

## Genetic differentiation and gene flow between populations of blood-cockles, *Anadara granosa*, along the Malay peninsular coast

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The commercially important blood-cockle, *A. granosa* is known to be a useful bioindicator to levels of marine pollution, particularly the accumulation of heavy metals. The cultivation of *A. granosa* have been concentrated along the West coast rather than the East coast of Malaysia, with certain sites in the west being subjected to high levels of pollution, which acts as a selective pressure to the natural populations of this species. The biology of life history of *A. granosa* is well docu-

mented and is a good model to test evolutionary hypotheses, particularly on marine larval dispersal. A study of *A. granosa* populations along the coast Malaysia, by allozyme analysis using cellulose acetate electrophoresis, would distinguish the populations if there is genetic differentiation between them (i.e. East-West coast populations, polluted versus non-polluted waters) and whether any adaptive traits are accounted by the levels of gene flow among the populations.

## Status of PAH contamination in coastal Korea: Results of 1999 and 2000 Korean mussel watch program

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National status of polycyclic aromatic hydrocarbons (PAH) contamination was investigated as a part of the Korean Mussel Watch Program. In the year 1999, sampling was focused on biota and sediment and in the year 2000, seawater sample was included and more detailed sampling was done in major harbors. Here results of 1999' bivalve, sediment and 2000' seawater will be presented. The average total PAH concentration of bivalve was 524 ng/g dry weight with range of 210–1,510 ng/g dry weight. Due to the environmental differences, three coasts, i.e., west, south and east showed characteristic distribution. Several source recognition index indicated that the pollution source of the west coast is mainly petrogenic from ship's activity, river-runoff and etc. East coast was also affected by petrogenic, but 'hot spot' like near industrial complex

station was dominated by pyrogenic sources. Away from these point sources other east coastal area was relatively clean. South coast showed more complex source and background concentration was highest. Sediment samples were collected from west and south coast. Mean concentration was 704 ng/g dry weight with range of 217–2,810 ng/g dry weight. 'Hot spots' and other stations showed distinct different source, pyrogenic and petrogenic respectively. Average concentration of seawater sample was 551 ng/l with range of 25.9–10,200 ng/l. Seawater sampling was focused on major harbors some of that posed harmful effect on human health. Principal component analysis revealed that Pohang harbor was influenced by similar but different sources.

## Persistent organochlorines in environment of coastal area, a case study in Vietnam

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In order to evaluate the status of coastal pollution caused by persistent organochlorine compounds including DDTs (DDT and its metabolites), HCHs (hexachlorocyclohexanes), Dieldrin, Endrin, and Aldrin, numerous surface water and

sediment samples were taken from river and estuaries at Hue province and Thaibinh province in Vietnam. Among the studied organochlorine pesticides, DDT was the predominant compound followed by DDD, DDE, and lindan. In general,