

INSTITUTE OF WOOD SCIENCE AND TECHNOLOGY, BANGALORE
BHARAT KA AMRUT MAHOTSAV – WEEK 31 TO WEEK 43

Webinar
on
Timber identification and its importance

12 November 2021

AzadiKaAmritMahotsav is an initiative of the Government of India to celebrate and commemorate 75 years of Independence of progressive India and the glorious history of its people, culture and achievements. As part of this celebration, ICFRE is conducting various programs like technical series, workshops, exhibitions, documentary shows, poster and essay competitions, cycle rallies etc.

Now, as part of Week 31 to 43 celebration of Bharat KaAmrutMahotsav, the Institute conducted a webinar on **“Timber identification and its importance” on 12 November 2021.**

Dr. S R Shukla welcomed the Director, Group coordinator Research and all other participants from wood and wood-based industries, universities, stake holders and researchers from ICFRE institutes. Mr. V. S. Shetteppanavar, IFS, GCR IWST addressed the gathering and shared his knowledge and importance of the subject.

Following this, Dr. M Sujatha, CTO, IWST rendered a presentation on ‘Identification of Hardwoods- Wood anatomical approach’ by macroscopic and microscopic process, general features, anatomical features of wood like vessels, rays, parenchyma, ripple marks, vertical canals, difference between softwood and hardwood, difference between ring porous and diffuse porous woods and the process of identifying hardwoods, 3D structure, maceration, annual rings, early wood, late wood, Xylarium and importance of identification.

Dr. Madhubala Sharma, Professor, North Eastern Regional Institute of Science and Technology (NERIST), Arunachal Pradesh, presented on “Identification of Softwoods”. She explained on the general types of trees and plant family, late wood, early wood, cross field pits, cell types in softwood, resin canals, traumatic resin canals, longitudinal parenchyma, rays-fusiform rays, homocellular ray, heterocellular ray etc.

Dr. Satish Kumar Sinha, Asst. Professor, Navsari Agricultural University, Gujarat, spoke about “Wood identification- Artificial Intelligence (AI) model on Xylorix platform.” he spoke about identification of commercial woods, forensic science and its archeological values; Laws

that enact globally and tracking of protected species; Methods of identification of wood at macro and micro level; Xylorix pocket, XylorixAlaaS Platform and Xylorix inspector app and its functions using macro lens of 24x zoom and AI model platform; upcoming technology for identification.

GCR discussed about Google ML software which can act as library in wood identification and about project proposed to ICFRE.

Mrs. Tresa Hamalton, Scientist D, IWST delivered lecture on “Molecular markers for Timber Identification”. She briefed about techniques in timber identification, level of identification, genetic analysis- Karyotyping/ Chromosomal banding, profiling/fingerprinting (DNA fragment markers). Barcoding (DNA sequence markers), DNA profiling, restriction fragment length polymorphism (RFLP analysis) and profiling, randomly amplified polymorphic DNA, AFLP profiling, Short Tandem Repeat (STR) analysis. She also spoke about illegal felling of trees- theft of wood and timber trafficking, wood samples associated with other crimes and authentic wood and its products. She explained in detail on DNA Barcoding and sample identification using DNA Barcodes.

Dr. E.V. Anoop, Professor, Kerala Agricultural University, Kerala, delivered lecture on “Utilization of lesser used species for various end uses.” He showed process of coconut palm wood made plywood, manufacture of coconut wooden pillars from inner core wood, the end product of coconut furniture and novelties at international coconut conference at Taj- Calicut, Vaiga and Thrissur. He spoke on training on coconut wood based manufacture and briefed about Coconut Biomass waste utilization (recycling), utilization of coconut wood and its waste for value added products. He listed the constraints, remedies, method of density grading, seasoning and preservation for KERAWUD (Density graded, dried, preservative treated, high and medium density palm wood), wood drying defects and availability of coconut wood and its producers. Later he explained about the properties of coconut wood compared to teak and other conventional timbers.

At the end of all presentations, Dr. Satish Kumar Sinha clarified on choice of sample size, number of samples and species using Artificial Intelligence model on Xylorix platform and also software used in identification of timbers through wood anatomical approach.

The training ended with vote of thanks. By Mrs. S. Shashikala, CTO, IWST, Bangalore.

Some glimpses of the training

