

of publications and hence the scope of a larger number of citations for a publication. In fact, now it appears that the fields that were considered to be quite esoteric, like those in the domain of fundamental physics, have really pushed down possibly because of the demand on the technology and application-oriented research with the targeted goal for the industry and business. Research activities and publications are not necessarily driven by the urge for knowledge, but for the targeted business interest of the funding bodies that are often the private sources. Interestingly, the two famous papers of Albert Einstein published in his 'miracle year' of 1905, one introducing the special theory of relativity⁴ and the other with the equation $E = mc^2$ (ref. 5), were not only considered as classics, but were the two most cited papers for quite a long time. It is accepted that once a particular scientific idea published in a paper gets identified as of fundamental importance and becomes textbook material people stop referring to the original publication. However, this really does not explain the top spot for the most cited paper⁶ published in 1951 that is considered as a 'method paper'. It continues to get cited as the original paper and not as a textbook material well after 60 years of its publication. In fact, the full list⁷ has more such examples.

There are papers in the top 100 list with a large number of authors, where one is likely to find authors of Indian origin. But they belong to a large group working abroad and, in a way, one may not like to consider that as an Indian paper. Moreover, some of the papers like the one occupying the top slot are there for more than 30 or 40 years. It is indeed more likely that an older important paper gets wider opportunity to get cited more number of times. But an older paper in this case needs to maintain its importance for a long period of time. If a paper gets cited 50 years after its publication, particularly if we keep in mind the immense change in the research scenario after the introduction of computers and suitable software in last 30 years or so, we have to appreciate the importance of the publication. On the other hand, a not-so-old paper from Indian researchers² that has crossed the 5000 mark in citation is indeed an important event. For a paper that was published barely 13 years ago in 2002 on genetic algorithm, a field where new things are forthcoming, this achievement is indeed immense. In fact, many feel that the comparison of the citations received by a paper should be done against the backdrop of its year of publication. This implies that one must also look at its year-wise citation, citations in the first five years and so on. In fact, this analysis has been done for the

Indian paper² and it shows a steady trend for the paper that has remained uniformly important for more than a decade.

One more interesting fact has been spelt out in the article in *Nature*³. More than 43% of the papers published receive no citation. And about 31.5% papers receive citations that stand between 1 and 9. Does that indicate that the publication of research papers with real significance has become difficult? In fact, this is also indicated by the fact that among these 58 million papers, less than 15,000 papers and publications have received more than 1000 citations.

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Angria Bank: an ecologically or biologically significant marine area of the northwest Indian Ocean

Conservation and sustainable use of biodiversity in marine areas beyond national jurisdiction is one of the central issues of the United Nations General Assembly. Therefore, the Convention on Biological Diversity (CBD), in 2008, adopted a resolution to identify 'Ecologically or biologically significant marine areas (EBSAs)' using scientific criteria in need of protection in open-ocean and deep-sea habitats^{1,2}. CBD has identified seven scientific criteria largely focusing on ecological or biological values¹ such as: (i) uniqueness or rarity; (ii) special importance for life-history stages; (iii) importance for threatened, endangered or declining species and/or habitats; (iv) vulnerability, fragility, sensitivity, or slow recovery; (v) biological producti-

vity; (vi) biological diversity, and (vii) naturalness of the site.

The coastal and marine ecosystems of peninsular India have been surveyed to identify and prioritize the 'important coastal and marine biodiversity areas (ICMBAs)' to improve the management of these areas³. Peninsular India has a vast coastline of about 5423 km, spanning 13 maritime states and Union Territories, with diverse coastal and marine ecosystems, supporting nationally and globally significant biodiversity⁴.

The criteria used to identify ICMBAs were inclusive of the EBSAs criteria. The ICMA site identification exercise began with six different criteria that are often considered important features for safeguarding coastal habitats and their

biodiversity³. Conservation-related targets were picked up from standard global approaches and designated 'conservation amplifiers' because they improve the opportunities for consideration or simply to allocate more weight to protection measures³. The tool was developed with six different criteria as conservation amplifiers and 26 subunits as indicators or goals respective to each criterion. A total of 350 potential sites were surveyed all along the coasts of peninsular India. Of these, 106 sites were identified and prioritized as ICMBAs^{3,4}. Angria Bank is one among them.

The Angria Bank is a submerged plateau that exists around 105 km west of Malvan in Maharashtra, India, in the Arabian Sea (16°69'27.55"N, 72°06'19.15"E). The to-

tal area of this site is ca. 1300 sq. km, which includes 350 sq. km area of submerged coral reefs. The Angria Bank, which contains the largest submerged coral reefs area of India, is unique due to its rich biodiversity, productivity and geological formation⁵⁻⁷. This bank is said to have began developing after the Holocene sea-level rise a few thousand years ago and coral communities dated 240 yrs BP⁶. This area has a clear water plateau, with coral development and associated marine life forms atop an undulating basalt sea floor, at a depth of 3–200 m. This site was observed with rich diversity of corals (ca. 20 spp.), algae (ca. 57), fishes (ca. 200 spp.), reptiles (ca. 5 spp.), birds (minimum 12 spp.) and mammals (minimum 8 spp.)^{4,8}. Further, the site was reported with large aggregations of myctophids⁹, which makes this bank an important fish-spawning ground of the region. Several threatened species such as marine turtles, whale sharks, whales and dolphins have been observed using this region as their foraging ground^{5,7}. Therefore, this site has been proposed to

be described as EBSA during the Regional Workshop of CBD on the northwest Indian Ocean and adjacent Gulf areas held at Dubai during 20–25 April 2015.

Many organizations such as CSIR-NIO, CMFRI and FSI had organized several physical and ecological surveys in this region. There are no protection measures in place to regulate human activities in this area. The State Forest Department and the Maharashtra Tourism Development Corporation are interested in protecting the region and in developing it into a tourist spot respectively^{3,4}.

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Publishing on hypoglycemic encephalopathy, borrowing information without giving credit: is *Current Science* invisible?

Annual seasonal outbreaks of what was popularly called acute encephalitis syndrome in Muzaffarpur, Bihar were clinically diagnosed in 2013 by us as non-infectious, toxic, hypoglycemic encephalopathy¹. Epidemiological and circumstantial evidence pointed to litchi-associated risk factor of causation¹. The toxin was pinpointed as methylenecyclopropylglycine (MCPG)¹. Thus, our first publication in May 2014 in *Current Science*¹ was a breakthrough after many groups of investigators had failed for many years to diagnose the disease or provide any plausible causative associations¹.

In 2014, we confirmed with clinical evidences that the disease is indeed hypoglycemic encephalopathy and the patients could be saved with prompt correction of hypoglycemia². These results were published, again in *Current Science*² in August 2014.

We then read a paper in March 2015, by a large group of investigators, stating that the disease is acute hypoglycemic encephalopathy with putative association

with litchi, as if they were the first to arrive at such a conclusion³. The authors of this publication had been investigating the cause of this disease for many years, including in 2012, as we were informed in Muzaffarpur by the local doctors. Our 2013 investigations which appeared in May 2014 in *Current Science*¹ were a watershed. The studies of Shrivastava *et al.*³ published in January 2015 in *MMWR* have not cited our earlier contributions – one reason could be that *Current Science* is invisible in the usual biomedical literature surveys. However, when we conducted a simple literature search through a popular search engine, we found references to both our papers^{1,2}. Further, the first paper published in May 2014 in *Current Science*¹ was also cited by a US group⁴ in 2015. Therefore, missing out on the literature search is unlikely to be the case for Shrivastava *et al.*³. If this was a deliberate act of omission, so as to appear that they were the first to unravel what used to be called a mystery disease, it amounts to scientific misconduct.

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