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

River dynamics in floodplains constitute 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, *Pyconotus prioccephalus*, 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 nesting 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.
Higher Education: Rocky Road to Reform

The reform agenda set by the Ministry of Human Resource Development (MHRD) is a clear sign that the time is ripe for considering a major restructuring of the education system in India. Higher education (college and university education) has long been viewed as an area where major interventions by Parliament and Government may be necessary. The process of reform has been speeded up by the extraordinary haste with dozens of new institutions have been created, the controversies over corruption in the accreditation processes, the growing pressure for creation of private institutions of higher learning, the challenges posed by the impending entry of foreign institutions and the growing realization that the best of India’s institutions must compete with the best in the world. Reform is being contemplated within a framework that abounds with constraints. The demands for equity must be balanced by the imperatives of excellence. The rules of the game for public, private and foreign institutions may have to be different, but the playing field must be largely even, if public institutions are to stem the tide of decay. The strongly federal nature of our governing structures dictates that Centre-State relationships must be balanced and cooperative. Both state governments and institutions view excessive ministerial interest with suspicion; reform measures can often be mistaken for attempts to interfere with local autonomy. The heavy, and often clumsy, hand of bureaucracy can ensure that even the best of intentions are misinterpreted by institutions which jealously guard autonomy. Over the last couple of years the National Knowledge Commission (NKC) and the MHRD, using the Yashpal Committee, have produced reports that spell out the contours of a reform agenda. Regulation of the education sector has become a critical area with the rapid growth of private institutions. Higher education is now a commodity to be sold and the pressures of the marketplace build up rapidly. The manner in which institutions are accredited and permitted to award degrees has been the subject of much recent discussion. Inevitably regulatory authorities, which have served admirably for many years after their inception, crumble under modern day pressures. Corrupting existing institutions and hastening their decay has unfortunately been a characteristic of India’s turbulent, and at times dramatic, growth over the last three decades. The NKC and Yashpal Committee reports are an attempt to address the issues raised by the crumbling foundations of the higher education enterprise in India, even as the sector is poised for unprecedented growth. These reviews have resulted in the drafting of legislation that intends to provide the foundations for reform and restructuring of higher education in India.

The National Commission for Higher Education and Research Bill 2010 (NCHERB) is being introduced as ‘an Act to provide for the determination, coordination, maintenance of standards in, and promotion of, higher education and research, including university education, technical and professional education other than agricultural [and medical] education’. The parentheses that envelop ‘medical education’ are present in the draft copy downloaded from the MHRD’s website. While agriculture is clearly excluded, there remains a hint of ambiguity about medicine. Curiously enough, the revolution in biology over the last half a century has had its most profound impact on agriculture and medicine. Genomics and all that has followed from the technical advances that have taken place over the last three decades have reaffirmed what was intuitively appreciated in the 19th century: the unity of organisms, plants, animals, microbes and man, despite enormous biological diversity. The bill, as drafted, places agriculture [and medicine] on a different pedestal; undoubtedly a recognition of political realities and the zealousness with which ministerial turf is guarded in Delhi, rather than the more esoteric grounds of academic unity. In an Act on ‘education’ the words ‘technical and professional’ in the opening paragraph strike a jarring note. Is science non-technical and unprofessional? Is the study of archaeology, history or literature also similarly labelled by implication? Is economics to be consigned to the backwaters of higher education by using the words ‘technical and professional’ to describe engineering, pharmaceutical science (clearly a misunderstood discipline in India in modern times) and possibly other subjects like veterinary science? It is time that the word ‘education’ is used and understood in its broadest sense. The distinctions in educating students (and teachers) in different disciplines need to be blurred and indeed removed. In a sense the draft Act seems to suggest that this may happen when it states that its purposes will be