through WILD)**

**Principal Investigators:** G.Srinivas & S.Babu

**Grant Term:** 04/11-09/12

Identify eco-sensitive and potential corridors and contiguity within and with adjacent landscapes in Highway and its environs. Develop plausible science-based management mechanisms with support of data on large mammal movement patterns, species-habitat interactions and threats. Disseminate results and findings to local stakeholders and the Forest Department through a series of workshops. Grid walk, Camera trap and Night survey are being carried out in the grids. So far 79 grids (4 sq.km) were completed in Theni forests. Thirty-five species of mammals were recorded including five primates (Nilgiri langur, Tufted grey langur, Bonnet macaque, Lion-tailed macaque and Slender loris), two giant squirrels and a flying squirrel. All three major carnivores namely tiger, leopard and wild dog were recorded during the survey. Among the lesser carnivore, jungle cat and vulnerable rusty-spotted cat were observed. Field work in the critical link between Anamalai and Periyar corridor is progressing.

### **Completed Projects:**

#### **The Status and Distribution of Freshwater Biodiversity in the Western Ghats, India**

Tarantula (Araneae: Theraphosidae) Spider Diversity, Distribution and Habitat-Use: A study on Protected Area Adequacy and Conservation Planning at a Landscape Level in the Western Ghats of Uttara Kannada District, Karnataka (Manju Siliwal, WILD)

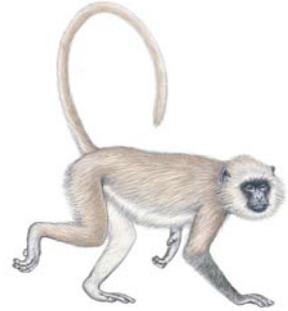


### **HECx workshops for Tamil Nadu and Kerala**

ZOO's popular educators' training workshop, 'Getting along with elephants' to promote Human elephant Coexistence HECx has been now planned to reach HEC areas of Tamil Nadu and Kerala. USFWS sponsored project has so far organized in India (West Bengal, Karnataka, Tamil Nadu), Bhutan, Bangladesh, Nepal, Indonesia and Thailand. With an intention to reach HEC areas of South India, a series of workshops has been planned in select areas of Thirunelveli (KMTR), Nilgiris and Hosur districts of Tamil Nadu with funding from USFWS. An awareness training with the support of IEF has been planned in Kerala as well. Pre workshop visits to the HEC areas to conduct survey in select areas are in progress. Education materials in local language are being developed which will be used during the workshop series.

### **Field project: Conserving Himalayan Grey Langur through a participatory stakeholder conservation initiative**

The Himalayan Grey Langur *Semnopithecus ajax* is restricted to the Chamba Valley of Himachal Pradesh, India. Its small population and restricted occupancy range is severely threatened with habitat degradation, deforestation, commercial horticulture expansions, hunting and persecution. WILD has applied with Conservation Leadership Program's Future Conservationist Award, Rufford Small Grants and Mohamed bin Zayed Species Conservation Fund. WILD got the Rufford Grant in March and will get the reply from The Conservation Leadership Program's Future Conservationist Award and R Mohamed bin Zayed Species Conservation Fund by April. This project is a pioneering initiative to establish the current distribution, threats and conservation status, and initiate a community based approach to conserve the species and site through participatory stakeholder conservation. The project will establish a long-term strategy for conservation of this Alliance for Zero Extinction species and act as an example for species champion based conservation efforts in India. The project advised by Dr. Sanjay Molur along with the three member team is led by Martina Anandam. The team has gone to Chamba, the field station in March to meet the Himachal Pradesh Forest Department and make the appropriate arrangement to start the field work in May.



### **USFWS – Amphibian Chytrid (WILD) – Evaluation and impact of Chytridiomycosis on the endemic, highly threatened amphibians of the Western Ghats.**

The Western Ghats is one of the richest amphibian hotspots of the 34-biodiversity hotspots of the world with 157 described species and several more under description. As per the IUCN Red List of Threatened Species (IUCN 2010) 8 of the described amphibians are Critically Endangered (CR), 28 are Endangered (EN), 16 are Vulnerable (VU), 6 are Near Threatened (NT), 30 are Least Concern (LC), and 69 are Data Deficient (DD). Most of the CR and EN species are highly restricted in their distribution with most of them found in less than five locations each and facing several threats from habitat loss and decline in quality of habitat due to changes in land use and other human influenced activities.

While in the neotropics, and some old world tropics such as in Africa and some parts of Southeast Asia, many species of amphibians are threatened with extinction due to the impacts of *Batrachochytrium dendrobatidis* (Bd), there is no information about the presence of this chytrid fungus in Indian amphibian populations. The lack of knowledge of the presence and therefore its negative impact, if any, on the Western Ghats amphibians makes the currently CR and EN species of amphibians face a higher risk of extinction. While current conservation planning for threatened amphibians are based on known threats related to habitat loss and quality, knowledge of chytrid would mean a different and more immediate strategy for conserving the species.

The probability of chytrid entering the Western Ghats is greater now than in the last year or before as there have been recent evidences of the African Clawed Frog *Xenopus laevis* entering

the country through the aquarium trade. Several instances of wanton release of this frog into the wild have been reported in Maharashtra, Karnataka and Kerala parts of the Western Ghats (A. Padhye pers. comm.) in the last six months. Since the species is imported from captive stocks, the provenance is unknown and therefore poses a very high threat to the native amphibians of the Western Ghats. Hence this project is critical in its importance at this stage.

The project will address the following action points and threats:

- (i) The project is intended to fill this lacuna in knowledge in our understanding of the presence, and if so, of the impact of the chytrid fungus (Bd) on CR and EN amphibians of the Western Ghats. Although the bulk of the project is research, it is extremely important for developing conservation plans and actually implementing conservation actions for CR and EN amphibian species of the Western Ghats.
- (ii) Provide information about threats to amphibians for revisiting amphibian status assessments in 2012 for the IUCN Red List of Threatened Species.
- (iii) Provide information to the government of India, Ministry of Environment and Forests regarding potential disease threats from alien exotics and develop guidelines for addressing the issue of amphibians in aquarium trade.
- (iv) In case the findings prove positive for chytrid presence in native amphibian species, appropriate action plans for mitigating the threat as well as conserving the species will be developed.

There has been no attempt in the past to study chytrid fungus in the wild in India hence this project is the first of its kind in the country. There are no lessons learnt from previous experience. However, experience from amphibian declines in the neotropics indicates a proactive approach to deal with any negative effects from the fungus. Hence this project is critical at this juncture.

Currently the project team is analyzing the data, map the infection and reassess the status of the CR and EN amphibians that show positive for chytrid infection in the Western Ghats. The preparation is going on to conduct fieldwork in at least 10 locations across the Western Ghats for presence/ absence of chytrid fungus in Critically Endangered and Endangered amphibian species, and lab analysis using PCR technique.

### **Chiroptera (Bat) Conservation Information Network of South Asia Projects**

**Principal Investigator:** Sally Walker. **Project Coordinators:** B.A. Daniel and R. Marimuthu

Bat Conservation International is funding in support of the Chiroptera Conservation and Information Network of South Asia (CCINSA)

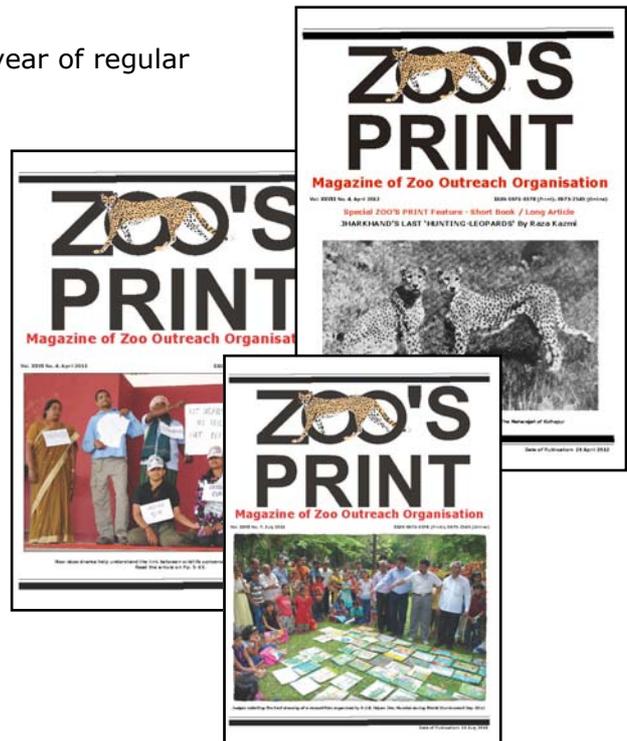
*"Conserving India's Bats through Education and Training"*. According to this grant ZOO will conduct bat conservation education, outreach and/or training events to reach the general public, other nonprofit organizations, and decision makers in India. Activities are anticipated to reach over key activities may include: 1) distribution of educational materials 2) holding public lectures to generate positive interest in bat conservation and promote changes to public policies to conserve bats; and 3) establishing a training workshop if adequate matching funds are secured.



**ZOOS' PRINT Magazine**

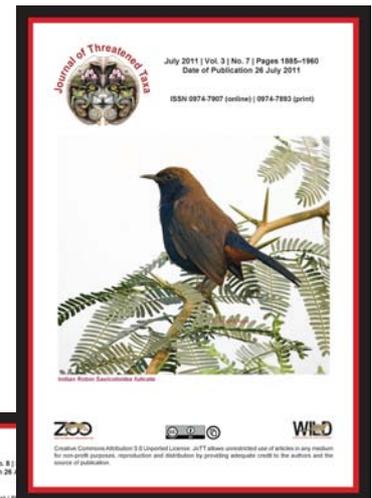
This year ZOOS' PRINT Magazine starts its 27th year of regular monthly publication.

ZOO's PRINT is a feature magazine with practical and "do-able" technical articles in it. ZOOS' PRINT was meant for practice and growth of "freshers" in zoos and wildlife. It publishes articles enabling improvement of aspects of zoo management and to promote communication and cooperation between zoos. In 2003 the magazine split into two parts, magazine and journal. ZOOS' PRINT Journal had a good run and became so popular with zoo and wildlife academics, that it morphed into a genuine journal in its own right, Journal of Threatened Taxa (JoTT) with an international profile and following and a very high class standard. Sally Walker, Founder and Editor Emeritus and Sanjay Molur, Editor



**The Journal of Threatened Taxa (JoTT) on-line peer reviewed Journal**

The *Journal of Threatened Taxa (JoTT)* is a monthly (aiming to be more frequent), online, open access, free access, peer-reviewed journal on wildlife, conservation, taxonomy, ecology and all aspects contributing to the science and action thereof. The objective of *JoTT* is to publish timely, articles of importance for promoting conservation and encouraging wildlife studies in the biodiversity-rich countries of the world. The lag time after final acceptance of manuscripts from January 2009 will be two months or less depending on the completeness (in content and format) of submissions by authors and timely returns of the galley proofs. For more information visit [www.threatenedtaxa.org](http://www.threatenedtaxa.org).



**In the year of 2011:**

- Number of articles published - 123
- Number of issues - April 2011 to March 2012 -- 12 issues
- Total number of pages - 1637-2480 -- 844pp

**Special Themes:**

- ALCS - 1 article
- CEPF Western Ghats - 7 articles



## **ZOO/WILD Network News**

### **Conservation Breeding Specialist Group, South Asia Network**

CBSG Taxon Networks working from ZOO office are based on the processes and principles of CBSG and all works are done with an aim of conducting Training, Conservation Planning, PHVA, CAMP, Education, Conservation, etc., using the CBSG tools to promote and deliver effective conservation in the region. All the networks CBSG, RSG, PSG (primates), ANSA (amphibian), SARN (Reptile), RILSCINSA (Rodent & Insectivore), CCINSA (bats), ZEN (educators), ICINSA (which is a network as well as a full SSC IUCN South Asian Invertebrate Specialist Group) and Climate Change network maintain a detailed member directory, web module, newsletter, etc. in which the convenors or chairs circulate current news, announcements, opportunities and articles of interest to all the members by email. This year CBSG supported the following ZOO projects: Small Mammal Field Technique Workshop, Red Panda Population and Habitat Viability Assessment Report, Amphibian and Climate Change Education and the travel support to Sally Walker and Sanjay Molur to attend the CBSG WAZA meetings.

**Chiroptera Conservation Information Network of South Asia (CCINSA) and Rodentia, Insectivora & Scandentia Conservation and Information Network of South Asia (RISCINSA)** newsletters joined to become Small Mammal Mail found at [www.zoosprint.org](http://www.zoosprint.org) under newsletters. CCINSA will conduct training in South India for local small mammal students and field biologists from around the region. Member directory updated and uploaded on the website [www.zooreach.org](http://www.zooreach.org).

**South Asian Reptile Network:** as mentioned the IUCN SSC Red List Global Assessment for Reptiles in South Asia was conducted in March 2011 that was sponsored by CEPF. In the current year the report compilation work is going on and soon it will be published. The recent on-line newsletter "Reptile Rap" is accessible at [www.zoosprint.org](http://www.zoosprint.org) under newsletters.

**South Asian Primate Network - PSG SAPN** representing IUCN SSC Primate SG

- South Asian Primate Pocket guide (PSG-SA/CI) distributed throughout regions with guidelines on using for school and public programs.
- Lion-tailed Macaque Poster developed and distributed during Wildlife Week
- PSG SAPN circulated current primate notices, news, articles, funding and other opportunities to all PSG network members in the region
- PSG SAPN constituent directory was updated on website. Any primate student, researcher, educator from South Asia is eligible for inclusion in PSG SAP regional network. <[www.southasianprimatenetwork.org](http://www.southasianprimatenetwork.org)>. Currently there are 134 members.

**IUCN SSC Invertebrate Specialist Group South Asia (SAsISG).** South Asian Invertebrate Specialist Group SAsISG is running in association with Invertebrate Conservation and Information Network of South Asia (ICINSA) hosted by Zoo Outreach Organisation (ZOO) / Wildlife Information Liaison Development (WILD) Society / CBSG, South Asia based at Coimbatore, Tamil Nadu, India. Dr. B.A. Daniel, Zoo Outreach Organisation is the Cochair.

### **Invertebrate Network (ICINSA) and Sub-networks (Pollinator Network and Aquatic Invertebrates:**

- Published the Invertebrate Conservation Network Newsletter ' Bugs R All' – Number 17 in April and 18 in December 2012.
- Participated in Marine Conservation workshop organized by NEST at Rameswaram with special reference to marine invertebrate conservation.
- Gave series of talks on the following topics in invitation: Species and climate change, Species status and conservation tools with special reference to invertebrate conservation.
- Assisted in the editing and publication of the Freshwater Biodiversity Assessment workshop report for Molluscs and Odonates of Western Ghats.
- Extended invertebrate pollinator activities with more focus to reach Pakistan.
- As a board member contributed in the discussions of the IUCN SSC butterfly SG, for the future activities of the SG.

- Initiated education project sponsored by CEPF through active learning teaching tools promoting freshwater invertebrate conservation in Western Ghats using the FW biodiversity assessment results.
- BA Daniel attended the IUCN SSC Subcommittee meeting held at Abu Dhabi Feb 20-21, 2012. For reports see ZOO's Print March issue.
- BA Daniel invited to attend IUCN SSC Specialist Group Chairs' meeting held at Abu Dhabi, 22-27 Feb 2012.
- Joined the MOSI (Mosquito Onset Surveillance Initiative) project, an international zoo and wildlife park initiative to monitor the effects of climate change on mosquito species range spread, activity periods and behaviour.
- Published the IPNSA directory for the year 2012

**Reintroduction Specialist Group South Asia:** Sanjay Molur as a Member of Re-introduction & Invasive Species Specialist Groups Task Force on Moving Plants and Animals for Conservation Purposes attended the Second Task Force Meeting, 15-17 April 2011 held at Abu Dhabi. Sponsored by Al Ain Wildlife Park Resort, Abu Dhabi. RSG South Asia section also has circulated a large number of documents and reports to the network of 45 experts and interested persons. A directory has been uploaded [www.zooreach.org](http://www.zooreach.org).

**Climate Change Network:** Zoo Outreach Organisation (ZOO) representing the CBSG/WAZA Climate Change Task Force started a Climate Change Network (CCN) for South Asia, inviting members of our taxon and thematic networks to participate. ZOO and network members have been contributing, commenting upon and exchanging articles, announcements, correspondence, comments, educational tools etc., on a regular basis since 2009.

**Climate Change Education :** ZOO educators created material linking Biodiversity and Climate change for youngsters proved a effective means of spreading knowledge about both.

**Climate Change Training:** The South Asian Zoo Association held their 10th Annual Conference on the theme of Climate Change. Participants formed country-based climate change working groups for Bangladesh, Sri Lanka, and Nepal with Afghanistan, Pakistan, Bhutan and India, working together. The groups assessed animals in their own zoo collections to ascertain which species were more vulnerable to climate change with a focus on education and conservation.



## ZOO Educator Network ZEN

### Teacher training workshops

- **Promoting Human Elephant Coexistence among Human Elephant Conflict Area Inhabitants of Coimbatore, South India**, 18-19 June 2011 at Nilgiri Biosphere Nature Park; 2-3 July 2011 at Vadivelampalayam; 9-10 July 2011 at Ramanathapuram near Chinnatadagam.
- **Promoting Human Elephant Coexistence among Human Elephant Conflict Area Inhabitants of Coimbatore, South India.... Refresher course**, 10 December 2011 at Panchayat Union Middle School in Vadivelampalayam, Coimbatore
- **Getting along with Elephants, HECx: Educator Training in Human Elephant Coexistence in Thailand** - Zoo Outreach Organisation organised three workshops in Kanchanaburi, Thailand from 15-24 August 2011. The first workshop was held from 15-17 August 2011, the second workshop was held from 18-20 August 2011 and the last one was held from 22-24 August 2011.
- **Getting along with Elephants, HECx: Educator Training in Human Elephant Coexistence in Thailand...Refresher Course**, 15-16 February 2012 at Thailand.

### Other education activities:

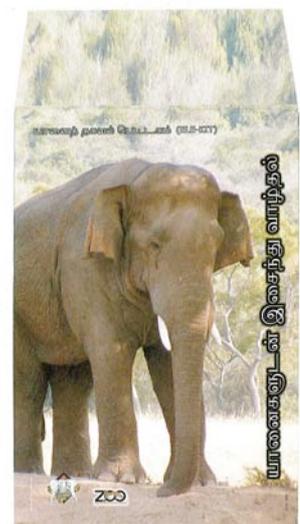
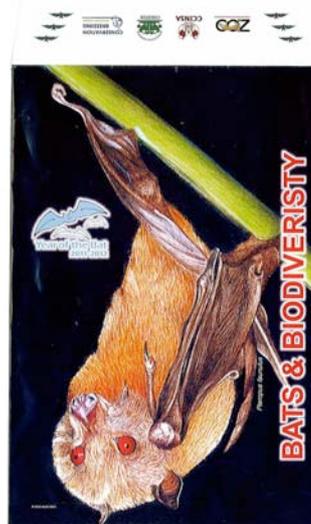
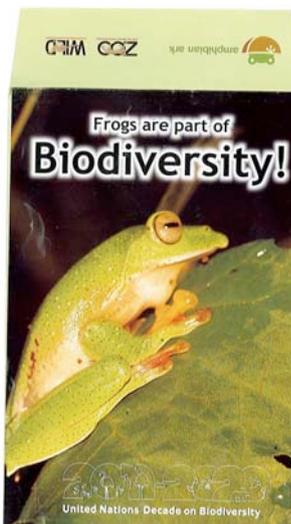
#### World Environment Day 2011:

2011 has been declared by the United Nations as the International Year of Forests. World Environment Day this year will reinforce this global concern with the official tagline - Forests: Nature at Your Service which underscores the many essential life-sustaining values that forests provide and the intrinsic link between our quality of life and the health of forest ecosystems.

ZOO developed a new education kit for the International Year of Forests based on this year's United Nation theme and supplied 3000 kits to 31 educators all over the India to celebrate the day and create awareness on saving forests. We also supplied them "Live More Simply" packets which carry a message on how to lead on simple way of living to curb climate change effects and also amphibian packets which deals with why we have save amphibians.

#### Wildlife Week 2011

Wildlife Week has been celebrated every year in India from 1-7 October for the last 56 years. For the past 26 years Zoo Outreach Organisation has helped zoos, forest divisions, NGO's, museums, schools and educational institutions to celebrate this event by providing free educational materials. This year's wildlife week is unique because there are so many



campaigns. There are three major campaigns, **International Year of Forests (2011), Year of the Bat (2011-2012)**, and the UN **Decade on Biodiversity (2011-2020)**.

In supporting these campaigns, ZOO provided ZOO 1600 Lion-tailed macaque posters, 3000 amphibian packets, 3000 bear packets, 3000 bat packets to 85 educators and they belong to forest departments, zoos, NGO, Education Institutions and museums. They used these materials and created awareness on the particular species to save them.

### **Animal Welfare Fortnightly 2012**

Every year for over 50 years Animal Welfare Fortnight has been celebrated in India in the last two weeks of January. Animal Welfare Board of India AWBI organizes this popular animal's event. Zoo Outreach Organization and our sponsors help educators of all kinds use the event to create awareness by providing complimentary educational material. This year ZOO developed 1000 special AWF posters to provide the educators who conducts animal welfare awareness programme on that day. So we supplied 1000 posters, 700 amphibian packets, 700 Lion-tailed macaque posters and 550 bear packets to seventeen of our educators.

### **Leaping Ahead of Amphibian Extinction....a celebration of good news for amphibians in 2012 in South Asia coordinated by Zoo Outreach Organisation**

Amphibian Ark, a joint effort of World Association of Zoos and Aquariums WAZA, Conservation Breeding Specialist Group CBSG and Amphibian Specialist Group ASG, launched a new "event" to coincide with "Leap Day" on 29 February 2012. It is an international event, called "Leaping Ahead of Extinction: A celebration of good news for amphibians in 2012." Though this event was focused globally on institutions that are conserving amphibian species in the captivity and involving in conservation activities that are being carried out in the wild. Zoo Outreach Organisation coordinated this programme for the South Asian region.

Within the short time, Zoo Outreach Organisation reprinted AArk's leap day posters, plus supplied 5 kinds of amphibian masks, colouring books, South Asian Amphibian posters and amphibian education packets to Indian participants and for Bangladesh, Nepal and Pakistan participants we had the soft copies of the materials. Overall, we supplied 1000 posters, 250 South Asian Amphibian posters, 1500 masks and 150 Colouring books to 16 Indian educators and 3 other South Asian educators.



## **ZOO Staff participation in various other meetings**

**Sally Walker** represented CBSG South Asia at the CBSG SSC IUCN Strategic Committee mid-year meeting and the South Asian Zoo Association (SAZARC) and Zoo Outreach Organisation ZOO at the WAZA mid-year meetings, 01-09 April 2011 held at Geneva, Switzerland. Sponsored by Chester Zoo, UK and CBSG, SSC, IUCN

**Sally Walker** attended the International Symposium on the History of Zoos and Aquariums, held at Chester Zoo, 19-20 May 2011 and gave a presentation on the Development of Zoo Associations. Sponsored by Chester Zoo, UK.

**Sanjay Molur** as a Member of Re-introduction & Invasive Species Specialist Groups Task Force on Moving Plants and Animals for Conservation Purposes attended the Second Task Force Meeting, 15-17 April 2011 held at Abu Dhabi. Sponsored by Al Ain Wildlife Park Resort, Abu Dhabi.

**Sanjay Molur** represented CBSG South Asia at the Regional Mapping and Conservation Planning Workshop for Wild Cattle and Buffaloes in S. Asia, 27th-29th June 2011 held at WII, Dehradun. Sponsored by Wildlife Institute of India, Dehradun.

**Sanjay Molur** represented ZOO & CBSG South Asia the 2nd meeting of the expert group to discuss the progress of implementation of recommendation of Steering Committee Red Listing species of India, 11 August 2011 in New Delhi. He was requested to coordinate the Red List process of India Mammals and specified Indian plants for the country and to bring out a publication on the species already assessed and listed in the IUCN Red List of Threatened Species. Sponsored by Ministry of Environment, New Delhi.

**R. Marimuthu** represented Zoo Educator Network ZEN and CBSG South Asia at the 3<sup>rd</sup> Asian Zoos Educators Conference, 18-21 September 2011 held in Taipei. Sponsored by Taipei Zoo.

**Sally Walker** attended WAZA Council meeting and chaired the Associations Committee Meeting at the 66<sup>th</sup> Annual WAZA Conference. She and Sanjay Molur attended and presented papers at the conference.

**Sally Walker** and **Sanjay Molur** attended the CBSG Annual Meeting, 29 September – 06 October 2011, Prague, Czech Republic. Sally delivered a report on the progress of the Conservation Welfare Task Force. Sanjay gave a report of activities of CBSG South Asia. Sponsored by Chester Zoo, Universities Federation for Animal Welfare and Conservation Breeding Specialist Group, USA.

**B. A. Daniel** attended the Central Zoo Authority GOI Review Committee meeting of Developing a Zoo Educators kit, which included a Manual and a CD, 18 Oct 2011 organized and sponsored by Center for Environment Education, Ahmedabad.

**Sanjay Molur** represented ZOO & CBSG South Asia the 3rd meeting of the expert group to discuss the progress of implementation of recommendation of Steering Committee Red Listing species of India, 12-13 October in New Delhi.

**Sanjay Molur** represented ZOO & CBSG South Asia the Alliance for Zero Extinction Steering Committee meeting held in Washington, 18-19 October 2011.

**Sanjay Molur** represented ZOO & CBSG South Asia the Western Ghats Portal Thematic Workshop #1, Biodiversity Informatics, 25 November 2011, Bangalore

**Sanjay Molur** reviewed the Muhammed Bin Zayed Species Conservation Fund applications, 16-17 December 2011, Abu Dhabi

**Sanjay Molur** visited Ministry of Environment Forests, New Delhi, January

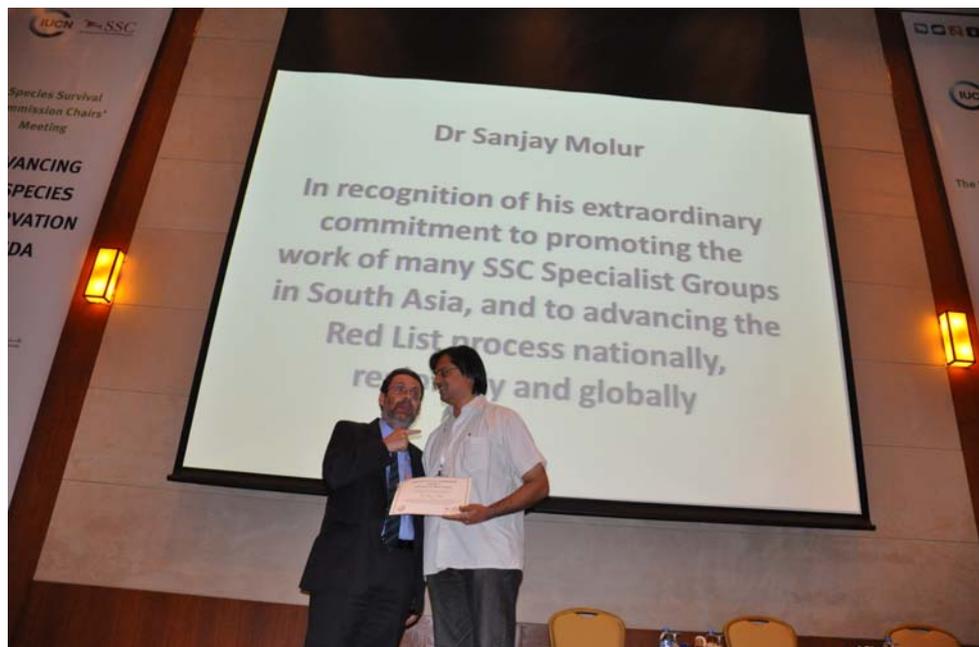
**B.A. Daniel** attended the 2<sup>nd</sup> Symposium on Animal Welfare & Conservation held by Bharathiar University, 24-25 Jan 2012. Daniel delivered a presentation on Animal Welfare & Conservation

**B.A. Daniel**, Scientist/Co-Chair, South Asian Invertebrate Specialist Group, ZOO has attended the IUCN/SSC Invertebrate Conservation Sub-Committee ICSC meeting held at Abu Dhabi, UAE, 20-21<sup>st</sup> February 2012.

**Sanjay Molur** and **B.A. Daniel** have attended the 2nd IUCN SSC Chairs' Meeting, 23-27 Feb 2012, Abu Dhabi, UAE. Sanjay Molur also received a Certificate of Excellence from Dr. Simon Stuart, Chair of the Species Survival Commission, for his contribution on Red Listing work at National, Regional and Global level and a Certificate as a Red List Trainer.

**R. Marimuthu** represented ZOO and CBSG South Asia at the Workshop on Conservation Education on Zoos at Bhopal from 27 Feb 2012 to 01 Mar 2012.

**B.A. Daniel** attended National Seminar on impact of Climate change and Industrial Pollution on Biodiversity and the need for community conservation Initiative at Kirloskar Hall , Koti, Hyderabad from 28-29 Mar 2012.



**Sanjay Molur** also received a Certificate of Excellence from Dr. Simon Stuart, Chair of the Species Survival Commission, for his contribution on Red Listing work at National, Regional and Global level and a Certificate as a Red List Trainer.

## On-going Projects

1. Critical Ecosystem Partnership Fund (CEPF) Project
  - i) Enhancing Knowledge about the Conservation Status of Globally Threatened Species in the Western Ghats, with a Particular Emphasis on Reptiles
  - ii) Protected Area Analysis With Respect to Freshwater Biodiversity and Reptile Assessments, and Development of National Policy for Inclusion in Legislation.
  - iii) Involving Community, Stakeholders and Journalists for the Conservation of Freshwater Biodiversity and Reptiles of Western Ghats through Education, Training and Follow up of the Assessment Projects.
  - iv) Establishing Community Conservation Reserves in the Anamalai Corridor
  - v) Assessing the Status and Distribution of Large Mammals in Highway and Its Environs, Southern Western Ghats
2. Conservation Welfare Educational materials
3. Pollinator Conservation Training Workshop
4. Western Ghats Biodiversity Open Collaborative Information Systems
5. Human Elephant Co-existence – Educator Training workshops to be held in Tamil Nadu funded by U.S. Fish and Wildlife Service
6. Human Elephant Co-existence – Educators Training workshop to be held in Kerala funded by International Elephant Foundation, USA.
7. Task Force for Conservation Welfare.
8. Field project: Conserving Himalayan Grey Langur through a participatory stakeholder conservation initiative
9. USFWS – Amphibian Chytrid (WILD) – Evaluation and impact of Chytridiomycosis on the endemic, highly threatened amphibians of the Western Ghats.
10. Bat Project (Education and Training)
11. Mohammed Bin Zayed Species Conservation grants - Butterfly Assessment, Conserving the Himalayan Grey Langur, *Semnopithecus ajax*, an Endangered, endemic species and Tarantula Spider survey.

### **Thanks to our Donors (FY 2011–2012)**

Alertis-Fund for Bear and Nature Conservation, Netherlands  
Amphibian Ark, USA  
Bat Conservation International, USA  
Chester Zoo, UK  
Columbus Zoological Garden, USA  
Conservation Breeding Specialist Group, USA  
Critical Ecosystems Partnership Fund, USA  
(Conservation International and through ATREE, India)  
French Institute of Pondicherry, India  
International Elephant Foundation, USA  
International Union for Conservation of Nature, Switzerland  
Knowsley Safari Park, UK  
Margot Marsh Biodiversity Foundation, USA  
The Rufford Small Grants Foundation (RSGF)  
Universities Federation For Animal Welfare, UK  
US Fish and Wildlife Service, USA  
Walt Disney Park and Resort, USA  
Zoological Society of London, UK  
Zoo Outreach Organisation, USA