Marine biodiversity - here, there and everywhere

ABSTRACTS

Keynote -1

Coastal biodiversity of Langkawi Island: Threats and conservation issues

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Of the 104 islands in the Langkawi archipelago situated at the northwestern corner of peninsular Malaysia, Langkawi Island is the largest with an area of 526 sq km. In the last two decades, this large island has been experiencing a development boom through governmental efforts to promote it as an international tourism destination. Langkawi Island was first conferred free port status in 1987, and recently, the Kedah Maju Master Plan 2010 has designed the island as the Western tourist corridor of Kedah. The number of tourists has dramatically increased from just 200,000 in 1986 to 2 billion in 2003. In fact, tourism has dramatically transformed the socio-economy of the island; the once dominant agro-fisheries sector has now declined by 50% as the local populace activities increasing cater to the more lucrative tourism industry. There is growing concern that the boon and development may have damaged some of the island's unique coastal biodiversity. The northeast Langkawi region (NEL) is of particular interest, because it is as yet relatively unmarred by development , and forms an unique wetland complex containing several marine and estuarine systems including coral reefs, mangroves, river basins, lagoons, sandy-rocky shores, limestone karsts and lowland forests. NEL is underlain by the Lower Palaeozoic Setul Limestone Formation, rich in Ordovician and Silurian fossil remains, and bearing artifacts of early Holocene human settlement. Among the extant rich flora and fauna are the distinctive, rare, first or new records of cycads, orchids, bryophytes, lichens, seaweeds, fish, crabs, beetles and amphibians. This paper discusses the findings of two recent scientific expeditions to Langkawi Island, the first in April 2003 and the second in April 2004, particularly on the coastal biodiversity of NEL, the threats to its rich diversity, and justification for its conservation.

Keynote -2

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The extent and depth of the marine environment presents a great challenge to the study of its biodiversity. Logistic difficulties and financial requirements are greater and we are still far from a comprehensive inventory of marine species richness. Limited exploration of the oceanic depths revealed many previously unknown but interesting species including habitats driven by chemical energy. Although shallow seas have been investigated much more, new species discoveries are still being made. In some cases, species new to science have been known to locals but escaped the attention of scientists. A good example is the coelacanth from Manado. In other cases, scientists target pristine or remote areas to discover new species, an example of this being Bird's Head Seascape in Indonesia's Papua province. Non-pristine areas subjected to long-term human impacts have also shown to harbour species that have escaped detection until recently. Such examples indicate that studies on marine biodiversity even in highly impacted areas are needed for the development of reliable inventories. Marine biodiversity is everywhere if one cares to look for it.