

## BOOK REVIEWS

Although there are many absorbing details, facts are loosely presented even within the chapters without either continuity or sequence to argument. Unfortunately, even in the epilogue there is no attempt to string the chapters into a meaningful summary based on arguments put forth, but is rather a reiteration of what comes across as a stubborn notion of the primary author which is stated at the very beginning of the book. Contradictory statements are made by the authors. For instance, while Romila Thapar claims that there is no clear-cut evidence of transport of lions to or from India, Valmik Thapar seems to take this for granted and discusses how he is sure that 'the lion was imported into the country in large numbers and bred for release into hunting grounds of Indian royals'. He also rules out dispersal by land saying there is no evidence of *leo perscia* in Afghanistan and Baluchistan, regions bordering India, leaving the only option of import through sea route.

Of great interest to me, as a lion researcher is the discussion on lions – It is known that there appears to be no representation of lions in ancient rock art, fossils and paintings in ancient times. Particularly intriguing is its absence among fossils and seals unearthed from Harappa, one of the earliest known ancient civilizations of India and geographically close to present lion range. Later references to lions such as in the *Rig Veda*, in Sanskrit and Prakrit texts, in epics like the *Mahabharatha* and in verses of ancient poetry occur from the Vedic Period onwards. Lions were not only emblematic of royalty, but also became important religious symbols around this time. They gained further prominence under the Mauryan rule, particularly in the times of Ashoka Maurya. The practice of maintaining royal hunting parks and menageries contributed to the survival of lions through the centuries. Such a custom reached its pinnacle from around the 12th century under the Islamic rulers, especially under the Mughals. The documentation and evidences from this time, particularly in royal biographies are exhaustive, but no tangible insight on whether lions (and cheetahs) were native to India exists. From here on, we have good records of the distribution, decline and ultimate isolation of lions in Saurashtra region.

The interpretation of these historical imprints in the book is objectionable.

Valmik Thapar conveniently interprets these as being represented by exotic animals in royal hunting parks and dismisses much of the evidence (seals, stone structures, literature) as 'royal symbolism' and what Yusuf Ansari calls 'cultural omnipresence'. Wherever it came from, whether through land or sea, whether solely maintained in hunting parks or not, the divergence of the subspecies *leo persica* occurred much before the above-mentioned historical events and it is from this point that we have to trace the nativity of the Indian lion. Considerable scientific literature is already available on historical distributions, origin and evolutionary history of *Panthera leo*. These works are largely limited to phylogenetics and evolution of lions in Africa; the Asiatic lion forms but a part of the discussion. Without more detailed scientific investigations, it would be difficult to piece these evidences into facts that unravel the origin of Asiatic lions.

Much as I would hate to sound clichéd, it seems like Thapar's prejudice is India's pride. The pride comes from having living specimens of an incredible species which was most widespread with a historical range covering much of Africa, Eurasia, North America and tropical South America that could help us construct a fascinating account of evolutionary history. While this book itself cannot be taken seriously, it will hopefully spur anthropologists and scientists to dig deeper and give us a more credible account of the origin of lions in India.

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**The Failure of Environmental Education (and How We Can Fix It).** Charles Saylan and Daniel T. Blumstein. University of California Press Ltd, London, England. 2011. 241 pp. Price: Rs 1740.

All organisms have direct/indirect linkages with their local environment through air, food, shelter, etc. and increasing and varied anthropogenic pressures might distort these natural linkages. One would recall a school chapter on environment that dealt with human and other activities happening around a pond ecosystem. If lucky, it is likely that towards the end of that session, the teacher takes the students out to a water body, which for a youngster in the early years of schooling would be enticing, interesting and thought-provoking. Such activities nurture curiosity among the young ones. However, today's young generation is rarely fortunate to have this kind of natural exposure, because many a tanks in recent years have gone dry, or the curricular engagements of children tie them down. Moreover, global warming and other unmindful actions by the citizens have spoiled such ecosystems, especially in the cities and other urbanizing agglomerations, and several ill-conceived programmes for the youngsters have deprived them of the time for such quality activities. While as children we appreciate nature, as we grow up we become renormalized conforming progressively to the norms and restrains of the society, economy and polity. These extremes in the views and deeds require to be addressed urgently, especially since the utility of the current paradigm of environmental education has remained a question in terms of cultivating the appropriate mental make-up to address vital environmental issues.

The book under review talks about the linkages between anthropogenic impacts

and environmental changes. The authors write about human ecological footprints across the world, responsible for denudation of the natural resources. They write about population growth and the failure of scientific developments in conserving nature. The authors argue that speedy and unpredictable change in human behaviour is solely responsible for the ill-effects on our local and global environment. They examine in detail the present status of environmental education (EE) in the school system and its failure in creating environmentally conscious and pro-active citizens, citing examples from the Western countries.

Broadly speaking, EE represents four pillars – environmental knowledge, environmental skill, environmental attitude and environmental behaviour. This book provides a rigorous critique on the present state of EE – the various issues related to it; definition, barriers, wrongs leading to its failure, role of media and institutions in effective EE; environmentally active citizens for protection of the environment; widening gaps in awareness and actions, domineering political interests, importance of exhorted consumption, change-ideas, and evaluation methods, and finally offering tips for solving the problems concerning EE. It is an appreciable attempt by the authors to focus on the viable paths to achieve efficient EE in school system. They also talk about five issues: (i) creating an essential civic responsibility; (ii) considering EE as compulsory subject at various curricular levels; (iii) introducing better evaluation system; (iv) developing problem-fixing ability through reinforcement and (v) promoting the celebration of human diversity in the context of EE. This narrative also talks about world economics, politics, history, science and civics.

It is commendable that the authors handle diverse concepts related to the theme in an excellent manner, their expertise making it possible to do so. Their constructive perspective emerges from the synergy of their varied backgrounds: Blumstein, a scientist and educator, and Saylan, an entrepreneur leading an environmental non-profit organization. We are sure that their narrative would help improve the quality of EE.

Since the mid 21st century, there have been protests across the world against environmental degradation and pollution. Environmentalism, in effect, emerged with appalling experience from the

World Wars and the classical *Silent Spring* published in 1962. The sparks, such remonstrations, are touched upon in this book considering them as the need of the hour. One can appreciate the concerns of the authors where they state 'Environmentalism is not an option like choosing one's religion or political affiliation', and 'It is a responsibility and fundamental aspect of cohesive society, like respect for the nature'. These positions have arisen from their intensive analysis of historical and contemporary incidences, and studies.

EE has failed to bring about the impelling changes in attitude and behaviour of individuals or society necessary to save nature. It has remained only a subhead in science education and world over it is counted only as an optional subject in most curricula. This attitude needs to be changed by adopting multidisciplinary teaching approach (cultivating scientific civic literacy) in schools; institutional and attitudinal obstacles with direct impacts on pedagogy have to be subdued in an unflinching manner.

Misinformed political and economic agendas, rapid industrial and green revolution and oil exploration and usage are major agents for environmental degradation. We must realize that we all breathe the same air, drink the same water, need to eat, and need shelter from natural elements. We must accept that we are each individually responsible for making sure that we do no irrevocably harm the natural systems that support us. The authors strongly believe that effective EE is the only option for a nation to be environmentally prosperous.

Schools perhaps play the most critical role in imparting environmentally positive ideas among the students, but they need proper infrastructure, time management, financial resources, trained and qualified teachers, timely government guidance and appropriate programme evaluation methods. It is also important that working at the grassroots level to the top, and vice versa, is essential for such actions to be successful. Nevertheless, schools focus nowadays on coaching in job skills for economic success, manufacturing standard employable products. They in effect posit that life is fundamentally a rat race and a fierce competition with everybody else to accomplish the best, failing to inculcate requisite values for a sustainable society and flouting the values of cooperation for a sus-

tainable development sans mounting material consumption and ever-growing ecological footprint.

The authors appreciate the innovative and successful stories of the green advisory team (GAT), green belt movement (GBM) and 'Food from the Hood' based on the concept of 'greening up our schools'. They rightly conclude that for humanity to ensure its place on Earth, creativity, flexibility, compassion and understanding, along with technological and scientific acumen are needed, all of which must be introduced, developed and reinforced through our educational institutions. For this, developing individual and collective responsibilities, values and pro-active perspective among the students is unavoidable.

The book will be highly useful in the field of EE. It is worthy as a reading material for undergraduate students. We believe that EE in the new perspective should have a wider reach, so that it may help us to save other species and our environment for posterity.

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**Genetically Modified Planet: Environmental Impacts of Genetically Engineered Plants.** C. Neal Stewart Jr. Oxford University Press, New York, 2004. 256 pp.

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Neal Stewart's book is a balanced account on genetically modified (GM) technology, which he views, is not dangerous and can prove beneficial for the environment. GM crops have been slammed by environmental activists and others worldwide, generating a debate on safety issues. Central to the debate has been the tactic of altering the characteristics of an organism by manipulating the genetic material encoded in the DNA.

However, there is an optimistic view to GM plants and food as well. The technology can be used to reduce mass hunger and revolutionize sectors – medicine,