

Opportunity for Indian palaeontology

In a thought-provoking commentary, Hughes¹ has attempted to reason out why Indian palaeontologists have not been able to make the same kind of impact as their Chinese counterparts during last two decades. There is no gainsaying the fact that, to a large extent, the scenario presented by the author is based on factual analysis of observations made in the two countries. However, the comparison made and the remedies suggested by him are rather too simplistic and need to be reviewed in depth.

Two of the factors pointed out by the author need to be emphasized. Chinese territory undoubtedly comprises a wide exposure of Phanerozoic rocks bearing well-preserved fossils of varying ages. The bulk of the Indian craton comprises rocks of Precambrian age. Marine fossils are restricted to a few coastal belts in Tamil Nadu and Gujarat, while freshwater Gondwana fossils are scattered through parts of Central India. Himalaya does expose a sequence of Phanerozoic rocks bearing fossils, but these localities do not only have poor accessibility but the fossils themselves are by and large deformed and poorly preserved. Secondly, Chinese palaeontology is fairly young and received serious attention only during the last few decades, revealing a lot of hitherto unknown and exciting data by way of new significant taxa as also an uninterrupted stratigraphic sequence in several sections in a relatively undeformed setting. This has opened up a whole lot of new fields of investigation. As against this, the Indian palaeontological investigation is fairly ancient, dating back from the nineteenth century onwards, where practically all fossiliferous localities, even those from remote areas in Himalaya, were known and studied by the middle of the last century. All that needed to be done in India afterwards was to revise the data and interpretations in the light of modern developments, methods and techniques,

updating the taxonomy and significance. There is little scope of any revolutionary or highly significant discoveries. Because of these factors, the Chinese palaeontology as of now has a positive advantage as far as attracting the international attention is concerned.

The remedy suggested by Hughes that the Indian palaeontologists need to collaborate with foreigners to achieve recognition, is attempting to implant the Chinese model to an entirely different scenario. Without going into the genesis of the problem in depth, such a simplistic solution is neither practicable nor can it achieve any tangible results. Hughes seems to suggest that there is and has been no collaboration by Indian palaeontologists with foreigners and there is no exchange of notes, debate and discussion with their counterparts elsewhere. This is far from the fact. Even in his own area of specialization, namely Cambrian trilobites, there are hardly a few active workers, belonging to the same school, in India. They are no doubt handicapped, since they are deprived from an intra-country debate. But they have been continuously debating with their counterparts elsewhere and Hughes should know better, since he has himself taken part in such discussions and debates.

The problem of Indian palaeontology is that there has been a steady decline in the number of workers involved in palaeontological research. Even those who were formally trained with considerable financial and academic inputs, changed their areas and moved into other fields. It has more to do with limited employment options available to them as professional palaeontologists. In a lighter vein, it can be safely said that palaeontologists are themselves on the verge of extinction in this country!

A similar scenario exists in most European countries and also to a large extent in the adopted country of Hughes, the USA

The Indian model, therefore, has more similarity with these countries than with China, which at present is in an expansion mode in palaeontology. That is why most European and American palaeontologists are making a beeline for China, where they have options for research that are not available to them in their own countries.

A few decades ago there was an enormous expansion and research activity in micropalaeontology, notably in foraminifers, conodonts, palynomorphs, etc. in India. This was related to the opening up of oil exploration in a big way in the second part of the last century. By now this boom has declined since the coming of age of the oil industry. Likewise, for many years Birbal Sahni Institute of Palaeobotany, Lucknow was one of the few institutions in the world where active research in this area was conducted at such a scale. One has to admit that demand is a major factor in research and if there are limited employment opportunities, few people would go into research purely for the love of it.

The problem of palaeontological research in India is not that of quality, but of quantity. The number of active palaeontologists is so small and the publications so limited that they hardly attract any significant attention. There are a whole lot of taxonomic groups for which no specialists exist in the country. The few that exist have received both national and international recognition, but they can be counted on fingertips.

1. Hughes, N. C., *Curr. Sci.*, 2006, **90**, 286–287.

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