

monumental shell middens, are key to understanding the complicated interplay between people, things and places during the Mesolithic of the northern Irish Sea basin.

Common to many of the papers in the session was an acknowledgement of the need to look beyond the minutiae of the contents of lithic scatters themselves, and to consider also how lithic scatters as dwelt-in locations are related to their immediate landscapes. Emma Philip's work on Late Mesolithic and Early Neolithic scatters in the Dee valley, Aberdeenshire, Emmett O'Keeffe's work on Mesolithic assemblages from Bardsey Island and the Llyn Peninsular, north Wales, and my own work on the Neolithic of the lower Exe valley, Devon, all explored ideas about the interplay between lithic scatters and landscape setting. My paper also discussed the benefits of situating the analysis of lithic scatters within other types of archaeological field work in order to tease out some of the lost topographic and monumental details in an intensively ploughed landscape.

Hugo Lamdin-Whymark discussed scatters of worked quartz found during the excavation of rock art sites near Kilmartin, Scotland. As a result of experimental work replicating some of the rock art he suggested these assemblages consist of fragmentary and used hammerstones, and as such are a bi-product of rock art production rather than being lithic debitage in the conventional sense. He also suggested that the creation of these pieces of rock art would have been a very visible and noisy process contributing to the prominence of these sites in the landscape.

Erick Robinson's paper critiqued approaches to Mesolithic scatters in the Low Countries which have focused on counts and distributions of microliths. He instead argued that a site or assemblage-based approach to scatters offers the potential for a much fuller understanding of the Mesolithic in this region.

For me, although initially slightly terrified of giving my first paper at TAG, the session was a good experience. It was inspiring to hear eight papers from other researchers who are also grappling with the complexities of interpreting lithic scatters and who aspire to doing more with them than simply reducing them to dots on maps. It was also comforting to realize that I am not alone in ploughing through box after box of small pointy stones.

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JOURNEYS TO THE UNDERWORLD: RITUAL TRANSFORMATIONS OF PERSONS, OBJECTS AND CAVES IN PREHISTORIC CENTRAL SARDINIA



*Neolithic cave painting in Grutta I de Longu Fresu, Seulo
(photo: G. Farci).*

During an unexpected encounter at the European Association of Archaeologists conference in Malta in 2008, a Sardinian geologist, Giusi Gradoli, and a British scholar, Terry Meaden, showed me photographs of a newly discovered painted cave and another cave full of human bones. They convinced me to see the caves for myself at Seulo in central Sardinia. I visited some ten caves and rockshelters distributed along tributaries of the River Flumendosa, each containing rich later prehistoric ritual deposits. Back home, I designed a research programme promising to evaluate ideas about the ritual transformation of persons, objects and caves using a range of modern scientific techniques on this new and potentially high-quality archaeological dataset. The key research aims would be to establish: the diversity of natural caves and their human uses in the territory of Seulo; how some of these caves and their natural features were modified from natural spaces into sacred places; the character

and variety of rites of passage performed and experienced by people in these caves; and the degree to which these persons and the material dimensions of their cave rituals were connected to (or marginalized from) wider patterns of life. Permission for fieldwork was obtained from the Italian Ministry of Culture and, thanks to the benevolence of the Prehistoric Society, the British Academy and the Fondazione Banco di Sardegna, funding was secured for the work. This began in the summer of 2009 with help of a small multi-national team of specialists and volunteers.

Over the first year of the project, we have worked on three levels: a small-scale field survey of the Taccu di Ticci plateau around which many of the caves are situated; an extensive survey of caves within the surrounding catchment of the upper Riu Narbonionniga; and the excavation and sampling of four contrasting cave sites known to contain prehistoric deposits. Automated dataloggers were installed in all four caves to record temperature and relative humidity levels and laser scans were made of the interiors of these caves. The field-survey identified around 50 'sites', including a later prehistoric nurgah and dolmen, and an extensive scatter of obsidian and ceramic artefacts suggestive of a later prehistoric hilltop settlement. In addition, 19 caves have been recorded through the cave survey while our cave excavations have been no less productive.

In Longu Fresu cave, three important ritual features were identified at the end of the small cave tunnel. The first was a small group of paintings, covered by flowstone (sampled for Uranium-series dating), placed to the side of a spring, and representing at least two schematic anthropomorphic figures; the second was a human skull, cemented to the cave wall by flowstone, and related bones deposited in niches and holes, radiocarbon dated to the Middle-Late Neolithic (c. 4250-4050 cal. BC); and the third was a semi-circular structure, formed by modified stalagmites and stone blocks, containing a greenstone axe-blade.

In the extensive Janas cave system, some intensively burnt ritual deposits were excavated in two chambers located at the end of the entrance corridor. These contained large quantities of ashes, pottery sherds (some decorated in the distinctive style of the Ozieri culture), animal bones radiocarbon dated to the Final Neolithic (c. 3800-3650 cal. BC), obsidian artefacts and ornaments of shell and stone. A third chamber was excavated in the deep interior of the cave system with a shallower special deposit.

In the very small Bittuleris cave, the mortuary deposits were found to have been completely disturbed since the 1930s. Nevertheless, we recovered substantial quantities of human bones radiocarbon dated to the Middle Bronze Age (c. 1750-1600 cal. BC), animal bones, pottery sherds, obsidian artefacts and bone, shell, ceramic and metal ornaments. Specialist study of the human remains by Jessica Beckett points to successive primary inhumations in this cave of adults and children, males and females, while DNA fragments have been assigned to mitochondrial haplogroups T, H, J and K by the Australian Centre for Ancient DNA.



*Human bones on the surface of Sa Forada de Gastea cave, Seulo
(Photo: R. Skeates).*

At the large Su Cannisoni rockshelter, excavation found that a pile of stones had been constructed under a spring and over a secondary burial deposit comprising a pair of adult human skulls radiocarbon dated to the Middle Bronze Age (c. 1550-1450 cal. BC) and an adjacent artificial semi-circle of stones containing a large group of disarticulated human bones, sheep/goat bones, pottery sherds and charcoal.

Having established the research potential of the Seulo caves, future work will involve larger-scale excavation and further scientific studies including obsidian and pottery characterisation, charcoal analysis, isotope analyses of human and animal bones and palaeo-climatic analysis of speleotherms. In this way, I hope that we will come closer to reaching the lives and deaths of the people who transformed these caves in the prehistoric past.

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