Acta Crystallographica Section A continues to have high impact factor

Acta Crystallographica Section A: Foundations of Crystallography [pISSN 0108-7673], continues to be the second highest IF (54.333) for 2010, with only *CA – A Cancer Journal for Clinicians* scoring higher[1]. Interestingly, the same pattern was observed in 2009, with IF then being 49.926. The main reason attributed to this high IF was a single paper authored by George Sheldrick, 'A short history of *SHELX*' (2008, **64A**, 112–122) providing an account of the development of the *SHELX* system of computer programs from 1976 to date[2]. More importantly, the 2008 IF of this journal was 2.051 (ref. 3).

This brings a few points to the fore, i.e. a review paper plays an important role in determining the IF of a journal. Also, one must look at the citation of an individual paper while undertaking any evaluation exercise, as IF alone may not provide the correct picture.

1. *Journal Citation Reports 2010*, Science edition (web-based), Thomson Reuters, Philadelphia, 2011.
2. Jain, N. C., *Ann. Libr. Inf. Stud*., 2011, **58**, 87.
3. *Journal Citation Reports 2008*, Science edition (web-based), Thomson Reuters, Philadelphia, 2009.

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Conservation significance of the Kadalundi–Vallikkunnu community reserve

Estuaries are in a state of constant flux. The health status and biological diversity of the Indian estuarine ecosystem are deteriorating day-by-day due to anthropogenic pressures, especially the dumping of enormous quantities of sewage. There is considerable ecological imbalance and large-scale disappearance of flora and fauna.

The Kadalundi estuary (11°7′28″–11°8′01″N and 75°49′36″–75°50′20″E) is located at the mouth of the river Kadalundi that drains into the Arabian Sea on the west coast of Kerala. Before entering the sea, it divides into two channels encircling a small island. The raised sandbars on the western and southern sides of the island separate the lagoon from the fidgety sea. Apart from scattered patches of mangroves, the estuary is bordered by human habitation and coconut groves. Around 8 ha of mudflats, exposed during low tides, offers potential foraging ground for several hundreds of wintering and resident water-birds, particularly waders. It also provides significant socio-economic and livelihood services for the people around (fishing, oyster farming and sand mining). Two bridges, one each for road and rail, intersect the estuary on the western and eastern sides of the mudflats respectively.

A total of 110 species of water-birds, including 53 migrants have been recorded. The estuary is one of the few habitats on the west coast where a small population of Lesser Sand Plover *Charadrius mongolus*, Whimbrel *Numenius phaeopus* and Common Redshank *Tringa totanus* are observed to over-winter[1]. Uthaman and Namassivayan[2] have reported a good regional population of Brown-headed Gulls *Larus brunnicephalus* and Black-headed Gulls *Larus ridibundus* (Figure 1), and the critically endangered Spoon-billed Sandpiper (*Eurynorhynchus pygmacus*). Considering its importance in terms of diversity of wetland birds and heavy anthropogenic pressures, the estuary has been officially declared as the Kadalundi–Vallikunnu community reserve[3].

An ecological study to assess the abundance and habitat characteristics of wetland birds in this ecosystem has been initiated. Preliminary studies revealed certain serious environmental issues. For example, anthropogenic activities such as construction of coastal highway bridges, dumping of poultry waste and indiscriminate sand mining during low tide exert pressure on this wetland and its fauna, especially migratory water-birds. Dumping of waste from households, poultry farms and slaughter houses has become a serious threat to waders, as they attract house crows, *Corvus splendens*, Brahminy kites, *Haliastur Indus*

Figure 1. Mixed group of Black-headed Gulls and Brown-headed Gulls.

and jackals. House crows and jackals are reported to be major predators of shorebirds[1]. Poultry waste dumping is usually done on mudflats close to the mangrove patches, which are imperative foraging ground for the waders.

The nutrient-rich top soil, removed during sand mining, is recouped by the soil carried in tidal waves. As this soil is devoid of polychetes (the major share of food for the birds), the foraging system of shorebirds will be affected. Twenty-year-old observations have highlighted that coir rotting[4,5] and bird hunting[5] were the major threats to the ecosystem. Presently these problems are under control, as a result of strong protests by the locals and environmental activists. But waste dumping and sand mining need to be controlled. In addition to these factors, natural processes such as proliferation of mangroves and increasing level of sand-bed deposition on mudflats are also exerting pressure. The 8 ha of mudflats provides food security to more than 4000 migratory waders annually – the density has increased to 500 individuals/ha.

Although some studies have highlighted these problems[1,4–6], no serious attempts have been made hitherto to evaluate the effect of these processes on the population status of water-birds and other organisms in this ecosystem. In this context, we emphasize the need for such a study and for developing science-based management mechanisms, with the involvement of local stakeholders.

1. Aarif, K. M., *Biosystamatica*, 2008, **2**(2), 81–83.
2. Uthaman, P. K. and Namassivayan, L., In Proceedings of the Third Kerala Science Congress, Kozhikode, February–March 1991, pp. 38–39.
3. Anon., Kadalundi–Vallkunnu Community Reserve, Government notification. S.O. (M.S.) No. 66/2007/Wild, dated 17 October 2007.
4. Kurup, D. N., In Proceedings of the Third Kerala Science Congress, Kozhikode, February–March 1991, pp. 31–32.
5. Uthaman, P. K., Namassivayan, L. and Venugopal, R., *Newsl. Birdwatchers*, 1987, **27**(11&12), 5–7.
6. Aarif, K. M., *Podoces*, 2009, **4**(2), 100–107.

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Use of recycled stone tools in the prehistoric culture of Mandla

The significance of archaeological sites in Mandla, Madhya Pradesh, for clear evidence of continuance of a microlithic tradition down to the historical recent time (as recent as the arrival of electricity) has been discussed in a brief communication published in *Antiquity*'s Project Gallery (http://www.antiquity.ac.uk/projgall/roy/index.html) and in other articles[1,2]. Use of recycled stone tools in prehistoric tool industry has been reported from several places around the world[3,4]. In Mandla, the evidence of using recycled tools is interesting and has methodological bearing in prehistoric archaeological studies. Roy[2] gives some examples on the use of recycled tools in the prehistoric tradition of Mandla.

Evidences of using recycled stone tools are as follows: (i) Use of recycled tools by fresh trimming of the working edge. In such cases, the original specimen remained without much change (Figure 1). (ii) Use of recycled tools after considerable reworking, such as the entire working edge made afresh. Signs of the original specimen are still clear (Figure 2). (iii) Use of recycled tools as raw material for fresh knapping. Large tools of earlier phase had been used in microlith production. The process had destroyed the original specimen completely such that evidences of the recycled tools being used were not clear, particularly when natural rock surface and possible knapping scar are not distinguishable. (iv) An extremely rare case was of a relatively fresh microlithic core found to bear old patinated flake scars, proving that large tools of an earlier phase had been extensively and exhaustively reused as raw material in microlithic manufacturing. (v) Successive reuse of recycled stone tools over a long time is also evident from old and new flake scars.

Figure 1. An elongated flake (8.8 × 3.8 × 2.8 cm) re-used as scraper; relatively fresh flake scars make the working edge.

Two important observations on the use of recycled stone tools are: (i) discarded large tools of earlier cultures had been reused by relatively recent microlith makers, and (ii) recycled stone tools had been used repeatedly over a long period of time.

Evidence of using large tool remains from earlier tradition by microlith makers was not readily available, as the process of microlith knapping would destroy any evidence of large tools being reused. This condition inadvertently shows that prehistoric interpretation perhaps grossly evaded an archaeologist's attention on such evidences. In Mandla, a core that has been incidentally recovered bears clear patinated flake scars of an earlier phase proving that large tools had been used in microlith making in Mandla (Figure 3). Once this is confirmed, tools bearing flake scars from previous removal could be identified fairly easily in Mandla tool assemblages.

How extensive the practice of using recycled large tools in microliths manufacturing had been in prehistoric culture would judge the extent of destruction of large tool cultural remains by subsequent microlith makers. In Mandla, hundreds