“Science Academies’ Lecture Workshop on Plant Taxonomy”

on

17-18, February 2014

Report
to

Indian Academy of Sciences
Bangalore

Indian National Science Academy
New Delhi

The National Academy of Sciences, India, Allahabad

By

Department of Botany (FIST Sponsored)
PSGR Krishnammal College for Women
College with Potential for Excellence
Autonomous Institution Affiliated to Bharathiar University
Reaccredited with ‘A’ grade by NAAC, ISO 9001:2008 Certified Institution

Peelamedu, Coimbatore – 641004. Phone: 0422 4395959; Fax: 0422 2591255
Website: www.psgrkc.com
“Science Academies’ Lecture Workshop on Plant Taxonomy”

The Institution

Established in 1963, the college has been the realization of the dream of the founders Sri. G. R. Govindarajulu and Smt. Chandrakanthi Govindarajulu to educate and empower women. The institution has blossomed into an academy of learning, having under its fold 23 UG, 13 PG, 3 PG Diploma, 3 Certificate courses, M.Phil and Ph.D programmes in 11 disciplines with a student enrolment of 5200. The college is an autonomous, ISO 9001-2008 certified institution and has been reaccredited by NAAC with ‘A’ Grade. The college has achieved its highest status as College with Potential for Excellence and included under the Star College Scheme of DBT. The institution has entered into its 50th year of golden jubilee in 2012-13.

Department of Botany

The Department was established in the year 1967, with the introduction of the UG programme, upgraded to a centre for postgraduate education (M.Sc. and M.Phil.) and as a Research Centre for Ph.D. in Botany. At present the department has 12 faculty members, of whom all have Ph.D qualification. The faculty strive hard to with dedication, zeal and enthusiasm to achieve excellence in teaching. The department has been sanctioned with the FIST (Fund for Improvement of Science and Technology Infrastructure in University and Higher Educational Institutions) programme of the Department of Science and Technology (DST), Ministry of Science and Technology, Govt. of India.

About the Workshop

Global biodiversity is being lost at an unprecedented rate as a result of human activities. To protect the biodiversity one has to identify and combat harmful invasive species from native species. Taxonomy provides basic understanding about the components of biodiversity which is necessary for an effective decision-making about conservation and sustainable use. Taxonomic information is also essential for agencies and border authorities to detect, manage and control of Invasive Alien Species (IAS) which is the need of the hour. Hence, this lecture workshop provides us with a way, how important is Taxonomy? as it forms the basis for other molecular and genetic level research. It also helps to determine which areas need protection based on its inhabitants.
“Science Academies’ Lecture Workshop on Plant Taxonomy”
at
Department of Botany, PSGR Krishnammal College, Coimbatore

17th & 18th, February 2014

Name and address of the organization : PSGR Krishnammal College for Women
Peelamedu, Coimbatore 641004

Title : Plant Taxonomy

Convener : Dr. M. Sanjappa
CSIR Emeritus Scientist
Botanical Garden
University of Agricultural Sciences
GKVK, Bengaluru 560 065

Local Co–ordinator : Dr. W. Suganya
Assistant Professor
Department of Botany
PSGR Krishnammal College For Women
Coimbatore

Duration of the workshop : 17th -18th, February 2014

Venue : Chandra Seminar Hall
PSGR Krishnammal College for Women
Peelamedu, Coimbatore 641004

No. of participants : 120

Name & address of the resource persons : Annexure I

Tentative Budget : Annexure II

Name of the Bank : Central Bank of India, Peelamedu Branch

Branch Code/IFSC Code : 641016006/CBINO280913
Acc.No. : 3088291291
MICR No. : 641016001
Annexure I

List of Resource persons:

1. **Dr.M.Sanjappa**  
   CSIR Emeritus Scientist  
   Botanical Garden  
   University of Agricultural Sciences  
   GKVK, Bengaluru 560 065  
   e-mail: sanjappam@ymail.com Mobile:09972035160

2. **Dr.R.R.Rao**  
   INSA Emeritus Scientist  
   Central Institute of Medicinal and Aromatic Plant  
   Allalasandra, GKVK PO, Bangalore  
   e-mail: raocimap@gmail.com Mobile : 09448852356

3. **Dr. G.V.S. Murthy**  
   Scientist - F  
   Botanical Survey of India , Southern Regional Centre  
   TNAU Campus ,COIMBATORE – 641 003  
   Tel : 0422 – 2432123,Mobile Number : 9442220115  
   e-mail : gvs.23.murthy@gmail.com

4. **Dr.C.Sathish Kumar**  
   Scientist - E2  
   Jawaharlal Nehru Tropical Botanic Garden and Research Insititute,Palode,  
   Thiruvananthapuram,Kerala-695562  
   e-mail:sathishkumar_57@rediffmail.com  
   Mobile:09446370133
Annexure-II

Number of participants of the “Science Academies’ Lecture Workshop on Plant Taxonomy”

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the College</th>
<th>No. of Participants</th>
<th>Total Number of Participants</th>
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<tbody>
<tr>
<td>1</td>
<td>Kongunadu arts and science college (autonomous), coimbatore</td>
<td>II M.Sc Botany-20 Research Scholars -12 Staff-1</td>
<td>32</td>
</tr>
<tr>
<td>2</td>
<td>Bhartahiar University</td>
<td>II M.Sc Botany-4 Research Scholars -4</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Govt. Arts College Coimbatore</td>
<td>II M.Sc Botany-18 - Staff-1</td>
<td>19</td>
</tr>
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<td>4.</td>
<td>PSGR Krishnammal College for Women</td>
<td>M.Sc Botany-48 Research Scholars -11 B.Sc Botany-32 -</td>
<td>91</td>
</tr>
</tbody>
</table>

Grand Total 150

“Science Academies’ Lecture Workshop on Plant Taxonomy” – Report

“Science Academies’ Lecture Workshop on Plant Taxonomy” was organised by the Department of Botany, PSGR Krishnammal College for Women, Coimbatore on 17.02.2014 & 18.02.14. The programme was convened by Dr. M. Sanjappa, CSIR Emeritus Scientist Botanical Garden, University of Agricultural Sciences GKVK, Bengaluru. The course was inaugurated by Dr. (Mrs). N. Yesodha Devi, Principal, PSGR Krishnammal College for Women, Coimbatore who emphasized the importance of plant Taxonomy in today’s Research. Dr. M. Sanjappa highlighted that taxonomy forms the basis of all current research areas like Biotechnology and Molecular Biology.
The Lecture workshop starts with the first lecture from Dr. M. Sanjappa on Western Ghats: World Heritage Site & Hotspot. He starts with the quote “Biodiversity is the total variety of life on earth. It includes all genes, species and ecosystems and the ecological processes of which they are a part” (Convention on Biodiversity, 1992). Variety and variability of living organisms on earth. He spoke about species diversity highlighting the number of species in different groups in the world and in India. He told that the total Percentage share of Indian species is about 47,147. India’s milk output is touched 121.5 million tonnes during 2011 year, up 4% vis-à-vis the previous year. The country produced about 116 million tonne of milk in 2010. When he was telling about genetic diversity, he told each species is a repository of immense amount of natural habitats. The number of genes range from about 1000 in bacteria, 10,000 in ferns, 400,000 in flowering plants and mammals. Mus musculus (Rat) has more than 100,000 genes.
He also emphasized that Pollinators secures our food supplies. He also added that 71 of ~100 crop species which provide 90% of food worldwide rely on pollinators for their production. €22.8 to 57 billion = global economic value. New medicines from cone snail venom toxins. Pain Killer Prialt® reputed to be 1000 times more potent than morphine. An extract from Hibernating Bear blood restores bone quality and could be used to treat osteoporosis. Thus biodiversity keeps us healthy & helps us respond to environmental disasters.

Importance of Western Ghats Exhibits climatic diversity and geo diversity with reference to minerals, Controls climate as they are adjacent to Arabian Sea (South West Monsoon) , Covers 6 states and 51 districts, Home for more than 40 tribal groups, More than 40% of the Indian rivers originate from this area, Highest Biological Diversity

**Dr. C. Sathish Kumar, Scientist E2, Jawaharlal Nehru Tropical Botanic Garden & Research Institute from Trivandrum gave a lecture on orchid biology- its morphology, structure & types.** He also said that Orchids are one of the largest, most diverse, and most ancient families of flowering plants on earth. There are 25,000 species of orchids with 1,20,000 additional hybrids. There are about 900 recognized genera in the orchid family. The number of orchid species equals about four times the number of mammal species, or more than twice the number of bird species. It also encompasses about 6–11% of all seed plants. He gave all the participants about the VIP Orchid Garden of Singapore and the strategy they follow in the VIP garden. They name a hybrid as a Symbol of goodwill, To foster closer ties with nations. From 1957 the Singapore Government began to honour State Visitors and other VIPs by naming selected orchid hybrids after them. To mention a few Aranthera Anne Black, named after Lady Black, wife of the former Governor of Singapore, Sir Robert Black, Holttumara Indira Gandhi, Ascocenda Shah Rukh Khan. He also pointed out that there are mimic orchids like Bee orchid, Dove Orchid, Ghost orchid, Mosquito Orchid, Frog Orchid, Donkey Orchid, Man Orchid, Monkey Orchid Tiger Orchid. This lecture was followed by the lecture on Botanical illustrations. He emphasized the importance of illustrations to all the participants.
Dr. R. R. Rao, INSA Emeritus Scientist from Bangalore enlightened the minds of the participants with his rich expertise in the field of Taxonomy. He gave much information about the medicinal plants and their active principles. He also highlighted the importance of commercialization of the products. He also motivated all the participants to take up research on medicinal plants and also to go for globalization of plant products. The participants were highly impressed by the knowledge of the resource person and had a good interaction with him.

Dr. G. V. S. Murthy, Scientist F, Botanical Survey of India, Southern Circle from Coimbatore was the last resource person of the lecture workshop. He gave the lecture on the biodiversity of Tamil Nadu and its conservation. He gave lot of information about the Hills of Tamil Nadu and its resourcefulness. He also stressed on the importance of Taxonomy in today’s research.

In the concluding session Dr. M. Sanjappa highlighted the importance of Taxonomy in today’s research. He also told about the upcoming job opportunities for the taxonomists as quarantine officers at the Airport etc.

All the participants had a discussion session at the end where all the resource persons answered their queries and thus this lecture workshop had laid a platform for their futuristic research.

We gratefully acknowledge all the Science Academies - Indian Academy of Sciences, Bangalore, Indian National Science Academy New Delhi, The National Academy of Sciences, India, Allahabad for their financial support in the successful conduct of the two days “Science Academies’ Lecture Workshop on Plant Taxonomy” on 17&18 February 2014.
Glimpses of the Science Academies Lecture Workshop on Plant Taxonomy

Dr. N. Yesodha Devi, Principal, PSGRKC inaugurating the Science Academies Lecture Workshop on Plant Taxonomy, Dr. V. Sashi, Dr. M. Sanjappa, Dr. C. Sathish Kumar are at the Inaugural Session.

Dr. M. Sanjappa highlighting about the Science Academies and about the importance of the workshop on Plant Taxonomy. Dr. N. Yesodha Devi, Principal & Dr. V. Sashi Head of the Department of botany are in the picture.
Dr. M. Sanjappa delivering his lecture on biodiversity of western ghats

Dr. Sathish Kumar at his interaction with a participant

Participant asking a question to Dr. Sathish Kumar
Dr. R. S. Meera Bai, Associate Professor of Botany introducing Dr. R. R. Rao to the audience

Dr. R. R. Rao delivering lecture on Bioprospection of Medicinal Plants

Dr. R. R. Rao answering to the participants question
Dr. R.R. Rao explaining a concept to the participant

Dr. GVS. Murthy delivering his lecture

Interaction of the resource persons with the participants