

Unconventional pests*

The group of unconventional pests include the giant African snail, teals, peacocks, parakeets, crows, starlings, mynahs, bulbuls, weaver birds, porcupines, bats and so on. They are the most neglected ones. Since many of these species are protected or endangered or threatened, it becomes imperative to bear this in mind while preventing or reducing losses to agriculture from such species. Addressing such a problem requires a thorough understanding of behaviour of this important group of animals. So, to highlight their cause, the Ethological Society of India like in the previous years, took the initiative to organize a national symposium. This symposium encompassed occasional but serious large-scale pestiferous activities of herbivorous mammals such as elephants, bears, nilgai, monkeys, deer, etc., grainivorous birds, non-insect invertebrates such as snails and slugs which have turned into pests because of environmental changes. The scientific presentations were in the fields of feeding behaviour, foraging strategies, mating behaviour, learning, communication and behavioural toxicology. The pest status and methods of alleviating damage by several species of sporadic crop predators and their management were discussed in full detail.

M. C. Satyanarayana, A.V.C. College, Mayiladuturai, Tamil Nadu, gave an interesting plenary talk on 'Pest status of peacock'. He gave a vivid picture of the detailed study carried out in South India on the Indian blue peafowl, *Pavo cristatus*, a granivorous bird feeding on grains and seed crops, assessment of interrelationship of peafowl and agriculture and determination of its pest status. The fur-

nished experimental details proved that the peafowl had an innate preference for grains like paddy as their bulk food and secondarily finger millet (ragi), pearl millet (sorghum) and sesamum and that the crops were damaged only at the ripening stage.

Another plenary talk was delivered by R. Ramamurthy, Sri Venkateswara University, Tirupati. While speaking on 'Invasive alien species: so what?' he mentioned that in modern times with unlimited opportunities for trade and travel, scope for exotic species to enter various ecosystems in almost every country is on the rise and more often than not, these exotic species dominate and lead to extermination of native species and such species 'become invasive alien species'. Through his lecture, he drew a picture of what has been happening and what might happen in terms of biodiversity loss if an international consortium is not formed to examine various issues and develop norms to contain the evil phenomenon. Potential impacts like disease, parasitism, predation, competition and hybridization, threat to/loss of biodiversity in ecosystems, habitats, species potential for disease transmission to wildlife and humans were also covered in detail.

The third plenary talk was delivered by M. K. Chandrashekar, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore. While speaking on 'Biological clocks in bats, mice and humans', he stated that recorded flight activity details of bats revealed the free-flying conspecifics of the colony. He defined what is maternal entrainment phenomenon in rats and also presented his experimental details on humans, where their sleep/wake cycles, rectal temperature profiles, meal timings, blood pressure, short interval estimation, alertness, etc. were studied in depth.

Vasudeva Rao, N. G. Ranga Agricultural University, Hyderabad delivered the fourth plenary talk. While speaking on 'ornithological research in agricultural landscape in India with special reference to grainivorous bird pests and their management', he stated that there are about 1200 species of birds occurring in the Indian subcontinent, at least 150 of them are reported to feed on seeds and fruits of different crops and only 25 species (about 2.1%) inflict serious damage to crops during vulnerable growth stages. According to him, damages caused by these birds can be reduced by using different lethal and non-lethal methods. He mentioned the services carried out by All India Network Project on Agricultural Ornithology, that includes more practical approaches which are not only effective but also farmer friendly and cost effective. Such methods are integrated not only to protect the agricultural produce but also to conserve and manage avian biodiversity in agricultural landscapes.

A lot of young scientists participated in the conference and talks like 'Foraging and guild structure of birds in the Shola forest of the Palani hills, South India', 'Potential of snails as crop pests in northern dry zone of Karnataka', 'Behaviour of chimpanzee in captivity in National Zoological Park, New Delhi', 'Vocal behaviour and spectral analysis of acquired vocalization in the Indian hill mynah', 'Unconventional mode of transmission of *Vibrio cholerae* through evening bats' gathered larger section of participants along with prolonged question and answer session.

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