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RESEARCH FINDINGS

Arid Forest Research Institute, Jodhpur

- Some endemic species were recorded in Rajbhavan area of Mt. Abu, Rajasthan, namely *Asparagus aethiopicus*, *A. setaceus*, *Holmskioldia sanguinea*, *Russelia equisetiformis*, *Solanum seafortianum* etc.
- Insects /pests collected and identified from nurseries and around Jodhpur are : Hemipteran sap suckers *Nezara viridula* (Pentatomidae), *Coridius janus* (Dinidoridae), *Dysdercus cingulatus* (Pyrrhocoridae), *Chrysocoris* sp. (Scutelleridae) scale insect and; Lepidopteran defoliators *Ariadne merione* (Nymphalidae) and *Colotis etrida* (Pieridae) on *Salvadora persica*, *Cassia fistula*, and *Capparis decidua*, *Euchrysops cnejus* (Lycaenidae) on *Prosopis cineraria*, *Danaus chrysippus* (Nymphalidae) on *Albizia lebbeck*. One species of predator *Cheilomenes sexmaculata* (Coccinellidae) found in association with sap suckers on *Adenium* sp., Shisham and Citrus species was also identified.

Forest Research Institute, Dehradun

- Study on influence of forest fire on soil organic carbon and available nutrient status revealed that there was no significant difference in available N, P and K in burnt and un-burnt Chirpine forests in 2017-18 post forest fire period in Tons forest division of Uttarakhand. However, an overall increase in Soil Organic Carbon (SOC) has been observed in the burnt forest sites during the first post-fire year, which might be because of *in-situ* addition of organic matter after burning. No significant difference was observed in soil pH for soil nutrient pool in tropical moist deciduous Sal forest and Himalayan sub tropical pine forest. However, slightly higher SOC in upper soil depth and higher available N were observed in Tropical moist deciduous Sal forest compared to Himalayan sub tropical pine forest. Available P & K was higher in Himalayan sub-tropical pine forest compared to tropical moist deciduous Sal forests.
- 250 bacterial colonies were isolated from soil samples collected from Kaithal & Fatehabad districts of Haryana and Muktsar & Bhatinda districts of Punjab. Soil micro flora changed at lower depths (30-60 and 60-90 cm) and the soil was occupied by spore forming gram positive bacteria and it may be the reason that they survive the high soil pH at lower depths.

- Five samples of lepidopterous larvae/cocoons were collected from Haryana from different forestry trees: *Cassia fistula*, *Tectona grandis* and *Dalbergia sissoo*, and also *Eutectona machaeralis* for rearing in the laboratory for emergence of *Apanteles* spp. and some unknown lepidopterous larvae were also reared. 20 specimens of *Apanteles* emerged. Two species *A. darjeelingensis*, *A. nilamburensis* have been identified up to species level. Photographs of various taxonomic structures of *Apanteles nilamburensis*, *A. darjeelingensis*, have been taken for their detailed microscopic structures, helpful in identification. SEM photography of *A. ruidus* emerged from *Hyblaea puera* (Teak defoliator) was also carried out. Slide preparation and species identification of *Apanteles* spp. are in progress under the project "Studies on taxonomy and host range of larval parasitoids, *Apanteles* spp. (Hymenoptera: Braconidae) from Uttarakhand and Haryana".
- About 40 specimens of egg parasitoids (Trichogrammatidae, Scelionidae, Eulophidae and Mymaridae) have been recovered from the collected samples. Eight insect egg samples were earlier collected from different forestry trees: *Tectona grandis*, *Pongamia pinnata*, *Azadirachta indica* and *Acacia latifolia* and continued for their laboratory rearing. Eight slides have been prepared and identified up to species level, viz.: *Aphelinoidea longiclavata*, *Neotrichoporoides viridimaculatus*, *Paracentrobia magniclavata*, *Oligosita novisanguinea*, *Oligosita meerutensis*, *Oligosita gilvus*, *Telenomus* sp. and *Ufens gurgaonensis*. Two different species of genus *Telenomus* of the family Scelionidae emerged from egg masses on *Populus deltoides* and *Eucalyptus* sp.

Slide preparation and photography of egg parasitoids are in progress under the project “Studies on diversity and host range of hymenopteran egg parasitoids from northern India (Haryana, Uttar Pradesh and Uttarakhand)”.

- Database on species of butterflies under different forest types was updated by adding new butterflies and their food plants. GIS based map of individual species of butterflies of Uttarakhand along with depicting forest sub-types and names was designed & generated as a draft model for all the species in the state under the project “Butterflies associated with different forest types/sub-types in Uttarakhand”.
- Larvae of 4 species of lepidoptera collected from ban oak trees during the surveys were reared for life history studies in the laboratory while 20 are in pupal stages under hibernation. Life cycle of cerambycid stem borer, *Xylotrechus basifuliginosus* is being studied within the logs kept in the laboratory & in the field under the project “Insect pests of Western Himalayan Oaks and their Control”.
- 611 species of Micro- Lepidoptera, Homoptera, Orthoptera and Isoptera in cabinet No.101, 102, 105, 106, 109, 113 and 115 were digitized and about 1200 photographs of these species were edited and stored. Database was updated for

editing species holding data in the database under the project “Digitization and enrichment of National Forest Insect Collection (NFIC) of Forest Research Institute, Phase-II (minute insects)”.

- Collection of pteromalid parasitoid was done from FRI and nearby areas. Rearing of host insect stages for parasitoid emergence in the laboratory is being carried out under the project “Diversity study of pteromalid parasitoids (Hymenoptera: Pteromalidae) of Northern India with special emphasis on bio-efficacy of some selected parasitoids”.
- Two populations of *Quercus semicarpifolia* (QS-19 and QS-20) grown in the forests of Mudhal, Tiuni and Dehradun were characterized for the first time for total phenolic contents determined in their leaves.
- One population (AP 10) of *Valeriana jatamansi* comprising 24 accessions collected from Arunachal Pradesh was characterized for the first time for their volatile constituents determined in their rhizomes.
- *Mangifera indica* knotwood was found to exhibit fungi toxicity against *Pycnoporus sanguineus* and *Oligoporus placenta*.

CONSULTANCY

- ICFRE presently works on nine consultancy projects, which are awarded by Tehri Hydro Development Corporation India Ltd; Himachal Pradesh Power Corporation Limited; Karnataka State Official Authority; Uttarakhand Jal Vidyut Nigam Limited (UJVNL); MoEF&CC, GoI, New Delhi; Coal India Limited, Kolkotta; NTPC Ltd., NOIDA and NMDC Ltd., Hyderabad.

TREE GROWERS MELA/ KISAN MELA

Institute	Participated/organized	Duration	Place
IWST, Bengaluru	Krishi Mela	4-6 January 2019	Shivamogga, Karnataka
AFRI, Jodhpur	Paschimi Rajasthan Udyog Hastshilp Utsav 2019	4-14 January 2019	Jodhpur
	Kisan Mela	28 January 2019	Central Arid Zone Research Institute, Jodhpur
RFRI, Jorhat	Science Exhibition	29-30 January 2019	Digboi College, Assam



WORKSHOPS/ SEMINARS/ MEETINGS

S. No.	Topic	Duration	Beneficiaries
Forest Research Institute, Dehradun			
1.	To Finalize the Calendar of Activities for Promoting Awareness among School Children about Forests and Environment	4 January 2019	Dy. Commissioners of Kendriya Vidyalaya Sangthan and Navodaya Vidyalaya Sangthan
Institute of Forest Genetics and Tree Breeding, Coimbatore			
2.	Securing Wood Demand through Enhancing Productivity of Planted Forests	29-30 January 2019	Scientist, Wood Based industries, Academician from different universities, research scholar, NGO, Federations of wood industries, Handicraft artisans and tree growing farmers
			
Arid Forest Research Institute, Jodhpur			
3.	Climate Change and Carbon Sequestration in Forest Ecosystem	17 January 2019	36 Scientists, Officers, Technical Staff and Research Scholar
Rain Forest Research Institute, Jorhat			
4.	FRCBR activities and strengthening of tissue culture lab.	22 January 2019	06 Add. Commissioner-NBM, FRCBR Head, Scientist and SFD officials
5.	Identification of Drivers of Deforestation in Meghalaya	29 January 2019	32 representatives from Academia, NGO, State Government Departments, including Forest and Environment Department, Government of Meghalaya, etc

Himalayan Forest Research Institute, Shimla

6.	झारखण्ड में केन्दू की पत्तियों के वार्षिक उत्पादन की मात्रा और राजस्व उत्पन्न करने और इसके बेहतर प्रबंधन के लिए इसका विश्लेषण	5 January 2019	Scientists and officers
7.	Wetland: Threats, Management and Rejuvenation Strategies	30 January 2019	Scientists, officers, research and technical support staff

Institute of Forest Biodiversity, Hyderabad

8.	Use of Fly Ash in Forestry Applications and Rejuvenation of Waste/Degraded Lands	19 January 2019	-
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Seminar on Use of Fly Ash in Forestry Applications and Rejuvenation of Waste/Degraded Lands

TRAINING PROGRAMMES

S. No.	Topic	Duration	Beneficiaries
Forest Research Institute, Dehradun			
1.	Forest Certification in Indian Context	14 - 18 January 2019	20 Officers from 14 states
2.	Conservation & Management of Coastal Ecosystem	28 January - 1 February 2019	12 Commandants of Coast Guard



Training on Forest Certification in Indian Context



Training on Conservation & Management of Coastal Ecosystem

- | | | | |
|----|--|--------------------|--|
| 3. | HRD Training on “Research Methodology and Statistical tools in Forestry” to the Technical staff of ICFRE | 21-25 January 2019 | Asst. Chief Technical Officer,
Sr. Technical officer ,
Sr. Technical Assistant &
Technician |
|----|--|--------------------|--|



HRD Training on “Research Methodology and Statistical tools in Forestry” to the Technical staff of ICFRE

Institute of Wood Science and Technology, Bengaluru

- | | | | |
|----|--|---------------------------------|---|
| 4. | Advances in Wood Production and Utilization | 7 - 11 January 2019 | 17 IFS Officers |
| 5. | Bamboo Technical Support Group (BTSG)- ICFRE | 28 January -
1 February 2019 | 21 Farmers of Karnataka,
Telangana and Andhra
Pradesh |

Tropical Forest Research Institute, Jabalpur

- | | | | |
|-----|--|--------------------------------------|--|
| 6. | Plant Tissue Culture Techniques and its Applications | 19 December 2018-
5 February 2019 | 16 Unemployed for skill
development |
| 7. | Value Addition and Marketing of NTFPs
(Plant origin):NTFP Products / Medicinal Plants | 8-22 January 2019 | 19 Unemployed for skill
development |
| 8. | Biodiversity of Sapura plateau with special
reference to dependencies of tribal's | 10 January 2019 | 35 SFD, farmers and
herbal healers |
| 9. | Environmental Awareness and Biodiversity
Conservation | 15 January 2019 | 16 Students |
| 10. | Nursery Techniques and Organic Manure
preparation | 25 January 2019 | 100 Students |

Arid Forest Research Institute, Jodhpur

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|-----|--|-----------------------|---|
| 11. | Forestry in Climate Change and Mitigation' | 16 to 18 January 2019 | Personnels from Watershed
Development, Ground Water
Board, PHED, PWD, Animal
Husbandry, Police Dept.,
Agriculture, Zila Parishad,
Horticulture, Water
Resource Dept.
and Electricity Dept. |
| 12. | Biodiversity and Ecosystem Services | 22 to 24 January | |

13.	Waste Management	11 December 2018 to 4 February 2019	17 Science graduates with no jobs
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Rain Forest Research Institute, Jorhat

14.	Bamboo Propagation, Nursery, Plantation Management and Bamboo Preservation Techniques	4 January 2019	42 Trainees of Forest Training School, Manipur
15.	Bamboo Propagation, Nursery, plantation Management and Bamboo Preservation Techniques	9 to 10 January 2019	30 Staff members of Forest department, Farmers, NGO, JMFC members students, teachers, artisans etc
16.	Capacity building training on value addition of bamboo	12 January 2019	25 trainees from 3 districts of Mizoram
17.	Role of Forestry in Sustainable Development of People	24 to 25 January 2019	20 IFS officers of different states of India
18.	Bamboo and Bamboo-based Composites for Engineering Applications	29 January 2019	20 Scientists, Academicians, Technologists, Students & Teachers



Training on Bamboo and Bamboo-based Composites for Engineering Applications

POPULARIZING FORESTRY THROUGH ALL INDIA RADIO

Programme Topic	Channel	Date
Forest Research Institute, Dehradun		
“वन मिट्टी के स्वास्थ्य पर जंगल की आग का प्रभाव”	All India Radio, Dehra Dun	13 January 2019
“दीमक एवं उसका नियंत्रण”	All India Radio, Dehra Dun	30 January 2019
“औषधीय एवं सुगंधित पौधों की खेती द्वारा आय सृजन”	All India Radio, Dehra Dun	-

- TFRI, Jabalpur organized environmental awareness programme under "Prakriti" programme on 21 January 2019 for the students of Jawahar Navodaya Vidyalaya, Bargi.
- FRC-SD, Chhindwara organized environmental awareness programme under "Prakriti" on 29 January 2019 for the students of Kandriya Vidyalaya-2, Chhindwara.
- AFRI, Jodhpur organized following programs/activities in the month of January 2019 under PRAKRITI program.
 - On 28 January 2019, a lecture on "Forest and Environment Conservation" to 120 students of class 9th and 11th of Kendriya Vidhyalaya, Army no. 1, Jodhpur. Extension literature of institute was also given to Vidhyalaya.
 - 29 January 2019, 272 students of class 6th, 7th and 8th from Kendriya Vidhyalaya, Army no. 2 visited AFRI. At the beginning of visit Director AFRI, and the Scientists/Officers of AFRI interacted with the students.
 - On 30 January 2019 a lecture was delivered on "Forest and Environment Conservation" to 487 students from class 6th to 12th at the Principal Jawahar Navodaya Vidhyalaya, Jojawar (Pali). Extension literature was also given to, Dr. J.C. Kaluawat. An exhibition showing research activities of AFRI through posters, forest products, plants raised in AFRI nursery was put up at the Vidhyalaya. 487 students and staff of school visited the exhibition. Plantation technique was also demonstrated to the students.
 - On 31 January 2019, a lecture was delivered on "Forest and Environment Conservation" to 118 students from class 9th and 11th of Kendriya Vidhyalaya (Army) Banad, Jodhpur. Extension material was also given to the Principal Shri Vishnu Dutt Tailor. An exhibition showing research activities of AFRI through posters, forest products, plants raised in AFRI nursery was put up at the Vidhyalaya. Staff and 313 students of class 6th, 9th and 11th visited the exhibition.
 - IFP, Ranchi organized one day training and demonstration programme on "Nursery Maintenance" at Jawahar Navodaya Vidyalaya, Mesra, Ranchi under 'Prakriti programme on 5 January 2019. 46 teachers and students attended the programme.

PRAKRITI PROGRAMME



AWARD

- Sh. Rajendra Kumar Sharma, Private Secretary to Director, HFRI has been awarded Meritorious Life Time Achievement Award by Director General, ICFRE during Republic Day ceremony at FRI, Dehradun on 26 January 2019.



AWARENESS AND DEMONSTRATION PROGRAMMES

- Research and Development activities of RFRI, Jorhat, Bamboo Cultivation, Propagation, Nursery Management, Value addition & Bamboo Preservation Techniques, Biotechnology

and Tissue Culture, Lac Cultivation and Vermicomposting etc. on 9 January 2019. 26 Students of Blooming Lotus school, Titabar attended the programme.

HR NEWS

Appointment

Name of Officer	Dated
Shri Dinesh Paul, DCF, HFRI, Shimla	01-01-2019

Repatriation

Name of Officer	Dated
Dr. R. Thanga Pandian, IFS, DCF, FRI, Dehradun	12-01-2019

Retirement

Name of Officer	Dated
Dr. Ranjana Arya, Sci. G, AFRI, jodhpur	31-01-2019

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Dr. Suresh Gairola, Director General

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