

A photograph of a yellow and brown bird, possibly a weaver, perched on a green, woven nest. The nest is hanging from a palm frond. The background is a blurred green palm frond.

Annual Report 2011-12

U.P. State Biodiversity Board

Lucknow

ANNUAL REPORT

2011-2012

**Uttar Pradesh State Biodiversity Board
Lucknow**

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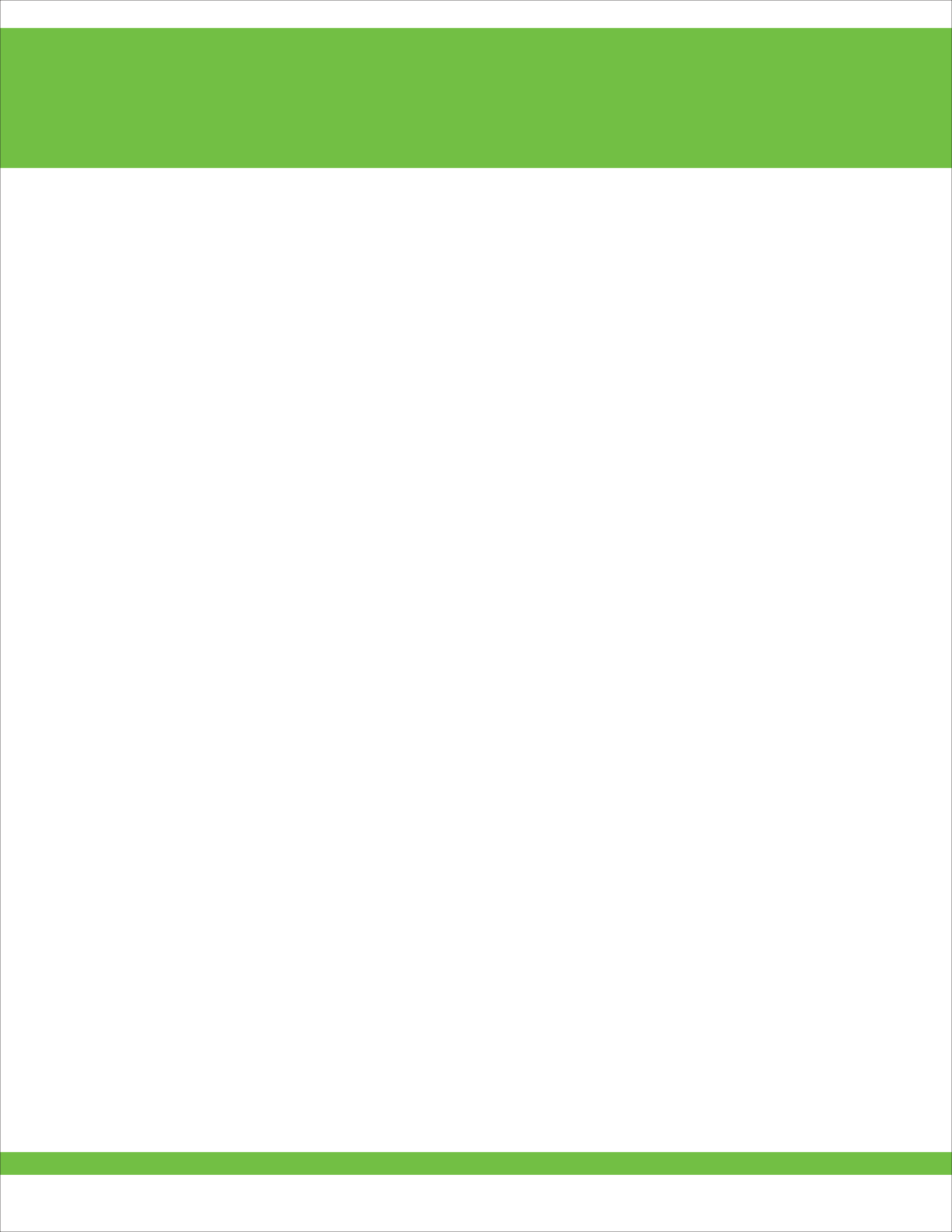
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Introduction

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 at a 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 in India and about 12% of the livestock population. The population density in the state is 828 persons per km².

Agriculture is the main occupation of the people. The state is well drained by a number of rivers—the Ganga, Yamuna, Ramganga, Gomti, Ghaghra, Gandak, Chambal, Betwa, Ken, Son etc.

The total forest/tree cover is 21,720 sq. km. which represents 9.01% of the total geographical area of the state. The recorded forest area is 16,583 km² 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 in 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, Government of Uttar Pradesh	Chairman
2.	Nominee of Principal Secretary/Secretary, Environment Department, Government of Uttar Pradesh	Member
3.	Nominee of Principal Secretary/Secretary, Horticulture Department, Government of Uttar Pradesh	Member
4.	Nominee of Principal Secretary/Secretary, Agriculture Department, Government of Uttar Pradesh	Member
5.	Nominee of Principal Secretary/Secretary, Animal Husbandry Department, Government of Uttar Pradesh	Member
6-	Principal Chief Conservator 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

6th Board Meeting

One Board meeting was held during the period under report on 5th December 2011. In this meeting, confirmation of the minutes of the previous meeting was done first, followed by the discussions on the progress and follow up actions on the directions given in the previous meetings. In addition, a review on the progress of various activities of the Board was presented by Pratibha Singh, DCF.

The following decisions were taken at the 6th Board meeting:

1. Approval of draft of Annual report 2010-2011.
2. Audited report of 2010-2011 presented before Board.
3. Approval of budget and proposed expenditure for the year 2011-12 by the Board.
4. Approval of expenditure of the Board upto 30th September, 2012.
5. Approval of proposed budget for 2011-2012.
6. Approval was given for making 1000 copies of the book “*Conservation of potential wetlands in District Sitapur- A first hand impression*” by the Board.
7. Permissions sought / Approvals given:
 - i. Under Sec 6 of Biological Diversity Act and Rule 18 of Biodiversity Rules, 2004, Dr. Nahid Ali from Indian Institute of Chemical Biology, Calcutta had sought permission from NBA for use of blood from people infected by a strain of *Leishmania donovani* - strain AG83 for research. NBA had sought consent of UPSBB for this, the same was given.
 - ii. Under Sec 41 (2) of the Biological Diversity Act, 2002, Dr R.K. Gupta from CSIR sought permission of use of plant material collected from NBRI campus for research- *Tribulus terrestris*, *Phyllanthus emblica*, *Zingiber officinale* and *Tinospora cordifolia*. NBA had sought consent of UPSBB for this, the same was given.
 - iii. Under Sec 3 of the Biological Diversity Act, 2002 and Rule 14 of Biodiversity Rules, 2004, Dr. Cecile Berthouly- Salazar, Department of Botany and Zoology, Matiland, South Africa had sought permission from NBA for the collection and use of feathers of Myna (*Acridotheres tristis*). NBA had sought consent of UPSBB for this. Since this bird is a scheduled bird (Schedule 4) under Wildlife Protection Act, 1972, permission from the Chief Wildlife Warden of UP under Sec 12 of WLP Act, 1972 is needed before grant of permission. The same was communicated to NBA.

- iv. Central Potato Research Institute (ICAR) had sought permission for field trials of 7 transgenic strains of *Solanum tuberosum sub sp tuberosum* - SP951, SP 904, KB/SP 951, KB/SP 904, KJ/SP 951, KBRB and KJRB at Modipuram , Meerut campus from Principal Secretary , Horticulture. The agriculture department referred the same to the UPSBB. It was decided to refer the matter to National Biodiversity Authority.
8. A booklet of Biodiversity of Uttar Pradesh is to be prepared. Concerned Departments (Agriculture/ Horticulture/ Fisheries/ Animal husbandry/ Environment / Forest) are to prepare a 20-25 page write-up on Biodiversity found in the state of UP in their respective areas and send the same to the Board office at an early date.

Other Meetings

(a) Appraisal meetings of ongoing projects:

Project Appraisal Committee 14 March 2012 and 24 March 2012

Ongoing projects were reviewed and presentations were made by the Principal Investigators about the progress of their projects.

(b) PBR Meeting

21-22 January, 2012

A meeting was organized with educational institutions sensitizing them about the PBRs, the importance of PBRs and a detailed discussion was done on PBR preparation methodology and guidelines for the same were made after detailed consultations.

Biodiversity Management Committees (BMCs)

The functions of 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 vairs and practitioners using the biological resources.

As per guidelines of the Biological Diversity Act, 2002 and in accordance with Rule 21 of Uttar Pradesh Biological Diversity Rules, 2010 the Biodiversity Management Committee was constituted at the village of Bhauwapar, Gorakhpur District on 5th April 2011 in a meeting organized in the village. The details of the committee are as follows:

The Biodiversity Management Committee of Bhauwapar, District Gorakhpur was constituted on 05-04-11 in a meeting organized in the village as per guidelines of the Biological diversity Act , 2002 and UP state Biological Diversity Rules, 2010. The constitution of the committee was as follows:

1	Chairperson	Mrs. Vimla Devi	5	Member	Sri Shambhavi Nandan
2	Member	Sri Ravindra Singh	6	Member (SC/ST)	Mrs. Sunita Devi
3	Member	Sri Kanhaya Lal Gupta	7.	Member Women Representative	Mrs. Mithilesh Devi
4	Member	Sri Ashutosh Shukla			

This is the fourth BMC that has been constituted in the state, the others being:

Agro Climatic Zone	Name of District	Name of Block	Name of Village	Date of BMC formation
Central Plain	Lakhimpur	Lakhimpur	Saidapur Devkali	15 Oct. 2009
Terai	Behraich	Balha	Nanpara Dehat	07 Dec. 2010
Bundelkhand	Chitrakoot Dham	Karvi	Baihar	10 Jan 2011
Eastern plain	Barabanki	Banki	Bhitauli Kalan	03 Mar 2011
North Eastern Plain	Gorakhpur	Piprauli	Bhauva par	05 Apr 2011

Peoples's Biodiversity Register (PBR)

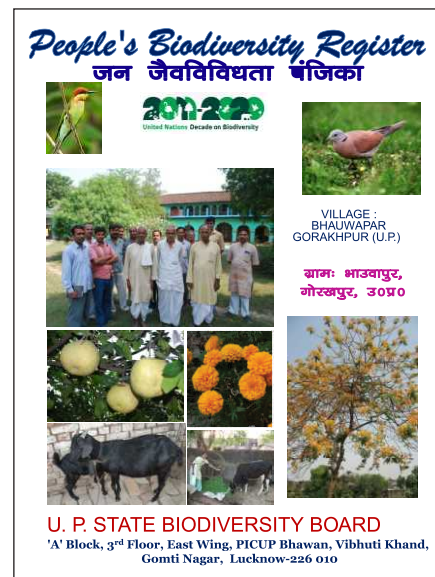
People's Biodiversity Registers (PBRs)

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.

Bhauwapar village, Gorakhpur District

Crop Plants	55
Wild Plant Species of Importance	14
Pests of Crops	16
Fodder Crop	02
Ornamental Plants	20
Medicinal Plants	12
Wild Aquatic Plant Species of Importance	04
Timber Plants	16
Aquatic Biodiversity	11
Domesticated Animals	06
Other Plants in the Wild	08
Culture Fisheries	17
Wild Animals (Mammals, Birds, Reptiles, Amphibian, Insects, others)	65
Wild Plants of Medicinal Importance	16
Weeds	21
Fruit Plants	28
Total species	311



An old Jamrasi tree (*Cassine glauca*) found in the village

About 311 species were identified in the village in the process of making the PBR. The villagers have also grown Sal trees.

Projects

The Board has sponsored various projects. The progress is as under:

(A) Completed Project

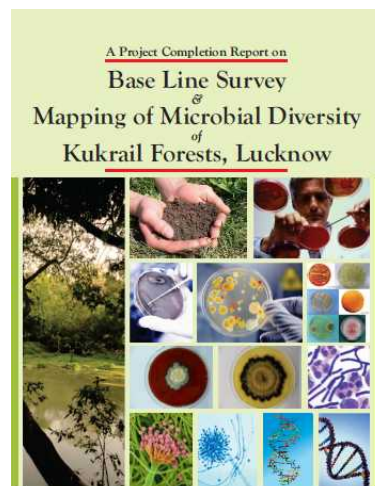
Baseline Survey and Mapping of Microbial Diversity of Kukrail Forests, Lucknow

The study was carried out by the Integral University at the Kukrail Reserve Forest in Lucknow. The base line data of microbes of this forest area was not available till the inception of the project. This study represents a combination of morphological, biochemical and molecular approaches for the identification of bacteria and fungi which are abundantly found within the Kukrail forest.

Phosphorus is one of the major plant nutrients, second to only nitrogen in requirement for plants. About 95-99% of phosphates are insoluble phosphates hence cannot be utilized by plants. Some soil bacteria and fungi can solublize phosphates making them available for plants. This can drastically bring down the phosphorus used as fertilizers.

Studies have shown that application of PSMs can increase crop yields in fields. Fungi have been reported to possess greater ability to solublize insoluble phosphates than bacteria.

In the present study, fifteen (15) bacterial isolates and twenty one (21) fungal isolates were isolated and identified on the basis of their morphological and molecular characterization as mentioned below:



Iso-late No.	Name of Bacteria	Phosphate solubilisation efficiency Yes/no	Lignin Decomposers Yes/No	Iso-late No.	Name of Fungi	Phosphate solubilisation efficiency Yes/no	Lignin Decomposers Yes/No
1.	<i>Bacillus subtilis</i>	yes	Yes	1.	<i>Shizophyllum commune</i>	Yes	Yes
2.	<i>Pseudomonas</i>	yes	Mild activity	2.	<i>Aspergilles niger</i>	Yes	Yes
3.	<i>Micrococcus</i>	yes	No	3.	<i>Aspergilles flavus</i>	Yes	Yes
4.	<i>Salmonella typhimurium</i>	yes	No	4.	<i>Alternaria brassicae</i>	Yes	Yes
5.	<i>Proteus</i>	yes	Yes	5.	<i>Verticillium</i>	Yes	Yes
6.	<i>Enterobacter</i>	yes	Mild activity	6.	<i>Rhizoctonia</i>	Yes	Yes
7.	<i>Bacillus mycoides</i>	yes	Yes	7.	<i>Bipolaris tetramera</i>	Yes	Yes
8.	<i>Streptococuss</i>	yes	Yes	8.	<i>Gliocladium</i>	Yes	No
9.	<i>E. coli</i>	yes	Yes	9.	<i>Tricoderma</i>	Yes	Yes
10.	<i>Bacillus thuriengensis</i>	yes	Mild activity	10.	<i>Fusarium oxysporum</i>	Yes	Yes

Iso-late No.	Name of Bacteria	Phosphate solubilisation efficiency Yes/no	Lignin Decomposers Yes/No	Iso-late No.	Name of Fungi	Phosphate solubilisation efficiency Yes/no	Lignin Decomposers Yes/No
11.	<i>Bacillus anthracis</i>	yes	Yes	11.	<i>Aspergillus</i>	Yes	Yes
12.	<i>Bacillus cereus</i>	yes	Yes	12.	<i>Ascobolus</i>	Yes	No
13.	<i>Pseudomonas straita</i>	yes	No	13.	<i>Phoma</i>	Yes	No
14.	<i>Bacillus weihenstephanensis</i>	yes	Yes	14.	<i>Aspergillus flavus</i>	Yes	Yes
15.	<i>Staphylococcus succinus</i>	yes	Yes	15.	<i>Alternaria azukiae</i>	Yes	Yes
				16.	<i>Aspergillus niger</i>	Yes	Yes
				17.	<i>Alternaria Spwf166</i>	Yes	Yes
				18.	<i>Aspergillus sulphuracae</i>	Yes	Yes
				19.	<i>Helminthosporium</i>	Yes	Yes
				20.	<i>Bortyris</i>	Yes	Yes
				21.	<i>Fusarium oxysporum</i>	Yes	Yes

The microbial strains isolated during this study have agricultural, biotechnological and industrial applications. The isolates *Bipolaris tetramera*, *Helminthosporium*, *Aspergillus flavus* exhibited high **phosphate solubilizing activity** and these microorganisms can be used as inoculants (biofertilizer) by farmers/forest department which simultaneously increases phosphorus uptake by the plant/tree and crop yield. Furthermore it also helps in reduction of use of chemical fertilizer and prevention of environment pollution.

Positive lignin degraders have great industrial application as they can be used in paper industry for wood solubilization and dye industry for dye decolorization. Moreover, lignin degrading microorganisms can also be used to exploit the plant biomass to its full capacity and in environment-friendly way. Identified fungal isolates *Bipolaris tetramera* and *Agaricomycete* have found maximum efficiency for **phosphate solubilization** and **lignin degradation** thus the isolates can be used as plant growth promoter in sludge area, doing both important functions. A paper titled “*Microbial DNA extraction from soil by different methods and its PCR amplification*” was published in Biochem. Cell. Arch. Vol III, No.1, 2011.



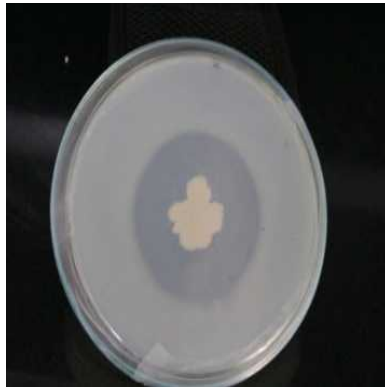
Bacterial colony on nutrient agar media



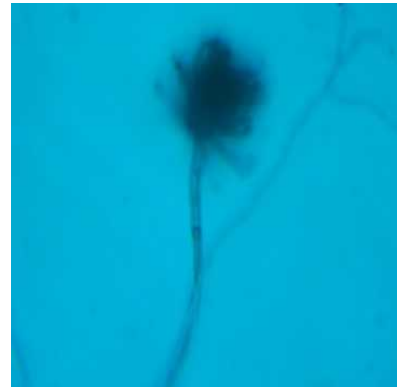
Fungal colony on PDA media



Positive lignin degrader fungal colony having a brown colour



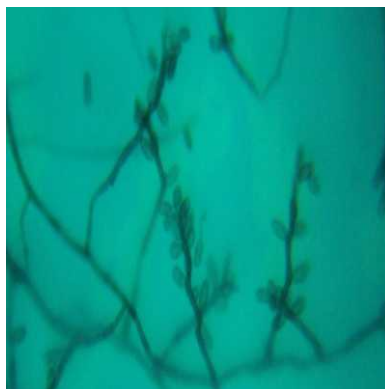
Positive phosphate solubilizer on media containing tricalcium phosphate



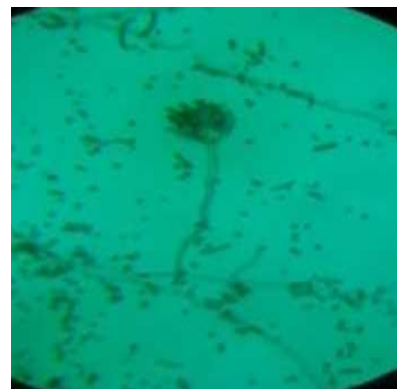
Microscopic analysis of Aspergillus paezelomyces



Microscopic analysis of Aspergillus niger



Microscopic analysis of Aspergillus flavus



Microscopic analysis of Aspergillus sulphuraceae



Microscopic analysis of Alternaria Spwf 166

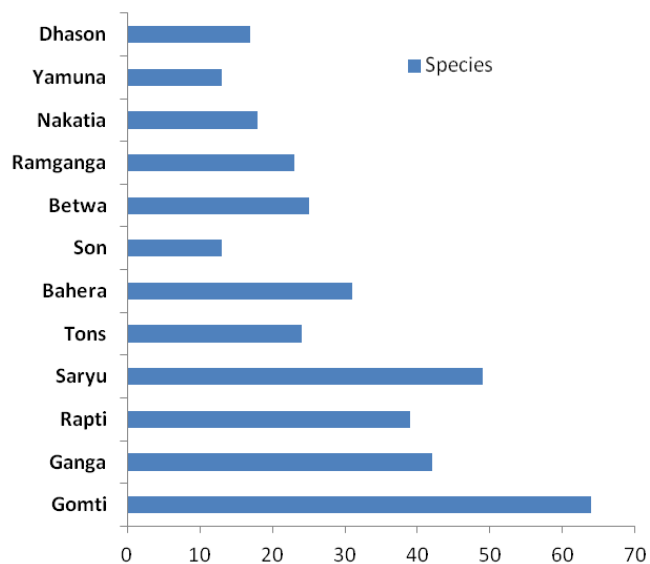
(B) Ongoing Projects:

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

This study is being carried out by the National Bureau of Fish Genetic Resources (ICAR), Lucknow. Based on the germplasm exploration, a total of 4500 individuals of fish have so far been collected from river Gomti, Sharda, Ghaghra, Betwa, Kishan, Raapti, Tamsa, Bhagul, Afsariya, Nakatiya, Ramganga, Bahera, Ganges, Son, Dhason, Chambal, Ken, Sukheta, Kharrot and other tributaries.

Different aspects of fish diversity indices were assessed such as biodiversity, distribution pattern, diversity index, tropic indices and morphological analysis of data is being carried out.



Variation Pattern of Species Diversity in Different Rivers of UP

A total of 79 species belonging to 22 families have so far been collected from all the explored rivers. Cyprinidae was the most dominant family containing 28 species followed by the Bagaridae, 7 species, Channadae, 5 species and Cobitidae, 3 species. A high species richness of 64 species in Gomti and 42 species in Ganges was recorded as compared to other rivers.



Amblyceps mangois



Pangio pangia

Some indigenous fishes



Puntius sophore (Pothe, Sidhari)



Puntius sarana (Pothe, Darahi)



Puntius ticto (Sidhari)



Salmostoma baccilla (Chelwa)



Puntius phuntio (Pothe, Sidhari)



Puntius chola (Sidhari)



Rasbora danciconius (Dendua)



Amblypharyngodon mola (Mola, Dhawal)



Chanda nama (Chenari)



Chanda ranga (Chanda)

2. Exploration and documentation of cucurbits biodiversity in Uttar Pradesh

The study is being carried out by the Department of Vegetable Sciences, Narendra Dev University of Agriculture and Technology, Kumarganj, Faizabad. The following cucurbit varieties were identified and studied in detail by survey in the field:-

Sl No	Common Name	Scientific Name	Local Name
Gourds			
1	Ash gourd/Wax gourd	<i>Benincasa hispida</i>	Petha/ Poojan Khoida
2	Bitter gourd	<i>Momordica charantia</i>	Karaila
3	Bottle gourd	<i>Lagenaria siceraria</i>	Lauki
4	Ivy gourd	<i>Coccinia cordifolia</i> (syn. <i>C. india</i>)	Kundroo
5	Pointed gourd	<i>Trichosanthes dioica</i>	Parwal
6	Ridge gourd	<i>Luffa acutangula</i>	Toraia/Vavian Satputia
7	Round gourd	<i>Praecitrnllus fistulosus</i>	Tinda
8	Snake gourd	<i>Trichosanthes anguina</i>	Chichinda
9	Spine gourd	<i>Momordica dioica</i>	Kheksi
Melons			
10	Musk melon	<i>Cucumis melo</i>	Kharbooj
11	Serpant/Long melon	<i>Cucumis melo</i> var. <i>flexuosus</i>	Kakdi
12	Snap melon	<i>Cucumis melo</i> var. <i>momordica</i>	Fhoot
13	Water melon	<i>Citrullus lanatus</i>	Tarbooj
Others			
14	Cucumber	<i>Cucumis sativus</i>	Kheera
15	Pumpkin	<i>Cucurbita moschata</i> <i>Cucurbita pepo</i>	Kadoo



1



2



7



8



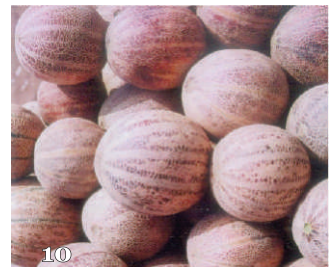
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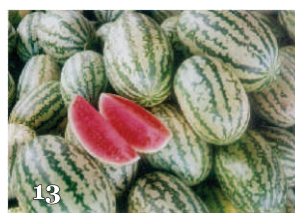
6



11



12



13



14



15

Identification of different genotypes, land races of the above are being done.

- | | |
|------------------------|------------------------|
| 1. Ash gourd/Wax gourd | 9. Spine gourd |
| 2. Bitter gourd | 10. Muskmelon |
| 3. Bottle gourd | 11. Serpant/Long melon |
| 4. Ivy gourd | 12. Snap melon |
| 5. Pointed gourd | 13. Watermelon |
| 6. Ridge gourd | 14. Cucumber |
| 7. Round gourd | 15. Pumpkin |
| 8. Snake gourd | |

3. 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. So far, 67 exotic ornamental fishes available in Uttar Pradesh based on collected information from different districts of U.P. have been reported. A total 59 species were recorded in Gomti and Sai river.

Under the project, presence of 10 exotic fish species from aquaculture system have been recorded which include:

1. Common carp (*Cyprinus carpio*)
2. Silver carp (*Hypophthalmichthys molitrix*)
3. Grass carp (*Ctenopharyngodon idella*)
4. Bighead (*Aristichthys nobilis*)
5. Tilapia (*Oreochromis mossambicus*)
6. Nile tilapia (*O. niloticus*)
7. African catfish (*Clarias gariepinus*)
8. Sutchi catfish (*Pangasianodon hypophthalmus*)
9. Pacu (*Piaractus brachypomus*)
10. Black carp (*Molypharyngodon idella*)

Out of these ten exotic fish species, the following five species were assessed and identified as invasive species and their invasion attributes were recorded : 1. *Oreochromis mossambicus*, 2. *Oreochormis niloticus*, 3. *Aristichthys nobilis*, 4. *Cyprinus carpio*, 5. *Clarias gariepinus*, 6. *Hypophthalmichthys molitrix*.

Attempts were made to investigate the presence of exotic species in different river stretches such as Ganga, Yamuna, Sharda, Gomti, Sai, Tamasa and few other natural bodies such as lakes and Katarnia range (Behraich) and found that nine exotic species existed. Invasiveness of these exotic species were also assessed and found that *Cyprinus carpio communis*, *Cyprinus carpio specularis*, *Aristichthys nobilis* *Oreochromis mossambicus*, *O. niloticus* *Clarias gariepinus* were invasive in these studied river stretches.



Oreochromis mossambicus (Tilapia)



O. niloticus (Nile tilapia)



Aristichthys nobilis (Bighead)



Cyprinus carpio (Common carp)



Clarias gariepinus (African catfish)



Hypophthalmichthys molitrix
(Silver carp)

4. Enumeration of lichens of Uttar Pradesh

The study is being carried out by the National Botanical Research Institute, Lucknow. The lichen herbarium of CSIR-National Botanical Research Institute (LWG), is the largest in south-east Asia. It holds a collection of about 1,30,000 specimens representing 1,600 species and all phytogeographic regions of India. Complete scanning of the herbarium resulted in about 1,000 lichen specimens belonging to Uttar Pradesh and they are being digitized and the entry for 750 herbarium specimens have been completed. At the beginning about 90 lichen species were identified in Uttar Pradesh. About 120 unidentified herbarium samples were identified which resulted in 20 new records for Uttar Pradesh. These are as follows:

S. No.	Name of the Lichens	S. No.	Name of the Lichens
1	<i>Anema decepiens</i>	11	<i>Peltula corticola</i>
2	<i>Anisomeridium ambiguam</i>	12	<i>Peltula placodizans</i>
3	<i>Anisomeridium anisolobum</i>	13	<i>Peltula steppae</i>
4	<i>Arthopyrenia alboarta</i>	14	<i>Pertusaria leucosora</i>
5	<i>Bacidia incongruens</i>	15	<i>Phylliscum testudineum</i>
6	<i>Bacidia rubella</i>	16	<i>Pyxine petricola</i>
7	<i>Buellia quartziana</i>	17	<i>Pyxine subcinerea</i>
8	<i>Dirinaria applanata</i>	18	<i>Rinodina exigua</i>
9	<i>Hyperphyscia adglatinata</i>	19	<i>Strigula elegans</i>
10	<i>Lichinella flexa</i>	20	<i>Thyrea plectospora</i>

Till now, about 110 species of lichens have been reported in Uttar Pradesh.

Some Prominent Lichens of Uttar Pradesh



Bacidia incongruens (Stirt.) Zahlbr., a crustose lichen new record to Uttar Pradesh



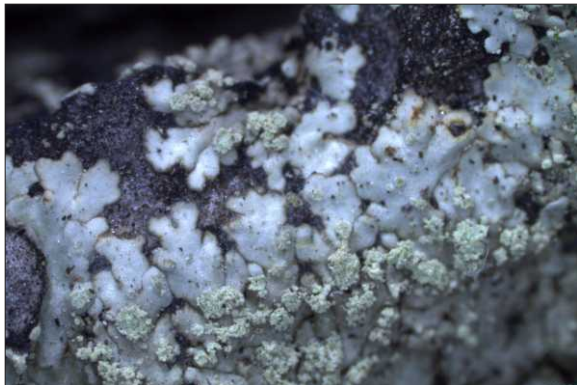
Caloplaca vitellinula (Nyl.) H. Olivier, a beautiful crustose lichen collected from rocks in Uttar Pradesh



Dirinaria aegialita (Afzel.) Moore,
a common foliose lichen growing on bark



Graphis subasahinae Nagarkar & Patw. (crustose)
and *Pyxine cocoes* (Sw.) Nyl. (foliose),
two common lichens growing on tree trunk



Hyperphyscia adglutinata (Flörke) H. Mayrhofer
& Poelt, a rare lichen occur on bark and
new record for Uttar Pradesh



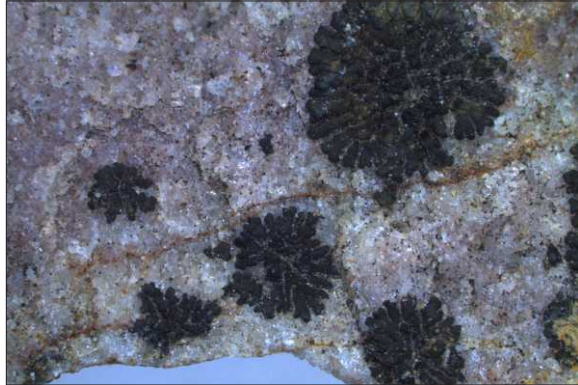
Lecanora tropica Zahlbr., a common
crustose lichen growing on tree bark



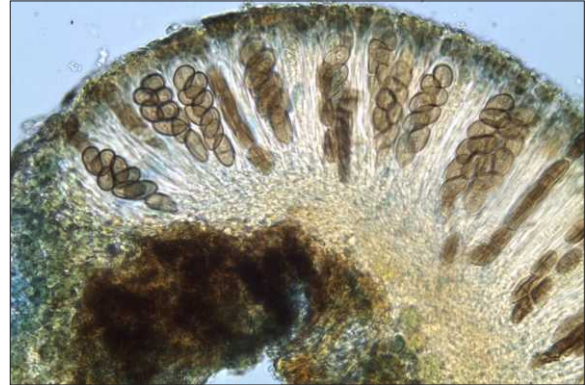
Letrouitia transgressa (Malme) Haf. & Bellem,
a beautiful crustose lichens occurring
on tree bark



Peltula euploca (Ach.) Poelt, most common
lichen found growing on rocks and
lime plasters of monuments



Peltula placodizans (Zahlbr.) Wetmore,
a new record for Uttar Pradesh



Ascospores of *Rinodina sophodes* (Ach.)
Massal., a common crustose lichen

5. Monitoring of roosting and breeding sites of vultures in Jhansi, Lalitpur, Jalaun and Mahoba

The study is being carried out by the Zoology Department of Lucknow University. The project has been formulated to study the natural breeding sites of vultures that will help in in-situ conservation of the scavengers. From the conservation point of these species the importance of roosts is remarkable. The four selected districts i.e. Jhansi, Lalitpur, Jalaun and Mahoba of U.P. were surveyed for the identification of vulture species as well as their breeding and roosting sites.

Vulture Species that are commonly found in Uttar Pradesh are :

Residential species	Migratory species
Egyptian vulture (<i>Neophron percnopterus</i>)	Griffon vulture (<i>Gyps fulvus</i>)
Long-billed vulture (<i>Gyps indicus</i>)	Himalayan Griffon vulture (<i>Gyps himalayensis</i>)
White-backed vulture (<i>Gyps bengalensis</i>)	Cinereous vulture (<i>Aegypius monachus</i>)
Slender-billed vulture (<i>Gyps tenuirostris</i>)	
King vulture (<i>Sarcogyps calvus</i>)	

Out of the 8 identified species in Uttar Pradesh only 3 have been observed in the study area- *Gyps indicus*, *Sarcogyps calvus* and *Neophron percnopterus*.

Species Wise Distribution of Vultures In Study Area

S.No	Districts	Long -billed vulture (Gyps indicus)	King vulture (Sarcogyps calvus)	Egyptian vulture Neophron percnopterus	Roosting sites	Breeding sites
1	Jhansi	4-5	-	50-60	Bhagwantpura	Leher giridh
2	Lalitpur	250-275	2-3	10-15	Dhaura, Deogarh	Dhaura, Deogarh, Madanpur Poorvi Beat, Gauthra Beat, Lakhnjar Beat
3	Jalaun	-	-	60-70	-	-
4	Mahoba	-	-	4-5	-	-
	TOTAL	254-280	2-3	124-150		

The approximate number of vultures reported from the study area is 380-433. The study has so far observed only 3 roosting sites and 6 breeding sites. Field visits and further studies are on to locate more sites, species and numbers.



Juvenile *Gyps indicus*



Adult *Gyps indicus*



Juvenile Egyptian Vulture *Neophron percnopterus*



Adult Egyptian Vulture *Neophron percnopterus*

6. Status and habitat assessment of Bengal Florican (*Houbaropsis bengalensis*) in the grasslands of Uttar Pradesh

The study is being carried out by the **Wildlife Institute of India, Dehradun, Uttarakhand**. As Bengal Florican is listed as one of the critically endangered species, the study is expected to provide a basis for developing an action plan for conserving the breeding. Non-breeding habitat of this species. As the grasslands support high biodiversity, the development of conservation plan for the bird will also help in conserving the grasslands of the Terai region. Till now, 35 questionnaire survey data were collected from 10 villages in and around Dudhwa and Kishanpur observed. 99 vegetation plots were also laid in different grasslands of Dudhwa and Kishanpur. In Dudhwa National Park, the vegetation plots were laid in Sathiyana (20), Sonaripur (18) and Salukapur Rhino enclose (29). 32 plots were laid in Kishanpur Wildlife Sanctuary.



Bengal Florican in flight



Bengal Florican

Poster publication for the training of field staff for the identification of Bengal Florican was carried out. One day workshop for the status survey and conservation of Bengal Florican was conducted in the month of March, 2012 at Dudhwa Forest Complex in which around 30 forest staff including Deputy Field Director, ACF's and Range Officers participated. The workshop was organized with an objective of sensitization of officers and staff towards the importance of status survey of Bengal Florican.

During the surveys only one male Bengal Florican has been sighted in March 2012 in Dudhwa National Park including Kishanpur Sanctuary by the PIs and JRF. No reliable evidence of sighting by others were recorded. Preliminary observations reveal that the population of Bengal Florican is lower than what was expected earlier.

7. Assessment and preparation of an illustrated resource inventory of underutilized wild edible plant resources in terai region of Uttar Pradesh

The study is being carried out by the **Ethnobotany and Ecology Division of National Botanical Research Institute (CSIR), Lucknow**. Based on extensive plant surveys and collection in the tribal areas of terai districts namely Behraich and Shrawasti, the useful information on potential underutilized wild edible plants used by tribals have been documented. Brief information about local names, locality, phenology, uses, chemistry, distribution and conservation status etc. on these plant/ species have been provided. Voucher specimens of underutilized wild edible plant species were also collected, processed, identified, accessioned and deposited in the Herbarium, National Botanical Research Institute, Lucknow (LWG).

So far, sixty wild edible plant species have been reported in the context of their potential utilization by tribals of terai districts of Uttar Pradesh.



Tharu women in front of their house



Colocasia esculenta
leaves edible



Ipomea aquatica
used as vegetable

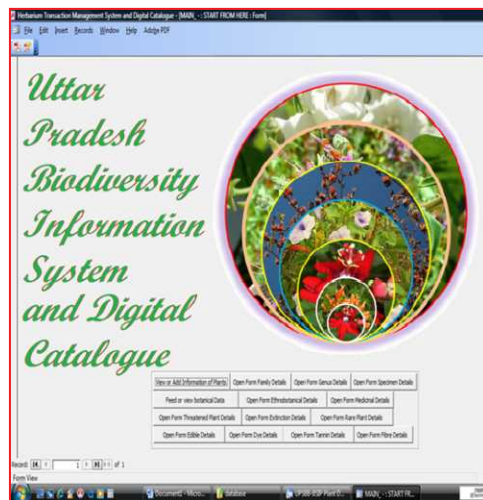


Artocarpus Lakucha
Ripe fruits are eaten



Spondias pinnata
used in *chatneys* and pickles

8. Documentation of plant diversity through literature survey for development of Uttar Pradesh Biodiversity Database Information System (UPBIS)



The project work is being carried out by **Birbal Sahni Institute of Paleobotany, Lucknow**. The main objective of the project is to develop the Uttar Pradesh Biodiversity Database Information System (UPBIS) as the first multifunctional tool for systematic and biodiversity researchers in the state of U.P. to browse a number of online species bank covering a wide variety of taxonomic information, species names, synonyms, distribution, illustration and literature references. An online database including Angiosperms, Pteridophytus, Bryophytes, Fungal, Algal and Lichen species have been prepared in the first phase. So far, database of 2770 plant species of 628 Genera and 296 families have been completed. Besides, 04 endemic and 01 rare Bryophytes species have also been marked for documentation.



Birbal Sahni Institute of Paleobotany, Lucknow
(U. P. State Biodiversity Board Sponsored Project: Uttar Pradesh Biodiversity Information System)

Angiosperms Species information Data Sheet

Name of Field	Angiosperms
1. Registration No.	BSIP0001
2. Genus	<i>Amaranthus</i> Linn.
3. Plant Name	<i>Amaranthus tricolor</i> Linn.
4. Common / Local names	Joseph's-coat, Rangin-Chaulai
5. Kingdom	Plantae -- Planta, plantes, plants, Vegetal
6. Class	Magnoliopsida -- dicots, dicotyledones, dicotyledons
7. Order	Caryophyllales
8. Family	Amaranthaceae -- amaranthes, pigweed
9. Basionym	X
10. Synonyms	X
11. Subspecies	X
12. Variety	X



Birbal Sahni Institute of Paleobotany, Lucknow
(U. P. State Biodiversity Board Sponsored Project: Uttar Pradesh Biodiversity Information System)

Pteridophytes Species information Data Sheet

Name of Field	Pteridophytes
1. Registration No.	BSIP 2001
2. Genus	<i>Ophioglossum</i> Linn.
3. Plant Name	<i>Ophioglossum reticulatum</i> Linn.
4. Common / Local names	Ekputa, Snake tongue.
5. Kingdom	Plantae
6. Class	Psilotopsida
7. Order	Ophioglossales
8. Family	Ophioglossaceae
9. Basionym	X
10. Synonyms	<i>Ophioglossum peruvianum</i> Presl, <i>O. petiolatum</i> sensu Wieffering, <i>O. cordifolium</i> Roxb.
11. Subspecies	X
12. Nativity	Paucis Rico.
13. Locality	Bahraich, Abdullaganj, Gorakhpur: Kumi Forest.
14. Habit	Herb.
15. Habitat	Wet floor of forest or on moist alluvial sandy soil.

9. Annotated and coloured checklist of the amphibians and reptiles of Uttar Pradesh

The study is being 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 and collect detailed natural history and bio-geographic information, facilitating a preliminary assessment and identification of priority areas of conservation of herpetological fauna.

Based on field visits, collection of material, data and photography till now in U.P. the reported reptiles and amphibians in different order. Sub-order, Family, Genus and species are mentioned in the table given below:

Order	REPTILES		AMPHIBIANS	
	Number	Name	Number	Name
	03	a. Squamata, b. Testudines, c. Crocoilia	1	a. Anura
Sub-order	03	a. Ophidia, b. Cryptodira Sauria/ Lacertilia	–	–
Family	07	a. Colubridae, b. Varanidae, c. Geomydidae, d. Crocodylidae, e. Phthonidae, f. Boidae, g. Gechoidae	1	a. Ranidae
Genus	50	–	2	a. <i>Hoplobatrachus</i> b. <i>Rana</i>
Species	46	–	2	a. <i>crassus</i> b. <i>tigerina</i>



Crocodile (*Crocodylus palustris*)



Gharial (*Gavialis gangeticus*)

10. Use of ITK (Indigenous Technology Knowledge) and experience in crop production and protection in Vindhyan 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 an objective to gather location specific ITK (Indigenous technical knowledge) through participatory survey focusing on the different aspects of agriculture. A total of 9 districts for on-farm survey and 2 locations for validation i.e. at Institute of Agricultural Sciences, main campus and at RGSC Mirzapur, south campus along with farmers participatory discussion at 30 villages were conducted during the reporting period (2011-12). Some traditional practices are shown in pictures below:



Farm yard manure



Organic matter rich soil



Traditional method of Farm yard manure preparation



Indigenous method of Farm yard manure preparation



Improved method of Farm yard manure preparation

**Land preparation, Seed treatment, sowing methods, fertilizer application,
intercultural operations and crop protection**



Ploughing with bullocks



Clod crushing with bullock drawn patela



Manual clod crushing



Clod crushing with bullock drawn roller



Puddling with bullock drawn deshi plough



Puddling with tractor



Manual transplanting



Transplanting with paddy transplanter



Direct seeding with drum seeder



Bamboo based wooden stack food grain storage



Mud cow dung coated bamboo based food grain storage



Kansh and bamboo based food grain storage



Kothi and Kuthla for storage of food grain



Kothi and Kuthla for storage of grain



Cow dung and mud coated wooden based Kothi for storage of food grain

INTERNATIONAL DAY FOR BIOLOGICAL DIVERSITY -2011

National Conference on “Forest Biodiversity-Earth’s Living Treasure”

The Uttar Pradesh State Biodiversity Board celebrated the International Day for Biological Diversity (IDB-2011) on 22-05-2011 at Dr. Ram Manohar Lohia National Law University Campus, Lucknow. On this occasion, one day National Conference on “Forest Biodiversity-Earth’s Living Treasure” was also organized. In all, over 400 delegates including officers from U.P. Forest Department and other states, various research organizations/institutes, universities as well as NGO’s attended the conference. The conference was organized to provide an effective platform for all those who are concerned or dealing with convention of biodiversity since it underpins the health and vitality of forests and also serves the basis for a wide range of ecosystem services necessary for people's livelihoods and well beings. The conference was organised by Hon'ble Minister for Forests and Wildlife, U.P. Shri Fateh Bahadur Singh, The guest of Honour for this event was Padamshree P.K.Sen, I.F.S.(Retd.).

In the inaugural session, Shri D.N.S. Suman, Principal Chief Conservator of Forests, U.P. welcomed all the dignitaries and delegates of conference and delivered the welcome address. He said that this year 2011 has been declared as International Year of Forests and the theme for International Day for Biological Diversity in 2011 is Forest Biodiversity-Earth's Living Treasure which is very much pertinent in order to save the planet through long term planning for conservation of our forest resources and sustainable development. He further said that forest department is making continuing efforts to uplift the economic status of local people living in the fringes of forest through implementation of different projects on conservation of flora and fauna vis-à-vis biodiversity conservation.

Speaking on this occasion, Secretary of the U. P. State Biodiversity Board, Shri Pawan Kumar emphasized the objectives of the National Conference as well as the efforts made for conservation of floral and faunal biodiversity so far. In his presentation, he gave a brief account of different components of biodiversity and their importance. He said that about 80% of the people in developing countries use plants as a primary source of medicine. 57% of the 150 most prescribed drugs have their origins in biodiversity. In view of the theme of the conference, he highlighted the importance of the year 2012 as it being 20th anniversary of CBD as well as United Nations Framework Convention on Climate Change (UNFCCC), India is going to host COP 12. He expressed that India is among the top ten species rich nations of the world hence loss of forests will be particularly harmful for India. Therefore, I call upon all of you to extend support to the cause of forest biodiversity. As a host of COP 12, we must take lead to save the earth's most diverse terrestrial ecosystems - the forests. Forests are disappearing partly because they are undervalued, and own market economy fails to recognize ecosystem services provided by intact forests. To stop

losing the earth planet's treasure, we must understand and appreciate its importance for human well being and development.

Shri Chanchal Kumar Tewary, Principal Secretary (Forests) and Chairman, U.P. State Biodiversity Board, in his talk stated that biodiversity is directly linked with our livelihood. Forests play vital role in serving human beings. Globally, forest biodiversity generates more than five thousand products of commercially importance. He said that the biodiversity is depleting at alarming rate now days, even approximately hundreds of species of flora and fauna is disappearing daily from the earth. The diverse forest ecosystem is earth's living treasure and insurance against climate change mitigation. He further added that approx 2.5% of total geographical area of the state is being managed as protected area (National Park and Wildlife Sanctuaries) with a view to conserve rare forest diversity and gene pools. It is our prime responsibility to conserve biodiversity on priority for sustainable use of bio-resources. There is an urgent need to restore the degraded forests in order to save forest biodiversity.

Hon'ble Minister for Forests and Wildlife, Govt. of Uttar Pradesh in his presidential address mentioned that today, the whole world is badly facing the adverse effects of climate change, drying water resources and increased natural disasters hence it is the urgent need of the hour to create mass awareness among the people for such changes being brought in and also to save our planet by conserving our natural bio resources.

The forests act as safety shield for the humankind. Expressing his concern about forest and tree cover of the state (9.01% of the geographical area) he said that we have to increase the percentage of forest/tree cover along with our development activities. He mentioned that it is an honour to our state that on 31st July, 2007, it has achieved milestone by enlisting in Guinness World Records for planting one crore saplings in a day. He further added that biodiversity is the unique identification of our planet earth. Our forests are quite helpful in enriching the biodiversity.

In the inaugural session, a souvenir on the theme of the conference "Forest Biodiversity-Earth's Living Treasure" was also released. It carried 25 articles in 164 pages.

Padamshree **P. K. Sen**, IFS (Retd.) delivered a highly illuminating lecture on "Biodiversity". In his lecture as special guest, he expressed that only two countries viz Brazil and Costa Rica in the world are richer than us as far as biodiversity is concerned. He said that more than 70% of India's biodiversity is confined within forests. The agricultural biodiversity which accounts for less than 30% of the total has also 12 centers of origin of cultivated plants having centre of origin of 30000-50000 varieties. India has a rich and varied heritage of biodiversity encompassing a wide range of habitat.

Mr. Sen further added that it is a global biodiversity hotspot which accounts for 7.31% of global species within its 2.4% area. He further added that a degraded forest is devoid of prey and predator both and not capable of holding water which eventually causes flood and drought. Forest is home not only to wildlife, the trees at different canopy level allow rain water to percolate and finally drain out to rivers and rivulets, thus recharging them.

He pointed out that planting trees and afforestation can never replace natural biodiversity therefore all our afforestation efforts to replace natural forests in the name of more financial gains have accelerated loss of biodiversity. It is now realized world over that there is a definite linkage between economy, the environment and the biodiversity. According to him, human and cattle population is threatening flora and fauna, accentuated by globalization in the industrial front. The country has tried to compensate loss of tree cover by plantations. Though the Wildlife Protection Act is reasonably stringent but have failed to protect faunal species due to global demand. Wildlife trade has taken a monstrous leap and considered to be the third highest after arms and narcotics illegal sale.

He mentioned that global warming is another reality which might trigger extinction of many floral and faunal species. Rising pollution from industrial effluents, garbage and sewage, other pollutants like offshore drilling, oil spills is taking a heavy toll of river and sea ecosystems. He informed that according to an estimate, the society receives the benefits from the forests as forest produce worth Rs 40000 crores every year.

Dr. P. B. Gangopadhyay, IFS (Retd.) spoke on “Challenges in conserving India’s rich biodiversity” was delivered by Dr. P.B. Gangopadhyay, Retd. Addl. Director General, Ministry of Environment and Forests, Govt. of India. He highlighted the status of India's rich biodiversity and its conservation. He pointed out that of the 18 hot-spots in the world, two are in India- North-East and Western Ghats. With over 46,000 species of plants and 81,000 species of animals, India accounts for 7-8% of the recorded species of the world.

He gave a brief account of the countries with largest annual loss of forest cover during the year 2000-2005. He pointed out that despite of decadal decrease in forest cover of many developing countries, our country has experienced a decadal increase of 23.12 Lakh ha. in forest cover between 1997-2007. He also presented the glimpses of India's diverse ecosystem and diverse wildlife through beautiful photos/pictures.

Dr. Gangopadhyay also threw light on different threats of forest biodiversity including land diversion, encroachment, grazing, forest fire, illicit felling, habitat fragmentation etc. At the end of his presentation, he suggested that the protection regime has to be strengthened while a closer relationship with forest dependent community has to be developed in order to conserve the biodiversity of the country. Fortunately, a lot of resources are now available for biodiversity conservation among all sections of the society and various development agencies including CAMPA fund. Besides, assistance from 13th Finance Commission externally assisted projects and resources of State's plan can all be accessed to meet most of the needs of biodiversity conservation.

Professor R. Sukumar, Chairman, Centre for Ecological Sciences, Indian Institute of Science, Bangalore in his presentation, spoke on the status of forest cover of India. He said that tropical dry forests constitute 40% of all tropical forests. He highlighted the importance of NTFPs coming from dry forests in India. According to him, non-timber forest products from dry forests in India generate revenues (incl. export) of several hundred million dollars annually.

The net value of revenues from NTFPs in dry forests of Eastern India was estimated to be US\$ 1000-1350 depending on the habitat. About 50 million people living near forests rely upon NTFPs for subsistence and cash income.

Emphasizing the carbon sequestration potential of tropical dry forests in India through presenting a case study from Mudumalai, Tamil Nadu, he expressed the prevailing hypotheses about tropical dry forests in relation to “stress” and “disturbance”. He said that current frequencies of fire would convert forest to savanna/grassland. Herbivores including large mammals such as the elephant would convert forest to savanna. Fire and drought stress would cause loss of carbon stocks from forest biomass.

He informed that in Mudumalai Forest Dynamics Plots, remarkable ecological changes have been brought since 1988 to 2008. Number of species have been increased from 72 to 84 and aboveground biomass increased from 8673 to 9418 tons per 50 ha. from the year 1988 to 2008. The most abundant species in the area are *Kydia calycina* (understorey tree), *Lagerstroemia microcarpa* (canopy tree) and *Helicteres isora* (shrub). Summing up his conclusions about Mudumalai, he suggested that tropical dry forests may not be species-rich but have their own intrinsic values and may be an important carbon sink in the face of environmental variability and disturbance. This has important implications for international policy discussions under the UN Framework Convention on Climate Change.

Dr. K. Venkataraman, Director, Zoological Survey of India, Kolkata delivered a lead lecture concerning to forest biodiversity conservation. In his talk, he highlighted the nutritional needs of growing global population and biodiversity thus, reflecting the necessity for the conservation of forest biodiversity and sustainable use of natural resources. Defining "Biodiversity", he explained the three ranges of biodiversity as Ecosystem Diversity; Species Diversity; Genetic Diversity.

He also gave a brief account of existing biodiversity of the world as well as India. According to him, 5 to 10 million species of plants and animals exist in the world including 1m animal (75% insect); 2,48,000 higher plants, 69,000 fungi, 31,000 protozoa, 27,000 algae, 5000 bacteria and 1000 viruses. Out of which, only 1.5 million species (17,70,000) have been identified so far where as in India there are: 91,000 Species of Animals; 45,000 Species of Plants; Bacteria- 850; Fungi- 14,500 etc.

He spoke on the importance of forest plants as these have medicinal as well as agricultural values. He also shared his views on different causes of biodiversity losses and changes e.g. extinctions, changes in population sizes, distribution, species composition, genetic diversity. Emphasising the importance to protect the forests, he expressed that the forests provide ecosystem services, which are beneficial to the global ecosystem like: support energy flow and chemical cycling, reduce soil erosion, absorb and release water, purify water and air, influence local and regional climate, store atmospheric carbon, habitats for life forms.

While focusing the main objectives of Framework Convention on Climate Change and Forests (FCCC), Dr. Venkataraman also spoke on conservation strategies for in-situ conservation of forest

diversity. He informed that 90% of world food supply came from 20 plants species and 14 species of domesticated animals. He described the major threats of forest ecosystems as unsustainable deforestation, increased erosion, habitat fragmentation and loss of biodiversity. He suggested that plantation may help to resolve urgent global issues in order to conserve biodiversity climate change mitigation and poverty alleviation.

He also focused on current activities being initiated by India as a part of strategy to mitigate climate changes like:

- It has made a submission to UNFCCC on Sustainable Management of Forest (SMF) and Afforestation and Reforestation (A&R) in December 2008.
- A Technical Group has been set up to develop methodologies and procedures to assess and monitor contribution of REDD+ actions.
- A National REDD+ Coordinating Agency is being established.
- A National Forest Carbon Accounting Programme is being institutionalized.
- India is hosting the Conference of Parties (COP-11) of the Convention on Biological Diversity (CBD) in 2012, to coincide with twenty years of Rio

At the end of his talk, he threw some light on India's forestry programme under Green India Mission. The main activities of this mission include:

- Proposing a fundamental shift from our traditional focus of merely increasing the quantity of our forest cover, towards increasing its quality and improving provision of ecosystem goods and services.
- Proposing to take a holistic view of greening, not merely focus on plantations to meet carbon sequestration targets. There is a clear and more important focus on enhancing biodiversity, restoring ecosystems and habitat diversity.
- There is a deliberate and major focus on autonomy and decentralization. The Mission will be implemented through an autonomous organisational structure with a view to reducing delays and rigidity, while ensuring accountability.
- Local communities will be at the heart of implementation, with the Gram Sabha as the overarching institution overseeing Mission implementation at the village-level.
- The Joint Forest Management Committee would be revamped as Committees of the Gram Sabha. This is in consonance with the fact that forests are a source of livelihood for over 200 million people in the country, and hence centrality of their participation is critical.

Dr. D. K. Singh, Acting Director, Botanical Survey of India, Kolkata: delivered a lecture on plant diversity in India. In his presentation, he gave a brief account of its bio-geographical status, global biodiversity hotspots as well as hotspots prevailing in India. Besides, he focused on different ranges of biodiversity including ecosystems, species and genetic diversity.

According to Dr. Singh, approx. 5725 species are endemic in India including 3471 in Himalaya, 2051 in Peninsular India and 239 in Andaman and Nicobar.

He also explained some interesting aspects of angiosperm diversity and flowering plants used in traditional system of medicine in India. Besides, he informed about some of the economically important algae and fungi. He expressed the fact sheet of biodiversity of India as:

- Three bio-geographic realms (Indo - Malayan, Eurasian and Afro - tropical), 10 bio-geographic zones, 26 biotic provinces, 16 major and 221 sub-agro climatic zones with 426 Biomes.
- 1,27,000 species of plants, animals and microbes; ca 4,00,000 species yet to be identified.
- 17,709 species of Flowering plants-having very high intra-specific variability
- Mango with 5000 recorded varieties.
- *Oryza sativa* (Rice) with over 60,000 recorded land races.
- About 33% of the higher plant species are endemic.
- 167 agri - horticultural crops.
- 320 wild related species of crop plants.
- 25 major and minor crop plant species domesticated.
- 1500 wild edible plants species used by the villagers.
- 3000 medicinal species - 85% of which are wild.

He added that the tribal use 3900 plants as edible; 8000 as medicine - with over 175,000 specific applications; 525 as pesticides, 550 as fibre and 475 as gum, resin and dye.

At the end of his talk, Dr. Singh emphasized that forests are more biologically diverse than any other terrestrial ecosystems. Conserving and sustainably using our forests will ensure protection of more than 2/3 of all terrestrial plants and animals. He suggested that Biodiversity underpins the health and vitality of forests and is the basis for a wide range of ecosystem services needed for livelihood and well-being of people. It is therefore imperative to understand and appreciate its full values, as well as its importance for human well-being and development.

Awareness Programmes

EARTH DAY, 20th April 2011

Earth Day was celebrated on 20th April, 2011 and on this occasion a “Village Mapping Competition” was organized in the schools of Lakhimpur and Barabanki districts of U.P. Overall, 59 students took part in the competition, out of which 04 students from Lakhimpur and 03 students from Barabanki were awarded.

WORLD ENVIRONMENT DAY, 5th June 2011

The World Environment Day was celebrated on 05th June, 2011. A Quiz Competition of 75 questions for students of (i) Class 6th -8th and (ii) Class 9th to 12th was organized. Questions were based on animals, plants, important days, environment and conservation. The total strength of the participants from various schools were 86 in which 06 students of Class 6th to 8th and 04 students from Class 9th -12th were awarded prizes in presence of S Kumar, Coordinator, RSC, Prof Nityanand ex-Director CDRI and NC Mehrotra, Director, BSIP, Lucknow. The Department of Zoology, Lucknow University helped in organizing this event at the Regional Science City.



World Wetland Day, 2nd February 2012

2nd February each year is the World Wetlands Day (WWD). This particular date has been selected because it marks the adoption of the Convention on Wetlands, in the Iranian City of Ramsar on the 2nd February 1971. Every year the Ramsar Convention selects a theme and raises awareness on specific types of wetlands or aspects of wetland management. This year, the theme was “Wetlands and Tourism”. The slogan for this year is - “Wetland Tourism: A Great Experience”. On this occasion, various competition like Essay, Poster and Debate competitions were organized.

Essay Competition

For Classes VI to VIII the topic was “Are Wetlands Important to Us?”. A total of 38 students from 5 schools took part.

For Classes IX to XII the topic was “Challenges of Ecotourism in Wetland Conservation” A total of 32 students from 7 schools took part.

For college students the topic was “Sustainable Tourism in Wetlands of India- Importance, Current Trends and Challenges”. A total of 18 students from 6 colleges took part.

Poster Competition

For Classes IX to XII the topic was “Ecotourism in Wetlands”. A total of 16 students from 3 schools took part. The prize winners were as follows:

1st Prize Rachit Pandey
XII- Riverside Academy, Lucknow



CONVENTION ON WETLANDS
(Ramsar, Iran, 1971)





IInd Prize Swarnima Singh
IX-E HAL School, Lucknow



Consolation Prize Arzoo Praveen
IX-E HAL School, Lucknow

For college students the topic was “Sustainable Tourism in Wetlands”. A total of 14 students from 5 colleges took part.



1. **Ist Prize Julee Upadhyay**
BSc Part-I, Pt DDU Govt PG College, Lucknow.
2. **IInd Prize Saumya Dalela**
BBA Tourism- Ist Year, Institute of Tourism Studies University of Lucknow.
3. **IIIrd Prize Anupma Srivastava**
MSc. Chemistry, University of Lucknow.
4. **Consolation Prize Pragati Singh**
BCom IIIrd year, Pt DDU Govt Girls PG College Lucknow.

Debate Competition

For college students the topic for Debate Competition was “*Is eco tourism possible in wetlands?*” A total of 9 students from 3 colleges/institutes of Lucknow University took part.

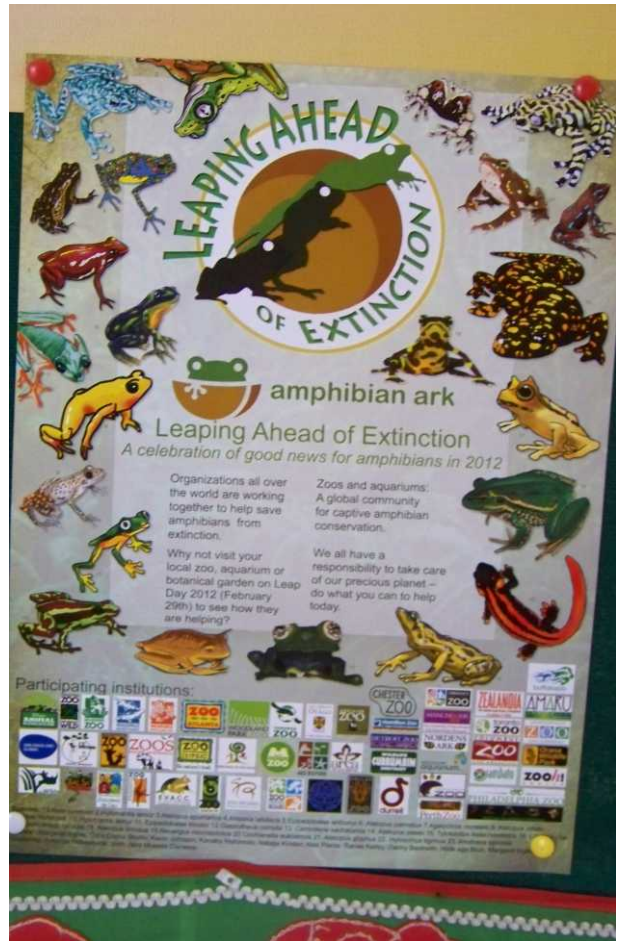


Leap Day 29th February, 2012

Uttar Pradesh State Biodiversity Board organized, Leap Day (February 29th 2012) with Department of Zoology, University of Lucknow, Regional Science City, Lucknow, Zoo Outreach Organization Zoo, and Amphibian Network of South Asia ANSA, Coimbatore, Tamil Nadu, India.

The programme was conducted at Regional Science City, Aliganj, Lucknow involving students of class 5th-8th. The aim of the programme was to raise awareness regarding Amphibian Conservation among the students through various competitions based on Amphibian topics. About 162 students participated in quiz, 190 students wrote slogans on amphibian conservation, more than 50 students participated in frog leap, 126 students participated in art competition and 8 groups of 4 students each participated in puzzle making. In all, more than 300 students participated in the events. More than 200 pamphlets on amphibians were distributed among the students and teachers.





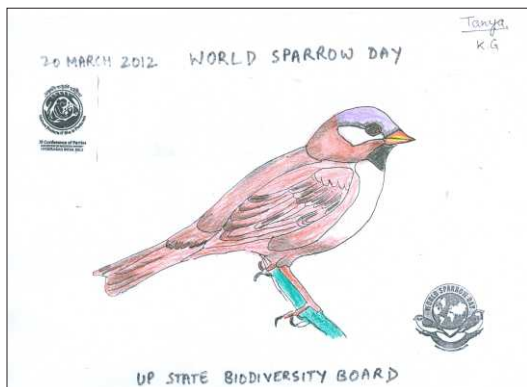
School students participating in Leap Day activities on 29th February, 2012



Students taking part in activities organised on Leap Day, 29th February, 2012

World Sparrow Day 20th March 2012

House sparrow (*Passer domesticus*), popularly known as *goriya* in Hindi and *Chriya* in Urdu unfortunately is now a disappearing species. The **World Sparrow Day (WSD)** has been celebrated on **20th March** across the globe to raise public awareness about the decline of the house sparrow and throw light on the problems faced by the species in its daily fight for survival. The rationale for celebrating World Sparrow Day is not only to commemorate the event for a day but to use it as a platform to underscore the need to conserve sparrows as well as the urban biodiversity. A request was given out through the newspapers and the website of the Board: www.upsbdb.org to the public to get out of their homes on 20th March, 2012, between 7:00 - 7:30am in the morning and count the number of sparrows that one could see near their homes and send it to the Board at upstatebiodiversityboard@gmail.com. Besides, a competition on colouring the picture of House Sparrow was also organized through the Board's website. A total number of 73 entries were received from different schools/colleges of Lucknow in this regard. The support to us in our efforts to spread awareness about urban biodiversity was encouraging.



Tanya- 1st Prize, Category Nur to Prep



Response from **RF Zaidi**,
(Email: r.f.zaidi@gmail.com)

A Poem on house sparrow written by my mother is as follows:

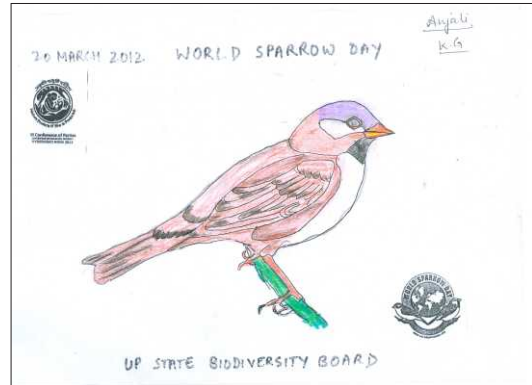
*Chehchahati gauraiya
sab ko bhati gauraiya
Kitni pyari si surat,
bholo bhali si moorat
Hum jo dana khilayen,
apne ghar me bulayen
Phur phur aati gauraiya,
sabko bhati gauraiya
Mera jeevan bachao
meri raksha ko aoooo
Gungunati gauraiya,
sabko bhati gauraiya
Na nazar aaungi main,
loopt ho jaaungi main
Ye batati gauraiya
sabko bhhati gauraiya
Chehchahati gauraiya
sabko bhati gauraiya...*

– Written By My Mother **Sayeeda Askari**

The prize winners of the competition on colouring the picture of sparrow are as follows:



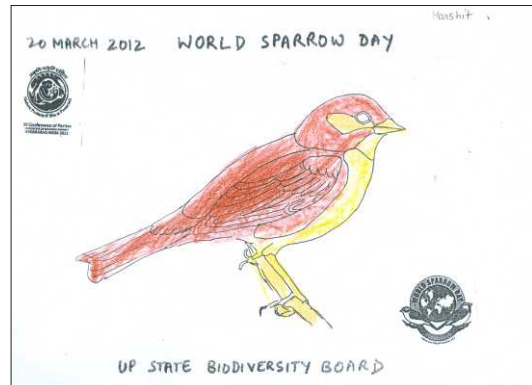
Falak Moshin - Ist Prize Prize,
Category Ist to Vth



Anjali Shekhar - IInd Prize,
Category Nur to Prep



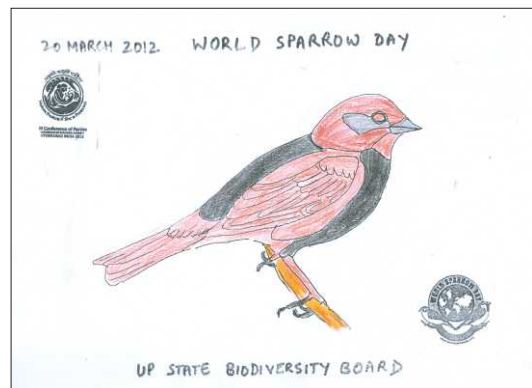
Sachin Kumar- IIIrd Prize,
Category Ist to Vth



Harshit Rajan- IIIrd Prize,
Category Nur to Prep



Shaily Singh Ist Prize,
Category VI to IX



Anupam- IInd Prize,
Category Ist to Vth

Human Resource Development

Human Resource Development

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

April- June 2011

1. Workshop at Regional Center for Urban and Environmental Studies, Lucknow University, 05 June, 2011. Dr. Ram Jee Srivastava, Senior Scientist, UPSBB made a presentation on “Forest Biodiversity: Status, threats and conservation strategy”.

July-September, 2011

2. Gorakhpur, Village Bhauvapar. Dates 05-06 September, 2011. Shri R. K. Dubey, ACF visited this village to facilitate making of the Biodiversity register.

October- December, 2011

3. Bioved Research Institute, Allahabad and Chitrakoot District. Dates 09-10 October, 2011. Shri. R. K. Dubey, ACF, visited the Bioved Research Society, Allahabad and Baihar Village in Chitrakoot to assist villagers in making of the PBR in this village.
4. Chitrakoot, 16 October, 2012: Shri R. K. Dubey, ACF visited Chitrakoot to guide local authorities for plantation of plants related to Ramcharitmanas.
5. National Consultation cum Workshop on People’s Biodiversity Register at Bangalore. 22-23 December, 2012. Shri. R. K. Dubey, ACF attended this meet. Major points covered included:
 - 1) What should a PBR address? Components and approaches.
 - 2) Review of content of current PBR format from NBA and preparation process
 - 3) Issues of IPR, TK and Development in a PBR and ABS
 - 4) Capacity needs of PBRs and
 - 5) Awareness rising of PBRs
6. Dr. Ram Jee Srivastava, Senior Scientist attended 22nd All India Congress of Zoology, at University of Lucknow during 29th to 31st December, 2012.

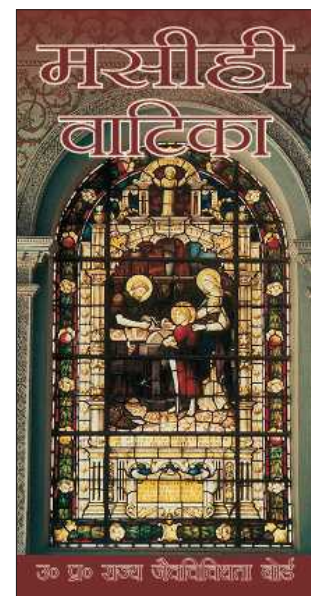
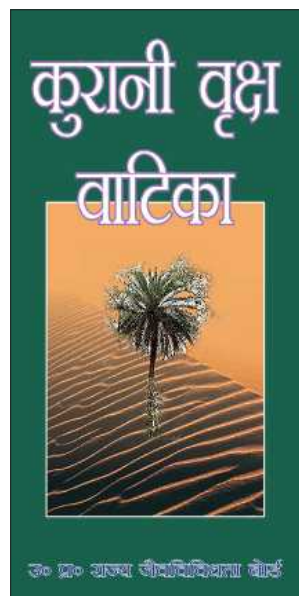
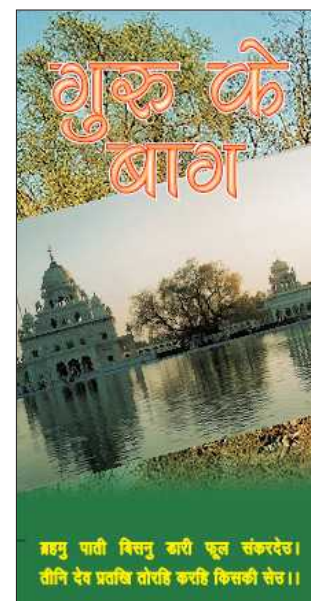
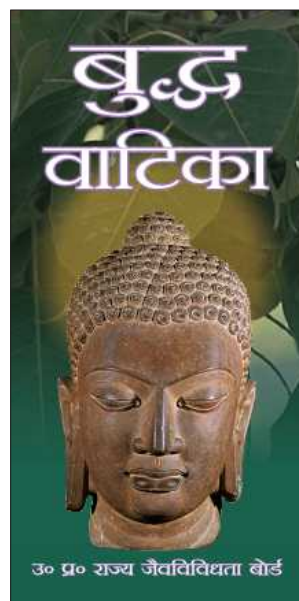
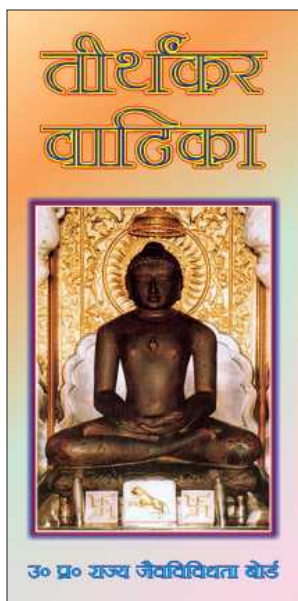
January - March, 2012

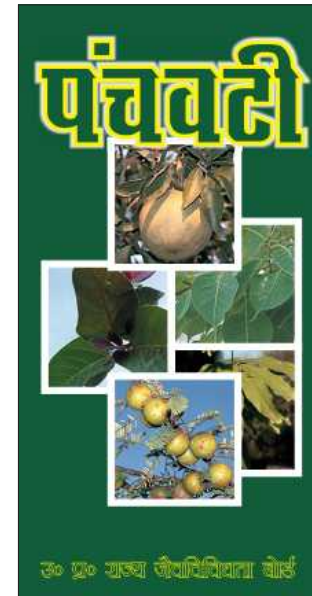
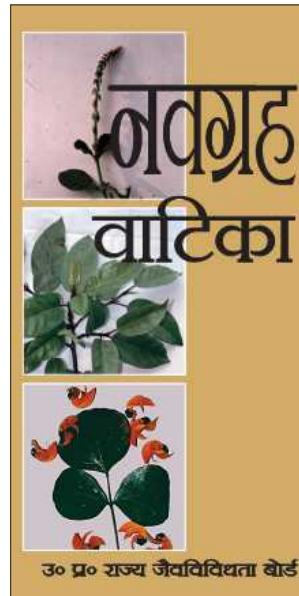
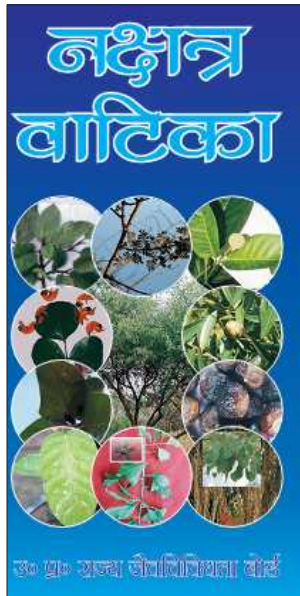
7. Shri. R. K . Dubey, ACF, A. K. Kashyap, Dy RO, and Santosh Kumar, Forester visited Narendra Dev University of Agriculture and Technology on 13-14 January, 2012. Visited Jaunpur also to collect information on *Jaunpuri mooli*.
8. Dr. Ram Jee Srivastava, Senior Scientist, UPSBB delivered a guest lecture on “Biodiversity Conservation” in the three weeks refresher course on Zoology for college and university teachers organized by the Academic Staff College, University of Lucknow on 19 January, 2012
9. The 7th State Biodiversity Boards meeting organized by National Biodiversity Authority at Chennai on 27-28 th January, 2012. Shri Pawan Kumar, Secretary, UPSBB and Shri. R. K. Dubey, ACF attended this meet. Major discussions included: review of State rules, guidelines, ideas for effective implementation of acts and rules, institutional issues (Statutory, Legal and Advisory), capacity and awareness needs and COP 11 delivery.
10. National Seminar on the Impact of Developmental Activities on Traditional Ethno medicines, Biodiversity and its Conservation on 17-19 March, 2012 jointly organized by Institute of Ethnobiology, Jiwaji University, Gwalior and National Botanical Research Institute . Dr. Ram Jee Srivastava, Senior Scientist, UPSBB and Shri. R. K. Dubey, ACF, UPSBB attended this seminar.

Publications

Folder(s)

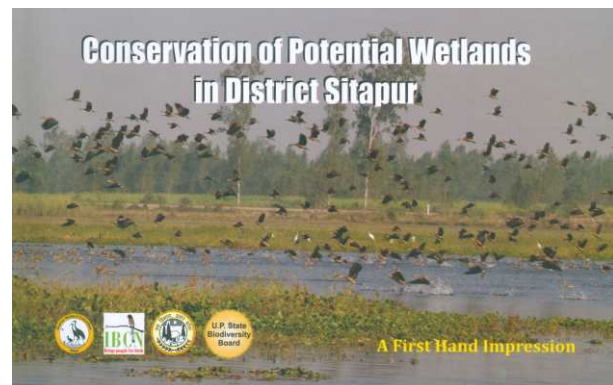
9 folders were published by the Board. The details of folders are available on the website:
<http://www.upsbdb.org/brochures.php>





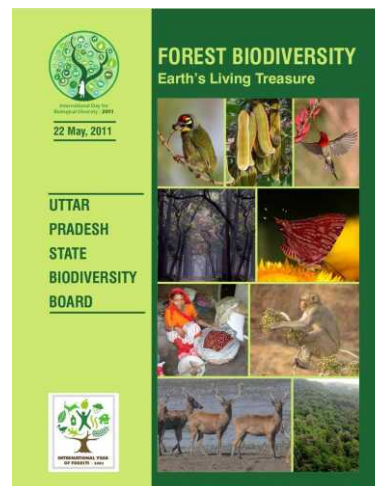
Book/Souvenir

1. A Book on “Conservation of Potential Wetlands in District Sitapur- A First Hand Impression” was published by U P State Biodiversity Board, Lucknow.



Souvenir on the occasion of IDB-2011

A Souvenir was brought out at the IBD -2011 Conference on May 22, 2011. It has 25 articles on forest biodiversity and the soft copy is available at : <http://www.upsbdb.org/content1.php>



SANJAY RAJIV & CO. CHARTERED ACCOUNTANTS

1st Floor, Y.M.C.A. Complex, 13, Rana Pratap Marg, Lucknow 226 001 • Tel. : (0522) 2209402
E-mail : myca.lucknow@gmail.com

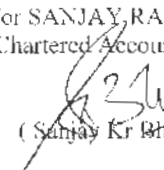

AUDITORS' REPORT

The Members,
UP STATE BIODIVERSITY BOARD
LUCKNOW

We have audited the attached Final Accounts for the year ending 31.03.2012 annexed thereto. These financial statements are the responsibility of the management. Our responsibility is to express an opinion on these financial statements based on our audit.

1. We conducted our audit in accordance with auditing standards generally accepted in India, those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.
2. Further read with the notes to the accounts annexed, we report that:
 - a) We have obtained all the information and the explanations, which to the best of our Knowledge and belief were necessary for the purpose of our audit.
 - b) In our opinion, proper books of accounts as required have been kept by the Board so far as it appears from our examination of those books.
 - c) The Receipt & Payment Account, Income & Expenditure Account & the Balance Sheet dealt with by this report are in agreement with the books of account and give a true and fair view.
 - d) In our opinion and to the best of our information and according to explanations given to us, the said accounts read together with the notes give the information as required, in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India :-

Lucknow
24.05.2012


For SANJAY RAJIV & CO.
Chartered Accountants

(Sanjay Kr Bhutani)



Finance & Accounts

SIGNIFICANT ACCOUNTING POLICIES & NOTES TO ACCOUNTS

1. The Board follows the cash system of Accounting and recognizes Income and Expenditure on Cash basis.
2. Interest on Fixed Deposits have been accounted for on actual receipt basis on the maturity of the Deposits
3. The accounts are prepared on historical cost basis as a going concern. Accounting policies not referred to otherwise are consistent with generally accepted accounting principles.
4. Expenses on Seminar on Biodiversity Day incurred through DFO, Avadh have been accounted for on the basis of Utilization Certificates received from the concerning DFO.
5. Expenses on Bio Park at Gorakhpur are been incurred by DFO, Gorakhpur Utilization for same have been received from the concerning office.
6. The Total amount paid during the year to various agencies/departments for Biodiversity related projects has been considered as the expenditure for the relevant year.
7. Fixed Assets are stated at cost of acquisition .
8. Depreciation on Fixed Assets has been provided on WDV basis at the rates prescribed under the Income Tax Act
9. Closing Stock of Books have been valued at cost
10. A sum of Rs 1,73,698/- being cost of Furniture & Fixture as per the revised final estimate of UPSIC , charged to office Maintenance in 2010-11 have been capitalized by Crediting the Capital Fund A/c.

For SANJAY RAJIV & CO.,
Chartered Accountants


(Sanjay Kr Bhutani)
Partner



Lucknow
24.05.2012

for Uttar Pradesh State
Biodiversity Board


(Pawan Kumar)
Secretary

Secretary
U.P. State Biodiversity Board
LUCKNOW

Finance and Accounts

UTTAR PRADESH STATE BIODIVERSITY BOARD,LUCKNOW RECEIPT & PAYMENT A/C FOR THE PERIOD 01.04.2011 to 31.3.2012

RECEIPT	AMOUNT	PAYMENT	AMOUNT
To Opening Balance:		Pay & Allowances	407,692.00
Cash in Hand	113.00	Office Rent	1,304,349.00
Balance with Banks	<u>1,748,219.00</u>	Electricity,Power & Fuel	140,625.00
	1,748,332.00	Staff Vehicles	778,556.00
Grant Received From Govt.		Telephone & Internet	119,964.00
From State Government	2,500,000.00	Projects,Research,Data Collection	4,392,613.00
From Central Government	<u>950,000.00</u>	& Documentation	
	3,450,000.00	DFO,Gorakhpur for Public Outreach Progrmme	270,000.00
Donation & Advertisement Receipt	1,036,500.00	Ongoing PBR Activities	147,242.00
Interest on FDR	12,853,483.60	Biodiversity Awareness Programs	17,468.00
Interest from State Bank of Patiala	13,190.00	Website Maintenance	30,000.00
Interest from Vijaya Bank	5,579.00	Computer running & maint.	67,659.00
Interest from Punjab National Bank	213,032.40	Accounting Charges	13,500.00
Sale of Books	65,700.00	Audit Fee	24,302.00
Fixed Deposits Matured	137,287,047.00	Office Exp	52,958.00
Miscellaneous Receipts	685.00	Maintenance paid to PICUP Welfare Society	36,180.00
		International Day for Biological Diversity 2011	879,056.00
		News Paper & Periodicals	6,888.00
		Postage & Courier	9,277.00
		Board & Other Meetings	58,043.00
		Supply of Manpower	183,792.00
		Office Stationary	22,626.00
		Preparation of Annual Report & Other Brochures	237,891.00
		Purchase of Projector	82,912.00
		Purchase of Computer	136,000.00
		Purchase of Hard disc	21,750.00
		Purchase of Books for Library	2,590.00
		Paid to UPSIC for Assets Purchased	97,370.00
		Bank Charges	26,468.00
		Contingency	18,920.00
		I.Tax Deducted at Source	838.00
		Fixed Deposits	139,448,529.00
		Closing Balance	
		Cash In Hand	1.00
		Cash at Bank	7,637,490.00
			<u>7,637,491.00</u>
	<u>156,673,549.00</u>		<u>156,673,549.00</u>

As per our separate report of even Date

For Sanjay Rajiv & Co
Chartered Accountants
-sd-
(Sanjay Bhutani)
Partner

LUCKNOW
24.5.2012

For UTTAR PRADESH STATE BIODIVERSITY BOARD
-sd-
(Pawan Kumar)
Secretary

UTTAR PRADESH STATE BIODIVERSITY BOARD,LUCKNOW
INCOME EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.3.2012

EXPENDITURE	AMOUNT	INCOME	AMOUNT
Cost Price of Books Sold	51,029.10		
Pay & Allowances	407,692.00	From State Government	2,500,000.00
Office Rent	1,304,349.00	From Central Government	<u>950,000.00</u> 3,450,000.00
Electricity,Power & Fuel	140,625.00		
Staff Vehicles	778,556.00	Donation & Advertisement Receipt	1,036,500.00
Telephone & Internet	119,964.00	Interest on FDR	12,853,483.60
Projects,Research,Data Collection & Documentation	4,392,613.00	Interst on Saving A/cs	231,801.40
DFO,Gorakhpur for Public Outreach Progrmme	270,000.00	Miscellaneous Receipts	685.00
Ongoing PBR Activities	147,242.00	Sale of Books	65,700.00
Biodiversity Awareness Programs	17,468.00		
Website Maintenance	30,000.00		
Computer running & maint.	67,659.00		
Accounting Charges	13,500.00		
Audit Fee	24,302.00		
Office Exp	52,958.00		
Maintenance paid to PICUP Welfare Society	36,180.00		
International Day for Biological Diversity 2011	879,056.00		
News Paper & Periodicals	6,888.00		
Postage & Courier	9,277.00		
Board & Other Meetings	58,043.00		
Supply of Manpower	183,792.00		
Office Stationary	22,626.00		
Preparation of Annual Report & Other Brochures	237,891.00		
Bank Charges	26,468.00		
Contingency	18,920.00		
Depreciation	140,071.03		
Excess of Income over Expenditure	8,201,000.87		
	<u>17,638,170.00</u>		<u>17,638,170.00</u>

As per our separate report of even Date

For Sanjay Rajiv & Co
Chartered Accountants
-sd-
(Sanjay Bhutani)
Partner

LUCKNOW
24.5.2012

For UTTAR PRADESH STATE BIODIVERSITY BOARD

-sd-
(Pawan Kumar)
Secretary

the pioneer
LUCKNOW THURSDAY | MAY 5, 2011

Ten flora species face extinction

SHARMILA KRISHNA ■ LUCKNOW

The latest report on Lucknow flora prepared by the UP State Bio Diversity Board in collaboration with the Botanical Survey of India shows ten floral species of Lucknow division are threatened. The report, which is in the form of a book, was prepared after intensive study carried out between 2009-2010. Deputy Conservator Forest, UP State Bio Diversity Board, Pratibha Singh, while talking to *The Pioneer*, said that the report was an effort to prepare a baseline data for the rich biodiversity of the region.

"The ten rare and threatened species are *Hedyotis coccinea* (Kapoor Kaeri), *Zingiber xeranthemum* (Matahari Basai), *Clitoria superba* (Kalhazri), *Rosa indica* (Ganga), *Rosa chinensis* (Ganga), *Asarum indicum* (Bach), *Curcuma zosterifera* (Kali haldi), *Desmodium illinoense* and *Nepenthes khasiana*. The study goes a step further to provide a description of 209 plant species of phanerogams belonging to 66 genera and 143 families. The study is also enriched with 16 new records of plants from Upper Gangetic plains.

"Our initial efforts at the Bio Diversity Board is to find out what we have and what we do not have in terms of biodiversity. It is important to have a baseline data in order to find out what is threatened and what is not," said Deputy Conservator Forest, Pratibha Singh. Singh pointed out that they received a sound proposal from the RSP and they gave a nod for the project which took them an year for completion.

Singh said that in addition 10 new plant records had been obtained from the Upper Gangetic plain which included *Mandibala longifolia* (Madhuri), *Hedyotis* (leucopyrus), *Ascrocephalus capitatus*, *Myrsatan aquaticum*, *Staurogyne glutinosa* and *Rosa brachyloba*. "The forest official stated that the documentation was an essential exercise and would help in any legal case." "The documentation is very important because if some related matters come in courts, we have records that we have the species in our land that has been recorded," said the forest official.

When asked if the Bio Diversity Board was going to do something for the list of threatened species, the Deputy Conservator Forest said that they were concentrating on collecting the baseline data first. "We have to know what we have. A mere notification of passing a GO won't help in this case. After we have collected the baseline data, we will work on the issue of doing something in this direction," said Singh.

Incidentally the Bio Diversity Board is also preparing a Bio Diversity register at every agro-climatic zone of the region having inputs from various villages.

CITY pioneer
LUCKNOW TUESDAY | NOVEMBER 1, 2011

Endangered species of fish found in Gomti

SHARMILA KRISHNA ■ LUCKNOW

Torrent Catfish (*Amblyceps mangois*), an endangered species of fish, has been found in river Gomti. These were found during an ongoing research being funded by the Biodiversity Board and being carried out by the National Bureau of Fish Genetic Resources.

Deputy Conservator Forest Biodiversity Board Pratibha Singh while talking to *The Pioneer* said that the species distribution was found in river Gomti, Ganga and Ram Ganga which is the first time ever.

"This species of fish was threatened because of pollution and conditions not being genial for survival. The presence of fish in Gomti has not been documented earlier," she said.

Singh said that the Research "Fish Biodiversity in Fresh Water" was being carried out under the guidance of Dr UK Sarkar of the National Bureau of Fish Genetic Resources. The project budgeted at ₹14 lakh will take two years to complete. It was started in March 2011.

The sites in Gomti that were chosen for sampling were in Lucknow, Pilibhit, Mishrik, Sultanpur, Kalthi, Jaunpur, Hardoi and Rehmankhera.

Samples will be taken from a total of 32 rivers in Yamuna, three sites in Ram Ganga, seven sites in Ghagra, Rapti, Son, Chambal, Ken, Jhansan, Hindon, Janni, Kalli, Majaj, Varuna, Tansa, Surba, Tal and Narora reservoirs.

"A total of 2,580 individual species have been examined and we have found that there are almost 73 species from 22 different species. Out of these, 43 species were found in Ganga, four were found in 1 rivers. A total of 37 species of food fish and 18 of ornamental ones were found," Singh said.

"The research is being carried out to document the diversity of fish in Uttar Pradesh, we know what we have in terms of various species only then we can save them. This is the baseline data that is being prepared," said Singh.

TIMES SPORT THE TIMES OF INDIA, LUCKNOW
MONDAY, JUNE 6, 2011

Quiz educates kids on environment

TIMES NEWS NETWORK

About 100 students participated in the quiz at RSC. The topic was 'Biodiversity: forests at your service'. In the senior section, the first prize went to Ashutosh Dwivedi, second prize went to P Sudeepam and third prize went to Sarthak Goel, Bharat Singh, Prerna Chaurasiya and Prajwal Rastogi from different schools of the city. In the junior section, prizes were given to Kunal Sulekh, Aditya Dwivedi, Sohit Arya and Madhav Kumar.

The RSC also organised a 'Paryavaran Mela', in association with directorate of environment, UP. A series of educational programmes like painting and quiz contest, treasure hunt and games were held.

Former director, Central Drug Research Institute (CDRI), Nityanand, encouraged children to observe and conserve natural resources.

THE TIMES OF INDIA, LUCKNOW
MONDAY, MAY 23, 2011

Grasslands key to biodiversity conservation

TIMES NEWS NETWORK

Lucknow: In an effort to conserve biodiversity in the state, grasslands will be developed and managed in the best possible manner.

Speaking on the occasion of International Biodiversity Day on Sunday, state forest minister Fateh Bahadur Singh said that the staggering green cover of Uttar Pradesh is a challenge to the forest department. He also stressed on the need to develop and manage grasslands in the state.

The forest department organised a seminar on 'Forest Biodiversity: Earth's living treasure' to mark the occasion. "In terms of biodiversity, Brazil and Costa Rica are the only countries richer than India, which has 7.3% of the world's flora and fauna. As per one of the estimates, people use forest products worth Rs 40,000 crore every year," said Padmashree P K Sen.

The forests of UP are rich in diversity. "Biodiversity has a major role to play in availability of food, medicines and raw produce," said Pawan Kumar, secretary, UP state biodiversity board. The minimum value for the environmental benefits derived from forests has been pegged at \$6,120 per hectare per year.

Biodiversity can be broadly divided into domestic and wild. The domestic category has some 10,000 species right from food crops to domesticated animals. The rest of the species are in the wild. "The department is running schemes to create awareness among communities dependent on forest for their basic needs," said DNS Suman, PCCE UP.

On the other hand, Regional Science City (RSC) organised various interactive educational programmes for school students and general public on the occasion in collaboration with UP directorate of environment. The programmes like poster making and "biodiversity walk" were held at RSC. "Biodiversity fulfils our social, cultural, economical and biological needs," said SS Singh, special secretary, environment, UP govt.

Yashpal Singh, director, UP directorate of environment, delivered a popular science lecture on forestry and biodiversity. "There is no species in this world that doesn't generate waste. In fact, waste of one species can be a raw material to other species. This is the biodiversity cycle that maintains balance in ecosystem," said Singh.

The Pioneer, 19th July, 2012

Initiative to promote Palash

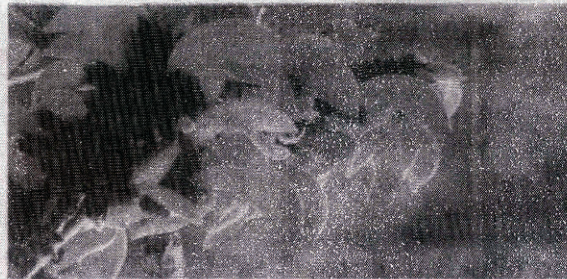
PIONEER NEWS SERVICE ■ LUCKNOW

The State Biodiversity Board is focussing on Palash flower that was declared the State Flower. The Board is taking initiatives for the propagation of the flower and spreading awareness about it.

Talking to *The Pioneer*, Secretary, Biodiversity Board, and Secretary, Forest, Pawan Kumar said that impetus was on plantation of the flower and getting brochures prepared on the flower for distribution.

"The flower cannot be grown in all kinds of soil. We are focussing on the plantation of the flower in Terai region which includes not the pure alluvial soil but the water-logged area that is close to it and is slightly alkaline which is the best for it," said Kumar.

Kumar said that the flower



ORGANIC MATTER OF PALASH THAT FALLS ON THE GROUND MAKES THE SOIL EXTREMELY FERTILE AND THE FRUIT OF THE PLANT ADDS TO THE NUTRITIVE VALUE OF THE SOIL. THE FLOWER GROWS NATURALLY IN THE FOREST BUT IS DIFFICULT TO CULTIVATE IN LARGE FARMS

was a natural forest species and could be grown as associated species.

"It has been seen that Palash acts as a very good associated species and is beneficial for trees that are grown in the forest. Its organic matter that falls on the ground makes the soil extremely fertile and the

fruit of the plant adds to the nutritive value of the soil. The flower grows naturally in the forest but is difficult to cultivate in large farms," he said.

Kumar pointed out that spreading awareness about the flower was necessary. "The flower is not grown in Gram Samaj land but in forests. It is

necessary that the flower is protected in the forests. For this, it is important to make people aware of the flower and its importance. During the Van Mahotsav, we informed the people about the importance of the flower. We will take out brochures on the plant for its publicity," said Kumar.

HINDUSTAN TIMES, LUCKNOW
TUESDAY, MARCH 20, 2012

LET'S BRING BACK THE TWEET

World Sparrow Day

- March 20 or World House Sparrow Day is the time to spread public awareness about the decline of the house sparrow and throw light on the problems faced by the species in its daily fight for survival.
- Sparrows are seen as a mascot for ecological conservation but birdwatchers are worried that adverse environmental factors such as

shrinking habitat may be driving them into hiding.

Nearing extinction

- Ecologists warn these small, highly social birds, that often nest in nooks and niches in and around human settlements, may also go the vultures' way if enough awareness is not created about them.
- Pratibha Singh, IFS, UP State Biodiversity Board says: "Sparrows are declining in number. And hence, the trend of observing World Sparrow Day (WSD) began."
- It is not only to commemorate the event but to use it as a platform to underline the need to conserve sparrows as

well as the urban biodiversity, said an official of the board of biodiversity."

New initiative

- The biodiversity department has also urged people to spare half-a-hour in their lawns and count the number of sparrows and send it to upstatebiodiversityboard@gmail.com. Some first hand experiences and interesting sparrow stories can also be written and sent along with the bird count for which the best entries would be awarded.
- Children can also visit the website www.upsbdb.org. Go to whats new page and click on World Sparrow Day 2012. Get the picture available, colour it and send back the scanned picture or by post to Dr Ramjee Srivastava, UP State Biodiversity Board, 3rd Floor, A Block, East wing, PICUP Bhavan, Vibhuti Khand, Gomti Nagar, Lucknow by March 27 2012. The best coloured pictures will be given certificates and a prize.

DO YOUR BIT TO SAVE THEM

- Putting water in a bowl or plate on the terrace or balcony of the house will save a lot of thirsty birds from dying in summers. Birds require water for bathing and a water pot in balcony will help birds meet this ecological need as well.
- Keep little *bajra* or broken rice in an open space will provide them food. However, things like these should be done with religious regularity as birds have the

natural affinity to return to the same place each time they feel the need for food, water or shelter

- Proper care must be taken for the cleanliness of the vessel and water to avoid any infections in the birds.
- Only locations of minimum disturbance should be selected for the vessel.



HERE'S HOW TO WIN PRIZES

- Count the sparrows between 7am and 7:30am
- Write a poem, article, story or experience related to sparrows.
- Visit and download the bird's picture. Colour it and send it to the biodiversity department.

चुन-चुन करती आएगी चिड़िया, दाना डालिए तो चहचहाएगी चिड़िया

लखनऊ। पल्लव शर्मा

ज्यादा नहीं, मुट्ठी भर अनाज और छोटे-छोटे पौधे लगाकर गौरैया को चहचहाए आप भी अपने घर में महसूस कर सकते हैं। शहरों के कारण जंगल समाप्त हो गए और गौरैया का आशियाना भी उजड़ गया। कैजेट के घर बनने लगे और चिड़ियों को घोंसले बनाने के लिए जगह भी नहीं बची लेकिन दो साल से गौरैया को बचाने के लिए चलाई जा रही मुहिम रंग लाने लगी है। कुछ लोग व पर्यावरण प्रेमी कहने लगें हैं—अब अलायंस से नहीं, चिड़ियों के चहचहाने से उनकी नींद खुलती है।

ऐसा माना जाता है कि जिस घर में गौरैया जाती है वहां का माहौल खुशनुमा व आबोहवा साफ-सुधारी होती है। पर्यावरणविदों या फिर शहर के अलग-अलग कोने में रहने वाले चैन्यजीव प्रेमी, इस बात से खुश हैं कि शहरों से विलुप्त हो चुकी परेलू चिड़िया वापस लौट रही है। इराक़ो से चरों में आना और छत्रांच, अलमारी के कोने में सुरक्षित जगहों पर घास-फूस से घोंसले बनाना उन्होंने शुरू



विश्व गौरैया दिवस आज

कर दिया है। गोमतीनगर के विभूतिखण्ड में रहने वाली लखनऊ प्रिण्ड उद्यान की निदेशक पृथु सिंह की सुबह उनके घर में आने वाली चिड़ियों से ही शुरू होती है। कभी-कभी घर उनकी चाय में भी घोंसला बनाने के लिए लाए जाने वाले तिनके गिरते हैं। यह इन लक्ष्यों का आनन्द उठाती है और उनको छेड़े बिना उनकी अटखलियां व रोमांच देखती है। यही हाल सीतापुर रोड स्थित गृहपरिशिनी कालोनी में कुछ घरों का भी है। सुबह छह बजे से ही चिड़ियों की आवाजें शुरू

हो जाती है। घरों में रहने वाले छोटे बच्चे सोम्या, आयुषी, ईशान, ईशा, डाल व गृधिया में तो सुबह छत पर दाने फेंकना व बैठकर चिड़ियों का इंतजार करना आदत में शुमार हो गया है। चिड़ियाघर के असिस्टेंट वाइल्ड लाइफ वार्डन आरकेपी सिंह कहते हैं कि गौरैया दिखने की वजह घरों में एयरकंडीशनिंग बढ़नी है। पंखों का कम चलना है, क्योंकि पहले पंखों में फंसकर गौरैया घर जाती थीं। अब घरों में उन्हें सुरक्षित स्थान मिलने लगा है। डीएफओ

गूँगेगा कलरव

- शहर के कुछ लोगों ने प्रयास किए तो फिर दिखने लगी गौरैया
- जहां जाती है गौरैया, माहौल बनता है खुशनुमा और सुधरता है पर्यावरण

महोबा रमेश चन्द्र बोले कि घरों में मुट्ठी भर अनाज फेंकने की परम्परा समाप्त होने से गौरैया का आना बंद हो गया है। उसके खाने के लिए भोजन व पीने के लिए स्वच्छ पानी नहीं मिल पाता। गांवों में यह परम्परा आज भी चल रही है इसलिए वहां गौरैया अधिक दिखती है।

दो साल पहले पड़ी थीं नींव

विश्व गौरैया दिवस 20 मार्च को होता है। इसकी नींव दो साल पहले 2010 में पड़ी थी। इसका उद्देश्य तेजी से कम होती गौरैया को बचाना है। राष्ट्रीय व अंतरराष्ट्रीय संस्थाओं, गैर सरकारी संस्थाओं, विश्वविद्यालय, स्कूल और व्यक्तिगत स्तर पर पूरे विश्व में जागरूकता अभियान चलकर यह दिवस मनाया जाता है।

इनसे सीखें गौरैया बचाना

लखनऊ। सामाजिक कार्यकर्ता पृथक रंजन चिड़ियों को घर में चुलाने के प्रयास में लगे रहते हैं। हेवलक रोड पर 107/36 मलका गेट फाटक पर पांच हजार स्ववायव्य फूट में इनका घर बना है। दाईं हजार स्ववायव्य फूट जगह खाली है। इसमें विभिन्न किस्म के पेड़-पौधे लगे हैं। रोजाना साढ़े छह बजे इनका सवेरा होता है। दैनिक क्रिया के बाद गार्डन में रखे पानी के बर्तन साफ करते हैं। ताजा पानी भरते हैं। काकून, दालें, बचा अनाज, ब्रेड के छोटे-छोटे टुकड़े प्रेमी के आसपास बिखर देते हैं। कुछ ही पलों में छेर सारी चिड़ियां जमा हो जाती हैं। यह प्रक्रिया रोज चलती है। चिड़ियों को बढ़ाने के लिए वह ऐसा प्रयास दूसरे लोगों से भी करने की अपील करते हैं। इन्होंने 100 से अधिक घरों में गौरैया और घरेलू चिड़ियों को वापस चुलाने के लिए लोगों को जागरूक भी किया है। वह कहते हैं, इस काम में महज 200 से 300 रूपए माहौल का खर्च आता है। इसलिए लोगों को चिड़ियों को संरक्षण देने के लिए आगे आना चाहिए।

ऐसे आएगी गौरैया

- घरों में देशी झाड़ीनुमा छोटे पौधे लगाए
- घरों के खुले स्थान पर उनका दाना डालें
- खराब अनाज कूड़े में न फेंके, छत या सुरक्षित स्थान पर डालें
- स्वच्छ पानी को खाली बर्तन में रखें
- लकड़ी का प्लेटफॉर्म घर के सुरक्षित और शांत स्थान पर बनाए
- गर्मी में पार्कों में चिड़ियों के लिए खाली स्थान छोड़ा जाए

खाने को क्या दें

- काकून, ज्वार, दालें, रोटी के छोटे टुकड़े
- चावल न दें
- चावल से चिड़ियों का पेट खराब हो जाता है

लखनऊ, 20 मार्च 2012 दैनिक जागरण

विश्व गौरैया दिवस (20 मार्च) पर विशेष

गीत गाएं गौरैया का

एक चिड़िया, अनेक चिड़िया, दाना चुनने आई चिड़िया ... गीत कौन कौन पहले अपने टीले पर बुना होगा। जब गौर कौनगी कि आने उस गौरैया चिड़िया को किसी घर सब देना था। प्राचीन काल से ही यह चिड़िया, मानव जाति की सहचरी रही है। उल्लस, स्वतंत्रता, परवर और संस्कृति की संसाधक गौरैया की संख्या दिन-दिनी घटती जा रही है।

विलुप्त होने के कारण

पेटलों के खनने से निरक्षरता का निवारण नाइट टेंडे कीटों के लिए विनाशकारी होता है। जबकि खरी कीट कुंजी के भोजन पदार्थ होते हैं।

गोबादन फसल टकरने से निरक्षरता वाली तराई में इतनी क्षमता होती है, जो उसे कोटि तक खसती है।

आधुनिक पर्वत का निर्माण इस तरह किया जा रहा है कि इनके पर्वत चरों की तरह 33000 टनटरे और मोने के लिए जगह ही नहीं है। जबकि यही स्थान गौरैया के घोंसले के लिए जगह उपलब्ध होते हैं।

शहरीकरण के दर दर में घरों में बनी हुई के लिए स्थान नहीं है। इन बनीतों में छोटे पौधे पाए जाते हैं, जो गौरैया के बच्चों के छोटे पौधों से

तथ्य

इसकी पहली संख्या के मस्टेडजर डेटिन की 'रॉयल सोसाइटी ऑफ गैरेशनल आफ बर्ड्स' ने इसे 'पेड़ चुली' में डाला है।

आज विश्वविद्यालय द्वारा किए गए अध्ययन के मुताबिक गौरैया की आबादी में करीब 60 फीसदी की कमी आई है। यह हाल शहरीकरण और खरी कीटों से हो रही है।

बचाव के उपाय

घर की छत या दीवार पर अनाज के थाने खोलें।

यदि घर में स्थान है, तो बागवानी करने रोक जल रखें।

घोंसले के स्थान पर काच में कुछ खाद्य पदार्थ रखें।

ऐतिहासिकता

यह आदिवासीयों की लोक कथाओं में गौरैया चिड़िया का वर्णन मिलता है। महाभारत की तृतीया पर्व उड़ीसा की चौथे अध्यायों (सकल्य और ब्रह्मवन्त) में इनका उल्लेख महाभारत के नवम व दशम स्कंधों की परंपरा मिलती है।

अब भारत की संस्कृति में यह चिड़िया इस तरह रही बसी है कि जिसके लोकगीत महानदी बर्तन में बहानी गौरैया में कामना की है कि हमारे खरी कीट को कुछ करने के लिए गौरैया चिड़िया फिर लौटेगी।

गौरैया उत्पन्न या प्रतीक है। इसी वजह से गांधी ने फसलों के बीजों में इसके चिड़ियों की बीजों पर बनाए जाते हैं।

चिड़िया एक नाम अनेक

देशीक नाम	पेरस डोमिनिकन
हिंदी	गौरैया
उर्दू	गिराय
सिंधी	झिरांकी
पंजाबी	विरी
उत्तर और मध्यीर	पहिले बंगाल
पश्चिम बंगाल	उड़ीसा
गुजरात	गुजरात
मलयालम	मलयालम

अमर उजाला

लखनऊ, 20 मार्च 2012

विश्व गौरैया दिवस आज

मोबाइल टॉवरों की इलेक्ट्रोमैग्नेटिक तरंगें घटा रही प्रजनन क्षमता

गौरैया की जान के दुश्मन मोबाइल टॉवर

प्रेम शंकर मिश्र

लखनऊ। हमारी सुविधाओं का बढ़ता संसार अन्य प्राणियों के लिए समलोक बनता जा रहा है। सुबह की पहली किरण के साथ अपनी चहचहाहट से सुप्रभात कहने वाली गौरैया भी हमारी दुनिया से कुछ ऐसी ही बचनों से दूर होती जा रही है। हमारे संवाद को सहज बनाने वाले मोबाइल टॉवर गौरैया की जान के दुश्मन बने हुए हैं।

गौरैया हमारे जीवनचर्या से अमूमन कहीं न कहीं से जुड़ी रही है। कभी आंगन में अपनी मौजूदगी के एहसास से तो कभी कहानियों एवं संस्मरणों के साथ। लेकिन यह संगत कितने और दिनों तक चलेंगी यह एक अहम सवाल है। जांचकर्ता बताते हैं कि भारत में मौजूद 1200 पक्षियों की प्रजाति में 87 संकटग्रस्त की सूची में आ चुकी हैं। गौरैया हालांकि इस सूची का हिस्सा नहीं है लेकिन

चिड़ियों के व्यवहार में बढ़ी आक्रामकता

भोजन न मिलने से अस्तित्व पर भी संकट

लखनऊ। सामाजिक कार्यकर्ता पृथक रंजन चिड़ियों को घर में चुलाने के प्रयास में लगे रहते हैं। हेवलक रोड पर 107/36 मलका गेट फाटक पर पांच हजार स्ववायव्य फूट में इनका घर बना है। दाईं हजार स्ववायव्य फूट जगह खाली है। इसमें विभिन्न किस्म के पेड़-पौधे लगे हैं। रोजाना साढ़े छह बजे इनका सवेरा होता है। दैनिक क्रिया के बाद गार्डन में रखे पानी के बर्तन साफ करते हैं। ताजा पानी भरते हैं। काकून, दालें, बचा अनाज, ब्रेड के छोटे-छोटे टुकड़े प्रेमी के आसपास बिखर देते हैं। कुछ ही पलों में छेर सारी चिड़ियां जमा हो जाती हैं। यह प्रक्रिया रोज चलती है। चिड़ियों को बढ़ाने के लिए वह ऐसा प्रयास दूसरे लोगों से भी करने की अपील करते हैं। इन्होंने 100 से अधिक घरों में गौरैया और घरेलू चिड़ियों को वापस चुलाने के लिए लोगों को जागरूक भी किया है। वह कहते हैं, इस काम में महज 200 से 300 रूपए माहौल का खर्च आता है। इसलिए लोगों को चिड़ियों को संरक्षण देने के लिए आगे आना चाहिए।

टॉवर गौरैया के दूसरे पक्षी के साथ संवाद क्षमता को भी प्रभावित करते हैं जिसके चलते पक्षियों में आक्रामकता बढ़ी है और उनके व्यवहार में परिवर्तन देखने को मिल रहा है। जैसे घरेलू गौरैया की खासियत यह है कि वह अपना घोंसला रिहायशी इलाकों में ही बनाती है लेकिन मकानों की बदलती संरचना एवं घटते प्रासलैंड के चलते उनकी मुसीबतें बढ़ गयी हैं। डॉ. अमिता कहती हैं कि पक्षे मकानों में गौरैया की लिए घोंसला बनाने की गुंजाइश कम रहती है। अगर यहां किसी तरह उससे घोंसला बनाया और अंडे दिए तो उनका अस्तित्व कितना सुरक्षित रहेगा यह भी सवाल है। गौरैया बच्चों को छोटे-छोटे कोंड़े खिलाती है लेकिन घर के आंगन और लॉन पक्षे होने के कारण मिट्टी के कोंड़े नहीं मिल पाते हैं। ऐसे में गौरैया के बच्चों का अस्तित्व खतरे में पड़ जाता है।

आओ हम सब बचाएं गौरैया को

लखनऊ, 19 मार्च (जागरण संवाददाता)। कर प्रदान नाकेवर्धनीय बॉर्ड व लखनऊ विश्व व आर्थिक विकास नगरी में जागरण विभाग है कि लोग अपने घरों में अपने घरेलू गौरैया की सुबह 7 से 8 बजे के बीच मिलती करें।

20 मार्च को आयोजित विश्व गौरैया दिवस के मौके पर 3.9 बार्डवर्धनीय बॉर्ड ने संवसादन पर लगे से गौरैया की मिलनी भोजन, उससे संबंधित अनुभव या कोई कहानी भेजने की भी अपील की है। बॉर्ड अली कानोनी या अनुभव को प्रसन्न करेगा। बॉर्ड ने संवसादन पर गौरैया का चित्र भी दिया है। बच्चे इसमें रंग भर कर बॉर्ड को 27 मार्च तक भेज सकते हैं। सूत्र विचारकाल के लिए बच्चों को प्रसन्न किया जाएगा। बॉर्ड के शरणार्थक प्रतिभा सिंह बताती हैं कि विदेशी के बारे में जागरूकता के माध्यम से आजीवन किए जा रही इन प्रतिक्रियाओं को जागरूक बॉर्ड की संवसादन

www.upsbdb.org पर ली जा सकती है। प्रतिभा ने बताया कि लोग गौरैया की संख्या, कहानी व चित्र upstatebiodiversityboard@gmail.com पर ई-मेल कर सकते हैं। उनपर सविधि व आर्थिक विकास नगरी हाथ मिलाने वाले से शुभ वृत्त बने से आजीवन कर सकते हैं।

कार्यक्रम में बच्चे भाग ले सकते हैं। लखनऊ की डॉ. अमिता कानोनीया ने भी अपील की कि लोग सुबह 7 से 8 बजे के बीच घर के आंगन या छत पर आने वाली गौरैया को मिलने कर जानकर देना।



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