The Academy Lecture Workshop was organized by the Institute of Ethnobiology, Jiwaji University, Gwalior (M.P.) from 21st – 22nd February, 2014. The following persons acted as the convener and the Coordinator of the programme:

Convener: Prof. R.R. Rao, FNA, INSA Honorary Scientist, No. 328, B-4, Kendriya Vihar, Yelahanka, Bangalore- 560064

Coordinator: Prof. Ashok K. Jain, Professor of Botany & Honorary Director,
Institute of Ethnobiology, Jiwaji University, Gwalior- 474011

The following resource persons delivered lectures on various aspects related to the theme of the workshop.

1. Prof. R.R. Rao, FNA, INSA Honorary Scientist, Bangalore


3. Dr. D.K. Upreti, FNASC, National Botanical Research Institute, Lucknow.

4. Prof. Ashok K. Jain, Institute of Ethnobiology, Gwalior

Topics covered by resource persons

1. Current problems of Plant taxonomy in India and how to resurrect the subject – Prof. R.R. Rao, Bangalore


5. Forest Fragmentation and its Implication for Biodiversity Conservation – Prof. R.S. Tripathi.
6. Ecosystem services – Prof. R.S. Tripathi, Lucknow


The Participants:

Over 110 participants comprising teachers, research scholars, M.Phil. and M.Sc. students from the School of Studies in Botany (University Teaching Department); Govt. SMS Science College, Gwalior; Govt. KRG College, Gwalior; Govt. SLP College, Gwalior; Govt. VRS Girls College, Morar, Gwalior; Boston College, Gwalior; College of Life Sciences, Gwalior actively participated in the lecture programme.

Date: 21.02.2014, 10:30 AM: Inaugural Function:

Prof. R.R. Rao, FNA and Dr. D. K. Upreti were the chief guest and special guest respectively during the inaugural function. Prof. R.K.S. Chauhan, Former Vice-chancellor, Vikram University, Ujjain (M.P.) was the “Guest of Honor”. The programme was presided over by Prof. R.J. Rao, Rector (Pro-Vice-chancellor), Jiwaji University, Gwalior. Prof. Ashok K. Jain, Coordinator gave an introduction to the genesis of the lecture workshop and all three national academies of India. He also emphasized the contribution of academies in proliferating and popularizing scientific activities in the country. Prof. R.R. Rao, Convener, asked the audience to join and actively participate in various activities of academies. He specially appealed young botanists to come forward and take advantage various academic activities of academies. Dr. D.K. Upreti also asked for the promotion of scientific activities. Prof. R.K.S. Chauhan cautioned botanists about the fate of plant taxonomy specially in India where the number is dwindling. He encouraged students and researchers for more field work to know plants in reality in nature. Prof. R.J. Rao, Rector and the President of the function appealed all teachers and students to apply for more and more projects for the promoting of taxonomy, Ethnobotany and conservation of threatened species. He assured all sorts of help from the university. Prof. R.M. Agarwal, Head, Botany Dept. proposed a vote of thanks.
Date: 21.02.2014 : Lecture Session

After the inauguration of the programme, first lecture was delivered by Prof. R.R. Rao on “Current problems of taxonomy in India”. He emphasized the history and development of classical taxonomy in India. He further pointed out the main drawbacks of the subject in Universities and other Institutes of the country. The current status of taxonomy in India and its dwindling nature were also discussed by him. He highlighted certain reasons responsible for the decline of the subject like the development of more fashionable and experimental areas of modern biology, faulty methods of teaching by untrained taxonomists in most Universities, lack of sufficient taxonomic literature and herbaria, synthetic nature of discipline of taxonomy, lack of sufficient number of practicing taxonomists and field botanists to carry out the survey and documentation of the vast diversity of the flora of India, most taxonomic journals with least or no impact factor, low citation index of Classical Taxonomists, development of computer databases and computer identification devices by non-taxonomists etc.

The second lecture of the day was delivered by Dr. D.K. Upreti on “Taxonomy of Indian Lichens”. He described the lichen wealth of our country and laid emphasis on the un-explored of lichens rich localities in higher altitudes and other difficult places of remote Himalayas and Islands and sea coasts of the country. He further explained that more than 22 thousand species of lichens are known from the world and India represents more than 10% of the total explored species. He also mentioned the useful aspects of lichens and asked researchers about great prospects of lichens in M.P.

Dr. Upreti’s lecture was followed by the second lecture of Prof. Rao on “Plant Nomenclature and why frequent name changes”. He explained the importance and relevance of Binomial Nomenclature for naming the plants since a single plant species is named by more than 50 names in a particular (local) language. He clarified by giving the examples of *Viola odorata* and *Mangifera indica*, known by a large number of local names. He mentioned that there are about 50 names of Mango in Sanskrit language. He further elaborated ICBN and naming plants this system.
In his second lecture Dr. D.K. Upseti spoke on “Bioprospecting of Lichens”. He emphasised on the use of lichens in many advanced fields like air pollution monitoring by both organic and inorganic metal loads in the environment. He elaborated that how lichens may be used as potential bio-indicators of climate change and regional environmental change. The lichen bio-deterioration of buildings depicts the environmental change of that particular area. He further highlighted the utilization of lichens as a good source of unique phytochemicals.

Date. 22.02.2014 : Lecture Session

The second day of the programme was started with the lecture of well known ecologist Prof. R.S. Tripathi on “Ecosystem services” in which he explained the services provided by ecosystems to mankind. He talked about the 5 categories of ecosystem services like Provisioning, such as the production of food, timber, non timber forest products and water, Regulating, such as the control of climate, carbon sequestration, control of diseases and flood; Supporting, such as nutrient cycles, pollination and dispersal, Cultural, such as spiritual and recreational benefits and Preserving, which includes guarding against uncertainty through the maintenance of diversity. He further emphasized the conservation of these ecosystems through the formation of certain networks and policies.

Prof. Rao delivered his third lecture on “Evolution of Flowers”. He narrated the co-evolution of flowers vis-a-vis-pollinators. He elaborated the evolution of floral whorls and how the Magnoliales are known as primitive group of plants. He further pointed out that the evolutionary process in angiosperm flowers is fundamentally guided by two basic principles, Principle of progressive economy in the production of reproductive parts and Principle of progressive adaptation to the insect visitors.
Prof. Rao’s lecture was followed by the second lecture of Prof. Tripathi on “Forest Fragmentation and its Implication for Biodiversity Conservation”. He mentioned about that fragmentation of forests has brought about adverse ecological impacts on forest ecosystem structure and function, physical, chemical and biological properties of soil, hydrology and biodiversity. He pointed out that increasing anthropogenic activities in recent years have caused destruction and degradation of the natural forests and as a result, they are getting fragmented into small patches. Further he laid emphasis on the conservation of tree diversity in the forests. He mentioned that it is necessary to bring newly fragmented forest patches to its natural condition as quickly as possible.

The last lecture of the second day was delivered by the Coordinator of the programme Prof. Ashok K Jain on “Conservation of Biodiversity through Tribal Wisdom” in which he explained the role of tribal communities in the sustainable conservation of biodiversity through various methods. He mentioned that there are certain beliefs, taboos and totems related to particular plant and animal species in these communities and they never harm such species. He further elaborated the role of sacred groves in the conservation of biodiversity. He also informed that some clans are named after plant species and tribals never harm their concerned species, in that way these species are conserved. He also highlighted the nutritional aspects of certain plant species which are used by tribal communities during scarcity and emergency conditions and these species possess high amount of carbohydrates, proteins and fats. He also mentioned about the conservation of vast germplasm of many species lying with many tribal communities of India.

All resource persons and participants also visited the museum of “Institute of Ethnobiology” and observed its herbarium, library and tribal exhibits.
Important features of lecture workshop:

Throughout the lecture sessions on both day, all participants were very much enthusiastic about the topics covered by resource persons. M.Sc. students specially asked a large number of questions from the experts, who satisfactorily quenched their thirst. Students and research scholars also showed a keen interest in knowing the academic activities of all three academies. Many researchers first time came to know about the status, stature and contribution of fellow of academies. Prof. G.B.K.S. Prasad, Dean, Faculty of Life Science and the chairperson the valedictory function acknowledged academies for encouraging such activities and invited other departments to avail the advantage of such programmes. In valedictory function, besides the comments by dignitaries on dice, students specially requested organizers to explain their views on such types of programmes and expressed high satisfaction by narrating that academies have provided them rare opportunity to listen and discuss with fellows of academies. The function ended with a vote of thanks to all who have helped in organizing such programme and special thanks was given to academies for supporting and encouraging such programmes.

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SCIENCE ACADEMIES’ LECTURE WORKSHOP on
“New challenges in Plant Taxonomy, Ethnobotany & Conservation of Threatened Plant Species”
Sponsored by
Indian Academy of Sciences (IASc), Indian National Science Academy (INSA) & National Academy of Sciences India (NASI).

PROGRAMME

DATE: 21.02.2014, FRIDAY

10:30 – 11:30  INAGURATION (Venue: Galav Sabhagar)
11:30 – 12:00  HIGH TEA

12:00 – 1:00  LECTURE- 1 (PROF. R.R. RAO)
(Topic: Current problems of Plant taxonomy in India and how to resurrect the subject).
1:00 – 2:00  LECTURE- 2 (DR. D.K. UPRETI)
(Topic: Taxonomy of Indian Lichens)

LUNCH BREAK (2:00 – 3:00)

3:00 – 4:00  LECTURE- 3 (PROF. R.R. RAO)
(Topic: Plant nomenclature)

Tea Break: 4:00 – 4:15

4:15 – 5:15  LECTURE- 4 (DR. D.K. UPRETI)
(Topic: Bioprospecting of Lichens)

DATE: 22.02.2014, SATURDAY  (Venue: Seminar Hall, SOS Botany)

10:00 – 11:00  LECTURE- 5 (PROF. R.S. TRIPATHI)
(Topic: Ecosystem services)

11:00 – 12:00  LECTURE- 6 (PROF. R.R. RAO)
(Topic: Evolution of Flowers)

12:00 – 1:00  LECTURE- 7 (PROF. R.S. TRIPATHI)
(Topic: Forest Fragmentation and its Implication for Biodiversity Conservation)
1:00 – 2:00  LECTURE- 8 (PROF. A.K. JAIN)
(Topic: Conservation of biodiversity through tribal wisdom)

LUNCH 2:00 – 3:00 PM

3:00 – 4:00 PM  DISCUSSION
4:00 – 5:00 PM  CONCLUDING SESSION
“Science Academies’ Lecture Workshop on
New challenges in Plant Taxonomy, Ethnobotany & Conservation of Threatened Plant
Species”

Inaugural Function

1. Persons on dice
   i. Prof. R.R. Rao- Chief Guest & Convener of Lectures
   ii. Prof. R.J. Rao- Rector (Pro-Vicechancellor), Jiwaji University
   iii. Dr. D.K. Upreti- Guest of Honor
   iv. Prof. RKS Chauhan- Special Guest
   v. Prof. R.M. Agarwal- Head, SOS Botany
   vi. Prof. Ashok K. Jain- Coordinator

2. Saraswati Vandana & Lighting of lamp: Pratima, Kiran, Sweta & Gagan (vandana)

3. Welcome of Guests by bouquet/ garland
   i. Prof. R.R. Rao Chief Guest – Prof. Ashok K. Jain
   ii. Prof. R.J. Rao - Prof. Prof RM Agarwal
   iii. Dr. D.K. Upreti - Prof. R.Bhadauria
   iv. Prof. RKS Chauhan Prof Avinash Tiwari
   v. Prof RM Agarwal Dr. M.K.Gupta
   vi. Prof. Ashok K. Jain Dr S. Manderia

4. Welcome & Introduction to lectures: Prof. Ashok K. Jain- Coordinator
5. Introduction of Dr. RR Rao Prof Avinash Tiwari
6. Introduction of Academies & lectures- Prof. RR Rao , Convener of Lectures
7. Introduction of Dr DK Upreti Prof. Rekha Bhadauria
8. Dr. D.K. Upreti, Chief Scientist, NBRI, Lucknow
9. Prof RKS Chauhan- (Former VC, Vikram Univ, Ujjain ) for blessings.
10. Felicitation of guests by Shawl & Sripal
    Hon’ble Rector & all others to RR Rao/ DK Upreti/ RKS Chauhan

11. Prof. R.J. Rao – Hon’ble Rector, JU, For presidential address.

12. Vote of Thanks Prof RM Agarwal

Tea Break

Imp. Announcement: After the tea all lectures are organized in the seminar hall of
SOS Botany. All participants are requested to proceed to Botany dept.