

THE MORAY AERIAL SURVEY

Discovering the Prehistoric and proto-Historic Landscape

Barri Jones, Ian Keillar and Keith Maude

Moray was of significance in the history of Scotland because it was an area capable of supporting a sizeable population sufficiently remote from the Scottish lowlands to form an alternative and independent power base. In historical times the crescent along the coast from Aberdeen to Inverness was to witness a series of major battles in the Roman, late Pictish, medieval and Hanoverian periods. Scotland, in historic times, could not be considered conquered until at least the Laigh of Moray had been subdued. Thus Edward I in 1303 only considered his task done when, after a period of vengeful butchery at Elgin, followed by a less bloodthirsty stay at Kinloss Abbey, he despatched a squadron of cavalry to Tain on the southern edge of the Dornoch Firth. It has generally been assumed that there may have been a considerable population based in Moray in earlier periods but the evidence for this is sketchy and only hinted at in, for example, the Pictish period where the number of previously attested settlement sites is minimal in contrast to a number of stones.¹ Likewise, in the prehistoric period, although a few major sites are known such as North Kessock, Craig Phadraig and Burghead (the latter two certainly being in use in the Pictish period)² there is an almost complete absence of the evidence that one would expect in the middle and lower ends of the settlement hierarchy. There is, furthermore, a geologically related imbalance in the record of survival for a variety of reasons. Stone-built cairns, for instance, long exemplified by the well-known Clava type and the Garbeg cemetery at Drumnadrochit, do survive in considerable numbers on the higher ground. Are we to assume that the known distribution is in any way a comprehensive view of the distribution of such burial patterns? The answer from the aerial survey described in this chapter must be firmly negative. The existence of known graves of this type simply reflects the survival of stone-built megaliths on higher ground. This pattern of imbalance also pervades our knowledge of settlement sites. These have been typified by the class of monument known to archaeologists as a *dun* (*doon*, *doone*), such as Barevan in Strathnairn, surviving on hilltops generally above the 600ft contour, often with their ramparts affected by vitrification.³

Yet a glance at the geological and climatic patterns prevailing in Moray shows that, even allowing for the very substantial coastal area which must be written off as neither habitable nor cultivable by ancient man, there remain substantial areas of good quality land ripe for exploitation in the middle and later prehistoric periods. This article, incorporating the results of aerial survey initiated from fieldwork in the early '80s, triggered by the 1984 drought, and pursued annually until 1989, shows the growth in

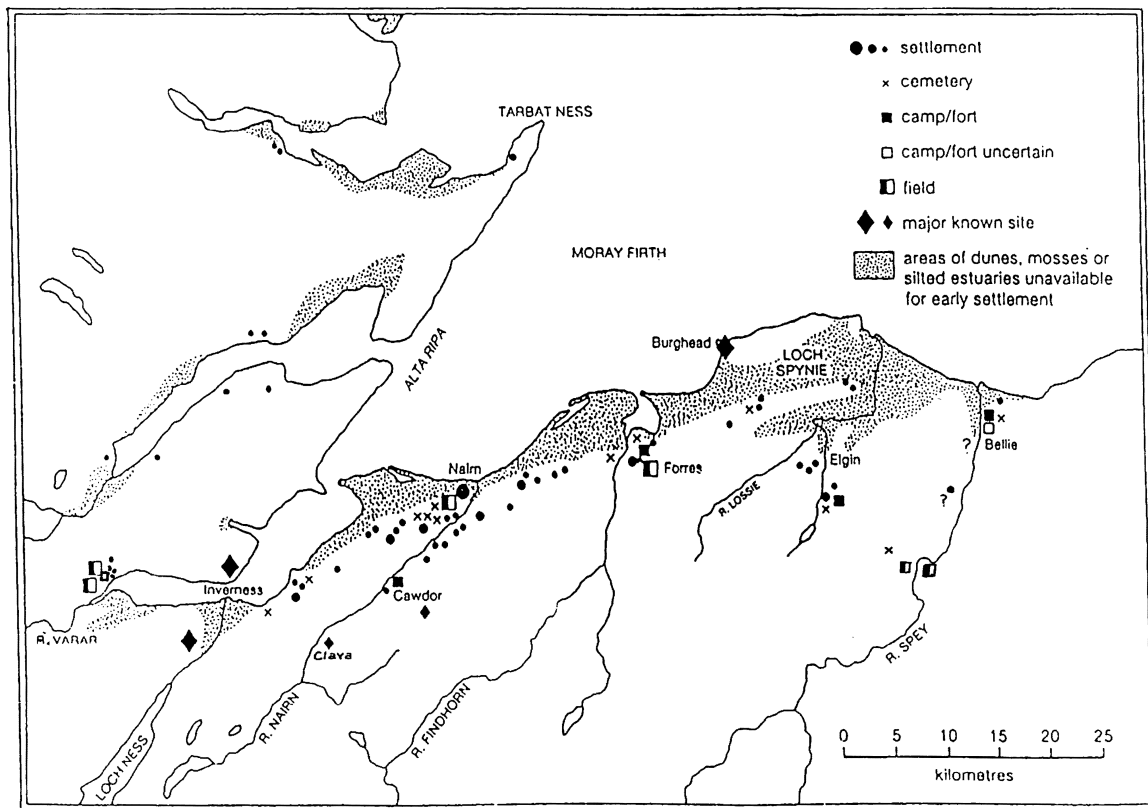


Fig.3.1 Moray Aerial Survey: General Map.

understanding of the ancient landscape prompted by systematic reconnaissance at annual climatic optima. This emphasis on long-term preliminary fieldwork, then on locally selected criteria for photo-reconnaissance (whether of climate, crop or even light conditions) is one we would emphasise in the centralising tendencies of current air photographic practice in the United Kingdom. The authors are deeply indebted to the local finance that made the Moray Aerial Survey viable and the individuals whose interest and support made the work possible. To all who granted access to land, or excavation or helped in other ways, the authors express their gratitude.

The Land

The Laigh of Moray below 75 metres enjoys a dry mild climate with an average rainfall of less than 800mm (31 inches). Sheltered parts of the area reach as low as 650mm (25 inches). The number of fine days is particularly noticeable and accounts for the presence of major aerodromes in the area. In this respect, although there can be considerable variation particularly in the summer (especially July) weather patterns, the climate provides a relatively favourable area for examination. The influence of the sea and the Moray Firth is also considerable, and by August the water temperature sometimes reaches +13 degrees centigrade falling to around +4 degrees centigrade by February. These temperatures tend to moderate the onset of winter and mitigate its harshness except in periods of high wind, the 'blows' which are attested to have caused considerable topsoil erosion in the last century. As well as relatively low rainfall and reasonable amounts of sunshine the Laigh of Moray also enjoys predominantly light and sandy soil suited for cereal production, a characteristic from which it appears to have benefited throughout its history. It is important to realise, however, that the bands of fertile land are limited by a number of factors. The area between the metamorphic schists of the Monadhliath mountains and the coast is drained in a north-east direction by great rivers such as the Spey, the Findhorn and the Nairn; all three rivers, fed by the Cairngorms or the Monadhliaths, are liable to produce flash floods. As part of the resultant silt disposition the longshore drift from east to west is continually pushing the mouths of the Spey and Findhorn westwards. Long sand or gravel spits built up and these were eventually punched through by the river itself or, in the case of the Spey, cut through in modern times by bulldozers.⁴

About 2000 years ago, the sea-level was about the same as at present but there may have been an open channel running from approximately Burghead to Lossiemouth. The detached mass of the harbour area of Burghead peninsula may arguably once have formed an island but is now connected by a 10m storm beach to the mainland at Clarkly Hill. The Findhorn probably entered the sea to the west of its present course, while the Spey probably emptied into an estuary partially enclosed by a long

spit of gravel reaching out from the eastern bank of the river. This means that in any reconstruction of the landscape towards the end of the pre-historic period we must make considerable allowance for a substantial variation in land morphology created by areas that were either seasonal marsh or liable to suffer from flooding.

Thus in detail (as shown in Fig.3.1) the coastal area at the mouth of the Spey was unsuitable for settlement north of Bellie where a slight ridge used by both Roman and Hanoverian armies offers a potential crossing point of the Spey. One of the greatest problems of interpretation, however, occurs further west where effectively there were major differences in the ancient landform from today. The Lossie (presumably, but not certainly, the *Loxa* cited by Ptolemy) is a smaller river whose capacity to flood can be seriously underestimated today. The river clearly changed its channel extensively north and south of Elgin. It is on the north-east side of the town, however, that some idea of the variations may best be appreciated. The progressive changes in the mouth of the Lossie in the area of Lossiemouth are documented at least in the early modern period. Originally, however, at the time when Duffus Castle acted as a port, Loch Spynie (now reduced to a marginal area of shallow water to the east) formed an inland harbour in the 12th and 13th centuries. There may be a suggestion that inland navigation was possible between Spynie and Burghead to explain the apparent passage of the Viking fleet in this direction, in the eighth century, or later.⁵

The evident changes further west around Findhorn Bay are relatively clear today, including not only the extensive accretion of land in the lee of Culbin Sands but also changes in the pattern of the mouth of Findhorn proper. The out-turned bow of land between Findhorn and Nairn is also geologically and morphologically recent. The outflow of Strathnairn on the other hand appears to be relatively fixed by the presence south-west of Nairn of an elongated ridge which has played a significant part in the history of the area. It was along this route that we may expect Roman land-based penetration of the inner Moray Firth to have passed, as did the Hanoverian army in April 1746 on its way from Nairn to the battlefield of Culloden. The ridge, hereafter termed the Croy ridge, confines the course of the Nairn within a relatively restricted channel as far as Cawdor, whereafter a broader flood-plain leads down to Nairn and a relatively constricted exit to the sea. On the north side the Croy ridge also marks the northern limit of habitable land. Until the construction of the railway in the late 19th century the intervening area, now occupied in part by Inverness airport at Dalcross, was largely marsh, terminating to the north in the foreshore west of Ardersier. The former mossland, broken by occasional drumlins, extends in a narrowing belt all the way south-west towards Balloch on the edge of modern Inverness.

It is nowadays perhaps at times difficult to understand the significance

of these former land configurations, particularly in view of the way in which land reclaimed in the last century today comprises some of the best agricultural land in Moray. In considering the ancient situation, however, these areas indicated in general terms in Fig.3.1 should be dismissed from our archaeological assessment of potential for ancient settlement. Perhaps man could, however, cultivate the light soils produced by sequences of fluvio-glacial outwash on the low ridges and drumlins between the Monadhliaths and the littoral. These areas were, in fact, highly attractive to the prehistoric farmer just as they remain today.

Distribution

The principal results of the Moray Aerial Survey are here described in an order that is inevitably controlled by the zones where evidence has been recovered. This means, in particular, that the lower end of Strathnairn takes pride of place in terms of the recovery of information. Accordingly, to give an idea of the breadth of the evidence, Strathnairn appears first in the topographical units described. To help in the assimilation of the crop-mark phenomena it has been divided into a number of zones (Fig.3.2): namely *Nairn*, including the major site immediately south-west of the town (Figs.3.3, 4; Pl.II); *Strathnairn North* which covers the major discoveries

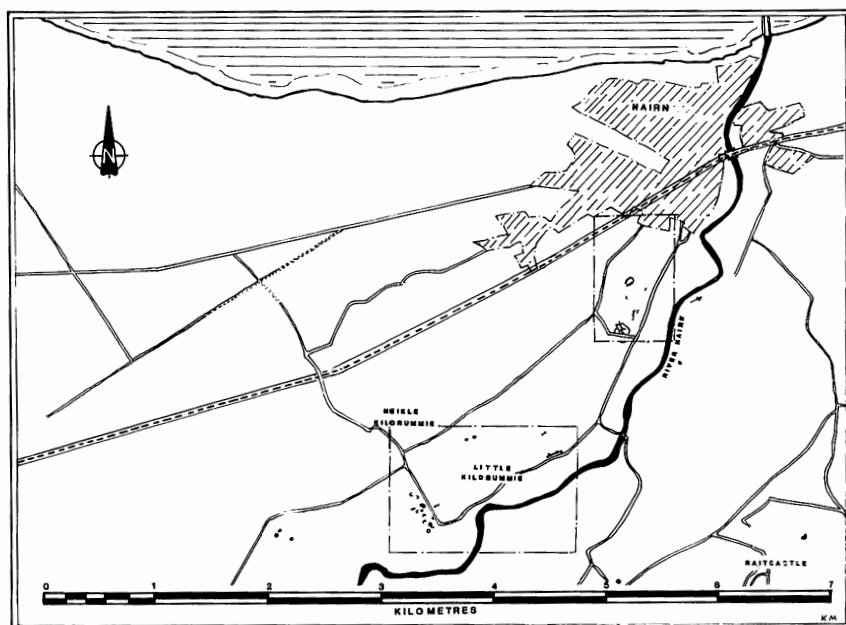


Fig.3.2 Nairn and Lower Strathnairn: location map.

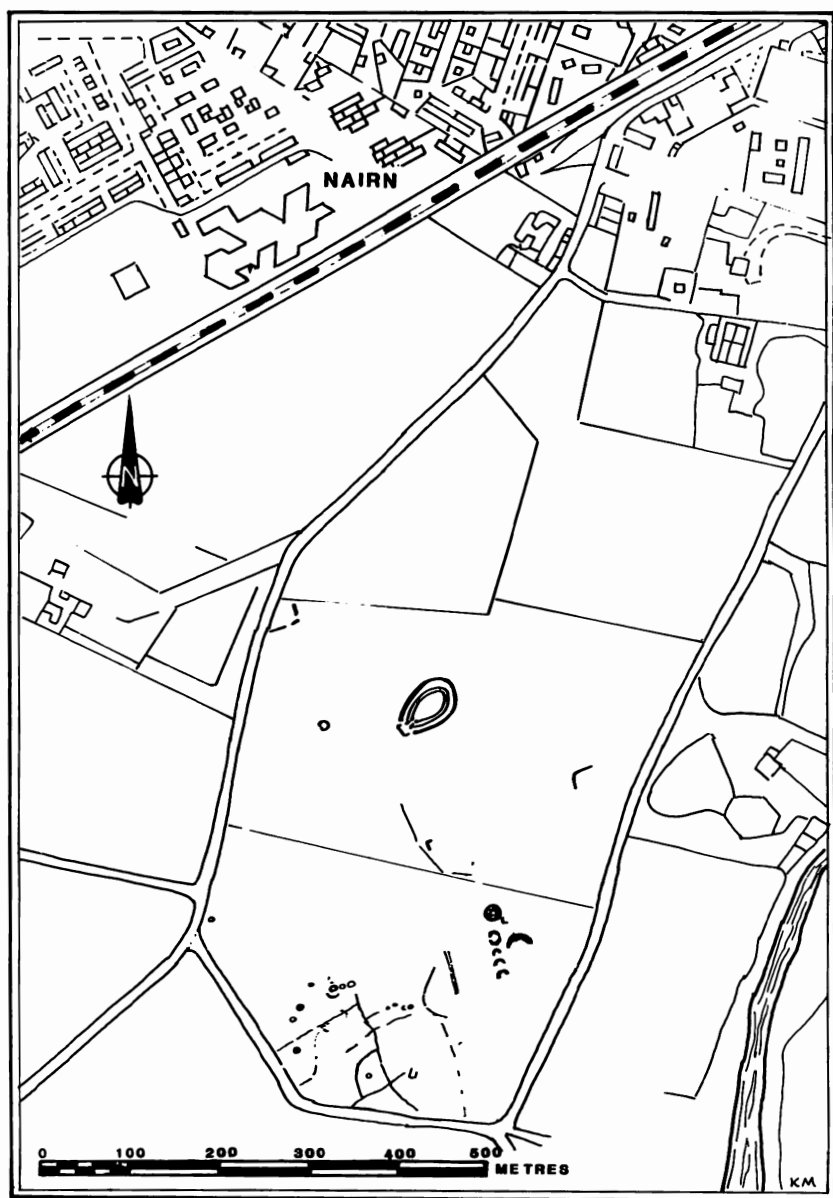


Fig.3.3 Nairn South: location map of crop marks. Note the presence of souterrains and land divisions (bottom).

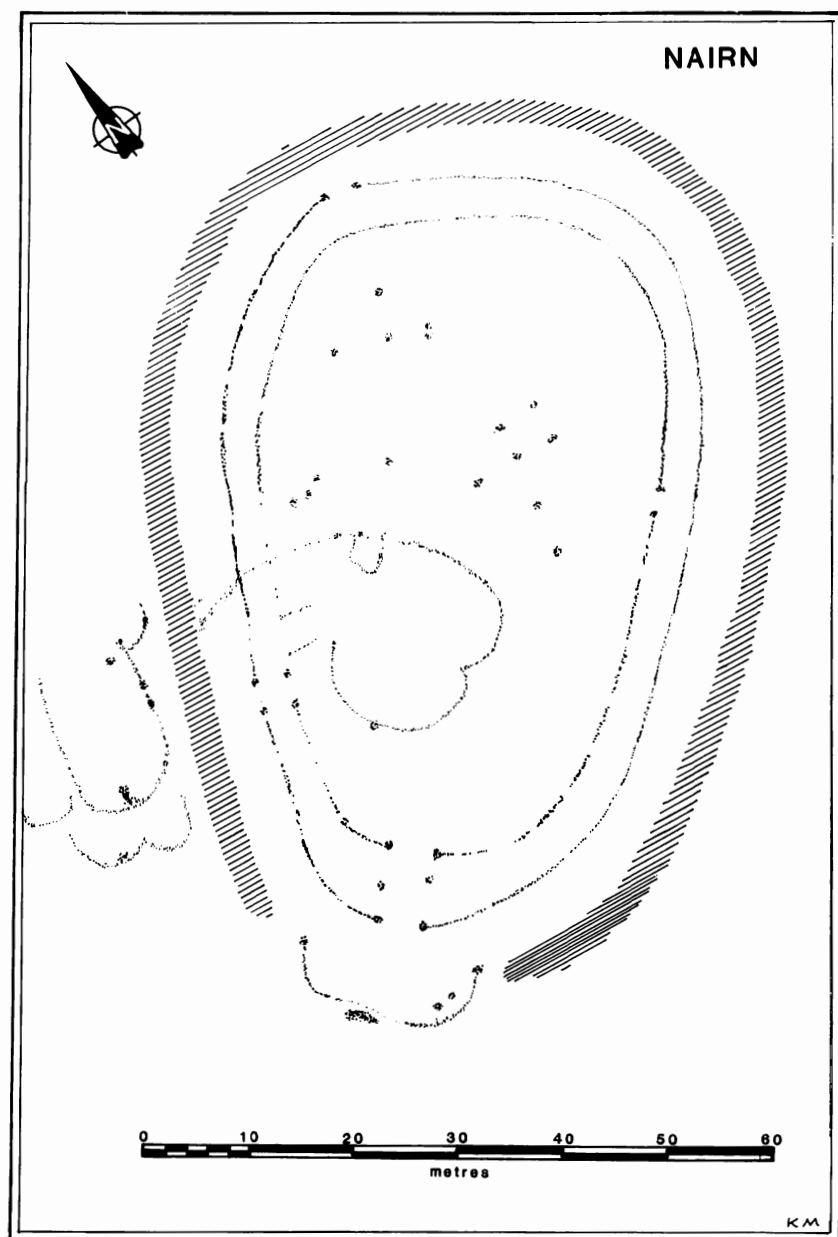


Fig.3.4 Nairn South: detailed transcript of the principal settlement (cf. Pl.II).

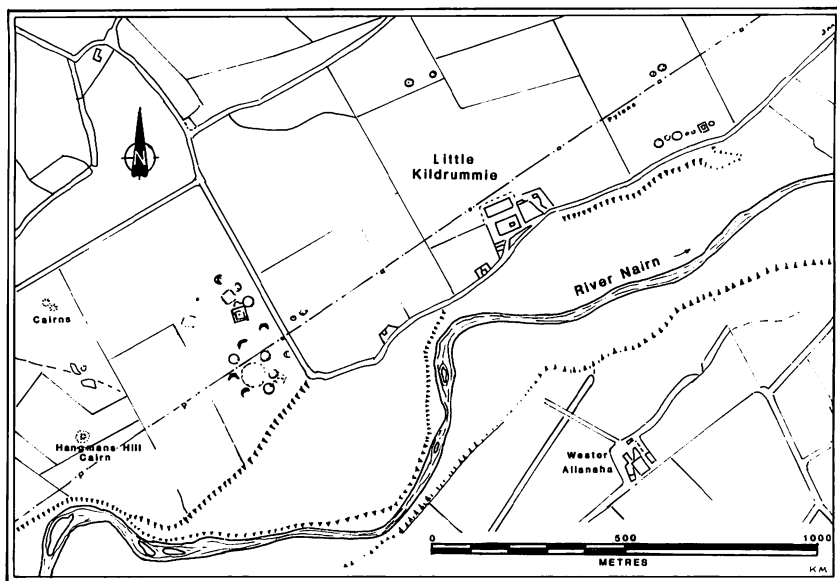


Fig.3.5 Kinchyle and Kildrummie: general location map. Note the square barrows visible amidst the linear cemetery at Little Kildrummie (Pl.V) and also (centre left) at the Kinchyle cemetery (cf. Pl. VI).

in the area of Kildrummie (Fig.3.5); *Strathnairn South* covering the south side of the Strath in the area between Brackla and Geddes, where much new information has been forthcoming; and finally *Flemington* on the north side of the Croy ridge where in an area unaffected by modern woodland a group of monuments has been identified around Loch Flemington and further to the north along the Ardersier road (Fig.3.6). Each of these areas is presented with its own appropriate map. In the Laigh of Moray a number of selected areas are then presented as dictated by the air photographic evidence. Several zones, notably that south of Burghead along the edge of the former mainland, have not proved amenable to air photographic reconnaissance for a variety of reasons, and the areas under discussion should not be treated as necessarily the only zones of prehistoric settlement. They are simply those zones where a combination of the subsoil and the pattern of cereal rotation between '84 and '89 has allowed the recovery of substantial material. Some of the evidence incorporated here derives by kind permission from the work of Ian Shepherd of Grampian Regional Council and Dr Ian Ralston, who advised on a number of points. The areas concerned comprise Forres where, despite the substantial changes in the lower course of the Findhorn, very important evidence has

survived of prehistoric and Roman date (Fig.3.7) west of the modern town (Pl.1a,b); and Elgin South, the area lying between Manbean and Birnie on the south side of the modern town, an area again substantially affected by changes in the course of the Lossie which probably explains the presence of several prehistoric and one Roman site well to the south of the present main east-west communications axis.

The inner Moray Firth was also sampled at a number of points. One of the most fertile is undoubtedly the littoral immediately east of Inverness towards Smithton and Balloch where, for instance, a major site is now known at Allanfearn. The distribution of ancient settlement in this area may be compared with that in a similar geomorphological setting along the north-western corner of the Beaully Firth near Muir of Ord. It will be apparent by this stage that areas of archaeological productivity are to some extent predictable in the area. In terms of the coast these are often defined by the land configuration at the head or side of a loch. Much more needs to be understood in geomorphological terms about the extent of the sea lochs at the end of the prehistoric period than at present, for instance, Haggart has conducted a survey of the alluviation patterns at the head of

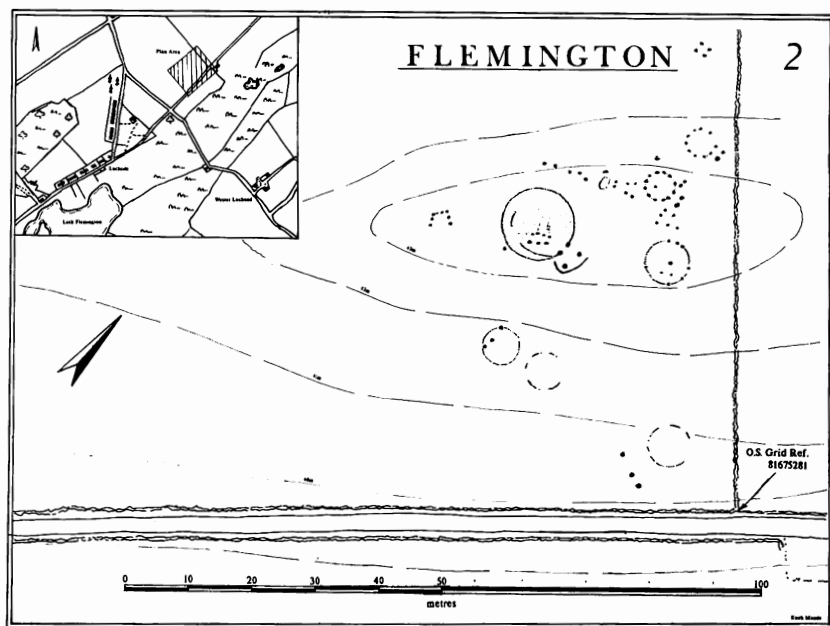


Fig.3.6 *Flemington 2: detailed transcription of the settlement north-east of Loch Flemington. Note the elaborate entrance to the principal enclosure and the apparent rows of pits.*

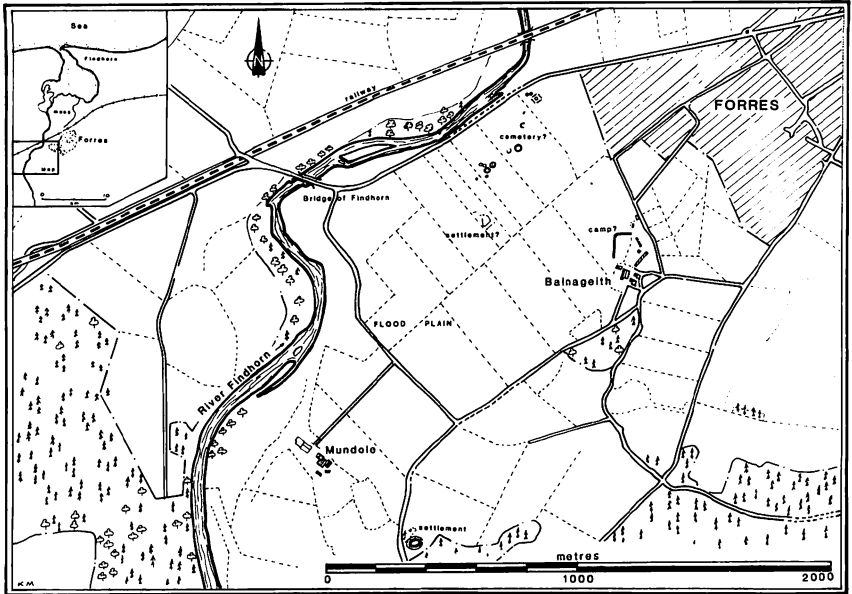


Fig.3.7 Forres West: a location map of the Findhorn area.

the Beaully Firth, north and south of Kirkhill, where clearly the Firth extended much further inland in comparison with the present morphology.⁶ Likewise, the head waters of the Cromarty Firth, which has clearly infilled considerably within the historic period, call for greater archaeological investigation.

Nonetheless, our understanding of the sites which may have formed the framework of settlement in the period remains largely to seek. The Black Isle, well-known today for its rich farming land, has singularly failed to produce traces of ancient settlement. The Moray Aerial Survey was deliberately extended into this area in the hope of identifying at least some zones where subsoil conditions would promote the development of cropmark phenomena. In the event, as already stated, the results proved relatively uninformative in terms of additional evidence. Nonetheless, in view of the fact that evidence was sought in apparently environmentally favourable areas across four separate seasons, it should henceforth probably be assumed that cropmarks will remain very limited in the Cromarty and Dornoch zones. Whether this represents a true picture of later pre-historic settlement density remains doubtful. It is puzzling that the lee side of the Black Isle, particularly the very sheltered Udale embayment, has consistently failed to provide diagnostic information; this despite Class 2 and Class 3 soils that should theoretically have encouraged ancient

exploration and the extensive modern cereal regimes that would facilitate cropmark recognition. There is at the moment no explanation of the general hiatus either there or across the sheltered Cromarty Firth. Between Alness and Invergordon the raised shelf of land, here termed Rosskeen, is well drained (as opposed to the equivalent littoral north-east of Invergordon); it has produced a number of cropmarks but as yet none diagnostic of any extensive settlement. Accordingly the evidence from Cromarty and Dornoch is limited to two sample areas, that around Rosskeen and a further example (hereafter designated Fearn) towards the head of the Dornoch Firth some 5 km. south-east of Bonar Bridge. On the north side of this point the promontory created by Dun Creich provides a wedge of arable land on which cropmarks have been observed, while on the opposite side the alluvial fan of the eastern Fearn Burn has also produced evidence alongside the modern railway line that may represent the original monastery site of that name. Elsewhere, towards Tain, limitations on flying imposed by the R.A.F. practice ranges coincide with areas of dune formation where recovery of information is most unlikely. There remains, however, one particularly intriguing site at Portmahomack, observed in 1984 and later, which must have major historical connotations whatever its date. A large enclosure, partly incorporating the southern side of the present village and evidently protected by a ditch and palisade, clearly relates to the church and anchorage on the south side of the modern fishing port. A radio-carbon date from recent excavations is awaited.

A major battle with the Norse and generally assumed to have taken place at sea is known to have been fought near Tarbat Ness, but the battle may in fact have been on land. It remains more probable, however, that proximity to the church is more significant. Fine eighth century carvings have been found at the latter and the likelihood of an associated *scriptorium* should be considered, set within a lay enclosure similar to that identified from the air alongside the early church at Ninkirk, Cumbria, or Ruthwell, Dumfries.

Interpretations

Overall there remains considerable room for conjecture regarding the precise interpretations of the cropmarks. The evidence may be divided into several broad categories. First and foremost there are a broad range of circular or ovoid sites associated with penannular ditches or darker markings partially reflecting a circular nucleus (Fig.3.8). Second, the evidence clearly assignable to funerary use is often outstanding in quality but is not as yet wholly susceptible to chronological differentiation. Lastly, the evidence of farming in the form of field divisions is rare, being limited effectively to the extensive Nairn, Forres and Tarradale complexes. If contemporaneity can be assumed, it is possible that the souterrains in the Nairn complex may be associated with field systems.

Undoubtedly the main problem surrounds the circular or oval settlements.⁷ These have been regarded as either settlement foci or, when the evidence comprises a single circle of apparently large post-pits, a form of megalithic structure (Pl.IV). Some advance may probably be made in defining this group of material. Although not all such sites exhibit traces of an umbra or 'aureole' (see below), those that do may almost certainly be regarded as settlements rather than burial sites. The cropmark phenomenon involved takes the form of darkened cereal (or even grass) growth relating directly to a penannular ditch or occurring independently within it (Fig.3.8). There are therefore some sites that exhibit a quarter- or half-moon shaped intensification in the tonal range of the crop, and this darker intensification can be further demarcated by the presence of a penannular ditch. Alternatively the outer penannular features may contain in a central nucleus either the shape of a quarter- or half-moon *umbra* or a circular disposition of post-holes apparently reflecting the interior of a hut.

Two points arise from this, one the nomenclature to be used, the other the interpretation to be applied. The term 'aureole' suggested by Maxwell⁸ is understandable but not perhaps the best applicable with its anatomical or pictorial connotations. In particular the term does not carry with it the implication of the chemical origin from which the marks derive. It can be suggested more positively that the *umbra* represents a phosphate and nitrate build-up in the subsurface soil from animal and human refuse. This phenomenon thus relates to settlement rather than burial sites. Obviously, however, within this context there is room for variation. Some sites may be animal compounds or enclosures, while others appear to reflect through the visible presence of post-holes the underlying presence of large huts implied by Tacitus' perhaps realistic reference in the aftermath of the battle of Mons Graupius to 'burning roofs' (*fumantia tecta*, Agricola 38.2). While Cassius Dio (76.12) on the other hand mentions the use of (hide?) tents amongst the Maeatae and Caledonii, he also emphasises the large extended family groups which might reflect the apparent size of the hut and compound configurations. In this context, therefore, priority should be given to a fieldwork programme to identify the placement of middens and comparable areas through analysis of the phosphate content of the interior. Likewise areas may have been set aside as latrines or standing areas for stock. Again these may be detectable from phosphate survey. The very detailed picture emerging from Flemington 2 would make an admirable starting point (Fig.3.6).

The presence of extensive cemeteries is evident in a number of places. Agglomerations of square barrows and ring ditches evidently forming barrows are particularly known at Forres (Figs.3.7, Pl.Ia,b) and at two places, Kinchyle and Little Kildrummie, in the evidence from lower Strathnairn (Pl.V, VI). The evidence for the mixture of burial styles involving ring ditches and square barrows is best shown at Little Kildrummie,

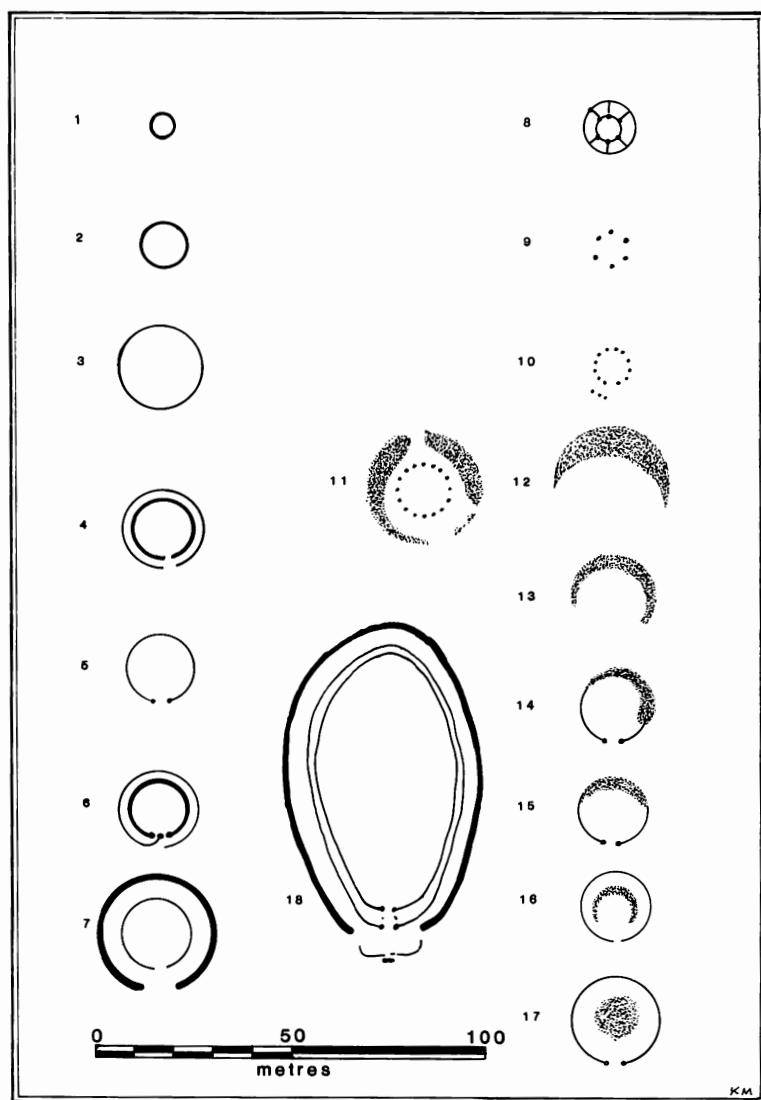


Fig.3.8 *Morphology: comparative sizes of circular and oval crop mark sites. (1) West and East Kildrummie; (2) Forres and Kildrummie; (3) Balloch; (4) Forres; (5) Balloch; (6) Forres; (7) Brackla; (8) Nairn; (9) Lochside; (10) Loch Flemington; (11) Lochside; (12) Nairn; (13) Forres and West Kildrummie; (14) Kildrummie and Kinchyle; (15) Kildrummie and Kinchyle; (16) Gollanfield; (17) Loch Flemington; Kildrummie and Gollanfield; (18) Nairn.*

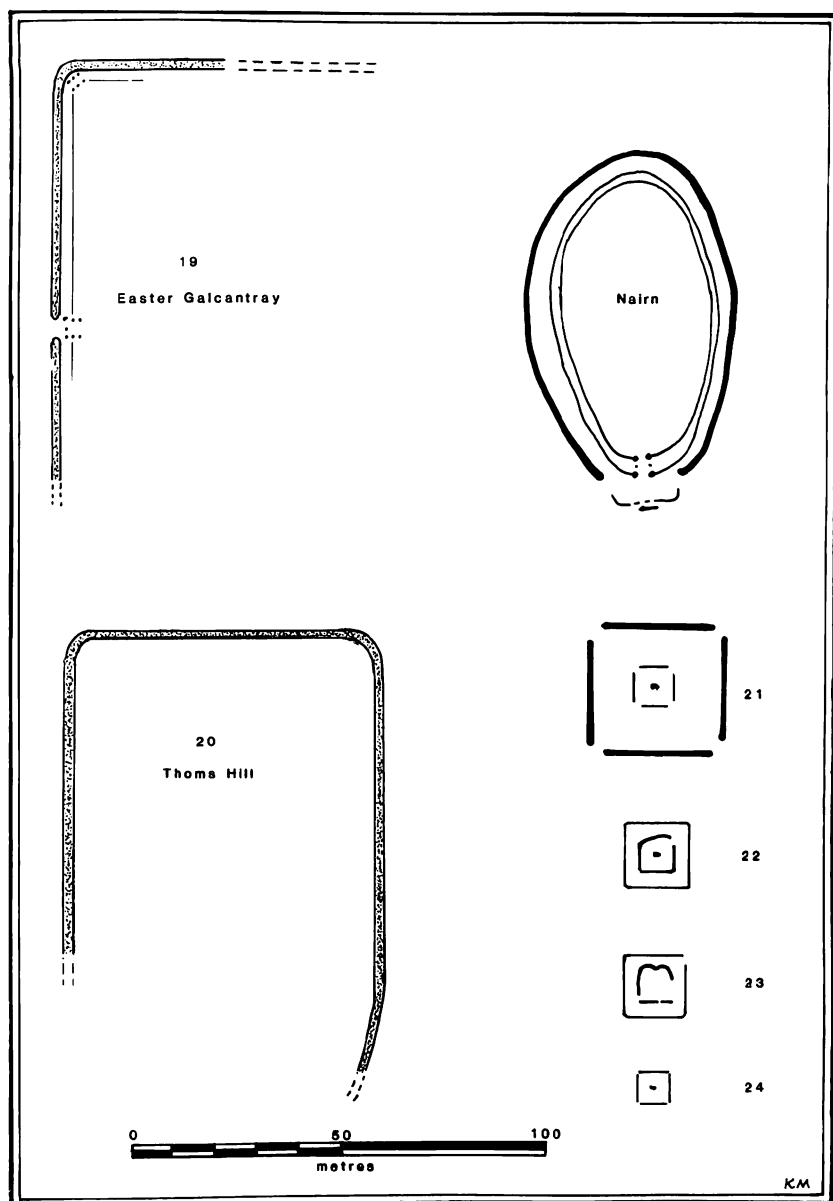


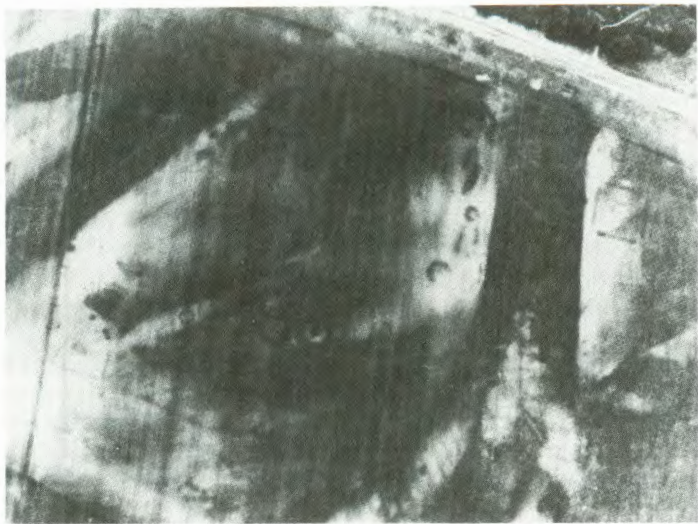
Fig.3.9 Morphology: comparative sizes of rectilinear sites, square barrows, etc. (19) Easter Galcantray, Cawdor; (20) Thomshill; (21) Forres; (22) West Kildrummie; (23) East Kildrummie; (24) Forres.

whereas further west at Kinchyle the evident cemetery area lies adjacent to a settlement on the south side. Little can be said of the ring ditch features because of lack of excavation. The same applies to the square barrows but there are some variations of internal arrangement and a major variation in size. The best preserved examples from Kinchyle and Little Kildrummie (Fig.3.9 nos. 22 and 23) occupy roughly the same area within the external ditch. The Little Kildrummie example shows the central burial clearly, whereas the Kinchyle example does not. They are, however, very closely comparable in size. Morphologically the Kinchyle example lacks a corner but is nonetheless distinct from the kind of square barrow evident at Forres. In these cases there is again a mixture of ring ditches and square barrows but as the examples show (Fig.3.9 nos. 21 and 24) the boundary ditch is not continuous and all four corners are incomplete. This has led to doubts as to the contemporaneity of this form with the type previously mentioned. Pictish burials showing discontinuous stone banks take a closely comparable form.⁹ There remains, however, the problem of size. For the largest of the funerary enclosures at Forres is on a scale far greater than any of the other examples, an aspect that may therefore relate to its chronology rather than status; but this remains entirely conjectural for the moment.

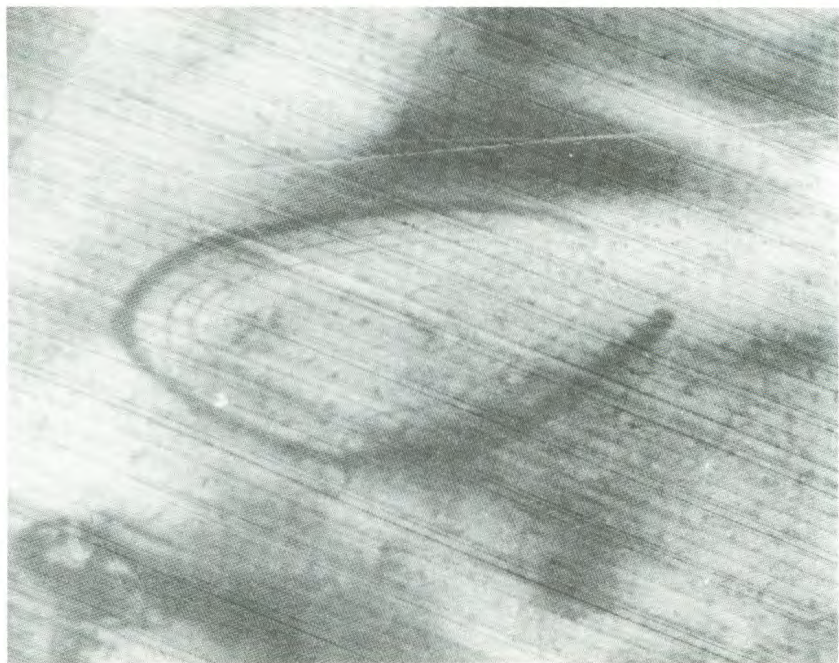
Elements of land divisions are few and far between. How this relates to the prehistoric economy remains open to debate. For the record, however, there is evidence of what may be field divisions associated with the settlement previously discussed north of Balnakeith at Forres. The prime example, however, remains lower Strathnairn (Fig.3.3). There the main site at Nairn South does not appear to have directly associated field systems but evidence of this kind does exist some half kilometre to the south-west close to the modern road to Cawdor. An area of ditched enclosures is evident in which there is also evidence of pits. The area as a whole also contains a number of souterrains to judge from the air photographic evidence.¹⁰ While there may be a broad contemporaneity between all these features, any hope of a detailed chronology remains dependent on excavation. To date only the presumed settlement site at Brackla (Pl.VII) has been sampled yielding material suggesting a late 2nd-early 3rd century date.

Historical Synthesis

What conclusions can be gleaned from the evidence arguably from the historical period? We can see that in distributional terms it is now possible to define population centres for tribal septs centred at the western end of the Beaulieu Firth, on the shelf of land adjoining the inner Moray Firth, around Balloch west of Inverness, above all where the lower reaches of Strathnairn provide rich agricultural soils between Nairn and Cawdor and a major site is now known (Fig.3.4, Pl.II), then less clearly at Auldearn and at the débouchement of the Findhorn. Moving eastwards the rather



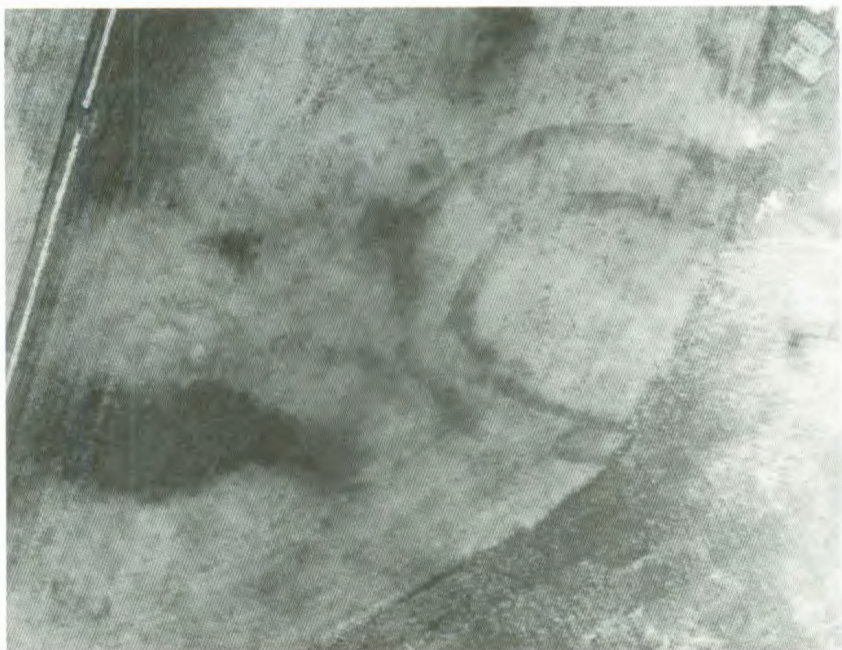
Pl.Ia,b Settlement a, b—Forres: the major agglomeration of cropmark evidence visible on the flood plain of the Findhorn (Fig.3.7). The upper picture (courtesy of Dr. I. Shepherd, Aberdeen Archaeological Services) shows (top) the exceptionally large burial enclosure, various penannular and circular marks associated with a settlement in the centre and a ditched enclosure at the bottom. The lower picture shows the three circular settlements visible in the centre of the upper photograph in an oblique view (1986).



Pl.II Settlement—Nairn (Figs. 3.3 & 3.4): The horseshoe shape of the major settlement located south-west of the town (1986). Inside the major ditch note the two thin lines that may represent palisades and also the faint traces of a horn-work at the entrance.

dispersed pattern of settlement south of Elgin, allowing for a reconstruction of the ancient morphology, appears to have its principal centre in the area of Birnie and Thomshill. Further east in the Deveron Valley settlement nuclei can be predicted and have been located at one to one and a half kilometre intervals on spur sites along the valley. Into this picture we have, of course, to add the presence of Burghead which, while shown by radio carbon dating to belong to the fourth century AD, is presumed for our purposes to have earlier antecedents.¹¹

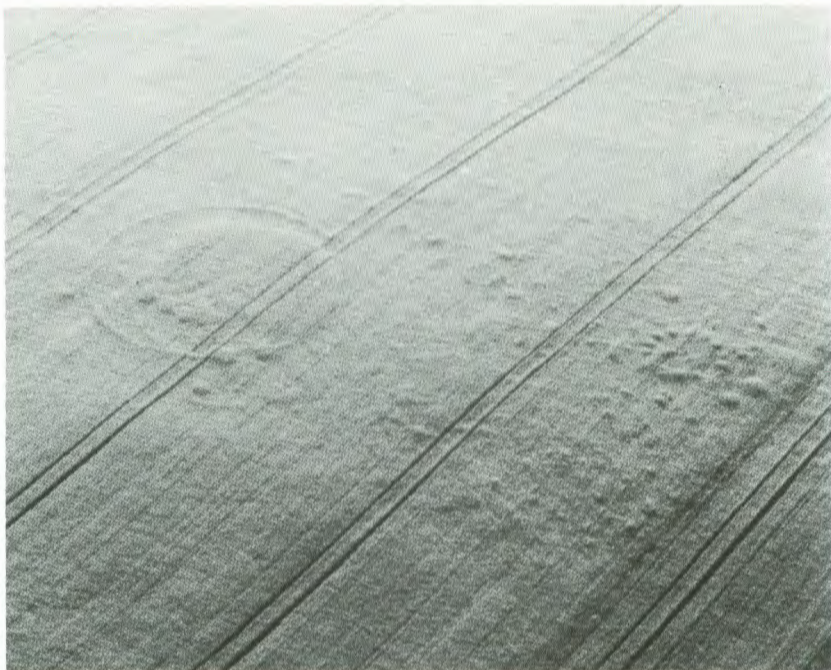
Against this background it is possible to move to a fuller and firmer picture of the tribal territories involved as known through Ptolemy and the Ravenna Cosmography. It is also salutary to remember just how much material is contained in the Ravenna Cosmography naming sites that remain at present unlocated. It is, however, the coordinates that give Ptolemy's Geography its unique importance, as all scholars have recognised. Unless one adopts a position that his coordinates are textually incorrect, then one has to follow their implications. These indicate that



Pl.III Settlement—Rait Castle: The ditch of a bivallate site occupying the scarp of a terrace in Lower Strathnairn (1984).

alta ripa is to be equated with the Ord or, more likely, on the relative northings, the line of cliffs either side of the Sutors broken by the mouth of the sheltered Cromarty Firth. Varar is preserved in the name of the Farrar flowing into the Beaully Firth. Like Rivet and Smith therefore it seems ineluctable to place the site of *Pinnata Castra* along the Moray coast. We are less concerned here with locating it than with the other information that can coalesce with it. Thus the land of the Vacomagi lay west of the promontory of the Tazali, namely Kinnaird Head, and therefore some of the sites named by Ptolemy, notably Tameia, are given coordinates that place them in the Moray littoral. It would be unprecedented in Ptolemy's set of coordinates to find the name for a marching camp listed. His '*poleis*' clearly must be seen as more substantive locations, whether these are native sites or, as Rivet and Smith argue, Roman forts.¹²

The presence of camps¹³ or even forts, thus implied by Ptolemy along the Moray littoral reflects, of course, the climactic historical event of the Flavian advance, the battle of Mons Graupius at which the Caledonian confederacy was defeated.¹⁴ The search for the actual battlefield has tended



Pl.IV *Settlement—Flemington: The exceptional precision of cropmarks in barley reveals the layout of a large circular site with prominent gate posts at its entrance (centre), the marks of a circular post setting (right) and numerous pits on this ridge top site (1989) (see Fig.3.6).*

to obscure the subsequent events attested by Tacitus in his biography (*Agricola* 38).

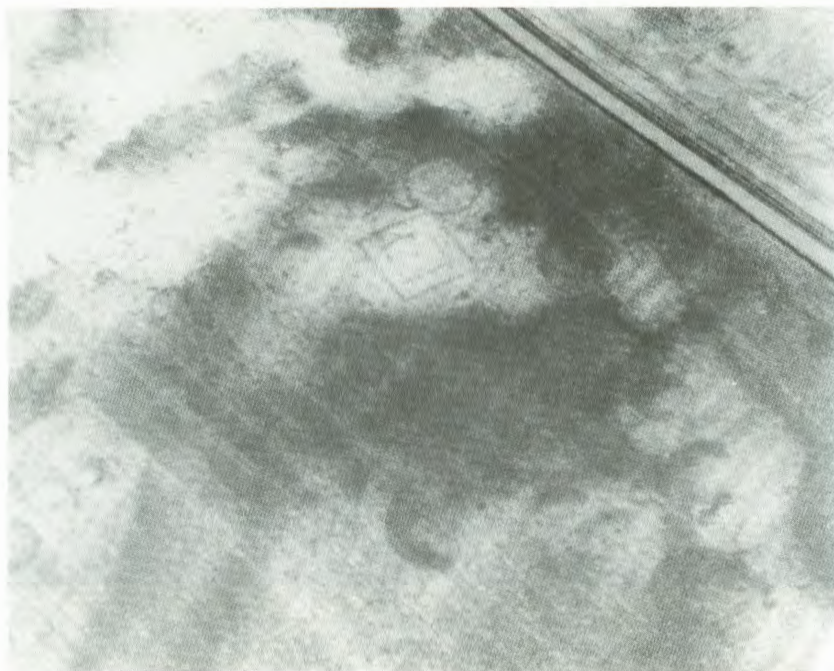
Here one might argue by analogy from two comparable invasions, namely that of Edward I in 1303 and the Hanoverian march in 1746. From this it is apparent that any would-be conqueror of north-east Scotland like Agricola must have followed a coastal line of march and it is interesting that in both cases the coast was reached near Banff¹⁵ whereafter the line of march was almost entirely controlled by the major physical barriers such as the Spey and the Findhorn. If there is indeed a Roman site at Bellie on the Spey near Fochabers, then it lies within a matter of a few hundred metres from the Hanoverian crossing point. The general lesson one might draw from these arguments by analogy is that on commonsense grounds the present terminal point of agreed site locations in the Pass of Grange near Keith cannot be the end of the Roman line, whatever problems of date may be posed by the two very differing sites known at



Pl.V Cemeteries—Nairn West, Little Kildrummie: A near vertical view of the linear cemetery at Little Kildrummie (Fig.3.5). Note at least two square mortuary enclosures amongst the ring ditches (1986).

Auchinhove and Muiryfold.¹⁶ As a further extension of this line of argument one could adduce the map of first century finds from the area. This includes two finds of Domitianic *asses* of AD 86, namely the familiar pay issues known at Inchtuthil, Strageath, Cardean, Stracathro, Camelon, and other sites. These come from Forres, where two such coins may be involved, and from Fortrose, still an anchorage on the north side of the Moray Firth to be sought under stormy conditions.¹⁷

It will be clear enough from the preceding section that local topography is the controlling factor; likewise that there are great fluctuations in local geomorphology. Both factors require detailed understanding to explain site location and survival. Thus to summarise, east of the Spey podsolisation and surface erosion through aeolian action are major problems affecting the recognition and survival of archaeological features. On the fluvio-glacial gravels west of the Spey major flood sequences (eg. on the lower Findhorn at Forres) and the erosion or deposition caused by sandstorms (the 'blows') have the same effect in archaeological terms. Nonetheless amidst the tens of curvilinear crop mark sites described on the



P.VI Cemeteries—Nairn West, Kinchyle: The presumed mortuary enclosure and ring ditch at Kinchyle showing remarkably in a crop of peas (1986). Note also the traces of other penannular and circular features probably forming an extensive settlement (Fig.3.5).

previous pages a very small but obvious number exhibit the morphology of Roman military sites, the location of which is best explicable in terms of the influence of any westward invasion along the Laigh of Moray. Thus a rectilinear site at Boyndie west of Banff controlling the coastal corridor to the west and access to the sea morphologically resembles a small camp or fort at the point where both subsequent Edwardian and Hanoverian invaders sought to gain the coast from the Deveron valley. At the Spey crossing, if the overbuilt site at Bellie is indeed Roman as is generally supposed,¹⁸ detailed reconstruction of its shape from the archive of the Gordon Estate and Luftwaffe air photographs demonstrates that with a size of less than six acres it is unlikely to have formed a temporary camp comparable with evidence from the far larger examples in the nearby Pass of Grange.

This is not the place to expatiate on the evidence from Bellie but west of the Spey we enter for Romanists uncharted ground¹⁹ where detailed



Pl.VII Settlement—Brackla: The crisply preserved remains of a presumed settlement with traces of an internal palisade (1984). Note the fainter remains of a similar feature (bottom).

knowledge of geomorphological change within the proto-historical period is a pre-condition. Thus the rectilinear site at Thomshill south of Elgin (Figs.3.1, 2.3), investigated by C M Daniels of the University of Newcastle upon Tyne, is only comprehensible in the light of the vastly greater size of Loch Spynie and its effect on the lower Lossie system at the time together with the discovery of a substantial native settlement nearby at Hillhead (Pl.VIII). On the site itself the V-shaped ditches with cleaning slot are classics of their kind but also show that to one side at least two metres of soil has been eroded through aeolian action. Small wonder then that, like Boyndie, no internal features survive, only the ditch circuit.²⁰

The next logical position of strategic significance must have been the Findhorn crossing on the south side of Findhorn Bay west of Forres (Fig.3.7). After repeated search, exceptional soil moisture deficit in early July 1989 produced the north-western corner of a site morphologically resembling a Roman fort or camp (Pl.IX). The discovery was indeed fortunate because most of the site proved to have been levelled by the massive 1829 flood. At the surviving corner, however, not only has the ditch been recovered but also the post-holes of a six-posted timber tower suggesting that the site was more than purely temporary.



Pl.VIII Part of the extensive settlement at Hillhead, Birnie, south of Elgin. The site of Thomshill lies 1 km. to the south-east.

Some seventeen miles further west at the edge of the main settlement concentration in Strathnairn and close to the land corridor of the Croy ridge lies the site of East Galcantray, Cawdor, astride a flat shelf slightly raised above the valley floor (Pl.X). Again the site has suffered very extensively from erosion, this time the loss of over fifty per cent of the interior, also in the 1829 flood, as attested by eye-witness accounts. In five seasons of excavation the surviving interior has yielded evidence of a V-shaped ditch with a single recut, a box rampart with the south gate and southern-western corner tower, associated road and rectilinear timber buildings suggestive of barracks. The Carbon 14 date recovered from the demolition of these timber buildings falls into the bracket 1880 \pm 20 B.P.; 80-130 cal A.D. (GrN-14643) and, despite the lack of readily diagnostic finds, when taken with the structural evidence now available makes it very difficult to argue against identification as a briefly held (three years at most) single period fort; from the literary sources we know that the only possible historical context within the dating bracket lies in the mid-to-late eighties A.D. and the campaigns of Agricola or his unknown successor



Pl.IX Forres: The distinctive curved corner of a Roman camp located and test excavated on the edge of the floodplain of the Findhorn at Balnakeith (1989). One of the flood channels of the infamous 1829 storm accounts for the darker colour of the lower picture (Fig.3.7).

prior to the abandonment of the northernmost territorial holdings in Britain by the Emperor Domitian.²¹

Amidst the generality of settlement sites from the later prehistoric to Pictish periods these five sites — three of which were discovered and one rediscovered from the air — form a distinct group to which that at Taradale at the head of the Beauly Firth may be added. They compare either morphologically or through excavated evidence with Roman military sites elsewhere, and by their locations logically spaced along the Laigh lend weight to Tacitus' claim that following Domitian's policy the whole of Britain had been overrun but almost immediately abandoned; the brevity of occupation, exactly paralleled at Forres and Cawdor, explains the lack of artefacts recovered.

Another even smaller group is arguably of early medieval date and religious by association. These comprise two polygonal enclosures that find no parallels in the morphology of the prehistoric settlement evidence.



Pl.X Easter Galcantray, Cawdor: Photographed in 1984, this oblique view shows the site on a central ridge massively eroded by the River Nairn in the 1829 floods. The single ditch forming the southern side is broken by an entrance excavated in 1986 and less than half the western side has survived erosion. Excavation continues.

Both occur alongside sites of known religious significance. The enclosure at Portmahomack mentioned at the end of the descriptive section appears to form a lay enclosure attached to the churchyard with its evidence of eighth century carving suggesting the additional possibility of a *scriptorium* nearby.²² The second, shown in Pl.XI, is a distinct polygonal enclosure alongside the oval enclosure of the church at Birnie south of Elgin. Birnie was the original early medieval seat of the Bishopric of Moray prior to its removal first to Spynie then to Elgin. The associated enclosure at Birnie can best be interpreted as the circuit of the early lay enclosure. As such it finds parallels with the church and lay enclosure from Ninkirk near Brougham in Cumbria, as does the layout discovered at Portmahomack at Ruthwell across the Solway in Dumfries.

Altogether nearly eighty previously unknown sites have been located in Moray from the air whether through the contribution of the Moray Aerial



Pl.XI Medieval—Birnie: The small historic church at Birnie was the original seat of the Bishops of Moray. The remains of the old church are visible amid the trees, while to the left are cropmarks showing the former existence of a secular enclosure (1984).

Survey described here or by other researchers such as Ian Shepherd for the Grampian Regional Council or Gordon Maxwell for the Royal Commission on the Ancient and Historical Monuments of Scotland. Whatever the source, corporately the new information has begun to reveal the buried location of the majority of sites originally occupying the more fertile lowlands of the Laigh, to counteract the prevailing academic picture derived from a minority of sites owing their upstanding survival to location on higher ground and consequently construction in stone. Moreover, within the broad corpus of new material we can now attempt to identify the differing morphology that may, with carefully selective excavation, help us to distinguish between prehistoric, Roman military, Pictish and early Christian sites.

Notes

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13. G S Maxwell 'The Evidence of the Temporary Camps' in *Agricola's Campaigns in Scotland* (*Scottish Archaeological Forum* 12, 1981) ed. J Kenworthy, 25. This includes a bibliography of relevant J K St. Joseph articles.
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22. And see John Higgitt 'The Pictish Latin inscription at Tarbat in Ross-shire' *PSAS* 112 (1982) 300; also Isabel Henderson, *The Art and Function of Rosemarkie's Pictish Monuments* (Groam House Museum Trust, Inverness 1990).