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## ANNUAL REPORT 2012-2013

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Cover Photo : Wetlands
    Front cover : 1. Sarus Cranes (Grus antigone)
                            2. Painted Storks (Mycteria leucocephala)
    Back cover : Black Headed Ibis (Threskiornis melanocephalus)
Photo Courtesy : Shri Neeraj Mishra
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Published by:

## Uttar Pradesh State Biodiversity Board

East Wing, III ${ }^{\text {rd }}$ Floor, 'A' Block
PICUP Bhawan, Gomti Nagar, Lucknow
Ph: 0522-4006746, 2306491, Fax: 0522-4006746
Web-site: http://www.upsbdb.org
E-mail: upstatebiodiversityboard@gmail.com
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## Introduction

Biodiversity encompasses the variety of all life on earth including terrestrial, marine and aquatic ecosystems. It includes diversity at three levels: Genetic Diversity (within species), Species Diversity (between species) and Ecosystem Diversity (between ecosystems).

Biodiversity is essential for human survival and well being. It forms the core of all development actions since it provides food, fodder, medicines, water, clean air and other goods and services.

## Uttar Pradesh ata Glance

It is the fourth largest (area wise) and most populous state in the country. On $3.7 \%$ of the total area of the country, Uttar Pradesh supports $16.49 \%$ of the human population of India and about $12 \%$ of the livestock population. The population density in the state is 828 persons per $\mathrm{km}^{2}$.
Agriculture is the main occupation of the people. The state is well drained by a number of riversthe Ganga, Yamuna, Ramganga, Gomti, Ghaghra, Gandak, Chambal, Betwa, Ken, Son etc.

The total forest/tree cover is $21,720 \mathrm{sq}$. km. which represents $9.01 \%$ of the total geographical area of the state. The recorded forest area is $16,583 \mathrm{~km}^{2}$ which is $6.88 \%$ of the state's geographical area. The state is home to one National Park and 24 wildlife sanctuaries. Latest Remote Sensing Applications Center (RSAC) records show that U.P. has $11,45,178$ ha area ( $4.8 \%$ of its geographical area) as wetlands.

About 2881 species of plants are recorded from Uttar Pradesh which is about $6.34 \%$ of the total species of India. The National Bureau of Fish Genetic Resources has recorded about 115 species of fish in U.P.from 20 rivers. Out of this, 109 are native fishes and 06 are exotic fishes.

## The Biological Diversity Act, 2002

The Biological Diversity Act, 2002 of 2003 was enacted by Ministry of Environment and Forests, Government of India on 5th February, 2003. This Act provides for conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto. The Act has 12 chapters and 65 sections.

The Biological Diversity Act provides a legal mechanism for establishing sovereign rights over the Indian biodiversity and its conservation, protection against misappropriation, regulation of access and sustainable use of biodiversity and associated knowledge.
The Biodiversity Rules were notified on 15th April, 2004.

The functions of SBBs as per Section 22 of the Act include:
> Advising the State Governments, subject to guidelines issued by the Central Government, on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of utilization of biological resources.
$>$ Regulating by granting approvals or otherwise requests for commercial utilization or bio-survey and bio-utilization of any biological resources by Indians.
$>$ Performing such other functions as necessary to carry out the provisions of this Act or as prescribed by the State Government.

## Constitution of the Board

As per the Biological Diversity Act, Section 22, each state is to establish a State Biodiversity Board. Accordingly, the Uttar Pradesh State Biodiversity Board (UPSBB) was established vide G.O. No. 1498/14-5-2006-57/2006 dt. 20 September 2006.
The Board consists of the following members:

| 1. | Principal Secretary, Forest Department, <br> Government of Uttar Pradesh | Chairman |
| :--- | :--- | :--- |
| 2. | Nominee of Principal Secretary/Secretary, <br> Environment Department, Government of <br> Uttar Pradesh | Member |
| 3. | Nominee of Principal Secretary/Secretary, <br> Horticulture Department, Government of <br> Uttar Pradesh | Member |
| 4. | Nominee of Principal Secretary/Secretary, <br> Agriculture Department, Government of <br> Uttar Pradesh | Member |
| 5. | Nominee of Principal Secretary/Secretary, <br> Animal Husbandry Department, <br> Government of Uttar Pradesh | Member |
| $6-$ | Principal ChiefConservator of Forests, Uttar Pradesh | Member |
| 7 to 11 | Five Specialist Members | Specialist Members |

In exercise of the powers under subsection (1) of Section 63 of the Biological Diversity Act, 2002, the UP State Biological Diversity Rules, 2010 was framed vide notification number 570/XIV-5-2010-57/2006 dated April 9, 2010. Under the provision of section 19(3) of the Uttar Pradesh Biological Diversity Rules, 2010, the Board shall submit the Annual report and the State Government will lay the report before the Legislative Assembly.

## Board Meetings

## $7^{\text {th }}$ Board meeting: $11^{\text {th }}$ Oct., 2012

The $7^{\text {th }}$ Board meeting was held on $11^{\text {th }}$ Oct. 2012. In this meeting, confirmation of the minutes of the previous meeting was done first, followed by the discussion on the progress and follow up actions on the directions given in the previous meeting. In addition, a review on the progress of various activities of the Board was presented by Pratibha Singh, DCF. It was brought to the notice of the board that India is host to the 11th Conference of Parties (COP) of the convention of Biological Diversity (CBD) that is currently at Hyderabad. Brochures/Flyers/Booklets/ Standees for the information of international guests have been developed and will be displayed/distributed at a stall in COP-11. These materials are being distributed free of cost at Hyderabad during the COP-11 meeting.

The following decisions were taken at the $7{ }^{\text {th }}$ Board meeting:

1. Approval of audited financial report of 2011-12.
2. Approval of expenditure of the Board upto August 2012.
3. Proposed budget of the Board for 2012-13.
4. Approval of Guidelines for preparation of PBR with the cooperation of educational institutions.
5. Approval was given for making 1000 copies (each) of books on Birds of Raj Bhawan, Lucknow and "Trees of Lohia Park", Lucknowby the Board.
6. The draft of Annual Report 2011-12 was approved by the Board for publication in Hindi and English.
7. 07 new projects were approved for funding from the Board.
8. Extension was given to BSIP currently doing the project, "Documentation of Plant Diversity through Literature Survey for Development of Uttar Pradesh Biodiversity Database Information System (UPBDIS)" for a period of o9 months (01-04-12 to 31-1212).
9. Extension was given to Zoology Deptt., Lucknow University for the project, "Annotated and Colored Checklist of the Reptiles and Amphibians of Uttar Pradesh" for a period of six months (May to October 2012).
10. Permissions sought/Approvals given:
i. Under Section 6 of Biological Diversity Act and Rule 18 of Biodiversity Rules, 2004, permission was sought from NBA by Shri R. K. Gupta, Head, Innovation Protection Unit, N.I.S. C.A.I.R Building, New Delhi for the use of biological resources e.g. Cymbopogon spp., Chrysanthemum cineraraiaefolium, Eucalyptus citriodora, Foeniculum vulgare, Lavandula spp., Lippia spp., Mentha arvensis, Mentha piperita, Ocimum basilicum, Perlargonium gravelens, Zingiber officinale from Central Institute of Medicinal and Aromatic Plant,

Lucknow. NBA had sought consent of UPSBB for this, the same was granted subject to conditions.
ii. Under Section 6 of Biological Diversity Act and Rule 18 of Biodiversity Rules, 2004, NIS, CSIR Building, New Delhi had sought permission from NBA by N.I.S. C.A.I.R Building, New Delhi for the use of biological resources like Juglans regia, Indigofera tinctoria, Terminilia chebula, Acacia simuata, Lawsonia inermis, Trigonella fornum-graecum, Sapindus mukorossi, Elipta alba, Embelica officinalis, Acacia catechú, Piper betle for research purpose through the purchase from Nakkhas Bazar, Lucknow. NBA had sought consent of UPSBB for this, the same was given.
iii. Under Section 20 of Biological Diversity Act and Rule 19 of the Biodiversity Rules, Prof. K.P. Joy, Centre of Advance Studies, Deptt. Of Zoology, Banaras Hindu University had sought permission for use of biological resource Hetero pneustes fossilis (Edible catfish) for research through purchase from Chauka Ghat Bazar of Banaras. NBA had sought consent of UPSBB for this, the same was given subject to conditions.
iv. Under Section 7 of Biological Diversity Act and U.P. State Biodiversity Rules 2010, M/s Sungro Seeds Ltd. had sought permission from NBA for the use of biological resources like 50 seeds of Gossypium hirsutum/barbedense (Cotton) and Cry1EC-cockerline, NBRI event 24 and Cry 1EC-gene-sourced from a soil microorganism, Bacillus thuringiensis from NBRI campus. It was decided by the Board to refer the matter to U.P. Deptt. of Science \& Technology for seeking their advice in this regard. Besides, the advice of two or three Biotechnology specialists in this field was also sought.

## $8^{\text {th }}$ Board meeting: $07^{\text {th }}$ Dec., 2012

$8^{\text {th }}$ Board meeting was held on $07^{\text {th }}$ December, 2012. In this meeting, confirmation of the minutes of the previous meeting was done, followed by the discussion on the progress and follow up actions on the directions given in the previous. Besides, a review on the progress of ongoing activities of the Board was presented by Pratibha Singh, DCF. It was informed that the COP-11 event was held at Hyderabad during 01-19 October 2012 and a stall of U.P. State Biodiversity was also exhibited, where a total of 22000 flyers and 2000 booklets were distributed free of cost to the visitors taking interest in the exhibition.

## The following decisions were taken at the $8^{\text {th }}$ Board meeting:

1. Presentation of work of the Board during the year 2012-13.
2. Approval of expenditure of the Board upto September, 2012.
3. Approval for the extension of ongoing project "Documentation of Plant Diversity through Literature Survey for Development of Uttar Pradesh Biodiversity Database Information System (UPBDIS)" for a period upto 31st March 2013 with the condition that no extra grant will be given for this purpose.
4. Permission sought/Approval given:

Under Section 7 of Biological Diversity Act and U.P. State Biodiversity Rules 2010, M/s Sungro Seeds Ltd. had sought permission from NBA for the use of biological resources like 50 seeds of Gossypium hirsutum/barbedense (Cotton) and Cry1EC-cockerline, NBRI event 24 and Cry 1EC-gene-sourced from a soil microorganism, Bacillus thuringiensis from NBRI campus.

It was decided by the Board to refer the matter to U.P. Deptt. of Science \& Technology for seeking their advice in this regard. Besides, the suggestions from two or three specialists in this field should also be sought.

## Biodiversity Management Committees

## Biodiversity ManagementCommittees (BMCs)

As per guidelines of the Biological Diversity Act, 2002 and in accordance with Rule 21 of Uttar Pradesh Biological Diversity Rules, 2010, two Biodiversity Management Committees (BMC's) were constituted this year. The details of the Biodiversity Management Committees (BMC's) are given as follows:

| S. No. | Name of the Village | Block | District | Date |
| :--- | :--- | :--- | :--- | :--- |
| 1. | Naipalapur | Khairabad | Sitapur | $16-01-2013$ |
| 2. | Harsewakpur No.2 | Chargawan | Gorakhpur | $26-02-2013$ |

So far, seven (07) BMCs have been constituted in the state, the details of which are as follows:

| S. <br> No. | Agro Climatic <br> Zone | Name of <br> District | Name of <br> Block | Name of <br> Village | Date of <br> BMC <br> formation |
| :--- | :--- | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | Central Plain | Lakhimpur | Lakhimpur | Saidapur Devkali | $15-10-2009$ |
| 2 | Sitapur | Khairabad | Naipalapur | $16-01-2013$ |  |
| 3 | Tarai | Bahraich | Balha | Nanpara Dehat | 07-12-2010 |
| 4 | Budelkhand | Chitrakoot <br> Dham | Karvi <br> (Chitrakoot) | Baihar | 19-01-2011 |
| 5 | Eastern Plain | Barabanki | Banki | Bhitauli Kalan | 03-03-2011 |
| 6 | North Eastern <br> Plain | Gorakhpur <br> Gorakhpur | Piprauli | Chargawan | Bhawapar <br> Harsewakpur <br> No. 2 |
| 7 |  |  | 05-04-2011 |  |  |

The functions of these BMCs include:
a. Preparing, maintaining and validating People's Biodiversity Register (PBR) in consultation with the local people.
b. Maintaining a register giving information about the details of access to biological resources and traditional knowledge granted, details of the collection fee imposed and details of the benefits derived and the mode of their sharing.
c. Advising on any matter referred to it by the State Biodiversity Board or Authority for granting approval, to maintain data about the local vaids and practitioners using the biological resources.

## Peoples's Biodiversity Resisten (PBR)

## People's Biodiversity Registers (PBRs)

The main function of the BMC is to prepare People's Biodiversity Register in consultation with local people. The registers shall contain comprehensive information on the availability and knowledge of local biological resources, their medicinal or any other use or any other traditional knowledge associated with them.

The PBRs focus on participatory documentation of local biodiversity, traditional knowledge and practices. They are seen as key legal documents in ascertaining the rights of local people over the biological resources and associated traditional knowledge.

During this period, the following two People's Biodiversity Registers (PBRs) have been completed:
i) Gram Sabha: Baihar, Distt. - Chitrakoot: The Biodiversity Management Committee (BMC) of this village was formed on 19-01-2011. Extensive survey was done during formation of the People's Biodiversity Register (PBR) of this village. PBR of the village was validated on 23-01-2013 by the BMC. Overall 295 species were recorded in this village; details of the same are given below in the table:

## Total diversity of life recorded in Village Baihar, District Chitrakoot

| Crop Plants | 42 | People’s Biodivensity Register |
| :---: | :---: | :---: |
| Wild Plant Species of Importance | 12 |  |
| Pests of Crops | 08 |  |
| Wild relatives of Crops | 01 | Gram Sabha: Baihar, Distt - Chitrakoot (U.P.) |
| Ornamental Plants | 10 |  |
| Fodder Crop | 01 | 20, |
| Wild Aquatic Plant Species of Importance | оо |  |
| Fumigate / Chewing Plants | 01 |  |
| Aquatic Biodiversity | oo |  |
| Domesticated Animals | 07 |  |
| Other Plants in the Wild | 23 | (0) 2 |
| Culture Fisheries | 00 |  |
| Wild Animals (Mammals, Birds, Reptiles, Amphibian, Insects, others) | 68 | U.P. State Biodiversity Board 'A' Block, 3rd Floor, East Wing, PICUP Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow-226010 |
| Wild Plants of Medicinal Importance | 25 | Cover page of the PBR |
| Trees, Shrubs, Herbs, Tubers, Grasses, Climbers | 45 |  |
| Fruit Plants | 13 |  |
| Medicinal Plants | 06 |  |
| Weeds | 22 |  |
| Timber Plants | 09 |  |

ii) Gram Sabha: Nanpara Dehat, Distt. - Bahraich: The Biodiversity Management Committee (BMC) of this village was constituted on 07-12-2010. Interactions/meetings with the local peoples, survey of the village and several visits was organized during formation of the People's Biodiversity Register (PBR) of this village. The PBR of Nanpara Dehat is available in two volumes (Vol. - 1 \& Vol.-2). The BMC of the village validated the PBR on 12-03-2013. Altogether 343 species were recorded in this village; details of the same are given below in the table:

Total diversity of life recorded in Village Nanpara Dehat, District Bahraich

| Crop Plants | 47 |
| :--- | :---: |
| Wild Plant Species of Importance | 15 |
| Pests of Crops | 17 |
| Wild relatives of Crops | 06 |
| Ornamental Plants | 18 |
| Fodder Crop | 03 |
| Wild Aquatic Plant Species of Importance | 04 |
| Fumigate / Chewing Plants | 00 |
| Aquatic Biodiversity | 08 |
| Domesticated Animals | 13 |
| Other Plants in the Wild | 19 |
| Culture Fisheries | 69 |
| Wild Animals (Mammals, Birds, Reptiles, |  |
| Amphibian, Insects, others) | 28 |
| Wild Plants of Medicinal Importance | 13 |
| Medicinal Plants | 24 |
| Fruit Plants | 15 |
| Timber Plants | 28 |
| Weeds |  |



Cover pages of the PBR


## Projects

The progress of these projects during the year 2012-2013 is as follows :

## (A) Completed Project

## 1. Annotated and Coloured Checklist of Reptiles and Amphibians of Uttar Pradesh

The study was carried out by the Department of Zoology, Lucknow University. The project was sanctioned initially for period of one year with the objective to comprehensively document the poorly known diversity of amphibians and reptiles of Uttar Pradesh.

The herpetology of Uttar Pradesh has never been studied systematically or in sufficient detail with respect to the distribution and abundance of species, Consequently, there was an urgent need to compile and collate existing data as well as initiate systematic cataloguing and documentation of abundance, distribution, habitat preferences and natural history of herpeto-fauna of the state to produce an authentic, annotated and illustrated checklist of reptiles and amphibian occurring within the political boundaries of Uttar Pradesh, which can serve as reliable baseline for monitoring biodiversity and environmental change.

Sampling sites were identified in the different physiographic zones of the state as well as different habitat types in the state.

The significant findings have been compiled to produce an authentic, annotated and illustrated checklist of herpetofauna occurring with in the political boundaries of Uttar Pradesh. A total of 88 species of herpetofauna have been recorded in the state. These include 64 species of reptiles and 24 species of amphibians.

List of amphibians reported from Uttar Pradesh

| S. |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No. Common Name | Scientific Name |  | Order | Family | Genus | SpeciesIUCN <br> Status |  |
| 1. | Jerdon's Bull Frog | Hoplobatrachus <br> crassus | Anura | Ranidae | Hoplobatrachus | crassus | Common |
| 2. | Common Indian <br> Toad | Duttaphrynus <br> melanostictus | Anura | Bufonidae | Duttaphrynus | melano- <br> stictus | Not <br> Evaluated |
| 3. | Marbled Toad | Bufo stomaticus | Anura | Bufonidae | Bufo | stomaticus | Not <br> Evaluated |
| 4. | Himalayan Toad | Bufo himalayanus | Anura | Bufonidae | Bufo | Bimala- <br> yanus | Least <br> Concern |
| 5. | Beautiful Stream <br> Frog | Amolops formosus | Anura | Bufonidae | Amolops | formosus | Least <br> Concern |
| 6. | Stoliczka's Frog | Rana vicina | Anura | Bufonidae | Rana | vicina | Least <br> Concern |


| S. No. | Common Name | Scientific Name | Order | Family | Genus | Species | IUCN <br> Status |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7. | Marbled Toad | Duttaphrynus stomaticus | Anura | Bufonidae | Duttaphrynus | stomaticus | Least <br> Concern |
| 8. | Skipper Frog | Euphlyctis cyanophlyctis | Anura | Dicroglossidae | Euphlyctis | cyanophlyctis | Not <br> Evaluated |
| 9. | Indian Bullfrog | Hoplobatrachus tigerinus | Anura | Dicro- <br> glossidae | Hoplobatrachus | tigerinus | Least <br> Concern |
| 10. | Common Pond Frog | Fejervarya limnocharis | Anura | Dicro- | Fejervarya glossidae | limnocharis | Least <br> Concern |
| 11. | Ornamented Pygmy Frog | Microhyla ornata | Anura | Microhylidae | Microhyla | ornata | Least <br> Concern |
| 12. | Gray Balloon Frog | Uperodon globulosum | Anura | Microhylidae | Uperodon | globulosum | Least Concern |
| 13. | Marbled Baloon Frog | Uperodon systoma | Anura | Microhylidae | Uperodon | systoma | Least <br> Concern |
| 14. | Assam Narrowmouth Toad | Kaloula assamensis | Anura | Microhylidae | Kaloula | assamensis | Least <br> Concern |
| 15. | Sri Lankan Bullfrog | Kaloula taprobanica | Anura | Microhylidae | Kaloula | taprobanica | Least <br> Concern |
| 16. | Terai Cricket Frog | Fejervarya teraiensis | Anura | Ranidae | Fejervarya | teraiensis | Least Concern |
| 17. | Indian Burrowing Frog | Sphaerotheca breviceps | Anura | Ranidae | Sphaerotheca | breviceps | Least <br> Concern |
| 18. | Roland's Burrowing Frog | Sphaerotheca rolandae | Anura | Ranidae | Sphaerotheca | rolandae | Least <br> Concern |
| 19. | Field frog | Limnonectes limnocharis | Anura | Ranidae | Limnonectes | limnocharis | Vulnarable |
| 20. | Common Sand Frog | Tomopterna species | Anura | Ranidae | Tomopterna | species | Least <br> Concern |
| 21. | Common Tree Frog | Polypedates maculates | Anura | Rhacophoridae | Polypedates | maculates | Least <br> Concern |
| 22. | Dudhwa Tree Frog | Chirixalus dudhwaensis | Anura | Rhacophoridae | Chirixalus | dudhwaensis | Data <br> Daficient |
| 23. | Not Known | Polypedates taeniatus | Anura | Rhacophoridae | Polypedates | taeniatus | Not <br> Known |
| 24. | Not Known | Chiromantis dudhwaensis | Anura | Rhacophoridae | Chiromantis | $d u d h-$ waensis | Not <br> Known |

The list of 64 identified reptiles of U.P. includes 35 species snakes, 15 species of reptiles, 12 species of lizards in addition to the crocodile and ghariyal. Of the 35 species of snakes 24 listed and identified 16 are venomous, 17 are non-venomous and 2 are unknown. The list is as follows:-

## 1. List of reptiles reported from Uttar Pradesh

Venomous and Non-venomus Snakes of Uttar Pradesh

| S. <br> No. | Common Name | Scientific Name | Order | Sub-Order | Family | Genus | Species |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Reticulated Python | Python reticulated | Squamata | Ophidia | Pythonidae | Python | reticulated |
| 2 | Indian Rock Python | Python molurus | Squamata | Ophidia | Pythonidae | Python | molurus |
| 3 | Red Sand Boa | Eryx johni | Squamata | Ophidia | Boidae | Eryx | johni |
| 4 | Common Wolf Snake | Lycodon aulicus | Squamata | Ophidia | Boidae | Lycodon | aulicus |
| 5 | Himalayan Pit Viper | Gloydius himalayanus | Squamata | Ophidia | Viperidae | Gloydius | Himalayanus |
| 6 | Russell's Viper | Daboia russelii | Squamata | Ophidia | Elapidae | Daboia | russelii |
| 7 | King Cobra | Ophiophagus hannah | Squamata | Ophidia | Elapidae | Ophiophagus | hannah |
| 8 | Wall;s Sind Krait | Bungarus sindanus walli | Squamata | Ophidia | Elapidae | Bungarus | sindanus walli |
| 9 | Siebold's Smoothscaled water Snake | Enhydris sieboldii | Squamata | Ophidia | Colubridae | Enhydris | sieboldii |
| 10 | Common Smoothscaled Water Snake | Enhydris enhydris | Squamata | Ophidia | Colubridae | Enhydris | enhydris |
| 11 | Common Vine Snake | Ahaetulla nasauta | Squamata | Ophidia | Colubridae | Ahaetulla | nasauta |
| 12 | Leith's Sand Snake | Psammophis leithii | Squamata | Ophidia | Colubridae | Psammophis | leithii |
| 13 | Condanarus sand snake | Psammophis condanarus | Squamata | Ophidia | Colubridae | Psammophis | condanarus |
| 14 | Checkered Keelback | Xenochrophis piscatorn | Squamata | Ophidia | Colubridae | Хепоchrophis | piscatorn |
| 15 | Barred wolf Snake | Lycodon striatus | Squamata | Ophidia | Colubridae | Lycodon | striatus |
| 16 | Banded Racer | Argyrogena fasciolata | Squamata | Ophidia | Colubridae | Argyrogena | fasciolata |
| 17 | Common Trinket Snake | Coelognathus helena | Squamata | Ophidia | Colubridae | Coelognathus | helena <br> Helena |
| 18 | Common Sand Boa | Gongylophis conicus | Squamata | Ophidia | Boidae | Gongylophis | conicus |


| S. No. | Common Name | Scientific Name | Order | Sub-Order | Family | Genus | Species |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 19 | Beaked Worm Snake | Grypotyphlops acutus | Squamata | Ophidia | Typhlopidae | Grypotyphlops | acutus |
| 20 | Brahminy Worm Snake | Ramphotyphlops braminus | Squamata | Ophidia | Typhlopidae | Ramphotyphlops | braminus |
| 21 | Spectacled Cobra | Naja naja | Squamata | Ophidia | Elapidae | Naja | naja |
| 22 | Banded Krait | Bungarus fasciatus | Squamata | Ophidia | Elapidae | Bungarus | fasciatus |
| 23 | Forsten's Cat snake | Boiga forsteni | Squamata | Ophidia | Colubridae | Boiga | forsteni |
| 24 | Common Cat Snake | Boiga trigonata | Squamata | Ophidia | Colubridae | Boiga | trigonata |
| 25 | Olive Keelback | Atretium schistosum | Squamata | Ophidia | Colubridae | Atretium | schistosum |
| 26 | Common Krait | Bangarus caeruleus | Squamata | Ophidia | Elapidae | Bangarus | caeruleus |
| 27 | Striped Keelback | Amphiesma stolatum | Squamata | Ophidia | Colubridae | Amphiesma | stolatum |
| 28 | Russell's Kukri Snake | Oligodon taeniolatus | Squamata | Ophidia | Colubridae | Oligodon | taeniolatus |
| 29 | Indian Rat Snake | Ptyas mucosa | Squamata | Ophidia | Colubridae | Ptyas | mucosa |
| 30 | Burmese Python | Python morulus bivittatus | Squamata | Ophidia | Pythinidae | Python | morulus bivittatus |
| 31 | Common Bronzeback Tree Snake | Dendrelaphis tristis | Squamata | Ophidia | Colubridae | Dendrelaphis | tristis |
| 32 | Yellow- Speckled Wolf Snake | Lycodon jara | Squamata | Ophidia | Colubridae | Lycodon | jara |
| 33 | Mock Viper | Psammodynastes pilverulentus | Squamata | Ophidia | Colubridae | Psammo dynastes | pilverulentus |
| 34 | Cantor's blackheaded snake | Sibynophis sagitarious | Squamata | Ophidia | Colubridae | Sibynophis | sagitarious |
| 35 | Bar-necked keelback | Xenochrophis schnurrenbergeri | Squamata | Ophidia | Colubridae | Xenochrophis | schnurrenbergeri |

## List of reported turtles and tortoise from Uttar Pradesh

| 36 | Tricarinate Hill <br> Turtle | Melanochelys <br> tricarinata | Testudines | Cryptodira | GeogmydidaeMelano- <br> chelys |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 37 | Brown Roofed <br> Turtle | Pangshura smithii | Testudines |  | Cryptodira | GeogmydidaePangshura <br> Pmithii |
| 38 | Crowned River <br> Turtle | Hardella thurjii | Testudines | Cryptodira | GeogmydidaeHardella <br> thurjii |  |


| S. No. | Common Name | Scientific Name | Order | Sub-Order | Family | Genus | Species |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 39 | Three Striped Roofed Turtle | Batagur dhongoka | Testu- <br> dines | Cryptodira | Geogmydidae | Batagur | dhongoka |
| 40 | Spotted Pond Turtle | Geoclemys hamiltonii | Testudines | Cryptodira | Geogmydidae | Geoclemys | hamiltonii |
| 41 | Indian peacock Soft Shell Turtle | Nilssonia hurum | Testu- <br> dines | Cryptodira | Trionychidae | Nilssonia | hurum |
| 42 | Painted Roofed Turtle | Batagur kachuga | Testudines | Cryptodira | Geogmydidae | Batagur | kachuga |
| 43 | Indian Soft Shell Turtle | Nilssonia gangeticus | Testudines | Cryptodira | Trionychidae | Nilssonia | gangeticus |
| 44 | Indian Eyed Turtle | Morenia petersi | Testudines | Cryptodira | Geogmydidae | Morenia | petersi |
| 45 | Indian Black Turtle | Melanochelys trijuga | Testudines | Cryptodira | Geogmydidae | Melanochelys | trijuga |
| 46 | Indian Roofed Turtle | Pungshura tecta | Testudines | Cryptodira | Geogmydidae | Pungshura | tecta |
| 47 | Elongated Tortoise | Indotestudo elongata | Testu dines | Cryptodira | Geogmydidae | Indotestudo | elongata |
| 48 | Indian Narrow <br> Headed Soft Shell Turtle | Chitra indica | Testu- <br> dines | Cryptodira | Trionychidae | Chitra | indica |
| 49 | Indian Tent Turtle | Pangshura tentoria | Testudines | Cryptodira | Geogmydidae | Pangshura | tentoria |
| 50 | Indian Flap <br> Shell Turtle | Lissemys punctata | Testu- <br> dines | Cryptodira | Geogmydidae | Lissemys | punctata |

Gharial and crocodile reported from Uttar Pradesh

| 51 | Crocodile | Crocodylus <br> palustris | Crocodilia | Crocodylidae | Crocodylus | palustris |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 52 | Gharial | Gavialis <br> gangeticus | Crocodilia | Crocodylidae | Gavialis | gangeticus |

## Lizards reported from Uttar Pradesh

| 53 | Chhipkali | Hemidactylus <br> flaviviridis | Squamata | Sauria | Gekkonidae | Hemidactylus | flaviviridis |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 54 | Brook's Gecko | Hemidactylus <br> brookii | Squamata | Sauria | Gekkonidae | Hemidactylus | brookii |
| 55 | Southern House <br> Gecko | Hemidactylus <br> frenatus | Squamata | Sauria | Gekkonidae | Hemidactylus frenatus |  |


| S. <br> No. Common Name Scientific Name  Order Sub-Order Family Genus Species <br> 56 Common garden <br> lizard Calotes versicolor Squamata Iguania Agamidae Calotes versicolor  <br> 57 Common <br> Brahminy Skink Eutropis carinata Squamata Sauria Scincidae Eutropis carinata  <br> 58 Snake Skink Lygosoma <br> punctatus Squamata Sauria Scincidae Lygosoma punctatus  <br> 59 Yellow Monitor Varanus flavescens Squamata Lacertilia Varanidae Varanus flavescens  <br> 60 Monitor Lizard Varanus Squamata Sauria Varanidae Varanus Varanus  <br> 61 Desert monitor Varanus griseus Squamata Lacertilia Varanidae Varanus griseus  <br> 62 Jerdon's blood <br> sucker Calotes jerdoni Squamata Iguania Agamidae Calotes jerdoni  <br> 63 Forest calotes Calotes rouxi Squamata Iguania Agamidae Calotes rouxi  <br> 64 Frilled house <br> gecko Cosymbotus <br> platyurus Squamata Not Known Gekkonidae Cosymbotus platyurus  |
| :--- |



Common Name: Indian Tent Turtle Scientific Name: Pangshura tentoria


Common Name: Banded Krait. Scientific Name: Bungarus fasciatus


Common name: Indian Bullfrog Scientific name: Hoplobatrachus tigerinus


Common name: Common Brahminy Skink Scientific name: Eutropis carinata


Common name: Common Indian Monitor Scientific name (Varanus bengalensis)


Common name: Mugger Scientific name: Crocodylus palustris

## 2. Enumeration of lichens from Uttar Pradesh

The study on lichens of Uttar Pradesh was under taken by the National Botanical Research Institute, Lucknow keeping in view of its large geographical area, forest cover, ecologically interesting habitats, the insufficient information on lichen flora of the state. The aim of the study was to document the diversity of lichens in the entire state, but to begin with the study was done in the eastern districts of Uttar Pradesh.

The study was initiated with the compilation of scattered literature, which resulted in 90 species of the lichens. The next step involved the identification of the unidentified lichen specimens of U.P. already available at lichen herbarium of CSIR-National Botanical Research Institute (LWG)
which is the largest in south-east Asia. Some of the earlier reported lichens from the state are reexamined to ascertain their correct identity. Nomenclatures of many lichens were updated according to recent developments. Fresh collections of lichens were made from more than 100 localities within 36 districts of eastern U.P. About 2250 lichen specimens were critically studied under microscope for identification following recent literature and standard procedures.

The study revealed the occurrence of $\mathbf{1 7 3}$ taxa ( $\mathbf{1 7 0}$ species and $\mathbf{3}$ varieties) belonging to 29 families and 54 genera. A total of 85 taxa are being recorded for the first time from Uttar Pradesh. while 9 are new to India. Among 71 districts of U.P. now the lichen representation is available for 36 districts, in comparison to previous record from only 15 districts. Among these 36 districts, Lucknow represented maximum number of lichens with 55 species, which is followed by Behraich ( 51 spp. ) and Sonbhadra (46 spp.). The districts Gonda, Unnao and Pilibhit represented one species each.

The lichen flora of U.P. was analyzed for its diversity in species composition, functional groups, growth forms and substratum preferences. The state has maximum number of crustose lichens represented by 119 taxa. It is interesting to note that the state represented by a good number of squamulose taxa with 30 species. The foliose lichens were in moderate number ( 15 spp .) while placodioid ( 5 spp .) and the leprose ( 4 spp .) have poor representation.

## New Distributional records of Lichen for India



Opegrapha astrea


Graphis japonica


Peltula corticola


Lichinella flexa


Phyllopeltula steppae


Ramonia microspora

The occurrence of Pyrenocarpous (27 spp.), Lecanoroid (27 spp.), Graphidaceous (21 spp.), Bacidioid (18 spp.), Physcioid (19 spp.), Cyanolichens (18 spp.) in abundance are the clear indicators of humid and tropical climate of the state U.P. It is observed that the lichens are specific to their substratum and most of them prefer to grow on tree bark (119 spp.). However, large number of lichens ( 49 spp .) also prefer rocky substratum including lime and cement plaster of old buildings and monuments. The species of Strigula grew on leaves on mango trees. A new species belonging to genus Verrucaria is the only terricolous lichen found in the state. Dirinaria aegilita and Parmotrema praesorediosum are the only two species that occur both on bark and rock.
Out of 173 taxa of lichen most of them are rare in occurrence and represented by less than 5 specimens; while 61 of them are common. A total of 19 species were most common, found growing luxuriantly on tree trunk and rocky substratum in many districts. Arthopyrenia nidulans, Arthothelium abnorme, Caloplaca bassiae, Peltula euploca, Pyxine cocoes and Rinodina oxydata are some of the most common lichens in U.P.


Anisomeridium calcicolum Upreti \& Nayaka


Endocarpon nigrozonatum
A. Singh \& Upreti


Bacidia inundata (Fr.) Körber


Endocapron pallidum Ach.


Endocarpon nanum $A$. Singh \& Upreti


Endocapron pusillum Hedw.


Endocapron rosettum
A. Singh \& Upreti


Peltula euploca (Ach.) Poelt ex Pisut


Phylliscum indicum Upreti



Endocarpon subrosettum
A. Singh \& Upreti


Peltula obscurans (Nyl.) Gyelink


Lecanora coriensis (Hue.)
J.R. Laundon


Peltula patellata (Bagl.) A. Singh \& Upreti



1. Banaras Hindu University (Varanasi) - An old building with scarce growth of lichen on horizontal parapet; 2. Ramnagar Fort Gate (Varanasi) -walls with lime plaster show luxuriant growth of lichen; 3. Endocarpon, Phylliscum species growing on lime plaster wall of Khusro - Bagh (Allahabad); 4. Phylliscum indicum - a common lichen on vertical and horizontal face of wall in Bahu-Begum Maqbara (Faizabad)

## 3. Documentation of plant diversity through literature survey for development of Uttar Pradesh

 Biodiversity Database Information System (UPBIS)The study was carried out by Birbal Sahni Institute of Paleobotany, Lucknow. The main objective of the proposed work was to develop a database for plant species of Uttar Pradesh that was available online.

The objective was to make up-to-date documentary record of whole plant diversity of Uttar Pradesh. After going through published literature of the state, 1047 genera and 2884 species of plants (lower and higher) are recorded from Uttar Pradesh. The details are as below:-

| Sl. No. | Plant Group | Genera | Species |
| :--- | :--- | :---: | :---: |
| 1 | Algae | 50 | 300 |
| 2 | Lichens | 28 | 88 |
| 3 | Fungi | 196 | 935 |
| 4 | Bryophytes | 36 | 72 |
| 5 | Pteridophytes | 21 | 44 |
| 6 | Gymnosperms | 2 | 3 |
| 7 | Angiosperms | 714 | 1442 |

The data is available online at www.upbiodiversity.com
4. Monitoring of roosting and breeding sites of vultures in Jhansi, Latitpur, Jalaun and Mahoba

The study has been carried out by the Zoology Department of Lucknow University. The study examined the natural breeding sites of vultures in the state. Four selected districts e.g. Jhansi, Lalitpur, Jalaun and Mahoba of U.P. were surveyed for the identification of vulture species as well as their breeding and roosting sites.

The data were collected to identify the possible vulture occurrence spots within the selected regions. Road surveys were conducted to count the number of vultures while driving along the roads or counts at carcasses seen beside roads. The colonies were surveyed to count the number of breeding pairs at each colony. Nest survey methodology was conducted on foot as well as vehicle depending on the area and suitability. Indirect signs of vultures in particular such as white washes and molted feathers were searched to locate vulture breeding colonies. The interviews and group discussions with villagers, local herders and local residents were used as a main source of information.

There are 22 species of vultures in the world. India has 9 species of vultures. Uttar Pradesh has 8 vulture species. The study area has 3 vulture species: Gyps indicus (Indian Vulture or longbilled), Neophron percnopterus (Egyptian Vulture) and Sarogyps calvus (Red-headed vulture or King vulture).


Gyps indicus (Indian Vulture or long-billed)


Neophron percnopterus (Egyptian Vulture)


Sarogyps calvus
(Red-headed vulture or King vulture)

The study shows a total of 10 breeding and 12 roosting sites in the study are as given below:-

| Sl.No. | Name of the district | Breeding sites | Roosting sites |
| :---: | :--- | :---: | :---: |
| 1 | Jhansi | 04 | 05 |
| 2 | Lalitpur | 04 | 05 |
| 3 | Jalaun | 02 | 02 |
| 4 | Mahoba | - | - |
|  | Total | 10 | 12 |

Species wise distribution of vultures in study area

|  | Gypus indicus <br> (Indian vulture <br> or long-billed) | Neopheon <br> percnopterus <br> (Egyptian vulture) | Sarcogyps calvus <br> (Red-headed <br> vulture) or <br> King vulture | Vulture <br> Population |
| :--- | :---: | :---: | :---: | :---: |
| Jhansi | $85-90$ | $60-70$ | $2-4$ | $30 \%(2)$ |
| Lalitpur | $250-275$ | $10-15$ | $2-3$ | $55 \%(1)$ |
| Jalaun | - | $70-80$ | - | $15 \%(3)$ |
| Mahoba | - | $4-5$ | - | $(4)$ |
| Total | $\mathbf{3 3 5 - 3 6 5}$ | $\mathbf{1 4 4 - 1 7 0}$ |  | $4-7$ |

The approximate number of vultures in study area is 483-542.
Nesting sites of vultures in study area


| Sl. No | Nesting Sites (10) | Number of nests recorded |  |  |
| :--- | :--- | :--- | :---: | :---: |
| 1 | Jhansi | 1. Lehergirdh in Sipri Bazar <br> 2. Moath <br> 3. Prithvipur Nayakheda, Babina | 2011 | 2012 |
| 1 | Lalitpur | 4. Dhaora Beat <br> 5. Madanpur Poorvi Beat <br> 6. Gauthra Beat <br> (. Deogarh <br> 8. Garhauli | $5-6$ | $40-45$ |
| 2 | Jalaun | 9. Chelhi <br> 10.Kotra | $120-130$ | $120-130$ |
| 3 | Mahoba | Nil- |  |  |
| 4 |  | - | $25-30$ |  |

## Suggestions for vulture conservation in the state include:

1. Continued monitoring of roosting and breeding sites identified in the study.
2. "Vulture Census" to be done every year in Nov.-Dec. and Mar.-Apr. after proper training and sensitization of staff.
3. Conservation of large trees and deserted nests of vultures. Plantation of Semal, Arjun and Pipal trees as these were seen to be most preferred trees by vultures.
4. Establishment of Vulture restaurants.
5. The study also emphasized the importance of educational awareness programmes for local to build overall awareness on conservation issues.
6. Proper coordination among various departments like Forest, Tourism, Archeological, Agriculture, Education and Revenue department.
7. Training of veterinary doctors.
8. Ensure local participation in conservation and census count efforts.
9. Maintenance of one rehabilitation centre for vultures in area were vulture are maximum in number to begin with.
10. A similar study to be taken up in the entire state of U.P. covering all the districts.
11. International Day for Vulture awareness should be celebrated to spread awareness on issues of vulture conservation.

Roosting sites 11 (sites where most of the non-breeding population meets)

| Sl. No |  | Breeding Sites (11) |  |
| :--- | :--- | :--- | :---: |
| 1 | Jhansi | 1. Lehergirdh in Sipri Bazar <br> 2. Moath |  |
| 2 | Lalitpur | 3. Prithvipur Nayakheda, Babina <br> 4. Bhagwantpura |  |
| 5. Dhaora Beat |  |  |  |
| 6. Madanpur Poorvi Beat |  |  |  |
| 7. Gauthra Beat |  |  |  |$\quad$| 8. Deogarh |
| :--- |
| 9. Garhauli |



Egyptian vultures roosting in Bhagwantpura, Jhansi

## 5. Assessment and preparation of an illustrated resource inventory of underutilized wild edible

 plantresources in terai region of Uttar PradeshThe study was carried out by the Ethnobotany and Ecology Division of National Botanical Research Institute (CSIR), Lucknow. The study area comprised of the districts of Pilibhit, Lakhimpur-kheri, Bahraich, Shrawasti, Balrampur, Siddharthnagar and Mahrajganj. These districts have a good population of mainly Tharu tribals. They make use of many plant species to meet their day to day needs, dietary requirements, nutrition and food supplements. During the study many tribal villages and forests in different seasons were surveyed. Experienced, knowledgeable elderly tharu tribal men were interviewed to document potential underutilized wild edible plant species for future food plants having newer tastes, texture, flavor, vitamins and minerals may also provide newer food recipes. The voucher specimens were collected processed, identified and housed in the herbarium of CSIR -NBRI for future reference and study. About 100 plant species belonging to 83 genera and 57 families were recorded.

## List of reported underutilized wild edible plants of Uttar Pradesh

| Sl. <br> No. | Scientific Name | Family |
| :---: | :---: | :---: |
| 1. | Agaricus campestris | Agaricaceae |
| 2. | Alangium salvifolium | Alangiaceae |
| 3. | Aloevera | Liliaceae |
| 4. | Amaranthus spinosus | Amaranthaceae |
| 5. | Amaranthus viridis | Amaranthaceae |
| 6. | Amorphophallus paeoniifolius | Araceae |
| 7. | Ampelocissus latifolia | Vitaceae |
| 8. | Anthocephalus chinensis | Rubiaceae |
| 9. | Antidesma acidum | Euphorbiaceae |
| 10. | Arisaema tortuosum | Araceae |
| 11. | Artocarpus lacucha | Moraceae |
| 12. | Asparagus racemosus | Liliaceae |
| 13. | Averrhoa carambola | Oxalidaceae |
| 14. | Basella alba | Basellaceae |
| 15. | Bauhinia vahlii | Caesalpiniaceae |
| 16. | Bauhinia variegata | Caesalpinaceae |
| 17. | Boerhavia diffusa | Nyctaginaceae |
| 18. | Bombox ceiba | Bombacaceae |
| 19. | Borassusflabellifer | Arecaceae |
| 20. | Bridelia squamosa | Euphorbiaceae |
| 21. | Buchananialanzan | Anacardiaceae |
| 22. | Butea monosperma | Fabaceae |
| 23. | Caesulia axillaris | Asteraceae |
| 24. | Capparis zeylanica | Capparaceae |
| 25. | Carissa opaca | Apocynaceae |
| 26. | Centella asiatica | Apiaceae |
| 27. | Chenopodiumalbum | Chenopodiaceae |
| 28. | Chlorophytum tuberosum | Liliaceae |
| 29. | Coccinia grandis | Cucurbitaceae |
| 30. | Commelina benghalensis | Commelinaceae |
| 31. | Cordia dichotoma | Boraginaceae |
| 32. | Costusspeciosus | Zingiberaceae |
| 33. | Crotolariajuncea | Fabaceae |
| 34. | Curculigo orchioides | Amaryllidaceae |
| 35. | Curcuma angustifolia | Zingiberaceae |
| 36. | Dendrocalamus strictus | Poaceae |
| 37. | Digeramuricata | Amaranthaceae |

Sl. Scientific Name Family
No.

| 38. | Dillenia pentagyna | Dilleniaceae |
| :---: | :--- | :--- |
| 39. | Diospyros exsculpta | Ebenaceae |
| 40. | Diplazium esculentum | Athyriaceae |
| 41. | Dioscorea bulbifera | Dioscoreaceae |
| 42. | Dioscorea glabra | Dioscoreaceae |
| 43. | Dioscorea hispida | Dioscoreaceae |
| 44. | Dioscorea pentaphylla | Dioscoreaceae |
| 45. | Ehretia laevis | Ehretiaceae |
| 46. | Emblica officinalis | Euphorbiaceae |
| 47. | Erioglossum rubiginosum | Sapindaceae |
| 48. | Ficus benghalensis | Moraceae |
| 49. | Ficushispida | Moraceae |
| 50. | Ficus palmata | Moraceae |
| 51. | Ficus racemosa | Moraceae |
| 52. | Ficus virens | Moraceae |
| 53. | Flacourtiaindica | Flacourtiaceae |
| 54. | Flacourtiajangomas | Flacouritaceae |
| 55. | Grewia hainesiana | Tilliaceae |
| 56. | Grewiahirsuta | Tiliaceae |
| 57. | Glycosmis mauritiana | Rutaceae |
| 58. | Helminthostachys | Ophioglossceae |


| 59. | Holarrhena pubescens | Apocynaceae |
| :---: | :---: | :---: |
| 60. | Ipomea aquatica | Convolvulaceae |
| 61. | Leucas aspera | Lamiaceae |
| 62. | Limonia acidissima | Rutaceae |
| 63. | Luffa cylindrica | Cucurbitaceae |
| 64. | Madhuca longifolia | Sapotaceae |
| 65. | Manikara hexandra | Sapotaceae |
| 66. | Marsilia minuta | Marsiliaceae |
| 67. | Miliusa velutina | Annonaceae |
| 68. | Momordica dioica | Cucurbitaceae |
| 69. | Moringaoleifera | Moringaceae |
| 70. | Morusalba | Moraceae |
| 71. | Murrayakoenigii | Rutaceae |
| 72. | Nelsonia canecsens | Acanthaceae |
| 73. | Nelumbo nucifera | Nelumbonaceae |
| 74. | Nymphaea nouchali | Nymphaeaceae |


| Sl. | Scientific Name |
| :---: | :--- |
| No. |  |
| 75. | Fymphly |
| 76. | Ophioglossum reticulatum | Ophioglossaceae



Averrhoa carambola: Raw fruits are edible


Flacourtia jangomas: The Fruits are edible


Manilkara hexandra: Ripe fruits are edible

## (B) Ongoing Projects:

The following projects were sanctioned for a period of two years by the Board in March, 2011. The progress of each project is summarized below:

1. Inventorization, impact assessment and risk communication of invasive fish species in Uttar Pradesh
The study is being carried out by the National Bureau of Fish Genetic Resources (ICAR), Lucknow. The present study was under taken to enlist the available invasive fish species and to document their impacts in different aquatic bodies/river streams. 11 alien fish species and 3 exotic hybrids have been recorded from grow out farms ( $>500$ in number) from 38 districts of Uttar Pradesh. These exotic species were Chinese carps which included grass carp and silver carp as well as common carp contributing substantially to commercial aquaculture in Uttar Pradesh.

In this study, increased incidence and occurrences of exotic species in several river stretches, reservoirs, lakes and wetlands which have been considered serious in view of sustainability of local fish diversity are being observed. Since exotic fishes are dominant and aggressive in behaviour, they have potential to extirpate the localfish species.


Market contribution of total and different exotic fishes in Uttar Pradesh


Occurrences and contribution of exotic fishes in different river stretches in Uttar Pradesh

Recent invasion of tilapia and common carp has increasingly taken-over at many locations contributing substantially to the fishery of these river stretches and streams eliminating the catch of locally commercial important species particularly Indian major carps.


Commonly cultured exotic fish species in Uttar Pradesh

## 2. Exploration and documentation of cucurbit biodiversity and its implication in Uttar Pradesh

The study is being carried out by the Department of Vegetable Sciences, Narendra Dev University of Agriculture and Technology, Kumar Ganj, Faizabad. An attempt has been made to explore the existent biodiversity of important as well as under exploited cucurbits of the state, by travel and visits across the state. Characterization and documentation of cucurbits was carried out for salient morphological traits, physiological traits, quality traits and resistance through description and photography. Efforts were made to locate region specific high yielding potential land races of certain cucurbits of the state. Exploration of cultivated/certain wild cucurbits was carried out by travel and visit of road sides, farmers' field, hutments and houses in the villages, town areas and cities across Uttar Pradesh. Collection of observations and documentation was done through description and photography of existent variability of various valuable cucurbit crops of the state. Conservation and evaluation of some very important and unique genotypes of cucurbits at NDUAT Kumarganj, Faizabad was carried out. Besides, collection of seed material of valuable genotype of interest and their deposition in Nation Gene Bank at National Bureau of Plant Genetic Resources, New Delhi was undertaken.

Surveys conducted across the state of Uttar Pradesh revealed that great extent of variability occurs in bottle gourd, sponge gourd, satputiya, pointed gourd, ivy gourd, bitter gourd and muskmelon. Documentation of a large number of genotypes of different cucurbits, viz. bottle gourd, pumpkin, sponge gourd, ash gourd, pointed gourd, ivy gourd, muskmelon, longmelon, snapmelon, cucumber, satputiya etc, are being carried out.

A. Bottle gourd genotype collected from Faizabad, bearing two fruits

B. Sponge gourd genotype collected om Kushinagar distt. bearing androgynous Inflorescence

C. Wild type bitter gourd genotype encountered in distt. Sultanpur

Fascinating genotypes of different cucurbits encountered in eastern U.P.
Based on the findings, the recommendations will be made for their in-situ conservation at specific site of cultivation and long term conservation at NBPGR, New Delhi. For instance, Lucknow Batti of muskmelon, Jaunpuri Karela, Lakhanawi Kakri, Kampierganj ka kundru, Faizabadi lauki etc. require special attention for conservation.

## 3. Status and habitat assessment of Bengal Florican Houbaropsis bengalensis in the grasslands of Uttar Pradesh

The present study on status survey on Bengal florican was carried by the Wildlife Institute of India, Dehradun, Uttrakhand in Dudhwa National Park, Kishanpur Wildlife Sanctuary, Pilibhit Reserve Forests and Lagga-Bagga in Uttar Pradesh (U.P.) during June, 2011-2012. Since Bengal Florican is listed as one of the critically endangered species. The field work was carried out in three different seasons first in breeding seasons (April 2011), second in pre-breeding (October 2011- January 2012) and the third in breeding season (February 2012-May 2012) of florican. To study the present status and population of florican, area search method is being used along with focal animal sampling for behavior study. The habitat parameters were collected using vegetation quardrat sampling method. Data was analyzed using simple statistical tools: MS Excel, PC-ord and SPSS. The status survey was carried out in peak breeding season in all the study sites. After many repeated search in each potential grassland patch, only 3 adult male floricans were recorded. Two were territorial males from Dudhwa National Park and one male was flight from Pilibhit Reserve Forests. The females are more difficult to locate so the population estimation was based on the assumption of an equal sex ratio.

The vegetation sampling was done in both seasons. In pre-breeding seasons, all the potential grassland patches were classified into three different plant communities dominated by Desmostachya bipinnata, Impereta cylindrical and Themeda arundinacea respectively whereas, in breeding season four different communities were found. A separate community was formed dominated by Saccharum narenga.

During the study three sets of behavioral activity data was recorded. It was observed that florican spent maximum time (52.32\%) in feeding. The second set after an interval of 6 days from the first showed that the florican invested equal time in feeding $38.53 \%$ and movement $44.04 \%$ whereas in third set the maximum time was spent in movement $76.67 \%$ along with the numbers of display activity in search of female.

## 4. Germplasm exploration, assessment and documentation of the freshwater fish biodiversity of Uttar Pradesh

The study was carried out by the National Bureau of Fish Genetic Resources (ICAR), Lucknow. Rapid explorations of the 12 main rivers, 7 tributaries, 12 dams including reservoirs and four lakes/taals in Uttar Pradesh were carried out and data on fish diversity, species composition, distribution and relative abundance were recorded. The total freshwater fish diversity of 124 native species and seven exotics species belonging to 26 families have so far been described from all the explored rivers in Uttar Pradesh. Overall, high species diversity ( 90 species) were recorded from Ganges followed by 85 species in Ghaghara, 78 species in Gomti, 75 in Betwa, 68 in Sharda, 62 in Tons, 63 in Rapti, 60 in 52 in Chambal and 50 in Sone,
respectively. The Shannon-Weiner biodiversity index of 12 rivers were calculated of which river Ganga showed highest diversity of species (4.14) followed by Gerua (4.17), Ghaghara (4.16) and Gomti (4.16) rivers.

New biogeographical distribution of the freshwater fish Glyptothorax conirostris was reported and described from river from Ganga canal, Roorki and a new distribution record of threatened catfish Amblyceps mangois (family Amblycipitidae ) was documented from river Gomti, Ganga and Ramganga Rivers. The species described from different rivers and tributaries were assessed under various categories as per IUCN (2012) and a total of 10 species were found included as near threatened (NT), 1 as vulnerable (VU), 78 as least concern (LC), 2 as data deficient (DD) whereas 34 species were under not evaluated (NE) categories.


GIS Map showing sites of exploration and occurrence of different fish species in Uttar Pradesh.


Bar diagram showing family and species richness in the selected rivers of Uttar Pradesh.


Field exploration and fish diversity assessment.

## P

## 5. Use of ITK (Indigenous Technology Knowledge) and experience in crop production and protection in Vindhayn region of eastern Uttar Pradesh

The study is being carried out by the Department of Agronomy, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi. The actual project work was started in the month of October 2011 with three major objectives viz i) intensive survey and collection of indigenous technical knowledge in agriculture prevailing in Vindhyan region, ii) proper documentation and validation of these ITKs on farmer field and their cross sectoral validation with already documented ITKs in the farmers' fields leading to iii) a mandate to generate location specific technologies through farmers participatory research involving feedback from on station experimentation.

The out-reach programmes involved farmers participatory survey, documentation and on station experiments on relevant crops (2011-12). The operational area received high rainfall in the region providing opportunities for water harvesting which can be linked with advantage to agriculture.


Under this project about 25000 farmers and 1000 students visited the experimentation sites.
There is much to be learned from indigenous knowledge systems of local people. As it is seen from the cases of indigenous agriculture of Sonbhadra district and surrounding areas of eastern Uttar Pradesh, the traditional agricultural practices evolved from these knowledge systems are performing well even today without bringing much ecological degradation.

## New Projects:

The following projects were sanctioned for a period of two years by the Board in December 2012:

| Sl. <br> No. | Name of the project | Name of the Institution <br> of the Prost <br> (Rs. in lacs) |  |
| :--- | :--- | :--- | :---: |
| 1 | Inventorization of Aromatic Plant Species, <br> their status and assessment of area under <br> cultivation of essential oil bearing crops in <br> some districts of upper Gangetic Plain. | Central Institute of Medicinal <br> and Aromatic Plants (CIMAP), <br> Lucknow | 12.95 |
| 2 | Status, distribution and threats with <br> special emphasis on conservational <br> measures of House Saprrow (Passer <br> domesticus) in urban and rural areas of <br> Lucknow district of Uttar Pradesh | University of Lucknow, <br> Lucknow | 11.38 |
| 3 | Assessment of Floral and Faunal Biodiver- <br> sity of the Aquatic Eco- systems of Bird <br> Sanctuaries (Wetlands) in Uttar Pradesh <br> using High Resolution Remote Sensing <br> Data and GIS Techniques | Remote Sensing Applications <br> Centre, U.P. Sector G,, <br> Jankipuram Kursi Road, <br> Lucknow | 20.17 |
| 4 | Chiropteran Diversity and <br> Conservation in Uttar Pradesh | Babasaheb Bhimrao Ambedkar <br> University, Vidya Vihar, <br> Rae bareilly Road, Lucknow | 22.97 |
| 5 | Fish Diversity of Ramgarh and Bakhira <br> Lake: Comparison of Present Status with <br> Pristine Data of Conservation and <br> Sustainable Utilization | National Bureau of Fish <br> Genetic Resources, <br> Canal Ring Road, Telebagh, <br> Lucknow | 14.99 |
| 6 | Assessment of sedges based on: Micro- <br> morphological characters, Food value <br> and potential role in phyto-remediation <br> in wetlands of Uttar Pradesh | University of Allahabad, <br> Allahabad | 11.84 |
| 7 | Diversity, distribution and ethno botany <br> of Pteridophytes and hepaticae <br> (Bryophytes) in Dudhwa National Park in <br> Uttar Pradesh and bordering regions | National Botanical Research <br> Institute, CSIR, Lucknow | 14.76 |

## International Day for Biological Diversity 2012

## INTERNATIONAL DAYFORBIOLOGICAL DIVERSITY-2012



## National Conference on "Marine Biodiversity"

Uttar Pradesh State Biodiversity Board celebrated the International Day on Biological Diversity (IDB-2012) on 22nd
 May 2012 at Dr. Ram Manohar Lohia National Law University Campus, Lucknow. On this occasion, a National Conference on "Marine Biodiversity" was organized in which more than 350 delegates including various research organizations/institutes, universities, officers from U.P. Forest Department and other state as well as NGO's etc participated. The aim of the conference was to create awareness about oceans and to inspire action to conserve marine wilderness and biodiversity. The conference was inaugurated by Dr. Syed Azmal Khan, Professor Emeritus, Centre of Advanced Study in Marine Biology, Annamalai University, Parangipettai, Tamil Nadu.
Shri J.S. Asthana, Principal Chief Conservator of Forests, U.P. welcomed all the dignitaries and delegates of the conference and delivered the welcome address. He said that presently, so far $2,30,000$ marine species have been identified but still information on thousands of species is yet to be explored. He expressed the concern about increasing pollution load on seas and the need of the hour to spread the awareness in this regard.

Shri Rajesh Kumar Singh, Secretary (Environment and Forests) and Chairman, U.P.State Biodiversity Board, in his talk said that about $65 \%$ of grasses and habitats in coastal areas have almost been destroyed and approx. 80\% of sea fish stock has either been exploited or over exploited. He further added that the aspect of biodiversity conservation should be introduced as a subject in study course of students of class VI to XII.

Dr. J.K. Jena, Director, National Bureau of Fish Genetic Resources, Lucknow delivered his guest lecture on marine fish biodiversity and its management. Giving the brief account of marine resources, he said that coast line of India extends upto 8129 km with EEZ as 2.02 million km 2 the fishery potential of our county is 3.9-4.2 million tones. He said that the Arabian Sea is known as one of the world's most productive oceanic region- upwelling, broad continental shelf area and wind-driven mixing. He said that as far as aquatic diversity of India is concerned, there are 2508 fishes ( $7.4 \%$ of world species), 2934 crustaceans ( $7.4 \%$ of world species), 5070 mollusks ( $6.0 \%$ of world species), 765 echinoderms ( $10.9 \%$ of world species), 486 sponges, 842 cnidarians ( $8.4 \%$ of world species), 844 seaweeds ( $4.2 \%$ of world species). According to him, the major threats to the biological resources in aquatic ecosystems include: extensive use of non-selective gears, indiscriminate capture of juveniles and sub-adults, onboard discards of low value fishes, coastal pollution, and habitat alteration. Besides, climate change and natural calamities are posing serious threats to the marine biodiversity.

Speaking on this occasion, Shri Pawan Kumar, Secretary, U.P. State Biodiversity Board, Lucknow focused on the importance of the year 2012 for India as India is hosting COP-11 (Conference of Parties) of CBD in Hyderabad during this year. This year is also the 20th Anniversary of the Rio Conference on Environment and Development, 20th Anniversary of Convention on Biological Diversity (CBD) and the 40th Anniversary of the 1992 first UN Conference on the Human Environment held in Stockholm in 1972. Throwing the light on the connection between Aichi targets and marine biodiversity, he gave the detailed overview of Target 6, Target 10 and Target 11 of the Aichi targets. During his talk, he drew the attention of the audience towards the role of the ocean, which acts as carbon sink in balancing the carbon di-oxide emissions generated by us and also providing us minerals and many more advantages which are not been taken into account. While concluding his presentation, he expressed his concern to save marine biodiversity and discussed some important critical ocean issues to be taken care of viz. overfishing, pollution, ocean acidification, global warming, habitat loss, deep water drilling.

As a chief guest, Dr. Syed Azmal Khan, Professor Emeritus in his talk gave on account of potential values of biodiversity as food fodder, species and aromatics, fibres in textiles, fuel supply etc. He said that more animal phyla exist in oceans than on land. He said that of 35 marine phyla, 14 are endemic whereas rare phyla contain only few species. Focusing his talk on significance of sea food, he said that seafood is superior to all the other animal protein sources. He also described important marine habitat e.g. corals, mangroves, sea grass beds, seaweed stretches, rocks and sand dunes. Dr. Khan also showed the beautiful slides of marine biodiversity such as coral, coral reefs, butterfly fishes, angel fishes, cardinal fishes and groupers etc. He further added that seventy percent of the modern medicines come from biodiversity. The sea is a source of many bacteria that are useful as antibiotics.

In the first technical session of the conference, Shri Samir Sinha, from Dehradun, gave a brief account of "illegal trade in marine biodiversity". He discussed the potential values of wild life trade and informed that wildlife trade is any sale or exchange of wild animal and plant resources by people. This can involve live animals and plants or a diverse range of products
needed or prized by humans-including skins, medicinal ingredients, tourist curios, timber, fish and other food products. Most wildlife trade is probably within national borders, but there is a large volume of wildlife in trade internationally. He further said that TRAFFIC has estimated the value of the illegal wildlife trade as between US $\$ 10$ to 20 billion a year.

He further informed that the marine species in trade include Marine Turtles, Corals, Sea shells, Sea Horses, Sharks, Whale Sharks, Sea cucumbers, Live Reef Fish. About seventy species of sharks are reported from Indian waters, though only eighteen species are reported to be occasionally or frequently caught. Some shark species are also listed in the Schedule I of the WLPA 1972. Sharks are particularly vulnerable to overexploitation because of their biological characteristics of maturing late, having few young and being long-lived. He informed that the coral reefs ecosystems are among the "most diverse and valuable ecosystems on earth", supporting one million species of animals and plants and an estimated eight million species that are yet to be discovered. Giving an account of live reef fish trade, he said that around 2 million people worldwide keep marine aquaria. This trade is a global multi-million dollar industry, worth an estimated US\$200-330 million annually. A total of 1,471 species of marine fish have been documented in trade worldwide with the best estimate of annual global trade ranging between 20 and 24 million individuals.

Dr. K.C. Gopi, Senior Scientist, Zoological Survey of India, Indian Museum Complex, Kolkata delivered his guest lecture on "Coastal and Marine Biodiversity of India." He presented the status of marine environment of India incorporating 10 maritime states with 800 km stretch of coastal region having 2 island groups and 3 gulf areas. He reported that $2.66 \% ~(4,827 \mathrm{sq} . \mathrm{km})$ of world's mangroves exist in India. Describing the various coastal and marine ecosystems, Dr. Gopi informed that mangrove ecosystem has 420 and 1862 species of flora and fauna respectively. Talking about the associated biodiversity in seagrass ecosystem, he said that there are 153 microalgae, 359 macroalgae, 178 invertebrates live as epiphytes and as associated organisms, fishes. About 340 animals feed on seagrasses, green turtles partially feed on seagrasses. Besides, 844 species of seaweeds he also exist in marine ecosystem of India. Further, he added that estimated total biodiversity of the world is 3-10 million in which only 1.7 million species have been identified where as total marine species in the world are estimated to be 3 lakhs out of which about $80,000(3.12 \%)$ species have been identified so far. India contributes $5 \cdot 33 \%$ ( $15,000 \mathrm{spp}$.) of the world's estimated marine species.

Dr Alok Saxena, Addl. Director, Indira Gandhi National Forestry Academy, Dehradun spoke on "Marine Diversity in India conservation and Management issues (with special reference to $\mathbf{A} \& \mathbf{N}$ islands)". He stated that sea waters cover about $70 \%$ of Earth's surface and account for $99 \%$ of volume known to sustain life. The total number of recorded marine species (both plants and animals) is less than that of terrestrial habitats mainly because marine diversity has not been fully understood due to logistic constraints in explorations and collection of specimen. Nearly all phyla are found to occur in the sea while only about half of the total number of phyla is represented by land animals. 21 phyla are exclusive marine. Similarly, marine plant life forms also show greater survival strategy.

Focusing on India's rich marine biodiversity he said that coastal waters along East and West Coast and also around two island groups have a plethora of marine species. Marine floral diversity includes 844 species of marine alga (sea weeds) belonging to 217 genera, 14 species of sea grasses and 69 species of mangroves. Marine faunal diversity includes 451 species of sponges, $>400$ species of corals, >2900 species of crustacean, 3370 species of marine mollusks, > 200 species of bryozoans, 765 species of echinoderm, 47 species of tunicates, more than 1300 marine fishes, 26 species of sea snakes, 5 species of sea turtles and 30 species of marine mammals including dugong, dolphins, whales etc. In addition a wide variety of sea birds can be observed around the coast.

Dr. Dhruv Sen Singh, Department of Geology, University of Lucknow delivered his talk on "Climate Change, Global Warming and Marine Biodiversity". He said that the universe is diversified and consists of stars, planets, satellites, comets, meteorites and asteroids. The planet earth is also diversified and consists of various continents and oceans. Our nation India is the classical example of diversification in terms of physiography, language, caste, religion etc, India has some of the world's most biodiverse regions. It hosts 2 biodiversity hotspots; the Western Ghats and the Himalayas. These hotspots have numerous endemic species. Expressing the views on marine biodiversity, he said that marine organisms play a crucial role in almost all biogeochemical processes that sustain the biosphere, and provide a variety of products (goods) and functions (services) which are essential to humankind's well-being. These include the production and mineralization of organic material, storage of cabon, storage of pollutants and waste products from land, the buffering of the climate and of climate change, coastal protection (mangroves, dune-beach systems, coral reefs). Massive deforestation and uncontrolled urbanization have led to environmental degradation never witnessed so far. Climate change is natural but pollution is anthropogenic. Our concern should be aimed on the conservation of natural things that will sustain the biodiversity. We should think and act to preserve the natural resources without which we cannot survive.

Dr.S. Balachandran, Deputy Director, Bombay Natural History Society, Mumbai delivered his guest lecture on "Avian diversity in coastal wetlands of India and their conservation needs". He described the role of coastal birds in the ecosystem as: recycling the nutrients back to the ecosystem, enriching the nutrients through guano deposition and enhance the fisheries, scavenging by feeding on the fishery wastes and feeding harmful insects-vector control. He said that there are 25 wetlands in India identified as Ramsar Sites out of which one is located in Uttar Pradesh. U.P. further has about 20 potential Ramsar Sites that have rich flora and fauna. He said that of the 181 critically endangered species in the world, India has about 9 . Out of 351 endangered species of birds India has 12 and out of 674 vulnerable species in the world 59 species are found in India.

## Souvenir:

In the inaugural session, a souvenir on the theme of the conference was also released. It carried twenty two articles on marine biodiversity.

Glimpses of IBD-2012


Inauguration of IBD-2012


Exhibits on Marine Biodiversity


Release of Souvenir on IBD 2012


A general view of the audience

## Awareness Programmes

## Marine Biodiversity Competitions $14^{\dagger}$ May 2012:

The U.P. State Biodiversity Board organized following competitions on $14^{\text {th }}$ May 2012 with the help of Zoology Department, Lucknow University, at Regional Science City, Aliganj Lucknow.

| S.N. | Name of the competition | Topic |
| :--- | :--- | :--- |
| 1. | Power point presentation | Illegal Trade in Marine Biodiversity |
| 2. | Poster competition | Uses of Marine Biodiversity |
| 3. | Quiz competition | Marine Biodiversity |
| 4. | Essay competition | Ocean and their Importance in our Daily Life |

The winners of the quiz competition were: Dhruv Dixit, Abhinav Pradeep and Nilesh Gupta. The winners of power point competition on "Illegal Trade in Marine Biodiversity" were: Vishnu Gupta, Kastubh Tandon, Pragati Yadav and Levin Roy. The prize winners of poster competition on "Uses of Marine Biodiversity" were: Avani Vikram Singh, Vishal Verma, Umama Fatima and Vishakha Chaudhary and that of the essay competition were: Snehil Srivastava and Charu Singh.

Chief Guest Prof. Syed Ajmal Khan giving away prizes to students on 22 May 2012 on the International Day for Biological Diversity



Avani Vikram Singh $1^{\text {st }}$ Prize


Vishal Verma $\mathbf{2 d}^{\text {nd }}$ Prize


Umama Fatima $\mathbf{3}^{\text {rd }}$ Prize


Vishakha Chaudhary Consolation Prize

## World Environment Day

$05^{\text {th }}$ June 2012:
The World Environment Day has been celebrated on $05{ }^{\text {th }}$ June across the globe with a theme "Green Economy: Does it include you?" On this occasion, competition on Power Point Presentation on the Topic "Ten Ideas to Make Lucknow Cleaner and Greener" was organized by the U. P. State Biodiversity Board at PICUP Bhawan, Gomti Nagar Lucknow during 11:00 am $13: 30 \mathrm{pm}$. The competition was divided into two categories i.e. junior group and senior group. The support in our efforts to spread awareness about protection of environment vis-a-vis green economywas encouraging.

## Vulture Awareness Day ${ }^{\text {st }}$ September 2012

On the occasion of International Vulture Awareness Day i.e. ${ }^{\text {st }}$ September 2012, a picture colouring competition was organized by U P State Biodiversity Board through the website. Total 198 entries were received from different schools/colleges of category (class $1^{\text {st }}-5^{\text {th }}$ ). The prize winners of the competition are as follows:
Class- Ist

| S.No. Name of Student | Name of School | Prize |  |
| :---: | :--- | :--- | :--- |
| 1. | Sneha Verma | Riverside Academy, Viram Khand-I, <br> Gomti Nagar, Lucknow | Ist |
| 2. | Satakshi Tiwari | City Montessori Inter College,Vishal Khand-II, <br> Gomti Nagar, Lucknow | IInd |
| 3. | Vaibhav Srivastava | S.J.S. Study Home College, Sector-12, <br> Indira Nagar, Lucknow | Consolation |
| Class- IInd | Afeefa Khan | S.J.S. Study Home College, Sector-12, <br> Indira Nagar, Lucknow | Ist |
| 1. | Falak Mohsin | Riverside Academy, Viram Khand-I, <br> Gomti Nagar, Lucknow | IInd |
| 3. | Kayanat Fatima | Riverside Academy, Viram Khand-I, <br> Gomti Nagar, Lucknow | Consolation |

Class- IIIrd

| 1. | Naina Saini | Seth M.R. Jaipuria School, Gomti Nagar, <br> Lucknow | Ist |
| :--- | :--- | :--- | :--- |
| 2. Lakshya Gupta | United Public School, Kanpur | IInd |  |
| 3. | Tanveer Alam Khan | Eram Intermediate College, C-Block, <br> Indira nagar, Lucknow | Consolation |

Class- IVth

| 1. | Dev Upadhyay | Seth M.R. Jaipuria School, Gomti Nagar, | Ist |
| :--- | :--- | :--- | :--- |
| 2. | Lucknow <br> Anupam Dutta | Riverside Academy, Viram Khand-I, <br> Gomti Nagar, Lucknow | IInd |
| 3. | Kirti Vishwakarma | S.J.S. Study Home College, Sector-12, <br> Indira Nagar, Lucknow | Consolation |

## Class- Vth

| S.No. Name of Student | Name of School | Prize |  |
| :--- | :--- | :--- | :--- |
| 1. | Shreea | Rani Laxmi Bai Memorial Senior Sceondary <br> School, C-Block, Indira Nagar, Lucknow | Ist |
| 2. | Sandhya Sahu | Riverside Academy, Viram Khand-I, <br> Gomti Nagar, Lucknow | IInd |
| 3. | Ishita Tandon | Study Hall, Vipul Khand-II, Gomti Nagar, <br> Lucknow | Consolation |

## Science Express - Biodiversity Special (SEBS)

'Science Express - Biodiversity Special' (SEBS) is an innovative mobile exhibition mounted on a specially designed 16 coach AC train, traveling across India from $5^{\text {th }}$ June to $22^{\text {nd }}$ December 2012. SEBS is the fifth phase of the iconic and path-breaking Science Express. The SEBS is a unique collaborative initiative of Department of Science \& Technology (DST) and Ministry of Environment \& Forests (MoEF), Government of India.

Gorakhpur Cantt. Railway Station :


03rd November 2012
The 'Science Express - Biodiversity Special' (SEBS) was welcomed at Gorakhpur Cantt. Railway Station by Shri. Ravi Ranjan Jamuar, CCF, Gorakhpur , Smt Pratibha Singh, Deputy Conservator of Forests, U. P. State Biodiversity Board and was attended by 14199 students and 754 teachers.

## Northern Railway Station, Lucknow :

## 07th November 2012

The Science Express-Biodiversity Special arrived on 07th Nov., 2012 at Charbagh Junction, Northern Railway, Lucknow. The exhibition was formerly inaugurated by Shri V.N. Garg, Principal Secretary, Forests and Environment, UP and Chairman UP State Biodiversity Board, Lucknow,. Shri Pawan Kumar, Secretary, Forest and U.P. State Biodiversity Board, Shri J.S. Asthana, Principal Chief Conservator of Forests, U.P., Shri Rupak De, Principal Chief Conservator of Forests (Wildlife), Dr. Ashwani Kumar, Principal Chief Conservator of Forests, Research and Training and Shri Umendra Sharma, MD U.P. Forest Corporation graced the occasion. Besides, Shri O. P. Verma, Director, Environment, U.P. and Member Secretary, U.P. Pollution Control Board was also present. The children of schools from C.M.S., Riverside Academy and T.D. Girls Intermediate College also participated actively on this occasion. Science ExpressBiodiversity Special train was visited by 46,425 visitors at Lucknow.

Dr. Amita Kanaujia and students of Zoology Department of Lucknow University were also present. The students of CMS had come with neatly painted placards. Dr. Preeti Kanaujia of C.E.E. (North Zone) encouraged the students to take the "biodiversity pledge". They also explained the concept of "Footprint" and "Handprint".


Shri. V. N. Garg, Principal Secretary, Forests and Shri. J. S. Asthana, PCCF U.P. welcome SEBS at Lucknow


Principal Secretary, Forests viewing different exhibits


Students participating in Platform Activity conducted by SEBS team

## World Wetlands Day, ${ }^{\text {nd }}$ February 2013



The World Wetland Day was celebrated on $2^{\text {nd }}$ February, 2013 by U.P. State Biodiversity Board along with active participation from Department of Zoology, University of Lucknow and Department of Applied Animal Sciences, B.B. Ambedkar University.

India is a signatory to the Convention on Wetlands signed on $2^{\text {nd }}$ February 1971. So far 164 countries have signed the convention and the total numbers of wetlands of International importance identified so far are 2083. The objective of celebrating the wetlands day was to undertake action aimed at raising public awareness of wetland values and benefits in general.


The programme started with a flagging off surveying teams by Pratibha Singh (IFS), Deputy Conservator of Forests, U. P. State Biodiversity Board Lucknow from the campus of University of Lucknow.

The study teams visited the following areas in and around Lucknow district:
Teams for field studies of Wetland Areas

| Gp | Name of the Area | Wetlands Visited |  <br> Members | Affiliation |
| :--- | :--- | :--- | :--- | :--- |

## Interaction with the villagers and school children during the visit



Discussion amongst the villagers


Team interacting with the villagers


Awareness programme in School


Awareness amongst the students


Interaction with students

These areas were visited to compare the biodiversity of wetlands outside protected areas with the biodiversity of wetlands inside protected areas (Nawabganj Bird Sanctuary). Interaction of University researchers and students of Ramkrishna Vidyavati Mahavidyalya, Sakran, Bichia Block, Unnao and villagers also took place.

Followed by the field visits, a power point presentation was also held on 07-02-2012 at U P State Biodiversity Board's Conference Hall. Teams that visited the field shared their experiences. Certificates of participation were awarded to all the participants.
Besides a power point presentation competition on "Biodiversity in Wetlands" was organized at Department of Applied Animal Sciences, B.B. Ambedkar University. About 150 participants from the Department of Environmental Biology/ Applied Plant Sciences/ Environmental Sciences/ Biotechnology/ Masks communication and Journalism/ Applied Physics/Applied Chemistry/ Human Development and Families Studies and MBA students took part in the competition.
A total of 256 students, research scholars and faculty members took part in the World Wetland Day Celebration. Smt. Pratibha Singh (DCF, UPSBB) delivered a lecture on "Wetlands and their importance in Biodiversity Conservation".

Dr. V. Elangovan (Coordinator, DAAS) talked about aquatic biodiversity and Dr. Ram Jee Srivastava (Senior Scientist, UPSBB) were the judges for the competition. Prizes along with certificates were distributed to the winners and participants. Mr. Amar Jyoti Das, Department of Environmental Microbiology, Ms. Sneha Verma, Department of Applied Animal Sciences and Ms. Dilpreet Kaur, Department of Applied Animal Sciences won the first, second and third prizes, respectively. Mr. Smriti Mehrotra, Department of Environmental Sciences and Ms. Harshita Pandey, Department of Applied Animal Sciences won the consolation prize.

## World Sparrow Day $20^{\text {th }}$ March 2013

The World Sparrow Day was celebrated on $20^{\text {th }}$ March, 2013 at Regional Science City and the programme was jointly organized by the U.P. State Biodiversity Board and Zoology Department, Lucknow University

The aim of the programme was to raise awareness regarding Sparrow Conservation among the students through various competitions.

About 120 students participated in poster contest on "Design and Paint a House for your Sparrow" and 80 students participated in the quiz competition. In all 200 students participated enthusiastically in the events. Hand-bills and pamphlets on conservation of house sparrow were distributed among the students and teachers.

Besides, a request was also made through news papers to common public to count the sparrows and report the same at the board's email: upstatebiodiversityboard@gmail.com. The response regarding the sparrow count from the common public was encouraging.

The list of prize winners of the competition are as follows:

## List of prize winners of the competition

## Poster Making Contest

Category：Class VI－VIII

| Name of Students | Class | ロロロロロロロロName of School | Prize |
| :--- | :--- | :--- | :--- |
| Harshi Lal | VII | Seth．M．R．Jaipuria School，Gomti Nagar， <br> Lucknow | First |
| Anjali Abdi | VIII | La Martiniere Girls College，Lucknow | Second |
| Aviral Chharia | VIII－B | Seth．M．R．Jaipuria School，Gomti Nagar， <br> Lucknow | Third |
| Sonam Agarwal | VII | Seth．M．R．Jaipuria School，Gomti Nagar， <br> Lucknow | Consolation |



Harshi Lal，1st prize



Anjali Abdi，2nd prize


Aviral Chharia，3rd prize

## Category：Class IX－XII

| Nihit Verma | XI－B | Seth．M．R．Jaipuria School，Gomti Nagar， <br> Lucknow | First |
| :--- | :--- | :--- | :--- |
| Monalisha Gupta | XI－B | Seth．M．R．Jaipuria School，Gomti Nagar， <br> Lucknow | First |


| Palak Poddar | XI-B | Seth. M.R. Jaipuria School, Gomti Nagar, <br> Lucknow | Second |
| :--- | :--- | :--- | :--- |
| Eram Khan | XII | La Martiniere Girls College, Lucknow | Third |
| Jillian Elizabeth | XII- E | Seth. M.R. Jaipuria School, Gomti Nagar, <br> Lucknow | Consolation |
| Aarushi Singh | IX | Seth. M.R. Jaipuria School, Gomti Nagar, <br> Lucknow | Consolation |



Nihit Verma, 1st prize


Eram Khan, 3rd prize


Monalisha Gupta, 1st prize


Jillian Elizabeth, Consolation prize


Palak Poddar, 2nd prize


Aarushi Singh, Consolation prize

## Responses received from the citizens:

About 1500 sparrows were counted and reported by email by the citizens.

## Pictures received from the citizens




Awareness materials published and distributed, on World Sparrow Day-2013


Poster


Handbills

Glimpses of World Sparrow Day -2013 Celebration



## International Day of Forests, 22 March 2013

#  21 March International Day of Forests 

The Uttar Pradesh State Biodiversity Board, Lucknow celebrated "World Forestry Day" on 21st March, 2013. On this occasion, a poster competition on "Importance of Forests" was organized in the districts of Unnao and Lucknow with a view to spread awareness among the students.

A total of 155 students participated in the competition. Out of which, 80 students (upto class VIII) and 12 students (class IX) of Church School Nawabganj, Unnao and 25 students (class Vth to Xth) of Kendriya Vidhalaya, Unnao took part in the poster competition whereas 29 students of Awadh Academy, Lucknow and 09 students of T. D. Girls Inter College, Lucknow participated in the competition. The winners were awarded prizes accordingly.

The list of prize winners of the competition is mentioned below:
Result of Drawing Competitions organized
Name of the School: Church School, Nawabganj, Unnao
Category: Vth - VIIIth

| S.No. | Name of Student | Class | Prize |
| :--- | :--- | :--- | :--- |
| $\mathbf{1}$ | Mantasa Khatoon | VIII | First |


| 2 | Mansi Diwakar | VII | Second |
| :--- | :--- | :--- | :--- |
| 3. | Mansi Singh | VII | Consolation |



Mantasa Khatoon, 1st Prize


Mansi Diwakar, 2nd Prize


Mansi Singh, Consolation Prize

Category: IXth - XIIth


Robin Vimal,1st Prize

## Name of the School: Kendriya Vidhalaya, Unnao

Category: Vth - Xth

| SlNo. | Name ofStudent | Class | Prize |
| :--- | :--- | :--- | :--- |
| 1 | Nidhi Shukla | X-A | Ist |
| 2 | RupanjaliYadav | VIII-B | IInd |
| 3 | Prachi Singh | VI-B | IIIrd |


| 4. | Akanksha Yadav | VIII-A | Consolation |
| :--- | :--- | :--- | :--- |
| 5. | Vanshika Mishra | VIII-B | Consolation |



Nidhi Shukla, 1st Prize


Akanksha Yadav, Consolation Prize


Rupanjali Yadav, 2nd Prize


Vanshika Mishra, Consolation Prize

Results of Drawing Competitions organized

| S. No. | Name ofStudent | School/College | Class | Prize |
| :--- | :--- | :--- | :--- | :--- |
| 1 | Anchal Kumari | TD Girls Inter College | III-A | First |
| 2 | Vandana Vishwakarma | Awadh Academy | VIII | Second |
| 3. | Sneha Prajapati | T D Girls Inter College | VIII-A | Consolation |



Anchal Kumari, 1st Prize


Vandana Vishwakarma, 2nd Prize


Sneha Prajapati, Consolation Prize

Glimpses of Poster Competition organized on the occasion of International Day for Forestry, $21^{\text {st }}$ March 2013


## Human Resource Development

## Human Resource Development

The officers and staff of the Board participated in various workshops/conferences/trainings through the year, the details of which are as follows:

1. Dr. Ram Jee Srivastava, Senior Scientist and Shri R. K. Dubey, ACF participated in the National Work-shop on "Experience Sharing and Capacity Building of Biodiversity Management Committees"organized by M.P. State Biodiversity Board during August 78, 2012.
2. Dr. Ram Jee Srivastava, Senior Scientist attended the Regional Science Congress on the theme "Science for Shaping the Future of India" jointly organized by The Maharaja Sayajirao University of Baroda, Vadodara and Indian Science Congress at during September 15-16, 2012. He also presented an invited paper on "Biodiversity Conservation and Sustainable Use of Some Medicinal Plants in the Technical Section of Botany Department, University of Baroda, Vadodara.
3. Sri Pawan Kumar, Secretary, U. P. State Biodiversity Board, attended Convention on Biodiversity (CBD) CoP 11 from $14^{\text {th }}$ to $18^{\text {th }}$ October 2012 at Hyderabad organized by Ministry of Environment \& Forests, Government of India, at HICC-HITEX Complex in Hyderabad, India.
4. Smt Pratibha Singh, Deputy Conservator of Forests, U. P. State Biodiversity Board attended Convention on Biodiversity (CBD) CoP 11 from $15^{\text {th }}$ to $19^{\text {th }}$ October 2012 at Hyderabad organized by Ministry of Environment \& Forests, Government of India, at HICC-HITEX Complex in Hyderabad, India.
5. Dr Ram Jee Srivastava, Senior Scientist attended the Diamond Jubilee Celebrations of CSIR -National Botanical Research Institute, Lucknow on $25^{\text {th }}$ Oct. 2012. Bharatratna Dr. APJ Abdul Kalam, Hon'ble Former President of India was the Chief Guest and his Excellency Shri B.L. Joshi, Hon'ble Governor of U.P. was the Guest of Honour on the occasion.
6. Dr Somesh Gupta, GIS/Technical Associate attended the $82^{\text {nd }}$ Annual Session of NASI \& National Symposium on "Nanoscience \& Technology for Mankind" jointly organized by National Academy of Sciences, Allahabad and Banaras Hindu University, Varanasi during November 29- December 01, 2012. He also presented a research paper on "Ramifications of Climate Change on Biodiversity" in the biological session.
7. Sri R K Dubey, Assistant Conservator of Forests, U.P. State Biodiversity Board attended the Annual meeting of all State Biodiversity Boards and First National Biodiversity Congress-2012 on the theme "Biodiversity for Food Security" during 27-30 December 2012 organized by Kerala State Biodiversity Board, at Kanakakkunnu Palace, Thiruvananthapuram.
8. The Institute of Engineers (India) U.P. State Centre in association with The Professional Engineers (Civil) Association - PECA celebrated World Habitat Day on Oct- 1, 2012. On this occasion Smt Pratibha Singh, Deputy Conservator of Forests, U. P. State Biodiversity Board delivered a keynote address focusing on habitat and feelings and affection for our habitat, the mother earth. She briefed about limitations of resources on biosphere with reference to our developments and growth including population. She also briefed about top ten green cities.

## PUBLICATIONS

a) Flyers: The U.P. State Biodiversity Board, Lucknow published the following flyers, which were distributed free of cost to the participants during XIth Conference of the Parties (COP 11) - Convention on Biological Diversity, organised by the Ministry of Environment \& Forests, Government of India from $8^{\text {th }}$ October to $19^{\text {th }}$ October 2012 at Hyderabad.

b) Booklet : A booklet on Biodiversity: "Living Treasures of Uttar Pradesh" was published for the XI ${ }^{\text {th }}$ Conference of the Parties (COP 11) - Convention on Biological Diversity, organised by the Ministry of Environment \& Forests, Government of India from $8^{\text {th }}$ October to $19{ }^{\text {th }}$ October 2012 at Hyderabad

The booklets were distributed to the delegates during the event free of cost.
c) Souvenir on Marine Biodiversity : A Souvenir on "Marine Biodiversity" was released at the occasion of International Day for Biological Diversity (IBD-2012).

It has 22 articles on Marine Biodiversity. The soft copy of the same is also available at: http://www.upsbdb.org/content2.php


UTTAR PRADESH STATE BIODIVERSITY BOARD

d) News Letter: e-magazine: A quarterly e-newsletter of U.P. State Biodiversity Board, Lucknow is published on line. This can be viewed on www.upsbdb.org under e-magazines. The following four issues have been completed till date.

iii) Vol.: 3, Issue: 13, Oct. - Dec. 2012

ii) Vol.: 3, Issue: 12, Jul. - Sept. 2012

iv) Vol.: 4, Issue: 14, Jan.- Mar. 2013


## Pinance \& Accounts

# SANJAY RAJIV \& CO. <br> CHARTERED ACCOUNTANTS 

# 1si, Floor, Y.M.C.A. Complex, 13, Rena Pratap Marg. Lucknow - 226001 * Tel. : (0522) 2209402 <br> E-mat : myca. lucknow gemail.com 

## Independent Auditor's Report

## To the Members of Uttar Pradesh State Biodiversity Eoard.

We have audited the accompanying financial statements of Citar Pradesh State Biodiversity Board ("the hoard"), which comprise the Balance Sheet as at March 31, 2013, and the Incons at tixpendiure Acount and Receipt \& Paymunt Account for the yer then endel, and a summary of significalla taconntiteg policies add ofter explanatory information.
Management is respunsible for the preparation of these tinancial statements that give a trtue and rair wiew of the financial position, tinarwial performatter of the Board in acordane with the Accounting Standards. Jhis responsibility includes the design, intelementation and maintenance of itilernal constrif relewanc to ithe preparation and presentation of the financial statements that give a truc and fair wiew aild are tree from material mistatemerth, whet her due to fraud or error.

 Accountionts of lodia. Those Stindards require that we comply with ethical requirements and plan
 fighi material mishatement.

An audit inolves performing procedures to obtain audit evidence athont the anounts and disclosures in the finanejal stanments. The prowedures seleched depend on the auditor's judgrient. includiug the

 preparation and tair presentation of the findacial statements in order to design audit procelures that ara appropriate in the cireumstances, An audit also itclufes evaluating the apprypriateness of


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 and iain wiew in conformily with tle accountirg principles generally awepted in Indiat:
a) In the casce of the Balane Shet. of the state of affars of the Boatian at March 3: 2has
 that Sate;

Place: Lucknuw
Date: 17.08.2013


## SIGNIFICANT ACCOUNTING POLICIES \& NOTES TO ACCOUNTS

1. The Brard has changed the method of accounting from Cash to mercantile basis.
2. Erstwhile Interest on Fixed Deposits have been accounted for on actual receips basis on the maturity of the Deposits, during the sear the Interest income has been accounted for on

3. The accounts are prepared on historical cost basis as a going conceri, Accounting policies not referred to otherwise are consistent with generally accepted accounting principles.
4. Expenses on Seminar on Biodiversity Day incurred through Dro. Ayadh have been accourted for on the basis of Utilization Cerlificates received from the concerning DFO.
5. The total amount paid during the period to various agenciesidepartments for Biodiversity related projects has been considered as the expenditure for the relevant year.
6. Fixed Assets are stated at cose of acquisition
7. Depreciation on Fixed Assets has been provided on WDV basis at the rates prescribed under the lncome Tax Act.
8. Clesing Steck of Books have been valued al cost


Place : Lucknow


Date : 17.08.2013

## Finance and Accounts

## UTTAR PRADESH STATE BIODIVERSITY BOARD,LUCKNOW

RECEIPT \& PAYMENT A/C FOR THE PERIOD 01.04.2012 to 31.3.2013


## UTTAR PRADESH STATE BIODIVERSITY BOARD,LUCKNOW INCOME EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.3.3013

| EXPENDITURE | AMOUNT | INCOME | AMOUNT |
| :---: | :---: | :---: | :---: |
| Pay \& Allowances | 457,926.00 | Recurring Grant |  |
| Office Rent | 1,431,012.00 | From Central Government | 700,000.00 |
| Electricity Bill | 156,896.00 |  |  |
| Staff Vehicles | 1,205,289.00 | Interest on Fixed Deposits | 18,735,137.00 |
| Expenses on International Day for | 839,711.00 | Other Interest from Bank | 661,431.00 |
| Biological Diversity |  | Donation \& Advertisement | 622,500.00 |
| Telephone \& Internet | 129,782.00 | Sale of Books | 24,300.00 |
| Ongoing PBR Activities | 44,768.00 | Refund from Project | 3,000.00 |
| Computer Running \& maint. | 118,463.00 | Miscellaneous Receipts | 3,175.00 |
| Maintenance paid to PICUP Welfare Society | 36,180.00 |  |  |
| Rent Rates \& Taxes | 5,666.00 |  |  |
| Postage \& Courier | 17,582.00 |  |  |
| Board Meetings \& Seminar | 75,632.00 |  |  |
| Cost Price of Book Sold | 19,277.66 |  |  |
| Printing \& Stationary | 50,434.00 |  |  |
| Traveling | 94,741.00 |  |  |
| Publicity \& Awareness Material for COP-11 | 300,000.00 |  |  |
| Website Maintenance | 22,500.00 |  |  |
| Biodiversity Awareness Programmes | 37,105.00 |  |  |
| News Paper \& Periodicals | 10,250.00 |  |  |
| Audit Charges | 15,736.00 |  |  |
| Professional Charges | 11,236.00 |  |  |
| Bank Charges | 844.00 |  |  |
| Project Research, Data Collection \& Documentation | 4,867,300.00 |  |  |
| Supply of Manpower | 684,275.00 |  |  |
| Preparation of Annual Report \& Other Brochures | - 223,308.00 |  |  |
| Security Charges | 41,731.00 |  |  |
| Repair \& Maintenance | 12,560.00 |  |  |
| Office Expenses | 78,812.00 |  |  |
| Depreciation | 273,091.88 |  |  |
| Excess of Income over Expenditure | 9,487,434.46 |  |  |
|  | 20,749,543.00 |  | 20,749,543.00 |
| As per our separate report of even Date |  |  |  |
| For Sanjay Rajiv \& Co |  | For UTTAR PRADESH STATE BIODIVERSITY BOARD |  |
| Chartered Accountants |  |  |  |
| -sd- |  |  |  |
| Partner |  |  |  |
| Place : LUCKNOW |  |  |  |
| Date : 17.08.2013 |  |  |  |

UTTAR PRADESH STATE BIODIVERSITY BOARD,LUCKNOW
BALANCE SHEET AS AT 31 March 2013

| LIABILTIES |  | AMOUNT | ASSETS |  | AMOUNT |
| :---: | :---: | :---: | :---: | :---: | :---: |
| CORPUS FUND |  |  | Fixed Assets |  |  |
| Balance b/f | 149,222,658.32 |  | AS PER LIST |  | 786,088.03 |
| Grant from Central Government | 5,000,000.00 |  | INVESTMENT |  |  |
| Add: Surplus for the year | 9,487,434.46 | 163,710,092.78 | Fixed Deposit with Banks | 141,948,529.00 |  |
|  |  |  | Interest accrued but not received | 3,981,106.00 | 145,929,635.00 |
|  |  |  | CURRENT ASSETS |  |  |
|  |  |  | Security Deposit Rent | 275,835.00 |  |
|  |  |  | Stock of Books | 353,801.75 |  |
|  |  |  | Tax Deducted at Source 2009-10 | 320,030.00 |  |
|  |  |  | Tax Deducted 2011-12 | 838.00 |  |
|  |  |  | Tax Deducted at Source 2012-13 | 330,905.00 |  |
|  |  |  | Income Tax Deposited | 227,109.00 |  |
|  |  |  | Short Interest Credit Receivable from Bank | 20,000.00 | 1,528,518.75 |
|  |  |  | Closing Balances |  |  |
|  |  |  | Cash in Hand | 1.00 |  |
|  |  |  | Cash at Bank | 12,965,850.00 |  |
|  |  |  | Cheque ih Hand | 2,500,000.00 | 15,465,851.00 |
|  |  | 163,710,092.78 |  |  | 163,710,092.78 |

As per our separate report of even Date
For Sanjay Rajiv \& Co
Chartered Accountants
-sd-
(Sanjay Bhutani)
Partner
Place : LUCKNOW
Date : 17.08.2013

For UTTAR PRADESH STATE BIODIVERSITY BOARD
-sd-

## Press clippings

HINDUSTAN TIMES, LUCKNOW TUESDAY, MAY 22. 2012

## RML UNIVERSITY Marine life to be focus of national conference

HT Correspondent<br>alkorepotersdeskeshinduatanlimes com

Lucknow: Marine life will be the focus of the national conference being held to mark the International Day for Biological Diversity at Dr Ram Manohar Lohia National Law University on Tuesday. The UP State Biodiversity Board (UPSBD) is organizing the conference The theme set by Convention on Biological Diversity (CBD) is Marine Biodiversity-One Ocean' Many Worlds of lifé,
"International Biodiversity Day-2012 is of special significance as it is the 40th anniversary of the first UN Conference on Human Environment held in Stockholm, 20th anniversary of the 1992 United Nations Conference on Environment and Development in Rio de Janioiro, and the 10th anniversary of the World Summit on Sustainable Development ir Johannesburg" says UPSBD senior official Pratibha Singh.

The decade 2011-2020 has also beentermed as the International Decade of Biodiversity. Among other events focussing on this burning environmental issue,

## THE CONFERENCE AIMS TO CREATE AWARENESS ABOUT OCEANS AND INSPIRE MEASURES FOR CONSERVATION OF MARINE ECOSYSTEMS

India will be hosting the Conference of the Parties to the Convention on Biological Diversity (COP 11) at Hyderabad in October this year, Singh says. Target actions on the CBD theme include addressing sustainability of fish harvests, invertebrates and marine plants in marine and coastal areas; and, the establishment of protected areas for marine ecosystems.
To spread awareness among school children, various competitions were organised on May 14, the prizes for which will be given during the programme on Tuesday:

The national conferenceaims to create awareness about oceans and their role as sources of oxygen, protein, medicine and climate regulation. It also hopes to inspire measures for conservation of marine ecosystems.


LOKNOW WEDNESDAYIMAY is. ante

## 'Good brand ambassador needed for biodiversity'




## shorlstories





## 70\% OF MEDCNES COMES FROM

 BIOONEESTY. SAYS PROFFESSOR

 Unvenity lir Syd Sinal Khan Frimariuifromile:







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 Tho bionLucknow's muskmelons disappearing vesumeat 8 inioy









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## industantimes

HMR

## Native birds on a vanishing flight

Urbanisation, Insecticides Pushing Winged Creatures Towards Extinction


## Sparrow population inching up?

POSITIVE TREND Bird watchers spot more than 1.800 birds in a day as compared to 2.500 in several days last year
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(2x) Birdwatchers go sparrow-spotting for count
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## TIMES CITY

## Conservation of wetlands

 must to boost eco-tourismZuchnow (PN5) Wildife (Hnnan), Samly (Paphon). Consertutuon Lab, Locknow Samtarpur (Kae Earolimaul
 ment and Stute lliadiversify Baard (Tuchavis) will nbserve Worle Wetlands Doy or

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hindy tre protented and alsead Getased Barmat altes, achord ithe to Hamsar (Iran) corven in 1971 fot comservation wilands Put still, tlome are any wellands lying in und numa licknow which arc

Luclonow: Thereisarich miodiven
sify lis the wetlands in and around Lincknow. If presseved it cm bonat the iotristr potential if the gtate ampuat Ori the occaston of Warld Whrlands Diay obsarwed every vear students of Lackame to the rbowe it carrying out difformil areas te utlities of emserv. de which will nol Jt the tourtsin, but TLANDSDAY
the llom and fatm Wetlands are low Eh as at marsin at Ewher regardial as talof wildufa yothestudentaftron tion with the UP Boant, a tism of 25

## WET \& WILD <br> Wettands in UP declared <br> conserved (Ramsar sites) <br> + Nawabgautif Pird.5anctiary in <br> Untran <br> -Sandy in Hardoí <br> 5 5amaspur in Rae gareh <br> tGheblin Kannauf <br> TAmphibians like stopper irog. turfle, dragonnty, and earthworm exset in the wetiands

places, Deen Deyal tipadhyay Pars (newr Sainet Sction, Sarofinims \#nor. Mohmilalgand and areas such as Parya (Barabankt), Naruiath Ganhari Jieel (Baralamki). BETT and arras like Chandaspure Mahora), Napar Choulcwa, Tikar'ian: Unnui, Gontunager including Katovilas Iheel Nawnulgind Biry Sonctuary (conserved), Bumin, Dus fu, Bhadosa intinties

On thair visit, students strulied the nindiversty and found a larem number if flora md fiumse extoring
arhers wece aloo seen," sald a stip tem . lestdes, pmencee of smills
 slapper foos tartie dragonilys and iarthworm weresleo sretl

Arcoriling to Kannulles, vorihty of buths wits found lin these weslands 1 rom Lapwing to Whistling Duick to Litile Cormorant and Pea cock, there were miny perates of birds, Among cehap vuriety its eludes Gryy Latt Goose Pirple Moorhen. Commoo Pocturd, Indi inPord Heran, F'uryie Beruin, Lilite Grete Agian Opmbinl, Phinlid Starksmid others:
 our topest 10 the stane pover wimel whacin thle some intilative in oon gerving these Wetlatils, which can bedemitpeetirtotouristslies " shid Kabeujin. The teatn also com udert that varisus inthropogecilic actiy ties such as sattle gratime, use of pesticias, dumping garbero thus beprobibitret in threatwetianis

Stuiteris also-distrtmuted patm phletsamong liercitizenshigalifit ing the impartasee ot weflande and

## दूme pionectr

LUCKNOW TH-UREDAY I AUGUST 30, 2012

## International Vulture Awareness Day on Sept 1

SHARMLA KRIRHAA E LUGKMCN
The up state hiodsuersis I Board in tisoctatiou wrift The Zoolotsy Depurment of Lucknow (Uapreity will cel eheate the Intrfmalinnal Vulture Ayrutheas Day by flogeine off a kas from the Tuchnow thiveruity which will Uistrifute jompidets abrail valhufe awaiencos actuw the cit and is Maribus achonk.

Deputy Comsethatar of Fotests Previhhe Singh, aild that the flagging of the cat would the place frum Ineltimu triverity.

ज्ञाe seidshat the gar whalde giv to more than 30 3chools here anil would be stationed at five loctias from where fath philets yo volure awarenew would be dletrinuied

The loiarnasional Vulfuse

every first sumerifay of the Septcaiber maoth and tbis septanber
time in will hlll on Seplember 1.
"We will try io immive roungi chidier io the proces o. sratimy imatenesp about volfures and no this canpalign ibetng carried put, The pampibiets will also carry un addihenal ounline of the bird which will becolonued by the stadents and the entrien will be enent tio the Blodiveraily Hourde' said Singts.

Prutbha sail that there were seviral culuser for the Awindling - zumber of roltare:

The yrimary peason hat heen the une of dirlofenac but the other teason is late flying die to whach the winge of the bind pet deafrowed thy the munTha (thruad) whith the peogale who ily toem use. The fubitat off this hird of procy is afse ger

## "WE WILL TRY TO INVOLVE YOUNG CHILDREN IN THE PROCESS OF CREATING AWARENESS ABOUT VULTURES AND SO THIS CAMPAIGN IS BEING CARRIED OUT," SAID SINGH

## ung adversely affected becunge

4 sits on deded treen But these 4 ats on dend treen bed for atting Ievenue eat Pratiblin Singis.

The Depuity Cansenvitor of Fotents sail that there werc

the wair ut UP, includinit the Orientar vitite vultate detetherbilled vulure, long bitled yuttwe, red headed vuliure. Egyptian vultare foitan Gizion vuluire Fimalayam veltare suit the bestrdal val lure

- The Orimal white vul tume fhe shaderbilled vilute and the long-billed vulnire fili lis the stincinte f part 3 nf the Wilatie Profection Act which metin that Jilling al the ugor and the itiling of the vulture samber put ta ithe same bacho ot. One vulhine eutratound 120 \%. of mifer meat and thas glayt ant umporiarit role in insintaiming the ecological hailance ar oftierwilie the puputa thom nf tula will increase Vilares are ecological iscin Exatory

She-ulded that the Orremal white volture: the slender-
billed valture the lung, filled yaltime and the red-fiesded valure were in that anticallymalingricit mitegury is wis dedarnd by the ticts

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${ }^{4}$ While bevent couritas hive bained the mamimiture anid umpurt of dideveiam no nicatures fiste bect lahed Mt to contrnt the 1ent ant ale of thie daperrmus trup Whan in afoin an areis af concation whe movement of the truman dietofmar the phe peit didufemacy ithe addiod.

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## 04 | metro | hindustantimes

## LU sets

## HT Cortaspondeat

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Lucionow lackonow Universityer zoology department and LIP State Mrodivassity Poard celebateed the internationul vilture day by flageriag of an awant near car and holding a hast of prommmasheremSerturday.

The vuluru car was set in notionat 630 am fromithe vice chuncellor bungalow by vion. chanceillor Mienof Kimar Milma and his wife Meenta Mism.

The car druve past the Nutlonal Botarical fesearch Inatitute look a furn towardy Ram Manohar Lohya Park. Regromal Science City, Fun Repiblic tosished Wuve Mall Galvara Ganh turned tomurds mo, Charbigh malinay stations

## 'save-vulture' drive in motion

THERE ARE 22 KINDS OF VUITURES WHICH INCLUDES 15 TYPES OF OLD WORLD VUITURES ANO 7 TYPES OF NEW WORLD VULTURES

Aminulod, Chowk, Hisernitging pind dietributed awareness materid lopeople

That 6000 pimphlets were distilibuted. In anocher vertis printing compesitlon war Alm crgamised along with a dopily Thall it Lurknow Universtys wole number. 4
The progimmen conchuded with the fum-fare, suid nusociate professor Amita Kimatilye.

IITTERMATIONAL VULTURE DAY OBSERVED 8 species of vultiore found in up (inclmarg toens amif mberalary wama

## स्डाDTETIML

Is) Gyps indicus conne-bilient vithure)
(2) Gyps bengatensin (Whitebucked vuiture)
(E) Gyps tenuliostris (Sienderbilfert vilture)
(d) Sarcogyps calves (KMg vut (tur)
(2) Neaphrar) percnopieres (ETphatan vuitire)


## MIEMATORY

1) Aepypiar manientas

1 (Cinerebus vullare)
(7) Oybs fulvies (erifono yuture)
(3) Cyps timalayensts

3 (himalayan Grffion vilume)

- (Abive) Liskuow Unienrsay Ylas-chancailos Mand Kumar Marsa and Ite wife Maene Misra flagnd off the vultury wertorans ait dit Saturliay.


## hindustantimes

# INTVLVULTURE AWARENESS DAY Throw fleshy parties to make 'em breed  

## AVIAN CONSERVATION Animal carcasses would be kept at identified spots across the state to raise their depleting number

## Raguev Mullicitiand Richa Ahmatran

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 orkutaction of tulbure metan. mots
 tyen mimios preforreal liy then servecgyens wonld bo it pirt if thermulin flusaspoces
-The haut for wich apose is on, "esys Amita Kannajity, an asuciale profinmor in the med cyitpmiment, 1 tu
she woryfine meminass of The Scute Multure Canservation Societs foecat degartment, ip un wil as the pericinal imeatprear af the projact ' Manitaring ufnowimenufloreeding sites if vatures in Jhansi Latippoif tatain end Mahaber Thin peot Cet is tetng funden ley fim UP Stepe Binilversity Hoaint.
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 hum food that te free from diclotonae Deap if in hin the ingisingid opensisely wo treit unimate When che animultoout
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Started by Herds of Pry Progemme in Somithafricame the Howk Convervaniry That in Breland, it le now beixa pele truted inlione the worls.

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 Lichnow Uninesigy Prathihi Sught IFS, stale biodiversity bourd will attend the gyent. Boolketa onvilumes parmitists vulture fits will shon bor ditilis used in setivole and enilliger apod in stive ity.



## Coyp infiane (Joweria)

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-High tomperature
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Killed by feedng 045 pol
soned carcasses hald by vil.
ligers for cimivires
-larassed and killed because they destroy trees on whinh they rest and destroy trees on wink mey rest and
mot wh their atrid exereta leavied the "hare poles" standing the "bare poles" standing
Mademizatbon of mimitiy Modemization of primitive slaughter houses and bain on dumping of circarcet is resputting in shartage of ficed sapply in

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## WHAT WECANDO.

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## COLOUR ARIWIN

Wait the state biodhersily board huthy? WWwapsbrte.erv/memational-vulture awareness day ahp and dommenad the picture of a wifure Students of Clanser I 505 may colaif tilis picture and al the entries may be sent hack to fainje Sovastava, UP State Blodiverily Board
 Nagar, Luekntw 225010 before
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THE RECOVERY PLIN

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-5tart conservation treeding programme - Hey ir bearctues for deat virtures at breed ing sites and foutts
ingthins the zone find post tion to leoti for visceral guie
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ESSENTIAL FORECO-BAE-INCE
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# Science Express arrives in city today 

PIONEER NEWS SERVICEE LUCKNOW

PPinctpal Sectetary, Forest, and Chaimam, Piodiversity Rinari, VN Garg will welcome the Science Expreas which will arrive here on Platform Non $\mathrm{B}_{1}$ Northern Rullway, Lucknow Junction, on Wedrenday: The wearsion will also see the presence of senior forest officials such as the Chief Wildllfe Warden, officials from the Uitar Pradesh Pollution Control Board and Environment Directorate

The children from City Montesson School, Riverside Acadeny and TD Girls' Inter College will be present on the occasion.

Giving the details about the Science Express, Deputy Conservator of Forests, Biodiversity Board, Pratbha Singh, while talking to 'The Pioneer' said "the state-of-the-art exhibition aboard the SEBS ams to create awhreness on biodiversity of Indias climate change and similar issues among various sections of the society, especially the students. The exhibition, thus, targets a wide audience, including school and college students as well as teachers:"

Pratibha Singh said that out of the 16 coaches of the SEBS (Science Express Miodiversity Special), eight supported by MoLF were solely dedicated to showcasing the myriad blodiversity spread across the bio-geographical zones of fidla. These include Trans-Himalayan areas \& the Himalayas, the Gangetic plain, North East India, the Desert \&o Semi-Anid Zone, the Western Ghats, the Deccan peninsula, the coasts and the tslands. The exhibition also covers various other facets like marine, coastal areas, forest5, microbial, agro biodiversity and therr linkage with livelihood besides challenges of conservation," she said.

In rest of the rake, one coach has an exhibition on clinate change, biodiversity and water, while more exhibits on climate change, develaped and supported by Swiss Embassy, have been put up in another coach. Yet another coach presents an exhbition on energy conservation while the

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Pratibha the coach, 5 experiment: concepts in environmen ics in an int centre-cum the same a teachers in ment, sciem At each planned it advance to engag different ages to reinforce SEBS and it much-sough conducted it along with it way platfor

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Science exhibition in 16-couch A since Octo tour acros iconic train Express unique co Departmeo Ministry

## An info hub on wheels

SCIENCE EXP Sixteen-coach iconic train creating awareness on India's biodiversity


Science exhibition on wheels attracts students



