

In this issue

Identification and assessment of agro-biodiversity heritage sites

The modern developments, including in agriculture, due to unidirectional productivity approach has been adversely affecting the traditional agricultural systems and agro-biodiversity heritage sites. Anurudh K. Singh and K. S. Varaprasad (page 1131) highlight the need for identification and assessment of agro-biodiversity heritage sites. The systems at these sites have evolved in an environmentally friendly manner over centuries, based on local resources and invariably responding to surrounding socio-ecological scenario, for sustainability. They harbour a great amount of genetic diversity in the form species diversity, crop diversity to meet most human demands, farmers' varieties and landraces in these crops, containing a reservoir of genes and practices that has helped them grow productively, and has sustained them and the natural resources needed for productive and sustainable agriculture. When the world is facing both adverse climatic changes and food scarcity, the article emphasizes that it is high time that the good products and practices of these time-tested systems be conserved and integrated with modern technologies to increase food productivity in a sustainable manner, conserving natural resources, thereby environment.

Real-time monitoring of tsunami

Real-time detection and monitoring of disastrous oceanogenic events such as tsunami, storm-surge, etc. is useful for warning and evacuation purposes. Realizing the importance of real-time monitoring systems after the 26 December 2004 disastrous tsunami episode, the National Institute of Oceanography (NIO) in Goa designed and developed cellular-based and Internet-enabled sea-level gauge which displays in real-time the measured sea-level along with predicted astronomical sea level, and the

residual (i.e. difference between the two) in graphical format. Two such systems established by NIO at Goa and Kavaratti Island detected the 12 September 2007 tsunami arrival at these two locations. Prabhudesai *et al.* (page 1151) provide an account of the instrumentation and the characteristics of the tsunami signals as detected at these locations. Arrival of a detectable tsunami signal first at Kavaratti Island and 2 h:45 min later at the shallower Goa coastal region (Verem Naval jetty) of the mainland indicates the practical utility of having high-sensitivity real-time monitoring and Internet-accessible sea-level stations on India's island locations for effective tsunami-warning purposes for the mainland.

Bioinvasion of *Kappaphycus alvarezii* on corals in India

Invasive macroalgae are proven threats to marine biodiversity. *Kappaphycus alvarezii* is a top-ranked invasive species, now cultivated commercially in the Gulf of Mannar Marine Biosphere Reserve (GoM), South India from 2002. The ecological danger associated with its large scale cultivation in the GoM has been debated in the past. All reports mentioning this species as invasive have



been neglected due to lack of scientific data for its invasion on corals in the GoM. After six years of its indiscriminate cultivation, Chandrasekaran *et al.* (page 1167) have documented its invasion and establishment on

corals in Kurusadi Island of the GoM. Their study provide a first hand qualitative and quantitative data for its invasion on *Acropora* species.

Call repertoire of the Indian chat

Acoustic signals play a very important role in the social life of most of the animals. Each acoustic signal is believed to have its own physical structure and inherent 'messages' and associated 'meanings'. India has a large number of songbirds, which are known for their elaborate, complex and varied sound signals. Unfortunately, systematic studies on the physical characteristics and sociobiological significance of these signals in Indian birds are scanty and have been carried out in only a very few species. Thus, a number of birds from the Indian subcontinent are left for the study of their detailed acoustic behaviour. To fill this gap of knowledge V. K. Sethi and D. Bhatt (page 1173) have studied and described the physical characteristics and sociobiological significance of different call types of an endemic avian species, the Indian chat *Cercomela fusca*. In the call repertoire of this species they found eight types of calls, namely territorial, begging, feeding, alarm, threat, contact, distress and roosting & emergence calls. Out of these, three types of calls were used by the young while adults produced the remaining five types. The possible functions of these call-types were deduced from the contexts under which they were produced. Characteristics and use of 'feeding call' (believed to be a kind of stimulatory call that parents use to initiate the begging by the nestlings when they do not respond to the parental arrival cue) have been reported for the first time in any avian species from India. The authors believe that this article will provide a basic framework to plan for future acoustic researches on other Indian bird models which are still struggling to be heard in the scientific community.