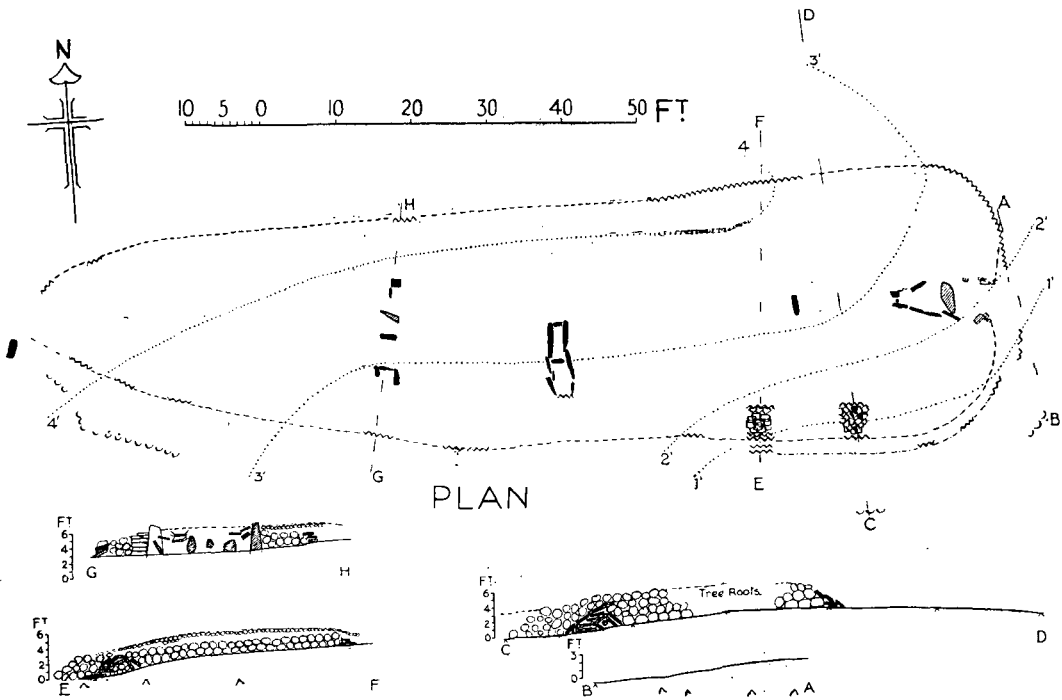


III.

THE CHAMBERED LONG CAIRN AT KINDROCHAT, NEAR COMRIE, PERTHSHIRE. BY PROFESSOR V. GORDON CHILDE, B.LITT., F.S.A.Scot.

The irregular enclosure termed on the Ordnance Map the Old Burying Ground on the farm of Kindrochat is marked as the site of a chambered



Sections at A-B, C-D, E-F, and G-H.

Fig. 1. Plan of, and Sections across, the Long Cairn at Kindrochat.

cairn by the two long cists explored by us in 1929. The cairn itself, however, had been largely levelled in the past (presumably to provide stones for dyke building), exposing the pillar-stones of the cists. Thereafter large trees had grown on the site, seriously disturbing structures with their roots. Moreover, for at least seventy years cart-loads of small stones, collected from adjoining fields, had been dumped on the site, and a recent soil had accumulated on the south slope of the

knoll to a depth of 2 or more feet, partly burying the enclosing dyke on that side. These circumstances complicated the task of determining the plan and structure of the former cairn, which was the primary object of the 1930 excavations.

The first operation was to drive a trench, termed Trench 1, across the cairn area on either side of the great tree stump that grew immediately behind Cist I. Below the superficial turf we found a layer of black mould mixed with small field stones, easily distinguishable from the much larger and more tightly packed boulders forming the under-



Fig. 2. View along Trench 1, looking south.

lying cairn material. Of this only two or three courses survived. At two points in Trench 1 we encountered, not rounded boulders, but large flat slabs forming a sort of rough wall or kerb. On the south the outer edge of this kerb, which was some 4 feet wide, lay just over 18 feet from the axis of Cist I. To the north it was narrow, its edge lying only 17 feet from the same axis. Between the two lines of kerbing, save in the region disturbed by the tree roots, the base of the original cairn was clearly discernible. It consisted of big water-worn stones, 18 inches or more in diameter, closely packed together and embedded in the red gravelly soil of the original land surface (fig. 2).

Beyond the northern kerbing no boulders reminiscent of true cairn material were encountered, though some 15 feet from the kerb a dump of small field stones, 2 feet deep, began and extended up to the dyke bounding the area on the north. To the south, on the contrary, large

stones like those constituting the cairn proper extended for a distance of 12 feet beyond the southern kerb and right under the boundary dyke on this side. These stones were more loosely disposed than those between the kerbs, lay at a considerably lower level, and were covered by a fine yellowish soil quite different from the red gravelly deposit found below and north of the cairn proper. This apparent anomaly was to be explained by a consideration of the conformation of the original land surface on which the cairn was built. At the southern end of our trench, 12 feet outside the kerb, this surface was only reached 45 foot *below* our datum. Just inside the southern kerb it had risen to 1.80 foot above datum, and under the northern kerb it stood at 3.30 feet. Soon after this point the land began to dip slowly northward, till after 30 feet it stood at 1.92 foot. Trench 1 accordingly revealed that the cairn had stood on the southern slope of a low undulation in the original soil, which rose at the rate of about 1 in 11.1 from the south to the northern edge of the cairn and dipped away thence at the gentler rate of 1 in 21.3 (see section CD).

We assumed that the walls of flat slabs cut by Trench 1 represented the boundaries of the original cairn. To test this assumption trenches were cut at right angles to the first, westward along the assumed line of the kerb. The northern cross trench disclosed a well-marked line of flat slabs extending for a distance of 22 feet (fig. 3). At the latter point a large tree had grown right over the line of the kerb and disturbed it hopelessly; not even after the tree stump had been blasted away could the line of the wall be recovered here. It was, however, picked up farther west by an extension of Trench 5, and again at the western end of the cairn. A trench dug northward along the axis of Cist II., across the site of the tree stump, failed to reveal any structure on the north corresponding to Cist II. on the south, nor was cairn material found here north of the assumed line of the kerb. The northern cross



Fig. 3. The Northern Kerb, looking east.

trench accordingly demonstrated that the kerb of flat slabs, cut at this end of Trench 1, did in fact constitute a continuous and reasonably straight boundary wall for the cairn. No cairn material was discoverable north of it.

On the south the position proved far less simple. The trench dug at a level of about 3.50 westward just outside the assumed line of the southern kerb continued to reveal large stones lying in and under



Fig. 4. South Wall exposed in Trench 2 (EF).

fine yellow soil between 3.30 and 3.80 above datum at a distance of four or more feet from the assumed line. From the south trench we accordingly dug deeper offsets northwards, numbered 2 to 5. In each, after removing some big stones, we again reached a sort of wall of flat slabs laid horizontally or set criss-cross (fig. 4). When plotted, the segments of walling thus disclosed were found to form a fairly good line for a distance of nearly 70 feet. The same line was traced, though in a more disturbed condition, almost up to the large upright that projected above the turf on the west. Here, however, the cairn had suffered badly from pillaging, and even its core was disturbed. Sporadic groups of large stones lay on the red virgin soil as much as 8 feet or 9 feet south of the

line of the kerb, but these did not form a continuous compact mass with a definite edge (fig. 5). The south trench accordingly confirmed our view of the kerbing disclosed in Trench 1, but raised certain problems to which we will return in a moment.

A further fact revealed was a rise of the original land surface to the west. In Trench 2 the red soil at the base of the southern kerb lay only .10 foot above our datum. In Trench 5, 50 feet to the west, it had risen to 2.80, and 30 feet farther on it was cut by the original south trench itself at 3.20, while in the next 20 feet it had risen above 4.00.

Throughout the south trench we were confronted by two problems—the asymmetry about the major axis of the cairn between the north

and south walls and the extension of cairn stones beyond the last-named. In Trench 2 the south wall or kerb was 3 feet 6 inches high. At its base on the red soil at 10 foot above datum its edge was 21 feet from the axis of Cist I. On the contrary, the edge of the north kerb was only 15 feet distant, but its base lay already about 4.00 feet. The southern kerb was, however, over 6 feet wide. A point near its inner edge, some 3.50 feet above datum and so nearly on a level with the base of the northern kerb, would correspond symmetrically with the latter. In other words, the apparent asymmetry of the cairn about its

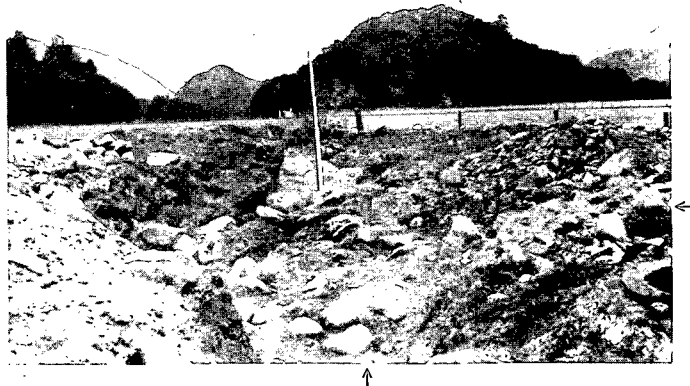


Fig. 5. Disturbed Southern Kerb near Western End of Cairn.

major axis was a natural corollary of the unevenness of the original land surface. The builders of the cairn had made up for the low level of the ground on the south by raising the height of the kerb on this side, and, owing to the method of building with an inward batter, the southern kerb must be much wider than the northern one (see section EF). An examination of the east end of the cairn confirmed this interpretation.

As to the extension of cairn material beyond the line of the kerb on the south but not on the north two explanations are possible: the large stones found here six and more feet south of the kerb's line may simply have rolled down from the top. More probably, however, it had been found necessary to support the body of the cairn by additional packing on the lower southern side to secure a stable slope up to the hypothetical ridge along the main axis.

After completing the south trench we turned our attention to the east end of the cairn. Last year we had found and plotted a wall of large flat slabs running across the mouth of Cist I. The line of this wall was now followed up on the north. Here a good line of kerbing came to light, curving round to the west till it came exactly into line with the north kerb, as determined west of Trench 1 (fig. 6). Its most northerly point lay 17 feet 9 inches north of the axis of Cist I., almost in a line with the pillar-stone marked D'. West of this point the kerb ran out

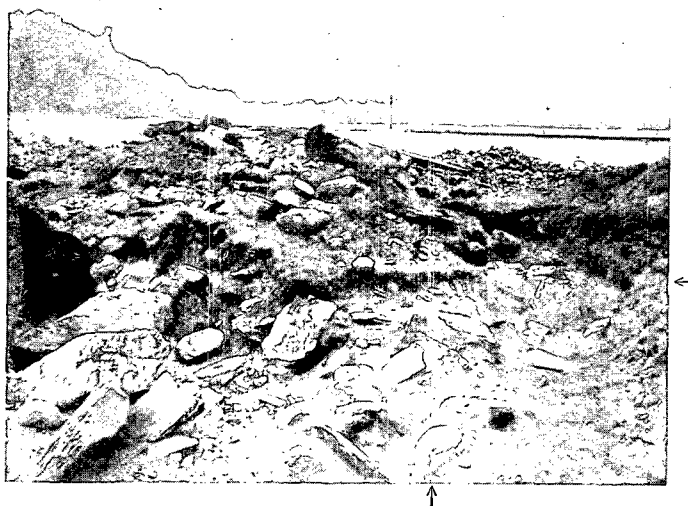


Fig. 6. Kerb curving round at East End of Cairn (looking west).

in an almost straight line, but eastwards it curved to the south very definitely. It was thus established that the cairn was not horned.

None the less, on the east as on the south the slope of the virgin soil had produced complications: the gentle dip from west to east here accentuated the north to south slope detected in Trenches 1 and 5. Even north of the axis kerb slabs were found rather outside the line expected if the wall were to curve in to meet that across Cist I., and further south such slabs extended 4 feet or so east of the expected line. Following up the latter we found them curving round westward indeed as was expected, but so as to come into line, not with the upper edge of the south wall, as determined in Trenches 1 and 2, but rather with its base. However, the slabs forming this line of kerbing all lay between 1.25 and 1.75 above datum or nearly 2 feet lower than the wall top determined in Trenches 1 and 2. They should therefore be compared with the base and lower courses of the wall in those trenches

and not with its upper edge. That might be expected to run 2 to 4 feet farther in, where it would join up beautifully with the wall across Cist I. Wet weather on the last day prevented attempts to prove this by actual sections, but the evidence obtained on this sector was sufficient to confirm the unhorned character of the cairn. The apparent distortion noted in tracing the kerb at the east is easily explained on the same principles as to the south by a glance at the contours of the original soil. This, standing at 3:30 under the northern kerb in Trench 1, had sunk .25 feet just round its corner 20 feet to the east. Along the axis of Cist I. it stood at only 1.10 just outside the kerb, and 18 feet farther south the original ground surface had sunk to .25 feet *below* datum. The extension of the kerbing here shown on the plan is therefore due to a banking-up designed to produce a level surface as along the south kerb. For this reason the outer kerb line detected here is marked by a different symbol to that used to denote the kerb's upper edge. As in the south trench, cairn stones were found to extend 7 or 8 feet beyond the kerbing. The spread here must be explained in the same way as in Trench 1.

The fine yellowish soil found above the cairn stones along the south side of the cairn and to the south-east constitutes a problem in itself about which a few words must be said here. It covers the red gravelly soil to a depth of 2 or 3 feet, and slopes less markedly from east to west (1 in 44 as against 1 in 33). Moreover, last year it was found to have buried the southern boundary dyke enclosing the cairn area to a depth of 3 feet 6 inches at least. It would seem, therefore, to be a quite recent deposit. A mountain stream now flows across the field south of the cairn area, and has only been prevented from flooding the land by a recently built bank of stones. Since the fine deposit is not traceable on the northern side of the 3-foot ridge on which the cairn stands, it would be natural to infer that the deposit is due to floods by this stream. Its volume seems, however, almost too great for such a cause. The evidence from the dyke at least implies that the deposit is later than the cairn.

It was hoped that the removal of the large tree stump that grew behind the eastern cist, planned and described in 1929 by Misses Kennedy and Mitchell, might reveal an extension of that chamber westward to the great upright stone that stood across its main axis 13 feet to the west. The roots of the tree had, of course, wrought much destruction to all cairn structure beneath them, but immediately behind the westernmost uprights of Cist I. large boulders carefully packed were observed, suggesting that here we were in the body of the cairn and no longer in the chamber. On the other hand, one slab on edge,

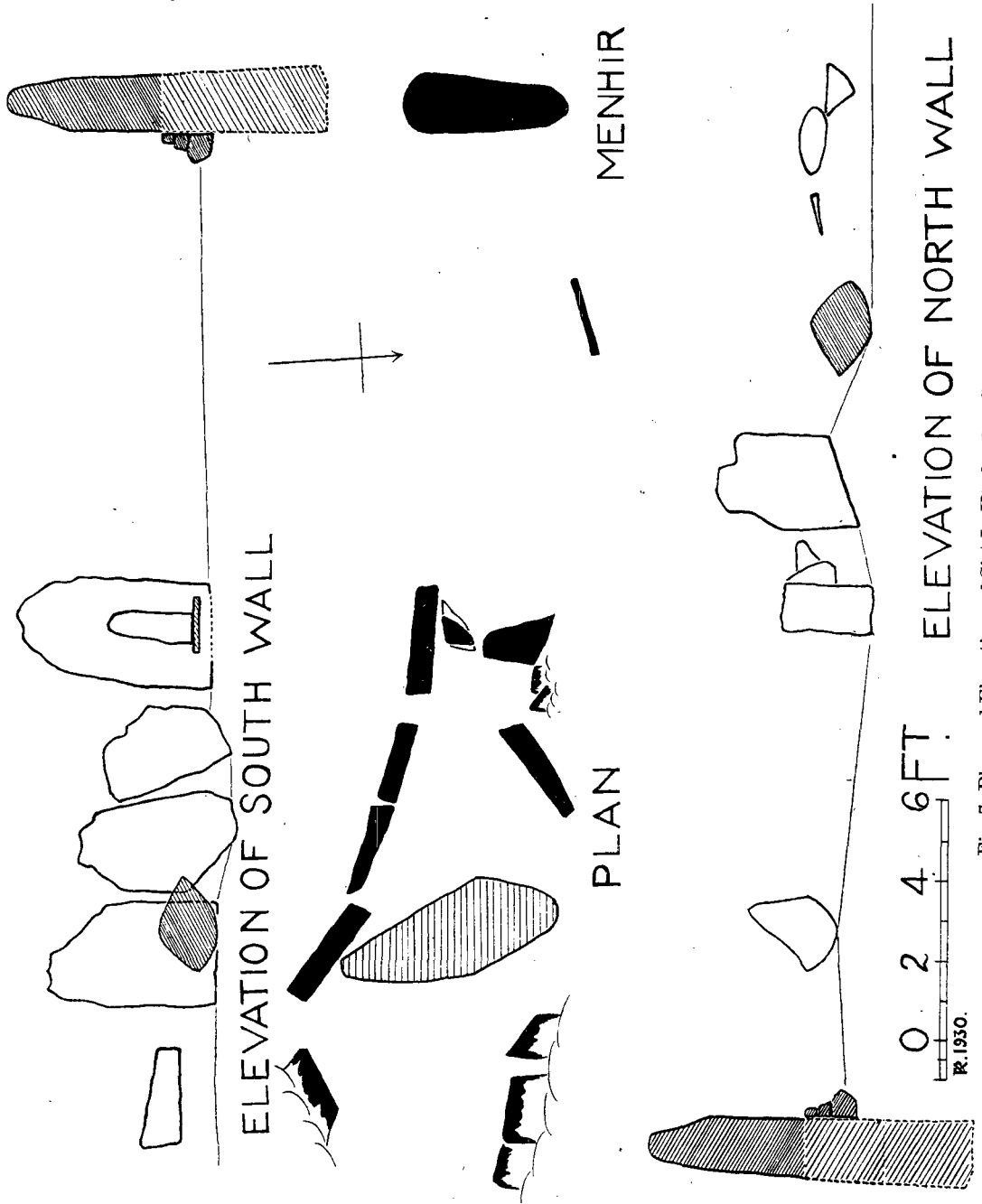


Fig. 7. Plan and Elevations of Cist I, Kindrochat Cairn.

only 1 foot 9 inches long by 2 feet high, might possibly have formed a continuation of the northern wall of Cist I. westward. Still, on the whole, the evidence is against any such westward continuation of Cist I. A new and clearer plan with elevations of Cist I. has, however, been prepared by P. Kennedy and M. E. Crichton Mitchell, and is reproduced here to replace that previously given (fig. 7).

The great upright or central menhir, which is the highest and most conspicuous stone of the cairn, must be regarded as independent of Cist I. A pit dug against its western face showed it embedded in the red virgin

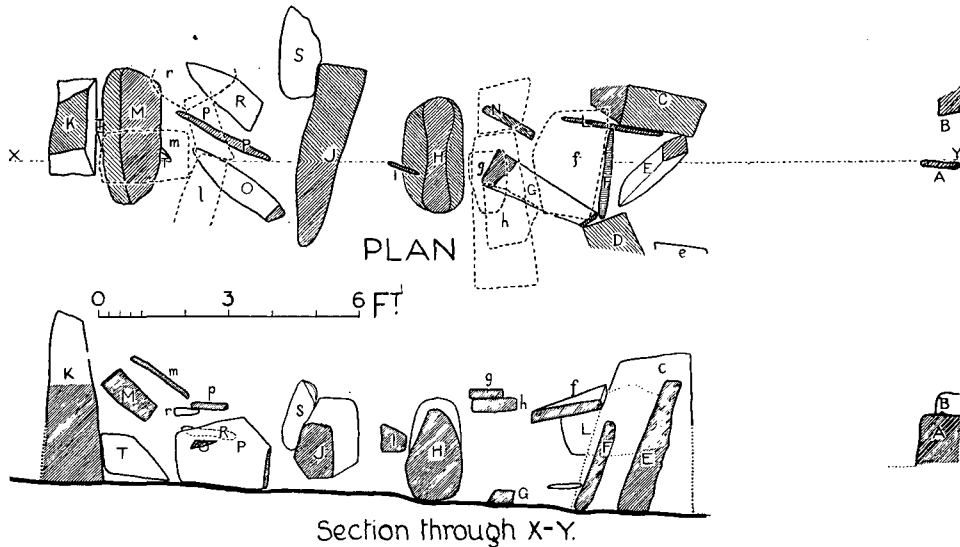


Fig. 8. Kindrochat: Cist III.

soil to a depth of 3 feet 6 inches. On the east it was wedged up by flat stones set obliquely in the red soil. Evidently this stone must have been erected at the same time as the cists and before the cairn was piled over them. Nothing was found at its base. It should here be noted that the larger pillar-stones of Cists I., II., and III. are likewise embedded in the red gravelly soil.

CIST III. (fig. 8).

A pair of uprights rising above the turf on the south slope of the cairn west of Cist II. and a tall pillar north of them suggested the possibility of a cist in this direction. Trench 5 was accordingly cut across the cairn between the two uprights, C and D on the plan, to the northern pillar-stone K. On the line of the south kerbing of the

cairn we here encountered the stone on edge A rising above the general level of the wall and the large block B to the east of it. North of this point the trench contained nothing but loose cairn stones till we reached the uprights C and D. Just beyond these we found, immediately under the turf and a superficial layer of feld stanes and mould, the series of horizontal slabs, *f, g, h, m*, extending for a distance of some 4 feet, and a similar series of flat slabs 4 feet in front of the pillar K. After



Fig. 9. Cist III., looking south, before removal of horizontal slabs (arrows indicate stone K).

being planned and photographed (fig. 9) the horizontal blocks were taken up, disclosing stones on edge, F and H, lying athwart the trench, and other large stones, E, G, J, and O, tilted at odd angles (fig. 10). Cairn stones and fragments of slabs lay among these larger blocks and were often wedged in, under, or between them. The trench was eventually deepened to the level of virgin soil, some smaller stones, L, M, N, O, and R, having to be moved in the process. It was thus established that the bases of stones F, H, and P and one end in each case of stones E, G, and J rested on virgin soil, while stones C, D, and K are deeply embedded therein. Blocks E, G, and J were found to be respectively 3 feet 3 inches, 3 feet 9 inches, and 4 feet 6 inches long.

It is possible that E, G, and J are the displaced uprights of a long cist. C and D would represent its portal and K the headstone. The horizontal slabs might be cover-stones, F a fallen lintel or a sill, while H would make an excellent septal stone resembling that in Cist II. The difficulty is obviously the absence of lateral slabs (apart from the supposed pillars E, G, and J). In the walls of our trench we could see only the usual boulders packed together with no more care than in



Fig. 10. Cist III., looking north (staff stands behind stone K).

other parts of the body of the cairn except just outside the pillars C and D. Here there was a regular wall of horizontal courses of flat slabs (fig. 11). In any case, the cist, if such it were, had been too much disturbed for any reconstruction to be possible. Nor were any relics discovered, though every trowelful of earth from beneath the horizontal slabs was laboriously riddled.

CONCLUSIONS.

1. The site of the long cairn at Kindrochat was a ridge, rising only 3 or 4 feet above the surrounding ground and covered like it with the red alluvial soil laid down by the Earn. The ridge sloped away to the south, east, and north.

2. The cairn was built along the southern slope of this ridge, extending westward from its eastern extremity.

3. Prior to the erection of the cairn the pillar-stones of the cists, the central menhir, and the western boundary stone must have been set up, since all are embedded in the red soil to a considerable depth.

4. The cairn, which surrounded and presumably covered the cists,



Fig. 11. Wall at Entry to Cist III. (west side). (Arrow indicates stone D.)

was composed of large water-worn boulders which, at least in the lower courses, were carefully packed together, bedded in the red soil, and wedged with smaller boulders.

5. The cairn was surrounded and supported by a kerb or rough wall of flat slabs, some laid horizontally, others criss-cross or on edge, and embedded in virgin soil.

6. On the north, where it ran along the crest of the ridge, the kerb was much lower and narrower than on the south. Here, to compensate for the depression of the land surface, the kerb had been built up to a height of 2 or 3 feet and strengthened by lateral extension southward. Hence, when planned without regard to ground-levels, the

cairn seems lopsided, but the asymmetry disappears if the outline be plotted approximately on the plane of the northern kerb.

7. No cairn material was found north or north-east of the northern kerb, but big stones extended for a distance of from 8 to 12 feet beyond the southern one. These may represent the natural "spread" of the cairn, due to stones slipping down the steeper slope, or they may denote a deliberate banking-up supplementing that effected by heightening the kerb on the low side of the ridge.

8. The cairn was cigar-shaped and unhorned. It was orientated east and west with its broader end to the east. Its axial length was about 135 feet and its greatest width just under 36 feet.

9. It covered three long cists, one at the east end and two along the south side at right angles to the first. Cist II., which alone is reasonably intact, corresponds in plan to the segmented cists of the Clyde basin, and especially to the degenerate versions thereof known from Galloway. The arrangement of the cists recalls that discovered by Edwards at Drannadow, but the pair of cists opening to the north at that site are missing at Kindrochat.

10. The only relic from the site was a leaf-shaped arrow-head of flint, discovered during 1929 in Cist II. It confirms the dating and affinities of the monument. The Kindrochat cairn does, in fact, denote an extension of the megalithic culture of the south-west coast across the watershed.

The excavations, which were supplementary to the researches embodied in Professor Childe's Munro Lectures for 1929-30, were rendered possible by a grant from Edinburgh University, grateful acknowledgment of which is hereby made. The work was carried out by the following members of the Edinburgh League of Prehistorians: V. G. Childe, A. Gilmour, I. Henderson, P. Kennedy, M. E. Crichton Mitchell, and T. Mitchell, who have all contributed to the production of the report and plans. Our thanks are due to W. Gilchrist Macbeth, Esq., proprietor of Dunira, and to Mr Macintyre, tenant of Kindrochat, for permission to excavate, loan of tools, and other courtesies, and to Mr Paterson, factor of the estate, for much kind help.