
Symposium: Maritime Interactions in Prehistory

Antoinete Jerardino

Interpreting temporal changes in the shell component of shell middens in Port Jackson, New South Wales, Australia

Val Attenbrow, Cheryl Stanborough and Takehiko (Riko) Hashimoto

In 1970 Bowdler interpreted correlations between changes in the abundance of certain species of shellfish and fish and the appearance of shell fishhooks as showing a change in women's economic activities. She proposed that in earlier periods only men fished, whilst women collected a range of shellfish focusing on large deeper-water species. With the introduction of shell fish-hooks, women had less time to collect shellfish, and concentrated on species which were easier and quicker to gather – edible mussels. Subsequent researchers questioned these interpretations pointing out that temporal changes in the abundance of (a) edible mussel were likely to be site-specific due to biological changes in local populations and not human behaviour; and (b) fish species are not significant.

In Port Jackson, some 200 km to the north of Bass Point, temporal changes in the abundance of shellfish species have been documented in several late Holocene shell middens. Reasons for these changes are explored in this paper.

Zooarchaeology and Brazilian shell-mounds, first steps

Levy Figuti

The sambaquis (shell-mounds) are a very common type of prehistoric archaeological site along the Brazilian south-east coast. They were formed between 7.000 and 1.000 years BP by a unique culture, and generally associated with rich coastal environments with a high carrying capacity: the mangroves and similar estuarine ecosystems. This study examines the faunal composition of some sambaquis sediments and shows some aspects of their formation. The analysis exposed by the researchers shows two different moments in the formation of those sites, different features of shell-midden deposition. The first moment is the period of construction of the site, with a rapid and massive accumulation, the other moment is the phase of habitation, exhibiting slow and gradual deposition. The analysis of the fish bones shows the importance of this activity and illustrates some of the fishing techniques used by the mound builders. The similarities within those shell mounds seem to reinforce some hypotheses about the way of life of this prehistoric group, as a complex fisher-gatherer society.

Location-allocation modelling of maritime hunter-gatherer mobility in a fjordland archipelago

Quentin Mackie

Location-allocation modelling originates in transportation/retail geography, in which it is used to find sets of interdependent central places. This paper outlines its implementation in a case study from Vancouver Island on the Northwest Coast of North America. It is argued that mobility is sufficiently constrained in such a directional fjordland environment that the routes between sites can be represented as a transportation network of shortest paths across water. The p-median model in a GIS-enabled location-allocation analysis is applied to this network of transportation linkages, which joins together 238 habitation zones, created by clustering 576 archaeological sites. It is shown that centrality of place within a network matters, as the sets of more central places are also larger sites, but this pattern only occurs at a spatial scale difficult to reconcile with deliberate optimising behaviour. Discussion follows of the applicability of this kind of analysis to other areas of the world.

Prehistoric maritime adaptation at the Sea of Japan: Ecology and subsistence

Yuri E. Vostretsov

The paper describes large-scale cultural changes in Early and Middle Holocene connected with the changes of climate and sea level. It suggests that the appearance of maritime adaptation, sedentism and ceramics should be considered intercontinental phenomena. The first phase covers the interval from 10000 to 6500 BP, and saw the intensive rise of the sea level. It is characterised by the attraction of the coastal zone for occupation by people. Periods of stabilisation of the sea level occurred ca.9300-8000 BP and ca. 8200-7800 BP. At those periods the first evidence of maritime adaptation appears, demonstrating non-specialised exploitation of marine

resources. The second phase covers interval of 6500 to 5000 BP, when conditions for living on the coast were most favourable. This phase is characterised by lagoon adaptations and exploitation of marine resources. The third phase covers the interval of 5000-2300 BP when sea levels stabilised near modern levels. It is characterised by shifting of subsistence systems from lagoon resource exploitation to the open sea and the appearance of specialised use of marine resources. Near 2300 BP the sharp fall of sea levels destroyed marine economies over the region, and thus began the domination of cultivation economies.

Coastal vs. interior adaptations in late prehistoric northwest Florida, southeastern U.S.

Nancy White

Some reconstructions of prehistoric human adaptations to coastal environments suggest that the stability of a marine/estuarine/terrestrial wetland resource base allows for early sedentism and experimentation with horticulture that establishes the foundations for complex agricultural society. Northwest Florida peoples living along the Gulf of Mexico deposited shell midden mounds as early as 4000BP (and probably far earlier) and exploited rich coastal and estuarine environments that shifted in response to dynamic sea levels and fluvial geomorphology. They apparently were not as involved in horticulture or the change to intensive maize agricultural systems that characterised later prehistoric chiefdoms of the riverine interior, but instead continued a fishing/foraging lifestyles as they interacted with inland farming groups.