PREHISTORIC DORNOCH.

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We are, none of us, in any way experienced in Archaeological research as everyone knows, and any concepts, or propositions, put forward this evening must be taken in that context: but, as I have been called upon by the Society to lay the results of our expeditions and researches in the Camore-Sidera Woods before you, I do so with all humility as a lay observer, and with absolutely no pretence of an Archaeological training what-so-ever. This talk, therefore, must be taken more as an interim Report upon a still-continuing research, than , by any manner of means, an erudite discourse upon an accomplished project.

Mr. J. K. Bell and I, who have done most of the outdoor work together, are especially grateful to the Dornoch Division of Forest Enterprise for unrestricted access to the woods, for the provision of official maps, for the removal of trees planted in many of the Hut-circles, and for their promise to remove thick bracken from these sites, by spraying. Mr. Peter Bowsher's assistance in locating some of these monuments, and his consummate skill in felling trees in these sites, without causing more damage, must be recognised, with gratitude.

We must also thank Mr. Richardson, the tourist information Officer, whose qualified Archaeological advice has been invaluable, and Mr. Wright," The Pillars", for placing professional articles, and books from his library, at our disposal. Mr J. K. Bell, I cannot thank enough for encouragement, pungent - but kindly criticism of the right kind, great company on so many expeditions - and for the loan of slides.

Sincere thanks must, indeed, go to that sturdy band of Society Members who, undaunted by clouds of midges, and other unpleasant denizens of the forest - worked like Trojans to clear one of the sites of scrub-wood, brushwood and fallen trees, in order that a detailed representation could be made of it, and I am happy to be able to show you the result, to-night.

Lastly I must thank Rhoda for help with painting of the charts, and Sander Macdonald for the photography resulting in most of these slides, to-night, and I am sorry he is not able to be here to see the product of his skilled work. Dr. Robin Hanley, of the Archaeology Department of Inverness Museum has kept me straight, on certain points.

The "Bible" of Sutherland Archaeology remains the "Second Report and Inventory of Monuments and Constructions, in the County of Sutherland, 1911, of the Royal Commission on the Ancient and Historical Monuments and Constructions of Scotland __ referred to academically as "R.C.A.M.Sutherland".

This slim tome _ a copy of which I am proud to possess __ should be the starting point of all Archaeological work in the County. Part of the survey of the whole of Scotland, County-by-county, the enormous area of Sutherland had to be surveyed in limited time, mostly on foot, and with the very primitive transport - and roads - of the period. A certain amount was thus, inevitably, omitted as either not discovered, or as at that time _ quite failing of recognition, or of significance.

For example, we discovered 2 Hut-circles not before recorded __ and, more recently, yet another we were unable to include in this Report, while one considered to be possibly an Animal Enclosure, has been proven a

Hut-circle by the discovery of a hearth - platform in it's centre. Archaeology is not a dead Science __ it is very much of a progressive study.

26 Hut-circles are formally defined in the recent R.C.A.M. computer print-out on these woods, a copy of which Mr. Bell has secured for Society use, and one "possible" Hut-circle is mentioned, but not enumerated - Our No.5. The 2 just mentioned, and not before recorded(our No's 11 & 32) are included here, but Hut"V" in the official list, despite intensive search, has so far defied discovery. Lastly, one of the known Hut-circles, "Z" on the Computer list __ and which the R.C.A.M. team was unable to locate __ has been discovered, and is reported tonight. The tally -apart from our recent discovery __ now stands at 29 Hut-circles known, or located.

When all of this has been taken into consideration, the Dornoch Heritage Society decided to draw-up it's own list of <u>all</u> the known monuments in the Camore-Sidera Woods Complex, and its immediate environs, including Sigurd's Grave site, the Cyderhall Eviction Settlement, Watermill and Souterain, the Camore and Evelix Chambered Cairns, for simplicity of reference

HUT-CIRCLES TYPES (Drg. No1. Huts) SLIDE 1

Two types of Round-House have been mooted from the remains of their foundations, and it would be scientific to refer to these foundations, alone, as the "Hut-circle" __ which is about all you, or I, may see on site without a controlled dig, __ and to refer to the finished article as the "Round-House". "Round-Houses" stood on "Hut-circles"!

The lower drawing is of the standard Roundhouse concept. It has a sturdy wall, nominally around 4 feet high, and with a conical roof of radial rafter-poles supported by a ring of transom members borne on vertical poles, surrounding a central hearth.

The rafters were lathed with short lengths of stout branches, and clad with anything available __ reeds, rushes, grass, Heather, divots of turf or even peat slabs, and no-one knows whether the apex was open to let smoke out, or closed __ so I have shown one of each !

These were the huts mainly on low-lying ground, and places sheltered from gale-force winds __ the type typical of the Camore Woods Settlement.

The other major type of Sutherland Round-House was well described by Fairhurst & Taylor, in 1970, to the Society of Antiquaries of Scotland, using Hut No1 at KILPHEDIR, in Strath Ullie, or Strath of KILDONAN, as an example.

This type is essentially a Hillside Hut, crouching low to the ground to diminish wind-resistance, and apparently differed in that the rafters were individually supported by a short upright. The stone foundation, or wall, was very low ____ but very broad, suggesting the roof structure was prevented from overlapping it, again to offer the least resistance to wind.

Where there are very low-walled Hut-circles in Camore Woods, suggesting this type of construction, hollowing-out of the floor is occasionally seen, as a possible attempt to make more head-room for the inhabitants.

CLASSIFICATION BY STRUCTURE OF WALLS.

Donald Omand, Editor of "Th	ne Sutherland Book",	1982, gives	basically 3
types of Hut-circles to be	found in Sutherland	<u>;</u>	
Type A	Turf walls entirely	, hardly any	stones.
Type B	Boulder-faced, turf	hearted.	
Type C	Boulder-faced, turf	hearted but	with
	"clubbed" wall ends	making a	long
	entrance passage.		

SLIDE 2 (Drg. No. 2 HUT No. 11)
There are examples of all three in Camore Woods, but in Hut No. 11,
the walls have been shown to be predominantly of large, water-worn
boulders and stones of all sizes, apparently without a turf hearting
_____that is to say approximating the modern dry-stone dyking technique.

This Hut-circle, one of our Heritage Society's own discoveries, and not recorded, is of the smaller type of Round-House. Two of the trees planted in its walls, were victims of last winters storms, and their wrenched-out root-fans revealed the stony construction of its walls. We can therefore add to Mr. Omand's classification:

Type D ____ That of elementary dry-stone dyke construction.

An additional feature in Hut No.11, also to be seen in others in the area, SLIDE 3 (Drg. No. 3 Hillside Hut) and obligatory in the upland hill-side examples, is the recessing of the rear floor into the hillside, by quarrying-out the hill and throwing forward the spoil to build-up the lower end into as level a platform as possible before building the walls __simply on the principle of building a hill-side roadway.

These platforms were rarely perfectly level, and usually sloped downhill, at a gentle angle, to shed the inevitable trickle of water in prolonged rain-storms ___ their roofs were rarely perfectly water-tight!

THE RELATIVE SIZES OF HUT-CIRCLES.

The measurement of Hut-circles poses a problem. A Type "A" Hut-circle, built almost entirely of turf, will ____ after abandonment __ become weathered-down, trodden over by animals and man, until a once-crisp 4 or 5 foot wall becomes flattened-out by spread of its material, into a low circular hummock, sometimes less than a foot high, as is well-seen in some of the photographs on view.

Such low hummocks, under a cover of more recently planted, closely packed fir-trees, can often be extremely difficult to locate, and such may account for our failure to find Hut-circle "V" ____ No 27.

KILPHEDIR No. 1 SLIDE

Where, then, does one measure from, to gauge the size of a Hut-circle ?

FAIRHURST & TAYLOR, in measuring the Kilphedir Hut-circles, measured from the inside faces of the walls ____ but they, as qualified Archaeologists, could dig away the spread of the material to reveal the true margins of the walls. Not so privileged, we had to resort to assessing from the mean centre-lines of total spread from the walls, the margins of which were often difficult to define, and accepting the highest points, or mean of the spread, to coincide with the centre-line. Notice the quite massive structure of the Hut-circle on the shoulder of the hill opposite!

KILPHEDIR No. 2 SLIDE

There is exhibited in these old dry-stone monuments, not only a lot of skill in the selection, siting and setting of the stones, but also a certain "architecture" or "feel" for the angle and balance of these great boulders, the studied positioning of which has, in most cases, stood the test of thousands of years.

Notice the neat alignment of the inner kerbstones here, forming a revetment, and the way the irregularly-shaped, un-dressed stones have been fitted in so as to take advantage of these very irregularities.

KILPHEDIR No.3 SLIDE.

This view of Kilphedir No. 5 Hut-circle floor, shows how the central floor-space has been ringed with kerbstones to form a fire-place, or hearth with radial extensions to the walls, as if to form a space for storage and drying of fuel, and possibly to define an area for cooking _____ or kitchen.

KILPHEDIR No. 4 SLIDE.

This slide shows the amazing architecture of the entrance passage-way ___some 2' 3" to 3'6" wide by 15 feet long, built up of large slab-faced boulders, and paved with flat stones.

Altogether a well-organised Hut-circle, showing evidence of two periods of occupation, with some additions and extensions to the last occupation, as the a front wall differs greatly from the back wall __ which is mostly turf and stone __ and the entrance, and its paving, exhibit two different patterns of building.

Sadly, since formal excavation between 1963 and 1968, the entire entrance-passage has been filled-in with boulders taken from the walls, and a modern clearance-cairn has appeared to the left of the front entrance when visited early this month (November 1993).

Hillside Hut-circles differ in construction from the coastal-plain variety, in a number of ways. Apart from the roof construction ____ mentioned earlier ___ the prolific supply of large boulders, many of them frost-split into slab-faceted stones so useful for building, that occur in the hills, make for sturdier buildings.

The coastal-plains had only the rounded, water-worn, or ice-worn boulders that did not lend to very precise building ___ as any dry-stane dyker will tell you ___ and these had to be liberally bonded together with turves.

An example, nearer home, of the large-boulder kerb-stone type of Hillside Hut-circle may be seen above the Achormlarie Croft House up the Evelix Valley.

AN ASSESSMENT OF WALL-THICKNESS was, from the same reasons, again frustrating.

First, the ground surface upon which the Hut was built, was very rarely flat, many being built on sloping ground ___ some of these quite steep. Their spread, therefore, over anything from 12 to 30 centuries, resulted in such uneven distribution of the wall material, that assessment was invidious, and so abandoned. Generally, though, the broader the spread, the higher the original wall, and we do have one Hut-circle in the Camore Woods with still a 5 foot remnant of a wall!

SLIDE 4 (SIZES OF HUTS-TABLE)

Of sizes, then, we had one at over 50 feet diameter, ranging down to one at just under 24 foot, and by arbitrarily taking SMALLNESS as from 20 - 34 feet in diameter, MEDIUM-SIZED-NESS from 35 - 44 feet, and LARGENESS from 45 feet upwards respectively, the Camore Wood Hut-circles are sub-divided into:-

LARGE 14%
MEDIUM 45%
SMALL 34%

and of the balance of 2 outstanding, one could not be traced (Hut V-No 24) and the other-due to overgrowth of gorse-simply could not be measured (Hut - No 32).

HEIGHTS OF WALLS.

We did attempt an assessment of wall height, though by the most empirical methods ____ lacking a theodolite. Anyone like to donate a theodolite to the Society'? The modern laser-beam models start at £20,000!

Walls below a foot, to say 18 inches high, we made a cursory visual assessment each, separately, agreeing the mean of the two. Above that height we gauged using a vertical stick inside the hut, down which one ran his hand until it coincided with the top of the wall as seen by the other, crouching on the-often boggy-ground, outside. Very empirical!

The range of these heights was from 1 to 5 feet, with the overall average of 2'6". I should say that 4 height assessments, were made, where possible, of each Hut-circle, at points diametrically opposite, as near as possible in each quarter of the circle.

Other difficulties met with in measuring wall-heights lay in the fact that many Hut-circle floors were higher than the original ground level, and many of their floors were <u>far</u> from level inside ____ some being scooped-out in part, or in whole, while many again sloped with the lie of the land, often quite steeply. The assessment of wall heights under such varying combinations of circumstance became almost night-mare-ish !

THE SHAPE OF HUT-CIRCLES IN THE CAMORE-SIDERA WOODS COMPLEX.

Though circles by name <u>and</u> to the casual eye <u>many</u> are indeed ovoid, or frankly oval in plan. Often, again, though not in the Camore Woods Complex, they can be so amorphous in shape that the name "Hut-circle" becomes purely a politeness: a convenience of classification in order to include them within the category of dwellings of the Hut-circle era. These are more often come-upon in the wilder, and more remote parts of Sutherland, and may have encompassed internal partitions or external excrecencies likely to have been store-houses or even small animal

shelters: witness those on Creag-an Amalaidh, near Cambusmore Lodge (see the Second Report & Inventory, No 3, page 39) and at Brae on the River Carnaig (No 129, page 46).

The majority in Camore Woods are round (14 Huts, or 48%) indicated by normal diameters of equal span, or up to 2 feet longer in major diameter. We have accepted up to 2 feet longer in the major axis to be still considered "Round". From 2 to 5 feet longer, however, the term "Ovoid" was applied, while if more than 5 feet longer it was regarded as "Oval".

Working on these lines, the incidence of various shapes in Camore Woods was identified as:-

OVAL	3	10.3%
OVOID	5	17.2%
ROUND	14	48.3%
Incomplete Hut-circles	4	13.8%
Incapable of Assessment	3	10.3%
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	29	99.9%

A REVIEW OF INDIVIDUAL ODDITIES.

The ordinary simple circles we shall neglect ____ after all, there are 14 of them, representing just over 48%, or very nearly half of them all. Instead let us have a look at the extra-ordinary ones, only, because these extra-ordinary Hut-circles have a certain significance, which we shall go into, shortly.

(Drg. No.5) HUT No 17 ("L" in the R.C.A.M. List). SLIDE 5

This is a perfect circle, with a wall centre-line diameter, in both axes, of 41 feet. It faces South-by-East, and its walls terminate in club-like enlargements spreading outwards to form an entrance passage. These "Horns" as they are called in the Reverend Bentinck's Book, are possibly the result of spread of short entrance-passage walls built out at right angles to the ends of the true circle, and forming these club-like extensions as a result of the process of spreading, over the 2 thousand odd years intervening.

The structure of the walls was impossible to see without formal digging, and the spread of the walls is covered in long grass. There is little evidence ___ other than the 3 to 4 feet in height of the south-facing wall ___ to suggest stone construction, and it probably falls into Omand's "Type A".

It can be found on the west side of the N-W Forestry Road some 65 average paces north of the gravel-pit, or quarry, at the cross-roads.

(Drg. NO 6) HUT NO.18 (M) SLIDE 6

Facing the entrance to the gravel pit, just north of the cross-roads, on your L.H.S. facing north ____ and set back some 20 or so yards from the road, on the top of a low hillock of gravel, lies the remanent half of a Hut-circle. It is 33 feet across the cut face, which puts it into the medium size range, and its walls are approximately 2' 6" high.

A previous generation of forestry authorities, when digging the

gravel-pit, cut away half of this Hut-circle, and recent extension of this work, there, has freshly cut away more of these walls, this year, giving a photographic picture of the JCB-cut section showing a wall largely built of turf, interlaced with quite big water-worn stones. (A photograph of this is displayed).

Some 5 yards west of its West-facing portals, there is a D-shaped mound of stones, previously excavated down the centre. It was probably a clearance cairn, rather than a small chambered, or burial cairn ___as it was most unlikely that burials were made so close to their living quarters.

(Drg. No7) Huts No.s 19, 20 & 21 ("N", "O"&"P"). SLIDE 7

Here is a neat little group of 3 Hut-circles, of various sizes _____ one large, one medium and one small, contiguous, or in close juxtaposition. They occupy the top of an elongated hillock, or esker, at the bend in the Forestry Road hard-by the gravel quarry.

The first one (Hut N. No19) has probably the most complete wall structure of all the local hut-circles ____ despite deliberate implantation with a number of trees. As you look at the picture you cannot but be struck with the vindictive care taken to plant these trees actually in these walls ___ as though with intent at their destruction!

From the crisp, vertical appearance of the walls, it suggests an all-stone construction of the "Type D"___ but, again, exploratory digging is Nationally forbidden__ and one can only stick wires into them, and guess !

This highest Hut-circle, though smaller in size than its neighbour, has its floor hollowed-out to a depth of between 3 and 5 feet, suggesting the possibility of its being a "Low-Roof" type of dwelling of the Kilphedir I type ___ which would be fitting for its siting on an exposed hill-top.

Its contiguous neighbour, with which it shares a common wall, is the largest of the group, though not nearly so well-preserved _____ Hut"O"__No.20. It is set slightly lower on the hill-top, and shows the same feature of hollowing-out of the floor to about 5 feet in depth ____ which would again seem to imply a "Low" Type roof.

From its west aspect it gives off a southwards-curving wall, which connects it to the smallest of the 3 Hut-circles, and suggests it might have been a portion of a walled annexe to the biggest Hut-circle, though otherwise incomplete

The 3rd., and smallest Hut-circle ("P"_No.21) lies the lowest, on the West-facing slope of the esker. It is recessed into the hill at its East end, with a build-up platform on its West. This platform would carry the original wall ___ now without trace ___ and render the floor not unreasonably level, while at the same time lending an "ovoid" appearance to what is a perfectly round Hut-circle, with equal, normal, diameters.

Behind this group of Huts, down the hill-side to the South-East, there runs a deep forest drain, of obviously modern construction.

(DRG. NO 8) HUT 24 "S". SLIDE 8

This is quite the most massively constructed Hut-circle in the 2 woods. It falls into our Medium-size range of Hut-circles, being around 41 feet in

diameter, in both axes, and round in contour. Built on a S-facing slope, with no attempt at levelling the floor area, it has a slightly raised central platform, suggesting the site of a hearth, and the simple entrance is in the South, towards the bottom of the slope. There is a quite marked area of hollowing-out of the floor in the western quadrant, and the monument is covered entirely by dead bracken before the growing period, and by a sumptuous 4 foot depth of bracken in the summer.

In its Northern arc, a gap in the wall leads into an attached, U-shaped annex, 15 x 17 feet in the R.C.A.M. Report. In this annex, the robust, high walls of the main body of the Hut-circle rapidly taper down, and thin-out. With no external access, the annex was probably used for food-storage ___ or could it even be possible it was used as some sort of praesidium of a tribal ruler, or community political leader? Certainly it represents a special type of usage not common to all Hut-circles.

Almost certainly built of stones, mainly, judging by its solidity ___and the 5 foot height of wall all down the E-arc, and the spread here to some 15 or 16 feet, all indicate these walls were originally even higher yet!

This Hut-circle is inside the forestry enclosure at the east end of the Sidera portion of the woods, next to the Davochfin Caravan Park. I have referred to it as a Nursery plantation, as the trees are all young ones between 5 and 20 years old, and the area is surrounded by a very high fence with a deterringly difficult access style. It has, perhaps, the most commanding position in the group of dwellings, and so might suggest its ownership by the Tribal leader, of those times.

(Drg. No 9) Hut No.26__"U" SLIDE 9

All that remains of this Hut-circle is a semi-circular wall 32' 6" between centre-lines, with a simple SE-entrance gap. It is just at the right-angle bend in the Forestry Road near Davochfin where the road bends Westwards towards Molly Sutherland's house "Stronvar" at Lonemore. It has been cut in half when first making a forestry ride down towards the Meikle Ferry Road, and is heavily over-planted with conifers, rendering it difficult to spot.

It has probably been one of the small type of Hut-circles, as the measurement across its cut face is 32' 6", but it was well made, as the remanent walls are still from 3 to 4 feet high.

Hut No. 27 __ "V"

This Hut-circle, described in the R.C.A.M. Computer print-out, has __so far __ completely eluded location despite repeated and careful scouring of the likely site. Probably with deterioration and down-treading, it has quite disappeared beneath the welter of dead bracken.

(Drg. No.10) DOUBLE HUT-CIRCLES No. 28 & 29 ____"W" & "X". SLIDE 10

Here is another example of a double Hut-circle, with a common wall in the central section ____ showing some evidence of an inter-communication, and forming a sort of figure-of-eight. The entrances are both in the South-East, and the whole area is covered a foot-deep in a sea of dead bracken.

No. 29 ___"X" is the larger, and more westerly Hut-circle, oval in plan,

with axial diameters 35 feet and 40 feet, and walls 3 feet to 3' 6" high, with a spread to 12 feet in the north sector, to as much as 18'6" in the S.

There is a 6 foot partial gap in the middle of the common wall which might be as much post-abandonment deterioration as representing any form of inter-communication.

At its west end there is a crescent-shaped enclosure with a probable West-facing entrance, and no obvious inter-communication with the main Hut-circle, ? animal protection __? grain storage ?? The official description of the westerly annexe is a bit baffling, as it varies markedly from the state of affairs as we found it. As we saw it, the annexe consisted of a pair of "Horns", 6 feet short of meeting, projecting from the North and South walls of the main Hut, and embracing the much worn-down West arc of the wall.

Its ultimate function is anyone's guess, but again, it does represent some specialised usage over and above the normal Hut-circle!

No. 28 __ "W": __ the smaller of the pair, is perfectly round, with diameters of exactly 33 feet, placing it in the "small" category of Hut-circles.

It shows evidence of possibly 2 entrances, the main __or larger __facing S-E, while the secondary entrance, facing very nearly North, is surely an artefact, caused by local break-down, mostly by animals.

The walls of this Hut-circle vary from 2 to 3 feet in height, with a spread of from 12'6", to 15 feet, while the passage at the main entrance is 11 feet long.

Both are sturdy, quite massively constructed Hut-circles, probably ____ judging by the heights of their walls ____ built mainly of stones, and occupy the whole of the top of a low knoll.

(Drg. No. 11) Half Hut-circle No. 30 __"Y". SLIDE 11

This is another mutilated Hut-circle, with only about half of it remaining, and it seems that the original fencing of the east-end of Sidera Wood having cut right through the middle of it, the foresters had simply levelled-off the lower half of it when planting was taking place.

It is a small sized Hut-circle judging by its cut-face diameter of 33.5 feet, abutting hard onto the 6'6" high forestry fence. Again, it is over-planted with recent young conifers, mostly 5 to 20 years growth, and as a result is quite difficult to spot.

It shows a 7.5 foot gap in the West-North-West arc, which would seem an unlikely position for an entrance, and is probably an artefact ____ the real entrance having been destroyed. The fairly crisp 3 foot high walls suggest it may be basically of stone construction.

SLIDE 12. (Drg. No. 12) Hut No.31 ___"Z". Of this Hut-circle, the R.C.A.M. Computer Report states, "There is no trace, in an area of whin ___ it may be destroyed by a modern fence and ditch.".

However, Dornoch Heritage Society located this Hut-circle with only a cursory search, having the R.C.A.M. grid reference co-ordinates to go by

the Farmer of Davochfin must have done a good job of gorse clearance.

The removal of this gorse laid bare an arc of the Hut-circle wall, like a crescent moon, extending some 12 feet into the field at the field's North end. The centre-line length of chord of this arc measuring 42 feet, indicated a very large original Hut-circle, the body of which had definitely been destroyed in the building, and ditching of the Forestry Road and boundary fence here. Its diameter, by geometric deduction, would have been 49 feet.

Built on the crest of a diagonal field ridge, that slants into the wood and disappears, the remanent wall heights are scarcely a foot and a half, all told, and the large quantity of stone lying on the floor of the Hut-circle suggest this had been the main material of its construction ____ though field clearance may well also have contributed to this.

Hut No.32.

No 32 site shows the low remains of a circular wall surrounding the crest of a short, steep, knoll ___ an outlier of the massive esker system on Cyderhall Farm Lands, or "The Skardies" as I believe they are referred to ___ up against the western boundary fence of Sidera Wood.

It is a diffusely defined ring, largely overgrown by gorse, or furze, and with the possible entrance in the north ___ the only direction of possible approach. It is scarcely likely to be an animal enclosure perched on its exposed position on top of the hillock, and it would seem a lot more likely to have had some fortification function in view of its position ___ except that the much higher Skardies overlook it from the north. It commands, however, a fine view over rolling pasture-land to the South, and West, either for the overseeing of grazing cattle, or crops, or as a good general look-out post.

However, it is neither mentioned in the R.C.A.M. Print-out, nor noted on the 1 in 10,000 Ordnance Survey map, and further consideration is required before it can be authenticated.

(Drg. No.13 9 & 10 __"F"&"G") Twin-Hut-circles No. 9 & 10 ___"F"&"G" SLIDE 13.

Now, last ___ but certainly not least __ the Twin Hut-circles No. 9 & 10.

These are the Huts that an intrepid band of Dornoch Heritage Society Members spent a whole evening in clearing from brushwood and felled trees early this summer. This hefty task was accomplished despite the poor weather and the midge onslaught, and allowed of the subsequent detailed drawing of the very interesting site, and the Heritage Society would like to reiterate gratitude to its members for this valuable, and productive work.

In 1991, when James Bell and I measured it up, photographed and drew tentative sketches of the site, it was covered with mature trees and long, lush grass. Early this year, the Forestry Commission very kindly felled the trees in some of these Hut-circles, to protect them from further disintegration, and under Mr. Peter Bowsher's skilled woodsmanship, did this job so very carefully and skilfully that no damage befell these monuments.

After the fellings, and residue of these activities was removed by the Society Members, and the site tidied-up and laid bare, errors in the

original sketch-plans could be corrected, and detail not previously obvious came to light.

SLIDE 20. (Drg. 20)

For instance, the paving in the central area of the Hut No.10, with fairly flat stones forming a sort of platform, most strongly suggested the existence of a hearth, or fire-place, in a Hut-circle hitherto graded simply as an animal enclosure by the R.C.A.M. Authorities, and therefore its use as a human dwelling. However, professional opinion and interpretation of these new findings are required for confirmation _____ but it does highlight the very great value that carefully conducted work by a lay Society such as our own can be, without any digging or delving, or expert knowledge whatsoever.

This was altogether an extremely useful exercise, for which the Society is much to be congratulated, and thanked, and I am happy to be able to exhibit the end-product of these efforts, in the first scale drawing of the site, this evening. Every single stone, above a clenched-fist in size, is recorded. The little black dots are rabbit-holes, and the circles marked "T" are sawn-down tree trunks.

(3 SLIDES of Hut No. 10)

Both of these Hut-circles are ovoid in outline, and both give entrance towards the South-East. The northerly of the two is in better preservation, and both would seem to have been built largely of stone.

Hut No.10 __ "G" has got "clubbed" wall-ends, forming an entrance passage 18 feet long, over spread, and incorporates a large mound of stone on its Eastern aspect, probably a clearance mound. In the central area, slightly nearer the back than the entrance, we have mentioned a platform of stones, almost certainly a hearth, and in the SW sector, there is a marked hollowing-out, in which area a scattering of sea-shells, brought to the surface by rabbit activity, was found.

It is in our opinion Hut No.10 $_$ "G" has been a dwelling-house, certainly at one stage in its existence, and was not intended in the first instance, to have been an animal enclosure, contrary to officially-stated opinion.

I have deliberately restricted consideration only to those Hut-circles ____ or really Round-Houses ___ having some feature, or features differing from the average, run-of-the-mill, simple Round Hut, as much in the interests of brevity, as of obviating boredom. But there is another important aspect of these oddly-shaped Round-Houses, and that is their very oddity represents some specialised function not engaged in by the others.

This, in turn indicates pre-conceived thought and design, and implies advancement both socially and intellectually, and the specialisation of function of certain individuals in the community. In other words, along with their undoubted Artistic ability, we are seeing the onset of advancing civilisation, and that well before the arrival of Julius Caesar.

I want now to turn to some general considerations, and an analysis of this community of the Camore-Sidera Wood Complex.

First, we must look at the impact of meteorological patterns on the settlement in Camore Woods, and the county generally.

METEOROLOGICAL PATTERNS.

Everything in nature goes in cycles. The Ice-Ages ____ of which 2 major, and 5 minor advances of the Polar Ice-caps, are recognised in Scotland by the geologists ___ were interspersed with periods of almost desert aridity, and the simple year-by-year weather patterns that we live through, are simply less intense reflections of the same natural cyclical activity from hot to cold __ in other words, the super-imposition of a weather wave-cycle of lesser intensity, and shorter wave length upon a massive, great carrier wave-cycle of profoundly extended periodically, and intensity.

The Scientists are unanimous from the multiple and complex evidence of geological, vegetational and pollen analysis, that the millennium between 3,000 and 2,000 years before the Birth of Christ was a period of optimum temperature and climate in Britain _____ coinciding with the late, or upper Middle Stone Age, with a Continental type weather pattern of very dry and hot summers, and cold, but dry, winters in at least Western Europe. However since then there has been gradual deterioration right up to date, and I should think that judging from the Summer we have just experienced we must surely have reached the very trough of the abominable cycle!

Never-the-less, the British weather of the Iron Age period ____ the last 500 years B.C., which we are considering anent the Camore Woods Settlement, while wetter and colder than this optimum Period, was almost certainly more equable, and clement, than ours today, allowing for more successful farming, and the wearing of lighter clothing, as was obviously the case.

SOIL CONSIDERATION.

From the weathering of the basal rock of the county, together with the right conditions for humus formation, comes the growth of the land, its fertility and productivity.

The evidence of the great Ice-Ages is imprinted upon our land for all to see. The first great Ice-flow was from West to East, carving the roughly parallel valleys of the Helmsdale, Brora, Fleet and Evelix Rivers, and the great gash of the Dornoch Firth, in Sutherland; while further south the Don and Dee, Esk, Tay, Forth and Tweed, amongst many other smaller examples, are evidence of this great ice movement from the West towards the East.

The Fleigachan Stone ___ that huge lump of quartz at Ardgay Station, was brought from the great outcrop of quartz rock on the Sutherland West coast, by this same ice movement.

The next great Ice-Age ___ and the last so far ___ was associated with movement from North to South, at least in the Central and West Highlands, when the deeper gashes of Loch Awe, Loch Fyne, Loch Long, Loch Riddon, Loch Striven, Loch Eck, the Gareloch and Loch Lomond cut clean across the old, established W-to-E configuration ___ classically seen today in the hanging valleys, and precipitous waterfalls that cascade down the steep sides of upper Loch Lomond.

In Sutherland, great ice sheets flowed down the Dornoch Firth, and across the Strathrory and Althamain moorlands to drop their stony boulders, sand and gravel, as Boulder Clay ___ or Till ___ across the flat lower lands around the Dornoch Firth, leaving high, sinuous, ridges called Eskers, and lateral and terminal moraines, as we all learned at school ___ but also

the great flattened plains of gravel and sand that are the quarry-man's dreams of today.

The day will come when the South-East of England, starved of native rock for road-metal, will come grasping for Sutherland gravel to grind into road-metal for the Home Counties massive road improvements much as it has already set its sights upon the Hebrides now.

The soil left behind by the ice-sheets, 12,000 to 10,000 years ago, is called "PODZOL" soil. SLIDE 14.

Depending upon the coarse, or fine nature of the boulder-clay locally, and its content of mineral derivatives, the elemental vegetation grew, died and rotted into ___ usually ___ black or brown humus, to be covered, annually, by recurrent generations of the same, until the underlying boulder-clay became clothed with a mantle of soil, varying in composition and thickness, consistency and fertility, with the underlying Till.

Colder, wetter, weather caused waterlogging of the land, prevented aeration for the normal rotting process to proceed, and dead Heather and Mosses rotted to peat, down through which the rain-water carried the smallest particles of soil, and minerals ____ mostly iron ____ to form a hard layer of "Podzol" called "Pan". Mostly this froze hard, impacted and became impermeable, and so the Peat-Bogs grew, as Terry Keating told us in March.

Thus we get the majority of the Camore-Sidera Woods growing upon a strong iron "Pan" on the underlying indurated sand and gravel of the Boulder-clay, or "Till", though along the margins, and more-so in the central parts of the woods, the earth is a brown humus-and-podzol mix (coloured Brown on the map), which is very much more fertile.

It is of considerable interest today, to observe that our remote forebears chose for their building sites, the more fertile "podzolised brown" earthy area of what is now Camore Woods, to build what was certainly the first large human settlement in the area ____ which may truly be regarded as Prehistoric Dornoch!

I am grateful to the Dornoch Branch of the Forestry Commission for the Soil Analysis chart I have been enabled to exhibit.

CONCENTRATION OF HUT-CIRCLES IN SUTHERLAND.

Hut-circles are found here and there throughout Scotland, and some in England, but no-where-else than in Central, and Eastern Sutherland is there such an amazing concentration of these elemental buildings to be found ____ and it has been estimated (Fairhurst & Taylor) that something in the nature of 2,000 exist in our County.

The rugged, and damper, western areas of Sutherland, not conducive to easy farming, show but few instances of Hut-circles, emphasising that these pre-historic people had long-since abandoned the nomadic existence for the static, and advanced existence as farmers ____ of both stock and crop. (See the samples of barley in the next room.)

Strikingly odd is this prehistoric Sutherland trait of Round-Houses, when it is seen that Caithness, Orkney and Shetland between them, have very few examples.

Caithness specialised in a different type of stone-built dwelling ____ the earliest roughly rectangular stone building of the same era, called "WAGS".

Donald Omand's ___ "The Sutherland Book" ___ records 5 Hut-circles in Kilearnan and Strath Brora with "wag"-like rectangular annexes integral with the Hut-circle building, indicating a transition phase, or fusion of East-Coast prehistoric architectural types. Almost certainly due to the Caithness influence migrating further south ___ did this, perhaps, mark a weather-change to the colder had already set in ___ or was it simply that our "Cattach " maidens were more attractive than the "Gollach " girls ?

Orkney and Shetland ____ both centres of very intense colonisation, in those times, and having a super-abundance of slabbed local stone, put this to better, and far more easily constructed architectural use than the ubiquitous water, and ice-rounded stone boulders which abounded in Sutherland. Certainly, the easy availability of the different types of natural, undressed, stone largely predicted the type of building of the different localities ___ witness the dry-stane dykes of today!

In the Borders ____ especially upon a shoulder of the East, or "Mother" Eildon Hill, at Melrose ___ circular dwellings existed, of the same period, though built of wood, upon flattened circular platforms ___ much like our Hut-circles, but without stone or turf walls.

That most of these dwellings, all over the country, were mainly on hilly ground, remote from the natural water-supply of rivers and streams, indicates the still remaining need of fortification against predators both animal, and fellow-man.

SOCIOLOGICAL ASPECT.

We have seen that the prehistoric inhabitants of the area were no longer nomadic, and had organised themselves into a farming people. Not only so, but in the Camore-Sidera Woods Complex, they had grouped closely together into what was really quite a large settlement, or community; and wherever such communities develop, the laws of community life require to be respected.

Specialisation of activities into farmers, labours, soldiers, hunters and fishermen, tool-makers, flint-nappers, blacksmiths, bronze-smiths, workers in wood, and so-on had become established, for by now they were well into the Iron Age.

Such social organisation inevitably required a Code of conduct, and the means of ensuring its observance ___ a Head Man, or political leader; a Religious leader __ call him Druid __ what you will; a Medical man or perhaps Witch-Doctor; a Militia, or Home Guard, and a system of bartering to pay for the interchange of goods, wares and the provision of food, protection, and so on __ all were brought into play.

The factors of poverty, and wealth began to obtrude, as the inevitable outcome of differential application, intelligence and luck divided up the populace into the traditional social classes.

All had to have big families, for there was much work to be done, and neonatal losses, and death in childhood and the early years, were the outcome of both infection, accident, and no proper medical care.

The community leaders ___ the head man, the Military organiser, the big farmer __ and perhaps the Religious Leader all, naturally, had larger and more prestigious Hut-circles, while the poor, the indolent and the less endowed made do with smaller, and probably more primitive, and possibly communal dwellings.

All of this may be seen in the Camore Woods community.

There are, as we have seen, examples of all sizes of Hut-circles except the smallest ___ for this was a well-off community !

There are twinned large Hut-circles ____ probably of the leading farmers of the area, with their collateral families, offspring and possibly in-dwelling farm labourers, and even circular animal enclosures. Certainly there are field-patterns and enclosures galore, built of heaped stones and turf, or even early dry-stone dykes. There are massively constructed Hut-circles with specialised annexes for leading personalities ____ there is even a triple Hut-circle complex. In fact, here we see the stirrings of early civilisation and social organisation.

As an advanced farming community of its time, it was natural to have chosen the better agricultural land and to built their farms on the choice flat lands near Dornoch Firth, showing a definite trend in social advancement, and community organisation beyond the majority of their hillside dwelling colleagues.

(Drg. No.15 %Hut-size Distribution) SLIDE 15.

PERCENTAGE HUT-SIZE DISTRIBUTION IN COMPARATIVE AREAS.

Recourse has been had to three professional papers on various groups of Sutherland Hut-circles with which to compare and contrast the Camore Woods Settlement ___ Achormlarie Forest in the Evelix Valley, and Kilphedir and Kilearnan Hill Settlements in Strath Ullie, or Kildonan Strath.

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SIZES:	Camore	Camore Achormlarie Kilphedir Kilear				
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These figures very pointedly indicate that, amongst other things:-

- 1) The Camore Woods Complex had a far greater percentage of both the larger types of Hut-circle __ showing a very marked shift towards the more substantial type of Hut-circle in the area.
- 2) The Hillside Hut-circles settlements were of much smaller-sized Huts, not simply because of the paucity of building area, or materials, but because of scanty hillside grazing, and poverty of soil.

THE AFFLUENCE OF THE CAMORE WOODS SETTLEMENT. SLIDE 16. (Drg. No.16)

Tn appraising this, the first requirement was to have an assessment of average size of Hut-circles in Sutherland, as a whole. To get this, the first 50 Hut-circles in "The second Report & Inventory", of 1911, were taken, and their average derived. This figure came to 27.7 feet, or a round 28 feet.

Perhaps a sample of 50 out of some 2,000 Sutherland Hut-circles would be unacceptable to the statistical mind, in gauging the average, but, as a ready reckening, it is at least an indication.

(Drg. No.17) SLIDE 17.

Compared with this, the Camore Wood average Hut diameter of 38 feet would suggest a fair degree of well-being and opulence over the rest of the County ___ using the sizes of houses as an indication of opulence. Such affluence would be in terms of kind, and personal prestige only.

So it would seem ___ from these figures ___ that the Prehistorical Settlement of Camore Woods was a relatively opulent one, and indeed almost certainly analogous to the County Town of Sutherland of those days ___ as is the Royal Burgh of Dornoch, today.

HUT-CIRCLE COMPLEMENTS.

How many people lived in an Iron-Age Hut-circle ? __ This is an oft-reiterated question, to which the answer is, simply ___ Nobody knows !

As we have seen, the Hut-sizes in Sutherland varied widely, from 5 feet up to 50 or so feet in diameter ___ limited by the availability of thin tree poles of necessary length to make radial rafters, and the area of ground available to build on.

Hillside Hut-circles, where sources of timber were remote, and usually scrub trees at that, were necessarily small ___ and the better for it, to resist the winter's gales. Those on the less exposed coastal plains, with unlimited timber supplies, and plenty of available space ___ depending upon their degree of opulence, and maybe the size of their family ___ could be very much larger.

Omand tried to relate Hut-circle complement to the area of modern Council-houses, and the number of persons they were designed to accommodate ___ but this was most unrealistic.

The modern small house must accommodate, besides inmates, a lot of furniture and fittings, personal belongings and storage space, and the area occupied by a bedroom or two ____ for 2 to 4 sleeping people, bears no relation whatsoever to the number, and disposition, of persons that could be accommodated in a Hut-circle.

(Drg.No.18) SLIDE 18.

Geometrically, looking at a 40 foot diameter Hut-circle with a 4-foot thick wall, it may be shown graphically that, sleeping radially, with the feet towards the centre, and allowing each person 3 feet of sleeping space, at least 34 people could be accommodated while still leaving a 10-foot broad entrance way, (excessive), and a very adequate central space for the hearth, cooking facilities, and for general social intercourse.

As 15, or more than half of Camore Woods Huts were this size and larger, the balance would certainly complement the 510 (plus) potential people they could accommodate by another 300 at the very least, bringing the potential populace up to a minimal 800 ____ especially so as we have since found another very large Hut-circle not included in these calculations, and there are, no doubt, others as well.

There will be innumerable arguments against this empirical estimate, but they can only be based on surmise alone, for as absolutely no fact is know this method does give a sensible maximum possible figure to work on, given that all these huts were occupied at the same time.

What it does show, of great interest, is that the population of prehistoric Dornoch was possible not very far short of the present day Royal Burgh, and well in excess of one-third of the Parish figure of 2128 in the most recent, 1991, census.

DIRECTION OF FACING OF HUT-CIRCLE ENTRANCES. (Drg.No. 19) SLIDE 19.

It has long been observed how almost all Hut-circles were orientated with their entrances facing in a South-Eastern direction _____ towards the Winter Rising Sun. This may have some religious significance in a Sun-worshipping community ____ or may simply have been an alarm-clock mechanism to get up when the Hut was flooded with morning sunshine, weather permitting!

Occasionally they were not so facing, for there are examples in Camore Woods of entrances facing all points of the compass except the North-West sector, West-South-West and North-North-East.

The ultimate choice of entrance had to be related to its physical positioning ___ for example if built on the North facing slope of a hill, or where the only negotiable approach was from an alternative direction, it was not feasible to face into the South-East.

Two types of graph have been used to indicate the various directions of entrances, and the numbers there of, putting visual impact upon either the compass direction of entrances, or the number os such, as the case may be.

It is of interest, however, that by far the majority do actually face the South-to-East sector.

RADIO-CARBON DATING.

There has been no radio-carbon dating of the Camore Woods Settlement. However, about a mile, or less, to the West, on Cyderhall farm land, A Round-House and souterrain were discovered in the gravel-quarrying for the approach road for the Dornoch Firth Road Bridge. This was almost certainly simply an outlier of the Camore Woods Settlement, both coexisting simultaneously.

From the official report, the Radio-carbon dating of this Hut-circle and Souterrain indicated an average date approximating the 5th. Century B.C. or 2,500 years B.P.(Before Present) in the modern jargon, so that it is more than certainly likely that in Camore Woods we are dealing with a settlement of around 500 years B.C. or the early IRON AGE period.

So, at least 400 years before the Romans first came to Britain, there existed an organised, successful and affluent farming community on the

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Indeed___The Camore Woods are a truly most fascinating place.

CAMORE WOODS HUT-CIRCLE TALK -- PROGRAMME OF SLIDES.

Slide No.	-		Drg. No.
1		Picture 2 Huts.	1
			2
2 3		Hut No.11 Class"D" Hut Walls predominantly Stone	4
.5	3	Hillside Hut Diagram Quarried-in	3 .
		+ Built-up Platform	a .
		Four Kilphedir Slides. (courtesy J.K.Bell).	A
4	5	Sizes of Huts in Woods	4
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5	6	Hut"L"No.17 Perfect Circle	-
		Clubbed wall ends.	5
6	6	Hut"M"No.18 Half Hut-circle +	
		Clearance mound at Entrance.	6
7	7	Triple Huts"N/O/P" 19/21 Triple Hut group.	7
8	7	Hut"S" - No.24 Annexe	8 9
9	8	"U" - 26 Half Hut at bend in road.	
10	8	"W/X" - 28/29 Double Huts.	10
11	9	"Y" - 30 Half Hut.	11
12	9	"Z" - 31 Quarter Hut.	12
13	10	"F/G" -9/10 Twin HutsHeritage Cleared.	- 13
20	11	Detail Drg. Heritage Cleared Hut.	20
	11		
•		(courtesy Mr.J.K.Bell)	****
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14	13	Soil-Analysis Map.	14
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15	15	%Age Hut size Distribution (Table)	15
16		Average Diameter Sutherland Hut-circles.	16
17	16	Diameter Camore Woods Hut-circles.	17
18	16	Attempted Assessment of Human Complement.	18
19	17	Direction of facing of Entrances.	19
13	17	Cyderhall Souterrain.	alle Buil
	.L. (oydernarr bodderrarn.	

