

'Mountain Ecology and Biological Invasions': Invasive species disrupt native biodiversity, ecological balance: Experts

KU organises two-day international workshop



Srinagar, July 3: To enhance the understanding and management of the complex dynamics of mountain ecosystems and biological invasions, particularly in the Himalayan region, the Department of Botany, University of Kashmir (KU), organised a two-day international workshop that concluded here Wednesday.

The event featured a blend of scientific talks, joint field studies and hands-on demonstrations, providing participants with a comprehensive understanding of the challenges and solutions related to mountain ecology.

The workshop outlined the intricate link between biological invasions and climate change in mountain ecosystems, highlighting the dual challenges posed by these factors.

Participants had the opportunity to engage with leading experts, gaining confidence and comfort in exploring different aspects of biological invasions in mountain systems.

Experts from ETH (Eidgenössische Technische Hochschule) Zurich, Switzerland, Prof Jake Alexander and Prof Simone Fior, offered deep insights into mountain ecology and invasion biology during the two day deliberations.

Dr Jake Alexander, group leader and Co-Chair of MIREN (Mountain Invasions Research Network), ETH Zurich, highlighted the pressing need for addressing plant invasions in mountain regions while underscoring the need for collaborative efforts and innovative research essential to manage these threats effectively.

“Mountain ecosystems are exceptionally vulnerable to the impacts of invasive species, which can disrupt native biodiversity and ecological balance,” he said.

Prof Simone Fior, Professor of Ecological Genetics at ETH Zurich, emphasised the importance of adaptive management strategies in response to climate change.

"As temperatures rise and precipitation patterns shift, the dynamics of mountain ecosystems are profoundly altered. Understanding these changes at a genetic level can help us develop robust conservation strategies," Prof Fior added.

Workshop Convenor, Prof Manzoor A Shah, said the workshop is a significant step towards effective management and conservation of mountain ecosystems.

“Bringing together global experts and young researchers from various institutions has encouraged an environment of shared knowledge and innovative solutions,” Prof Shah said.

KU Dean, Research, Prof M Sultan Bhat and Head, Department of Botany, KU, Prof Zahoor A Kaloo, also spoke during the inaugural session.

The first day included technical sessions featuring Dr Jake Alexander’s talk on plant invasions into mountain and alpine ecosystems and Prof Simone Fior’s presentation on the evolutionary response to climatic shifts in alpine plants.

Prof Zafar A Reshi, former Head, Department of Botany, KU, and Prof Manzoor A Shah, Workshop Convenor, shared insights from their studies on plant invasions in Kashmir.

The second day focused on field demonstrations at Dachigam National Park and the Long-term Ecological Observatory Site, exploring plant invasion in protected areas and restoration strategies, with young researchers presenting their findings.

Titled, ‘Mountain Ecology and Biological Invasions’, the workshop was sponsored by the Ministry of Education, Government of India, through the Mission Directorate RUSA (Rashtriya Uchchatar Shiksha Abhiyan), Government of J&K under RUSA 2.0, the workshop addressed critical thematic areas, including the threat of invasive species to the ecological integrity of mountains, shifting vegetation patterns due to climate change and the ecological genetics of mountain ecosystems.