

tion structures of the littorinids are investigated at the three sites by collecting about 400 individuals at each site and recording shell lengths and sex.

Egg capsules of littorinids can be obtained by separating the females in vials, with a little sea water. The egg capsule morphology varies greatly and the size never exceeds 250 microns. Veligers hatch two days after spawning and the time period needed before settlement is 46 days for *N. vidua* in a laboratory condition.

Roughness experiments will be set up in the coming months. Evidence of predation by shore birds and dogwhelks, plus density-independent mortality by rainstorm will be further studied.

A combination of these factors will help elucidate the role of these littorinids in the ecology of the upper intertidal in Hong Kong.

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Genetic comparison of four species of *Littorina* considered before as *Littorina kurila*

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It was believed that 6 species of *Littorina* inhabit the north-western part of the Pacific ocean (Golikov & Kusakin, 1978). It has been found with a method of electrophoresis that 4 species of *Littorina* considered before as *L. kurila* occur on the Kurile Islands. There are : *L. sitkana*, *L. subrotundata*, *L. kasatka* and *L. sp.*

These species were compared electrophoretically using 17 loci coding 14 enzymes. Phenograms reflecting genetic relationships between species were produced from estimates of genetic distance (Nei, 1972) by unweighted pairgroup method. All species are easily separated on the allozyme markers of gene. Diagnostic loci are revealed. The genetic distances are : between *L. sitkana* and *L. species* 0,786, between *L. sitkana* and *L. subrotundata* 0,981, and between *L. sitkana* and *L. kasatka* - 1,660.

On the basis of obtained data it may be thought that *L. sitkana*, *L. subrotundata* and *L. sp.* are members of a common species complex. According to Reid's classification (Reid, 1990) these three species correspond to the subgenus *Neritrema*, whereas *L. kasatka* - corresponds to the subgenus *Littorina*. The genetic distance between the later and *L. sitkana* is far more than it is between *L. sitkana* and atlantic species, which are members of the same subgenus *Neritrema*.

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