In this issue

Management of *Lantana*

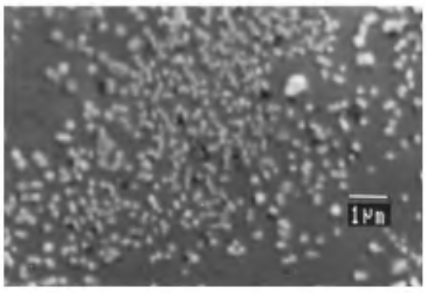
Biological invasions constitute one of the major 21st century global environmental challenges. *Lantana camara* (*Lantana*), a native of central and south America, is one of the world's worst invasive alien weeds. It is contributing to the loss of biodiversity, changing the structure/composition of forest ecosystems and diminishing ecosystem services and goods across the globe. In India, it was introduced in the early part of the 19th century and today it has become a menace in forest ecosystems across the country. All control methods have failed to contain the spread of *Lantana* not only in India but also in other countries.

Love *et al.* (**page 1421**) have evolved a new management strategy for the control of *Lantana* based on the understanding of biological and ecological attributes of *Lantana*. The new strategy is simple, cost effective and it involves (i) removal of *Lantana* by the innovative cut rootstock method which has several advantages over the methods practised today, (ii) weeding out of saplings around the trees used by generalist birds for perching, and (iii) restoration of weed-free landscapes to native vegetation. The authors have proven the efficacy of the new management strategy in controlling *Lantana* through the establishment of demonstration plots of 2–5 hectares in different protected areas.

The new management strategy has been widely adopted by the State Forest Departments to control *Lantana* across the country. The new strategy may help in eradicating *Lantana* from forest ecosystems. Similar strategies are needed to control other invasive weeds.

Structural and electrical properties of polyaniline

Ramola *et al.* (**page 1453**) report the effects of swift heavy ions on the structural, electrical and morphological properties of chemically synthesized free standing polyaniline films. X-ray diffraction, scanning electron microscopy and I–V measurement techniques were used for characterization of the polyaniline films. The conductivity of the polyaniline films was found to increase after ion beam irradiation. The crystalline nature of free-standing polyaniline films increases with increasing ion fluence. The ion beam irradiation also leads to formation of clusters and craters in polyaniline films.



DNA at interfaces

Chattoraj and Mitra (**page 1430**) discuss works related to adsorption of hydrophilic DNA biopolymer on various types of rigid and soft particle surfaces as well as surfactant–DNA interaction in the last four decades in their laboratory. The affinities of these DNA and surfactants for these surfaces have been calculated using thermodynamic principle at different solution parameters. Results of such interaction as functions of time have been investigated in physico-chemical terms.

During the last two decades considerable research on interactions of various surfaces and surfactants with DNA have been studied using most modern techniques. It has been also shown that such work leads to various types of technology such as gene therapy, fabrication of biosensors and gene chips, DNA delivery in lungs for medical treatment, development of cancer vaccines. Recent developments of DNA–protein and DNA–lipid interactions *in vitro* have been reported and it is expected that more such interactions with DNA at interface occurring in cellular systems during cellular function and cell divisions will be studied using surface chemical principles.