Natural History Museums to play an active role

The commentary by Mukund Sharma (*Curr. Sci.*, 2002, **82**, 913–917) is really thought-provoking, and it must activate the mindset of leading palaeontologists working on plant or animal fossils.

There is an urgent need to upgrade the teaching of the basic sciences, including palaeontology at the graduate and post-graduate levels. The front-ranking technological courses that are being given priority in the educational curriculum also need support from basic sciences.

In our country there are a limited number of Natural History Museums, and most of them are only exhibitors without doing any serious research. The trend is, however, reverse in Europe and America, where the curators have contributed significantly to the cause of science. It will be desirable to convert the museums in India into active research-oriented centres.

A large number of graduate and post-graduate students are passing out every year and at least a few of them can be employed to initiate research activities in such Natural History Museums. By doing so, the academic atmosphere of such institutions will get enhanced.

Preservation of important fossil sites is also important, since we have to pre- serve these geological monuments for posterity.

The Ministry of Science and Technology and Ministry of Environment and Forests should explore a strategy not only to popularize palaeontological science, but should also plan as to how to make best use of the trained human resources.

G. P. SRIVASTAVA

Museums Association of India,
Birbal Sahni Institute of Palaeobotany,
Lucknow 226 015, India

Priorities in science and technology

Ashok Parthasarthy[1] has critically evaluated in his write-up, the priorities in science and technology (S&T) at the national level. He is an acknowledged authority on science policy[2] and an advocate for self-reliance in development[3]. Parthasarthy has vehemently criticized our political and scientific leadership in wasting scarce national resources in the pursuit of wrong priorities. For example, the development plan for a prototype fast breeder reactor may cost the state exchequer a whopping sum of Rs 3000 crore, when all other developed countries have abandoned their plans to enter this field. The author pleads for major re- structuring of our priorities in the field of S&T. Our budgetary allocation must reflect higher priority for rural development, viz. in sectors like public health, power, renewable energy sources, weather forecasting and biodiversity.

The most important sector which has been ignored by our S&T planners is our universities. Now, we are paying the price for this neglect. Parthasarthy has outlined his scheme for changing this scenario. Let us hope that UGC and DST implement this scheme to improve teaching and research in the university set-up. We have already lagged behind the developed countries by following a lacka- daisical approach during the last five decades.

1. Parthasarthy, A., *Curr. Sci.*, 2002, **82**, 1211.
2. Parthasarthy, A., *Nature*, 1969, **221**, 909.
3. Parthasarthy, A., *Development Dialogue*, Uppsala, Sweden, November 1979, p. 33.

H. S. VIRK

360, Sector 71,
SAS Nagar 160 071, India
e-mail: virkhs@yahoo.com

Monsoon vagaries

The article 'On forecasting the Indian summer monsoon: the intriguing season of 2002' by Sulochana Gadgil *et al.*[1] explains in clear terms the techniques of prediction of monsoon behaviour and the degree of error involved. The farmer going by the rosy forecast, at times, faces adverse conditions. The overall forecast of say 102 per cent excess – a successful prediction in meteorological parlance – may still result in demands of drought relief.

Simultaneous occurrence of floods in one part of the country and drought in another may balance the *average* scenario like heavy downpours in August (or extension of summer monsoon till October) or a rainless July. Sixteen para- meters, harbingers of a favourable monsoon, do not always hold water.

From this informative article, it appears that data for a period of over 130 years for 306 stations form the very basis of prediction. Instead of general prediction at all-India level, it would be meaningful if forecasts are made for the agro-meteorological zones. After all, the flood-prone northeast has little in common with the arid northwest, the cold Himalayan desert (Leh) and other bio-climatic provinces.

The role of forest-cover in the rainfall cycle has to be properly assessed[2,3]. Also the correlation between heavy rains and the Hindu calendar dates of festivals like 'Raksha-Bandhan', 'Janmasthami' and 'Ganesh mahotsav' in Maharashtra needs to be investigated scientifically.

1. Gadgil, S., Srinivasan, J., Nanjundiah, R. S., Krishna Kumar, K., Munot, A. A. and Rupa Kumar, K., *Curr. Sci.*, 2002, **83**, 394–403.
2. Gadgil, S. and Prasad, C. R., *Sci. Age*, 25–28 July 1986.
3. Meher-Homji, V. M., *Climate Change*, 1991, **19**, 163–173.

V. M. MEHER-HOMJI

20D, Sagar Sangeet,
58, Colaba Road,
Mumbai 400 005, India