

# Editorial

---

*N Mukunda, Chief Editor*

One of our avowed aims, always in our minds, is to encourage students, teachers and others familiar with one area of science to read about other areas distant from their own. We consciously try to include material in each issue that will serve this purpose.



Madhav Gadgil's series on 'Life – Complexity and Diversity' takes up the problem of scales of diversity encountered in the living world. Here is a prime example where an outsider to biology – say a mathematician or a physicist – needs some key concepts or viewpoints which will act as guides in assimilating facts, ordering them into a coherent pattern, and in avoiding the feeling of being swamped by detail. Gadgil's statement that "Diversity of life is therefore best viewed in two major contexts: diversity of hereditary material amongst members and the same species, and the diversity of species within a biological community" serves this purpose admirably and helps us grasp the basic ideas involved. To a student of biology it must be common knowledge that the number of extant life forms – species – today is anywhere between fifteen million and a hundred million; of this only a million and a half have so far been recorded in the literature. Gadgil also describes the sense in which we humans share a very high percentage of genetic material with our nearest relatives – chimpanzees, gorillas, old world monkeys, and orangutans – in each case around ninety five percent or more. And yet we seem to be so different in appearance and abilities. As the French say in another context – 'Long live the difference'!

Diversity of life is therefore best viewed in two major contexts: diversity of hereditary material amongst members of the same species, and the diversity of species within a biological community.

We are privileged to feature Harish-Chandra in this issue – with a portrait on the back cover and a short 'Article in a box'

"Though he spent  
almost all of his  
professional life  
abroad, culturally my  
father was always  
very deeply rooted in  
India"  
— on Harish-Chandra  
by his daughter

by Rajat Tandon. Harish-Chandra was the greatest Indian mathematician since Srinivasa Ramanujan. Though he grew up in India, and began his research career as a theoretical physicist working with Homi Jehangir Bhabha at the Indian Institute of Science in Bangalore during 1943–45, the rest of his professional career and his blossoming into a mathematician of world stature took place in the West. And yet, quoting from his daughter Premala Chandra: "Though he spent almost all of his professional life abroad, culturally my father was always very deeply rooted in India." Ramanujan's name has long been a household word; Harish-Chandra deserves no less. Appreciations of his work and the monumental character of his achievements by R P Langlands and V S Varadarajan appear elsewhere in this issue. His only collaborator Armand Borel said this of him some time ago: "Harish-Chandra was a highly principled man, for whom one's life had to have a purpose. In his view, the main one of his own was no doubt to prove the hardest and the most fundamental theorems accessible to him. ... Underlying this tremendous productivity were very strict, almost ascetic, discipline and routine... The sense of purpose Harish gave to his life had some spiritual, even religious underpinning. His religion was not a traditional one with the usual paraphernalia of stories, rituals, prayers and direct intervention of a personal god. Rather it was an abstract, philosophical level, a yearning for some universal principle, transcending our lives, which would give sense to the universe". To very few of us is it given to be able to even appreciate the work of such gifted individuals, leave alone to reach such heights ourselves. And yet we all need heroes – verily the salt of the earth – from whom to derive the inspiration to reach beyond ourselves.

