

BIODIV News



Sarus Crane
Courtesy : Neeraj Mishra

Editorial

Dear Readers,

The New Year is here, 2014. This year also happens to be the "International Year of Small Island Developing States" as declared by the United Nations.

In this quarter the U.P. State Biodiversity Board emphasized on trainings in particular. These trainings were on general issues of biodiversity along with legal aspects of the Biological Diversity Act. The objective is to make people aware through education and training about protection and conservation of biodiversity to inculcate in them a sensitivity towards biodiversity.

We also celebrated the World Wetland Day and World Sparrow Day with enthusiasm. Your comments, suggestions to improve this issue are most welcome at upstatebiodiversityboard@gmail.com.

– Editor

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1- World Wetlands Day, 02nd Feb, 2014

The year 2014 is the UN International Year of Family Farming – so the Ramsar Convention chose *Wetlands & Agriculture as the World Wetlands Day theme for 2014.*

The U.P. State Biodiversity Board celebrated *World Wetlands Day on 2nd February, 2014* in collaboration with Department of Zoology, University of Lucknow and Regional Science City, Aliganj, Lucknow. The programme aimed at creating awareness for the wetland conservation among the students of schools and colleges and local people of the Lucknow.

The celebration of World Wetlands Day started on *1st February, 2014* with various competitions like Rangoli, PPT Poster Display and at Spot Painting Competition. The competitions were organized in three groups *i.e. Group A-* (class 6th to 8th), *Group B-* (class 9th to 12th) and *Group C-* (Graduation and Post-Graduation Student) at Regional Science City Aliganj Lucknow.

A total of **200 (approx.)** students of various Schools, Colleges and University actively participated in different events throughout the programme. Prizes along with the certificates were distributed to the winners by Mrs. Pratibha Singh, Conservator of Forests, Uttar Pradesh State Biodiversity Board, Lucknow. The list of prize winners of the Wetlands Day competitions is given below:

Group A: Rangoli

<i>Name of the student</i>	<i>School</i>	<i>Class</i>	<i>Result</i>
Somya Srivastava	H.A.L School	VIII	First
Mansi Gaur	H.A.L School	VIII	Second
Kirti Pandey	H.A.L School	VIII	Third

Group B: Rangoli

<i>Name of the student</i>	<i>School</i>	<i>Class</i>	<i>Result</i>
Harshita Rajnesh	Seth M. R. Jaipuria School	-	First
Riya Patel	Seth M.R. Jaipuria School	-	Second
Monalisha	H.A.L School	XI	Third

Group B: PPT Poster Display

<i>Name of the student</i>	<i>School</i>	<i>Class</i>	<i>Result</i>
Ujjawal Singh	H.A.L School	XI	First
Utkarsh Asthana	H.A.L School	XI	Second
Priyanshu Sahu	H.A.L School	XI	Third
Vashishtha Narayan	H.A.L School	XI	Third

Group A: Painting

Name of the student	School	Class	Result
Sonam Agrawal	Seth M. R. Jaipuria School	VIII	First
Harshi Lal	Seth M. R. Jaipuria School	VIII	Second
Vardaan Mishra	H.A.L School	VII	Third

Group B: Painting

Name of the student	School	Class	Result
Unnati Jain	H.A.L School	XI	First
Aman Gupta	H.A.L School	XI	Second
Swarnima Singh	H.A.L School	XI	Third

Glimpses of different competitions organised on 1st February 2014

A view of Rangoli competition



Students taking part in Rangoli competition

Display of Poster Presentation



Poster judgement by the experts at Regional Science City, Aliganj, Lucknow

Students taking part in Painting competition



Judgement of Rangoli by the experts



Paintings made by students

Prize Distribution



Prize distribution to winners



Photograph of the winners of the events

On 2nd February 2014, the programme started with flagging off of wetlands awareness and wetlands birds' diversity surveying vehicles from the campus of University of Lucknow. Mrs. Pratibha Singh, Conservator of Forests, Uttar Pradesh State Biodiversity Board, Lucknow motivated the volunteers to explore the wetlands and the probable threats. Four teams with volunteers set out at 6:30 am to various places to discover the wetland's biodiversity.

During the survey, observations were made, for a full day, at 4 sites in and around Lucknow. Total 14 conserved and non conserved wetlands were explored by the 04 groups of 19 people. The survey was carried out at appropriate time i.e. starting at 7:00 A.M to view the morning diversity and the survey was completed at 5:30 P.M to see the diversity before dawn. The surveys were carried on foot and vehicle as feasible according to the area. Awareness for wetlands conservation was also created through distribution of awareness materials such as flyers and pamphlets to the local people as well as students.

The awareness vehicles visited following areas in and around Lucknow:-

1. Nawabganj Bird Sanctuary (Conserved),
2. Purain Jheel in Unnao
3. Bhadesha Jheel in Unnao

4. Dahi pond in Unnao.
5. Maghaiya Purva Jheel in Gosaiganj, Lucknow
6. Nawab Ali ka Purva in Gosaiganj, Lucknow
7. Dhan Talab
8. Aneeya Jheel in Amethi, Lucknow
9. Sakri Jheel in Amethi, Lucknow
10. Salarpur Jheel in Deva Barabaanki
11. Kodwa Jheel in Deva Barabaanki
12. Bhaghar Jheel in Fatehganj
13. Puraina Jheel in Deva Barabaanki
14. Kheballi Jheel in Deva Barabaanki

Followed by different field visits/surveys, a power point presentation was also held on 11-02-2012 at U P State Biodiversity Board's Conference Hall. Teams that visited the field shared their experience. Certificates of participation were awarded to the participants by Mrs. Pratibha Singh, Conservator of Forests, U.P. State Biodiversity Board, Lucknow

Presentations by groups



Recommendations of students from survey:

- 1) Prevention of high level of pesticides and fertilizers in fields that are along the wetlands.
- 2) To prevent the over exploitation and sustainable use of wetlands for fish and water chestnut cultivation, irrigation purpose.
- 3) To prevent soil digging from wetlands.
- 4) There are many dead Pisces, birds and reptiles found in wetlands so it should be necessary to test water quality of all wetlands.
- 5) Do not used wetlands as a dustbin for dumping of polluted water of city.
- 6) To check soil erosion or filling of wetlands.
- 7) Fish seeds should be applied in the wetlands with prior consult of Fisheries Department.
- 8) Sustainable use of water for irrigation.
- 9) Preventing the drainage for agriculture and construction work

- 10) Prevention of soil erosion and siltation.
- 11) Proper co-ordination should be between Forest Department, Fisheries Department and Construction agencies. Lack of co-ordination and complicity and contradictory objectives of policies have led to unwise, unsustainable and destructive exploitation of wetlands.
- 12) There should be management inputs.
- 13) Wetlands should be restored and recreated.
- 14) In most wetland reserves, vegetation (e.g. Paspalum distichum, Vetiveria zizanoides, etc.) needs to be cleared periodically and moderate grazing encouraged. Some wetlands require digging or dredging in the dry season, and encroaching Prosopis juliflora annually removed.
- 15) Efforts are needed to control hunting, including by patrolling wetland protected areas and intercepting illegal hunters, and by monitoring and controlling the sale of water birds.
- 16) Measures are required to minimize conflicts between Sarus Cranes and local people, including setting aside small areas of uncultivated wetland and grassland for nesting, and education programmes stressing the threatened status of this species and the traditional relationship between cranes and man.
- 17) Surveys are required to identify key feeding and roosting areas for residential and migratory birds.
- 18) Promoting the cultivation of water spinach, Jussiaea, cyperus and other similar weeds on which water birds feed.

Besides, U.P. State Biodiversity Board also organized poster and essay competitions in different schools/colleges. A total of 131 students from different schools of Lucknow actively participated in these competitions. Out of which, 55 students of Group A (Class VI to VIII) and 32 students of Group B (Class IX to XII) participated in the Essay Competition. A total of 44 students of class IX- XII participated in the Poster Competition. The winners were awarded prizes accordingly. The results of the programme are as under:

2. Results

A) Essay Competition

Group A (Class VI- VIII)

Sl No.	Name of Student	Name of the School	Class	Result
1	Hritik Mohan	Rani Laxmi Bai Memorial School, Sec-14, Indira Nagar, Lucknow	VIII-E	First
2	Kshitij Nargwani	Rani Laxmi Bai Memorial School, Sec-14, Indira Nagar, Lucknow	VIII-A	Second
3	Satyam Yadav	Riverside Academy, Gomti Nagar, Lucknow	VIII	Third

Group B (Class IX- XII)

1	Hrithika Singh	Rani Laxmi Bai Memorial School, C-Block, Indira Nagar, Lucknow	IX-D	First
2	Soni Yadav	Awadh Academy Inter College, Lucknow	XI-A	Second
3	Sadaf Parvez	Riverside Academy, Gomti Nagar, Lucknow	XI	Third

B) Poster Competition

Category- Class- IX- XII

Sl No.	Name of Student	Name of the School	Class	Result
1	Twisha Gupta	Kendriya Vidyalaya Gomti Nagar, Lucknow	X-E	First
2	Anjali Verma	TD Girls Inter College, Lucknow	XI-B	Second
3	Suraj Shah	Awadh Academy Inter College, Lucknow	IX	Third

Winners of the poster competition



First Prize, Twisha Gupta



Second Prize, Anjali Verma



Third Prize, Suraj Shah

2- World Sparrow Day

20th March, 2014

World Sparrow Day is a day designated to raise awareness of the House Sparrow and other common birds to urban environments, and of threats to their populations, observed on 20th March. It is an international initiative by the Nature Forever Society of India in collaboration with the Eco-Sys Action Foundation (France) and numerous other national and international organisations across the world.



World Sparrow Day also has a broader vision to provide a platform where people who are working on the conservation of the House Sparrow and other common birds can network, collaborate and exchange conservation ideas which will lead to better science and improved results. It aims to provide a meeting ground for people from different parts of the world to come together and form a force that can play an important role in advocacy and in spreading the awareness on the need of conserving common biodiversity or species of lower conservation status.

The World Sparrow Day (WSD) was celebrated on 20th March, 2014 at the Regional Science City, Aliganj, Lucknow. The day was jointly celebrated by U.P. State Biodiversity Board, Lucknow, Zoology Department, Lucknow University and Regional Science City, Lucknow. The aim of the programme was to raise awareness regarding Sparrow conservation among the students through various competitions.

The celebration of World Sparrow Day started on 19th March, 2014 with various events like Art and Quiz Competitions. The competitions were organized in two groups i.e. Group A- (class 4th to 8th) and Group B- (class 9th to 12th) at Regional Science City Aliganj Lucknow. The details of the events are as follows:

In all 172 students of various schools in Lucknow participated enthusiastically in the aforesaid events. In which, 81 students of Group 'A' (57) and Group 'B' (24) participated in Art competition on "Sparrows in and around your garden" and 91 students of Group 'A' (21) and Group 'B' (70) participated in the quiz competition on "Sparrows". Prizes along with the certificates were distributed to the winners by Mrs. Pratibha Singh, Conservator of Forests, Uttar Pradesh State Biodiversity Board, Lucknow. The list of prize winners of the World Sparrow Day competitions is given below:

1- Art Competition:

GROUP- A (class 4th -8th)

S.No	Name of the Student	School	Class	Prize	
1	Kuhuk Agarwal	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow		VI	First
2	Samriddhi Singh	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow		VII	Second
3	Satvik Rastogi	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow		IV	Third



1st prize Kuhuk Agarwal



2nd prize Samriddhi Singh



3rd prize Satvik Rastogi

GROUP- B (class 9th -12th)

S.No	Name of the student	School	Class	Prize
1	Bhavana Yadav	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	XI	First
2	Harshita Rajnish	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	XI	Second
3	Bhagat Singh	C.M.S. Mahanagar, Near Badshah Nagar, Lucknow	IX	Third



1st prize Bhavana Yadav



2nd prize Harshita Rajnish

2- Quiz Competition:

GROUP- A (class 4th -8th)

S.No	Name of the student	School	Class	Prize
1	Aditya Verma	Sri Ayodhya Singh Memorial Inter College, Chinhat, Lucknow	VI	First
2	Ayush Yadav	C.M.S. Mahanagar, Near Badshah Nagar, Lucknow	VIII	Second
3	Khuboo Pal	Sri Ayodhya Singh Memorial Inter College, Chinhat, Lucknow	IV	Third

GROUP- B (class 9th -12th)

S.No	Name of the student	School	Class	Prize
1	Ayushi Singh	C.M.S. Mahanagar, Near Badshah Nagar, Lucknow	IX	First
2	Shreya Srivastava	C.M.S. Mahanagar, Near Badshah Nagar, Lucknow	IX	Second
3	Jainub Shaikh	M.L.M. Higher Secondary School, Sec.A., Aliganj, Lucknow	IX	Third

Awareness materials published and distributed on the occasion of World Sparrow Day-2014



Poster



Handbills



Sparrow count form

Glimpses of World Sparrow Day -2014 Celebration



Students participating in Art Competition



Students with their paintings



Students participating in Quiz competition



A view of paintings by the students



Prizes and certificates for winners



Prize distribution

Besides, *World Sparrow Day Campaign* was also organized on 20th March, 2014. The event started at 6:30 am covering more than 30 areas of Lucknow (Triveninagar, Khadra, Daliganj, Aliganj, Aminabad, Indiranagar, Alambagh, Chowk, Telibagh, Kapurthalla, Vikasnagar, Mahanagar, Gontinagar, Chinhat, Munshipulia, P.G.I., Bangla Bazar, Rajajipuram, Faizullaganj, Smileganj, Niralanagar and New Hyderabad in Lucknow city and its associate areas like Kakori, Malihabad, Itaunja, Gosainganj, Bakshi Ka Talab, Mahona, Nagram, and Amethi).

The volunteers spotted the Sparrows in the aforesaid areas and created awareness by distributing flyers, pamphlets, posters and calendar on sparrows to the local people. They also distributed the Sparrow count forms. Celebrating this day is an attempt to bring sparrow lovers and nature supporters on a common platform, and start a conservation movement to save the common flora and fauna of the world.



Sarus crane

Courtesy : Neeraj Mishra

3- Biodiversity Management Committee (BMC) & People's Biodiversity Register (PBR)

a) Biodiversity Management Committee (BMC):

The following Biodiversity Management Committees (BMCs) have been constituted by the UPSBB:

S. No.	Agro Climatic Zone	Name of District	Name of Block	Name of Village	Date of BMC formation
1.	North Eastern Plain	Maharajganj	Paniyara	Laxmipur	11-06-2013

b) People's Biodiversity Register (PBR):

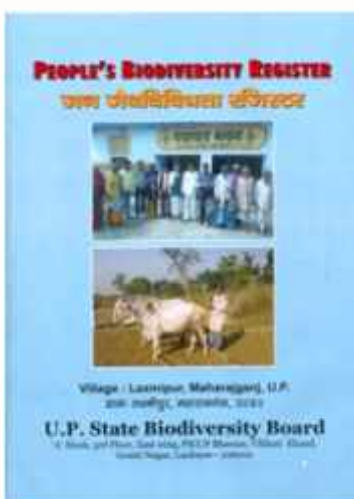
During this period the following People's Biodiversity Registers (PBRs) have been made:

i) Gram Sabha: Laxmipur, Distt. - Maharajganj:

The Biodiversity Management Committee (BMC) of this village was formed on 11-06-2013. Extensive survey was done during formation of the People's Biodiversity Register (PBR) of this village. PBR of the village was validated on 25-02-2014 by the BMC. Overall 212 species were recorded in this village; details of the same are given below in the table:

Biodiversity of Laxmipur Village, Maharajganj

Crop Plants	42	Wild Plant Species of Importance	10
Pests of Crops	10	Wild relatives of Crops	02
Ornamental Plants	08	Fodder Crop	02
Wild Aquatic Plant Species of Importance	06	Domesticated Animals	06
Aquatic Biodiversity	06	Culture Fisheries	10
Other Plants in the Wild	04	Wild Plants of Medicinal Importance	12
Wild Animals (Mammals, Birds, Reptiles, Amphibian, Insects, others)	50	Fruit Plants	16
Medicinal Plants	10	Weeds	08
Timber Plants	10		



Cover page of the PBR

4- Visits/Trainings/Conferences

1- 9th National Meeting of State Biodiversity Boards and Celebration of 10th Anniversary of National Biodiversity Authority, during 20-21 January, 2014 at NBA Chennai was attended by Dr. Ram Jee Srivastava, Senior Scientist, U.P. State Biodiversity Board. The meeting was aimed at bringing all the State Biodiversity Boards in India on a single platform to discuss the ways and means of strengthening the implementation of the Biological Diversity Act and Rules. The programme included sessions on issues related to strengthening of SBB's, organizing capacity building PBR preparations, discussions on project proposals from SBB's and issues related to understanding Access and Benefit Sharing (ABS) mechanism etc.

2- Training on "Legal Aspects of Conservation of Biological Diversity" 23rd January, 2014

One day training programme on "Legal Aspects of Conservation of Biological Diversity" was conducted by U.P. State Biodiversity Board on January 23, 2014 at Conference Hall of Judicial Training and Research Institute (JTRI), Lucknow for Forest Officers of U.P. The participants attended the Training programme, were 25 senior forest officers (CCF,s, CFs, DCFs,).



The programme was inaugurated by Hon'ble **Mr. Justice S.K. Saxena**, Judge, Allahabad High Court, Lucknow Bench in the presence of Shri. J.S. Asthana, PCCF, UP Guest of Honour and the programme was presided over by Hon'ble Mr. Justice Bhanwar Singh, The Chairman, JTRI, U.P. During the programme concern for environment, its awareness and conservation was shared.

The first session was taken by **Hon'ble Mr. Justice Bhanwar Singh** covering the International Initiatives in conservation of Biological Diversity. The different Constitutional provisions and case laws were discussed. The overview of Jurisdiction of courts in Civil/Criminal Adjudication was also discussed along with the case laws with special reference to the Bio-diversity.



The Resource person of second session was **Prof. Dr. B.B. Pandey**, Former Professor, Delhi University. He shared about Judicial Creativity, Public Interest Litigations, Important land mark Judgments of Hon'ble Courts in the area of Environment, conservation of forests, Biodiversity. The Jurisdiction of National Green Tribunal and its Consultation was discussed. During his address, he also focused on the current trends of courts in Conservation of Biological resources citing the latest case laws.



In the Post Lunch session, **Shri A.K. Awasthi**, Additional Director, JTRI discussed the salient features of the Biological Diversity Act 2002 and U.P. Rules 2010. He discussed in detail regarding the authorities/committees under the Biological Diversity Acts, National and State Biological Authorities, Local Management Committee. The Role and Functions of Forest Officers under the Biological Diversity Acts was also discussed. He also discussed the Biodiversity related Legal Frameworks in India with reference to District Courts. He also shared regarding the procedure for filing complaints under the act before the appropriate courts

and issues involved therein.

In the fourth session **Dr. Anupam Goyal**, Additional Director, JTRI and **Shri Pushpender Singh**, Dy. Director, JTRI spoke on Intellectual Property Rights with reference to the Bio-diversity and role of forest officers in such cases. The issues and challenges of Genetically Modified Organism was discussed. The concepts of traditional knowledge and Monopoly in relation to IPR were discussed with leading cases.



The valedictory session was Chaired by **Hon'ble Mr. Justice Bhanwar Singh**, The Chairman JTRI and **Mr. Rupak Dey**, PCCF, Wildlife, UP, Lucknow. During the session the relevance and importance of the laws were discussed. Mr. Rupak De expressed all support to officers in implementation of relevant acts/rules and shared about policies and departmental vision in regard to the topic. The Programme ended with the vote of thanks.

3- Training on "Biodiversity: Law and Policy" 31st January, 2014

A one day Training Programme on "Biodiversity: Law and Policy" was conducted by U.P. State Biodiversity Board, Lucknow on January 31, 2014 in the Library Hall of Dr. Ram Manohar Lohia National Law University, Lucknow. The participants in the training programme were Conservators, Deputy Conservators (DFOs) of the state of U.P. There were 25 nominations from U.P. Forest Department which were attended by almost everyone with full zeal and enthusiasm from all over the state.



The inaugural session was presided over by **Shri Pawan Kumar**, Secretary, U.P. State Biodiversity Board, Lucknow, the Chief Guest for the occasion and by Prof. Gurdip Singh, the Vice Chancellor of the host university. The chief guest delivered his key note address on biodiversity law in India and the activities of the U.P. State Biodiversity Board for preserving, protecting and safeguarding the biodiversity of the state.

The next technical address was by **Prof. Gurdip Singh**, the Vice Chancellor of the University. Prof. Singh delivered on the international perspectives of biodiversity particularly linking the Indian legislation with the International Convention on Biodiversity Cartagena Protocol and Nagoya Protocol on biodiversity.



The next session was on "Ecology, Architecture and Infrastructure of Biodiversity Act 2002: A Critique" by **Prof. Amar Pal Singh**, the Head of Department of Legal Studies of the university.



Dr. A. K. Tiwari, Associate Professor, Ram Manohar Lohia National Law University, in his deliberation explained to the participants the National Biodiversity Action Plan (2008) prepared by Ministry of Environment and Forest, Govt. of India. He also discussed the salient features of the National Environment Policy, 2006 and the Forest Policy of 1988. In his talk Dr. Tiwari discussed the principles of Sustainable Development, Polluter Pays Principle, Precautionary Principle etc.



The last technical session was on rights and responsibilities of the authorities with the Biodiversity Act and this was taken up by **Mr. Vikas Bhatti**, Assistant Professor, R.M.L.N.L.U. Mr. Bhatti in his deliberation explained to the participants that access, fair and equitable sharing of the benefits are the key components of the biodiversity conservation in India and elsewhere. For that purpose, a regime consisting of prior permission for access, and transfer of research results, and for claiming IPR's from NBA is necessary and prior information to the State Biodiversity Boards for obtaining biological material is necessary under the Biodiversity Act, 2002. Measures for documentation of biodiversity are crucial (like, TKDL) which can ensure a cost-effective and time saving tool to protect exploitation of biodiversity.



4- Training on "Biodiversity and Its Conservation" at Lucknow University, Lucknow, 26-28 March, 2014

A three day training programme on "Biodiversity and Its Conservation" was organized by U P State Biodiversity Board at Zoology Department, Lucknow University. The objective of the training programme was to build partnerships with schools and colleges for effective biodiversity conservation.

Overall, 90 participants including teachers from various schools, Colleges and Universities such as Shia P.G.College, I.T.P.G.College, Navyug Kanya Mahavidhyala, B.S.N.V. P.G. College, Karamat Hussain Muslim P.G. College, Shashi Bhusan Balika Vidhayala, University of Lucknow, R.P.P.G. college, P.M.S.Girls Degree College, Bhartiya Vidhaya Bhawan Girls Degree College, Govt. P.G.college Aliganj, Mumtaj P.G.college, CMS Mahanagar II, Naari Shiksha Niketan P.G.College Lucknow, M.K.I.T.M Lucknow, KMC Urdu Arbi, Farsi University Lucknow, Awadh Academy Inter College, Riverside Academy Gontinagar, MKITM Gontinagar actively participated in the programme.

The lectures were on all the forms of biodiversity by Eminent Scientists, Experts and Conservators. The different themes include: Biodiversity and its importance, Legal Aspects of Wildlife and Biodiversity, Arthropod and Biodiversity, Bird Biodiversity, Conservational Aspects of wildlife and Biodiversity, Lichens and Lichenology, Fresh water Biodiversity, Fish Biodiversity, Vulture Conservation, Sparrow Conservation and Wetland Conservation. This training served as a platform to promote collaboration and exchange between teachers from Schools, Colleges and University in Lucknow which will benefit the conservation of the biodiversity.

7. Newspaper Clippings

(i) International News

THE HINDU • THURSDAY, JANUARY 2, 2014

Mangroves in Florida expanding poleward

The expansion is due to decrease in extreme cold events

R. PRASAD

Adding to the growing evidence of climate change-induced poleward migration and/or expansion of many fish and terrestrial plant species, a paper published recently in the *Proceedings of the National Academy of Sciences* (PNAS) journal has found a massive expansion of mangroves in Florida. The expansion has been to an extent of more than 1,000 acres over a 28-year period — 1984 to 2011.



THE EXTENT: The increase in mangrove coverage north of latitude 26.7 degree N was about 4,200 acres. — PHOTO: C. SURESH KUMAR

By default, mangroves are restricted to the tropical areas as they cannot tolerate the extreme cold events that are so very typical of the temperate zone. Therefore, the massive expansion of mangroves in the temperate zone of Florida during the last three decades is proof of climate change's role.

These increases (expansion) correspond to decrease in the frequency of extreme cold events in this region," notes Kyle Cavasough of the Smithsonian Environmental Research Center, Smithsonian Institution, U.S. Dr. Cavasough is the first author of the paper.

Aside from pointing out the poleward expansion, the study has highlighted another important parameter — the "dynamics of mangrove" coverage. The authors have found that the 26.75 degree N latitude plays a critical role.

While there was an increase in the mangrove coverage north of this latitude, there was "little or small decrease" in the area south of this latitude. The increase in mangrove coverage north of 26.7 degree N was about 4,200 acres; the area south of

this latitude had reduced by about 1,164 acres. "The 26.75 degree N [is] a breakpoint in the relationship between latitude and change in mangrove area," they write.

According to the authors, the reason for this strange concomitant expansion/reduction in mangrove coverage boils down to extreme cold events — days colder than -4 degree C. Mimos four degree C is the physiological temperature limit of mangrove survival.

The region north of 26.75 degree N latitude had registered an increase in coverage as there was a "significant decrease" in the frequency of extreme cold events during the last three decades, they note. Such extreme cold events are "rare or non-existent" in the region south of this latitude.

The impact of extreme cold event (days colder than -4 degree C) has been well documented by the hard-frost winter of 1989 to 1990 — the cold event decreased the mangrove area. It took about nine years for the mangroves to reach the pre-1989 levels.

The authors rule out the role of temperature increase in bringing about an expansion. It is true that the mean winter temperatures had risen at seven of eight coastal weather stations in the study area. But if overall warming was indeed the factor for the expansion, then an overall increase in coverage should have been observed both north and south of this latitude. According to them, no other factor like rainfall and urban or agricultural land use could account for this strange trend. Only a reduction in the extreme cold events could.

"It is likely that cold thresholds act as a barrier to the poleward extension of mangroves in other parts of the world," they write. "Relatively small future decreases in the frequency of extreme cold events could lead to further increase in mangrove cover near the current poleward limit of mangrove forests in Florida."

Unlike terrestrial plants, a change in the type of vegetation cover would be relatively rapid in the case of mangroves as water is far superior to wind and animals in dispersing plants.

2 Jan 2014 : Due to climate change and warming the mangroves of Florida are expanding. They have expanded over 3000 acres over a 28 year period-1984 to 2011.

hindustantimes SUNDAY HINDUSTAN TIMES, LUCKNOW FEBRUARY 09, 2014

HTSUNDAY SPECIAL

Chimps population jumps in remote DR Congo forest

STUDY Experts believe the group is one of the last chimp 'mega-cultures', sharing unique set of customs and behaviour

Devan Chatterjee

It is one of the most dangerous regions of the planet, against all odds, a huge yet mysterious population of chimpanzees appears to be thriving — because the forest in the remote and remote forests in the north of the Democratic Republic of Congo (DRC) and on the border of the Central African Republic, the chimp were completely unknown until recently — apart from the local legends of ghost apes that are born and hatched in the night.

But researchers who tracked thousands of chimpanzees through restricted territory and difficult terrain positions and made findings, now believe the group is one of the last thriving chimp 'mega-cultures'.

"This is one of the few places left on earth with a large continuous population of chimps," says Cleve Hicks, a primatologist based at the Max Planck Institute in Leipzig, Germany, who says the group is probably the largest in Africa.

"We estimate there are thousands of individuals, perhaps tens of thousands. A unique set of customs and behaviour is shared by the apes across a vast area of 20,000 sq km, remaining how they live naturally."

The naturally large chimps of the Bili-liele forest have been seen foraging on ground and build ground nests for roosting than other chimps, as well as having a unique habit for plant African species, whose shells they appear to pound open in rocks or logs. "Their activities have been some left in the forest for eight months since reported groups of males patrolling their territory and others showing their pride, they use tools to eat and hunt insects — although this is not confirmed by the latest work."

Conservationists have revealed an extraordinary catalogue of forest dwellers, including forest elephants, olive baboons, spotted hyenas as well as red pine and giant forest hogs, crested guinea fowl and hornbills.

"We have identified thousands of wildlife on our camera traps, but we did not catch a single one of a human," says Hicks. "It remains one of the last untouched wildernesses in Africa."

One instance event resulted in an incident where a camera trap was struck from a log, but all two dozen cameras were nearly lost when poachers invaded the area and burned the researcher's camp. Only a swift two-day rescue mission retrieved the footage.

FOREST ELEPHANTS While the chimp numbers have apparently remained stable, the numbers of forest elephants have crashed by half due to poaching. The slaughter, to fuel the highly lucrative illegal ivory trade, mirrors

LAST THRIVING CHIMPS



Chimps have been seen foraging on insects.

THE BILI-LIELE

The Bili-liele Protected Area Complex is located in the remote north of the Democratic Republic of Congo. It covers about 20,000-60,000 sq km and is home to an estimated 35,000-65,000 eastern chimpanzees. It is one of the last remaining mega-cultures of chimpanzees in the world.

The estimated 'mega-culture' is thought to be the largest population of chimps in Africa and one of the last remaining mega-cultures of chimpanzees in the world.

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09 Feb, 2014 : The Bili-liele Protected Area Complex is located in the remote north of the Democratic Republic of Congo. An estimated 35,000-65,000 eastern chimpanzee are found here. This is the largest population of chimps found in the wild in the world. It is said that strongly 440 animals are slaughtered each year for bush meat to earn \$300-\$1000 per animal!

When caring less may actually help

Conservationists should be concerned about saving the species, rather than every individual tiger

K. Ullas Karanth

The shooting of a man-eating tiger, as it happened recently in the Nilgiris, Tamil Nadu — barely two weeks after two other tigers preyed on four people in neighbouring Karnataka — invariably polarises public opinion. Locals, whose lives are at risk, want maneaters shot. Animal lovers, on the other hand, demand their “safe capture.” Caught in the middle, officials have to confront increasingly angry mobs, while authorities in Delhi insist on elaborate “operating procedures.” In Bandipur, Karnataka, after dozens of attempts at darting a tiger with a tranquillizing gun had failed, and after the big cat killed its third victim, angry locals burnt the forest office, forcing forest staff to abandon the scene. A posse of armed police had to control the situation, until the 12-year-old infirm male tiger was finally darted.

Science and practical experience clearly show that we cannot care for every individual wild tiger. Animal lovers and conservationists should therefore focus on saving the species as a whole, rather than worry about saving every individual. Conservation interventions must therefore be guided by scientific evidence and social practicality, rather than emotion.

Understanding tigers

My tiger research and conservation of three decades focusses on the central Western Ghats, which consists of forests in Karnataka and adjacent parts of Kerala and Tamil Nadu. This landscape now harbours the largest tiger population globally. However, the 400 or so big cats in my study area are restricted to reserves comprising less than 10 per cent of the total area. With the overall landscape populated by 15 million people, public support for conservation is critical to tiger survival in the long term.

Studies show that tiger populations in some well-protected reserves, such as Nagarhole and Bandipur, in Karnataka, have dramatically rebounded, with their numbers attaining near saturation densities of 10-15 tigers per 100 sq km. A substantial part of the credit for this must go to the forest departments of these three States. With the control of hunting and cattle grazing, deer, gaur and wild pigs have attained optimum densities of 20 or more animals per square kilometre, which is crucial for a healthy tiger population.

Every wild tiger requires a prey base of 500 animals to sustain it. When prey becomes abundant, individual tiger territories shrink and breeding increases. A single female may produce 10-15 cubs in



PRECARIOUS FUTURE: When conflict between man and tiger escalates, crucial local support for tiger conservation gets undermined. Picture shows the Bandipur “man eater” which was eventually trapped.

— PHOTO: M.A. SRIRAM

her lifetime, an average of one cub a year. Consequently, thriving tiger populations produce annual surpluses, pushing dispersing sub-adults and old tigers to the edges of reserves.

These are the animals that prey on livestock and, more rarely, on humans, becoming “problem tigers.”

Tiger-human conflict

On rare occasions, tigers may accidentally attack persons moving in dense cover, mistaking them for prey, or in self-defence, when surprised. Sometimes they may even consume the victim. But if they do not subsequently prey on humans, these tigers also cannot be called “maneaters.” However, attacks occur when uncontrollable mobs surround and harry “problem tigers” when they venture out of reserves. Such tigers are not “maneaters.”

True maneaters are individual animals that persistently stalk and hunt human beings, after losing their instinctive fear. They pose a serious risk to local people and must be swiftly removed. By my reckoning there have been less than half-

a-dozen such casts in the last decade in this region, three instances in the last two months. In all these cases, the tigers were injured, aged or infirm. Even so, maneaters do not prey exclusively on humans. They also kill livestock or wild prey opportunistically. There is no evidence at all that tigers get “addicted” to human flesh as common lore has it.

The critical point is that recent cases of conflict in the Western Ghats, central India and the Terai are a consequence of rebounding tiger numbers. In some sense, these rare instances of conflict we are witnessing are the price of conservation successes. In contrast, in the extensive but overhunted forests of the tribal belts of Chhattisgarh, Jharkhand, Odisha and the North Eastern Hill States, tigers have been either extirpated totally, or occur at low densities. In these regions, where tiger conservation has clearly failed, tiger-human conflict is virtually non-existent. This is not good news for tigers.

Research shows that in my study area, 20 per cent of the tiger population is lost every year due to several causes: fights

between rivals, injuries, starvation, poaching and official removals by shooting or capture, following conflict incidents. I estimate that at least 50-75 tigers are being lost this way annually, although only a fraction of these mortalities are detected. However, such loss is not a cause for worry in itself as the birth of new tigers makes up for it.

To kill or not to kill?

Given this inevitable annual loss of 20 per cent in thriving populations, trying to “rescue” a few man-eating tigers is irrelevant to accomplishing the conservation objective of expanding and stabilising wild tiger populations. Tigers involved in conflict incidents are often seriously injured, infirm or old. If captured and removed to a zoo, they suffer a life of perpetual stress from years in captivity. Caring for these doomed tigers misdirects scarce resources that could be used for conserving their wild relatives. Sadly, for old and injured “conflict tigers,” a humane and quick death may be the best option.

Well-meaning animal lovers often do not understand that in high-pressure conflict situations, safe chemical capture of a free-ranging tiger is difficult or even impossible. Darting a stressed animal playing hide-and-seek is an extremely difficult task. On the other hand, shooting the animal with a gun is often far easier, and saves human lives.

When precious days are spent in clumsy attempts to “rescue” maneaters, growing public anger seriously undermines the long-term support crucial for wild tigers, protected areas and the forest personnel who guard them. Overall, the future of wild tigers as a species is rendered more precarious when local public anxiety and anger are not quickly dealt with by eliminating the problem animal. By curing for individual wild tigers far too deeply, we may be dooming the species.

To save the tiger for posterity, we need to work on expanding protected area coverage, and reducing adverse human impacts. Both these require increased local support for tiger conservation. Yet, this is precisely what is undermined when human-tiger conflict escalates. While a few animal lovers may feel good if a man-eater is “rescued” rather than killed, the cause of tiger conservation suffers.

In this overall context, the decision of the Tamil Nadu government to shoot the man-eater in the Nilgiris, rather than persist in pointless rescue attempts, was the right thing to do.

(K. Ullas Karanth is director for Science-Asia, Wildlife Conservation Society).

30 Jan 2014 : In this article, Ullas Karanth says that to save the tiger for posterity, we need to work on expanding protected area coverage and reducing adverse human impacts. This also requires local support for tiger conservation. Yet this is what is undermined when human tiger conflict escalates.



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