

## Need for a national prehistoric museum

I fully endorse the views expressed by Thewissen and Hughes<sup>1</sup>, on the subject of establishing a national repository in India for fossils and other geological specimens. In the West, the fields of palaeontology and evolutionary biology have progressed rapidly following the medieval dark ages of science because of the foresight of its academic and scientific leaders. Majority of the western countries have well-organized museums to house and display prehistoric animals, plants, and rock and mineral specimens of great geological and evolutionary significance. These museums are also active centres of research on these natural treasures and are regarded as important media for dissemination of knowledge among the public, particularly children.

Prehistoric museums enable us to make an excursion into the past to understand the evolution of life through long geological time periods, areal distribution of land and sea, ecological and climatic changes and their effects on faunal and floral distributions and patterns, and causes of biotic extinctions. In the West there has been greater concern about spreading scientific knowledge through museums, particularly subjects that are directly or indirectly related to nature. Apart from educating, visits to museums inspire and ignite young and creative minds. Well-known museums, such as the Natural History Museum (NHM) in London, American Museum of Natural History (AMNH) in New York, Muséum national d'Histoire naturelle (MNHN) in Paris and Museum für Naturkunde in Berlin, allow researchers from different parts of the world to study their collections, thereby promoting research in the concerned fields.

In comparison, India offers a dismal picture. The country preserves rocks ranging in age from 3500 m.y. to the last 1 m.y. or so. These rocks are endowed with various mineral deposits and vertebrate, invertebrate and plant fossils from the Late Proterozoic era (700–550 m.y.), Palaeozoic strata (546–250 m.y.) of the Himalaya, Mesozoic (250–65 m.y.) deposits of both Himalaya and peninsular India and Cenozoic (65–1.5 m.y.) deposits of the sub-Himalayan region, particularly pre-Siwalik and Siwalik fauna. Some of these fossiliferous rock

sequences provided excellent opportunities to understand the patterns of evolution and extinction. The Mesozoic fossils from India are expected to provide an insight into the biological consequences of the northward journey of the Indian land mass until its collision with Asia. The importance of these fossils has been fully understood by the Western geoscientists. As a consequence, a large number of geoscientists, palaeontologists and evolutionary biologists from Europe, USA, Canada, Australia and New Zealand visit various high-altitude areas in the Himalaya such as Zaskar, Spiti, Ladakh and Kargil to study the life forms that existed prior to and after the origin of the Himalayan mountain chain.

On the other hand, even after 65 years of independence, we have not realized the potential of the above-cited areas for the recovery of diversified fossil groups and their importance in understanding evolution and the geological, chemical and physical processes that led to the formation of the Himalayan mountain chain. Some efforts have been made by faculty members of many universities and scientific staff of research institutions to understand: (i) the evolution of the Indian land mass since its fragmentation from the former Gondwanaland leading to the rise of the world's highest mountain chain, and (ii) the evolution of life on the subcontinent from the nascent stages of the earth to the present. But no attempt has been made either to educate people on our prehistoric treasures by housing and displaying them in a well-equipped and well-organized museum, or to conserve our natural heritage.

The Geological Survey of India (GSI) museum in Kolkata is the only one having fossil, mineral and rock collections from different parts of India. As mentioned by Thewissen and Hughes<sup>1</sup>, this museum lacks modern curatorial and repository facilities. Besides, GSI has many other priorities (basically geological mapping), such as discovering new natural resources; documentation and repository of fossils is low on its priority list. International museums like NHM, AMNH and MNHN have become excellent centres of research in palaeobiology because their collections are under the custody of researchers with strong ongo-

ing research programmes. In contrast, museums in India are administered in a typically bureaucratic manner with little or no involvement in research. Late B. P. Radhakrishna, former President of the Geological Society of India and the doyen of Indian geology, had reiterated many times the need to take initiatives for establishing prehistoric or palaeobiological museums in the country. He also emphasized that 'universities should take the initiative in organizing natural history museums with exhibits on various life forms of the geological past to kindle interest in the minds of children and lay public'.

As a result of unplanned and wanton quarrying of various important geological formations in the country, many rock surface exposures are likely to vanish in a few years and with them our natural heritage will also disappear forever. Since there is no legislation by the various State Governments to halt this process, it is necessary that our heritage is documented and preserved for posterity. Our neighbouring country, China, has invested heavily in earth sciences research and has established many palaeobiological museums to exhibit new discoveries and to undertake frontline research in the field of palaeontology. The results of these actions can be seen in the number of new discoveries since the early nineties and the visibility that Chinese researchers have achieved in the international arena with frequent research publications in highly reputed science journals like *Nature* and *Science*.

In the light of the above discussion, I fervently appeal to those in the higher echelons of scientific research and administration in the country to take immediate measures to establish a national geological/palaeobiological museum.

1. Thewissen, J. G. M. and Hughes, N., *Curr. Sci.*, 2010, **99**, 267.

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