



**Indian Council of
Forestry Research
and Education**

ICFRE NEWSLETTER

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VAN MAHOTSAV 2020



Van Mahotsav celebrated at HFRI, Shimla

FRI, Dehradun celebrated of Van Mahotsav 2020 programme at KV, ITBP, Dehradun on 17 July 2020 under PRAKRITI. Smt. Richa Misra, Head, Extension, Forest Research Institute, Dehradun welcomed the participants and briefed them about the importance of the occasion and the events. Shri Arun Singh Rawat, DG, ICFRE graced the occasion as Chief Guest and addressed the gathering stressing on the linkage between tree plantation and the country's commitment at the Global forum. HFRI, Shimla; IFGTB, Coimbatore; AFRI, Jodhpur; IFP, Ranchi; IFB, Hyderabad and FRC-SD, Chhindwara also celebrated Van Mahotsav 2020 during the month of July 2020.



Forest Research Institute, Dehradun

- Economic analysis and compilation of agriculture crops yield of *G. arborea* and *E. officinalis* based agroforestry models at Dhaluwala (Haridwar) and Fatehpur Pelio (Saharanpur) sites. Review of literature on *G. arborea* and *E. officinalis* based agroforestry practice is in process. Maintenance and monitoring of plantation of *G. arborea* and *E. officinalis* at above sites is in progress under the project "Development of *Gmelina arborea* and *Emblica officinalis* based agroforestry models on degraded lands in Uttarakhand and Uttar Pradesh".
- Economic analysis and compilation of agriculture crops yield of Kachnar (*Bauhinia variegata*), Bhimal (*Grewia optiva*) and Kadam (*Anthocephalus cadamba*) based agroforestry models at Dhaluwala (Haridwar) site. Review of literature on Kachnar, Bhimal and Kadam based agroforestry practice is in process. Maintenance and monitoring of plantation of Kachnar, Bhimal and Kadam at above sites is in progress under the project "Development of Kachnar (*Bauhinia variegata*), Bhimal (*Grewia optiva*) and Kadam (*Anthocephalus cadamba*) based agroforestry models on farmers land under rainfed conditions in Uttarakhand".
- Chemicals treatment experiments (Thio-urea and urea) for fibre extraction have been initiated and put on observation. Eco friendly fibre extraction method using cow dung has been initiated and put on observation. Stock solution of the fungal spore suspension in SDB has been prepared with fungi "*Aspergillus niger*" for treatment of bhimal twig. Experiment of fibre extraction, bhimal twigs by treating with fungi "*Aspergillus niger*" has been initiated. Review of literature was also done under the project "Livelihood improvement through sustainable utilization of *Grewia optiva* (Bhimal) in Uttarakhand".
- Total Eight samples of insect eggs were collected from New forest area and botanical garden Dehradun from different forestry trees: *Cassia fistula*, *Mesua ferrea*, *Populus deltoides*, *Mallotus philippensis*, *Morus alba* and *Quercus leucotrichophora*. Two egg parasitoids were emerged out from the collected egg samples one species of genus *Anastatus* of the family Euplemidae were emerged from the bug eggs on *Mallotus philippensis* and One species of genus *Arachnophaga* family Euplemidae were emerged out from otheca on *Morus alba*. Seven egg parasitoids were identified up to species level which were sorted out from the

previous collected sweeping samples: *Apoleptomastix* sp, *Callipteroma sexguttata*, *Microterys* sp., *Prosoligosita perplexa*, *Trichogramma hebbalensis*, *Trichogramma sembilidis* and *Trichogramma chilonis*. Research paper work on record of *Ooencytrus* from the eggs of bug of family Coreidae from *Dalbergia sissoo*, photography and slide preparation are also in progress under the project "Studies on diversity and host range of hymenopteran egg parasitoids from northern India (Haryana, Uttar Pradesh and Uttarakhand)".

- A Field survey was carried out in Deoban, Chakarata Forest Division, Dehradun District, Uttarakhand, for collection of data and insect material. Collections were made of the Cerambycid borer, *Xylotrechus basifuliginosus* on Kharsu oak, *Quercus semecarpifolia* trees Deoban RF, Chakarata Forest Division for carrying out experiments on its biology. Emergence, mating, egg laying was recorded and collected. Experiments were laid out and are being continued in the laboratory. 25 quadrates of 10m x10m were laid out in the un-infested Kharsu oak forest for recording stands parameters i.e. gbh, density, tree mortality and vegetation composition and disturbance. Studies on the life cycle of 3 species of lepidopteran defoliators (2 Lymantriidae and 1 Geometriidae) were being carried out under the project "Insect pests of Western Himalayan Oaks and their Control".
- Digitized 237 insect types and about 912 photos of these types were taken. Photographs were saved in Tiff, Jpeg and compressed forms. Edited photographs of 142 species of cabinet 136. Compressed all the photographs of cabinet 87, 106 and 115. All the photographs of the un-accessioned species of these cabinets, clicked earlier, were renamed (given accession nos). Corrections in the database records, based on the verification report, of 1612 accessions/species were done in the cabinets 31 to 37 under the project "Digitization and enrichment of National Forest Insect Collection (NFIC) of Forest Research Institute, Phase-II (minute insects)".
- Sampling of moths was carried out for 4 days in the 3C/C2a Moist Shiwalik Sal Forest in Nauri and Mundiapani areas of Lansdowne Forest Division, Kotdwar, Pauri Garhwal District, Uttarakhand. Moth screen with CFL lamps were used inside the forest area at night from 8:00pm -11:00 pm to attract moths, daily. Over 45 species of moths were

SIGNIFICANT RESEARCH FINDINGS

sampled and 11 specimens were also collected for identification besides baseline parameters of sites under the project “Assessment of Species Diversity of Heterocera (moths) across the Shiwalik Landscape of Northern India and Development of a Database”.

- Proximate analysis and quantitative estimation of nutritional constituents of *Rubus niveus* fruits.
- CIEL*a*b* analysis of silk, wool and cotton fabrics dyed with natural dyes derived from *Prosopis juliflora* aerial biomass.
- Analysis and interpretation of data pertaining to quantitative estimation of Azadirachtin 'A' & 'B', nimbin and salanin in Neem seeds from selected progenies.
- Cross-linking of guar gum has been done using citric acid. The products have film forming properties.
- Betulin, the marker triterpenoid, content was determined in the bark of three populations of *Betula utilis*, using HPLC, grown in Govind Ghat, National Park, Chamoli; Pindari, Rudraprayag and Darma Valley, Pithoragarh.
- Extracts isolated from the needles of two populations of *Taxus baccata* found in Bhukkitop, Uttarkashi and Gheas, Badrinath, Chamoli were purified using column chromatography for their 10-Deacetylbaccatin-III.assisted screening.
- Essential oil from the leaves of *Cupressus torulosa* was isolated (yield 0.38%) using steam distillation and its composition was determined with the aid of GC-MS. The oil was found rich in monoterpenoids. Its specific gravity, optical rotation and refractive index were also determined.
- A pot experiment was conducted to check the effect of bacterial strains on bioremediation and growth promotion of *Dalbergia sissoo* (Shisham), *Vachellia nilotica* (Babool), the final results showed that the Gram positive bacterial species (*Bacillus* sp. and *Streptococcus* sp.) were more efficient than the Gram negative bacterial species (*Enterobacter* sp. and *Pseudomonas* sp.) in plant growth promotion and bioremediation activities.

Workshops/ Webinars/ Meetings

S. No.	Topic	Duration	Beneficiaries
Forest Research Institute, Dehradun			
1.	Natural Dyes from Forest Biomass	24 July 2020	Academia, research, NGO, Industries KVICs, Central Silk Boards, State Silk Board and other stakeholder groups.



Webinar on Natural Dyes from Forest Biomass



Institute of Forest Genetics and Tree Breeding, Coimbatore

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|----|--|--------------|---|
| 2. | Conservation and Utilization of Cinchona in the present COVID-19 Situation | 16 July 2020 | Professors from FC&RI, TNAU, KMCH college of Pharmacy, Thiruvalluvar University, CEO and Senior Research Officers from ITM & HMCRC, Nagapattinam, Retired DFO and Range officers from TNFD and IFGTB Scientists |
|----|--|--------------|---|



Webinar on Conservation and Utilization of Cinchona in the present COVID-19 Situation

Institute of Wood Science and Technology, Bengaluru

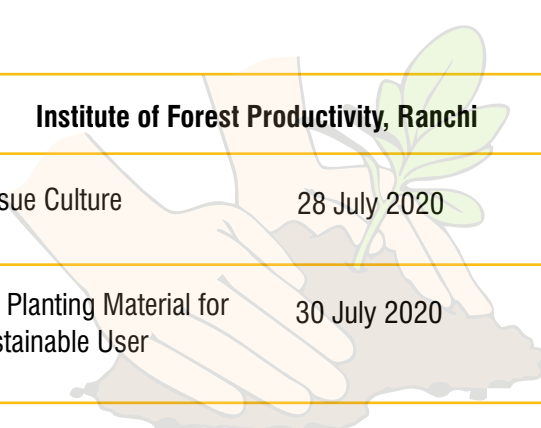
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| 3. | Furniture: Trade, Testing and Certification | 29 July 2020 | Wood based Industries, Researchers (ICFRE & other organisations) Wood based Industries, Researchers (ICFRE & other organisations) |
|----|---|--------------|---|

Tropical Forest Research Institute, Jabalpur

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|----|---|--------------|--|
| 4. | Land degradation: focus on forests degradation in India | 31 July 2020 | TFRI, Forest Research Centre for Skill Development (FRC-SD), Chhindwara, Universities, MPCST and University students |
|----|---|--------------|--|

Institute of Forest Productivity, Ranchi

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|----|---|--------------|--------------------------|
| 5. | Problems in Trees Tissue Culture | 28 July 2020 | Officers & Staffs of IFP |
| 6. | Importance of Quality Planting Material for Conservation and Sustainable User of Medicinal Plants | 30 July 2020 | Officers & Staffs of IFP |



Himalayan Forest Research Institute, Shimla

7. Role of Honey Bees as Pollinator in Forest Ecosystem and Impact of Anthropogenic activities on their population in the North Western Himalaya

29 July 2020

Research staff



Seminar on Role of Honey Bees as Pollinator in Forest Ecosystem and Impact of Anthropogenic activities on their population in the North Western Himalaya

Training Programme

S. No.	Topic	Duration	Beneficiaries
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Rain Forest Research Institute, Jorhat

1. Bamboo Nursery Management

29 June to 03 July 2020

Forest personnel



Skill Development Training on Bamboo Nursery Management and distribution of certificates at RFRI

Forest Research Centre Livelihood and Extension, Agartala

2.	Bamboo Plantation techniques	8 July 2020	Farmers
3.	Bamboo Craft Work for Hand Made Water Bottles	20 - 24 July 2020	Tribal youth of Tripura and other artisan stakeholders



Training on Bamboo Craft Work for Hand Made Water Bottles at Agartala

Consutancy

ICFRE, Dehradun presently working on ten consultancy projects, which are awarded by Tehri Hydro Development Corporation India Ltd; Himachal Pradesh Power Corporation Limited; Karnataka State Official Authority; MoEF&CC, Gol, New Delhi; Coal India Limited, Kolkata; NTPC Ltd Noida; NMDC Ltd, Hyderabad; Singreni Collieries Company Ltd., Kothagudem; Chhattisgarh Forest Department, Raipur; Deptt. of Forest and Environment, Bhubaneswar.

Prakriti Programmes

IFGTB hosted Online Knowledge Series as part of “Prakriti – Student Connect Programme” of Indian Council of Forestry Research & Education (ICFRE) to school and college students. “Talk to Scientist” was the main theme wherein the students got a chance to interact with the Scientists and Officials of IFGTB. The webinar series for school and college students was initiated in July 2020 and the topics covered in the month included

1. Butterflies – The Winged beauties of Nature
2. Plant growth regulators- Role & Functions
3. Biomolecules – The Genie in biological systems

300 students participated in the webinar series.





Miscellaneous

Institute	Special day/theme	Duration
FRI, Dehradun	National Moth Week 2020	18 to 26 July 2020
IFGTB, Coimbatore	International Day for the Conservation of the Mangrove Ecosystem	27 July 2020



Moths being observed at FRI campus during Moth week



International Day for the Conservation of the Mangrove Ecosystem celebrated at IFGTB, Coimbatore

HR News

Retirement

Name of Officer	Date
Dr. S.P.S. Rawat, Scientist-G, ICFRE (HQ)	31.07.2020
Dr. V. Jeeva, Scientist-F, ICFRE (HQ)	31.07.2020
Dr. B.M. Dimiri, Scientist-E, FRI, Dehradun	31.07.2020
Smt. Saroj Stephan, ACTO, FRI, Dehradun	31.07.2020

Patron:

Shri. A.S. Rawat, Director General, ICFRE, Dehradun

Editorial Board:

Dr. Sudhir Kumar, DDG(Extn.), Chairman
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Shri Ramakant Mishra, CTO, (M&Extn.), Member

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