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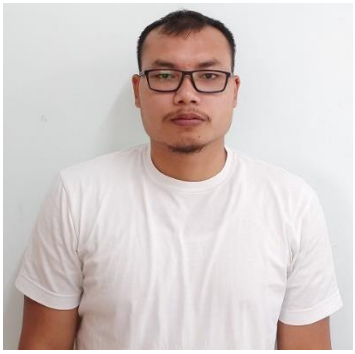
Summer Field School [Online] on
MOUNTAIN ECOSYSTEMS AND RESOURCE MANAGEMENT
Ivano-Frankivsk Region, Ukraine :: 19-28 September, 2021

DELEGATE PARTICIPANT'S PROFILE

	**Mr. Arup Khakhlari** *Research Scholar* Department of Biosciences Assam Don Bosco University Tapesia Campus, Sonapur, Guwahati, Assam Tel: +917086586235 Email: arupkhakhlari304@gmail.com
Highest Education	Masters of Science (Microbiology)
Personal Statement	Dear Friends, I would like to say few words in order to present myself as the delegate participant in the upcoming Summer School on "Mountain Ecosystems and Resource Management". I am a Research Scholar, currently working on Insect-plant interaction and microorganisms. In 2016, I completed my Bachelor of Science in Botany from Pragjyotish College, under Guwahati University. In 2018, I accomplished the Masters of Science in Microbiology and in the same year enrolled myself for the PhD programme. In 2020, I worked as a Research Assistant in Ouija Biosolution Pvt. Ltd., Guwahati Biotech Park, IIT Guwahati.
Paper/Presentation Title (Unpublished Research or Review or Field Work)	*Articulating Fragrant Agarwood Formation as an Outcome of the Interaction between the Insect* Zeuzera conferta *and Aquilaria Trees – A Review*
Keywords	Insecticides; Frass; Taxonomy; Artificial rearing; Interaction; Lepidopteran
Abstract (100-300 words)	Agarwood is the resinous infected wood formed by *Aquilaria* species, which is a highly priced product in the flavour and fragrance market. Its formation is a complex process of interaction between the plant, insect, and microorganisms. Multiple studies concerning the interaction of microorganisms with the *Aquilaria* tree have been reported. However, the significant interaction between the insect *Zeuzera conferta* Walker (Lepidoptera: Cossidae) with

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	Aquilaria have been overlooked and only exiguous studies have been accomplished. Considering the dearth of available literature on this interesting phenomenon a review has been attempted. The taxonomy, morphological descriptions proffered by researchers and the insect life cycle is discussed. The review lays emphasis on the chemical ecology of the interaction between *Z. conferta*, *Aquilaria* and associating microorganisms as a possible continuum operating in the form of complex chemical signalling via release and sensing of Volatile Organic Compounds (VOCs), and Herbivore Induced Plant Volatiles (HIPVs) and Microbial Volatile Organic Compounds (MVOCs). The review also scrutinizes the future perspectives of understanding the interaction in devising suitable management strategies to prevent uncontrolled infestation and simultaneously develop artificial rearing technology for the insect *Z. conferta* as a strategy for ensuring sustainable livelihood of farmers dependent on agarwood production.
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