

## A Circular Debate: Rock Carvings at Knarrbyn, Dalsland, Sweden

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*The rock carvings at Knarrbyn in Dalsland, Sweden, lie high on a rocky ridge and consist almost entirely of multiple circles in various groups. In both location and imagery the panels at Knarrbyn provide a contrast with the varied figurative images on a majority of large rock carving sites of the Bronze Age in southern Scandinavia, which are mostly set low and near the contemporary seas. The paper aims to explore both shape and place of the Knarrbyn discs, with new recordings and landscape assessment. In contrast to the general opinion that Bronze Age carvings of circles had some close relationship to concepts of the sun, the Knarrbyn discs, by their unusual internal shaping and their position here on the high rocks, offer an alternative concept, that these particular carvings had close physical and ideological relationships with Bronze Age burial cairns in this isolated part of Dalsland. These and other late prehistoric monuments are mapped in the paper and include several previously unrecorded sites on the Knarrbyn ridge. The precise landscape location of the carving sites suggests they were part of a sacred passage in the Bronze Age, leading southwards to the major cemetery and rock carving sites at Tisselskog; such a passage may have foreshadowed and influenced the emergence and orientation of the Pilgrimsleden that traversed the same landscape some 2000 years later.*

The province of Dalsland lies in western Sweden, bordered by Bohuslän on the west and by Lake Vänern on the east (Fig. 1). It is not so well-known in the archaeological world as Bohuslän, certainly insofar as rock carvings are concerned, and other ancient monuments too are not so abundant or so prominent as those to the west. The province is heavily wooded, especially in the north, in a landscape of moraines and high ridges of rock. A number of elongated lakes generally outflow to the south and eventually to Lake Vänern. The population density in the region is rather low. For me, the landscape is very attractive, remote, quiet, composed. The towns of Bengtsfors and Åmål are centres of northern industry, quarrying and forestry quite important, and, for us, south of Bengtsfors is Högsbyn, Tisselskog, with a huge array of rock carvings and by far the best-known of such sites in all of Dalsland (Rex Svensson 1982).

In 1974 I was made aware of some carvings at a

place called Knarrbyn, in the parish of Fröskog, through my visits to the complex of rock carvings at Tisselskog (Fig. 1). From Tisselskog it was only some 12 km north to the small town of Fengersfors, and on to see a panel of carved designs high on a ridge at Knarrbyn. A minimal record was made, and then abandonment by me as I was diverted elsewhere. It was not until 1997 that a more structured visit could be made and in late May of that year, with Steve Minnitt, we made a short excursion to see one of the panels of carvings, with several large circular images to be described below. This was the start of my small project and the beginning of a set of problems as well as, I hope, some success in understanding the place and character of the carvings.

In brief, and to be explored further below, the carvings at Knarrbyn lie inland and high on a ridge, well away from the well-documented original shoreline positions of many sites in Bohuslän and elsewhere. The rock formations in this region of Dalsland are complex, with many ridges of metamorphic rock, particularly phyllite and gneiss, and deep valleys and widespread morainic deposits. The imagery at Knarrbyn is also unusual in its

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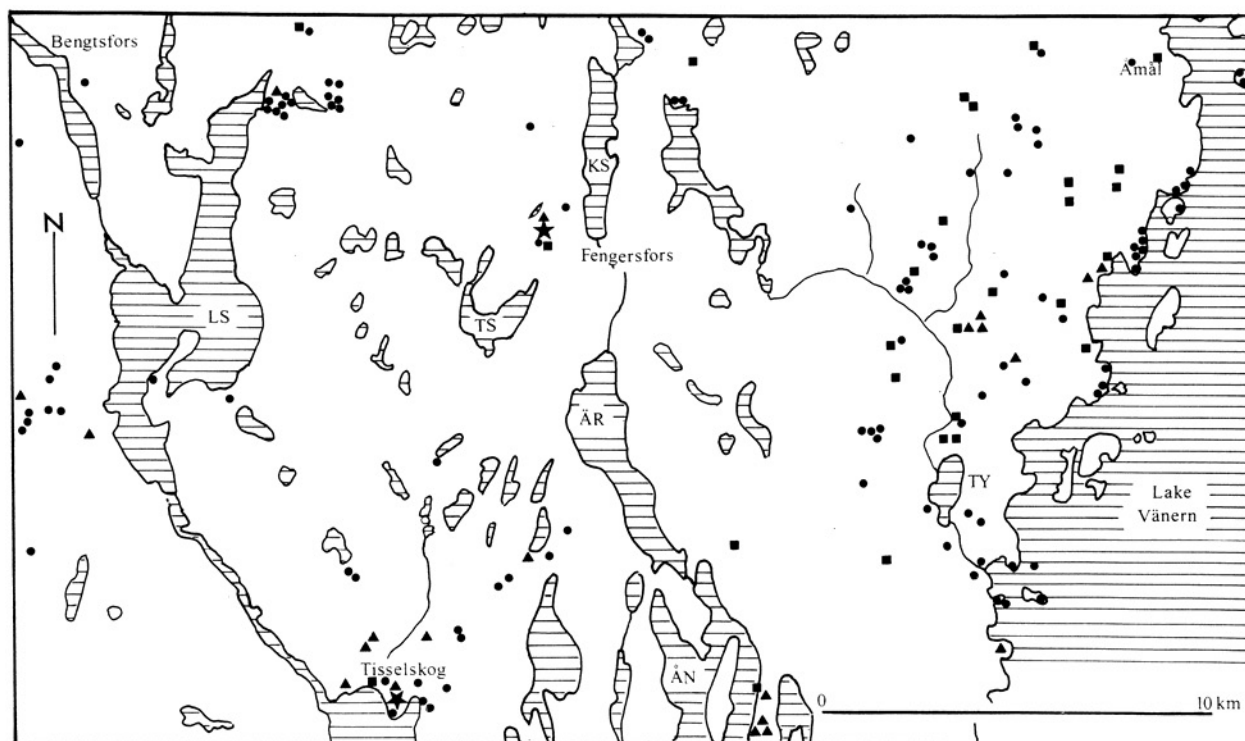
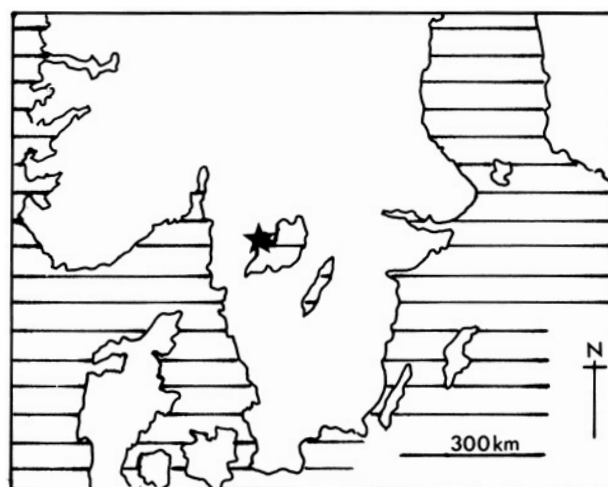


Fig. 1.

Map of part of NE Dalsland with multiple lakes (small bodies of water mostly omitted from this map), the towns of Bengtsfors and Amål, and the western shore of Lake Vänern. The star at centre marks the Knarrbyn ridge; the linked lakes of the Knarrbysjön (KS), the Ärr (ÄR), and the Änimmen (ÄN) flow into Lake Vänern. The major lake to the west is the Laxsjön (LS). Tansjön, at centre (TS), lies higher in the landscape than the Knarrbysjön. The Tydjesjön (TY) on the east collects water from a vast area of land mostly lower than the highlands to the west. The star at base marks the rock carvings and cairn cemetery at Högsbyn, Tissselskog. Circles: cairns; Squares: gallery graves; Triangles: rock carvings, mostly cupmarks. Lower: South Scandinavia with star marking the location of north-eastern Dalsland & Lake Vänern



uniformity of circular designs, shallowly-carved, and it is extremely difficult to locate and identify individual images upon the uneven rocky surfaces of the ridge, much of the surfaces masked by low vegetation. Such conditions are not unique to Knarrbyn.

The carvings are not entirely isolated at Knarrbyn; there is a small concentration of burial monuments on

and near the panels, some newly identified in our surveys. However, the regional map illustrates the segregation of the Knarrbyn monuments from the bulk of later prehistoric sites in the area (Fig. 1). To the east and near the shorelands of Lake Vänern lie many later Neolithic gallery graves and Bronze Age cairns, on a relatively low-lying landscape reaching up to c. 70–100 m above sea level. The waters of the

Lake lie at *c.* 44 m. The inland ridges just to the west of the line of lakes Knarrbysjön–Äar–nimmen reach to *c.* 175–225 m in quite dramatic fashion, and ancient sites upon these ridges are few and far between. Farther to the west the land remains high, *c.* 175–200 m maximum, with few but quite tight concentrations of burial cairns here and there north and west of the Laxsjön. The abundance of rock carvings and burial monuments at and around Tisselskog in the south is remarkable within such a landscape.

#### FIELDWORK AND DISCOVERIES

The methods of recording images on the rocks of Scandinavia have varied greatly over the many years of discoveries and debates. Casting, painting, chalking, tracing, rubbing, and sketching have all been tried, most have been found to be wanting, most are roundly derided for making contact with the rock surface, but, as Sognnes states (2001, 16), we surely must do whatever seems best now, with our available technology, to make the most accurate record we can. If we hold back, to await the newest and future technologies to become widely available and, in theory, to yield an immaculate record, it seems quite possible that some of the rock surfaces will have deteriorated to such an extent that the finest details are no longer capable of detection (Milstreu & Prøhl 2009, 18–32; Coles 1992; 2004). We should do whatever is necessary to preserve, of course, but also to record while we can.

There have been various problems in coming to grips with the carvings at Knarrbyn. As we shall see, their unusual position in the landscape probably prevented their recognition by academics for many decades although doubtless the local farmers and foresters will have known of their existence for centuries. It was not until the 1940s that official recognition came into wider prominence and over the decades since then there has been a sequence of discoveries of circular designs on the abundantly-veined rock surfaces at Knarrbyn (Rex Svensson 1982; 1992; 1993).

The landscape within which the carvings lie is dominated by steep and high ridges of rock ascending in waves from the western shore of the Knarrbysjön (Fig. 2 upper). The whole region itself is quite

dramatic and movement cutting diagonally across the ridged landscapes must have always been as difficult as it is today, and as I have experienced it. Travel along the ridge tops, with occasional undulations, would be easier, and at lower levels, parallel to the ridge lines, the land-based traveller would encounter deeper soils, inlets, and streams. Some of these lower lands are now down to pasture, some of it abandoned in recent years. The essence of the area is, in effect, isolation and quietude. The ridges here are quite heavily wooded, and are steep and uneven; logging tracks churn the wet lower soils and the upper ridge surfaces are mostly barren apart from patches of vegetation, including occasional small stands of pine trees and shrubs that close off any wider views along the ridges or downslope into the more dense woodland.

The discoveries of the carvings on the high ridge at Knarrbyn have been sporadic and the result of quite dedicated survey by several people. Karin Rex Svensson in various reports notes the name of Oscar Lindstrand of Fengersfors for early recognition of some carvings and Claes Claesson for perhaps the first recordings in 1942, and Ole and Agnes Bjerke for new observations and identifications in the 1960s, reported by their daughter Eva Bjerke in 1989. Rex Svensson's excellent survey of rock carvings in Älvsborgs Län in 1982 was the first to place one of the panels in its setting and, in 1992, in reporting on the Bjerke's discoveries, she promoted further research, and additional details appeared in 1993. Many of the carvings have been painted for the benefit of visitors (Fig. 2 lower). Since then, the ridge at Knarrbyn has become progressively wooded in its lower approaches, and vegetated by moss and shrubs and grass along the upper surfaces. Extensive forestry operations in 2008 have damaged some surfaces and made field studies very difficult.

Following the short visit to the Knarrbyn ridge in 1997 with Steve Minnitt, I made a second visit and spent some days searching along the ridge. It was on the edge of the uppermost ridge that I located more circles, although the finding of them barely matched the information that had been provided by brief reports in local journals. Several concentrations of circles lay just below the top of the high ridge, on slopes facing to the south-east, and were mostly carved upon relatively smooth exposures of rock with veins of quartz nearby, such contrasting colours perhaps originally of significance in the choice of surface for the carving. The work of recording the





Fig. 2.

(upper): The Knarrbyn ridge, looking northwards. The carved Panels lie off to the right (east), all but one sloping down at the point where the broad ridge top begins its steep descent; (lower): discs on a Panel at Knarrbyn, recently painted. Compare with Figure 6. Scale totals 250 mm

circles was relatively simple, with gridlines and offsets, and photographic work for circle details, and by the end of several moderately intensive days there existed a number of plans for these separate panels. But one reported panel could not be found and at this point some problems emerged, needing only the briefest of mentions here. Having at first got hopelessly lost amidst the other ridges at Knarrbyn, I managed to locate the missing panel of carvings late on my last day for fieldwork here, and my recording of it was incomplete and missing essential data; I sought to make amends on my next visit, in October of that year.

For those who conduct fieldwork in Sweden it is a well-known observation that early October in every year is a good time to stay at home, or at least to keep out of the forests and fields. This is when the annual elk hunt takes place and is always a cause for assembly of hunters, guns, beaters, and multiple cars and trucks to bring all to likely locations; it can be an elaborate operation and is strictly controlled as the exact territory to be covered and the particular age and gender of the animals allowed to be killed. Notwithstanding my earlier contacts with such things, I found myself at Fengersfors in early October *en route* to the Knarrbyn ridge.

From Fengersfors the track led northwards along the valley base to a point where a logging entry existed, just south of the houses at Grimsheden (Fig. 3). To my alarm, it was full of cross-country vehicles and assorted tractors – the hunt was on. What to do? I abandoned my car by the side of the road, gathered my gear and prepared a drawing board with white graph paper on both sides; one of the sheets had sketches of the great circles on the panel. Holding the board high above my head, I sprinted up the slope, through the woods. From here I hurried along, still displaying the white board and soon, fortunately, found the panel of carvings. At this point I began to hear the occasional shot, and it seemed to be farther along the ridge. I laid out the grid, made the measurements, and put it all on the paper, checked distances, orientation, slopes, depths of carved lines, natural cracks in the rock, and notes on view points. The operation was perhaps the fastest bit of basic survey I have ever done. I returned as before, board held high, down the slopes to the car. It was not until I got back to my cabin that I realised, there I was, scurrying through the woods during an elk hunt carrying a perfect target, large circles with inner rings

drawn out upon a white background, just what the telescopic sights might well have focused on, much to their owners' surprise. And I thought to myself – this is archaeology?

#### THE ENVIRONMENT

There are a number of points to be made about Knarrbyn and its carvings in terms of the wider geographical position and the immediate environment. A glance at any map of the distribution of known rock carvings in southern Sweden will point to the Knarrbyn carvings as unusual, well inland unlike a majority of rock art areas which lie quite near even current coastlines, and even closer during the high seas of the 2nd and the 1st millennia BC, relative to the isostatically low lands (Ling 2008). There are exceptions to this general observation, of course, in parts of Västergötland, Västmanland, and other more eastern lands, but Knarrbyn, and indeed the nearby Tisselskog sites, are quite unusual in their general locations.

However, the environment of the Knarrbyn panels is not at all land-locked. Within 1 km of the ridge itself are the shores of the Knarrbysjön, a long narrow lake, which is linked to its southern neighbour, the Ärr, by a small stream, the Knarrbyån; from the southern Ärr, the water flows south and eventually into Lake Vänern itself (Fig. 1).

The more immediate environment of the Knarrbyn carvings is its high ridge of rock (Fig. 3). The ridge links the Knarrbyviken, a bay of the Tansjön (TS on the map), with the Knarrbysjön (KS), along one of the less abruptly-sloping routes down off the ridge. This major ridge reaches high above the waters of the Knarrbysjön, and is bordered by the Idetsjön (IS) on the west; the ridge is about 600 m wide and stretches from its southern end about 2.5 km to the north. Along the ridge lie burial cairns and carved rock surfaces, with signs here and there of ruined and ruinous stone monuments, some recorded in the regional archives, at least one of these now unlocatable, and others not yet assessed as to their original character or likely date. It is along this ridge, near and at its southern end, that the rock carvings of Knarrbyn lie.

The carvings recorded to date are clustered on a small ridge-like outcrop rising above the main ridge



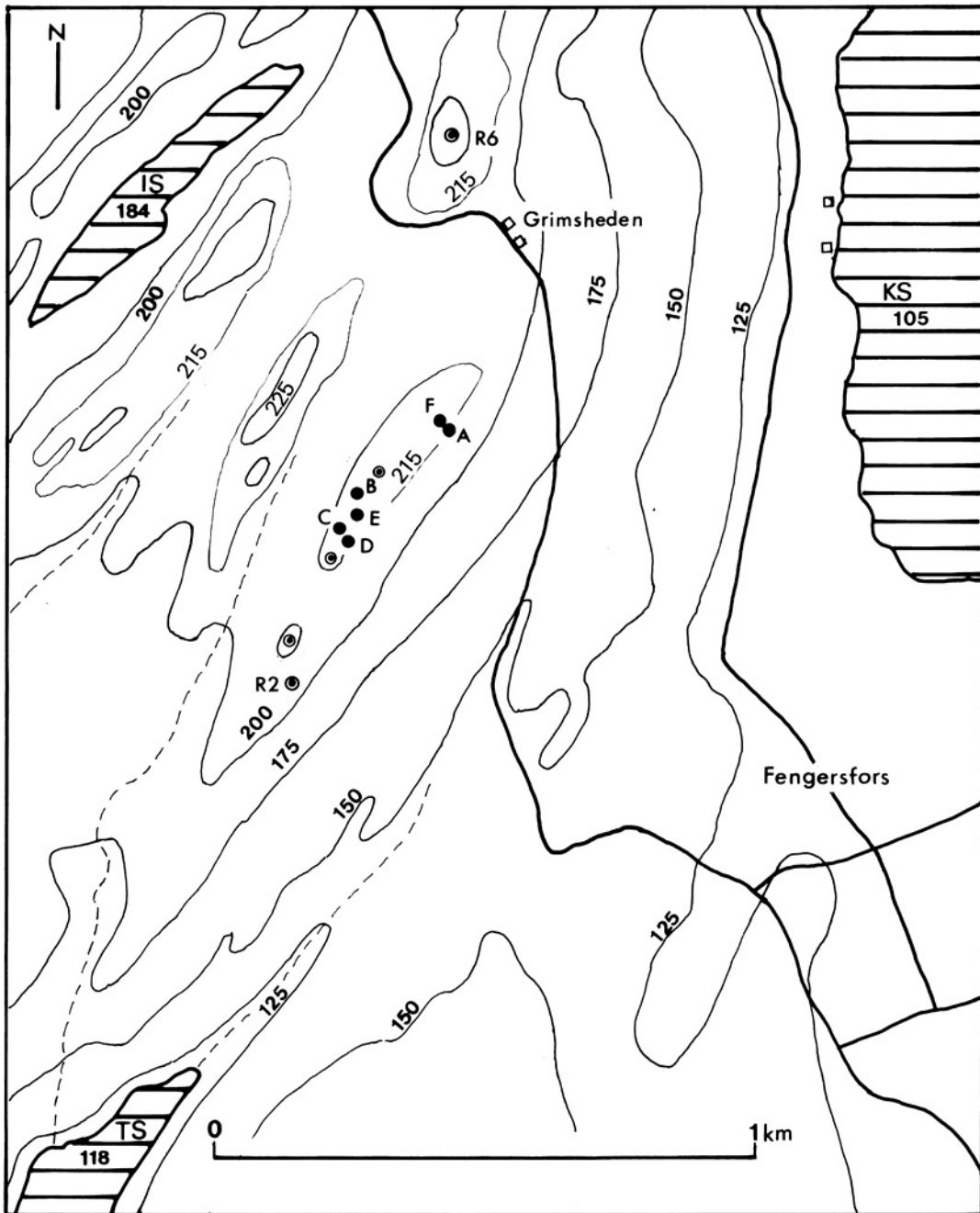


Fig. 3.

The Knarrbyn ridge lies at 200–225 m above sea level to the north-west of the town of Fengersfors. The Knarrbysjön (KS) at 105 m is a major lake below the ridge, and a smaller body of water lies higher to the north-west, the Idetjärn (IS), and to the south is a major lake, the Tansjön (TS) with its narrow bay, the Knarrbyviken, stretching towards the ridge. Heights of the land and the lakes are in metres above sea level. Dot circles are cairns (R6) or other stone-built ancient monuments (R2); the smaller dot circles near Panels B and D are probably ruined cists, and just north of R2 on a small ridge are 5 or 6 small stone-layer mounds. The four major panels of rock carvings on the ridge are marked A, B, D, and E, and lie beside or on small outcrops rising to about 215 m above the 200 m plateau. The small panels C and F lie nearby. Thin dash lines are streams, bold lines are modern roads. Plan by the author based on 1:10,000 map with site mapping along the ridge

surface; there are two further unadorned ridges, slightly higher, lying to the north-west. The major ridge is drained by several streams which emanate from two marshy areas just below the small high ridges; the small ridge with carvings is isolated from and well above these watery areas.

To the north of the carved panels, and separated from them by a shallow dip in the land, is a small but steep ridge, more of a hill in effect, that holds a burial cairn (R6) on its top. This monument still retains its original character; it is about 9 m in diameter, rises about 0.7 m above its rocky base, and parts of an original stone-built kerb are still visible amidst the tumble of water-worn rocks, spread now by some ancient exploration of the cairn (Fig. 4 upper). A second cairn was reported in the immediate area in 1850 but is no longer visible. The surviving cairn and an immediately adjacent hillock offer immense views to east and north. To the east, over the Knarrbysjön, the waters of Lake Vänern can be seen as well as the Värmlandsnäs peninsula; to the north, the peaks and hills of Värmland are visible. Such views probably lay behind the choice of this spot for the building of the cairn.

Just off the uppermost area of the Knarrbyn ridge itself, to the south, and very near the carvings, the remains of a stone-built structure can be seen amidst a spread of large slabs, the whole knocked about by forest clearance activities (Fig. 4 lower); this monument, if it be that, has not been recognised before now and it is just possible that it is, or was, the lost cairn noted above. A larger stone-built chamber (R2) is known some 150 m farther south, probably once a gallery grave of the late Neolithic period, built upon a low ridge. It too has been badly disturbed over the years. Nearby are several other sites, noted below. These monuments are mapped on Figure 3.

Overviews of the prehistoric monuments of Dalsland make the point that the evidence of settlement and other activities from the early Mesolithic to the late Iron Age is generally considered to be rather sparse (Johansen 1991; original surveys, Hellman 1964; 1965). Two major types of prehistoric monument are identified, gallery graves and cairns, and there are also stone settings and mounds dated to later prehistoric periods. Gallery graves are usually dated to the late Neolithic on the basis of several Dalsland excavations (Stjernquist 1950; Rex 1974); about 100 such monuments are recorded from Dalsland and they often occur as clusters in areas of

the province adjacent to the western shores of Lake Vänern (Hellman 1965, fig. 7). One such cluster lies about 10 km to the east of the Knarrbyn ridge in and adjacent to the valley of the Vitlandaån flowing into the Tydjesjön (TY on Fig. 1). Cairns of the earlier Bronze Age, such as the R6 site at Knarrbyn, with smaller stone cists as the central focus, are more widespread although there are various regions of the province, including the Knarrbyn area, where such sites are much less common, at least in the archival record. Many cairns are located near the shores of Lake Vänern. The largest cairn in Dalsland lies just north of the concentration of rock carvings at Tisselskog, and further comment appears below.

There are relatively few rock carving sites in north-eastern Dalsland, insofar as fieldwork and historic records attest. A few small panels, with one or two carved images (boat, footsole) are known on rocks near Lake Vänern but almost all of the carved surfaces here and elsewhere in the area mapped on Figure 1 bear only cupmarks. The Högsbyn complex at Tisselskog is extraordinary in variety of imagery and abundance of carvings, and other relatively large sites are only known well to the south of Tisselskog (Rex Svensson 1982).

Less well documented are the discoveries in Dalsland, made in surveys of 1987–8, of ‘large numbers of small, irregular, single-layered stone-settings’ (Johansen 1991); these gravefields of small cairns are widely distributed in Dalsland and date from the later Bronze Age until well into the 1st millennium AD. They appear as clusters of rounded stones, very slightly raised above the ground level, and sometimes they only emerge from the uneven landscape through clearances of woodland and rough ground on the heights. Just such a group was identified during our surveys of the Knarrbyn ridge (Fig. 5 upper); five or six small settings of rounded stones lie on a small elevated ridge, to the south of and in effect a continuation of the major rock carving ridge (Fig. 3). The settings are small in size (from 2 x 2 m to 4 x 3 m), one more elongated (5 x 1.5 m), and they are clustered together in an area about 40 x 50 m in extent. It is just possible that such clusters, or some elements of them, are more recent field clearances but the terrain here at Knarrbyn, and their character, suggest a greater antiquity. The proximity of such a group to the existence of an earlier monument, the gallery grave (R2), is matched elsewhere in north-western Dalsland. Near a gallery grave on the small





Fig. 4.

(upper): Cairn (R6 in the register of sites) on the Knarrbyn ridge top, north of the carvings; (lower): probable ruined stone-built monument at the south end of the Knarrbyn ridge, damaged recently by machinery for forestry operations

island of Björkö in the Svansfjorden, some 25 km to the south of Knarrbyn (Stjernquist 1950) is a small group of stone settings, each perhaps 3–6 m in diameter and 0.4–0.7 m in height; they lie on a narrow peninsula of the island, and have been considered to be burial cairns and contemporary with the rock carvings of the region, although the detailed relationships are not well-defined, and it is perhaps more likely that they are of the earlier Iron Age. A single example of these small cairns may also lie on the Knarrbyn ridge, today a flattened and irregular spread of stones, between the panels of carvings; it is difficult to think how else such a grouping could come to lie here upon the smooth ridge surfaces.

Overall, the patterns of prehistoric settlement and activities in Dalsland are ‘difficult to interpret’, and perhaps represent ‘waves of expansion ... forwards





Fig. 5.

(upper). One of the small single-layer stone cairns off the southern end of the ridge. Panels D and E lie near the end of the ridge in the background; (lower): rubbing of a Panel. Two discs were previously known and are clearly visible on the rock surface. The rubbing revealed a third disc set between the two. Scale totals 250 mm

and backwards across the landscape' (Johansen 1991, 100–2). Such a model, based upon the overall record of identifiable monuments, is perhaps supported by the records of stray finds of Bronze Age stonework and metalwork; in the whole province of Dalsland, only 10 pieces of earlier Bronze Age metalwork were recorded by Oldeberg in 1974, and later Bronze Age artefacts are equally sparse (Baudou 1960); more pieces have been added to these totals in recent years.

#### THE KNARRBYN RIDGE

The top of the Knarrbyn ridge is rather flattened and most of the upper surfaces have a slight slope, perhaps 5–10°, down to the east (Fig. 2 upper). The fall becomes much more abrupt off the upper surface and the rock surface descends steeply towards the Knarrbysjön. The outlook from almost all of the panels of carvings is firmly towards the east, but the panels themselves tend to assert the ridge line itself, as the visitor walks along the slopline. From ridge top to the lake is a fall of about 120 m; it seems clear that from the ridge itself the shining waters could once be seen, and from the southern end of the ridge the Knarrbyviken (Tansjön) would also beckon the traveller. Today all these views are masked by woodland, a relatively recent development.

Much of the exposed surfaces of rock along the uppermost areas of the ridge are smooth but heavily veined by quartz and, in places, badly cracked. Whether this surface cracking is weather-induced or created by the movement of heavy logging vehicles I do not know, and perhaps both are involved. Certainly today there is machine damage on parts of the surfaces very near the southern panels of carvings (Fig. 4 lower) although the local authorities have tried to mark areas of carvings for machine-drivers to avoid.

At the northern end of the ridge is one of the panels of carvings (Panel A), with several smaller images (Panel F) near to the large panel (Fig. 3). A panel is here defined as a discrete area of the rock surface where carved images occur. Midway along the ridge edge is another panel (Panel B). Near the southern end, on and beside the highest part of the ridge here, are two further panels (Panels D and E) with a single disc nearby (Panel C). The distance between the northern and the most southern panel is about 250 m,

but it seems possible that along this entire distance there are, or were, comparable images, today lost or obscured by the dominant ground-covering vegetation. The ridge itself has an undulating transverse surface; Panel A lies on the easternmost edge, just as the descent towards the lake begins, and the other Panels are on the upper surfaces of the ridge.

This is perhaps the place to point out again that the Knarrbyn carvings lie at heights well above those of the vast majority of sites in most of southern Sweden. Hundreds of rock carvings in southern Sweden were created upon surfaces near the contemporary shorelines, and lie today at levels between 10 m and 25 m above present sea level. Such rock surfaces are intensively searched for carvings and many sites have been discovered in recent years. It is the burial cairns that are well-known to have been placed upon the heights and many distribution maps point out the differences in location between Bronze Age carvings and Bronze Age burial monuments. Here at Knarrbyn the pattern is changed, and cairns and carvings lie at the same levels in the landscape. Further comment appears below.

#### PANELS AND CARVINGS

The Knarrbyn carvings are in no way as varied or identifiable as those at Tisselskog or farther afield; the dominant image is a disc (preferable term to circle), carved as an outlined irregular ring and not hollowed out internally. All of the 40 or so discs along the ridge have, in essence, one or more rings, varying from one to seven, and occasionally the inner rings merge with one another, so an uneven spiral effect is created. There is considerable variation in width of carved line, and some also in depth of line; comment about this is made below. The discs vary in diameter from 490 mm to about 100 mm, and some do not even approach circularity, particularly on Panel E. Logically enough, the larger the disc, the more internal rings it has. Each of the major panels has two or three large discs with multiple rings. The largest on each Panel are listed in Table 1 and expressed as diameter (cm)/number of rings.

It is likely that other discs remain to be found along the ridge. In our inspections along the ridge, it was instructive to observe certain lichen formations that assume ring-like shapes and perhaps there was an

TABLE 1: MAXIMUM DIAMETER & NUMBER OF RINGS COMPRISING KNARRBYN DISCS

<i>Panel</i>	<i>max. diam/no. rings</i>
Panel A	43/5 and 39/4 + 2 smaller discs
Panel B	39/5 and 37/5 + 3 smaller
Panel C	26/5
Panel D	49/7 and 37/7 + 13 smaller
Panel E	28/4 and 25/3 + 2 smaller
Panel F	28/4 + 2 smaller

original connection here.

When the work of recording the Knarrbyn carvings began, involving careful surface cleaning and rubbings made with 60 g paper, it was anticipated that the discs, painted by local authorities for visitors' convenience, would emerge upon the paper as firm concentric rings with occasional straying of the lines. However, the results of the recordings made in 2009 have proved rather different from expectations. Because all of the discs previously found had been painted, their individuality was masked. It was only by attempting to record afresh, by rubbing and detailed tactile work, that differences emerged, and previously unknown images appeared (Fig. 5 lower). One of the Panels proved to have discs wholly unlike those anticipated from their painting and their publication. So the plans in this paper do not always, or often, match the painted versions in details, or indeed existence, although it is acknowledged that mere recognition of a disc upon the uneven rock surface is difficult, and details cannot be clarified by anything but rubbings and/or varying low-level illumination.

Overall, something like four varieties of carvings

can be seen, in effect from the initial marking out of the central image and its successive encircling rings, to a finished product with smooth and uniform rings. Such variation within a panel of carvings is very unusual to survive on Bronze Age images in southern Scandinavia, and most authorities have remarked on the smoothness and uniformity of lines on well-known carving sites that contain various designs whether that be of boat, human, disc, or whatever; a few images here and there do seem to have reached only an initial stage, being shallowly-carved in the main, but few show the early approaches and preliminary carving stages as seen at Knarrbyn. As many will know, the word 'carving' is not entirely appropriate for this material, but it seems useless to try to re-name it all.

Discs at Knarrbyn began to be marked out by a series of separate peckmarks made into the surface, presumably following, or attempting to follow, some line marked out by colour (ochre, charcoal) or scratching by sharp stone edge. The resulting roughout thereby made demonstrates the ability, or lack of it, to establish the parameters and broad outline of the desired image. There follows the emergence of the shape itself as the individual peckmarks are joined up by further heavier hammerwork. This marks the point of no return, the shape is fixed, and is made more smooth and better-defined by more closely-directed pecking. A final stage of work lies in the grinding and pecking of more delicate aspects of the image and the elimination of irregularities in depth and width, and perhaps even in the design, by adaptation and invention, achievable only by incorporation of such faults within wider or deeper carved lines or shapes.

Fig. 6

(*overleaf*). Panel D slopes at 8–10° at top and 14–20° lower down, to ESE; the discs show considerable variation in artistry and phases of work, with the largest pair very ragged. The central large disc has an outermost ring at an early phase of marking-out, akin to those on Panel B. Central rings on several discs are non-circular. Panel B slopes 5° at top and 1–5° at base, to ESE; all the discs are irregular and represent early phases of work, the marking-out of rings, unless entirely incompetent artists were at work. At least two of the central 'rings' are square in shape. Panel F slopes 5° to ESE and the outer two discs are firmly and evenly carved; the central disc is very faint and may underlie that on the left. Two of the central 'rings' are square in shape. Panel C slopes 5° to N; the carving lies on the ridge top rather than sloping edge. The surface of rock is very rough and heavily grooved S–N. The disc rings are irregular

Fig. 7

(*overleaf, opposite*). Panel A slopes at 10–11° down to ESE; there is a large area of uncarved rock between the oval image on the S and the two discs on the N. Panel E slopes at 7–8° down to ESE; there is an area of uncarved rock between the main complex of discs and the isolated disc on the N where the rock slopes at 10°. The disc at top left is very irregular, similar to that on the far right. Several of the central 'rings' are square in shape



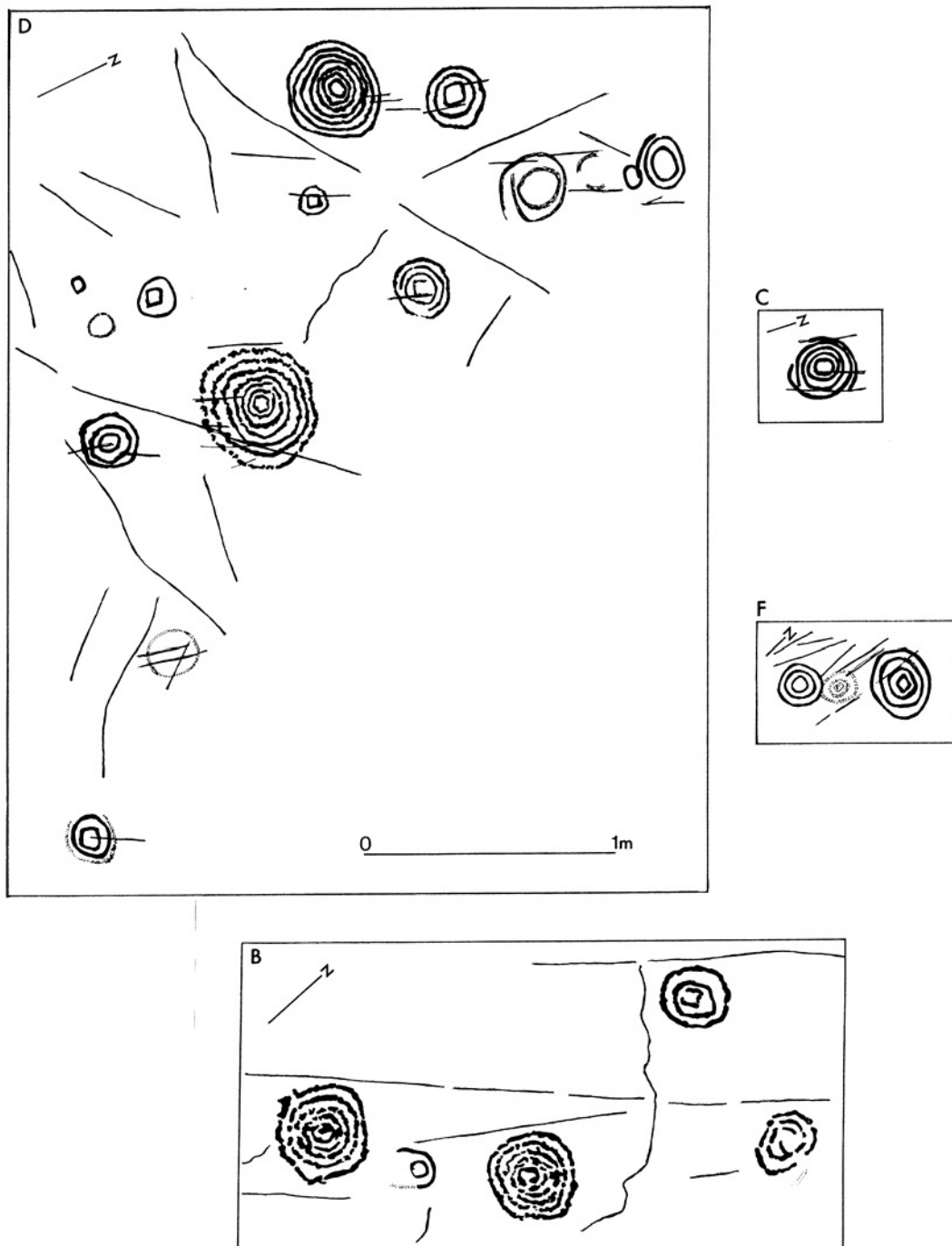
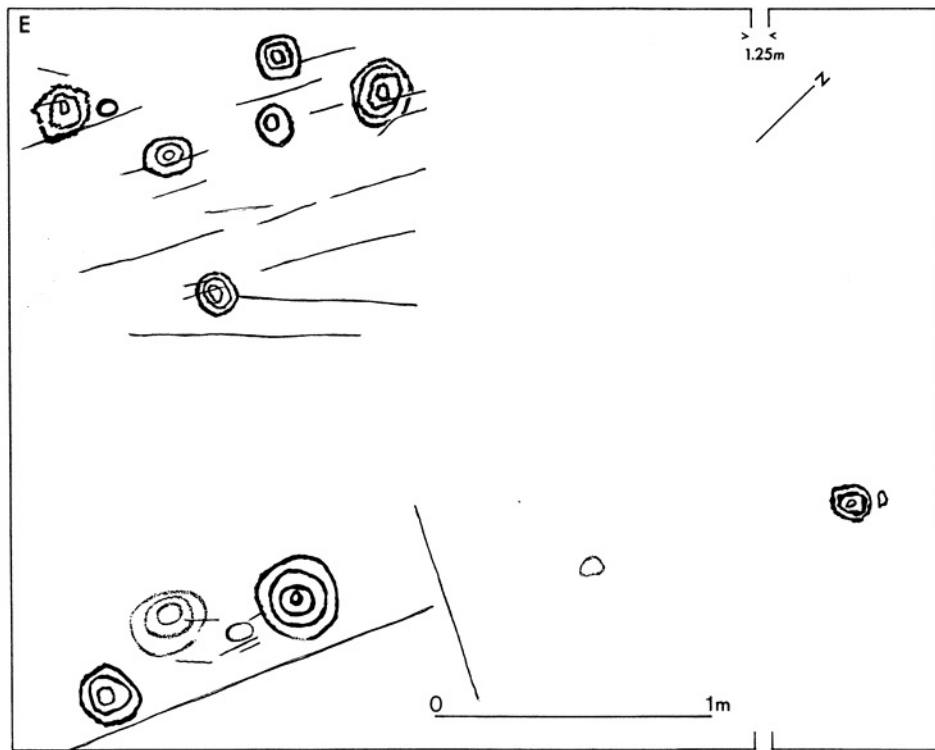
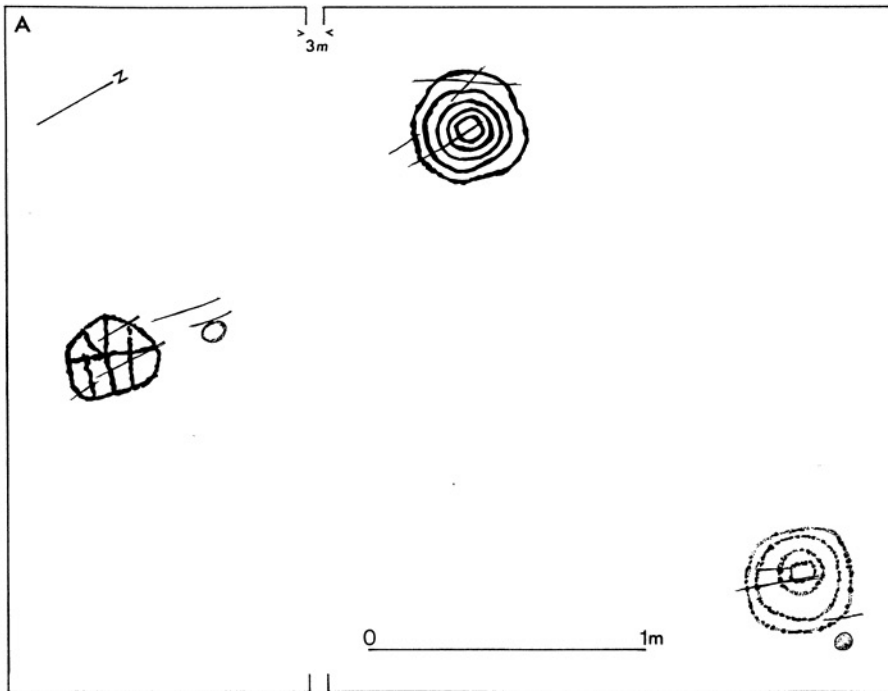


Fig. 6-7.

Panels at Knarrbyn, Dalsland. The surface along the rock is cracked and narrow veins of quartz lie here and there, mostly in NE-SW orientation. The plans of the Panels are newly-created and all images have been identified by rubbings and other visual and tactile means. The surface cracks have only been recorded beside or near the carvings



At Knarrbyn, such delicacy was not much required as the images are unvaried in their design, but here can be seen more clear contrasts in the expertise and quality of the artists. The initial phase of carving, the roughouts, are clearly visible on Panels B, D, and E in interrupted and individual peckmarks on discs (A right, B left, D centre, E top left) (Figs 6–7). All these images are roughly framed, with irregular lines and places where the artist seems to have ‘lost the thread’ and strayed away from uniformity – incompetence perhaps, but also a glimpse of initial steps not so often visible on the rocks. The size of such peckmarks created at this initial phase of work is about 10–12 mm diameter, but where the first marks have been partly, sometimes unsuccessfully, joined to a neighbouring mark, the width of line can be as much as 18 mm; the depths of such early markings may be 2 mm or so.

A succeeding phase of work can be seen in a more coherent alignment of carving, individual peckmarks joined together, and the desired, or inevitable, design emerges on the rock. Panel B (second left large disc) and Panel D (top centre) have images showing this phase of work, with that on Panel D rather farther along than Panel B. There logically follows work to complete the basic design, eliminate variations in line width and depth, even if the overall effect is still slightly uneven. A number of such images occur here, on Panel A (upper disc), B (upper), and D, but others on the Panels are also of this phase and might well have been considered finished and appropriate for their purpose. Depths of line at this stage in the work are 2–3 mm in general but some achieve 5 mm depth when their final shape has been reached; such depth may have been necessary to disguise any unevenness in the strength of the work. In many places the artistry has strayed irretrievably and the rings have lost their symmetry, and occasionally a merging of lines became unavoidable; of course this might have been deliberate but such appears unlikely, granted the initial marking out of lines that have survived undeveloped, as on Panel B in particular, although this Panel has its own range of irregularities.

Here and there on the rock surface are discs formed with evenly thin lines only 10 mm wide in places and barely 1 mm deep, hardly visible unless under exceptional lighting angles and detected primarily through rubbings made as part of adjacent disc recording. It is possible that a wholesale exercise, to record by rubbing a whole Panel with adjacent ‘blank’

areas would repay with more discs, but this awaits future interests. A well-shaped disc on Panel E (second left at the base) and another on Panel F (centre, and newly-found) are in this category. Elsewhere on the Panels are images that have achieved a uniformity often seen elsewhere on rock carving figures but here somewhat rare, on Panel E (fourth from bottom left, including the tiny disc) and F (on the right).

The peculiar image on Panel A (on the left) with firm outer line 20 mm wide and 2.5 mm deep, and inner divisions only 12 mm wide and 2 mm deep, represent, in workmanship terms, a moderately developed phase technically not unlike some discs on other Panels. This image is discussed below.

A glance at the overall appearance of the Panels B, D, and E (with perhaps Panel A) will at first suggest an unstructured spread of uniform images separable only by size, and by number of rings. However, the spacing of almost all the discs on Panels B, D, and E would have allowed a simple small disc with only one or two rings to be added to, over time, and to develop eventually into a larger multi-ringed disc that did not impinge on its neighbour. The smallest discs on the panels are very much a match in size and character for the innermost rings on the larger discs. In other words, on the panels there was generally space left between initial rings for expansion over time, and discs with one, two, or three rings would thus represent stages in periodic development, the work carried out perhaps during or marking an annual passage along the ridge, or celebrating particular significant events in the life of a community. Further comment appears below.

It is apparent from a detailed examination of the larger and mid-sized discs that variation in the carving of the individual rings exists. The variations in ring shape, in line width, and unevenness, and in symmetry, suggest that different hands were at work and, although we do not know the internal sequence of events (the ordering of the discs on Panels), we might think in terms of different Panels for different groups, those proprietors of Panel B and Panel D less committed, more hurried, shorter periods of interest and activity, than those concerned with the emergence of images on Panels E and perhaps A. There is one other feature on some of the discs that merit comment, and is pursued later in this paper.

Certainly there do appear to have been a variety of craftspersons at Knarrbyn, from crude and heavy-handed with little line-control to more assured and



delicate in execution of the work on their traditional or newly assigned places on the ridge. The more assured creations have mostly lost their individualities in the traces of workmanship. The images only outlined or marked by pecking will retain their individualisms both in identifiable hammer points and, perhaps, in the selection of areas or alignments for the initial work. Two of the discs on Panel B, for example, have such traces and appear to indicate the use of two, perhaps three, hammerstones and to show that the curved arcs making up the rings were not at all a smooth progression but a series of (perhaps hesitations is too strong a word) pauses in the execution, and minor corrections. Here it also appears that the delivery of the artist's tool was in an anti-clockwise sequence, and the same is evident on one of the lower discs on Panel E and on the lowest disc on Panel A where the individual tool impressions are very clear. Perhaps these artists were left-handed.

The opportunities to work along these lines of enquiry depend upon the survival and visibility of the carved lines and other markings, and it is a particular difficulty here that modern painting of the carved lines has obscured some of the carving 'signatures' of the artists as well as any variation in weathering of the lines. Both of these, particularly the former, are crucial to attempts at interpretations.

In every other area of rock carvings of the Bronze Age, cupmarks are abundant and there are relatively few sites without such carvings. At Knarrbyn, traditionally-shaped cupmarks are not present. Even with the difficulty of identifying such small carvings on the Knarrbyn surfaces, the absence seems genuine and deliberate; the small round image on Panel A has a flat centre and is unlike the normal cupmark hollow.

The discs at Knarrbyn pose a number of questions, and these include dating as well as their non-figurative character within the well-attested corpora of south Scandinavian imagery. Note has already been made about the unusual environmental position of the Knarrbyn panels, well outside the normal range for carvings of the Bronze Age with their quite predictable proximity to their contemporary shorelines. There are, of course, exceptions to this general rule, and none better than the carvings at Frännarp in Skåne, well-inland and, logically enough, non-representative of Bronze Age boats, and cluttered, it seems, with circular designs some of which are wheels of well-depicted carts and their teams of horses, although human drivers are noticeable absentees (Coles 2002).

On Panel A at Knarrbyn, the oval image with internal lines is unique in the entire complex of carvings here. The overall border to the image is irregular and unfinished in its retention of the individual hammermarks. This image bears a clear relationship with carvings on other sites and provides a base for thinking that the Knarrbyn carvings fall within the compass of Bronze Age imagery as seen and dated on a number of sites in southern Scandinavia. In looking for images comparable to the Knarrbyn oval, it is clear that the concept of a particular shape, an enclosing border with interior divisions created by a longitudinal line and a number of cross-lines, gave rise to a variety of representations.

At Högsbyn, Tisselskog, the nearest well-dated carving site, there are a number of such images on several panels (eg, Beteshagen; Rex Svensson 1982, 24–5). A comparable carving from Skogby in Svenneby, Bohuslän, lies amidst boats and human images of middle Bronze Age character (Fig. 8) (Fredsjö 1971, 69; Kniep 2000). Farther north and west, sites at Skjeberg, Østfold, carry inner-lined discs on panels with other discs and boats of later Bronze Age types (Marstrander 1963, pl. 10; Coles 2005, fig. 263). Sites in Östergötland have a larger number of such images in close association with middle and later Bronze Age carvings, at Herrebro (Fig. 8), Himmelstalund and Skälv (Burenhult 1973, 102–70) and in this region there are considerable variations in the overall shape of such inner-lined figures, some oval and some oblong; the range of expression is summarised in Norden's ancient survey (1925, 187). Several of the oblong-shaped images on the Himmelstalund sites appear to be part of, or attached to, long spears, held in one case by minute human figures. In his overview of the carvings of Götaland, Burenhult identifies a wider variety of such images, called net or frame figures (1980, 78–81, fig. 26); many of these contain multiple inner lines, often as 'V's or straight bars. By their varied associations, most of these are assigned to the middle Bronze Age of the north, mid-2nd millennium BC in broad terms. But such surveys of these images emphasise the variety in such representations, oval and oblong, and with variant inner lining. More lined images have recently emerged from surveys in Småland (Broström 2005). And an intriguing image carved near the top of a menhir at Langeneichstädt in Sachsen-Anhalt looks like the Knarrbyn and Skogby carvings except for a pair of dots, like eyes, in the topmost segments

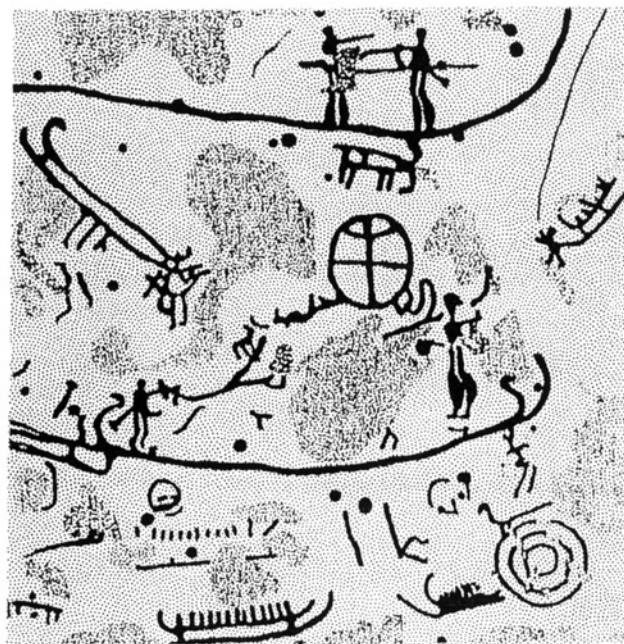
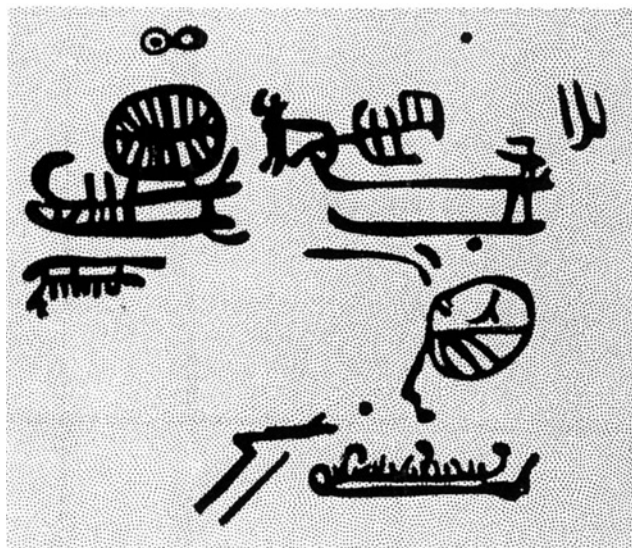


Fig. 8.

(right): Part of a panel at Skogby, Bohuslän, with oval frame set amidst a group of boat and human images. Length of oval frame 400 mm. From Kniep 2000; (left): a small panel at Herrebro, Östergötland, with oval frame above an image of a boat. Length of oval frame 350 mm. From Burenhult 1973

of the stone (Müller 1991, abb. 10–11); no trace of such a feature has been identified on the Scandinavian figures.

It would seem reasonable to suggest that these designs, including the Knarrbyn example, were some sort of emblematic symbol, perhaps represented on textile or wood and occasionally laboriously carved on rock surfaces undergoing work by the societies' artists. The carvings at Herrebro and Himmelstalund in particular are positioned in very prominent places on the various panels, above boats and beside boats, and the images are large and deeply-carved in the main; they must surely be an important symbol within the artists' repertoire and the systems of belief within the society.

#### THE DIVERSITY OF DISCS

The Knarrbyn discs are not unique in the repertoire of south Scandinavian rock carving images, but they are

not common throughout the entire territory of such carvings. As an example, the recent publication of rock carving sites of all sizes from three catchments in Tanum, Bohuslän (Milstreu & Prøhl 2009) lists the major images on 157 sites as 3531 cupmarks, 606 boats, 376 humans, and 48 discs. The six Knarrbyn panels have 42 discs, one atypical cupmark, and no boat or human images. Nonetheless, discs do occur at a number of rock carving sites throughout the south Scandinavian traditional regions. Examples of sites with discs in varying sizes and positions on panels are found in the Trøndelag in western Norway, and Hordaland and Rogaland as well, with a few in Telemark and Østfold, and, as noted, relatively few in Bohuslän where we might have expected a majority of such a design to be present along with the wealth of other images. A few examples can be found in Västergötland, more in Västmanland and Småland, some on specific sites in Östergötland and Uppland, but more rarely seen in Skåne or Blekinge or in Denmark. Throughout most of these areas the wheel-cross, a disc with criss-cross lines inside, is a

moderately common image (Malmer 1981), but the plain disc, or disc with central cupmark, is a much rarer element, and here I will set out only a few sites seen during field visits where similarities in design and, more importantly, positions on panels and in landscapes may help in understanding the unusual character of the Knarrbyn panels.

Away from Dalsland, the inland site at Hjulatorp in Småland, again high on a ridge, has an altar-shaped rock with many carved images, cupmarks, footsoles, wheel-crosses, and two large discs with eight and nine rings (Fig. 9 upper); the discs lie one on each side of the whole panel and clearly emphasise the powerful symbolism of the whole, but at the same time they rather diminish the neighbouring small carvings. Today the panel is disintegrating (Skoglund 2006; Coles 2007). There are other, smaller sites in Småland, including Dänningelanda with two large discs and a scatter of cupmarks and Växjö, again with two discs and cupmarks (Skoglund 2006, 61, 75). These sites in Småland are well inland and boat images are barely represented.

This contrasts with larger sites such as Ekenberg in Östergötland, where a crowded panel of boats and animals contains four large discs; one of these is neatly positioned between the points of two opposed swords, and two others are placed in close proximity to boat stemposts (Fig. 9 lower; Burenhult 1973, 139). Not far from Ekenberg is Herrebro where impressive discs, with central cupmarks, occur on panels with boats and other images (Burenhult 1973, 162).

Something along the same lines of association can be seen on certain Uppland sites, where discs without central cupmarks occur in association with boat images, at Härkeberga and Litslena (Coles 2000, fig. 71), and an unusual site at Vårfrukyrka contains a scatter of cupmarks and a group of six discs, one of which is large with four rings (Coles 2000, fig. 100); the site lies on a flat rock surface with a very steep fall into a valley immediately beside the large disc (Fig. 10 upper). A comparable site at Ryland in Bohuslän contains five such discs, with three or four rings each, and these form the central panel of the site, with boat designs on the periphery (Fig. 11 centre; Almgren 1912). Most of these discs have circular rings at centre, some with cupmarks as well.

In the same landscape of the west are several sites where prominent discs form focal points of complex panels. The small rock at Borgen, in Østfold, is covered with boat designs centred around two discs

(Fig. 11 lower), and these are clearly an integral part of the structure and not merely additions to an established structure (Marstrander 1963, pl. 24; Coles 2005, fig. 250).

Västmanland in central southern Sweden contains several sites where discs are an essential and basic part of the entire panels. A site at Bjuggsta has two large discs with five and six rings wholly dominating some cupmarks and a boat design, and near Irsta three discs form the base of a multitude of cupmarks covering the enormous boulder (Fig. 10 lower). The large site at Häljesta, dominating a wetland and with minor sites nearby, has one disc, with four rings and central cupmark, set apart from the main panel (Coles 2001). Nearer to Knarrbyn is Evenstorp in Dalsland, with a large disc positioned above a procession of human figures, the disc providing one of the central foci for the whole site (Rex Svensson 1982).

Along the western coast of southern Norway are a number of sites where the disc seems to have been a particularly important element in the structure of rock carving sites. In the Trøndelag, sites such as Hegra, Ydstines, Auran, and Gråbrekk (Fig. 11 upper) contain numerous discs with 2–6 rings, some in close association with boat designs, others more isolated (Sognnes 2001).

More striking, perhaps, are sites in Hordaland where discs are displayed prominently and in near-isolation, at Fitja for example, or with multiple cupmarks at Støle, or associated with boat and tree designs at Flote. Some of these sites lie high in the landscape, overlooking bodies of inland waters or rivers (Mandt 1972, pl. 4a, 14, 11). And in Rogaland, one of the island sites at Åmøy has a four-ring disc on a panel of boat images and footsoles, the disc set well apart from the rest (Fett & Fett 1941, pl. 13). Another island location, on Tjörn off the west Swedish coast, is at Valla with another four-ring disc, this one positioned as a central focus for the whole panel (Pettersson & Kristiansson 1977, figs 24 & 76). A little-known site at Løberghaugen in Telemark has several discs, one with five rings, occupying logical and structured positions in a panel of boat and animal images (Marstrander 1969). And one final example of such images occurs at the site of Varp in Bohuslän, where a very large boat design dominates the rock, with three discs positioned beneath and a clutter of other images above the boat (Bengtsson 1995).

The Knarrbyn discs and their counterparts elsewhere therefore expose and reinforce a necessity



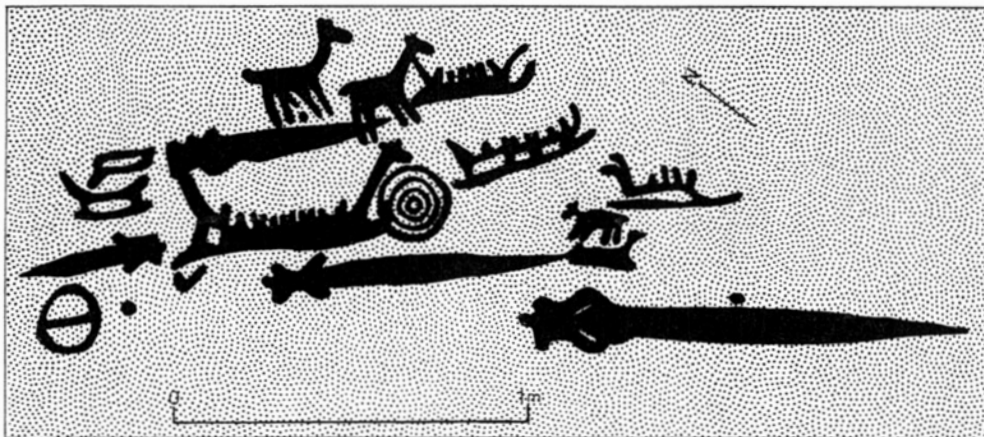
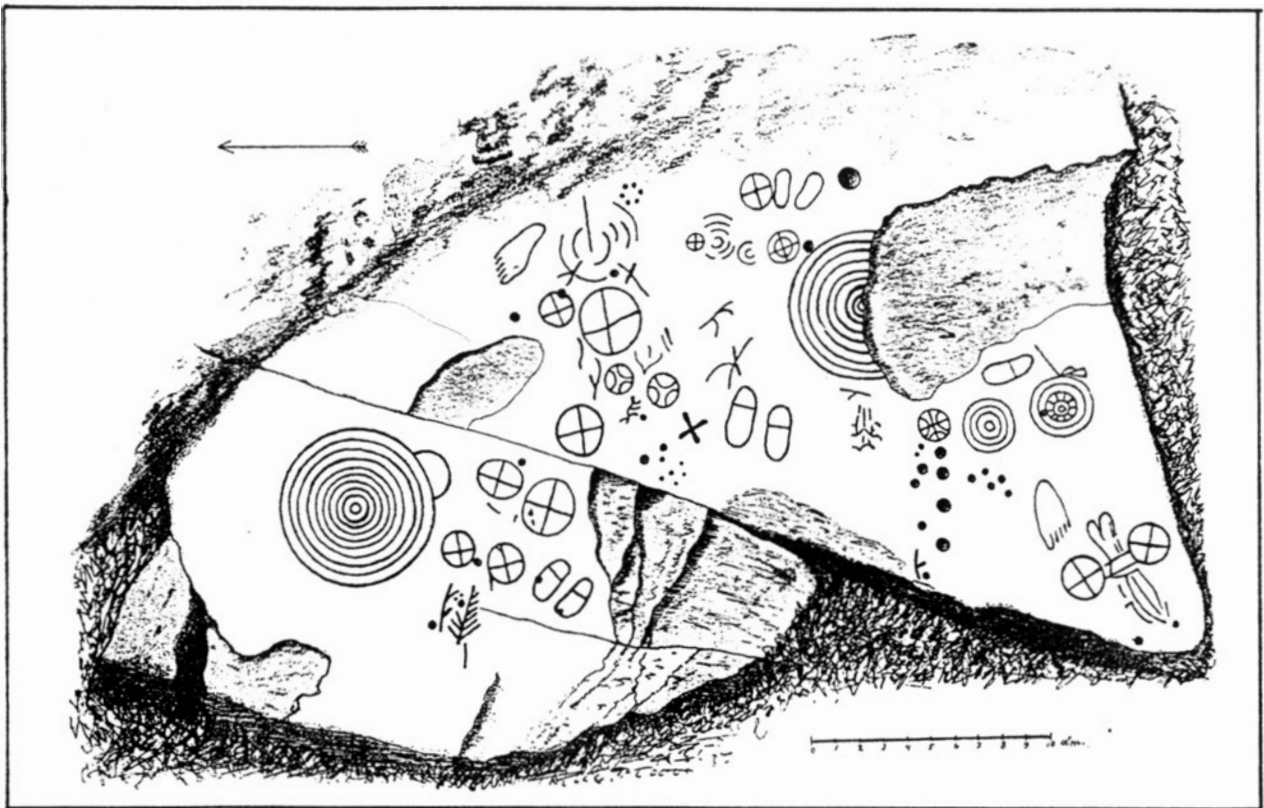


Fig. 9.

(upper): A panel of carvings at Hjulatorp, Småland, recorded in 1909 but now badly eroded. Plan by Kjellmark and Lindsten (1909; see also Skoglund 2006 & Coles 2007). The scale is 1 m; (lower): part of a very large panel of carvings at Ekenberg (Östergötland), with disc at boat prow and sword and animal images surrounding. middle and late Bronze Age images. Based on Burenhult 1973





Fig. 10.

(*upper*): Rock carving at Vårfrukyrka (Uppland), on a flat surface at the edge of a steep cliff, with large erratic boulder. Images painted. Photo: Coles 1992; (*lower*): rock carving near Irsta (Västmanland), on a detached slab, with multiple cupmarks and large discs near the base, badly eroded. Painted. Photo: Coles 2001

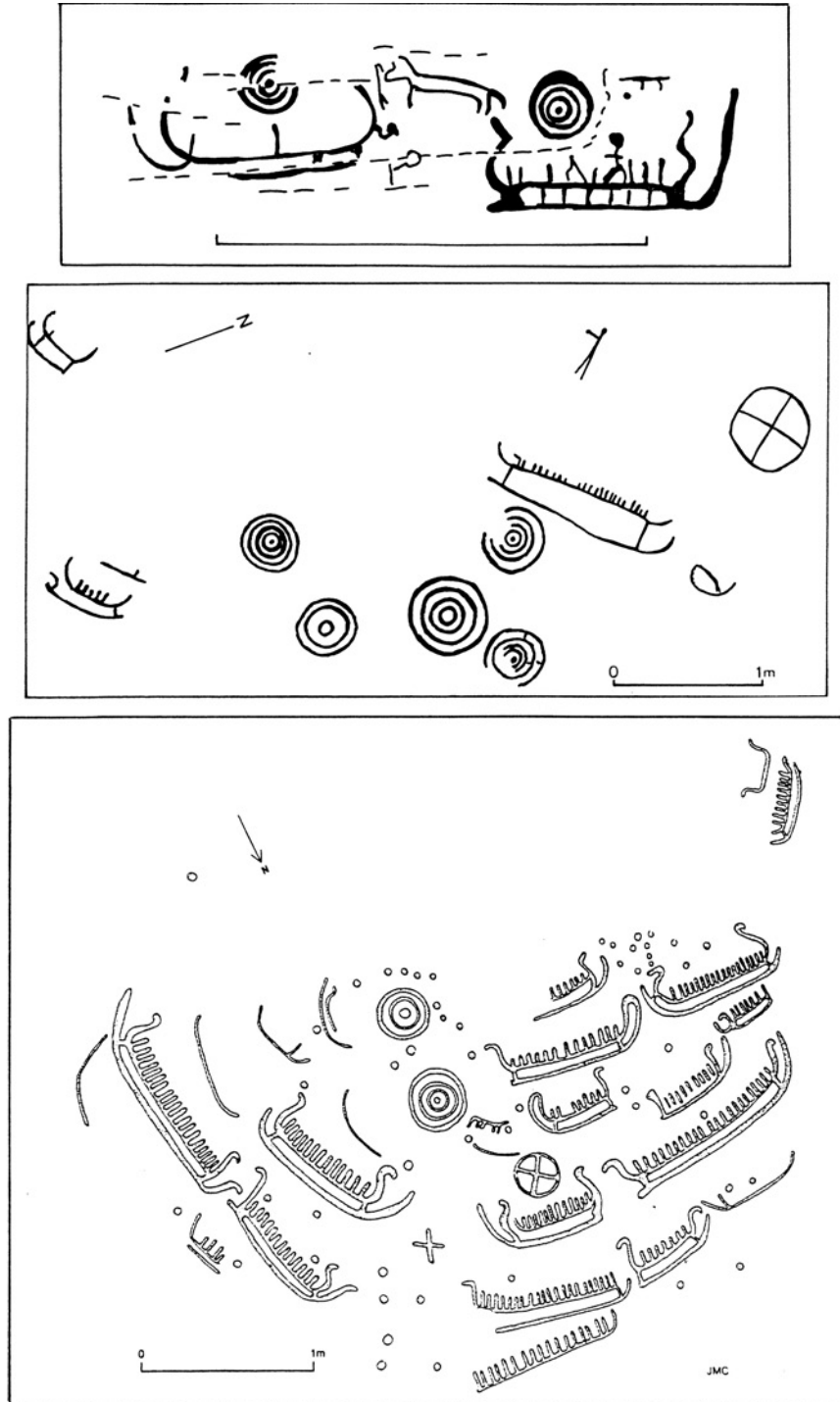


Fig. 11.

(upper): Part of a small panel of carvings at Gråbrekk (Trøndelag), with discs above late Bronze Age boats. Scale is 1 m. Based on Sognnes 2001; (centre): Panel of carvings at Ryland (Bohuslän), the central discs flanked by middle Bronze Age boats. Based on Vitlycke Museum archive plan and site visits. (lower). Plan of carvings at Borgen (Østfold), the discs central to late Bronze Age boat images. The rock is domed, discs near the top. From Coles 2005



to confront the disc as an integral part of the repertoire of Bronze Age imagery with its own particular meaning and power beside those more seemingly-identifiable symbols of boats, humans, quadrupeds, and, of course, the ubiquitous and inexplicable (to us) cupmarks that probably mask a variety of emotions and memories.

Discs of varying designs have been the subject for questions of identity, and conjecture, in many studies of north European rock carvings. I am told of an informal record in the Knarrbyn area of an elderly man who always described the discs on the ridge as 'suns', offering a view of the wide skies and the welcome warmth therefrom (Rex Svensson, pers. comm.), and this concept is quite widely held and impressively explored (eg, Kaul 2004). The extensive surveys of major rock carving regions in Scandinavia suggest that a greater number of sites with discs exist in more northern regions than in areas farther south. There are many discs on sites in the Trøndelag, Hordaland, Rogaland, and Telemark (eg, Mandt & Lødøen 2005; Sognnes 2001) and it may be that such northern lands had particular emotional responses to the sun, its appearance and intensity for the land. Other carved discs may represent shields, others contain internal crossed lines (eg, Fig. 10 upper) and often appear as the wheels on carts and wagons. Many discs of whatever design occur as single and isolated images on a variety of sites both large and small. It will be context and association that allow us to suggest that certain discs had particular characters and places within the compass of Bronze Age systems of belief, so we can avoid any simple and all-encompassing unit of identity. What seems to be clear in all of this, for Knarrbyn, is the quite unusual shaping of the discs on the Panels, irregular, incomplete in some cases, without central cupmarks, lacking other image associations, and set high on a ridge rather than anywhere near the contemporary seas.

#### KNARRBYN'S PANELS IN THE LANDSCAPE

Here at Knarrbyn, the carved discs upon the ridge are at one with their contemporary monuments, the burial cairns, and we might look upon their relationship more closely. It may well be that the Knarrbyn discs, with their multiple rings and the

variation seen within the carving of those rings, represent the outcome of a lengthy period of creation, with initial small rings, and successive outer rings perhaps generationally-added. This may seem unlikely for the somewhat crude and incomplete discs of Panel B at Knarrbyn but on other Panels the irregularities suggest variation in the artistry, in skill and in delivery upon the rocks. So it can be suggested that the ridge itself received visits over a considerable period of time for episodes of work on the rocks.

Along the ridge heights are burial cists and cairns, contents rarely recoverable or recorded; these were positioned on particular outcrops, slightly higher eminences within the ridged landscape, just as the individual panels at Knarrbyn were positioned upon the highest points of the chosen ridge (Fig. 3). In shape, the carved discs resemble the cairns, and their development, growing outwards circle by circle, would match the constructional methodology used in some cairn formations, a small heap of stones at centre point, enlarged by stone accretion around the core, expanding outwards, and with internal rings of stones on occasion. A further observation, unexpected when the recording of the Knarrbyn discs began, is that the small central ring of multiple-ringed discs (those with 7, 5, 4, and 3 rings) is often not circular at all, but angular with four or five sides (Figs 6–7). Perhaps these represent the shape of the cists at the heart of burial cairns. Of those discs with sufficient clarity of rings, about 15 have firmly carved lines at centre in the shape of rectangles or angular oblongs. Most of the others have more distinct ovals and very few have central circular rings. Central rings are usually considered to define and control the outer rings as the lines follow one another more or less evenly; this is distinctly not the case here with most of the discs where the internal angular carved lines in no way influenced, or conformed to, the enclosing rings. All of this suggests a deliberate shaping of the central carved lines, to resemble cist-like shapes and to be surrounded by the supporting rings as seen in many cairns and barrows. Such irregular central 'rings' at Knarrbyn are unmatched on other rock carving sites where discs predominate, in Hordaland for example where sites such as Flote, Støle, and Vinje contain over 50 discs of one sort or another, none with a clear or suggestive cist-like central image (Mandt Larsen 1972, pl. 11, 14, 18); the same result emerges from other concentrations of discs on sites in more southern regions, in Bohuslän, Östergöland, and Uppland.

Perhaps the carved discs on these widely distributed sites need more careful examination to determine if they might have particular details within their rings to open possibilities of closer identifications and to expand beyond the simple concepts of sun, shield, and wheel.

The literature on the earthen mounds and stone cairns of northern Europe is vast and yet must present only a fraction of the once-abundant burial monuments, and numerous authors lament the disappearance of such sites from their particular areas of study. As an example, Rønne in 1993 speaks of a concentration of 33 barrows at Ringsted in central Zealand, of which two survive, and almost all the others have been plundered and ploughed to extinction. Cairns, more often positioned upon the heights of the north and west (Thrane 2006, fig. 2), are probably less prone to total removal by such activities; nonetheless, the literature on, and surviving monuments of, cairns suggests that many, perhaps most, have been searched by stone removal from the central areas of the monuments, with little or no record of what, if anything, was found. The individual histories of cairns and barrows can often provide tantalising information about internal structures even if no formal excavations, illicit or not, have ensued (eg, Thorsen 1982; 1983). Evidence such as this does not allow anyone to advance accurate figures on the formation processes that went into the construction of such sites, but as a generalisation it seems that the earthen mounds, mainly holding primary wooden coffins, sometimes had wooden post circles within the mound and often their internal settings were of stones. Cairns were somewhat different and most of them had a central stone cist or cists, stone kerb and internal stone circular settings.

Both mound and cairn constructions were not, it seems, the single act of a population engaged in the ritual of a burial (eg, Auer & Kersten 1977; Thrane 2006; Goldhahn 2009). Their presence, always visible, was a constant reminder of their elitist origins, their ancestral significance, their territorial importance. Many of these sites can now be seen as the focus of continued attention, renovation, augmentation, and adjustment over periods of time. Expansion was one such amendment to burial monuments and we might well consider that certain sites now with three or five internal rings of stones represent successive stages, perhaps rapid, perhaps long-delayed, in the development of a small cairn or

mound, a primary focus to be sure, but additions and adjustments thereafter made as the society's needs dictated. Other such sites may well have been created as set pieces, full-size with internal, hence soon invisible, rings of stone.

A cairn at Nygårdstrum on Gotland, for example, had a wide band of placed stones at its edge, and six internal rings of aligned stones encircling a central long cist or gallery grave (Hallström 1971; Victor 2002, fig. 78; Fig. 12). This cairn as exposed by excavation appears to show at least three separate elements, perhaps phases, in its lowest levels of construction, a central rectangular cist with five or six uniformly shaped stone rings surrounding it, then expansion and some repair with a different range of stones, then an outermost enlargement with smaller stones. Other cairns are less complex, of course; a barrow at St Köpinge in Skåne had a stone kerb and two internal rings of stone focusing on a central burial (Jennbert 1993). Others were more simple; a site in Funen at Brydegård had paired barrows each with a simple stone kerb and separated by two small stone circles (Thrane 1993). It is suggested here that monuments like these with their internal and external stone settings may be depicted on the rocks at Knarrbyn.

At a closer level, we might well consider that the organisation of the carved discs on Panels D and E at Knarrbyn may reflect the orientation and relative positions of the cairns in certain Dalsland cemeteries – there is a level of similarity between the Tisselskog cairnfield organisation and the discs carved on Panel D, but the problem is that although we may have identified all of the carved discs on the Panel, some of the actual cairns have been severely reduced to tiny heaps of stones, and some may well have vanished completely. This particular aspect requires further exploration in the field.

It will be obvious to all who look closely at the character and distribution of Bronze Age rock carvings in southern Scandinavia that the Knarrbyn panels and their landscape position are unlike the normal patterns. One comment will need little expansion and it is that we do not know if such images occur in other areas of Dalsland or indeed elsewhere; few of us have searched such heights and if there we have generally been directed to the cairns and other stone-built monuments so prominently presented on the heights. Faint circular patterns, akin to lichen rings, created upon fragmented or solid rock

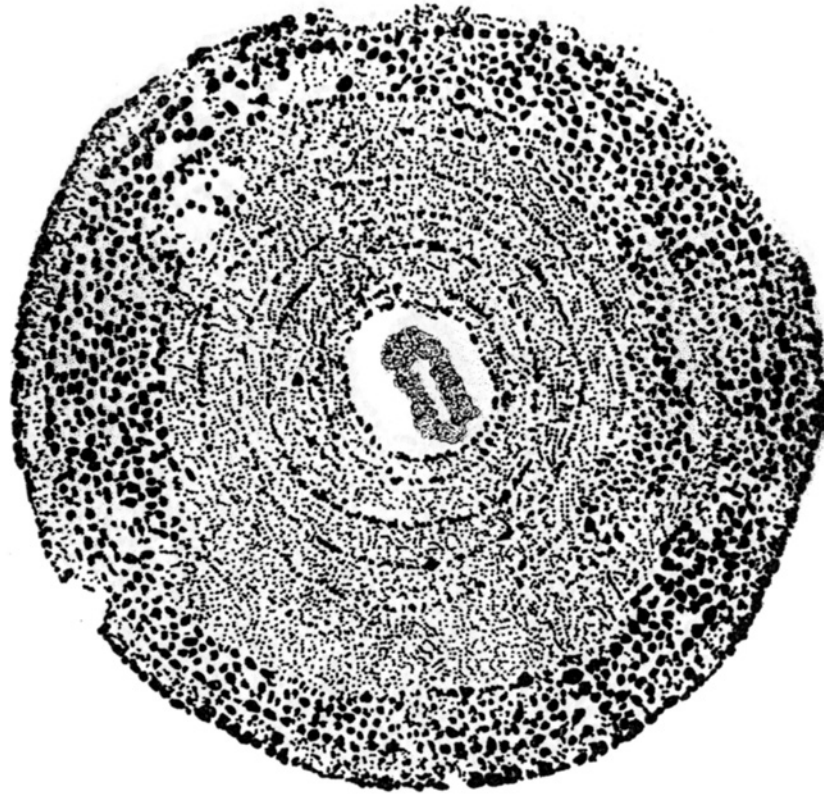


Fig. 12.

Plan of the cairn with central gallery grave and multiple inner stone rings at Nygårdstrum, Gotland. Diameter of cairn *c.* 30 m. Drawing based upon photo by Hallström 1971, reproduced in Victor (2002)

surfaces may well be overlooked; some of the Knarrbyn discs are basically invisible now, unless painted or detected by the most careful of visual or tactile inspections, including rubbings. The work reported here has concentrated upon the panels we know to exist, and previously undetected images and new details have emerged upon the rubbing paper; more are to be expected in the future if the ridge surfaces survive the forestry machines.

In the Knarrbyn area, traces of ancient settlements and other common activities are not often encountered, and the record consists in the main only of some objects of stone and metal; probably much remains to be found, perhaps some hoards or precious objects buried in wetlands or deposited in lakes and streams. For the immediate Knarrbyn region, it is probable that prehistoric settlement existed in at least three areas (Figs 1 & 3). These are, firstly, at the entry

to the Knarrbyån, the stream joining the Knarrbysjön to the Ärr, secondly, on the southern shores of the Tansjön, the western lake with its openings farther north where more flatlands lay, and thirdly, perhaps a small set of shoreline locations on the Knarrbysjön itself where lake-based activities were focused.

The upland terrains of the Knarrbyn area itself are not and were not amenable to expansive cultivation practices; the amount of suitable land is limited and the same, in part, might well have been true for a subsistence pattern based upon pasture for domestic animals. Hunting and gathering as seasonal activities are likely to have been important, and include water-based work such as fishing and harvesting marsh and shoreline plants. These would mostly take place within the lower levels of the landscape, but not entirely, as the ridge tops, even if scoured by winds and with very thin or no soils might have seen low



fruiting shrubs and the occasional animal such as elk as part of such activities.

Archaeological evidence from the Knarrbyn area is rather restricted and the reasons for this are as obvious here as in many other comparable regions – the lack of deep soils for survival of material, absence of the plough for artefact exposure, less intensive survey for likely sites and objects, rather dense woodland for aerial work, less modern development, and perhaps such an intensity of archaeological work to the west, in Bohuslän, that Knarrbyn and its region have been neglected. The briefest of looks at the ridges, valleys, streams, and sudden openings of the landscape to the north and west of the Knarrbyn ridge itself, suggest that much may well exist to be identified and, we may hope, to be preserved from operations such as logging that clearly disturb surfaces and monuments that at the moment may be obscured. The example of Knarrbyn is an obvious one, with all its monuments and identities under stress.

The most visible ancient structures on the Knarrbyn ridge are the stone-built cairns and, more fragmented, the remains of cists or cist-like slabs that may well have once been shielded by small cairns. These monuments would have been easily reached and perhaps could be seen from the lakes around the ridge, to its east and south-west. The cairns and carvings were outside the normal day-to-day actions, yet accessible to travellers, and were focused, in origin, upon death and burial, and commemoration. They were prominent, marking special places within the territory of the community; although the deceased were no longer visibly a part of the society, their monuments served as reminders of a presence, even if, over time, the identity of that presence was lost. Here is where the carvings may have played their part in the preservation of such entities, either by an initial inscription upon the rocks at death, or other significant times for selected individuals, and, by augmentation of the discs on suitable occasions, generational perhaps, the identities could be preserved and traditions of existence and behaviour maintained.

#### DEATH AND LIFE AT KNARRBYN

The concept of death and burial in such a remote and isolated region of the northern world is difficult to envisage, particularly when one stands on the high

ridge at Knarrbyn and sees, first, the lichen-covered rocks of burial cairns, the rocks carried up one by one from far below; second, the barren bedrock with carved lines forming circles, in groups along the ridge top; third, the extremes of silence, interrupted only by the occasional birdsong, sounds of movement by unseen creatures through the grasses, and the wind through the trees below. Here we might well want to consider the opinion that ‘death is the origin and centre of culture’ (Assmann 2005); here at Knarrbyn we are faced, and our predecessors were faced, with nothing but the images of a passing away, a finality, eased only by the sounds and sights of the natural world around. From such a point there had to be an emergence towards life and what we call ‘culture’ developed to sustain it. Living with the dead and with death in the past must surely have been the norm, an ordered and anticipated event, and included within society, unlike our patterns of today. So perhaps, at a basic level, the cairns and discs at Knarrbyn played a more integral role in Bronze Age lives than we are persuaded to believe today, by virtue, or defect, of our own existence.

In all of this I am aware that people, alive and active, do not often figure in description or debate of sites such as these. The people concerned are abstracts, isolates, and their individualisms and living presences at the carving sites have left little trace. On more typical rock carving sites, adorned with a variety of images, of humans, boats, vehicles, and other identifiable figures, and often set low in coastal and accessible landscapes, we can envisage the carvers at work, the audiences assembled, approaches and activities at base or near the gently sloping surfaces. On the Knarrbyn ridge, high up and not reached without an effort, the images created were quite small, not deeply – and on occasion not confidently – carved, perhaps not always visible or easily found. It is possible that such carvings were not meant to be seen, admired, and venerated and it was the act of initiation or addition that was the dominant impelling reason for such marks to be created, imperfectly, unevenly, as a variety of hands came to be employed on the rock surfaces over a long period of time.

The model proposed also sees the panels of discs as part of the other stone monuments along the ridge, guiding the travellers to, and reflecting upon, the centre of veneration and inspiration down by the waters of Råvarp, at Högsbyn, Tisselskog, with its vast array of imagery and burial monuments, all a

part of the lifeways and practices of the communities who had come to inhabit or otherwise use the vast landscapes of ridge, stream and lake in our present Dalsland.

The Knarrbyn ridge, with its alignment of stone monuments and carved surfaces, perhaps formed a significant part of a natural route leading southwards along the high lands and then down to the lake edge at Tisselskog, with its major cemetery and huge concentration of rock carvings, with detailed and figurative images delivered upon the many rocks on and upslope of the lakeshore. Such a route, perhaps initiated in the northern lands beyond the Knarrbysjön, became more focused at the Knarrbyn ridge itself, by its unique position in a wide landscape (Fig. 13).

There is one other aspect to consider. The

concentration of cairns and gallery graves far to the east, at and near Lake Vänern, suggests an area of major occupation, and the only viable entry to the inland region from here was along a river valley and across the lowlands between the Knarrbysjön and the Äar; today this holds the only major east–west road in the area. The arc of cairns set on heights overlooking the eastern lowlands might just reflect the initiation of such a route to the west in the Bronze Age. Such an entry would have led directly to a passage southwards to Tisselskog and the waters of Råvarp, picking up and guided by a string of burial monuments in the southernmost areas. Such a wider scheme as proposed here is of course conjectural.

The map (Fig. 13) also shows the line of a much later passage, that of the *Pilgrimsleden*, once part of the complex of such ways in southern Scandinavia

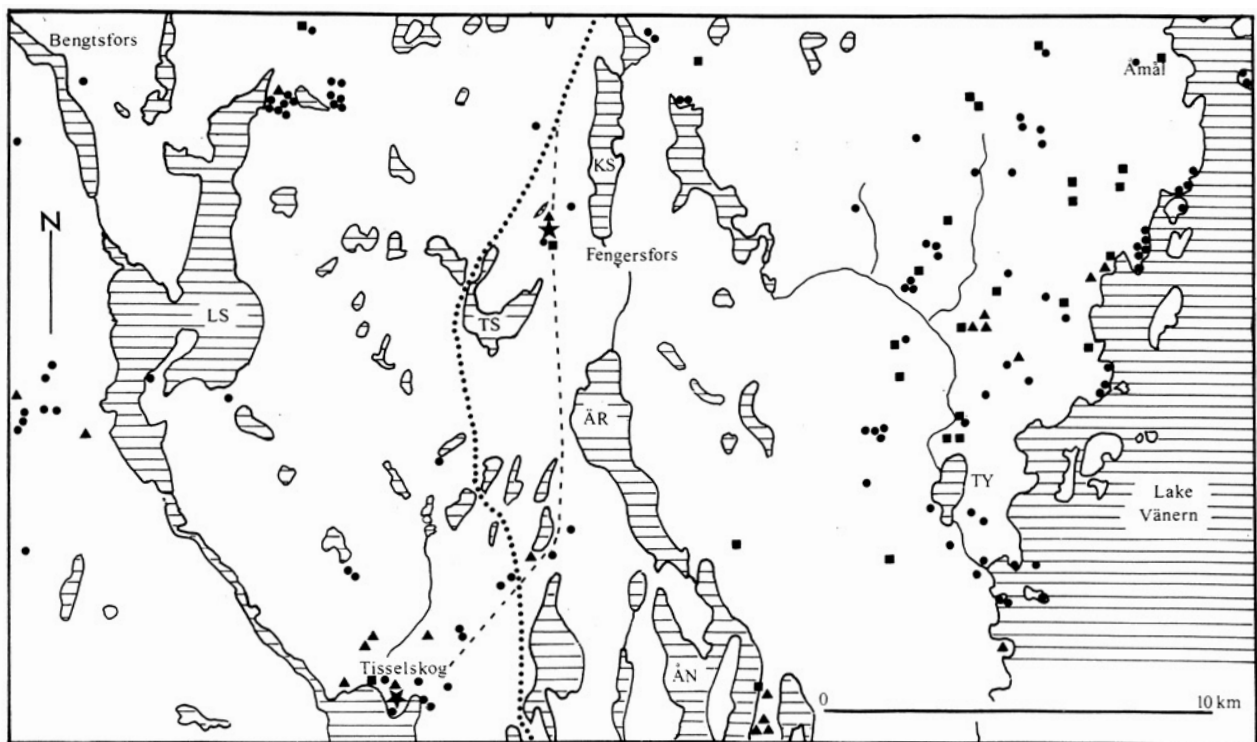


Fig. 13.

Map of part of north-eastern Dalsland with the Knarrbyn ridge (starred at centre) and the Tisselskog peninsula and lowland (starred at base). Abbreviations for lake names explained in Figure 1 caption. The dash line is the suggested sacred route from the north past burial cairns, the Knarrbyn rock carvings, and southwards to the linear cairn spread and cemetery, and the concentration of carvings at Tisselskog. The dot line is the recorded *Pilgrimsleden* leading ultimately to the far north, and in this area it seems to have taken evasive action to avoid passage near the ancient monuments and symbols at Tisselskog and Knarrbyn. Circles: cairns. Squares: gallery graves. Triangles: rock carvings, mostly cupmark sites

that had a final destination far to the north, at *Nidaros* (Trondheim) and the shrine of Saint Olav in the cathedral there. Olav Haraldsen was killed in battle in 1030 and shortly thereafter his remains and the memory of his life became 'holy', doubtless because of his multi-faceted character – described variously as ruthless, intelligent, powerful, and alluring. He was by far the most popular and acknowledged saint in the early medieval period of the northern lands, and a variety of tracks and trails mark the sacred paths devised and developed over several centuries to show the way towards his shrine. Traces of other ancient routes, many of them 'sacred', exist in many regions (eg, Fleming 2009) and are being diminished by lack of recognition and subsequent neglect; the *Pilgrimsleden* is an example of the difficulties.

At Tisselskog, the small peninsula and its immediate approaches form a powerfully expressed ceremonial centre for the Bronze Age. The peninsula itself has many exposures of rock near or at the lakeshore of Råvarp that carry a multitude of images, unique in character (Rex Svensson 1982; Andersson 2000; 2005; Tilley 1999). These lie on rocks at levels about 0.5–12.5 m above the waters of the lake (about 60–72.5 m above sea level). The number of known panels with carvings has been expanded over recent years by consistent fieldwork; an earlier excavation at the base of one of the major panels exposed a heavy platform of stones perhaps contemporary with the carvings although the precise dating remains to be explored (Rex Svensson 1992). At the extreme tip of the peninsula is a small cairn; upslope from this are the remains of a stone circle or other stone setting.

From the lowland peninsula there rises a shallow ridge, reaching just over 100 m altitude about one km to the north, that is, about 30 m above the lake level. Upon this upland, on a relatively flat terrace near the top, are 7–8 stone cairns, several now spread into low mounds. The largest cairn in Dalsland lies nearby (Johansen 1991, fig. 5). There is little evidence that any of these mounds have been subjected to scientific excavation, but almost all have been disturbed at some time. From the cemetery, high on the land overlooking the lake waters, the rocks with carvings could probably be discerned if woodland permitted it. The whole complex of carvings and cairns was probably the conclusion of any passage from the north, from the Knarrbyn complex, with its own carvings and cairns, and perhaps farther beyond from

the northern lakelands. The medieval *Pilgrimsleden* appears to have avoided any contact with the earlier Knarrbyn track (Fig. 13) perhaps in an effort to diminish the ancient sacred route marked by the signs of an earlier belief system, with indecipherable images and cairns and other stone-built monuments containing the forgotten dead.

Amongst the multitude of rock carvings at Högsbyn, Tisselskog, are a number of prominent human images including several acrobats performing over boats (Fig. 14). It is intriguing and fanciful to think that perhaps amongst such carvings are the Bronze Age equivalents of Saint Olav, whose exploits centuries later would doubtless have included whatever acrobatic manoeuvres seemed necessary for him to gain both the power and wealth that came to surround him and his lasting reputation.

The Knarrbyn carvings do not fall within the normally encountered landscapes and imagery of southern Scandinavia, and our knowledge of contemporary settlements in this region of Dalsland is slight and incomplete. The whole question of the relationship between rock carvings and contemporary settlements has been pursued in Sweden by a number of scholars, and viewpoints differ (Sognnes 2001). Nordbladh suggested that rock art in Bohuslän was created in zones of production, low in the landscape, and the dead were consigned to upper levels well beyond the decorated rocks (1980). Larsson in Östergötland considered that rock carvings, hoards, and burials were the result of community based activities, well outside more ordinary family and community living (1984). Weiler looked at the relationship of Bronze Age settlement and rock art from the standpoint of movement and considered that the carvings were integral to major routes of contact and communication (1994), and the Knarrbyn sites might well fall within this model, although in a more direct and visual manner. Mandt took a variant line in Hordaland, seeing settlements linked into wider relationships, meta-territories, and rock carvings tended to lie on the edges of such wider concepts, as part of the western sea routes also marked by burial cairns (1991; Mandt & Lødøen 2005). Other works, in different areas, suggested a closer relationship between carvings and community territories, eg, in south-west Uppland (Kjellén & Hyenstrand 1997; Coles 2000) or on the island of Ven (Welinder 1977). But at Knarrbyn the close relationships between the carvings and heights and cairns suggests that here we





Fig. 14.

One of the 30 or more panels of carvings at Högsbyn, Tisselskog (painted for touristic purposes). The boat with acrobat and other figures is *c.* 600 mm long. Photo: Coles 2005

see the traces, the markers, of a long-distance route that culminated about 10 km to the south at Högsbyn, Tisselskog, with its array of carvings and its wider landscapes of lowlands and connections.

The Knarrbyn panels are thus a part of both life and death, marking the way for the living and guiding them to the dead. They helped to identify the places for the dead, and perhaps were part of the insignia of the dead, who were no longer visible beneath the cairn stones but whose marks were carved into the surfaces, and perhaps periodically enhanced by expansion, and visible to all who came, or who passed by. In this way, the ridge may have served as a place of assembly as well as a significant marker for a major route linking the great centre at Tisselskog with its northern

outposts. The passage had to proceed along this ridge by virtue of the variety of guiding monuments, significant to the living as much as to the memories of the dead.

Much of course remains to be explored within and around the Knarrbyn carvings. The ridge itself (Fig. 2 upper & Fig. 4 lower) deserves a better treatment than it is receiving at present, both for protection of the known carvings and discovery of others as vegetation ebbs and flows through seasonal and industrial operations. The proposal set out here, that the ridge served as a monument itself, and an element in a processional way from the north towards Tisselskog and the waters of Råvarp, with burial cairns set high on the ridges overlooking the lakes, might well repay

further landscape survey and greater precision in the proposed route. In a way, it foreshadows the emergence of the *Pilgrimsleden* in its own broad trajectory and purpose, a sacred passage to and from the northern lands, and across a landscape marked by monuments through the ages.

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