

Rock art and the prehistoric landscape of Galicia: the results of field survey 1992–1994

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This paper discusses the relationship between the earlier prehistoric pattern of settlement in Atlantic Europe and the creation of rock art. It investigates the organisation of the Copper Age and Early Bronze Age landscape of north-west Spain using the evidence provided by the distribution, siting, and composition of rock carvings. It presents the results of field survey in three sample areas extending from the centre to the outer edge of their distribution. Although these drawings cannot be interpreted as illustrations of daily life, they may have helped to define rights to particular resources in an area which experienced abrupt changes of ground conditions over the course of the year.

INTRODUCTION

Many writers have commented on the striking contrast between those parts of earlier prehistoric Europe with evidence of substantial settlements and the areas in which monumental tombs play a more prominent part (the basic statement is Renfrew 1976). In such cases the settlement pattern must be approached obliquely, by studying the relationship between the development of funerary monuments and the use of the landscape as a whole. That is why the interpretation of megalithic tombs as territorial markers has been espoused so widely, for it proposes a close relationship between the development of those monuments and the existence of limited but critical resources in the local environment (Chapman 1981). Although it was not a requirement of the original model, most applications of these ideas have been concerned with sedentary populations and with the distribution of cultivable soils.

A rather similar idea has been advanced by the anthropologist Michael Casimir in studying the territorial organisation of more mobile populations. Writing in a rather similar vein, he suggests that in areas of

above-average population or in regions of unusually varied ecology people may be more concerned to define their rights explicitly (Casimir 1992a; 1992b). There are many ways of doing this. Tim Ingold has argued that mobile populations often communicate through a 'language of signs', leaving messages for one another at specific points in the landscape. Such messages may contain a mixture of sacred and practical information, and they can appear in various media, from cairns on dry land to buoys in open water. The essential feature is that the parties cannot communicate directly because they are not present on the same occasions (Ingold 1986). These ideas have important implications for archaeologists who find it particularly difficult to study the settlement patterns of mobile people. Nowhere is this more apparent than along the Atlantic coastline of Europe where there is only limited evidence of lasting settlements between the first adoption of domesticated resources and the agricultural intensification of the later Bronze and Iron Ages. These problems are particularly severe over an area extending from the British Isles as far south as the border between Portugal and Spain.

It is in this very area that archaeological examples of the phenomena described by Ingold may perhaps be identified (Criado 1988). For example, the distribution of funerary monuments has often been explained in terms of a mobile pattern of land use. In our own study

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area in north-west Spain, the distribution of mounds is certainly associated with the paths across the landscape followed by free-ranging animals to this day (Infante *et al.* 1992; Criado & Vaquero 1993; Criado & Fábregas 1994). In an earlier article in these *Proceedings* one of the writers took a similar approach to the interpretation of prehistoric rock carvings in the British Isles (Bradley *et al.* 1993), but once again these sites form only part of a wider phenomenon, for the same style of rock art extends down the Atlantic coastline as far as Spain. This paper investigates whether the territorial model employed in studies of rock carvings in Britain is also appropriate there.

The Galician style of rock art is largely confined to two parts of north-west Spain: a series of four major peninsulas extending into the Atlantic, separated from one another by the long inlets known as rias; and a substantial tract of higher ground further to the east in between the heads of those rias and the mountains of the interior (Fig. 1). The 'Galician/Atlantic' style of rock art extends northwards from the Portuguese border for about 100 km (Peña & Vázquez 1979; García and Peña 1980; Vázquez 1990). The main groups occur no more than 50 km from the open sea and are generally within 30 km of the heads of the rias. Diagnostic motifs are sometimes found outside this compact area, particularly to the east and north-east, but for the most part the extent of 'Galician' rock art is limited by the distribution of Schematic Art which extends across the rest of the Iberian Peninsula (Gomez 1991).

Even today the areas with Galician rock art have a very distinctive character (Alberti 1982; Carballeira *et al.* 1983). The most productive regions are probably the low-lying basins towards the coast, which is itself a major source of fish. Intensive agriculture extends inland, principally along the river valleys, with less intensive farming on the higher ground. The main crop is maize. Each of the peninsulas has a spine of hills which are less used today and these areas are generally covered with gorse or have been planted with eucalyptus and pine. The same applies to the higher ground to the east of the rias, although in this case the uplands are far more extensive. On the coast, the peninsula of Barbanza has the largest extent of high ground, rising to a maximum of nearly 700 m, whilst the mountains of the inland area include an extensive plateau more than 600 m above sea level. Most of the rock carvings, however, are not much over 300 m in elevation.

These topographical differences result in major differences of ecology (Fig. 2; Alberti 1982; Carballeira

et al. 1983). The fertile coastal area can experience drought during the summer months and this vitally affects the natural distribution of animals, particularly horses. Although these are technically domesticates since each has an owner, they run free throughout the year, moving to the higher ground during the summer months. They follow well-established paths along the more shaded valleys and tend to congregate in the shallow basins known as *brañas* which are the only places to retain much moisture at the warmest time of year; the *brañas* were certainly forming by the Mid Holocene period, and the growth of peat indicates that these areas were unusually damp in the first place. Animals also congregate in the lee of prominent rocks where they can obtain some shelter from the sun. To a smaller extent the same applies to the movement of cattle, although these are not permitted to range so widely across the landscape. In some areas of Galicia the only breaks in the vegetation are along the paths created by these animals or in the areas where they congregate.

Galician rock art is usually found on flat or gently sloping surfaces. The motifs divide into two main groups (García & Peña 1980). The first is entirely abstract and panels of rock art are generally based on the individual cup mark. These motifs may be embellished by the addition of one or more concentric rings and also by a radial line of the kind familiar in Britain. Different motifs may also be linked together and can be drawn into quite complex patterns. In addition, they may be embellished by the creation of further cup marks, either inside the circular motifs or elsewhere on the same surface.

The second group of carvings is mainly of animals (Figs 3 & 4). Although not all scholars are agreed on their identification, we believe that most of these drawings are of stags and hinds, depicted at different stages in their growth. Occasionally they form part of hunting scenes. There are also drawings of horses, which tend to be portrayed together with human figures, often riders. There are more occasional images of weapons, idols, or other types of artefact (Fig. 3), and there are still more infrequent drawings of strange creatures described as 'anthropomorphs'. Because these motifs are relatively uncommon they play a limited part in the interpretation presented here.

These general patterns are cross-cut by more local variations. The main concentration of animal art is found on the higher ground to the east of the rias, where it is almost always accompanied by a range of

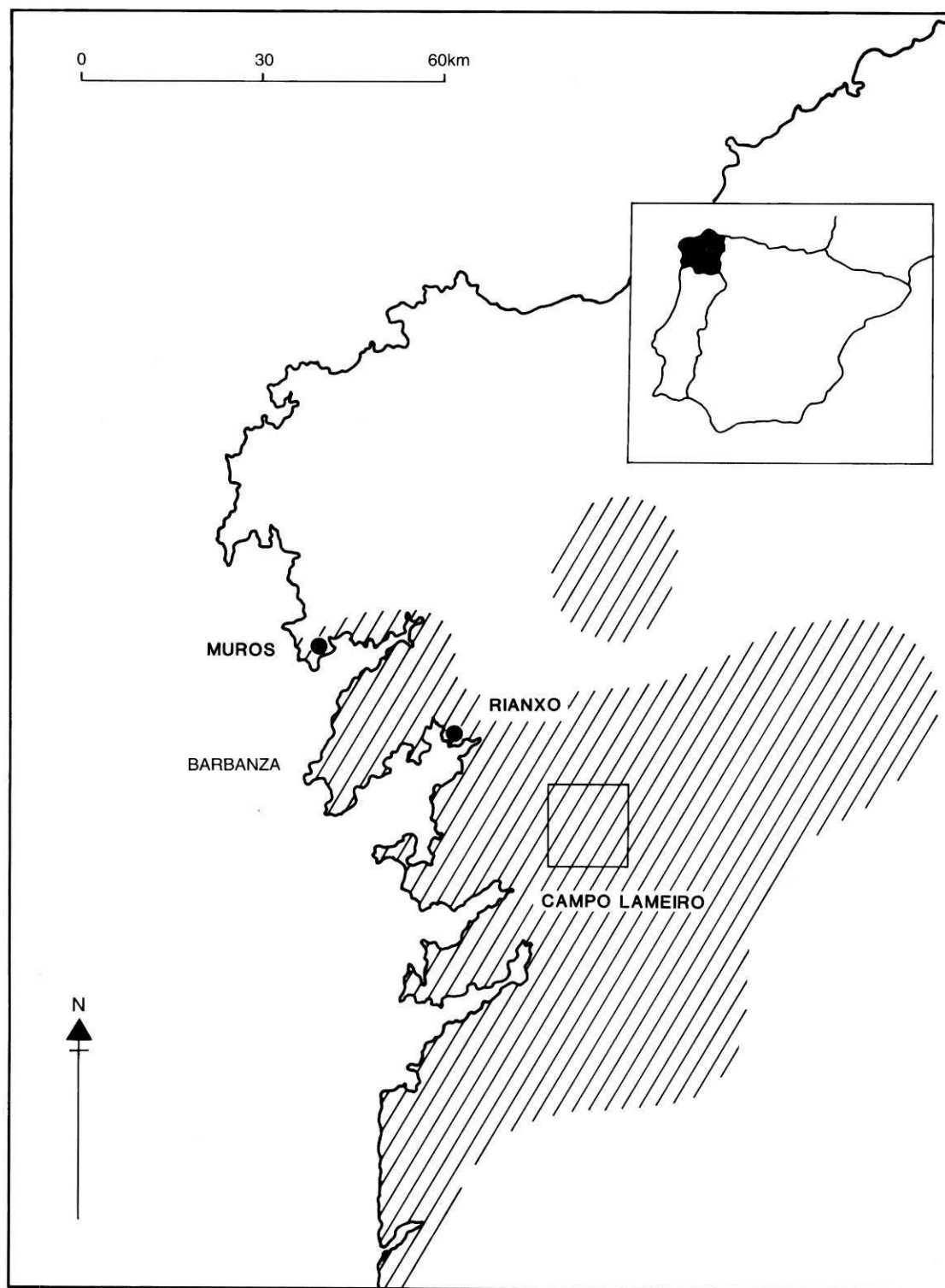


Fig. 1

The distribution of Galician rock art, showing the location of the three study areas

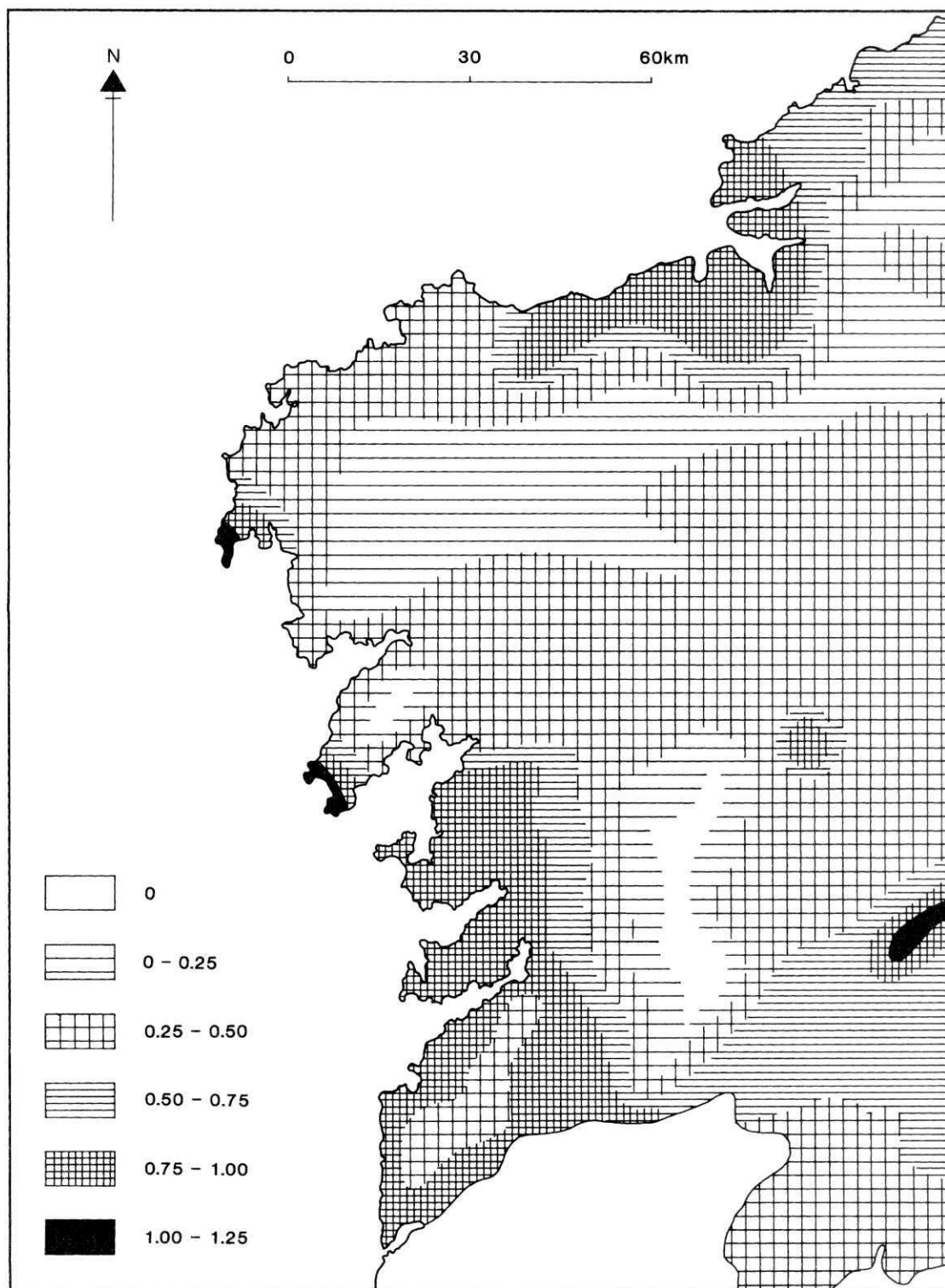


Fig. 2

The extent of drought during July (after Carballeira *et al.* 1983). An index of > 1 indicates the areas of drought in July. Note the steep gradient across the area containing the prehistoric rock art

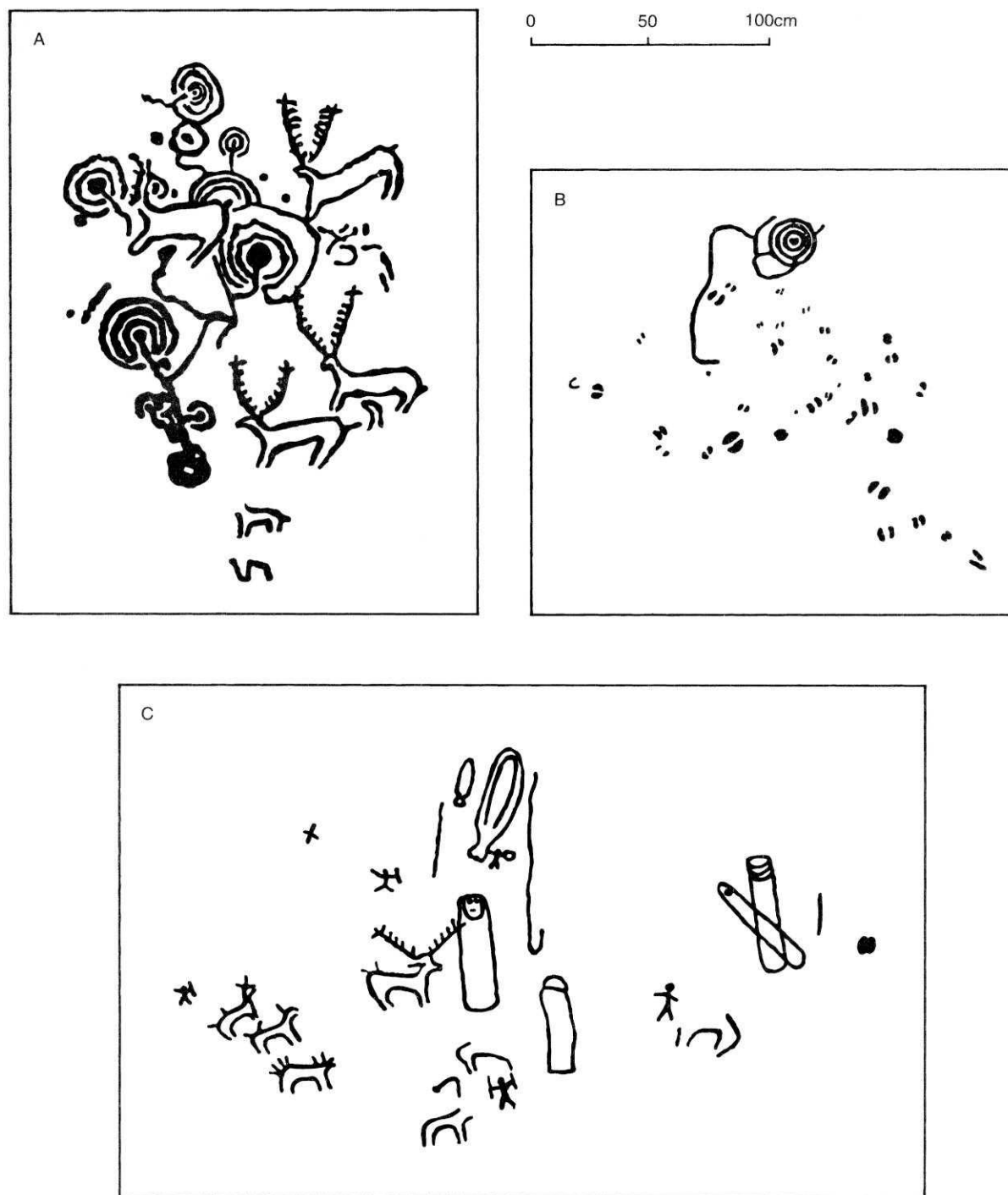


Fig. 3

The repertoire of Galician rock art. A) Laxe dos Cebros, Fentáns, showing circular motifs and stags. B) and C) both illustrate the nearby site of Laxe das Ferraduras. On the flat surface (B) there are hoofprints and a circular motif. On the steeply sloping side of the same rock (C), overlooking a large valley, are weapons, idols, human figures, and deer.

Note the apparent association between an idol and a large stag

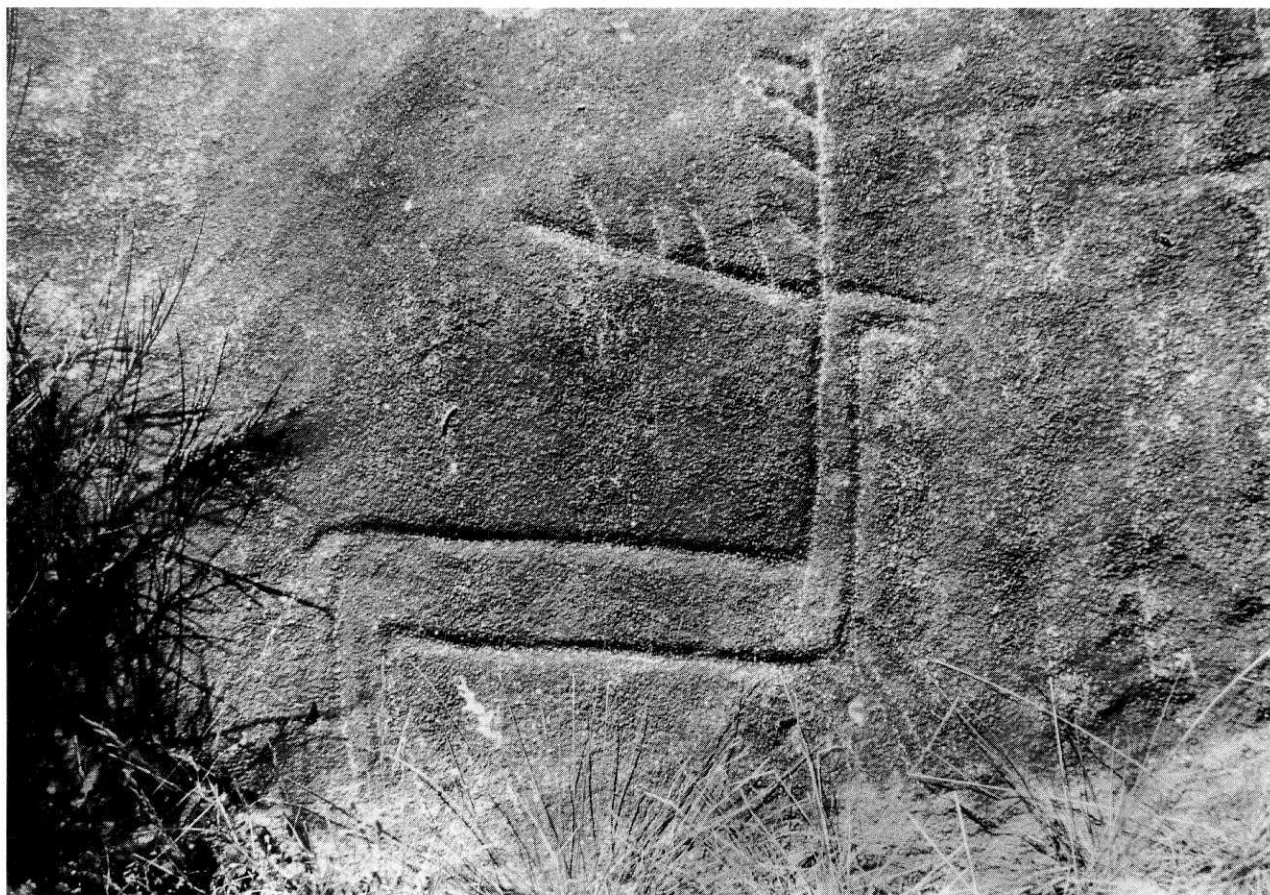


Fig. 4

Carving of a stag from the study area at Rianxo

abstract designs. With only limited exceptions, principally on the promontory of Barbanza, depictions of animals are less common towards the coast, where the rock carvings consist mainly of circular motifs (Peña & Vázquez 1979). Towards the south of their distribution they also include occasional design elements that are found in Schematic Art. The rock carvings show another form of variation too, as the same species of animals are depicted in at least two different styles. Although the question needs more research, it seems as if these were mainly associated with different zones along the Atlantic coastline (Concheiro & Gil *in press*).

The dating of Galician petroglyphs remains rather controversial, although there seems no reason to doubt that their currency did overlap with that of comparable carvings in the British Isles. The traditional view is that they were first created during the later use of

megalithic tombs. They continued in use during the Copper Age and the Early Bronze Age but were no longer made by the time that fortified settlements were established in the 1st millennium BC; in fact there are cases in which these 'castros' overlie older rock carvings (Peña & Vázquez 1979). An alternative hypothesis is that Galician art has a shorter currency and is confined to the Copper and Early Bronze Ages (Peña 1980). This argument is based on the depictions of recognisable halberds and daggers among the images (Figs 3 & 5) and also on the drawings of idols which have their closest parallels in the Chalcolithic settlements of Portugal (Fig. 3; Aparicio 1986; Fábregas 1991, 170–92). Such carvings are undoubtedly rare and in this paper we shall argue that they had a somewhat different role from the remaining motifs. There is no reason to reject an earlier origin for Galician petroglyphs.

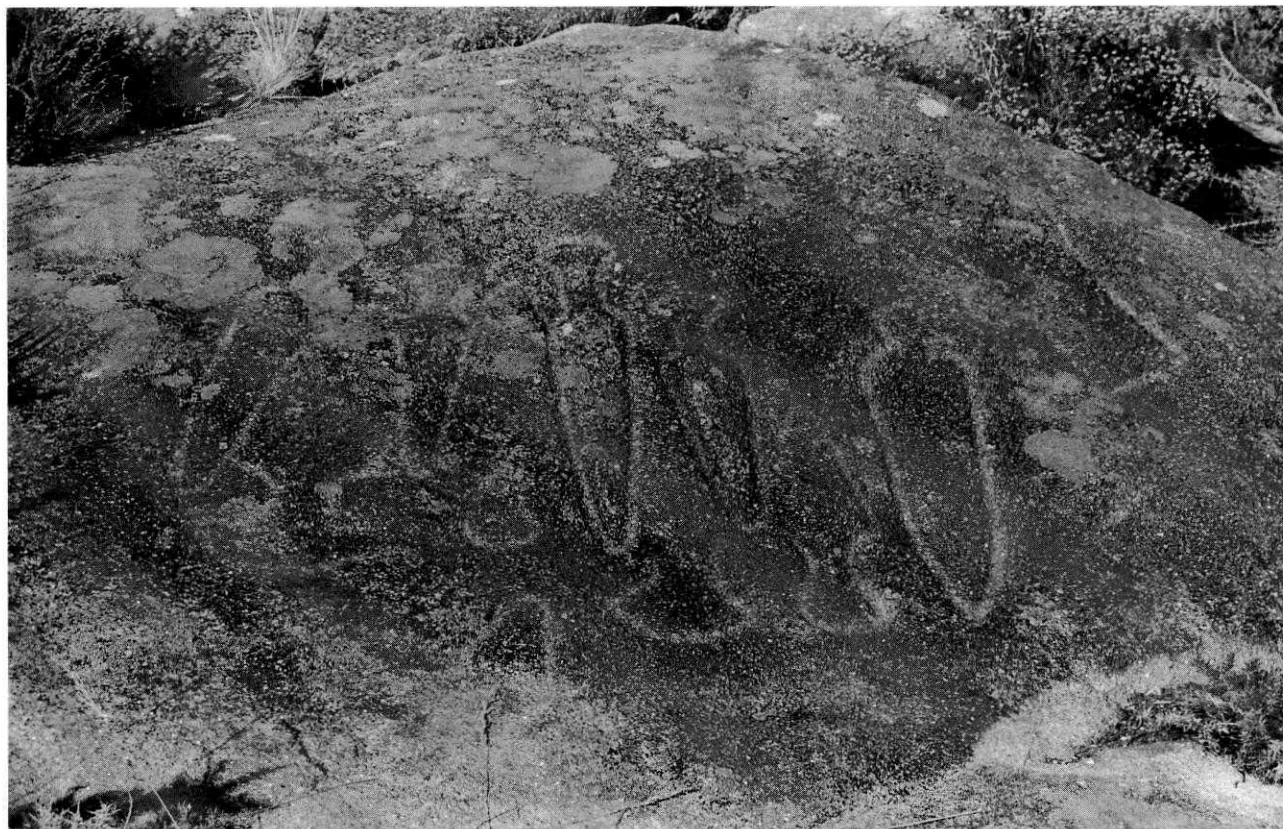


Fig. 5

Carving of a series of daggers at Morillas, just outside the study area at Campo Lameiro

If these arguments are correct, they could place the currency of the petroglyphs at an important juncture in Galician prehistory, for it is just before the adoption of Beaker pottery that settlement sites first appear with any frequency (González 1991). Like some of their counterparts further to the south these seem to have been open sites. Work here and in Portugal suggests that they may have been involved in food storage and the exploitation of secondary products (Jorge 1986), but in neither area is it clear whether they were permanently occupied (Méndez 1994). The same period sees the development of individual burial in Galicia and the adoption of a more elaborate range of grave goods including Bell Beakers and the first metalwork.

Again there may be links between these different phenomena. A few of the rock carvings depict the kinds of metalwork found in graves and hoards (Fig. 5), whilst there is a certain overlap between the decoration of burial cists and motifs found in the open

air. Moreover, current fieldwork in Galicia has shown that settlement sites were sometimes located in the vicinity of the rock carvings. It is too soon to isolate any general patterns, but a detailed study of the evidence from the coastal peninsula of Morrazo suggests that the petroglyphs there were normally situated about a kilometre from the settlements and may have been located between neighbouring sites (Peña & Rey 1993).

It is easy to understand the disparity between our detailed knowledge of the content of the petroglyphs and current uncertainties over their place in the pattern of settlement. This is because the study of the prehistoric landscape is quite a recent development in Galician archaeology. This is particularly true of the study of rock art which is difficult to locate precisely in a landscape with few fixed points (Fig. 6). Now this problem can be overcome using a Global Positioning System which works by taking bearings on satellites. This has played a fundamental role in our fieldwork.



Fig. 6

The open landscape in the foothills near Campo Lameiro, looking towards Chan de Lagoa

METHODOLOGY

In the introduction we suggested that rock art may have been important in the territorial organisation of mobile peoples. How can this interpretation be assessed in the field? Our work is based on three main premises.

First, if rock art had acted as a system of messages between groups of people who were not present on the same occasions, it is essential that the intended audience would have been able to find it. That could only have happened if the carvings had been located in a consistent manner. This idea could be investigated by comparing the characteristics of the rocks that were carved with those of the undecorated surfaces in the same area. Unless the two samples differed from one another on a regular basis it is hard to see how the petroglyphs could have provided an effective means of communication.

Secondly, if the rock carvings really formed part of a territorial system, we might also expect them to be located around particular resources. As we have seen, Galician megaliths seem to have been placed in relation to the routes that horses follow across the terrain today. We would expect the petroglyphs to show equally predictable patterning, but this time it might extend to the location of resources in the landscape. In view of the numerous drawings of horses and red deer in Galicia, there could be a close relationship between the siting of the petroglyphs and those areas that would have been most important in an economy with a strong emphasis on animals.

Lastly, Casimir's work would suggest that mobile people might mark resources mainly in those regions that would have been subject to competition. If so, the Galician petroglyphs should be especially frequent where different areas might need to be used at different

times of year, and we would expect the greatest pressures to have occurred in the regions with most bioclimatic variation. This would have affected both the human and animal populations, and such pressures could be reflected in the siting of the rock carvings and in the complexity of the information that they had to impart. It will not be possible to recover their original meanings, but it could still be feasible to investigate their structure across the landscape.

In order to put this programme into practice, it was essential to select study areas that could encapsulate the principal features of the rock art, and, in particular, the striking contrast between the petroglyphs found on the coastline and the sites that are further inland. The most basic requirement was to consider a region in which the art was relatively simple. An area on the coast near to Muros seemed entirely suited for this purpose, since it was already clear that almost all the published carvings were abstract. Here our fieldwork focussed on an area where we could examine two linked systems of valleys and basins, one of them close to San Francisco and the other near to Serres. The area had already been the subject of a useful publication by Eiroa and Rey (1984).

Although that region seemed to typify the abstract carvings found on the coast, there were a few exceptional areas where the carvings included a significant proportion of animals. Work took place at Rianxo where there is exceptionally high density of animal carvings. Here we were able to use the results of an outstandingly thorough survey by Bonilla (1993).

As we shall see, the carvings at Rianxo have most in common with those found in the foothills, and so it was necessary to select an upland area for comparison. Work took place in a series of valleys and basins close to Campo Lameiro, where again the results of earlier fieldwork were available (García & Peña 1980; Peña 1981; Alvarez 1986). The study area incorporated three of the best known groups of carvings, those at Fentáns, Chan de Lagoa, and Caneda, together with a substantial tract of ground between.

In two cases, at San Francisco and Campo Lameiro, work followed exactly the same procedures. Every rock was examined for petroglyphs, and it was a major objective of the fieldwork to compare the carved rocks with those that had been left uncarved. We also studied the setting of the carvings in relation to the local micro-topography and analysed the layout of the images on the rocks themselves. All the exposed rocks were examined in the course of this work, but at San

Francisco the vegetation was sometimes so high that others may await recognition. Such small areas were inaccessible that this is unlikely to bias our results.

At Rianxo the area had recently been surveyed so that it was not necessary to repeat the exercise. In this case our research was limited to an assessment of the position and layout of the carvings in relation to the local terrain. The main objective of this work was to provide a secure basis for comparing the animal carvings on the coast with those found further inland. In the field we took a similar approach to the published carvings at Serres, although here it was normally possible to examine the other rocks in their vicinity.

OBSERVATIONS

In this section we shall describe the main kinds of patterning recognised in all three areas. We shall begin with the simplest art, that around Muros, but will reserve detailed comparisons between these studies for the final part of the paper.

Muros

In this case we studied the archaeology of two linked systems of basins and valleys on either side of a promontory on the Ria de Muros (Fig. 7). One was a relatively narrow basin running northwards into the higher ground above San Francisco, whilst the other was a more extensive valley which ran westwards from Serres to meet it at its upper limit, 2 km from the coast (Fig. 8). There are 24 rock carvings in these areas, 14 of which are new discoveries. There were insufficient sites for the kind of statistical treatment employed at Campo Lameiro. Since ground conditions varied so sharply between San Francisco and Serres we shall begin by considering those areas separately.

Three prehistoric carvings were already known close to San Francisco, as well as two further groups which we believe to be of more recent origin because they depict a large number of crosses and are situated outside a monastery. The older petroglyphs consisted of two sets of concentric circles and the much more complex series of circles, spirals, and cup marks at Laxe das Rodas (Fig. 9). The simpler carvings were on the lower ground not far from the sea, whilst the more elaborate composition was found about 100 m above these sites at the edge of an upland basin.

The study embraced both these areas. Towards the ria it focussed on the fertile valley containing the modern settlement of San Francisco and the monastery

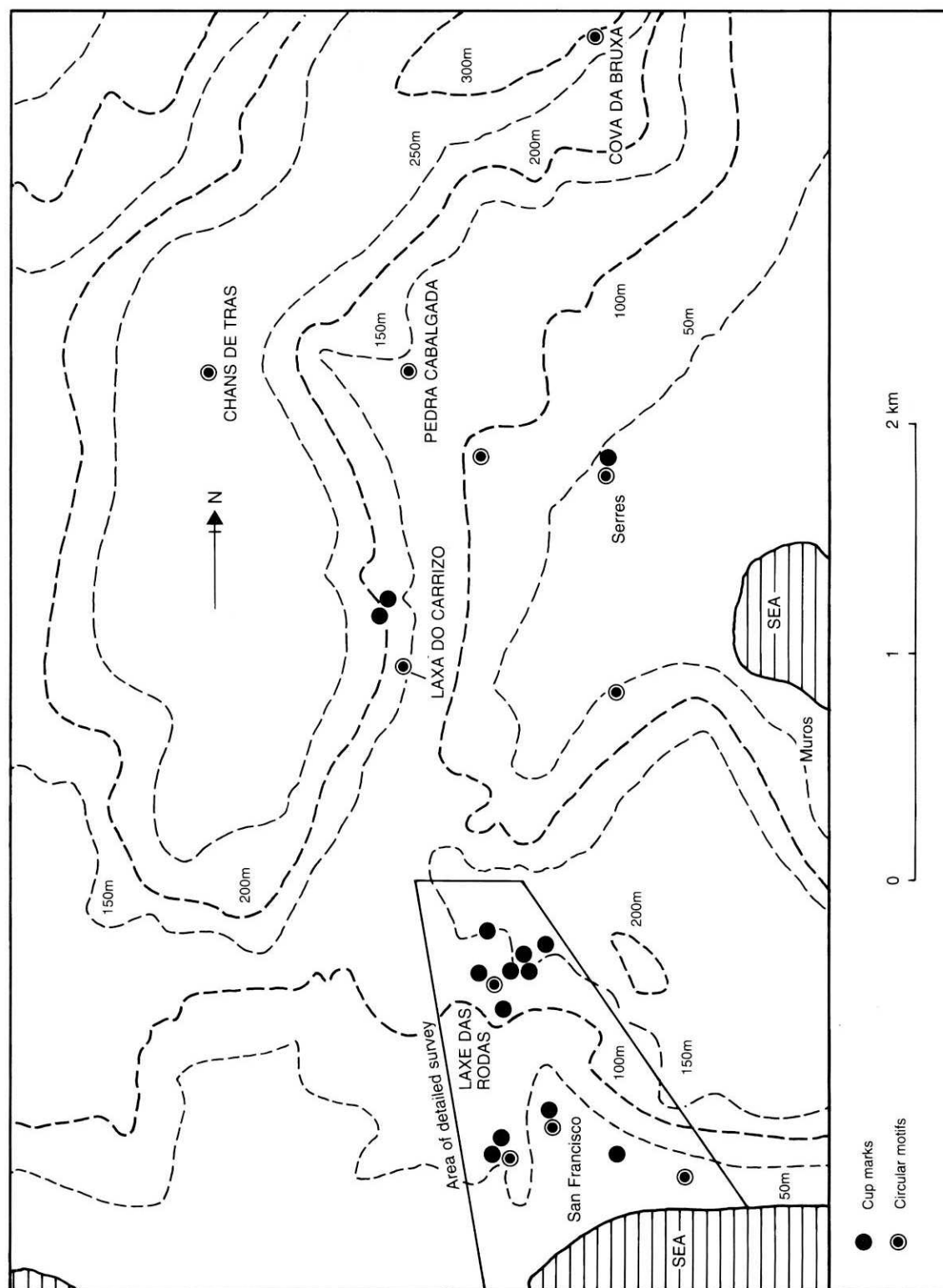


Fig. 7
The study area near Muros, showing the locations of the valleys at San Francisco and Serres and the positions of the other carvings mentioned in the text



Fig. 8

The opening of the Serres valley and the northern shore of the Ria de Muros

from which the village takes its name. This area is linked to the higher ground of the study area by a steep-sided valley. At its upper limit the land broadens out into an extensive basin with a spring, and here small areas of enclosed land are maintained for grazing and growing crops. The lower ground was clearly the main focus for settlement in the historic period. The upland basin is divided by field walls, many of which are concealed beneath the modern vegetation, but it seems to have been used mainly for pasture or shifting cultivation.

That distinction is echoed by the evidence of the rock carvings. The edges of the San Francisco valley are marked by three very similar carvings, each of them consisting of a cup mark embellished by concentric circles and a radial line. Two of these have already been published, whilst the third, on a conspicuous outcrop at the head of the valley, was accompanied by

a series of cup marks. All three sites command extensive views into the lower ground and seem to mark the outer limits of the sheltered land that would be best suited to year-round settlement.

They are not the only carvings in this part of the study area. There is a cup-marked slab on the eastern edge of the valley and on the western side there are two prominent outcrops, the upper surfaces of which have been decorated in the same manner. The latter overlook the position of one of the complex carvings and command a view across the lower ground. The more northerly of these sites also provides an uninterrupted view along the full length of the valley leading into the uplands. No carvings were found within this valley, or in a similar valley leading to the same area from the south-west.

Only one petroglyph, Laxe das Rodas, was known to exist on the higher ground, but in fact there are at

least eight carved rocks there. All the new finds are of cup marks, and these have a most striking distribution. In one case they are found on a detached boulder which may not be in its original position, but in all the remaining instances they are on rather prominent rocks, where they are normally located on or close to the top of the exposed surface. There are no more than five cup marks on any of these rocks and sometimes there is only one. Their positions ring the undisturbed parts of the basin, but avoid the other exposures within its area.

Four of the cup-marked rocks are found at entrances to this basin. To the south two decorated outcrops overlook the heads of the valleys leading uphill from the coast. Similarly, an extremely prominent rock, bearing a single cup mark, is found where the basin merges with our other study area, the valley extending inland from Serres.

Laxe das Rodas is at the pivotal point of this system (Fig. 9). It is the most complex rock carving in this area and includes a variety of circles, spirals, and cup marks as well as one small drawing of an animal. Although these occupy another conspicuous outcrop, it is invisible from the lower ground to the south but can be seen from all over the basin. The carvings overlook the entire extent of that basin, as well as the heads of both the valleys providing access from the lower ground. This is particularly striking when we consider the placing of the carvings on this outcrop. These can only be viewed from the higher part of the rock, looking towards the interior of the braña; from the foot of the rock some of the motifs are concealed from view. As in a newly discovered carving at the head of the lowland basin, there are isolated cup marks higher up the outcrop than the circular designs.

The valley extending westwards from Serres has a very different character (Fig. 8). It is far larger and has been extensively cultivated and cleared of stone. There are some patches of exposed rock on the flanks of the valley, but a number of these have been disturbed by quarrying, whilst others are so densely vegetated that only small areas are suitable for field survey. The area is overlooked by an extensive plateau to its west.

Again the lower end of the valley was the main focus for curvilinear carvings, which commanded extensive views into and along the basin. In two cases these carvings were on unusually prominent outcrops, whilst in the third instance the original character of the rock is uncertain because of recent damage. No carvings were found at the head of the basin close to the

junction with our other study area, but the entire extent of the lower ground was commanded by a complex circular carving, not unlike a labyrinth, situated on the edge of the high ground (Laxe do Carrizo). There was just one cup-marked rock on the edge of the basin, situated immediately upslope from one of the circular carvings.

Above the basin there are further rock carvings. Two of the valleys leading towards the high, well-watered plateau have carvings on their flanks, and in each case these command extensive views along the valley in both directions. Two carvings are of cup marks and are on quite prominent rocks 100 m apart, whilst the third site, Pedra Cabalgada, occupies a still more conspicuous position and contains a distinctive mixture of cup marks and circular motifs. This outcrop has been badly disturbed but may originally have acted as a rock shelter.

We examined two further petroglyphs which are outside the valley altogether. The first of these, Chans de Tras, was situated on the plateau, 300 m above the opening of the Serres valley, a distinctive environment with a whole series of prominent rock outcrops and at least one natural waterhole. This area is relatively moist and sheltered during the summer months and today it provides good quality grazing land. It is here that large numbers of free-ranging horses congregate during hot weather.

The second site, Cova da Bruxa, is quite different from all the rest. It overlooks an extensive tract of lower ground from a position on a steep scarp slope. It lies well beyond the system of valleys and basins seen at Serres and San Francisco and is the only rock carving to depict a large number of animals. These are all stags, many of them with prominent antlers. The same site includes a number of circular motifs and possibly a drawing of a dagger blade.

Several points are worth making at this stage. In this case it seems as if the most important points in the terrain were marked by complex designs and that these were often located on the more prominent outcrops. The circular carvings seem to have been overlooked by a less formal system of cup-marked rocks. At least nine of them were in particularly prominent locations, suggesting that they may have been added to places that had an already established significance. The cup marks also tended to be placed on or close to the top of those outcrops. At some of the more complex carvings the cup marks extended further up the surface of the rock than the other motifs.



Fig. 9

The main area of carvings at Laxe das Rodas

In terms of our basic hypotheses we can say that the carvings at Muros were not distributed haphazardly and that they seem to have focussed on two well-defined areas, one of which would be well suited to year-round occupation, whilst the other might be used less consistently. There is also some evidence that the routes to still higher ground might have been marked by petroglyphs.

Rianxo

Rianxo is located on the northern shore of the Ria de Arousa (Fig. 10). The main concentrations of rock carvings extend between the coastline and a wooded plateau 2 km inland, and their heights range between 20 m and 110 m. They focus on the flanks of a wide basin leading into the uplands. Today the distribution of petroglyphs is divided between two concentrations,

separated by a village and its fields, but it seems likely that the division is the result of modern land use. The lower group of carvings emphasises a series of shallow valleys extending inland from the coast and is situated to the east of the Rio Grenla. The other group is on rather higher ground to the north-west of the river and focuses on a low plateau dissected by shallow valleys. Beyond these two concentrations of carvings there are other, more isolated examples, most of which follow the shoreline to the east of the study area.

That distinction is mirrored in the contents of the rock art. Except for a few carvings towards the edge of the main clusters, all these groups contain depictions of animals. Beyond them, however, the art is entirely abstract and has more in common with the petroglyphs at Muros. The one exception is found on the high ground 3 km to the north-east at Leiro where a series of circular motifs are found in association with

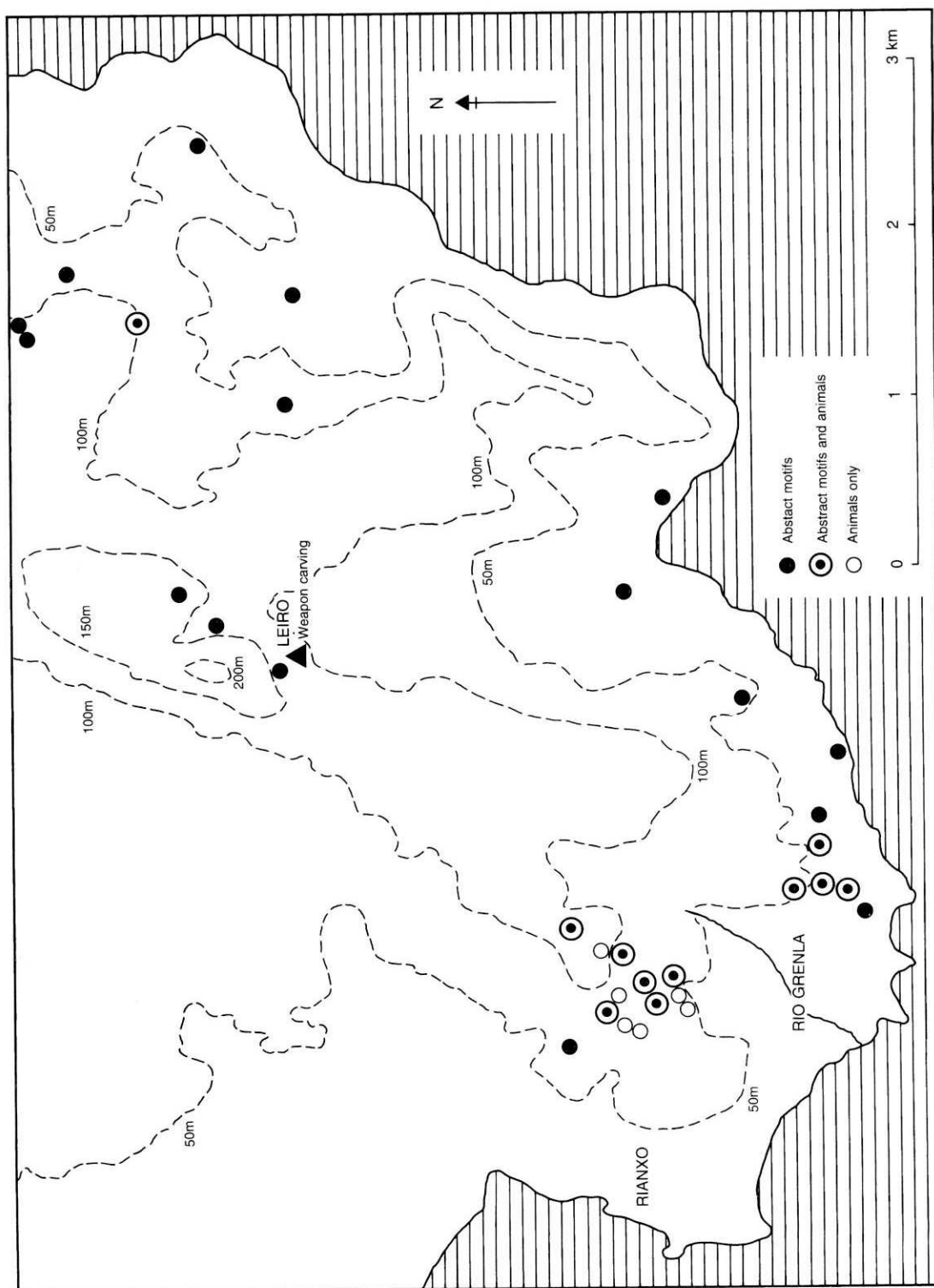


Fig. 10

The study area near Rianxo, showing the concentration of carvings with animals and the wider distribution of geometric motifs.
Note the isolated position of the weapon carvings on the high ground at Leiro

depictions of halberds and daggers. This carving is on particularly high ground and commands an enormous view (Calo & González 1980).

Few of the rock carvings at Rianxo are well preserved, and many have been damaged by quarrying. That sets limits on the detail in which we can analyse them today. Even so, they are densely distributed and occupy a remarkably limited range of positions in the landscape. Virtually all are situated either at the heads of shallow valleys or on their flanks, a little below the highest ground. They seem to select rather conspicuous exposures, and a few of those placed at valley heads enjoy views in all directions. Otherwise they command the interiors of the valleys at the expense of the surrounding area.

These rocks depict a large number of animals, mainly red deer. The animals share one predominant orientation and seem to be aligned along the contours, some of them just above the flanks of the valleys. Only rarely would their positions suggest that the deer were crossing exposed ground. Because the study area is so disturbed, it is impossible to relate these images to long-established paths across the landscape.

Apart from the peripheral position of the abstract art, there is little spatial patterning within either concentration of carvings. So many of the surfaces have been damaged that it would be misleading to embark on an elaborate analysis of the compositions which now remain. In the inland group, however, the only depictions of weapons are on the higher ground, and the one site which depicts a human figure and stags with prominent antlers is, in fact, the highest of them all. That is not necessarily significant as there are even larger drawings of stags at another site near to the coast (Fig. 4).

In terms of our initial hypotheses, the carvings at Rianxo were certainly located on a completely consistent basis. They overlook a series of sheltered valleys leading from the coast to the higher ground. The animals themselves appear to be depicted moving along that axis. There are signs of spatial patterning at an even broader level, suggesting that it was only in the main concentrations of petroglyphs that animals feature in the carvings. Within these two groups, however, there are only limited signs of variation.

Campo Lameiro

Campo Lameiro is towards the centre of the inland distribution of rock art, 14 km north-north-east of Pontevedra (Fig. 11). Some of the carvings overlook

the valley of the Rio Lerez which links this area to the sea. This region contrasts with the Muros area because, in addition to the abstract motifs, it includes many depictions of animals, a feature which it shares with the rock art of Rianxo (Peña *et al.* 1993).

Although our basic approach was the same as at Muros, the topography of these two areas is very different. So too is the modern pattern of land use. The fertile valleys around Campo Lameiro are quite intensively farmed and it seems unlikely that many petroglyphs would survive in these areas, had any originally existed. By contrast, the upper slopes of the valleys and the more varied terrain above them include a remarkably large number of rock carvings. In contrast to Muros or Rianxo, there is little evidence of recent agriculture in these areas, and nothing like the intricate network of field walls found above San Francisco. At present the vegetation is much less severe than it is in the other study areas, and this makes it easier to establish the original distribution of the petroglyphs. The more open conditions also encourage horses to range freely across the terrain. The main areas of enclosed ground are around a series of shallow peat-filled brañas, which are among the few areas to retain any moisture during the summer drought (Fig. 11). These provide excellent grazing. Otherwise the network of paths and roads owes little to current patterns of land use and tends to follow the routes along the valleys created by free-ranging animals (Figs 12 & 13).

Our study area focussed on two brañas with rock carvings, Fentáns and Chan de Lagoa, and on the area around them. It also extended to two well known carvings featuring depictions of weapons, at Laxe das Ferraduras and Caneda, and covered a substantial area of high ground. At the same time we recorded the siting of a random sample of uncarved rocks chosen by superimposing a grid on the base map that we used in the field.

In contrast to the Muros area, rock carvings are abundant, but the main concentrations are around the edges of the brañas and along the limits of the shallow valleys that communicate between them (Figs 12 & 13). There are very few petroglyphs on the higher land. This impression is confirmed by the results of random sampling. The first test considered the distance between the rock art and the edges of both the brañas and the valleys.

	0–50 m	51 m and above
Rock carvings	63	5
Random sample	33	33



Fig. 11

The braña at Fentáns seen from the higher ground. The moist soil of the braña is used as pasture today, and the distribution of carvings follows the edges of the basin and emphasises the ends of the valleys leading into this area

A X^2 test showed that the contrast between the two distributions was significant at the 0.1% level.

The second test concerned the difference of elevation between the rocks in the random sample and the edges of the basins or shallow valleys. Again the contrast was significant at the 0.1% level.

	0-5 m	6 m and above
Rock carvings	58	11
Random sample	32	33

In fact the positioning of the rock carvings is extraordinarily consistent. As we have seen, it follows the sides of the valleys and the limits of the brañas. The carved rocks command views into these areas and for the most part they do not overlook the surrounding lowlands, even though this could have been achieved from alternative locations only a short distance away. Few of the carvings are on particularly conspicuous

rocks, although more prominent outcrops can usually be found in their immediate vicinity.

One reason for this striking pattern seems to be that these carvings are actually distributed along paths leading into and around these basins. Those places would have been ideal locations from which to watch domestic livestock or ambush game. The most complex compositions are generally found around the edges of the brañas, whilst the other motifs are ranged along the valleys communicating between them. The simpler motifs tend to occupy less conspicuous rocks. The main concentrations of carvings are where the valleys provide access to the brañas or where different routes converge. The placing of the motifs on the rock surface suggests that they were meant to command quite specific areas of the landscape. At Fentáns, for example, a complex series of abstract and naturalistic carvings can only be seen by a viewer who is looking

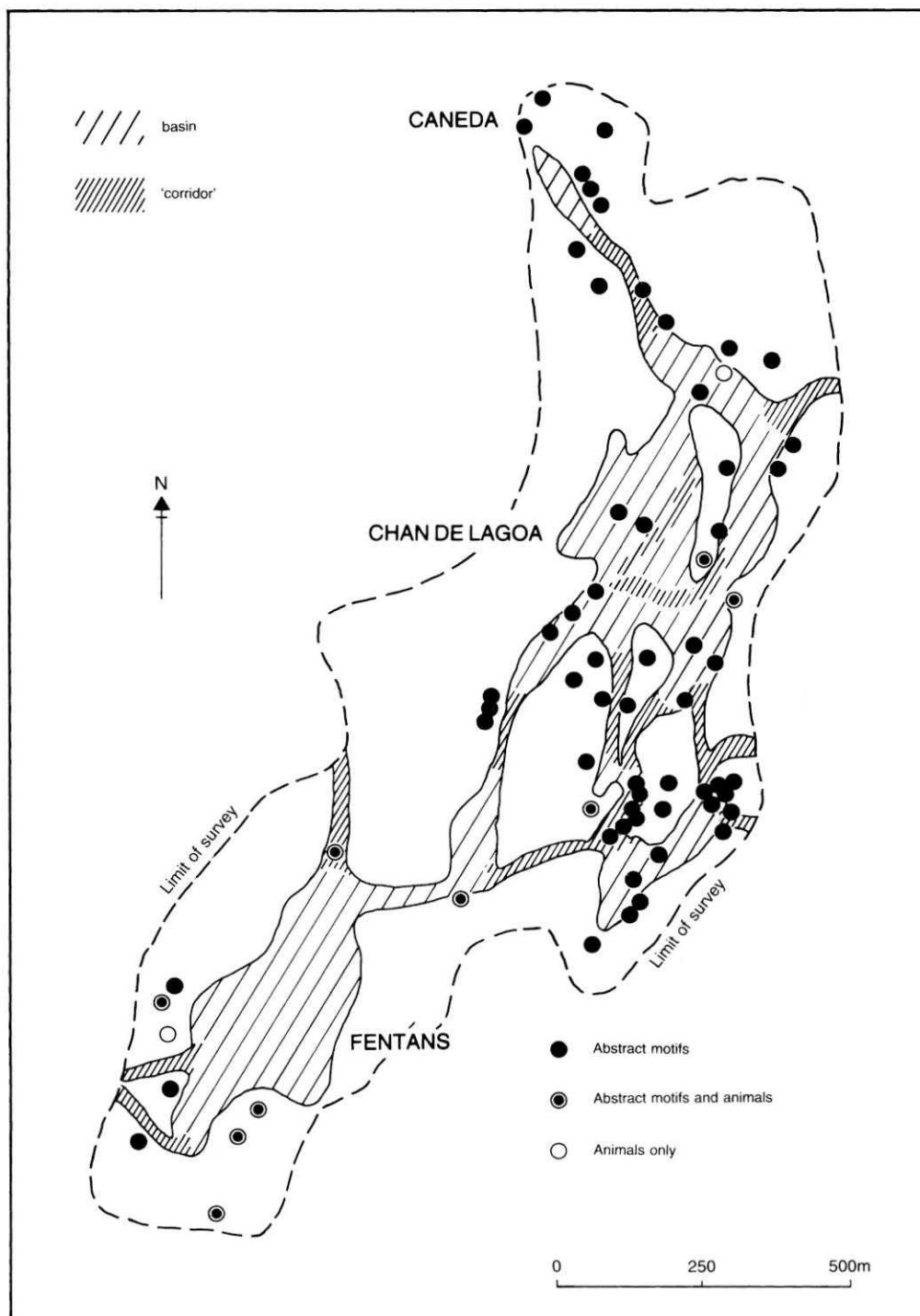


Fig. 12

The study area near Campo Lameiro showing the extent of the brañas at Fentáns and Chan de Lagoa and the narrow valleys running between. These are among the only shaded areas with surface water today. Note the close relationship between the positions of the carvings and the extent of these natural features

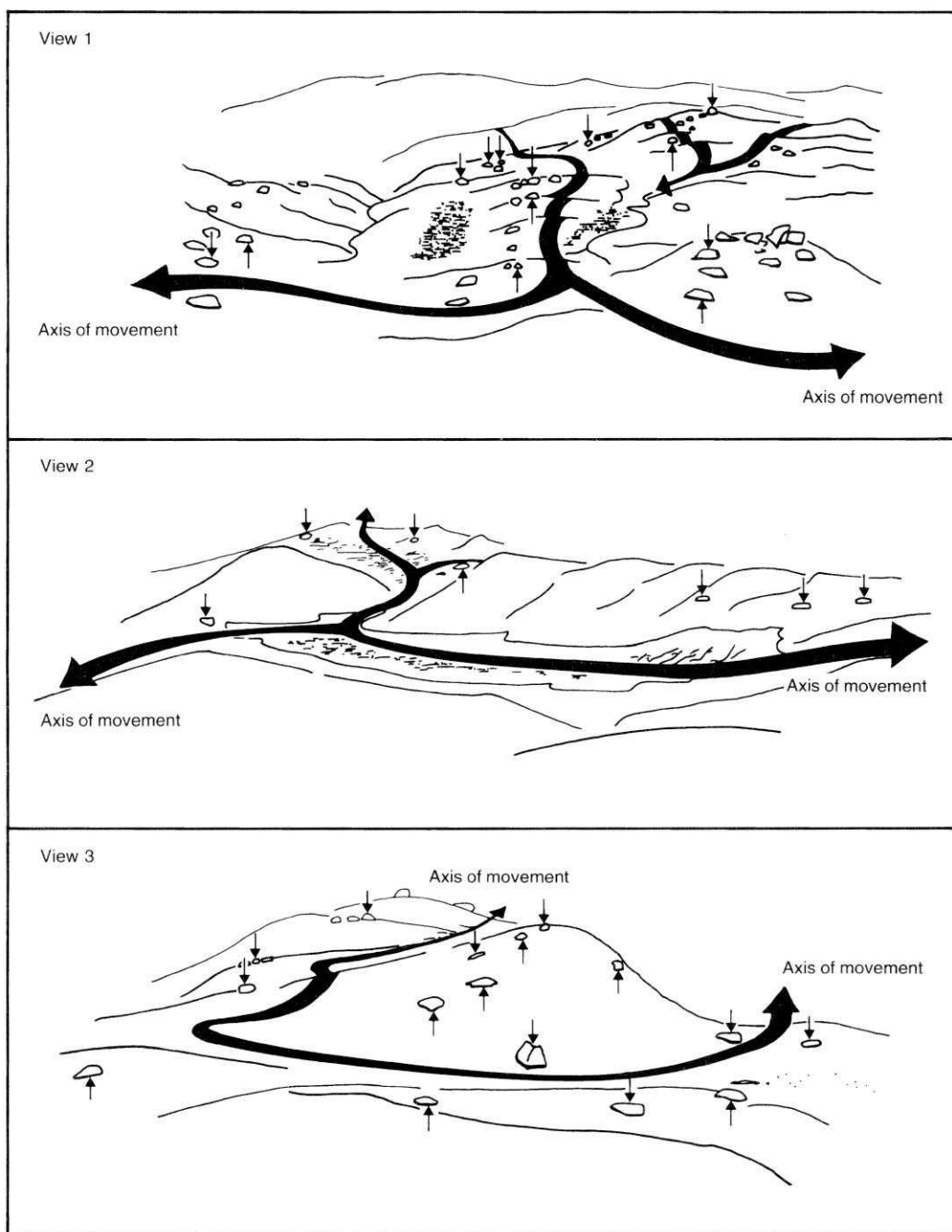


Fig. 13A

into the basin; as at Laxe das Rodas, the motifs are invisible from inside the braña.

One striking feature of the carvings around Campo Lameiro is the practice of depicting horses and red deer. These rarely appear in isolation, and where more

than one animal is portrayed on the same carved surface, they are viewed in profile and tend to face in the same direction, as if they were crossing the landscape together. What is striking about these carvings is that the orientation of the animals in fact

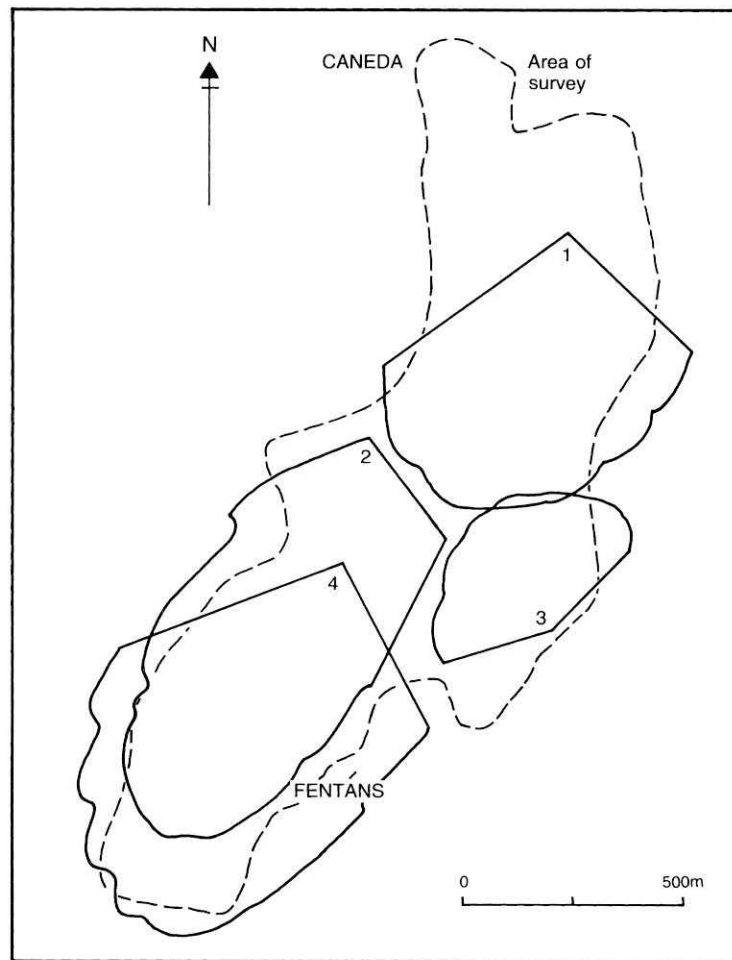
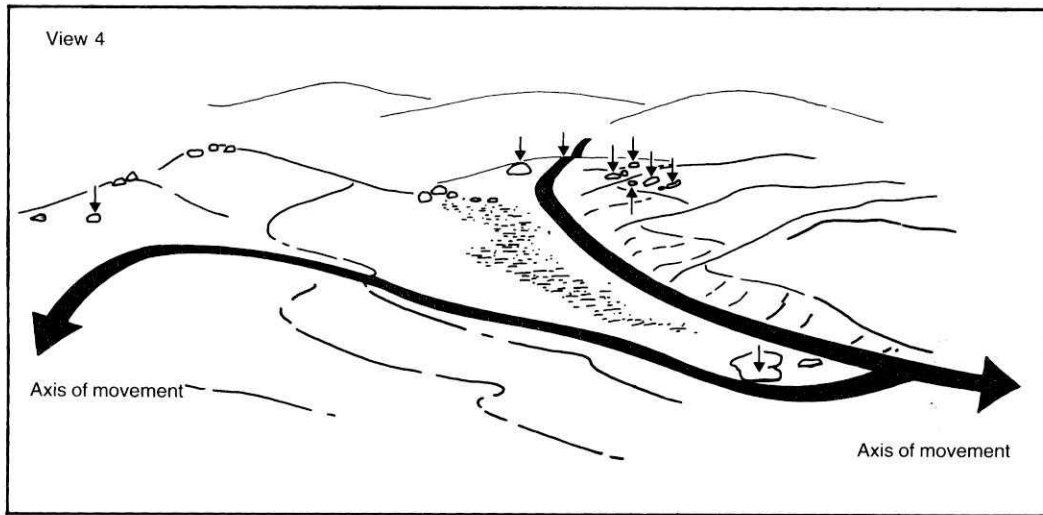


Fig. 13B

Four drawings illustrating the topographical position of the carved rocks in relation to the routes followed by free ranging horses in the landscape today. The map shows the positions of those views in relation to the distribution of petroglyphs between Fentáns and Caneda

echoes the topography of the surrounding area and generally follows the same alignment as the nearby paths. If this had happened in areas with a sparse distribution of rock art, it could reasonably be dismissed as coincidental, but it is found consistently around entire basins. Thus the layout of the animal carvings corresponds to the movement of horses today.

As well as depictions of animals, there are numerous abstract motifs of the kind found at Muros (Fig. 14). Generally speaking, abstract and naturalistic images occur together around the *brañas*, whilst purely abstract motifs are rather more frequent along the valleys communicating between those areas. Where the two groups are found together on the same rocks, there is a tendency for the major circular motifs to occupy the centre of the carved surface, which is often the highest part. The animals, on the other hand, are depicted around the edges of the composition. This distinctive arrangement recalls the siting of the carvings about the limits of the *brañas* and may even refer to the movement of animals across the landscape as a whole.

A few carvings are quite exceptional. These generally lie beyond the shallow valleys and basins that provide the main focus for the petroglyphs and tend to depict a rather different range of motifs. There are a few isolated cup marks on the high ground above Caneda, but more striking are the occasional drawings of weapons and idols. They are sometimes located on sloping rock surfaces which command extensive views. The nearby sites at Paredes and Laxe da Rotea do Mendo illustrate a further variation, for they include carvings of outsize deer with very prominent antlers. These seem to portray stags in the rutting season when adult males occupy the high ground and indulge in aggressive displays. Again such sites tend to be placed at prominent locations above each valley system and overlook a considerable area of land. We should not suppose that they provide a literal representation of the local fauna. Rather, like the weapon carvings which adopt similar positions, they convey a sense of competitive aggression. One of their roles might have been to exert claims over particular resources and to alert strangers who entered the same areas. The imagery that conveys this message is unambiguously male, and this highlights the more general point that Galician rock art seems to exclude women altogether. In its emphasis on wild animals, weapons, and the hunt it encapsulates many of the characteristics of the Agrios (Hodder 1990).

Again these findings seem to be consistent with our basic premises. In this case the rock carvings adopt a consistent range of locations and seem to be closely associated with paths across the landscape. The animal carvings provide evidence that the same routes were important during the prehistoric period. Apart from the drawings of weapons and outsize stags, the petroglyphs also focus around a series of basins and shallow valleys which play an important role in the movement of horses today.

DISCUSSION

The rock art in these three areas shows both similarities and contrasts. We can consider these relationships at several levels.

The first is at a local scale. There are a number of striking similarities between our observations in these three study areas. Perhaps the most striking observation is also the simplest. The Galician petroglyphs were located according to consistent rules. They tended to be placed at the mouths of productive basins, around their edges and along the flanks of the valleys that communicated between them. Unless these criteria were met, they were rarely located on prominent rock outcrops, and for the most part they are not found on the highest ground. Where adequate information is available, they tend to be sited along the routes followed by free-ranging animals in the modern landscape, although we must emphasise that this argument is based on the movement of horses as deer are locally extinct.

Within this general framework there are other common patterns. Isolated cup marks tend to be created on higher ground than the other motifs, and where animals are represented they normally follow a common axis which reflects the topography of the surrounding area. The most elaborate circular motifs, on the other hand, tend to be associated with individual basins. It may be that such motifs in fact referred to those features of the landscape. If so, that would explain the peripheral position of the animal carvings, for the principal paths in the modern terrain run round the edges of the *brañas*.

The major exceptions are provided by three less common kinds of carving, which can sometimes be found together. These are the depictions of weapons, idols, and outsize stags, especially those with prominent or exaggerated antlers. All tend to be located outside the basic system of valleys and basins, on



Fig. 14

Drawings of animals and abstract motifs at Chan de Lagoa

higher ground which commands a much more extensive vista. Unlike the remaining motifs, carvings of weapons and idols may also be placed on inclined surfaces, as if to confront the onlooker. Possible examples of this pattern have been identified in all three study areas and the same arrangement occurs more widely in Galicia. These sites represent a specialised element in Galician rock art and that is why they might have been created over a more restricted period than the other images.

There are also important contrasts to consider. The most striking is between the rather low density of petroglyphs at Muros and the much higher density of sites in the other study areas. Although this may have been influenced by differential preservation, the contrast does seem to be real and it probably results from the fact that Muros is towards the edge of the distribution of Galician rock art, whilst Campo

Lameiro is at its centre. This leads to a further observation. In our three study areas there seems to be a direct relationship between the density of petroglyphs and the character of the rocks where they were created. At Muros, and to some extent at Rianxo, the carvings are generally on quite conspicuous rocks, whereas at Campo Lameiro similar outcrops were often avoided. This may be because in the simpler systems seen on the coast the rocks had an already established role in the way in which the landscape was organised.

In all three areas the key to the system seems to have been the sheltered, well-watered basins, and these still play a fundamental part in modern landuse. One of the most important developments in Galician archaeology has been the recognition of a series of open settlements whose chronology appears to overlap with that of the rock art. Their exact character is problematical, but two features are already clear. These sites

occur both on the coast and in the uplands and in each case they are commonly associated with valleys or *brañas*. Either those settlements are found inside them or they overlook them from higher ground. Work in at least three separate parts of Galicia — two of the coastal peninsulas and the uplands further to the east — has also shown that these sites are to be found in the same areas as petroglyphs (Peña & Rey 1993; Concheiro & Gil in press). In a recent paper Méndez (1994) has suggested that these locations were used over long periods of time but may not have been settled continuously. They were particularly well suited to a pattern of landuse that combined shifting agriculture with pastoralism, and it seems quite possible that different locations were occupied at different times of year.

In each of the study areas, then, there may be a close relationship between the siting of the petroglyphs and the location of key resources in the landscape. All the carvings seem to be directed towards particular features of the terrain, and the siting of these images follows a predictable pattern. This would be consistent with the idea that they had helped to define access to specific areas in a relatively mobile pattern of settlement. Some important details still elude us, for we do not know whether the entire population might have used such areas in the course of subsistence activities, or whether only one segment of the community occupied the uplands, using them primarily as seasonal pasture or hunting land. In either case the relationship between the rock art and the local landscape can hardly be fortuitous. At the same time, there is no doubt that the art found at Rianxo is more complex and densely distributed than the carvings at Muros and that the petroglyphs of Campo Lameiro are more complex still. Why should that be the case?

In the introduction to this paper we referred to Casimir's suggestion that mobile populations might be more concerned to define their rights in areas which are productive but ecologically diverse. We can explore that idea at two geographical scales. The first concerns the overall distribution of Galician petroglyphs which occupy a much smaller area than the rocks that were suitable for carving. In an earlier paper (Bradley *et al.* 1994) we argued that these petroglyphs were found in precisely those parts of the country that would have experienced the most pronounced variations of rainfall, productivity, and plant growth during the course of the year. Under these circumstances animals would often have changed their distribution and different

parts of the landscape could well have come under pressure. That is not to equate mobility with uncertainty. Although animals might have needed to move from the coastal region into the hills, they were limited by the availability of moisture and shade at the hottest time of year. Their distributions might have altered from one area to another, but because of these constraints their locations might have become more predictable. As a result, conflicts of interest might arise which could have resulted in a more explicit demarcation of resources. That may be why the main concentrations of animals would be found in precisely the places which are marked by petroglyphs.

The same argument applies at a local scale. We have already suggested that if Galician rock art had acted as a territorial system, it ought to have a more complex structure in those areas where the greatest pressures were experienced. It was already apparent that there were striking contrasts between conditions in the foothills around Campo Lameiro and those experienced on the coast. What is perhaps less obvious is that exactly the same contrasts — of rainfall, drought, temperature, humidity, and growing season — are also found between the coastline and the high ground of Barbanza. The sharpest ecological gradient includes the area around Rianxo. At one level it might mean that this region provided a focus for the migration of red deer and other animals, but, at another, it implies that different resources in this area could have come under pressure at different times of year. Such local contrasts are not experienced at Muros, nor are they found at any other point in the coastal distribution of the rock art. It may be why it is so densely distributed at Rianxo and why the carvings there have such a distinctive character.

How can these ideas be taken further? There seem to be two main avenues to explore. The first is to investigate the settlement sites found in the same areas as the rock art with a view to refining their chronology and establishing both the character of occupation and the nature of the subsistence economy. A particularly important question will be the use of animals at this time. A few of the rock carvings depict domestic livestock, and these animals may well have used the *brañas* as grazing land. There are many more drawings of red deer but was hunting really as important as this evidence might suggest? Or is this simply an instance of a partial view of the world being expressed by one section of society? It will be important to compare the settlements on the coast with those on the high ground

of the interior. Until that has been achieved it will not be possible to say much more about the nature of earlier prehistoric landuse.

The second requirement is for a more searching analysis of the circumstances in which castros were first established, for these were the settlements of sedentary populations engaged in stable agriculture (Peña 1992). One possibility is that they were associated with a new technology that for the first time allowed permanent cultivation of the lowland soils. Some hint of the magnitude of that change is provided by the distribution of these sites, which is more restricted than that of the rock carvings. This might suggest that the earlier system had involved more extensive use of the landscape and that it had incorporated areas that were not suitable for sustained exploitation.

Those questions are for the future and for anyone who wishes to pursue them. In the meantime we conclude this paper with the less ambitious proposition that rock art has at least some potential for illuminating the landscape archaeology of Atlantic Europe and that detailed topographical analysis of the kind that we have outlined here is one way of achieving this cheaply and efficiently.

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