Hunters and gatherers on the edge: foraging for the past at continental limits.

Karen Hardy & Raquel Piqué

Sandwiched between the Palaeolithic and the Neolithic, the Mesolithic period marks, in many areas, the end of the primacy of hunting and gathering. It is a time of major climatic and environmental upheaval that is likely to have seen large scale landscape events such as the catastrophic flooding of Doggerland in the North Sea basin (Weninger *et al.* 2008). As early-mid Holocene coastlines now lie underwater in many areas, the west coast of Scotland, which has largely risen through isostatic rebound, offers an excellent opportunity to study coastal occupation during this period (Figure 1). This offers, perhaps uniquely for Europe, an extensive, largely undisturbed, record of marine exploitation and coastal occupation from the earliest to most recent times (Figure 2) (Hardy & Caldwell 2009). Investigation into the Mesolithic of the Inner Sound and Isle of Skye, found numerous lithic scatters, as well as many caves and rockshelters with archaeological material of Mesolithic or later date (Wickham-Jones & Hardy 2004; Hardy & Wickham-Jones 2009).



Figure 1. *Staffin Bay, Isle of Skye.*



Figure 2. *Inside a cave on the north-west coast of Jura, Scotland: note the surface shell midden.*

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A similar record of raised beaches, prolonged coastal occupation based around shell middens and a hunter-gatherer-fisher occupation can be found in Tierra del Fuego (Figure 3). Though these places lie at opposite ends of the earth, their latitudes are almost identical (Ushuaia: 54° 47'S; Portree: 57° 40'N) The climate is somewhat harsher in Tierra del Fuego, it has a higher average rainfall and lower average annual temperatures but the topography is similar with high mountains giving way to sometimes steep shorelines, inlets, channels and a heavily forested interior, similar to parts of Scotland during the Mesolithic. While in Scotland hunter-gatherers had largely disappeared 5000 years ago, in Patagonia the earliest records of hunter-gatherers dates to 10500 years ago (uncalibrated); and a continuity of occupation exists from 6000 years ago to less than 100 years ago.



Figure 3. *Shell middens, Tierra del Fuego. The hollows in the foregrounds are hut enclosures; these are surrounded by shell middens.*

Other similarities between the two regions include the fact that they are both continental edges. In times past they were the edges of the world. During the late Pleistocene and early Holocene, when lowered sea levels made them continental peninsulas, they represented part of the north western edge of the Eurasian landmass and the southernmost tip of the American continent respectively. Marginal today, they have escaped the population increase and industrialisation which have destroyed many traces elsewhere, consequently extensive archaeological remains survive.

A long-running project in the Beagle Channel has combined ethno-historical and archaeological records to explore the limits of conventional archaeological techniques to interpret aspects of the past, such as decision making and mobility, which are not always evident in prehistoric contexts (Estévez & Vila 2006; Estévez *et al.* 2007).

A joint project has recently begun which explores the way that the methodologies developed and insights

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gained in Tierra del Fuego can be combined with the extensive database of Mesolithic and later sites available for the Inner Sound and Skye to develop a better understanding of the way people lived here during the Mesolithic period.

Hunter-gatherer groups in both places exploited a wide range of marine and terrestrial resources, as food and raw material; both groups constructed shell middens, and both were highly maritime. In Tierra del Fuego inland populations have also been studied; the understanding gained about the way they interacted with coastal groups and where and how they lived can help focus on likely locations to search for evidence of inland populations in Scotland (Mansur & Piqué in press).

The aim is to address questions that have been difficult to answer up to now in Scotland. Specific objectives include locating living, burial/ritual and inland sites, assessing relationships between coastal and inland groups and mobility. The project will incorporate bioarchaeological and use-wear analyses, alongside conventional palaeobotanical methods to assess the role of plants in the diet; an investigation of the exploitation patterns of lithic raw materials; collaboration with a sea level team to search for early and pre-Mesolithic sites; and palaeoenvironmental reconstruction. A related aspect is an ethnographic study of the historical and modern use of wild resources. As well as a deeper understanding of the occupation of this European limit, we hope eventually to extend the project into a comparative study to include locations elsewhere in Europe to ask the questions to what extent are these cultures defined by their geographical limits and do they represent the ancient norm or are they different for existing in what must have been the edge of their world and on the point of extinction?



Figure 4. *Saloum Delta, Senegal, shellfish processing village.*



Figure 5. *Processing shellfish, Saloum Delta, Senegal.*

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Figure 6. *Gathering for a modern reference collection of limpets, October 2008.*

An associated project based in the Saloum Delta, Senegal (Figures 4 & 5), will work in collaboration with the Universite Cheikh an Diop, Dakar, Senegal and anthropologists from CSIC, Barcelona, to study a group of modern transient shellfish gatherers. Beginning in autumn 2009, it should lead to valuable insights into the way middens are constructed.

Following a preliminary visit to Scotland by a team from Catalonia in October 2008, in which a shell midden containing microlithic artefacts was found, the project conducted its first full field season in spring 2009. Several new shell middens have been recorded in south west Skye and samples have been collected from these and other shell middens in locations across the island and adjacent coastlines for parallel radiocarbon and AAR dating. A project to use limpets to extract seasonality data was begun in October 2008 and a modern reference collection is being complied through the monthly collection of shells, temperature and sea water (Figure 6).

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