In this issue

River dynamics and conservation implications for endangered Barasingha or swamp deer (*Cervus duvauceli*)

River dynamics in floodplains constitutes a disturbance regime resulting into a complex floodplain pattern with high biodiversity. Most river systems are regulated owing to rapid land-use changes and by way of damming, reservoir operation, inter-basin transfer and irrigation. An extensive belt of woodland–grassland–wetland complex existed throughout the Gangetic and Brahmaputra floodplains in the pre-independence era harbouring abundant wildlife including swamp deer.

Swamp deer is an endemic to the Indian subcontinent with three subspecies reported. Surviving populations in each case have recovered from precariously low numbers in recent decades, now mainly confined to protected areas. In India, current population of the northern swamp deer has been estimated ca. 1800–2400 individuals. One stronghold is Jhadi *taal* (lake), a pocket of tall grasslands around a shallow seasonal lake on the floodplains of Sharda River. High run-off and siltation were observed in recent decades leading to frequent and sudden changes in the river course and the channel has come dangerously close to Jhadi *taal* (<10 m by 2008). Thus, understanding the nature, extent, rates and causes of river dynamics is critical. Neha Midha and Pradeep K. Mathur (**page 665**) evaluate channel changes of a stretch of the Sharda River and highlight changes in channel characteristics and land use/cover during 1948–2001 and their impact. Threat to *taal* was confirmed by a probability model. Increasing instability, widened channel area, enhanced water and silt pointed towards the changing flow regime and sediment dynamics upstream. The effect of manmade activities with respect to the channel dynamics requires primary attention and forms a subject of priority research.

Barren Island volcano

Barren Island is India's only active volcano, located in the Andaman Sea, a young ocean basin developing by back-arc spreading and with ongoing major subduction of the Indian lithospheric plate nearby. There is much current international interest in the volcano-tectonic evolution of the seismically active Andaman region, and the age and eruptive history of Barren Island volcano is one of the key pieces of the puzzle. The volcano had eruptions in hitherto unknown prehistoric times, then during 1787–1832, and again in 1991, 1994–95 and 2005–06, as well as in 2008–09. H. C. Sheth *et al.* (**page 620**) describe aspects of this latest eruption witnessed by them, and discuss the broader aspects of volcanology that make this volcano exciting for scientists and laymen alike.

Parental care strategies of grey-headed bulbul

Theoretical and empirical work often acknowledged the role of biotic and abiotic selection pressures such as food, competition, predation, weather, habitat and individual quality in driving avian life history variation across latitudinal and altitudinal gradients. Most of our existing perspectives and theories of life-history evolution are based on north-temperate systems which may not be true for the tropics. Therefore, studies of tropical species can contribute to a more comprehensive understanding of the geographic diversity of avian reproductive traits and life history evolution, determination of population survival rates, adaptability and vulnerability of populations to respond to climatic perturbations. Parental care is a key component of reproductive effort, which has important fitness consequences through its influence on reproductive success and the quantity and quality of reared young, and energetic costs imposed on parents. P. Balakrishnan (**page 673**) presents a quantitative study on

the parental care strategies of grey-headed bulbul, *Pycnonotus priocephalus*, an endemic to the Western Ghats, south India. The author shows the variation in parental care patterns in terms of nest attentiveness, on-bout and off-bout durations and nest trips among the reproductive phases and different clutch sizes across different daylight hours and days in the nesting cycle. The birds responded to the low ambient temperature periods by increasing the nest attentiveness. Both attentiveness and on-bout durations increased by progress of incubation and decreased with progress in nestling age which demands high food delivery. The author suspects that the predation pressure plays an important role in shaping the parental investment strategies of grey-headed bulbul and points the need for further research.