Save India's heritage

In the nearly 20 years of our research on fossils in India, we have seen the country move from an underdeveloped third world nation to an economic tiger, fiercely independent, and interacting with other countries on equal footing. The wealth and international stature that India has gained are the envy of much of the developing world, and India, its government as well as its people, can be proud to have chosen a path that has delivered these riches.

India knows that any responsible nation that can afford to preserve its heritage does so. To this end, India is moving proverbial mountains: closing factories in order to save the Taj Mahal from air pollution, and spending crores to reduce water pollution of its holy river.

In order to conserve their heritage, great nations have created museums, consisting of exhibits that educate the public, and repositories that store scientifically important specimens so that future scientists can study them. Whereas the Indian Museum in Kolkata and the National Museum of Natural History in Delhi fulfil some of the exhibit functions, they lack modern curatorial and storage facilities for scientific specimens.

Whereas the Natural History Museum of London, and the Smithsonian Institution of Washington are amongst the most famous and most respected institutions of Britain and the United States, India lacks an equivalent. This is ironical, since much of the success of those foreign museums is based on collections made abroad. India has a rich geological history, spanning more than 2500 million years, and documenting key moments in evolution from the first record of life to the first whales, yet nowhere is this heritage displayed and comprehensively preserved. It is even more ironical, since, unlike most other societies, the deep-time roots of earth were recognized even in ancient Indian culture.

Some of India's institutions do collect, exhibit, and store such specimens: for instance, the Geological Survey of India, Wadia's Institute of Himalayan Geology, Dehradun, and the Birbal Sahni Institute of Palaeobotany, Lucknow. However, these institutions only curate specimens collected by their own scientists and preserving the heritage of all of India is not part of their mission.

Much of India's geological and palaeontological heritage consists of specimens collected by faculty members of Indian universities on Indian soil and preserved at their academic institutions. However, as those institutions are not museums, they cannot maintain specimens when there is no in-house researcher actively working with them. These specimens, rock samples, fossils, and microscope slides, risk being orphaned, forgotten and lost when the scientists that studied them retire. India needs to realize that these specimens, like the Taj Mahal, cannot be replaced and are part of India's heritage. These specimens, which should be the object of national pride and international respect, deserve to be preserved. Collections breathe life into science when they are curated and accessible. They inspire young people to study India's heritage, and encourage foreigners to learn about India. India needs a central repository that can curate such specimens after researchers retire. A great nation deserves a great museum.

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Threat of Gopalpur port oil spill to olive ridley turtles and their hatchlings

M. V. Malavika, an Essar-owned vessel was hit by a barge at Gopalpur port (Ganjam District, Orissa) on 12 April 2010. A crack developed in the ship's fuel tank leading to leakage of fuel oil that soon covered the coast ranging from Arjipalli beach (which is adjacent to Gopalpur port) to Rushikulya River mouth, about 20 km from the port.

The oil spill was visible the next day on the sea and beach up to Rushikulya River mouth. The Rushikulya rookery is one of the mass nesting sites of the endangered olive ridley sea turtle *Lepidochelys olivacea* (F. Cheloniidae) along the Orissa coast. Oil rapidly spread to a stretch of 20–30 km towards the river mouth and over a 7 sq. km area off the beach, 200 m away from the river mouth where the olive ridleys had laid eggs in March 2009. Some of the oil also reached the sands of the nesting grounds at Gokharkuda and Kantigada beaches. This stretch is one of the three mass nesting sites of olive ridleys. The spill also led to death of fishes and may have affected the fish breeding sites, which is likely to affect the turtles feeding on live fish. In comparison to the Gulf of Mexico spill, this spill was not of a massive nature; approximately 7 tonnes of fuel oil was immediately cleared from the surface of water within half an hour but the water near the port could not be entirely cleared. Port authorities have denied threat to the turtles in spite of nearly 25, 2 to 3-day-old dead turtles found floating on the water between Arjipalli and Prayagi.

About 155,000 olive ridleys nested along the coastline near the Rushikulya rookery in March and eggs hatched after 45 days in the first week of May[1], as anticipated. Nevertheless, environmentalists and wildlife activists fear that the eggs of olive ridleys may be at a risk and may not yield healthy hatchlings due to oil deposits on the sand, posing a threat

to the turtle population. There may be an irreversible damage to the turtle population present on the offshore waters. It is also feared that marine fauna that form the live feed of these turtles may also be severely affected due to the spill.

Olive ridley sea turtles, though omnivorous, are predominantly carnivorous particularly in the immature stages, and feed on a wide variety of food items including protochordates (invertebrates) found in shallow marine waters. They also dive to a depth of 500 feet (150 m) to forage on benthic invertebrates. They generally crush and grind the food before intake. Immediately after emerging, hatchlings head for the open sea and swim deep into the sea until they reach the sea current. Thousands of hatchlings were found entering the sea during the first week of May at the Rushikulya rookery. It has been found that during this period, large-scale mortality of hatchlings occurs, and one in 1000 may survive. It is also feared that the spill may have increased the mortality of hatchlings[2]. However, it has also been reported that there is no oil residue near the nesting site. The oil that leaked is of a non-persistent nature and due to physical and chemical changes it will undergo weathering soon[3]. Considering these circumstances, the spill may cause little impact on the live feed of turtles and their hatchlings, and to their wellbeing. But, there is no doubt that these endangered species need to be protected from anthropogenic threats on the coast.

1. Anon., *The Hindu*, 4 May 2010, p. 18; http://www.hindu.com/2010/05/04/stories/2010050463251800.htm
2. Olive Ridley Turtle (*Lepidochelys olivacea*), Office of the Protected Resources, NOAA Fisheries; www.nmfs.noaa.gov/pr/species/turtles./oliveridley.htm
3. White, D., *Geoscientist*, 2005, **15**, 4–11.

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Updating scientific serials catalogue

The Indian National Scientific Documentation Centre (INSDOC) was established during 1951–52 with three activities in mind, one of which was Document Supply Service (DSS). Any researcher would for decades need INSDOC's services for the research activities as research is mostly 'prior-art'-based. With DSS in mind, INSDOC painstakingly prepared a National Union Catalogue of Scientific Serials in India (NUCSSI) over a period of two decades and published it as a four-volume compendium in 1988. In the 1990s a CD database was published from the NUCSSI data. It was subsequently updated in the beginning of the new millennium. The database is now web-enabled and is being updated. Even after it is web-enabled, the requirement of constant updation of NUCSSI remains.

Publication of NUCSSI in print, as a CD database or as a web database does not take away the role of an exchange centre like National Institute of Science Communication and Information Resources (NISCAIR; the current *avatar* of INSDOC). Only NISCAIR can control a centralized database like NUCSSI at the National level. All the library associations, the S&T institute administrations should look up to NISCAIR as a facilitator of research information exchange.

It is in this context that I want to draw attention of the scientific community and information professionals that all S&T institutes should have an up-to-date serials catalogue made available to NISCAIR so that NUCSSI web-hosted by NISCAIR remains under permanent updation. NISCAIR's web hosted NUCSSI will then become a centralized database and a 'call centre' for S&T articles facilitating easy access and faster research throughput.

When a user would go to NISCAIR website, he will fill up a document requisition form, whereupon an automated system can go through NUCSSI database web-hosted by NISCAIR and place a document request with a holding institute. A constantly updated web-hosted NUCSSI would mean 'first-stop success' in document procurement, resulting in faster throughput for DSS. NISCAIR, as originally planned as an INSDOC activity in 1951–52, can continue for now to deliver the same to the requester.

In this context, I would also like to draw attention to the need of a union catalogue of conference proceedings database as there is a great need of articles from these too. And what about an ILL component in all library automation software, whence any loan request is automatically broadcast to select list of institutions so that researchers can be served even better?

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