

Report on

Orientation Program on Plant Morphology, Anatomy and Conservation of Medicinal Plants for the School Students



Date: 4th January, 2016

Venue: Transdisciplinary University (TDU), Bangalore

Participating School: Maruthi International School, Tumkur

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Background

The cities have witnessed an incredible urbanization of late, in the name of modernization leading to rapid diminishing of green cover. It is necessary to maintain an ecological balance, a truth not sufficiently appreciated and understood in the world of urbanist advocacy. Cities need both beauty and function of nature to regulate pollution, restore and improve human and ecosystem health. Understanding and appreciation of urban ecosystem and planning development in harmony with nature can go a long way in building a healthy urban ecology and therefore, pertinent to mould the young mind in conserving the biotic components in a whole hearted and conscious manner.

In this context, TransDisciplinary University (TDU) has developed a one-day orientation program for the students who are pursuing their secondary education. This program gives students an opportunity to learn the basics of taxonomy, anatomy and methods to conserve plants in a simple format so that it is easily comprehended. This program is designed in line with their school curriculum. This will broaden their understanding and can take up further studies in the subject.

Session 1

The orientation program for the students of 7th, 8th, 9th and 10th standard was organized on 4th January, 2016 at Transdisciplinary University campus. Around 44 students participated.

The program began with an introductory session by Dr. Abdul Kareem. He explained about the medicinal plants diversity and its importance and need for their conservation. He briefly informed about the conservation initiatives that are already underway in the country.



Session 2

The next session saw the students actively engaged by Sri Somashekhar. He dealt upon the components of biodiversity and various ecosystem that prevail within. He kept the audience interested by introducing few simple interactive games. He called two students to the stage and asked one of them to pick up one of the fruit/seed kept in a box and narrate its feature without seeing it. Then he asked the other student to identify the fruit/seed based on the narration given. The stage was then opened up to all the participants to come out with answers. He then showed the fruit/seed to the audience and some of the students had correctly identified while some of them not. They realised that they couldn't identify correctly though they have seen it and are very familiar which are available in and around their school campus. Sri Somashekhar then explained about various biodiversity components, species and genetic diversity, intraspecific variations and dependence of mankind on nature for food, fiber, fuel, fertilizer, fumigants, fence, floss, fur and so on and so forth.



Later, he asked the students to come to the dias and observe various seeds, fruits and raw drug samples that were on display. In this fashion, the students could relate easily with the various aspects of biodiversity hitherto unaware of to the students.

Session 2

This session saw students explore the ethnomedicinal garden which harbors around 750 medicinal plants dotted by rare and endangered species. It has 13 thematic gardens depicting the diversity of medicinal plants. Dr Dhatchinamoorthy taught the basics of taxonomy and morphology to the students through specific characters of leaf, flower, branching, smell/aroma, historic events, plant-animal interactions etc., and its threat status.





Session 3

In the penultimate session, Dr. Noorunnisa Begum gave hands on training on plant anatomy. She demonstrated the preparation of anatomy slides by taking sections of a dicot and a monocot stem of *Stereospermum cordifolia* and staining technique. Students were invited to the stage to observe the specimen through the microscope and examine the xylem, phloem, epidermis & cortex. The students were then asked to form a group of five each and prepare similar slides. It was noticed that students have imbibed the knowledge and were able to prepare good slides.

Session 4

It was felt that students should know some basic herbal remedies for their Primary Health Care. Mrs. Chanda Pandey, a Traditional Healer was called in to explain about the uses of some of the medicinal plants in addressing primary health conditions. She taught students how to prepare basic home remedies for taking care of head aches, skin problems, fever, hair fall and dandruff. Students were all ears to the healer and were encouraged to ask questions.



The program culminated with a feedback followed by presentation of certificates to the students by Sri. Arun Seetharaman, Consultant, TDU. The students visited the ethno-botanical garden and purchased some saplings for their home gardens.

Learnings:

The students made note of all the information given to them and elicited interest in identifying more species and growing them in their school and homes. They also understood fairly well the basics of taxonomy and anatomy and the need for conservation of the threatened species. They also learned about some of the basic preparation of herbal medicine for primary health care.

Feedback:

It was suggested that the lectures can be made more interesting by using the aid of a visual media. Students can be given prior information on saplings that are available for sale at the campus. Some sessions can be made more absorbing by including games as a tool of teaching.

Course coordinator:

Dr. M. Abdul Kareem

Associate Professor,
TransDisciplinary University (TDU),
No. 74/2, Jarakabande Kaval, Attur Post,
Via Yelahanka, Bangalore 560106
Ph: 080-28568006 Mob: 09343130299

Resource Persons:

1. Dr. Abdul Kareem (Ethnobotanist), Associate Professor
2. Dr. Noorunnissa Begum (Plant anatomist), Senior Assistant Professor
3. Mr. B.S. Somashekhar, Associate Professor
4. Mrs. Chanda Pandey, Traditional healer
5. Mr. Dhatchinamoorthy, Botanist
6. Sri. KSN Prakash, Program Officer
7. Ms. Anu.V, Senior Research Fellow

List of Students participated in the school program

VII Standard Students

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| 1 | Vipin N Muddappa |
| 2 | N.B. Prathyush |
| 3 | Bhuvan C |
| 4 | Shreyas S |
| 5 | Chinmay S Jain |
| 6 | H.B. Hrushikesh |
| 7 | Shreyas S Rao |
| 8 | Shashank R |
| 9 | Akanksh |
| 10 | Kishan J Vadia |
| 11 | Kusum K S |
| 12 | Gagana Lokesh |
| 13 | Aadhya S |
| 14 | Ananya K H |
| 15 | Niriksha M |

VIII Standard Students

- 1 Nihar G Setty
- 2 Prajwal M K
- 3 Jeeth P Vadia
- 4 Mohammed Ibrahim Anwar
- 5 Nithish Ramu
- 6 Taakshitha B M
- 7 Vivek V Kashyap
- 8 Yashonandan.P
- 9 Bhuvan Matam

IX Standard Students

- 1 Avani H Wadia
- 2 Aisiri C Shekhar
- 3 Suksha V
- 4 Anees Fathima Anwar
- 5 Ananya P
- 6 Priyanka G
- 7 Raghvendra Surya T R
- 8 Shivayogi
- 9 Komal G.D
- 10 Vignesh G
- 11 Adnan M I
- 12 Veer Vidhu D Kaval

X Standard Students

- 1 Vansi priya
- 2 T H Namitha
- 3 Monisha H C
- 4 Keerthana N
- 5 Bhavana K
- 6 Poornima K
- 7 Devika N
- 8 Prerana R
- 9 Yoganarasimha T K
- 10 Preetham K H
- 12 Adithya V H