

## In this issue

### Ancient shell industry

Marine shell is no ordinary faunal material. In coastal regions, marine shellfish have been used as food, raw material for tools, container, inlay and ornamentation. The Gulf of Kachchh harbours varieties of shells which were utilized by the ancient man. Many trade routes of ancient people have been identified by the archaeologists on the basis of the sources of shells found during explorations. Shell industry was one of the major industries during the Protohistoric period in the Indian subcontinent. India has played an important role in Indian Ocean trade and commerce.



Coastal excavation at Bet Dwarka revealed that this was one of major centres of shell industry in the past. *Turbinella pyrum* (chank) was the important species used for various purposes such as bangles, beads, and inlay work besides a large number of *Chicoreus ramosus* for bangles, and ladle and *dentalium* shell. Shells have successfully been used to obtain radiocarbon dates to assign a time bracket for Bet Dwarka settlements. Gaur *et al.* (page 941) discuss the importance of shell artifacts recovered.

### African rice can help improve Asian rice

Scientists have attempted to combine drought tolerance and weed competitiveness of African rice *Oryza glaberrima* with the high yield of common rice *O. sativa* for more than fifty years. Even though both the species have AA genome, they do not hybridize easily and the rare hybrids are sterile. For the first time hybrid derivatives called NERICAS (New Rice for Africa) have been developed at WARDA, West Africa by Monty Jones. He was awarded the World Food Prize for 2004 for developing NERICAS. The award was shared with Yuan Long Ping of China for his work on hybrid rice. The NERICAS are drought resistant, weed competitive, high yielding and are replacing *O. glaberrima* which were poor yielders. They have the potential to benefit 20 million farmers in West Africa. Sarla and Mallikarjuna Swamy (page 955) review and discuss the potential of introducing useful traits of *O. glaberrima* into *O. sativa* grown in upland conditions, the problems of incompatibility and hybrid sterility, and methods to overcome them. Molecular markers and other biotechnological tools can be of help. As the major area under rice cultivation is rainfed, the development of high yielding, drought resistant and weed competitive varieties is a challenging but promising task.

### Insects of tropical streams

Insects with their abundance and diversity dominate freshwater ecosystems. All over the world, about 45,000 spe-

cies of insects are known to inhabit diverse freshwater ecosystems. Aquatic insects, comprising some well-known groups such as dragonflies, mayflies, caddis flies and flies play an important role in the functioning of aquatic ecosystems. They are involved in nutrient recycling and form a prey base for water birds, fishes and frogs. In addition to this important ecosystem



function, studies from various parts of the world have shown that aquatic insects are reliable indicators of health of freshwater ecosystems. In many temperate countries, methodologies have been developed and extensively used for monitoring the health of freshwater ecosystems. However, in a tropical country like India, the aquatic insect fauna is poorly documented. This has hampered the development of reliable biomonitoring tools. Subramanian and Sivaramakrishnan (page 976) attempt to fill this information gap by studying the diversity and distribution stream insects in the Western Ghats. The study discusses the importance of habitat and microhabitat distribution in understanding the spatial distribution of stream insects and developing biomonitoring tools for streams in this region.