



ICFRE NEWSLETTER

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Significant Research Findings

Forest Research Institute, Dehradun

- Forty sweeping samples were collected from districts of Pauri Garhwal, Tehri Garhwal, Rudraprayag and Uttarkashi in Uttarakhand. Fifteen samples of insect larvae and *Apanteles* cocoons were collected from different forestry trees i.e. *Alstonia scholaris*, *Murraya koenigii*, *Populus* sp., *Cassia fistula*, and *Quercus leucotrichophora* for their laboratory rearing which was continued for emergence of *Apanteles* spp. Twenty two *Apanteles* spp. were screened out. Two *Apanteles* species were identified upto species level: *A. caniae* and *A. prodeniae*, which were reared from Shisham defoliators: *Plecoptera reflexa* and *Hyposidra* sp.
- Total forty eight samples of insect eggs were collected from districts of Dehradun, Pauri Garhwal, Rudraprayag, Tehri Garhwal and Uttarakashi from different forestry trees i.e. *Acacia* sp., *Abroma augustum*, *Cassia fistula*, *Dalbergia sissoo*, *Holoptelea integrifolia*, *Mallotus philippensis*, *Populus deltoides*, *Quercus floribunda*, *Quercus leucotrichophora* and *Tectona grandis*. Six egg parasitoids were emerged and sorted out from collected egg bunches and sweeping samples and specimens were identified up to species level: *Trissolcus* sp. from eggs of bug on *Holoptelea integrifolia*, Eulophid from shisham leaf roller, Eulophid from oak leaf roller and *Baryconus* sp. from oak leaf roller and *Baryconus* sp. and *Trissolcus* sp. were screened out from collected sweeping samples.
- Field surveys were carried out in Chamoli district (Joshimath-Tapovan-Malari-Niti-Hanuman Chatti-Mana villages; Mandal in Kedarnath Wildlife Sanctuary and Rudraprayag district (Makkumath-Duggalbitta) during monsoon season. Sampling was carried out on 13 transects in 8 forest sub-types. A total of 47 species were sampled and 22 specimens of uncommon & rare butterfly species were collected and preserved. Herbarium specimens of 23 species of tree and shrubs were also collected from different forest sub-types for identification. A field survey was also carried out in Chakrata Forest Division, Dehradun district. Sampling was carried out on 1 transect in 1 forest sub-type. A total of 11 species were sampled with collection of 6 specimens. GIS based false colour composite maps of Mussoorie Forest Division, Chamoli district (Joshimath-Malari-Niti-Mana-Kedarnath Sanctuary & DeobanRF in Chakrata Forest Division, Dehradun district) area were generated for different forest sub-types for touring/sampling besides, updating of butterfly database.
- Ten days field survey was carried out on Kharsu (*Q. semicarpifolia*) in Chakrata Forest Division (Deoban RF), Uttarakhand for recording new pests and the extent of damage during monsoon season by the wood borers by laying down 45 quadrates (10mbx10m) for tree GBH, density & vegetation composition and infestation. Six borer infested logs with *Xylotrechus basifuliginosus* were collected from Kharsu forest and brought to the laboratory at FRI, Dehradun for life cycle studies on the borer along with two species of braconid and ichneumonid parasitoids. Six lepidopteran larvae of saturaniidae moth were also collected from Kharsu oak from Deoban RF besides other wood infesting beetles i.e. *Necydalis indicola* and unidentified cerambycids. Rearing experiments were continued on the life cycle of one cerambycid stem borer, *Xylotrechus basifuliginosus* on Kharsu oak logs for 2nd, 3rd & 4th instar larval stages. A field survey was also conducted to investigate wilting and drying of oak leaves & trees and borer infestation in Ban oak, *Quercus leucotrichophora* in Dalakhet area of Thanu range, Dehradun district bordering Tehri Garhwal district. Borer infested logs were collected and brought to the laboratory for further studies on the life history study of the borer.
- A visit to the districts of western Uttar Pradesh was done for the collection of *Clostera cupreata*, and observation of different

poplar fields. Experiment on wood production loss has been conducted in Roorkee. Experiment to study the biology of *Clostera cupreata* on ten clones of poplar has been conducted.

- Data on socio economic survey & population of *Grewia optiva* was recorded in all the three study sites viz. villages Jisau Kharaya, Chandau, Malhau & Tipau in Kali Block, Dehradun villages Walna, Khadgoli, Karchuli & Rikholi in Ranikhet, Almora and villages Kandi, Kolsi, Dhunga, Vithyani, Dhungadhar, Aamgoan & Thangar in Yamkeswar Block Pauri, Garhwal. Besides above, trees were lopped for remaining twigs, counted the number of sprouts on each treatment, measured the fodder quantity in each treatment and collected the samples for fibre and saponin determination in laboratory at FRI.
- Quaternisation of guar gum was done under dry conditions. DS of 0.1 was achieved. The reaction is upscaleable on pilot scale.
- Extraction of essential oil from *Chamaemelum nobile* (Roman Chamomile) was done. The complete analysis of essential oil showed butyl tiglate as the major compound.
- The preliminary litter fall study after post fires in Chirpine forests revealed that the litter fall of Chirpine forest maximum in summer and minimum in winter, and continuing around the year. The annual litter fall was maximum 7208 kg/ha in un-burnt and minimum 2098 kg/ha in burnt forest of Pharsula Beat, Lansdowne forest range, Lansdowne Forest Division of Garhwal

region. The annual litter fall was Maximum 6538 kg/ha in un-burnt and minimum 2917 kg/ha in burnt Chirpine forest of Sarna beat of Bhowali Range, Nainital Forest Division of Kumaon region of Uttarakhand.

- The vegetation study was conducted in different forest types of Uttarakhand and the maximum tree density was 440 trees ha⁻¹ in Himalayan Moist Temperate Ban Oak (*Quercus leucotrichophora*) Forests, Chailusain Beat, Lansdowne Forest Range, Lansdowne Forest Division, Duarikhali, Pauri Garhwal followed by 390 trees ha⁻¹ in Tropical Moist Deciduous Forests; C2b (i): Dehradun Sal (*Shorea robusta*) Forest, Gola Tapper, Barkot Forest Range, Dehradun Forest Division, 330 trees ha⁻¹ in Tropical Water Swamp *Diospyros peregrina* and *Phoebe lanceolata* Forests, Tin pani, Barkot Forest Range, Dehradun Forest Division and 320 trees ha⁻¹ in Himalayan Sub tropical Pine Forests, Chirpine (*Pinus roxburghii*) forests in Singtur Range, Tons Forest Division of Uttarakhand.

Arid Forest Research Institute, Jodhpur

- Photosynthetic rate estimated between seedling, coppice and mature plant of Neem, Ardu and Rohida revealed significant difference among seedling, coppice and mature plants of all three species. Highest photosynthetic rate was observed in coppice plants of Neem (9.35 $\mu\text{mol m}^{-2}\text{s}^{-1}$), Ardu (13.22 $\mu\text{mol m}^{-2}\text{s}^{-1}$) and Rohida (11.20 $\mu\text{mol m}^{-2}\text{s}^{-1}$) while lowest was in seedlings

Consultancy

ICFRE, Dehradun works 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.

Exhibition

Institute	Participated	Duration	Place
FRI, Dehradun	Destination Uttarakhand - 2019	18 to 20 July 2019	Uttarakhand Council of Science and Technology, Uttarakhand



FRI, Dehradun participated Destination Uttarakhand -2019

Workshops/ Seminars/ Meetings

S. No.	Topic	Duration	Beneficiaries
Forest Research Institute, Dehradun			
1.	Networking with KVKs activities under taken for the year 2019-2020	25 July 2019	Participants from different KVKs from Punjab, Haryana, Uttarakhand and Uttar Pradesh.
2.	DPR Preparation on the Rejuvenation of Yamuna River through Forestry Intervention	5 July 2019	Stakeholders of Uttarakhand
3.	DPR Preparation on the Rejuvenation of Yamuna River through Forestry Intervention	27 July 2019	All Stakeholders
Institute of Forest Genetics and Tree Breeding, Coimbatore			
4.	Periodical Research Seminar	12 July 2019	JRF, SRF, FA, Research Scholars
5.	Assessment of Adaptive Genetic Diversity in Teak and Sandalwood to Guide Conservation and Genetic Improvement Efforts	19 July 2019	Professors, Scientists from different Universities/ Organizations
6.	Implementation of Genome Rearrangement Identification Software Suite (GRIDSS) Programme in Nilgiris District and Probable GSDP Courses	22 July 2019	Scientists
7.	Conservation and Management of Deltaic Mangroves	26 July 2019	IFGTB staff
Arid Forest Research Institute, Jodhpur			
8.	Restoration of Degraded Aravalli Hills through Rainwater Harvesting, Afforestation and Soil Amendments for Increased Biodiversity and People Livelihood in Western Rajasthan	26 July 2019	Scientists, Engineers, Technicians, Farmers & Administrative etc.



Meeting to initiate the DBT funded project on Assessment of Adaptive Genetic Diversity in Teak and Sandalwood to Guide Conservation and Genetic Improvement Efforts



Seminar on Conservation and Management of Deltaic Mangroves

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| 9. | Forest Resource Dependency and Ecological Assessment of Forest Fringe in Gujarat and Rajasthan | 30 July 2019 | Scientists, Forest officers, Academician, Scholars, etc. |
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Rain Forest Research Institute, Jorhat

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| 10. | Assessment of Livelihood Initiative Techniques Using SWOT and AHP Based Decision Making Tools | 02 July 2019 | Students of Tata Institute of Social Sciences, Guwahati |
| 11. | Preparation of Detailed Project Report (DPR) for Rejuvenation of River Brahmaputra through Forestry Interventions | 19 July 2019 | People of Brahmaputra Basin |
| 12. | Eco-Tribe Sacred Plantation Mission | 23 July 2019 | Villagers, Govt Organizations, SHGs, School Students, NGO |



State level Consultation Meeting: Meghalaya



Eco-Tribe Sacred Plantation Mission

Himalayan Forest Research Institute, Shimla

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| 13. | Cold Desert Biosphere Reserve for the Preparation of UNESCO MAB Net Document | 26 July 2019 | Senior officers of the SFD, Representatives of Animal Husbandry, Agriculture, Horticulture, Tourism, HIMCOSTE, HPBB, Rural Development Departments, Central Govt. Organizations, Universities, NGOs, Scientists and Officers of HFRI |
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Workshop on Cold Desert Biosphere Reserve for the Preparation of UNESCO MAB Net Document

14.	Preparation of Detailed Project Report of Jhelum River	24 July 2019	Stakeholders of J&K
15.	Research Seminar	30 July 2019	Scientists, Technical staff and Researchers from HFRI



First consultative meeting on Preparation of Detailed Project Report of Jhelum River



Monthly Research Seminar

Institute of Forest Productivity, Ranchi

16.	Carbon Sequestration Pattern in Protected Areas of Jharkhand	16 July 2019	Officers, Scientists, Officials & Students
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Training Programmes

S. No.	Topic	Duration	Beneficiaries
Institute of Forest Genetics and Tree Breeding, Coimbatore			
1.	Plant Tissue Culture	4-5 July 2019	Officials and Staff of Research and Extension Circle, Indore, Madhya Pradesh
2.	Capacity building on the development of Tree Rich Biobooster to Irular Tribes in Forest Fringe Villages of Coimbatore, Tamilnadu: An Alternate Source of Livelihood Support	15 July 2019	Irular Tribes, Members of WSHGs of Senkuttai, Kuliur, Gopanari, Pattavayal and Maelpavi villages of Anaikatti, Coimbatore District
3.	Windbreak Tree Varieties	24 July 2019	Banana Growing Farmers



Members of tribal WSHGs undergoing training to operate the coir pith disc making machine



Training on Windbreak Tree Varieties

Tropical Forest Research Institute, Jabalpur

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|----|--|--------------|------------------------------|
| 4. | ग्रामीण आँगनों में जड़ी बूटी उद्यान की स्थापना पर एक दिवसीय कौशल विकास प्रशिक्षण कार्यक्रम | 10 July 2019 | Aganwadi women (Kundalikala) |
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Rain Forest Research Institute, Jorhat

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|----|--|-----------------|--|
| 5. | Bamboo Treatment House Construction and Awareness Generation | 8-10 July 2019 | - |
| 6. | Nursery Techniques | 10-24 July 2019 | Forest Officials, EDC & JFMC Members from Seven Forest Divisions of Eastern Assam Circle |

Himalayan Forest Research Institute, Shimla

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|----|--|--------------------|--|
| 7. | Capacity Building on Various Aspects of Forestry | 22 to 24 July 2019 | Officers and Frontline staff of Sarahan Wildlife Division (H.P.) |
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Training on Capacity Building on Various Aspects of Forestry

Memorandum of Understanding

- Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore (Indian Council of Forestry Research and Education (ICFRE)), has signed Memorandum of Understanding (MoU) with Tamil Nadu Forest Plantation Corporation (TAFCON), Tiruchirapalli on 19 July 2019 for collaborative research in plantation forestry. Shri. R. K. Upadhyay, IFS, PCCF, HoFF & Chairman, TAFCON graced the occasion as Chief Guest. Dr. Mohit Gera, IFS, Director, IFGTB, Coimbatore and Shri K. V. Girdhar, IFS, Managing Director, TAFCON signed the MoU in his presence.
- A MOU has been signed between AFRI, Jodhpur and CZRI, Jodhpur on 25 July 2019 for mapping and assessment of most sensible area for forestry intervention in Luni basin area.



IFGTB, Coimbatore signed Memorandum of Understanding (MoU) with TAFCON

Prakriti Programmes

- FRI, Dehradun organized a botanical exploration/ bird watching programme for students of Jawahar Navodaya Vidyalaya, Shankarpur, Sahaspur, Dehradun on 6 July 2019. A group of 52 JNV students were taken into nearby forest area of school for botanical exploration, insect and Bird watching programme.
- 49 KV students of KV B.E.G. & C. Roorkee led by their teachers visited FRI, Dehradun on 8 July 2019. During the visit of different museums, quarries about raised by KV students were explained concerned scientists/officers in museums.
- Under *Prakriti* programme Van Mahotsava celebrated by TFRI Jabalpur at KV TFRI on 23 July 2019 and by FRC-SD, Chhindwara at JNV Singodi, Chhindwara.
- AFRI, Jodhpur participated in Forestry lecture and tree plantation campagne organized for the students of Kendriya Vidyalaya, IIT Jodhpur on 20 July 2019.
- 35 students of 11th & 12th and 35 faculty members of Kendriya Vidhyalaya, Jakhu Hills, Shimla visited HFRI, Shimla on 4 July 2019. Scientist of HFRI, Shimla presented detailed information about “Biodiversity” to students & faculty members through powerpoint presentation. Students displayed immense interest & curiosity while interacting with the scientists.
- HFRI, Shimla organized Prakriti programme on 25 July 2019 for 60 students of Jawahar Navodaya Vidhyalaya, Khanpora, Distt. Badgaom, Jammu & Kashmir, with an objective of making them aware about Forestry & Environment.
- IFP Ranchi organized Prakriti programme on 'Forestry awareness' at Jawahar Navodaya Vidyalaya, Khunti, Jharkhand on 25 July 2019.
- IFP Ranchi organized Prakriti programme on 'Forestry awareness' at Jawahar Navodaya Vidyalaya, Tenughat, Bokaro, Jharkhand on 26 July 2019.



Celebration of Van Mahotsava at JNV, Shahaspur, Dehradun



Students of Kendriya Vidhyalaya, Jakhu Hills, Shimla

Awareness and Demonstration Programme

- Research and development activities of RFRI, Jorhat, such as Nursery Management, Cultivation, Propagation & Value addition of Bamboo. Bamboo preservation techniques, Biotechnology and Tissue Culture, Lac Cultivation, Botanical Garden, Orchidarium, Vermicomposting etc. on 12 July 2019. Seventy Two students and family members came from different villages.
- FRI, Dehradun organized training programme on “Growing and Utilization of Bamboo” from 17 to 19 July 2019 at village Dhulkot, under Demo Village programme. Forty participants from different categories like farmers, students and NGOs participated in the training programme.



Training programme on Growing and Utilization of Bamboo at village Dhulkot, Dehradun under Demo Village programme

Rajbhasha Activity

- In the category of offices under the government sector, town official language implementation committee (office-2), Shimla (Satluj Hydroelectric Power Corporation Limited, office) presented HFRI, Shimla with the second prize for excellent work in the area of official language during the year 2018-19.

Visit of Dignitaries

- Shri R. Kamalakannan, Hon'ble Minister for Agriculture & Farmers Welfare, Education & DRDA, Govt. of Puducherry visited IFGTB, Coimbatore on 15 July 2019.
- Jal Purush, Dr. Rajendra Singh (Magsaysay awardee), visited FRC-LE centre on 4 July 2019.



Hon'ble Minister for Agriculture & Farmers Welfare, Education & DRDA, Govt. of Puducherry visited IFGTB, Coimbatore

Director General Visits

- Dr. Suresh Gairola, Director General, ICFRE, Dehradun visited IFP, Ranchi from 11 and 12 July 2019 and interacted with scientists and research staff of the institute.
- Dr. Suresh Gairola, Director General, ICFRE and Dr. R. S. C. Jayaraj, Director of RFRI, Jorhat attended a meeting with PCCF & HoFF of Nagaland at PCCF's Office, Kohima on 25 July 2019 and PCCF & HoFF of Manipur at PCCF's Office, Imphal on 26 July 2019.
- Dr. Suresh Gairola, Director General, ICFRE visited FEEDS, Senapati, Manipur on 26 July 2019. Dr. R.S.C. Jayaraj, Director, Dr. R. K. Borah, Scientist-F and Mr. Niren Das, ACTO of RFRI, Jorhat accompanied him.



Dr. Suresh Gairola, Director General, ICFRE attended a meeting with PCCF & HoFF of Manipur, Imphal

Miscellaneous

Institute	Special day/theme	Duration
IFP, Ranchi	Van Mahotsav	5 July 2019
FRI, Dehradun		22 July 2019
HFRI, Shimla		30 July 2019
AFRI, Jodhpur		31 July 2019

HR News

Appointment

Name of officer	Date
Dr. Sher Singh Samant, Director, HFRI, Shimla	08.07.2019
Sh. M.P. Singh, IFS, Director, IWST, Bengaluru	16.07.2019

Repatriation

Name of officer	Date
Sh. Bega Ram Jat, DCF, AFRI, Jodhpur	31.07.2019

Transfer

Name of officer	From	To	Date
Sh. Sunil Waman Bhondge, ACTO	HFRI	ICFRE	15.07.2019
Sh. Anugrah Tripathi, TO	FRI	ICFRE	23.07.2019

Retirement/VRS

Name of officer	Date
Sh. N.C.M. Rajan, Sci.-D, IWST, Bengaluru	31.07.2019
Dr.(Ms.) Malabika Ray, Sci.-D, IFP, Ranchi	31.07.2019
Smt. G. Vijayalakshmi, ACTO, (VRS), IWST, Bengaluru	31.07.2019
Sh. Kuldeep Singh Payal, SO, FRI, Dehradun	31.07.2019

Patron:

Dr. Suresh Gairola, Director General, ICFRE, Dehradun

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