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# 27. RECENT DEVELOPMENTS IN THE STUDY OF NEOLITHIC SETTLEMENT IN CALABRIA

A. J. Ammerman and S. Bonardi

Substantial gains have been made over the last five years in our knowledge of prehistoric settlement patterns in Calabria. In contrast with Sicily and Puglia, regions where neolithic sites have received wider attention, Calabria has remained until recently more or less terra incognita on the map of southern Italy. It is common to distinguish a number of different levels of spatial organisation in settlement pattern studies. The following five levels have, for example, often been recognised: (1) features; (2) structures; (3) settlement; (4) areas within a region; and (5) the region as a whole. No attempt will be made here to discuss the merits of the various analytical frameworks for the study of settlement patterns that have been put forward in the literature. In this brief report, we shall be concerned mainly with the middle three levels in the list given above. It should be emphasised at the outset that we are still in an early phase of the development of settlement studies in southern Italy. We still know relatively little about neolithic houses or structures (their sizes, shapes and methods of construction) in most parts of southeer Italy. We know perhaps even less about the number of houses occurring at sites or the internal layout of settlements. Much more seems to be known about the distribution of neolithic sites in certain areas as a result of archaeological surveys. But few studies have yet been made which attempt to evaluate the quality of site distributions or how complete the maps obtained from survey work actually are. Work recently initiated in the Acconia area of Calabria along such lines suggests that the 'patterns' obtained from the coverage of the landscape during a single field season, for example, may be much less complete than we have generally assumed. More systematic and sustained approaches to fieldwork would seem to be called for if we intend to produce distribution maps of higher quality. However, the important point to make here, without losing sight of the limitations of our present state of knowledge, is that such developments are beginning to take place and that initial results are quite promising.

Prior to the start of the Calabria Survey in 1974, few neolithic sites were known in the region. The sites that were reported were located in the northern part of Calabria where several cave sites and one open air settlement had been excavated (Cardini, 1970; Tinè, 1964). The accepted opinion at the time was that the region apparently offered few attractions for neolithic settlement and that in comparison with Sicily and Puglia it had witnessed little in the way of occupation during impressed ware times (Bernabò Brea 1966: 43). The results of the Calabria Survey call for major revisions of this picture. Widespread evidence has been found for neolithic settlement in the region. Instead of reflecting the stylistic traditions of peninsular Italy, the pottery observed at

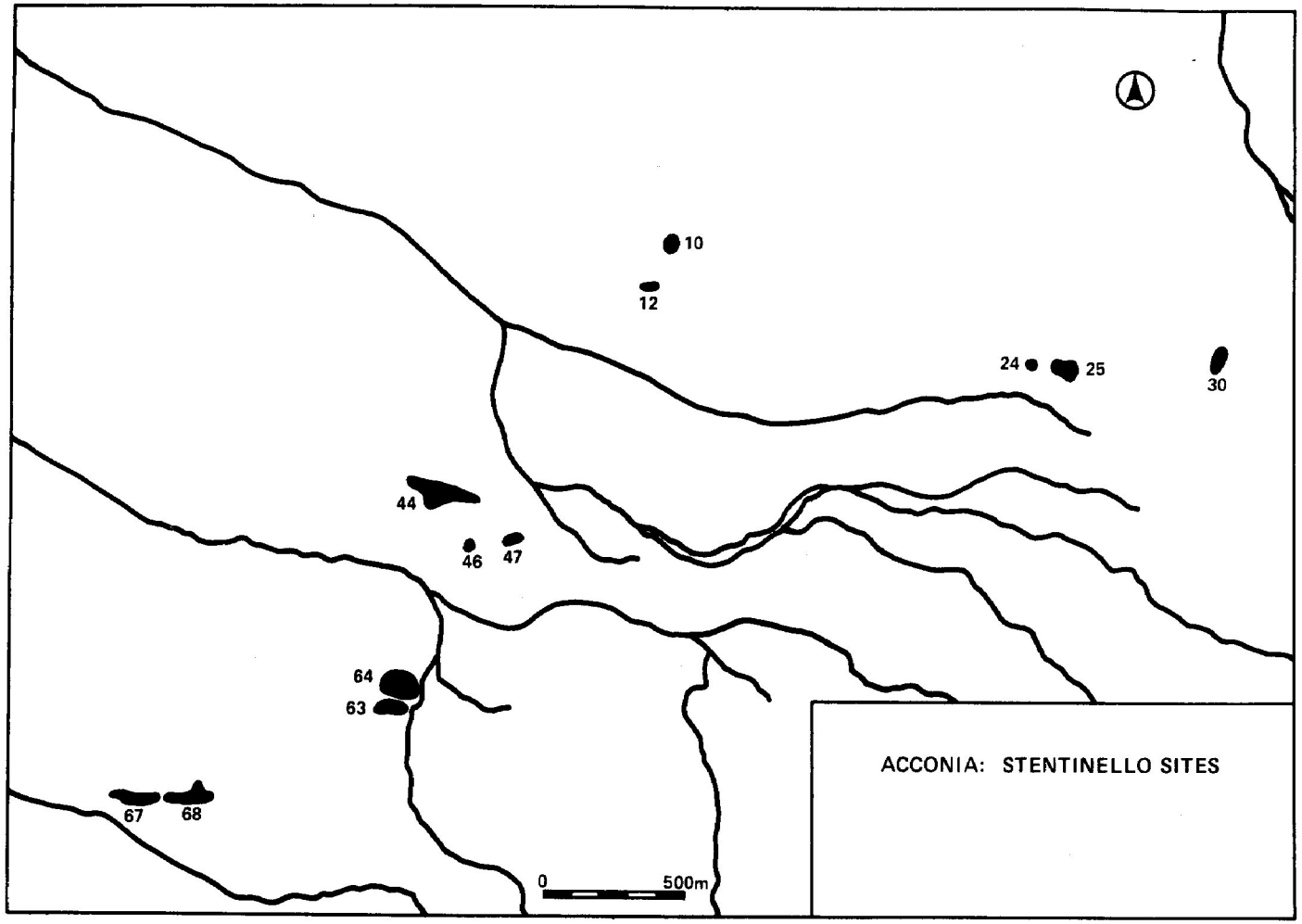


Fig. 27.1 Distribution map of known Stentinello sites in the Acconia area of Calabria in 1977.

impressed ware neolithic sites in the central and southern parts of Calabria shows closer affiliations with the Stentinello tradition of Sicily. Obsidian from the island of Lipari comprises the main raw material used for making chipped stone tools at many neolithic sites on the west coast of Calabria. The implication would appear to be that rather than being a marginal region, Calabria may have played a central role in the operation of exchange systems in southern Italy (Ammerman, 1979). The apparent lack of settlement evidence in Calabria prior to 1974 was due, as is often the case in archaeology, to a lack of fieldwork.

Of those parts of the region examined during the Calabria Survey, the most intensively explored area is the one near the village of Acconia, which is located on the Gulf of S. Euphemia along the west coast of Calabria. Repeated coverage of the landscape over five field seasons led to the discovery of well over 70 prehistoric sites in an area which measures only about ten square kilometres. Perhaps the most interesting finding to emerge from this work was the dense pattern of Stentinello settlement in the area (Fig. 27.1). The introduction of new field methods such as the replicated collection of site surfaces made it possible to make fuller and more controlled use of the material recovered during the survey (Ammerman and Feldman, 1978). Detailed mapping of the soils and geomorphology of the area, which was done by A. Remmelzwaal, contributed in a major way to the Acconia Survey. Since the early Holocene, the land surface of the Acconia dune area has experienced repeated episodes of inflation and the formation of a series of paleosols. It is this environmental context which has provided favourable circumstances for the preservation of prehistoric sites. In covering the landscape, situations are encountered where buried paleosols have recently been exposed due to either wind erosion or human activity. In a few fortunate cases, it was even possible to record neolithic occupation surfaces brought to light in this way (Ammerman et al., 1978). The same soil conditions also account for the good state of preservation of wattle and daub structures dating to Stentinello times. Excavations conducted in the Acconia area in 1977 and 1979 have produced the first good series of impressed ware neolithic structures in southern Italy (Ammerman et al., in press). In terms of organisation, it is perhaps best to start with a description of structures and then turn to higher levels of settlement patterns.

During the survey of the Acconia area, it was found that fragments of baked daub were often observed in those scatters of surface material where impressed ware neolithic pottery was also encountered. In a few cases, Stentinello sherds were recovered in direct association with recently exposed (as a result of agricultural activity) concentrations of daub fragments representing the remains of collapsed wattle and daub structures. In planning for the first season of excavations in 1977, a major concern was to develop techniques to locate neolithic structures which in many cases were probably buried at depths of a metre or more below the modern land surface. The strategy adopted was to have three main methods: a magnetometer survey would first be conducted at a site; borings would then be made on anomalies detected as a check on the presence of daub fragments; and finally as a third step, excavations would be undertaken in order to confirm the occurrence of wattle and daub structures at those places identified by the magentometer survey and borings. One advantage of such a strategy would be the possibility of sampling

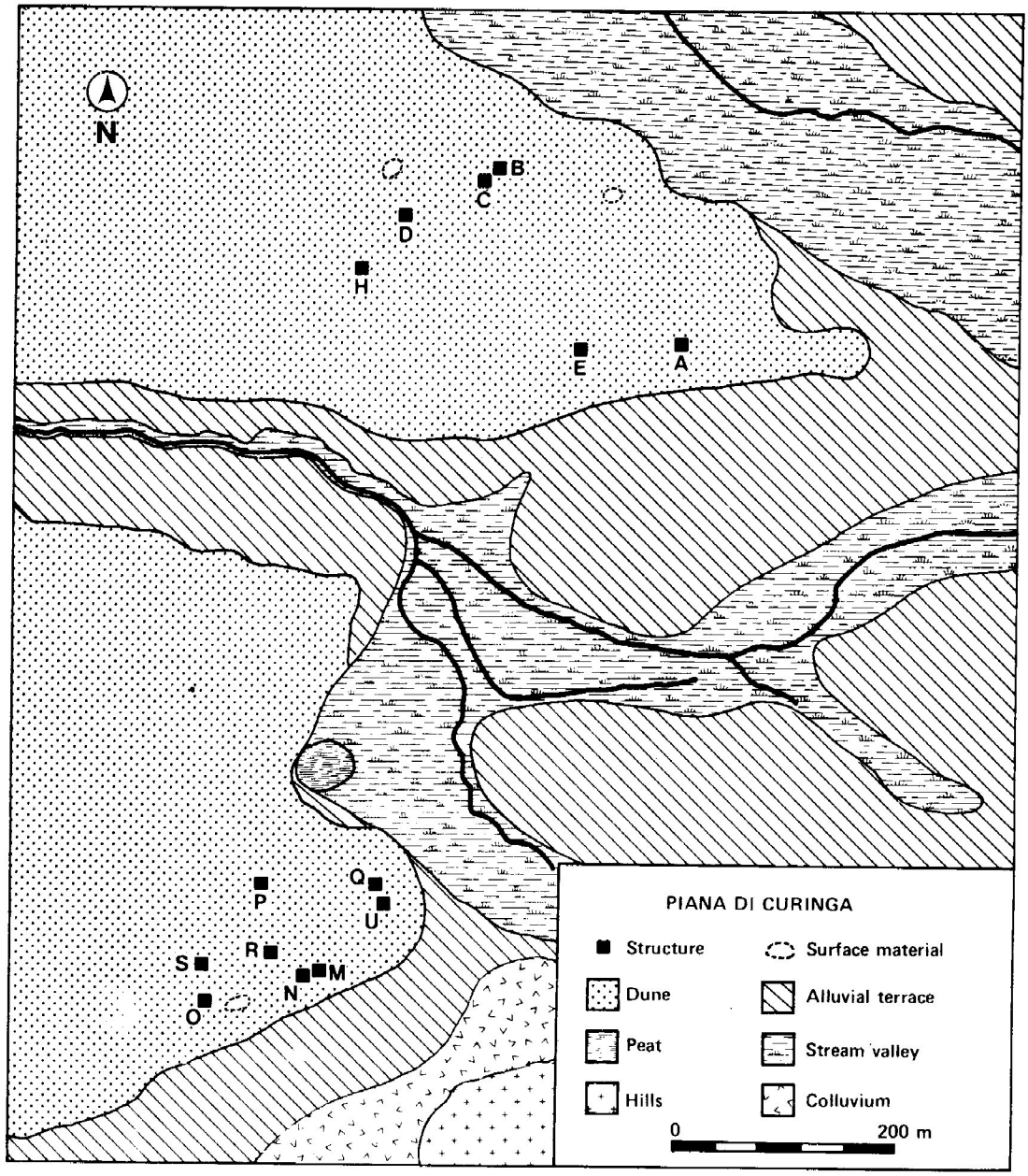


Fig. 27.2 Distribution map of wattle and daub structures where excavations were conducted in 1977.

directly on collapsed structures. There were reasons for thinking that wattle and daub structures which had been fired would show up as magnetic anomalies. Fragments of fired daub could be expected to possess thermo-remanent magnetism and the dune sands of the sites would provide a quiet background for the mapping of magnetic anomalies. The magnetometer survey was carried out by A. Bartlett and A. David of the Ancient Monuments Laboratory, using the system described by Clark (1975) which permits the plotting of anomalies while work is being done in the field. At the anomalies detected, borings were subsequently made in order to establish the exact location and depth in the ground of a collapsed structure. It is worth commenting here that there is a good contrast in terms of both colour and texture between the dune soils and daub remains. Additional borings were made at points between or away from anomalies as a control on the possible occurrence of structures that may have passed undetected by the magnetometer survey. Confirmation of the occurrence of wattle and daub structures at those places indicated by the first two steps was provided by excavations, which also made it possible to establish the dating of the structures to the Stentinello period. A distribution map of the structures selected for excavation in 1977 is shown in Figure 27.2. In the initial selection of places to excavate, the aim was to obtain a wide spatial coverage of settlements as a means of gaining a comprehensive sense of the degree of variation among structures both within a given settlement area and between adjacent settlements.

With regard to the structures themselves, they have a shape that is rectangular to sub-rectangular in plan. The structures are relatively small in size, measuring often only four to five metres in length and three to four metres in width. The walls, which consist of a wooden framework covered with daub, vary somewhat in thickness but tend to be of the order of twenty centimetres thick. In terms of flooors, daub or clay does not appear to have been employed for this part of the structure. Use is made instead of the surface of the sand dune itself. A massive amount of wall rubble can be recovered from a collapsed structure: for example, the total weight of fired daub fragments recovered from the excavation of the structures in Areas C and H amounted in each case to almost 1000 kilograms. It is worth adding that the size and shape of a structure are often reasonably well reflected by distribution maps showing the weight of daub fragments recovered per metre square in an excavation area (e.g. Ammerman et al., in press: fig. 3). A large number of the daub fragments uncovered during excavation exhibits impressions of poles, saplings, leaves and finishing marks. At the better preserved structures such as the one in Area H, there is, in fact, a wealth of information available for the identification of building materials and the reconstruction of building methods. There is the opportunity to go beyond the description of house plans alone and begin describing individual structures themselves. In this context, it is worth mentioning the experimental work related to the reconstruction of Stentinello structures initiated by G. Shaffer in 1979. Perhaps one of the most intriguing features of the structures concerns the procurement of clay used in making the daub walls. This does not occur naturally on the dunes and was probably obtained from the underlying fluvial terraces at the edges of the dunes. In some cases, the distance that the clay would have had to have been transported from the closest point on the terraces to a structure is well over 100 metres. It is instructive to try to imagine the

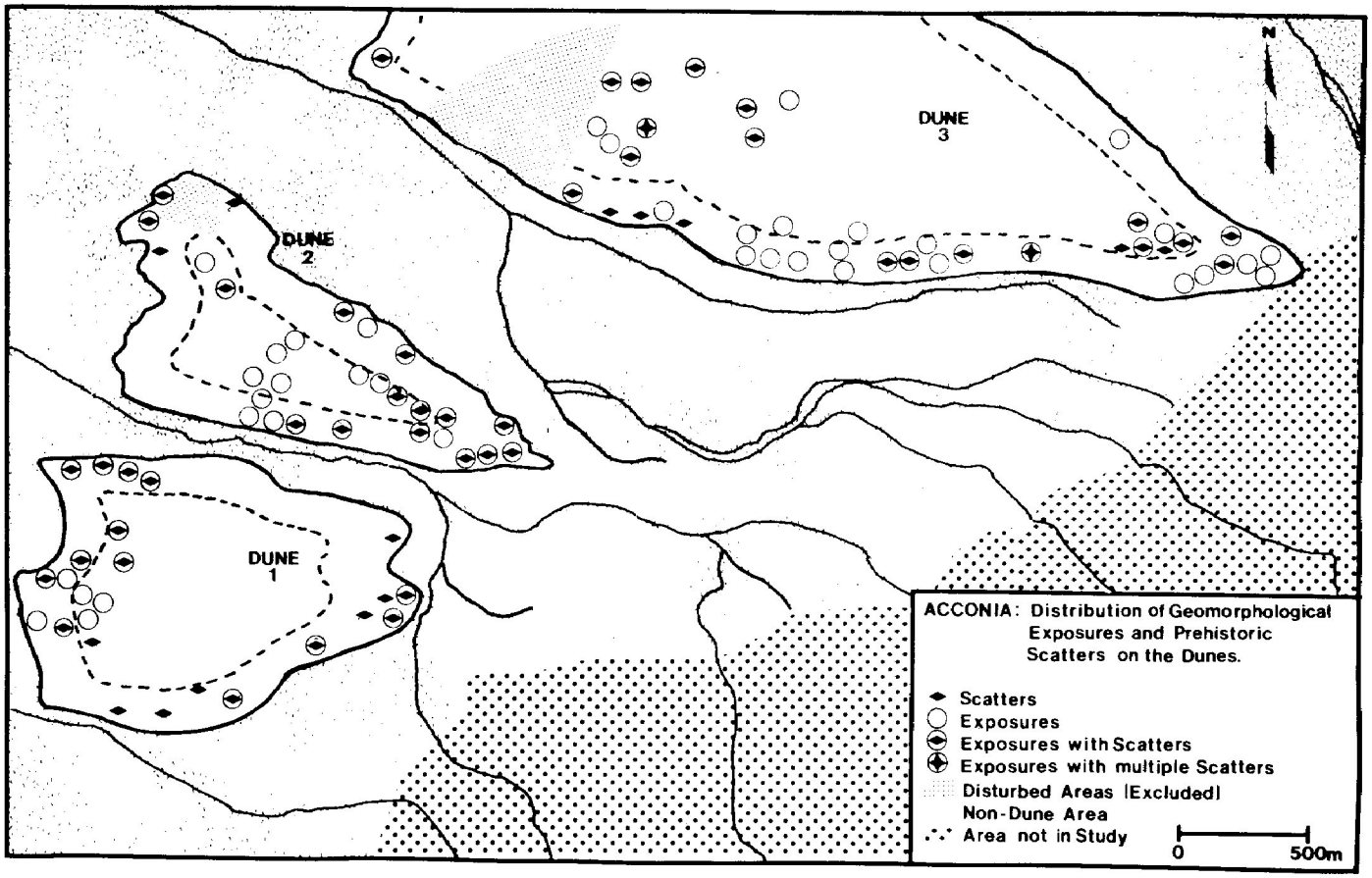


Fig. 27.3 Distribution map showing the association between scatters of prehistoric material on the land surface and geomorphological exposures in the Acconia dune area. The analysis of this relationship was made by J. McDonough.

work effort involved in quarrying and transporting the several tons of terrace sediment that may have been required for the building of a structure.

In a recent review article, Evans (1976) notes that our current knowledge of the layout of neolithic settlements in southern Italy is extremely limited. This is no doubt the most difficult level of settlement patterns to study. Only a few brief comments about Stentinello settlements in the Acconia area will be offered here. From the evidence available at present, it appears that Stentinello occupation near Acconia was largely confined to sandy soils or dune areas. Several of the settlement areas (or site complexes in the case of a group of closely spaced sites such as 63 and 64 or 67 and 68 found during the Acconia Survey) are reasonably large in size and extend over at least 200 metres along their longest dimension. On the basis of magnetometer work and an extensive series of borings, it has been possible to identify more than 30 structures within the settlement area shown in the upper part of Figure 27.2 (i.e. A to H). There is a good chance that not all of the structures at this settlement have yet been located. Moreover, it is still not clear whether the structures should be seen as forming a village occupied at a given point in time or whether the presumably dense pattern represents a palimpsest of individual farmsteads occupied at different times within a long period of overall occupation. Work is in progress in trying to evaluate these two alternative models (the village versus the shifting farmstead) and also possible combinations of the two. Various lines of evidence need to be developed in order to attempt to solve such a difficult archaeological problem.

In turning to the distribution of Stentinello sites in the Acconia area, it is possible to interpret Figure 27.1 in terms of five main site complexes or settlement areas each located about one kilometre from one another. This is the pattern of sites that was obtained in 1977 as a result of five seasons of coverage of the Acconia area. The point should be made that a much less complete picture would have been obtained if there had been only a single season of survey coverage. There is evidently a tendency to underestimate the number of sites in an area when the traditional approach to survey work involving the coverage of an area over a single season is employed. This would seem to be especially true for periods such as the Neolithic where the recognition of sites is not always an easy or simple matter. But even the distribution of sites for the Stentinello period shown in Figure 27.1 is probably far from complete. By 1977, we had become increasingly aware of the influence of geomorphology and geomorphological exposures on the surface visibility of sites. One of the factors responsible for the location of new sites over successive seasons was our increasing ability to 'read' the landscape of the Acconia area and appreciate the relationship between so called geomorphological 'windows' and the visibility or findability of sites. This development is well illustrated in a study made by J. McDonough in which the association between a group of prehistoric scatters and geomorphological exposures in the Acconia dune area is examined. In this study, the mapping of geomorphological exposures is based upon the interpretation of aerial photographs (in colour and at a scale of 1:5,000) and ground checks in the field. Three-quarters of the scatters seen in Figure 27.3 are found to be associated with such exposures, which taken together in terms of their total area comprise only a fraction of the total area of the three dunes. Studies of this kind help to explain why the visibility of a site may change over time or with field experience. They also have wider implications for the design

of surveys and how we should approach the interpretation of site distributions, More attention to the role of geomorphology in the patterns obtained from surveys would clearly seem to be warranted. As a final note, it is worth adding that this line of thought led us to refine our field methods after 1977 and to continue the search for further prehistoric sites in the Acconia area. This work has resulted in the location of several more Stentinello sites and an even denser pattern of neolithic occupation in the area.

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