

Plant Invaders in Forest Ecosystems

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As is well known, invasive alien plants threaten the world's species rich plant communities by encroaching the forest-land fast. They have already invaded various geographical regions of the world, especially the tropics. The main pathways of invasion include import of seeds of crops, ornamentals and other agricultural products contaminated with seeds of invasive plants. Some of the invasive aliens are transported through man-made introduction as ornamentals or source of medicine or for improving soil quality and landscape.

At the international conference* on "Plant Invasion and Forest Ecology: Concerns & Solutions" at Panjab University in Chandigarh, India, participants discussed some of the worst plant invaders viz *Parthenium hysterophorus*, *Ageratum conyzoides*, *Chromolaena odorata*, *Imperata cylindrica*, *Lantana camara* and *Prosopis juliflora*. These have caused havoc in the world and have adversely affected the species diversity, caused fodder scarcity and impaired forest operations. One of the papers highlighted the need of using remote sensing and GIS techniques to map invasive alien plants. There was also a discussion on the mechanism and theories that help invaders to colonize the alien ecosystems. One of the important aspects that help them to colonize and dominate native vegetation is allelopathy – a plant mediated chemical interference in which invasive alien plants release chemical substances that deter the growth of other plants. This is in fact one of the major reasons for local spread of invasive plants. Absence of natural enemies and growth strategies are other reasons that impart invasion success to plant invaders.



Group photo by Navtej Singh from Panjab University

At the conference, the need of a research-based nationally coordinated project to identify invasive plant species in different eco-regions, their categorization into different functional life forms, their behavior and impact on the major vegetation type of the area and the development of a conceptual framework for their sustainable management was expressed. Adding value to invasive plants such as *Lantana* and *Prosopis* was also discussed. The main conclusion of the conference was to find out sustainable approaches to deal with the problem of invasion in the forest ecosystem that has altered vegetation firstly at the national level then in the context of Asia as a whole.

* The conference was organized by IUFRO Units [8.02.04](#) and [4.02.02](#) with support of the IUFRO Special Programme for Developing Countries ([IUFRO-SPDC](#)) and Dayanand National Academy of Environmental Sciences, India and Panjab University, Chandigarh, India from March 16-18, 2009. Over 65 scientists from 12 countries discussed a wide range of topics including the impact on plant diversity, early detection and rapid response of invasive species, pathways of invasion, and socio-economic impacts of the invasive plant species. A brainstorming and informative panel discussion with experts in the field of invasive plants in forest ecosystems also formed part of the event.

IUFRO-SPDC in cooperation with the Centre of Environment & Department of Botany, Panjab University, Chandigarh, India organized a training workshop on "Working effectively at the Interface of Forest Science and Forest Policy" from Chandigarh, India, 14-15 March, 2009.

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