

Window towards bygone life – world wide open access

Modern life is technology-based. In all the spheres of human activity, technology plays a vital role. Stupendous data have been accrued through computer hardware and software. The latter is an acknowledgement of human ingenuity, and the growth of scientific research is a result of such pursuit. In the process of information management, scientific data themselves have become a big science (e.g. bioinformatics) and are being utilized by knowledge-seekers. Recent upsurge in databases in different spheres of science is an indication of growing awareness. It is true for data on life of bygone eras as well¹⁻³.

Fossil data have been extensively used in interpreting modern ecosystems and trends in climate change. Riedel and Budai⁴ felt that use of different names by different works in palaeontology does not augur well for scientific interpretation. Hence a dataset signifying and unifying the taxonomic anomalies is needed. Such efforts in taxonomy⁵ can minimize taxonomic contradiction of genera and species of fossil plants world over. Exact taxonomic assignment using a novel database with details of taxa, affinity, geographic locale, geological information, etc., in the form of software needs to be developed. These endeavours should be widely extended to other floral and faunal groups as well. Organized data should be launched in different URLs to enhance their worldwide efficacy. This requires pertinent software design and simple methodology. Such data should be launched in various por-

tals to help seekers/users/researchers. Kremp⁶ introduced computer-based research in palaeontology and later Riedel⁶ developed a program in Turbo Prolog to assist users to identify fossils consistently and expeditiously. Unfortunately, Indian data have no such programs.

Data on remnants of past plant life in the form of plant parts like root, stem, leaf, fruit, seed, spore, pollen, etc. are essential to understand living systems and their climatic conditions (ecology). Tiwari *et al.*⁸, developed DCB (Dinesh Chandra Bharadwaj) computer-aided search and retrieval of references on palynology and allied aspects related to the Gondwana sequence of India. Govind *et al.*⁹ developed the Indian Gondwana Megaspore Information System (IGMIS), a Windows-based software, for storage and retrieval of Indian Gondwana megaspores (female reproductive unit of early land plants). This software provides information on 45 genera and 159 species of megaspores recorded from Palaeozoic and Mesozoic sediments of India. Hitherto global database developed is not freely available on the web. It is the time to prepare user-friendly world wide web-based software for open access and wide usage. World wide open access is a prerequisite for scientific research, particularly in paleontology (Figure 1).

The open access movement in scientific publishing is a welcome change in making science accessible to a larger community and it is seen as a great leveller of knowledge¹⁰. Practices such as masking of a database by software developers

are not good signs for the growth of science. The Government of India is also keen to encourage such web-based initiatives shared through consortia among different national laboratories and using National Knowledge Networks. It is high time that digitized information in palaeontology is spread all across the globe.

Many researchers are in favour of developing a database¹¹ on life-forms of bygone eras. Open access palaeontological database is a new milestone for the upcoming researchers who can access data at their fingertips. A window to data on the life of bygone eras is inevitable and the future is waiting to open these windows to experience the rainbow of open access interactions. 'Modifesto' in science and technology also has such a vision¹².

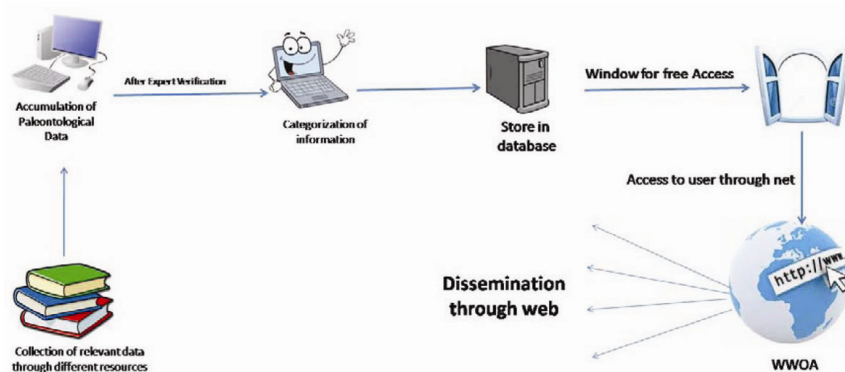


Figure 1. Global outreach pathway.

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