

THE EARTHWORK REMAINS OF ENCLOSURE IN THE NEW FOREST

By NICOLA SMITH

ABSTRACT

The RCHME carried out a programme of archaeological field survey in the New Forest between 1994 and 1997. This paper examines the enclosure earthworks of the area, tracing their development from small sub-circular types of the Iron Age to extensive angular timber plantations of recent times. It describes their main characteristics, background, uses, and impact upon the landscape as a whole. Of particular interest are less well-known, yet distinctive, New Forest enclosure types. A striking contrast is seen between the earthwork remains to be found in the New Forest compared with those of adjacent areas, and particularly the chalkland. It is apparent that New Forest land-use differed greatly from that of these other areas, even before the 11th century creation of the royal forest. Possible reasons for this are discussed.

INTRODUCTION

The New Forest is a unique and important Tertiary landscape. Its mixture of heathland, acid grassland, valley bog, unenclosed deciduous woodland, and enclosed silvicultural plantation includes an outstanding range of wildlife habitats, while its open access and aesthetic appeal make it ideal for recreation. The distinctive character of the New Forest rests largely on its past. Selection of the area as a royal hunting forest by William I has preserved aspects of the pre-Norman landscape and continuation of its ancient pastoral economy has enabled its preservation as the largest area of unsown vegetation in lowland Britain. The archaeological remains of the New Forest are thus unscathed by modern agriculture in an otherwise intensively-farmed region of southern England. Identified and carefully characterised,

they should survive in the long term under the beneficial conservation regimes now in place to manage the area, as an asset to both the local and national archaeological stock and for the education and enjoyment of the wider public.

Recent years have seen increased pressures upon the New Forest for recreation. It lies close to the urban centres of Southampton and Bournemouth and is now within easy daily travelling distance of many other cities by motorway. Growing visitor numbers have caused increasing damage to the fragile landscape. Until 1972 extensive ground erosion resulted from virtually unrestricted vehicle movement throughout the open Forest, and since then ever greater numbers of horse riders and cyclists have continued the problem. Urban fringe expansion has had further implications for the New Forest, creating traffic problems, proposals for road development and public utility development. Inflated land prices are also threatening the existence of commoning as a way of life and so challenging the ancient basis of the local economy which is essential to the survival of the New Forest landscape.

Visible clues and reminders of the area's past history are an integral part of the New Forest scenery and greatly enhance its aesthetic appeal, its diversity, and its interest. In order to manage most effectively the archaeological resource as a whole and to protect individual sites it is important for those concerned, the Forestry Commission, English Heritage, and Hampshire County Council, to have a record of the area's archaeological remains which is as up-to-date and as complete as possible. Between 1994 and 1997 the Royal Commission on the Historical Monuments of England (RCHME) carried out a project of archaeological field survey in the New Forest with purpose of

making a contribution to this end. The particular aims of the project were to provide information to such bodies through updated records held by the National Monuments Record (NMR) and to provide a current assessment of the area's archaeological earthwork remains. As part of this process, additional information, from a wide variety of sources, was also brought together for the first time and used to re-examine the landscape history of the district.

This paper specifically examines the earthwork remains of enclosure within the New Forest. The archaeological significance of enclosure in Britain has long been recognised due to the highly visible nature of many remains, which include monuments of most archaeological periods, from early prehistoric burial, ritual or ceremonial enclosures, to enclosed settlements which arose in the first millennium BC alongside agricultural intensification and a stronger concept of land as property (Thomas 1997). Later earthwork enclosures, of the historical period, demonstrate the ebb and flow of settlement or agriculture, as well as demarcating other areas known from documentary records to have been used for special purposes. The subjection of the New Forest to forest law from the 11th century prohibited the wholesale enclosure seen in most other areas, but numerous enclosures of various size and plan are to be found throughout the district. Their use has remained an important factor in the development of the landscape. Little is known about the date of construction or purpose of most, and a large number were probably illegal. The paper falls into two parts. The first offers description and discussion of the archaeological field remains. The second part treats the area as a whole, describing what is known about its changing land-use through time and identifying its characteristic features which may be illustrated, confirmed, or called into question by the earthwork evidence.

The Fieldwork Programme

The archaeological remains examined included monuments and landscapes of all periods up to 1945, as required by the RCHME royal warrant. The staff allocation was initially two full-time field investigators, later reduced to one full-time field

investigator, with additional support where necessary. The area covered by the project was that of the proposed New Forest Heritage Area defined by the New Forest Committee (1991). This stretches from the mouth of the Lymington River and the Avon Valley in the west to the urban fringe of Southampton Water in the east, and from commons fringing the Hampshire/Wiltshire border to the Solent coastline.

Some archaeological techniques which reveal valuable information in other areas are less helpful in the New Forest. The absence of extensive cultivation offers little potential for surface collection of artefacts. Acidic soil conditions mean that very few small finds or bones have been preserved for study and dating, restricting the amount of information gained by excavation. Aerial photographs offer little assistance. The occurrence of crop marks and soil marks is confined to the small area under cultivation, and earthwork features do not show up well from the air because of woodland and scrub. The project therefore had to rely almost entirely on, inherently time-consuming, ground-based survey. Nevertheless, all available aerial photographs were checked in the course of the project.

It was realised from the outset that field examination of the entire project area for new archaeological features would not be feasible because of its size (570 sq km), the limited time and staff resources available, and the dense vegetation restricting ground visibility in many places. Fieldwork was therefore targeted to meet particular needs, and included a combination of methods.

- Ground examination of archaeologically blank areas, mostly woodland, identified from the NMR and county Sites and Monuments Record, in order to assess the reasons for gaps in the record.
- Known earthwork sites were examined to confirm their location and update NMR records of their condition, interpretation, and plan.
- Large-scale (1:1000+) survey of a number of complex earthworks and a sample of characteristic New Forest earthworks was carried out
- A number of earthwork systems not previously mapped were surveyed at basic scale (1:2500).

- A large number of earthworks discovered by the New Forest Section were examined and outline details (grid reference to 1 km) added to the NMR database.

Three types of archaeological earthwork feature commonly found in the New Forest were only looked at in passing. The numerous round barrows had already been examined recently as part of English Heritage's Monuments Protection Programme. The Roman pottery kiln sites have already been the subject of much archaeological investigation (see below). Ubiquitous woodland features such as charcoal-burning platforms and saw-pits were largely excluded from the study. Investigation of the extractive industries of the New Forest also lay outside the scope of the project. The fieldwork concentrated upon the Crown and common lands which form the core area of the New Forest, and so excluded distinct and specialised coastal features such as salterns and sea defences.

Nature of the Earthwork Remains

The underlying geology of the district affects the durability of earthworks. They are fragile, on unstable gravel and sands, those on sandy soils being particularly susceptible to wasting. The general lack of landscape division of the area means that some earthwork features have suffered erosion arising from random trampling of animals or people, passage of vehicles, and miscellaneous digging. Forestry operations have directly caused the destruction of some archaeological remains by ploughing and drainage, while incidental damage has resulted from passage of heavy vehicles and timber haulage. The area was a conveniently located open space for military manoeuvres from the 18th century until after World War II. The greatest activity was seen during World War II when, in addition to well-documented military centres such as the airfields, there were troop encampments, tank routeways, quarrying, and defensive works. Some earthworks have also been levelled during pasture improvement.

The archaeological earthworks of the New Forest are therefore often fragmentary in nature. Large complexes revealing subtle relationships be-

tween different features are rarely found. Many remains consist of isolated banks and ditches which start and finish with no clear purpose, some fading into valley mires, others ending abruptly and inexplicably. Although some archaeological earthworks may have wasted beyond recognition, the lack of intensive agricultural land-use has ensured the preservation of the New Forest landscape in general and it is likely that a high proportion of the original population of earthwork features survives.

The New Forest landscape presents problems for any archaeological fieldworker attempting to locate earthwork remains. Even well preserved features can easily be missed in woodland. Even when ground cover is absent during the winter months their continuity is fragmented by tree outlines and variation in light from shadows cast, while they often lie beneath dense bracken for the rest of the year. Heathland vegetation can also present problems. Great variation in the height of heather may create a false impression of ground undulation, while elsewhere gorse thickets or high heather completely obscure any earthworks.

Previous Archaeological Work

Interest in the earthwork remains of the New Forest dates from at least the 19th century, when J R Wise reported on his diggings into New Forest earthworks (1863). Early work concentrated on Roman pottery kilns and barrows. The first archaeological survey work was carried out by J Williams-Freeman (1915), whose surveys of major New Forest monuments were included in his volume on the field archaeology of Hampshire. The pioneer archaeological fieldworker in the New Forest, however, was Heywood Sumner, who surveyed further archaeological earthworks, including some of a lesser nature, and carried out the first 'archaeological' excavations. His *Ancient Earthworks of the New Forest*, 1917, was the first, and only, comprehensive study of the area's archaeological remains. Studies published later have been site and period specific, notably concerned with the Romano-British pottery industry, investigated by Sumner (1927a), and more recently by Fulford (1975) and Swan (1984). Further work has since been carried out on the Romano-British pottery industry (Gaffney *et al*

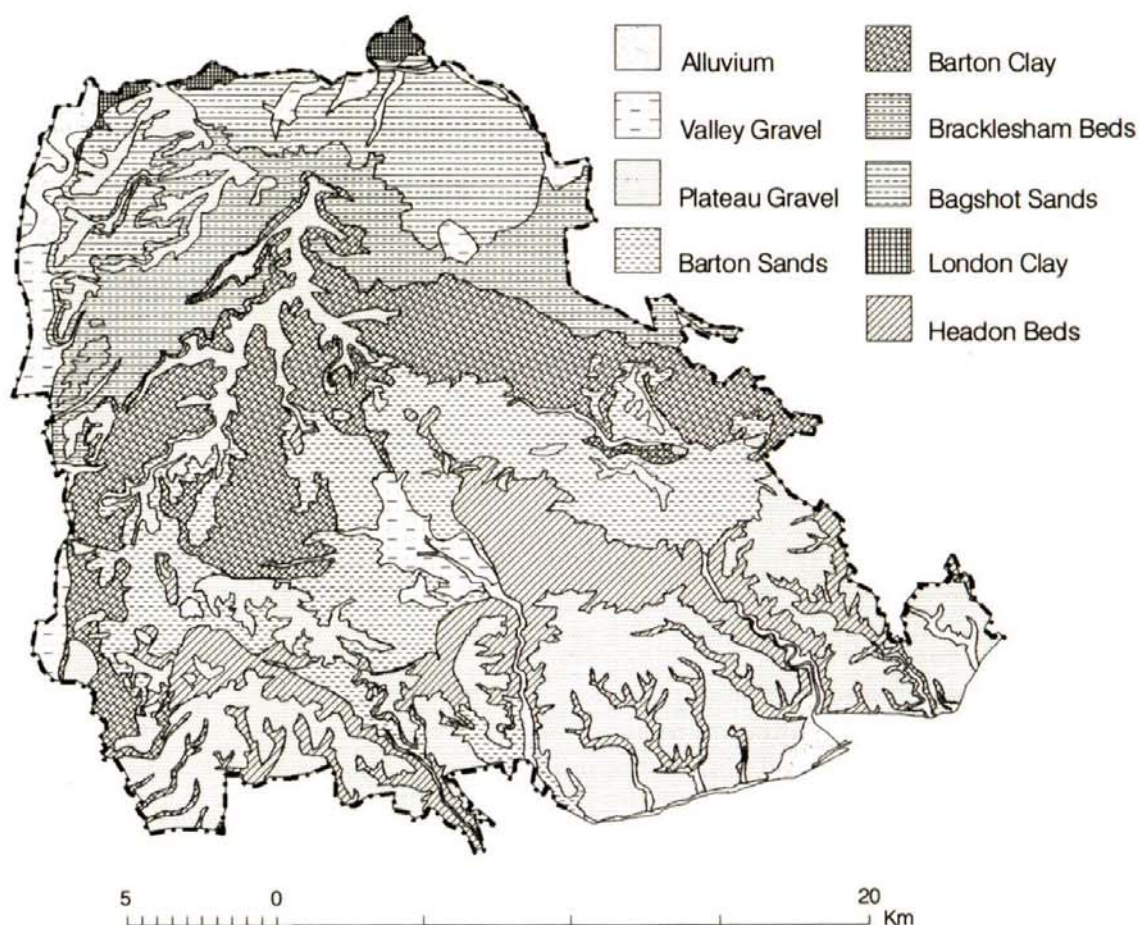


Fig. 1 Geology of the New Forest

1993; English Heritage ongoing) and English Heritage have evaluated and examined New Forest barrows for the Monuments Protection Programme. From the 1950s to the early 1980s the Ordnance Survey's Archaeology Division made a significant contribution by the description and basic scale survey of archaeological earthwork remains throughout the Forest. The work of the New Forest Section of the Hampshire Field Club in documentary research and field reconnaissance since the 1950s, supplemented later by small-scale excavation, which has added much to our knowledge of the area, has been outlined by Pasmore (1996). Recent studies have included a landscape

character assessment of the New Forest by Wessex Archaeology (Walker & Davies 1996), which details the area's archaeological resource, but involved no new fieldwork; and a study of New Forest settlements, part of a wider study by Hampshire County Council. Colin Tubbs's *A Natural History: The New Forest* (1986) remains the leading publication on the New Forest landscape in general.

Geology and Geomorphology (Fig. 1)

The underlying formations of the the New Forest are Tertiary strata laid down as sedimentary deposits of sand and clay during the Eocene and

Oligocene periods. Folding of the earth's surface created an east-west syncline, the Hampshire Basin, near the centre of which the New Forest lies, its rock formations dipping towards the south, with the oldest rocks outcropping in the north. Three minor folds also occurred, creating the Lymington anticline and the Lyndhurst and Hordle synclines. Overlying the various geological formations are drift deposits of gravel and brickearth.

The present drainage pattern of the New Forest was probably established in the late Pliocene-Pleistocene (Everard 1957, 243). During the late Pleistocene terraces were formed by progressive falls in sea level, while valleys were partially infilled with transported gravel, alluvium, and brickearth (Chatwin 1960; Tavener 1957). The main watershed runs roughly north to south and from this the major New Forest rivers, the Lymington River and the Beaulieu River, flow into the Solent. In addition, on the western edge of the Forest, six streams flow into the River Avon, while on the eastern edge many small streams flow into the River Test.

At the end of the last Ice Age sea levels were up to 50 m lower than they are today and the present Solent, Southampton Water, and its tributaries are believed to be remnants of a submerged river system. Dock excavations and numerous boreholes have shown that gravel terraces and peat beds buried by alluvial mud occur at many points in Southampton Water and its tributaries. The main submergence occurred during Mesolithic and Neolithic times (Everard 1953, 263-4). More recent work at Brownson and West Yar on the Isle of Wight has indicated that sea levels rose enough to separate the island from the mainland approximately 6,000 years ago (Devoy 1987). Later subsidence has been more gradual, with a sea level rise of about 0.5 m recorded at Hengistbury Head since the Iron Age (Cox & Hearne 1991, 219).

Gravel terraces and plateaux, divided by eroded valleys, thus dominate the New Forest landscape. Along its north-western boundary a gravel-capped escarpment rises to the New Forest's highest point, 128 m OD on Black Bush Plain (SU 248160). From here the land slopes towards the River Avon in the west and to the Beaulieu

River in the south-east, in a series of terraces separated by wide valleys. The southern part of the New Forest, in contrast, consists of gently undulating gravel-covered terraces descending almost to sea level along the Solent shore.

The geological conditions affecting the nature of the soil in the New Forest are very varied, clays, sands, loam, gravel, and alluvium occurring. The soils are not unusually poor, but they have a high acid content and are, in many cases, ill-drained and podzolised (Tavener 1957). Podzols are very acid, leached soils, the acidity of which is due in part to base deficient parent rocks, partly to comparatively low temperatures which check decomposition of and oxidation of organic matter, and further to the intrinsically acid-forming nature of the fibrous remains of plants which flourish in such conditions (Cornwall 1961, 108-9). Bagshot and Bracklesham Beds, which occupy large areas of the Forest, give rise to the most severe acidity. Further south, along the coastal belt, the more fertile Headon Beds occur as loam, clays, and clay with marl, but large areas are overlain by gravel.

Valley mires are common in the New Forest. The proximate cause of their formation is the collection of groundwater and lateral water-flow over slowly permeable soils issuing in breaks of slope, hollows, and valley bottoms. Peat development is a natural interglacial process in the Hampshire Basin and radiocarbon dating of New Forest peat mires has shown the process of peat inception has operated since the late Devensian (Clarke & Barber 1987, 23).

Palaeoenvironmental Studies

Palaeoenvironmental techniques have been used to reconstruct the former vegetation patterns of the New Forest. On the heathlands and many Tertiary deposits, land snails do not survive and bone preservation is variable, but pollen is well-preserved (Allen 1996, 55). Since pollen is only found in soil which has become sufficiently acidic for its preservation, there may be no pollen evidence for vegetation prior to soil impoverishment. Examinations of stratified pollen sequences from New Forest valley bogs have been carried out to assess the regional pattern of vegetation change.

The first detailed pollen diagram published was for Cranes Moor (SU 191028) (Seagrief 1960). This provided information for the period c. 7000–4000 BC, but later layers had been removed by peat cutting. In the 1970s further peat sequences were examined, the key site being Church Moor (SU 247069) which provided information from approximately 7500–5500 BC to recent times (Barber 1975). Its sequence was related to less complete profiles obtained from other bogs (Barber 1975; 1981). Such studies have provided useful information about broad changes in vegetation over long time spans.

Soil pollen has also been examined in the New Forest. In 1955 a study of pollen from soils under six deciduous woods was published (Dimbleby & Gill 1955), while soils related to archaeological earthworks, and their pollen profiles, have been studied to determine the vegetation growing on the sites prior to burial (Tubbs & Dimbleby 1965; Reynolds & Catt 1987). During the 1950s and 1960s Dimbleby carried out initial investigations at securely dated archaeological sites: Burley Moor round barrow (SU 212052); a barrow on Beaulieu Heath (Dimbleby 1954); and Lyndhurst Old Park bank (SU 314077). Further work was undertaken by Dimbleby on samples from soils buried beneath the banks of undated enclosures at six sites, Setley (SZ 303994); Crockford (SZ 355994 and 358993); Hinchelsea (SU 265009); Holmsley (SZ 208998); Long Slade Bottom (SU 266009); and Pilley (SZ 344984) (Tubbs & Dimbleby 1965).

Profiles of soils themselves have also been studied. Reynolds and Catt (1987) examined soil profiles beneath and adjacent to banks of further undated enclosures at Homy Ridge (SU 232160), Long Slade Bottom (SU 266009), Burley Moor (SU 213043), East Boldre (SZ 358995), and Hatchet Gate (SZ 367018).

Palaeoenvironmental studies in general provide a long sequence of climate and vegetation development from the late Glacial through to Holocene times. From about 3000BP we see a reduction in woodland, expansion of the open landscape and major heath development. The expansion of heathland has been linked with soil degradation, leading to the formation of podzolic soils. Studies in the New Forest have shown a general transition

from woodland to heathland, with evidence of soil deterioration, consistent with what is known from pollen analyses elsewhere on English lowland heaths (Dimbleby 1962). The change from woodland to heathland is thought to have been caused by, or accelerated by, human activity (Allen & Scaife 1991; Scaife & MacPhail 1983). Change did not occur simultaneously in all parts of the Forest, and heathland probably appeared earliest on base poor soils such as the Plateau Gravel. Heathland vegetation associated with podzolic soils certainly existed on Plateau Gravel before the late Bronze Age (Dimbleby 1962; Reynolds & Catt 1987) and podzolisation was complete before 1300AD (Dimbleby 1962). On other parent materials heath vegetation and acidic soils with incipient podzolisation appeared only in later periods (Reynolds & Catt 1987). Woodland persisted in some areas, particularly in the central belt, and some unenclosed woods in the New Forest overlaid undisturbed acid forest brown earth indicating that they have never been cleared and farmed (Dimbleby & Gill 1955). Woodland recolonization of open areas has also been noted in parts of the Forest, and the successive retreat and reappearance of woodland on the western limits of the Forest is indicated by an unpublished pollen diagram for Must Thorns Bottom (SU 194149) (Tubbs 1986, 63). The origin and age of the New Forest's unenclosed woodland has been much debated. It has been attributed to medieval coppicing (Lascelles 1915) but this is disputed (Flower 1980, 192). Rackham believes most of the existing trees in the unenclosed woods date from 1663–1763, 1858–1923, and 1938–1960, when grazing was slack (1983, 174).

Chronological Methodology

A number of methods have been used to arrive at a chronology for archaeological earthwork remains in the New Forest. Easily identifiable classes of monument, such as burnt mounds, barrows, and hillforts, are dated by excavated parallels elsewhere, or by small finds recovered during excavation. For other remains, buried soils beneath earthworks have been dated by pollen analysis. Conventional pollen analysis uses progressively accumulating deposits such as peat or

lake mud. Soil pollen is quite different, being only crudely stratified (Dimbleby 1985, 2–5). Dates for buried ground surfaces are proposed by relating their pollen profiles to nationally or regionally accepted sequences of vegetation change tied into a time-scale based on some direct dating method such as radiocarbon dating. In areas where the general pattern of vegetation change has been established and tied into an absolute time-scale by radiocarbon dating, isolated pollen spectra may be fitted into their appropriate position in the known sequence to give a date (Dimbleby 1963, 139). Pollen dates are estimated on the basis that certain tree genera became scarce or were reintroduced at known times in the past, for example a drastic decrease in hazel occurred in the New Forest soon after the Iron Age. Pollen analysis of New Forest sites has sometimes been combined with radiocarbon dating of organic matter within the soils. Radiocarbon dates obtained in this way are very imprecise for dating earthwork features. Since organic matter is continuously added to soil, and is therefore at different stages of decomposition, any date obtained includes the mean residence time of soil humus at the time of burial. The magnitude of this error is unknown, but it is likely to be in excess of 1450 years. Although useful in the absence of more precise information, palaeoenvironmentalists themselves stress that the methods do not necessarily give accurate dates of burial (Tubbs & Dimbleby 1965, 88; Dimbleby 1954, 235; 1985, 62).

THE ARCHAEOLOGICAL EARTHWORK REMAINS

Hillforts

The earliest known enclosure earthworks to be considered here date from the Iron Age (600 BC–AD 43). Seven enclosures within the New Forest may be classified as small 'hillforts', three of which command the estuaries of the two major rivers. Exbury promontory fort (SZ 419987; SZ 49 NW 3) (Fig. 2a), situated at the mouth of the Beaulieu River, lies only a few metres above sea level. It is 'defended' by natural features, the river and adjacent marsh, on its southern and western

sides, and by earthworks which have been partially destroyed by gravel digging, salterns, and cultivation on its eastern and northern sides. Earthwork remains of the former post-medieval settlement of Lower Exbury (SZ 42029876; SZ 49 NW 4) (Fig. 2b), which was moved to Exbury by the Mitford family in the 18th century, are also visible on the survey plan.

On the west of the project area the prehistoric enclosure of Ampress Camp (SZ 320970; SZ 39 NW 8) once lay on the western bank of the Lymington River. Like Exbury, it made use of a low-lying shelf, standing only 3 m above riverine mud flats, defended on the south and west by earthworks, and on the two remaining sides by natural defences of the Lymington River and a tributary stream. The enclosure, now mostly destroyed by landscaping, was once recorded as univallate, but excavations (Robertson-Mackay 1959) confirmed the presence of a second bank and ditch depicted on early plans (eg Gough 1806). Pottery of Iron Age and early medieval date has been recovered from the site (Williams-Freeman 1938; Robertson-Mackay 1959).

Buckland Rings (SZ 315968; SZ 39 NW 7) (Fig. 3A) is situated only 400 m to the west of Ampress. At 20 m OD it occupies a position of reasonable strength, defined by contour-following earthworks enclosing approximately 2.8 ha of a gravel ridge. It is undoubtedly the New Forest's most impressive hillfort, being the only well-preserved multivallate example in the district. A sketch in Gough's edition of Camden's *Britannia*, 1806, and excavations in 1933–4 (Hawkes 1936) showed that an intrenched entrance, characteristic of the early Iron Age, formerly lay in a natural gully in the centre of the eastern side, which was ploughed out in the 18th century. A timber-framed rampart appears to have been constructed at the site some time between the 6th and 4th centuries BC, with occupation continuing into the 1st century BC. The pairing of enclosures seen with Buckland and Ampress is interesting. It is not known whether the sites are contemporary or whether one is a precursor of the other. Both are well sited to control movement along the Lymington River, while Exbury is similarly well placed on the Beaulieu River.

Two further enclosures, largely destroyed be-

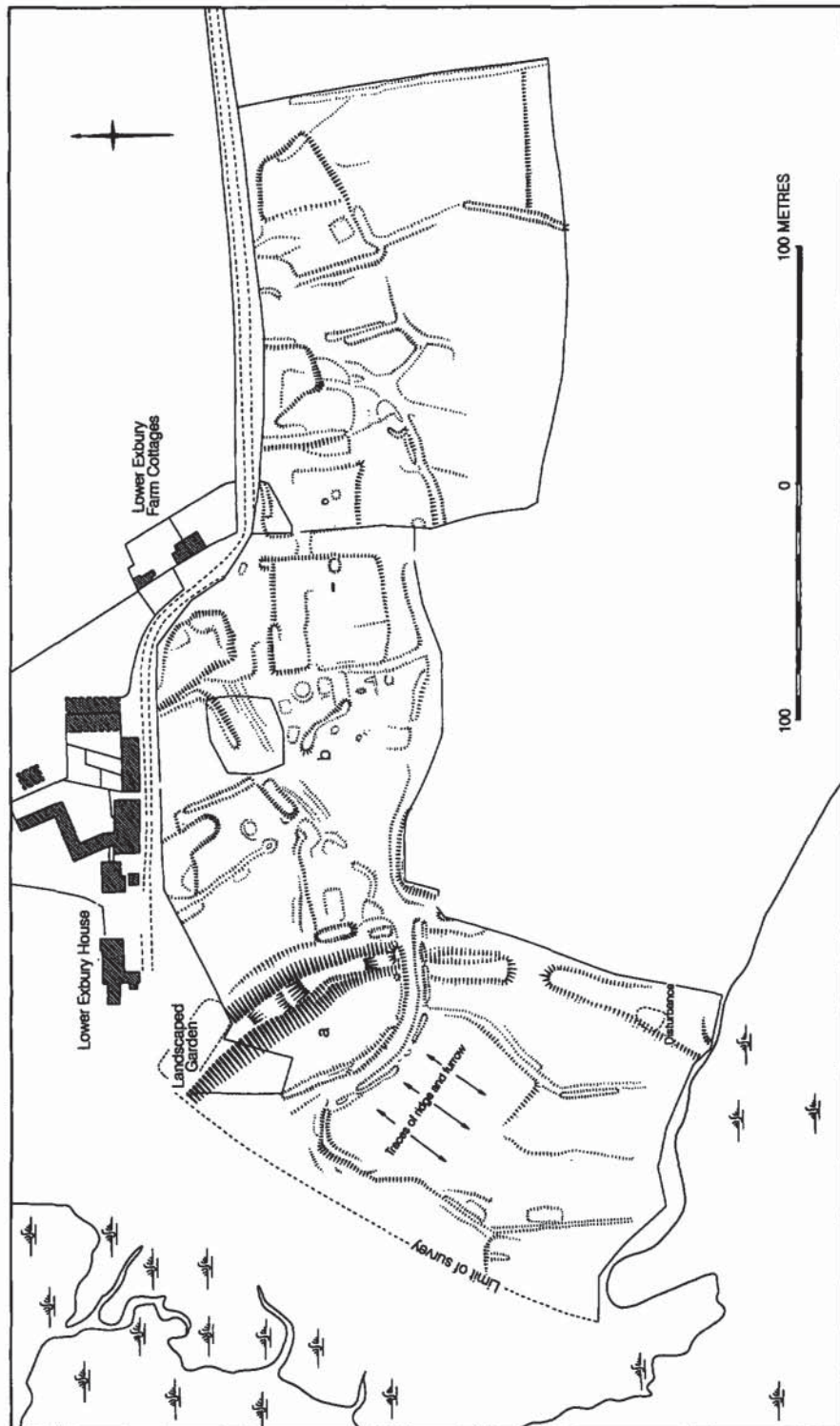


Fig. 2 Earthwork remains of promontory fort and settlement at Exbury

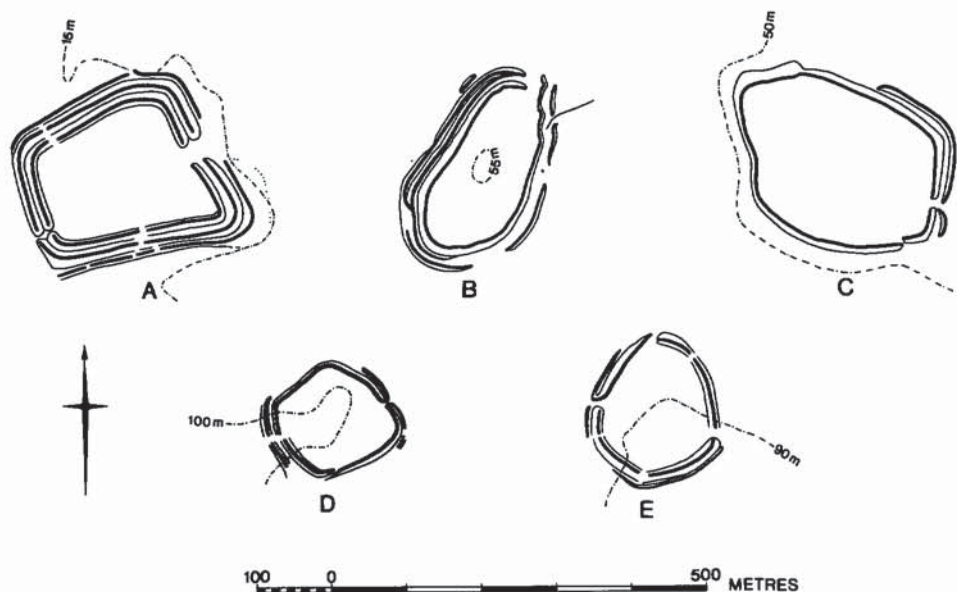


Fig. 3 New Forest hillforts. A Buckland Rings, B Tatchbury, C Frankenbury, D Castle Malwood, E Castle Hill, Burley.

fore 1915, are said to have existed close to Buckland Rings, but are of uncertain authenticity. The first, situated at a place called 'The Copse', near the grounds of Buckland House, was examined by Williams-Freeman, who observed that it was so mutilated by sand diggings as to be barely recognisable. The ramparts he saw were arguably just topsoil piled around the edges of a gravel pit. Gough (1806) mentions a possible camp on Mount Pleasant, on the other side of the Lymington River where H Burrard's monument stands on a spur overlooking the river, at SZ 333958. It was said to have contained 10 acres (4.05 ha), with its outworks covering 10 acres more. To the east, a rampart at Hamble Common (SU 40 NE 10) also demarcates a piece of land below the 8 m contour line in the angle formed by the Hamble River and Southampton Water. A further earthwork enclosure known as 'The Walls' (SU 31 NE 16) is shown at SU 358159 on the Ordnance Survey 6" map of 1910. Crawford (1925) classified it as a prehistoric settlement comparable with Exbury, but it was destroyed by military activity and gravel extraction prior to 1953.

The remaining New Forest hillforts lie further inland, but are all close to heads of main drainage systems and ideally sited to control small scale movement of goods and people inland. Many lie on gravel-capped ridges and have thus been prone to quarrying. Castle Hill, Burley (SU 19870393; SU 10 SE 9) (Fig. 3E) lies at 85–95 m OD, on a prominent gravel scarp at the head of a tributary overlooking the Avon valley. A single bank and remains of an external ditch enclose a roughly oval area of approximately 2.4 ha. Malwood Castle (SU 27691220; SU 21 SE 8) an enclosure of 1.6 ha, lies in woodland on a sub-square gravel spur at c. 100 m OD, above the heads of several streams running east into the River Test. Its earthworks are roughly contour-following and consist of a single bank with an external ditch. Excavations in 1972 revealed evidence for probable timber revetment of the rampart, but no small finds were recovered to assist with dating (Betts 1974). The north-western side has been quarried so only the main rampart and a ledge representing a portion of the former ditch remains. On the south-western side at least one spread outer bank and ditch probably represent additional defences. On the

basis of their slighter form and position, it has been suggested (Betts 1974, 8) that these outer earthworks may belong to an earlier promontory fort, but no evidence was found by the RCHME to substantiate this and, although on a slight promontory, the site lacks strong natural slopes.

Tatchbury (SU 330145; SU 31 SW 1) (Fig. 3B), the only other multivallate hillfort in the New Forest, occupies the summit of a hill at 50 m OD above a low-lying plain on the eastern edge of the New Forest, also adjacent to several streams issuing into the River Test. Its oval enclosure of 2 ha is defined by contour-following earthworks. It has been badly mutilated by later use as an ornamental garden and by Tatchbury Mount Hospital. The ramparts are now densely overgrown with rhododendrons. The site has not been excavated but there is no doubt about its interpretation and Williams-Freeman (1915, 410) notes that a 'Celtic' comb has been found there.

Frankenbury hillfort (SU 16721521; SU 11 NE 21) (Fig. 3C) is another irregular-shaped enclosure situated in a prominent position, at c. 70 m OD, on a gravel scarp overlooking the River Avon. The 4.5 ha enclosure is defined by a single scarp, which follows the contours of steeply sloping ground on its southern, western, and north-western sides, with a slight ledge indicating the position of the former ditch. The western part of the site now lies within woodland, while the remainder of the circuit forms the boundary of a field under cultivation. The site has not been excavated and no finds have been recorded, but from its situation and earthwork form there is no reason to doubt its classification as an Iron Age hillfort.

A further earthwork (Sumner 1917, plan opp. p. 45) formerly enclosed the southern end of a high spur of Gorley Hill, at SU 16431120 (SU 11 SE 12). It consisted of a single bank and ditch crossing the neck of the spur to the north, supplemented by scarping of the hillside on the eastern side and steep natural slopes on the southern and western sides. An entrance gap cut slightly to the east of centre through the bank and ditch, faced a small rectangular enclosure (SU 11 SE 10) which lay immediately to the north. Excavations by Sumner in 1916 revealed evidence for Romano-British occupation of the small enclosure, but nothing for the larger enclosure (Sumner 1917,

48–59). Both earthworks have now been largely destroyed by gravel extraction; only the enhanced scarping of the eastern side of the hill and the western end of the cross-bank survive.

Multivallate hillforts are largely confined to western Wessex, and virtually all those in Hampshire lie in the west of the county beyond the River Test. Those in the New Forest are of the 'compact' Wessex type, with closely spaced ramparts. Multivallate sites usually had more than one structural phase. In most cases the first phase consisted of a univallate fort to which extra ramparts were added at a later date. Univallate forts with less substantial defences and simple gap or incipient in-turned entrances generally appear to be of early date. Most New Forest hillforts excavated appear to have had timber- or turf-revetted ramparts which also suggests an early construction date of 800–500 BC (Avery 1993, 152), although berms between hillfort ramparts and ditches, indicative of former revetting (Forde-Johnston 1976, 12), were not seen at any of the sites investigated.

The uses of hillforts in general seem to have been diverse. Some were densely occupied and possibly used as distribution centres, or centres for controlling regional trade networks, others were only sparsely occupied and possibly used as refuges or stock enclosures associated with seasonal exploitation of upland areas. In some areas of Britain, especially where hillforts are found in association with concentrations of earlier monuments, there has been a growing interest in their possible ritual use. New Forest examples do not have any obvious association with earlier monuments and, although their distribution is riverine, most stand apart from surviving round barrows.

The riverine and coastal siting of New Forest hillforts is interesting in the light of recent research. It may indicate a role in controlling movement of people and goods along the coast and inland via rivers. Sherratt (1996) makes particular reference to the River Avon as a link for cross-Channel movement. During the late Iron Age growing cross-Channel trade meant that New Forest rivers formed vital access routes to the Solent coastline, and it is probably in this context that the major New Forest hillforts may be explained. There is no evidence to suggest that they were densely occupied. No hut circles are visible

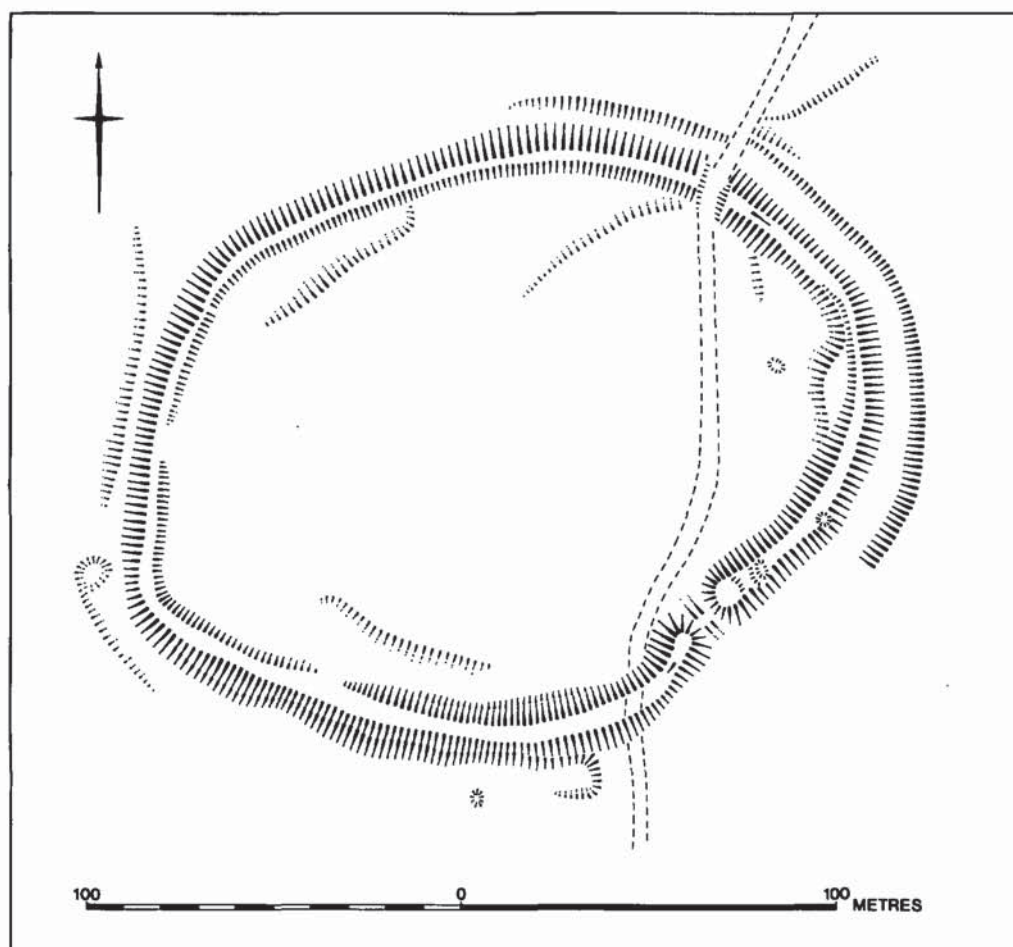


Fig. 4 'Castle Piece' earthwork enclosure

as earthworks inside them, but their interiors have usually been disturbed by quarrying, ploughing, or buildings and gardens. The few archaeological excavations carried out have also been confined to the enclosing banks and ditches.

Smaller Iron Age Enclosures

In addition to hillforts, there are five lesser curvilinear enclosures within the New Forest which are believed to date from the Iron Age. These enclosures are smaller, less than 2 ha in area, and occupy less prominent positions than the hillforts,

but are similarly situated close to river systems. They are simple, univallate, and sub-circular in plan. Their earthworks are generally very denuded, usually consisting of a single very spread bank and a silted external ditch.

A well-preserved example is Castle Piece (SU 19900895; SU 10 NE 18) (Fig. 4), an enclosure lying on a gentle west-facing slope overlooking the Linford Brook, at c. 75 m OD. Its earthworks consist of a single spread bank with intermittent remains of an external ditch, defining a sub-circular area of approximately 2 ha. A gap on its south-eastern side flanked by terminals slightly

curving inwards almost certainly represents an original entrance. In 1978 a damaged section of the enclosure earthwork, recorded by the New Forest Section, revealed the inner edge of the ditch beneath spread bank material, but no finds were recovered to assist with dating (Pasmore 1979).

A similar enclosure (SU 21 NW 34) (Fig. 5) lies at SU 232159, situated at *c.* 120 m OD on level ground forming part of a gravel-capped plateau known as Homy Ridge. The earthworks comprise a denuded boundary bank, in places only visible as a slight scarp, with an external ditch of V-shaped profile, enclosing a roughly circular area of about 0.9 ha. The bank measures at most 0.4 m high, with the ditch 0.2 m deep. A gap in the earthwork circuit may be the original entrance. An examination of the interior revealed no internal features except a roughly rectangular platform 14 m by 12 m defined by two scarps and the remains of a bank, maximum 0.3 m high. In 1988 excavations on the enclosure's south-eastern boundary by the New Forest Section recovered a cordoned jar of sandy grey fabric, from the bottom of the ditch, which has been dated to the 1st-century AD (Pasmore & Fortescue 1989, 9, fig 1). This appears to have come from a well-stratified context, and provides a good indication of the period of use of the enclosure, whose earthwork form is certainly consistent with an Iron Age date.

In Sloden Wood a further very wasted earthwork (SU 21 SW 4: SU 21601285) (Fig. 6a) defines an oval enclosure of roughly 1.3 ha. This enclosure also lies on level ground, at *c.* 105 m OD, on a gravel-capped ridge between Dockens Water and the Latchmore Brook, again not a strongly defensive position. The northern part of the enclosure lies within Sloden Inclosure, a plantation of 1864, and it is here that it is best preserved with the bank averaging 1.3 m high, with slight traces of an external ditch. The remainder of the enclosure is very denuded, standing to no more than 0.5 m high, with no trace of a ditch. The original entrance probably lay on the eastern side, there being no indication of any breaks in the circuit on the better preserved western side. In 1992–4, excavations of the earthwork by the New Forest Section found Roman pottery in later

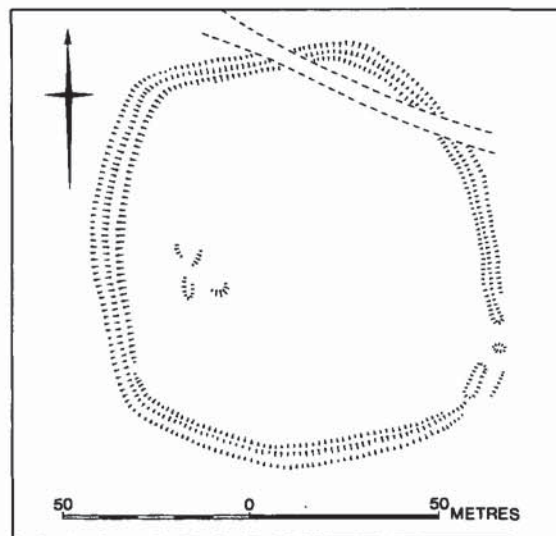


Fig. 5 Earthwork enclosure at Dark Hat Wood, Homy Ridge

phases of the ditch silts, suggesting that the earthwork was already of considerable age prior to the establishment of a nearby pottery kiln, probably in the 3rd century AD (Pasmore 1994). Field investigation of the earthworks confirms that they would be consistent with an Iron Age date, and the RCHME survey has established, by earthwork relationships, that the enclosure clearly pre-dates Sloden coppice boundary, which is known to have been established by at least 1609.

The very denuded condition of the earthworks at the latter two sites in comparison with Castle Piece is difficult to explain, but it could be the result of ploughing. At Dark Hat evidence for cultivation of Roman or later date was found during an investigation of buried soils nearby (Reynolds & Catt 1987, 522). The entire Sloden earthwork fell within a timber plantation created in about 1768 (Stagg 1989, 143) but the fact that the best preserved portion coincides with, and falls within, Sloden Inclosure boundary of 1864 would suggest that the levelling of the remainder has occurred since that date.

A smaller, and almost perfectly circular, enclosure of approximately 0.8 ha (SU 335083; SU 30 NW 11) (Fig. 7) lies at Matley Ridge, in an area of

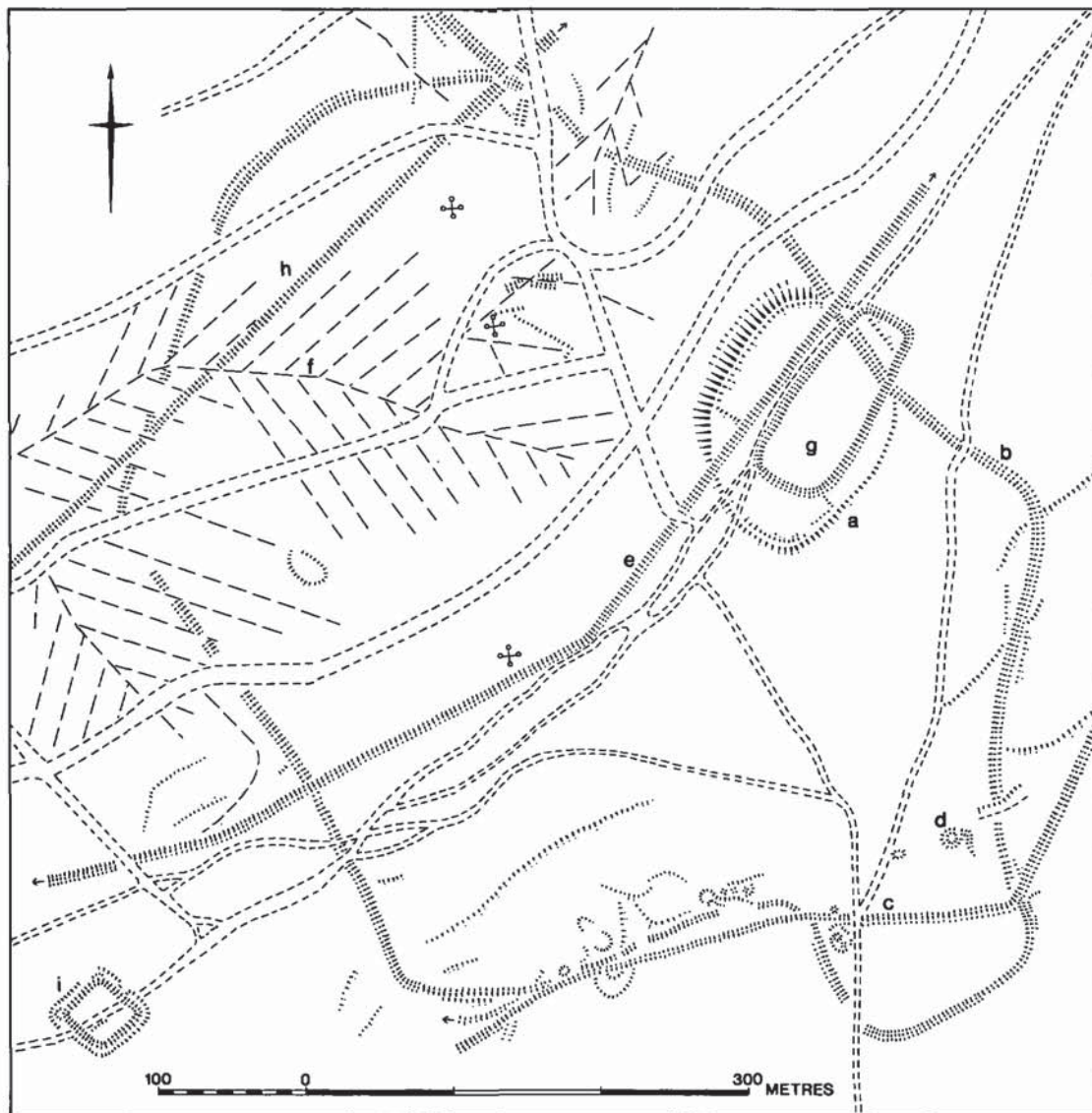


Fig. 6 Earthwork remains in Sloden Wood. a. Iron Age enclosure; b. coppice enclosure, pre 1572; c. timber enclosure, 1768; d. pig pound; e. statutory enclosure, 1768; f. forestry drains; g. post-medieval enclosure; h. earthwork of uncertain date or purpose; i. medieval lodge site

open heathland south of Ashurst Lodge. A small barrow group (SU 30 NW 10) is situated 250 m to the south and a number of hollow-ways run between this and the enclosure. All the earthworks

are on a slight ridge, at 35 m OD, close to the source of the Beaulieu River. The enclosure is a prominent feature defined by an earthen bank with an external ditch. The bank is strongest on

the south, where it measures 1.3 m from the bottom of the ditch, the inner face rising to 0.6 m above the interior. A break of slope in the outer face of the bank on the southern side suggests there has been an episode of re-cutting, possibly resulting from military use during World War I when a trench mortar school and artillery range were located nearby (Pasmore 1977, 135). The surrounding ditch is also well defined on the southern side, measuring up to 0.8 m deep. A gap in the eastern side of the enclosure probably represents the original entrance since the ditch disappears here and the bank turns outwards and is slightly more substantial. The interior has been mutilated by burrowing animals, but an examination of the burrows revealed no artefacts thrown to the surface. There is thus no evidence, other than by association, for the date or function of this enclosure; however, its size, shape, and its situation on prominent ground add weight to its interpretation as of Iron Age date.

The ring-work and bailey at Castle Hill, Godshill (SU 11 NE 11; SU 16661617) (Fig. 8), situated on the end of a prominent spur overlooking the Avon valley, is an unusual earthwork comprising an oval ring-work with two small square outer baileys to the north-east. The ring-work overlies a probable further Iron Age enclosure (A on plan) well-placed overlooking the River Avon. The ring-work is the only known example of an earthwork castle within the project area, and has been interpreted as an adulterine castle, perhaps the temporary fortification used by Hugh de Puiset in 1148 (Read 1994).

At Crockford (SZ 35749933; SZ 39 NE 10) an Iron Age settlement site is today visible as an oval enclosure lying in a small clearing amongst dense gorse. It is defined by a very denuded and spread bank with traces of an external ditch, similar to the earthworks at Sloden and Dark Hat. The enclosure has an overall diameter of 45 m, the bank 5 m wide by 0.4 m high, and the ditch 3 m wide by 0.3 m deep. The only indication of an entrance is a possible causeway across the ditch on the eastern side, which faces a horned entrance within a com-

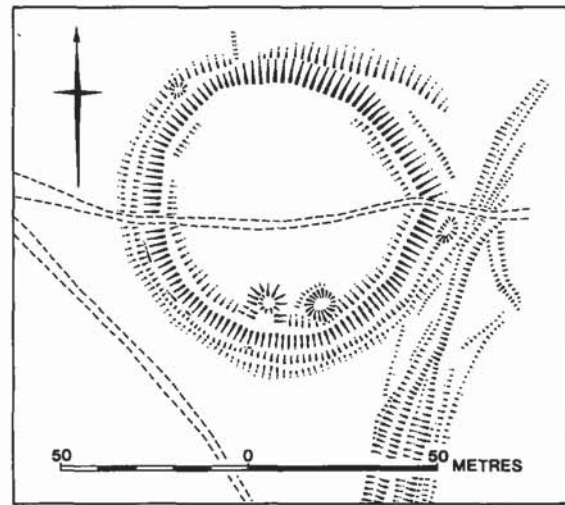
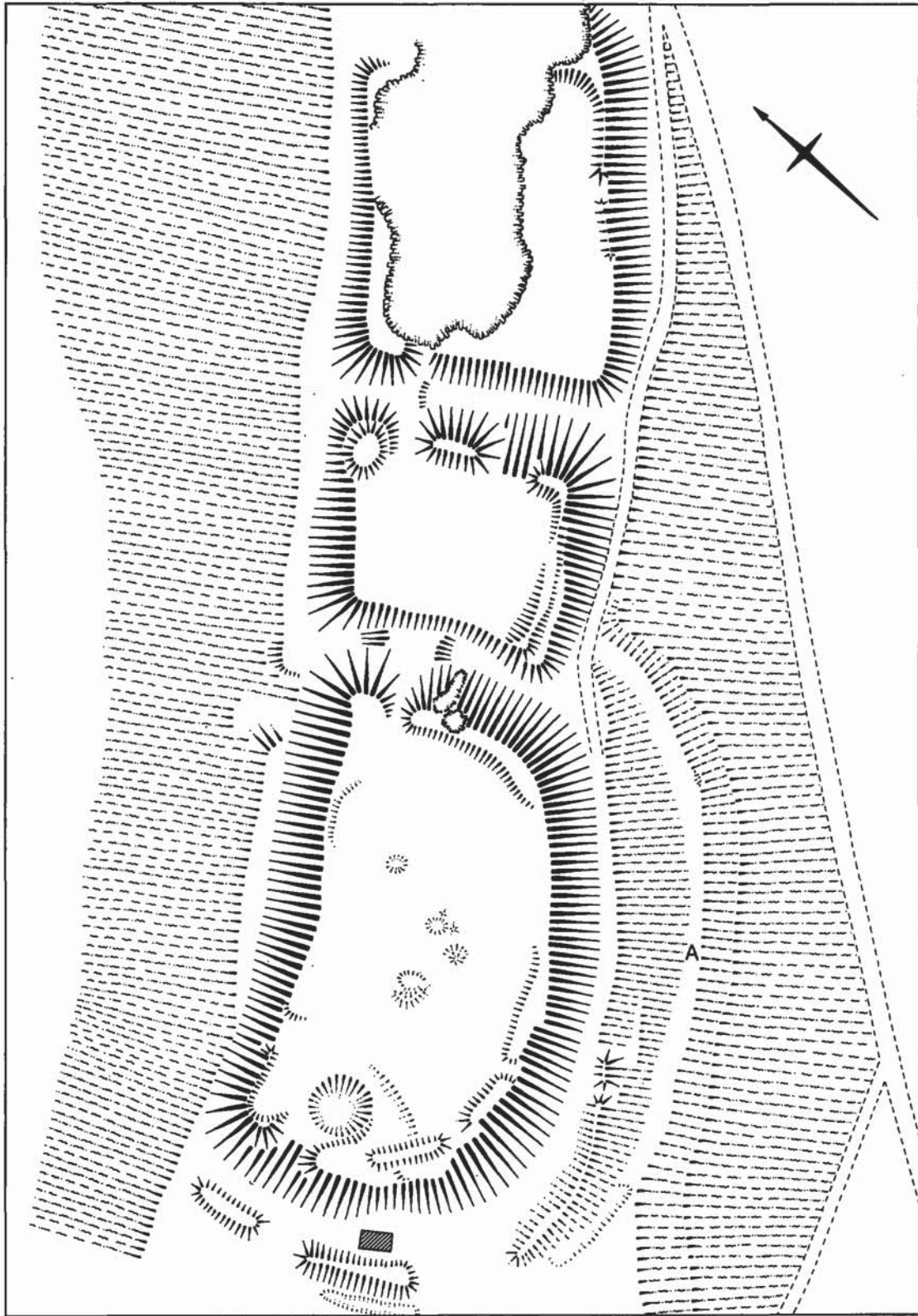


Fig. 7 Earthwork enclosure on Matley Heath

plex of adjacent larger enclosures, similar to an Iron Age entrance at Chickengrove Bottom, south Wiltshire (D McOmish pers comm) (SU 02 SW 13). Excavations by the New Forest Section in 1964–6 revealed post holes apparently truncated by later ploughing, three pits with signs of burning, a V-shaped ditch, and a small amount of Iron Age and Romano-British pottery (Pasmore & Fortescue 1979).

The finds recovered concur in giving a late Iron Age to Romano-British date range for these New Forest enclosures. These include late Iron Age artefacts from Castle Piece, Iron Age and Romano-British pottery from Homy Ridge and Crockford, and also pottery indicating a pre-3rd century AD date for Sloden. The earthwork form and size of the enclosures is also broadly consistent with this date range when compared with Iron Age sites elsewhere, such as Meon Hill (Liddell 1933). Apart from the enclosure at Castle Hill, which may be better classified as a hillfort, none of these enclosures lie in naturally defensible positions. They also have level approaches, but the earthworks are no stronger on these sides than in

Fig. 8 (opposite) Ringwork and bailey earthworks overlying an earlier hill-top enclosure at Castle Hill, Godshill. Scale 1:1000



the remainder of their circuit. This suggests that defence was not the dominant consideration in their construction. Most also have entrances facing east or south-east towards sunrise, which may have symbolic significance in further considerations of cosmological approaches (Oswald 1997). Almost all the Iron Age hillforts and lesser enclosures now lie within woodland or farmland, in striking contrast to the largely heathland distribution of the Bronze Age earthwork remains. In the absence of evidence for Bronze Age settlement or agriculture it is impossible to draw any firm conclusions about whether this represents changes in land-use. There was a shift from unenclosed to enclosed settlement forms in many areas of Britain in the earlier part of the first millennium BC and Thomas has recently (1997) argued that enclosures of this period had a social purpose in emphasising 'insider/outsider' distinctions. He links changes in society with an intensification of agriculture, particularly arable production, which generated a stronger concept of land as property. In the absence of linear ditches or Iron Age field systems, however, evidence for intensification of agriculture is lacking, and from the density of known sites, the New Forest appears to have been sparsely populated in comparison with the chalkland.

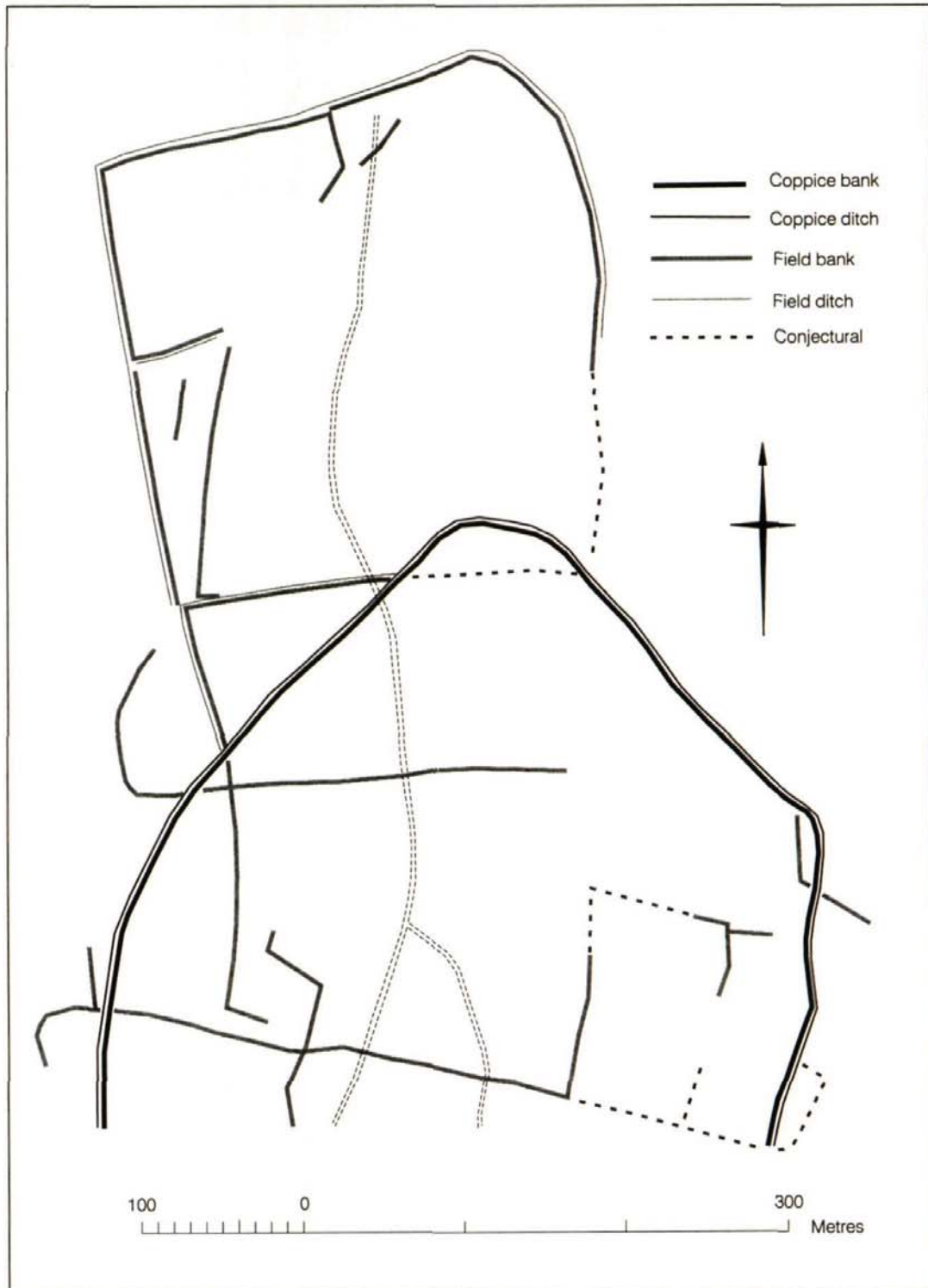
Prehistoric and Roman Field Systems

A limited examination of aerial photographs combined with field reconnaissance for the RCHME project, revealed that extensive field systems or land divisions characteristic of the later prehistoric and Roman periods elsewhere are rarely to be found as earthworks in the New Forest. The reasons for the apparent absence of land division and field systems in the New Forest are uncertain. It may simply be that the area was less valuable for agriculture than the chalkland, but this does not explain why Bronze Age land division occurred on areas such as Dartmoor but not the New Forest. The palaeoenvironmental evidence shows that by at least the mid to late Bronze Age cattle, sheep, and horses would have needed to roam

large heathland areas for the vegetation to sustain them, and by then the area was not fertile enough to be intensively cultivated. As a result, well-defined field systems did not develop and any crops grown were probably in small cultivation plots cleared from the heath and soon abandoned. Perhaps the nature of social organisation differed from that of these other areas. Cultural differences between other communities and those of the New Forest may also result in or arise from the different forms of land-use.

Despite the lack of evidence for intensive land-use, several earthwork enclosure complexes may represent the remains of field systems of later prehistoric or Roman date. One such field system lies partly on open heath and partly in woodland on Ridley Plain (SU 203063; SU 20 NW 24) (Fig. 9). The northern portion of the field system, on open heathland, consists of two sub-rectangular fields, defined by well preserved banks approximately 2.5 m wide and up to 1 m high, with external ditches up to 1.5 m wide by 0.5 m deep. The southern part lies largely within Ridley Wood. It consists of fragmentary remains of at least three sub-rectangular fields defined by lynchets up to 1.5 m high. A substantial lynchet, 2 m high, forming the axis of the field system is clearly cut by Ridley coppice bank, which dates from at least 1590 (Flower 1980, 188). The field system continues to the west, where further lynchets are cut by the western side of Ridley coppice enclosure and end on heathland beyond. Probable field banks visible east of Ridley Wood on aerial photographs may have formed part of the same complex. The condition of the earthworks to the north of the wood suggests that this part of the field system has been re-used at a later date. Partial coppicing of an area recently used as a field system is unlikely, particularly since coppices were based upon groups of existing trees. This suggests that the fields were abandoned long before 1590. By its form, the earliest phase of the field system at Ridley certainly corresponds with cohesive field systems of the type found in other areas of Wessex, which are believed to date from the Iron Age.

Fig. 9 (opposite) Earthworks of former field systems and part of a coppice enclosure surviving on Ridley Plain



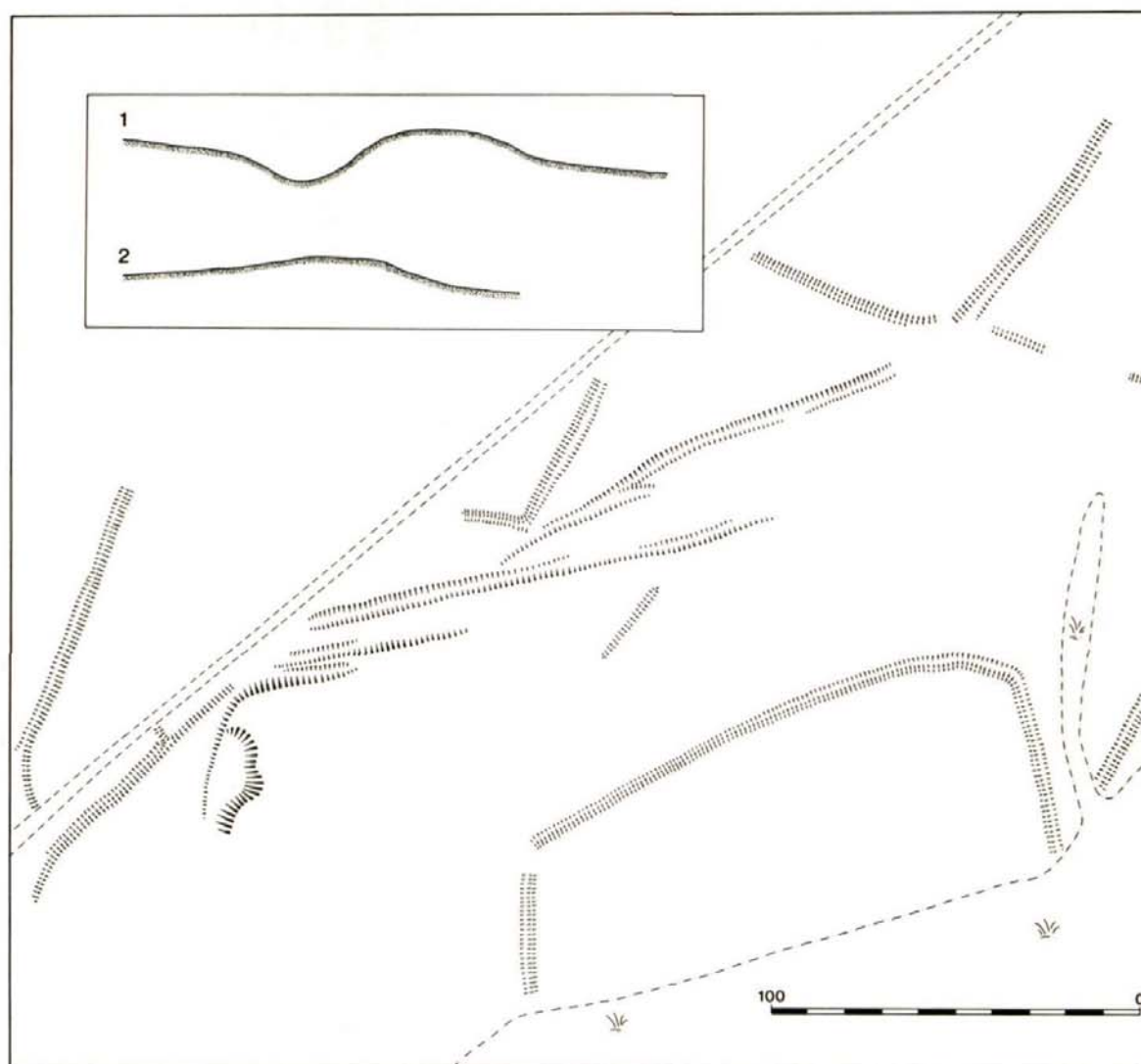
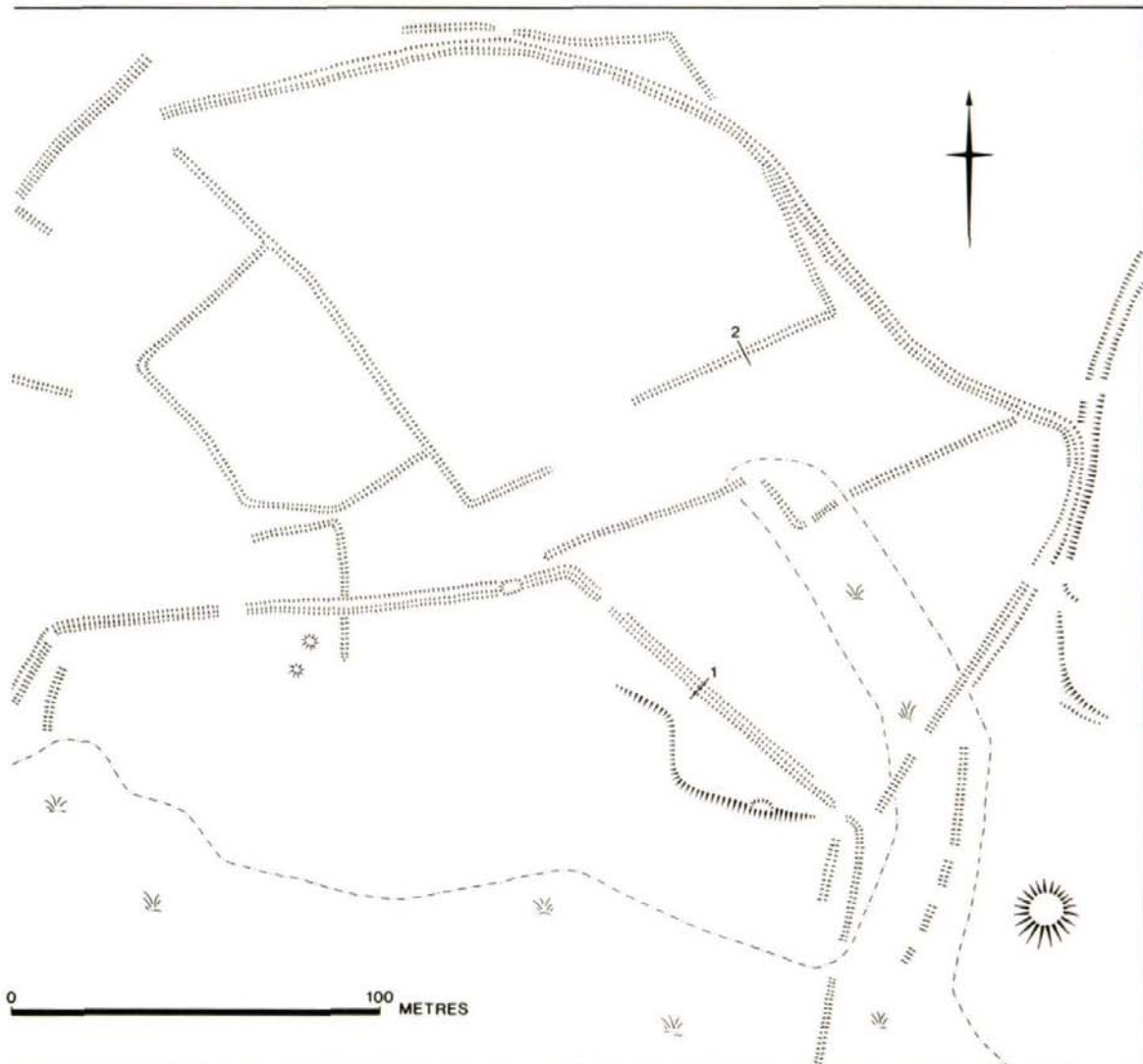


Fig. 10 Earthworks of former fields at Shepton Water

At Shepton Water (SU 30 SE 47; SU 375046) (Fig. 10) the first phase of a field system could also be of prehistoric date. There very denuded banks, approximately 2 m wide and no more than 0.3 m high, define at least four sub-rectangular enclosures of widely differing size before fading into bog. They lie in close proximity to two round

barrows (SU 30 SE 6) and are overlain by later field boundaries.

At Lucy Hill (SU 20 SW 48; SU 226038) (Fig. 19) and at Crockford (SZ 39 NE 9; SZ 355993) further complexes of very denuded banks, possibly the remnants of prehistoric or Roman field systems, underlie probable medieval field systems.



A number of more fragmentary banks and ditches may also be of prehistoric date judging by their earthwork relationships with other monuments. At SZ 36279934 (SZ 39 NE 3), a bowl barrow was seen, by the Ordnance Survey Archaeology Division, to overlie a small bank and ditch. This earthwork runs for 50 m westwards from the barrow before fading into Shipton Bottom and for 20 m eastwards, where it joins another earthwork of similar profile. At SU 3520467 a length of bank

was seen, by the RCHME, to run for approximately 40 m westwards from a bowl barrow (SU 30 SE 3), before fading into bog. A possible Bronze Age field boundary adjacent to a further bowl barrow (SU 30 SE 4) was also identified at SU 35960442. Here one bank 2 m wide by 0.4 m high runs from the barrow and a similar bank runs perpendicular from the first bank. Both fade into bog. The first bank appears to overlie the ditch of the barrow and so post-dates it, but it may still be

of late Bronze Age date. The very spread condition of the banks compared with the barrow, and their alignment upon it, also suggest that this is a possibility. At SU 212042 (SU 20 SW 37) another spread bank is aligned on a possible barrow. Late Bronze Age barrows are frequently located on the edges of field systems.

An early date has been suggested for earthwork enclosures at three locations in the New Forest from soil pollen evidence. The first is a small enclosure forming part of the Crockford 'complex' (SZ 39 NE 9). The Crockford 'complex' is an extensive system of sub-rectangular enclosures occupying over 80 ha of level and gently sloping ground on Beaulieu Heath, at approximately 30 m OD. A plan of the complex has been published by Pasmore and Fortescue (1979). The enclosure sampled, 'Crockford A' (SZ 35769948), is a small rectangular enclosure which abuts larger fields known as 'Crockford B'. Pollen dates for the feature, estimated from tree pollen trends within its buried soil, gave an estimated Bronze Age date and considered it to be a precursor to the larger fields of Crockford B (Tubbs & Dimbleby 1965). The enclosure is similar in size and plan to Deverel-Rimbury enclosures on Cranborne Chase (Barratt *et al* 1991, 143–226), but, unless recut, the earthworks are rather sharp and well-preserved to be of Bronze Age date. The earthwork relationship between Crockford A and Crockford B is inconclusive. The ditch of Crockford B continues through to form the southern side of Crockford A. Crockford A is thus either cut by Crockford B, with no sign of a continuation beyond, or Crockford A has been appended to the pre-existing field boundary of Crockford B. At SZ 359990, however, a series of very wasted banks underlie, and hence certainly pre-date, the earthworks of Crockford B.

Another series of sub-rectangular enclosures (SU 20 SE 44) was investigated during the 1980s (Reynolds & Catt 1987). This included two at Long Slade Bottom (SU 264010). A radiocarbon date obtained from humic A horizons of soils buried beneath the bank suggested an early Bronze Age date, but this date includes the mean residence time of soil humus at the time of burial, the magnitude of which error is unknown (see above). The soil was buried before the drastic decrease in hazel, which occurred in the New

Forest soon after the Iron Age. Particle size analysis suggested the soil had been homogenised to a depth of about 20 cm, possibly by cultivation. The earthwork boundaries of the Long Slade Bottom enclosures now visible are not of prehistoric type. The enclosing banks, 3 m wide by 0.5 m high, and external ditches, 1.5 m wide by 0.5 m deep, are similar to those of Crockford B. They have very sharp angled plans and their profiles are well defined with little apparent wasting, indicating that they are of a later date.

Using soil pollen evidence, a Bronze Age date was proposed for enclosures at SU 232160 and SU 233161. These enclosures, defined by banks 0.5 m high by 2 m wide and external ditches 1 m wide by 0.3 m deep, lie on a level plateau to the north-east of Dark Hat, an isolated Wood on Homy Ridge, and form part of a system of rectilinear enclosures which extends over some 6.5 ha. All are well preserved and, from field examination, appear to be of a later date than that suggested. Excavations at Homy Ridge in 1988 support this, revealing that at least three other banks forming part of the same system respected the limits of a circular enclosure (Pasmore & Fortescue 1989, 6–9) believed to be of late Iron Age or early Roman date (see above). It is also notable that the earthworks of these alleged Bronze Age fields have a sharper profile and are far more prominent than the Iron Age or early Roman enclosure which survives as a very spread earthwork.

An Iron Age or Romano-British date has also been postulated from soil pollen analysis for the early phase of four small enclosures at Pilley, which display varying degrees of preservation (Tubbs & Dimbleby 1965). These were not examined by the RCHME but, on the field evidence and comparison with other sites, such a date did not recommend itself to fieldworkers of the New Forest Section (Pasmore 1980).

An Iron Age date has recently been suggested (Pasmore 1996) for many isolated field systems, on the basis of failure to discover medieval documentation for them and of evidence from excavations at Hive Garn Gardens (SU 11 SE 78: SU 194150). Here a field system of 3–6 enclosures, covering an area of 12 ha, is superseded by a later enclosure. A lynchet terminating at a bank and ditch was excavated in 1995. Two fragments

of coarse black pottery were found and tentatively ascribed by their fabric to the Iron Age (Pasmore 1995). According to Pasmore (1996), however, the excavation results were inconclusive, but are consistent with finds at Dark Hat, Church Green, and with evidence from fieldwork in parts of Sloden and perhaps Broomy. Earthwork remains of field systems are, however, not to be found at Sloden or Church Green, and Iron Age and Romano-British finds at Dark Hat (Homy Ridge) relate to the sub-circular enclosure previously discussed.

From the evidence above prehistoric field systems clearly do survive as earthworks in the New Forest, but they are not numerous or extensive. Given the good preservation of the New Forest landscape in general it is likely that many more such field systems would be visible today if they had ever existed and if the area had ever been subjected to long-term or intensive arable cultivation.

Medieval Settlement: core and expansion

The New Forest corresponds broadly with an area that in Domesday Book has a density of recorded population averaging less than 1 per square mile (Lewis 1996), but by this time most of the major New Forest settlements had already been established. Lyndhurst, Burley, Minstead, Boldre, and Brockenhurst were then represented by small manors, and there was a scatter of holdings immediately inland on what are now the Sowley, Beaulieu, Exbury, and Cadland estates (Tubbs 1986, 47).

During the medieval period settlements continued to develop as enclosures within the distinctive open landscape of the New Forest. The Lay Subsidies of 1327 and 1334 again show the area to have had a significantly lower than average population (Lewis 1996). In the medieval period the New Forest appears to have been, as now, an area of small dispersed settlements. Settlement types were much more diverse than hitherto and included isolated farmsteads, moated sites, settlements formed by agglomerations of enclosures, common edge settlement, and more distinctive forest types such as hunting lodges.

The morphology of areas enclosed at different times, for different purposes, and in different parts

of the Forest varies and is worth study and explanation. Examination of the current Ordnance Survey 1:25,000 map reveals a number of curvilinear enclosed areas in the centre of the Forest which represent pockets of settlement or farmland apparently carved from the woodland. Perhaps the most obvious of these curvilinear enclaves is seen at Fritham (SU235140) (Fig. 11). Here the present settlement stands within an oval enclosure defined by a bank *c.* 1.2 m wide by 0.5 m high with an external ditch *c.* 1.5 m wide by up to 0.8 m deep, clearly re-cut in places. The bank is surmounted by coppiced trees and old pollards. Within the enclosure sub-divisions are generally straight and regular, defined by hawthorn hedges and either no earthworks or very small banks and ditches of sharp profile, all having the appearance of later sub-division. Fritham is one of only two larger enclaves of enclosed land which cannot be certainly identified in Domesday, and it has the characteristic rounded boundary of a later medieval vaccary (Tubbs 1986, 47). On the eastern side the outer enclosure boundary appears to funnel into the enclosure, possibly for driving stock in.

Cattle were forest animals prior to domestication and can be kept in largely forested areas. As many as ten vaccaries, for twenty-nine cows and one bull each, were enclosed by the Crown in the New Forest by the time of Henry III. They subsequently became small farm holdings. Identifiable places include several post-Domesday holdings with rounded boundaries following the margin of better land. Most were probably of 13th-century or earlier origin and had the purpose of supplying the royal entourage on its visits (Tubbs 1986, 72). A survey of *c.* 1300 lists twelve vaccaries (Stagg 1979, 141), and there were probably more.

The gradual expansion of New Forest settlements, annexing more land by creation of curvilinear closes and crofts as woodland clearings can also be seen in settlement plans of towns, villages, and farmsteads, which often appear as agglomerated enclosures (Fig. 12). Brockenhurst is of particular interest. It was the only manor lying centrally to the New Forest which was not afforested. Here an oval close of reclaimed land, the Wiers, extends south-west from the town to Black-



Fig. 11 The settlement at Fritham lies within a sub-circular enclosure, possibly the boundary of a medieval vaccary.
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hamsley (SU 285003). This waterlogged area has been drained by many ditches and ditched enclosures with up-cast banks. Burley similarly has a curvilinear close, Bisterne Close (SU 228028) extending to the east of the village, and a number of curvilinear closes cluster around Bramshaw village.

In addition to the larger settlements, small farmsteads occupy irregular curvilinear enclosures representing the boundaries of possible medieval or earlier clearance (Fig. 14). Examples can be seen at Hinchelsea (SU 275011), the site of an-

other ancient vaccary (Tubbs 1986, 97), where in 1315 Andrew, son of Nicholas de Cantertone, was fined 10 shillings and allowed to keep an enclosure of 40 acres surrounded by a live hedge and ditch (Stagg 1983, 200). Also at Norley Wood (SZ 360980), where there was local demand for new land in the late 13th century and in the early 14th century the vicar of Boldre occupied 100 acres at 'Northle', enclosed with a ditch and live hedge (*ibid.*). At Ipley (SU 380072) a farmstead today lies in the centre of a close of small fields adjacent

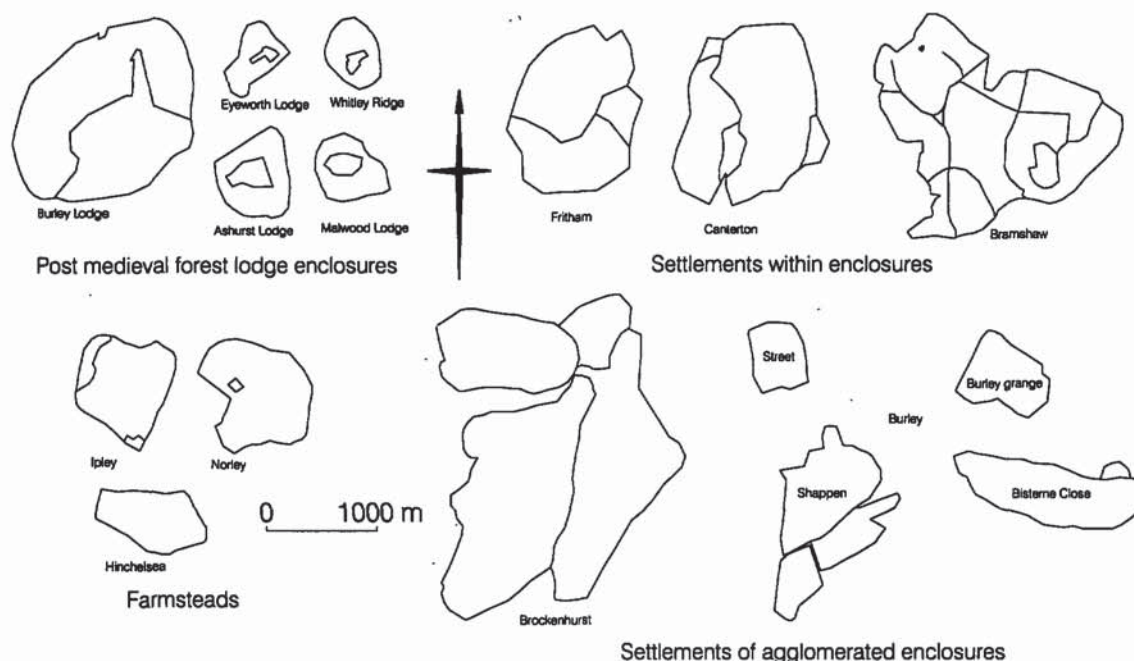


Fig. 12 Various types of enclosure commonly found in the New Forest provide clues to settlement origins

to woodland. Amorphous scarps, possibly the remains of small-scale settlement, lie around the farm, which was first documented in 1210 (Lewis 1996), and is listed as a 'vill' in the Lay Subsidy Roll of 1327-8. It was a vaccary held by Beaulieu Abbey from 1316. Enclosure in these areas accords with evidence for general population increase which, according to Rackham (1983, 55), resulted in the destruction of woodland at a rate of at least 20 acres a day between 1066 and 1226.

Moated Sites

Lying on the periphery of the New Forest, the over-spill from a wider distribution, are several moated sites, a distinctive type of medieval settlement. They include two within the project area: a series of ponds, probably the remains of a moat at Old Charford (SU 16861892; SU 11 NE 6) and Holbury manor moated site (SU 42760360; SU 40 SW 24). The earthwork remains of a further example, which may have been within 50 acres of

land granted to Breamore Priory in 1236, have been found in Royden Woods (at approximately SZ 322997) (Ogilvie 1987). Excavations in other areas have shown that construction of moated homesteads has a narrow date range within the 12th to 14th centuries. They are rare in Hampshire and generally confined to areas of dispersed settlement (Lewis 1996).

Hunting Lodges

Another type of small sub-square or sub-rectangular enclosure, which unlike moated sites is central to – and characteristic of – the New Forest is the royal hunting lodge. Most hunting lodges were situated in areas of permanent afforestation (Fig. 13) and were connected with the king's sport. Although New Forest hunting lodge sites generally lie within woodland today, they may once have been in the open. We know that Studley, at least, was open until 1852 (A Pasmore, pers comm). Little is known about royal hunting lodges in the

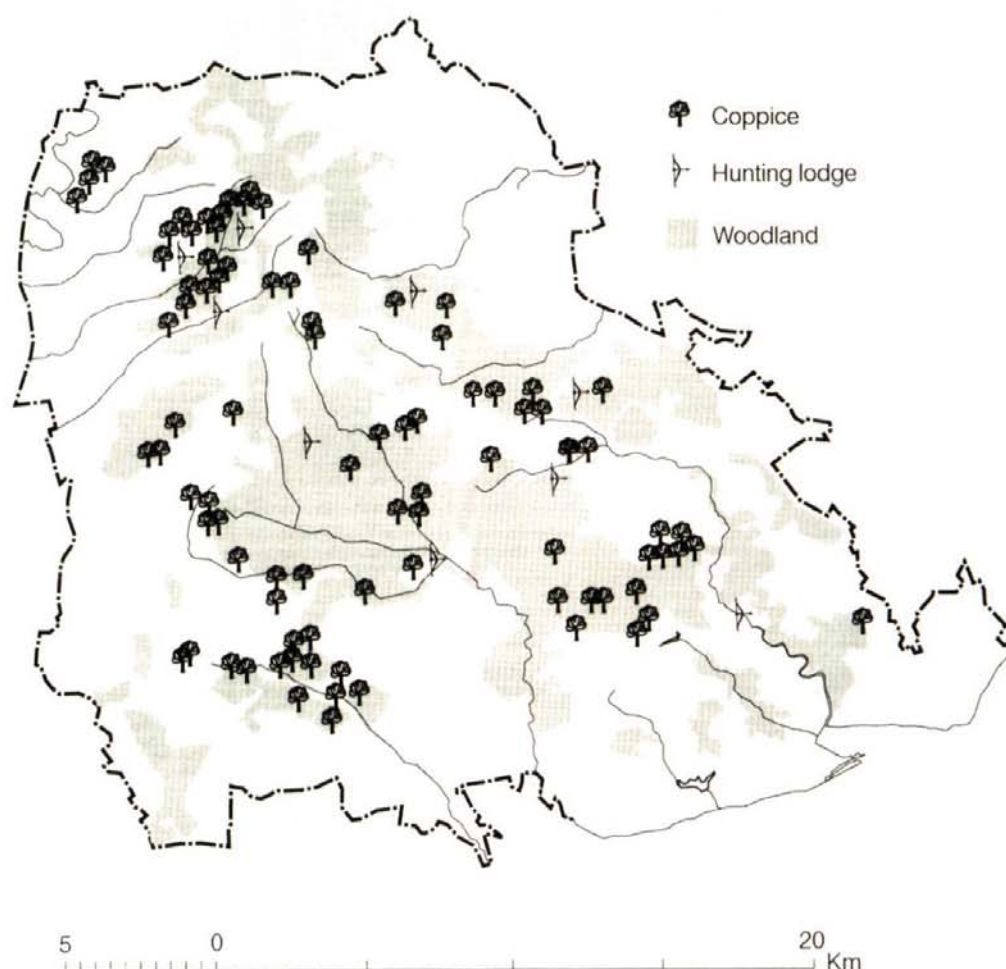


Fig. 13 Distribution of early hunting lodge sites in the New Forest

New Forest before the 14th century, or indeed about the smaller hunting lodges in general. In 1199–1200, however, ‘Master Elias the Engineer’, of Oxford, was working on royal hunting lodges in the Forest (Allen-Brown *et al* 1963, 983) and in 1204 King John gave a royal lodge to Beaulieu Abbey (Bond 1994).

Although hunting lodges had no military function some rudimentary defences were necessary to protect the king’s property from desperate men always to be found in forests, and so hunting

lodges were enclosed by earthworks or palisades. Early hunting lodge remains in the New Forest were once known as ‘church place’ earthworks from the mistaken view that they represented the sites of churches destroyed for the creation of the royal forest. They are characteristically situated on ridge-top positions within woodland and are remote from known settlement. Five have been found: Church Place, Sloden (SU 21 SW 7; SU 211125) (Fig. 14C); Church Place, Denny (SU 30 NW 17; SU 33340689) (Fig. 14A); Church Place,

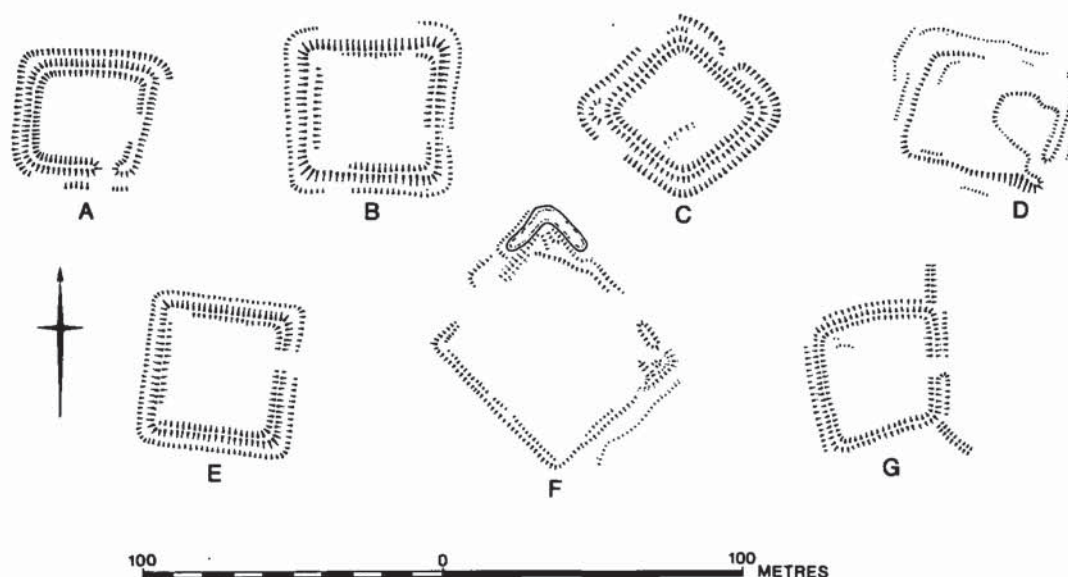


Fig. 14 Earthwork plans of early New Forest hunting lodges. A Church Place, Denny, B Church Place, Ashurst, C Church Place, Sloden, D Bolderwood, E Studley Castle, F Queen Bower, G Enclosure at Kings Passage, Matley.

Ashurst (SU 30 NW 1; SU 34200966) (Fig. 14B); Bolderwood (SU 20 NW 18; SU 24400794) (Fig. 14D); and Studley Castle (SU 21 NW 8; SU 22201601) (Fig. 14E). Each comprises a small sub-square enclosure, approximately 50 m square, defined by a bank and external ditch. The entrance is usually a single gap situated centrally in any side. Few internal earthwork features were seen at the sites examined, although Studley has a bisecting ditch, nor were any associated earthworks found outside the enclosures.

The example at Sloden was surveyed as part of the RCHME's area survey of the former Sloden coppice. It is a small, square, embanked and ditched enclosure situated in woodland towards the western end of Sloden Ridge, at SU 21101250. It measures some 45 m square, with the bank up to 1.5 m high from the bottom of the ditch and up to 2.8 m wide, with a 3 m wide ditch. The original entrance gap is in the eastern side. The interior of the enclosure shows no surface evidence of any internal features, although it has been disturbed by trees and an un-metalled track runs through its centre. Excavations of the enclosure were carried out by Wise in the 1860s (*Archaeologia* 35, 97), and

by Heywood Sumner in 1915 (Sumner 1917, 63), but no dateable finds or evidence for the site's use were found.

The finding of West Country slate at Studley in 1968 provided a breakthrough in the interpretation of the 'church place' sites (Pasmore 1970). It was linked with references in the *History of the King's Works* (Allen-Brown *et al* 1963, 984) to the construction of hunting lodges in 1358, by order of Edward III. In 1358–61, an order to build four named 'Studley', 'de Parco', 'Hatheburgh', and 'Helmlesley', was issued. Each was to be of timber frame and plaster construction, surrounded by a ditch, and roofed with Purbeck and Cornish slate. The accommodation, which included a kitchen and a fireplace, was mainly for resident foresters. Hatheburgh was the exception, its construction costing £140, while the others cost £50 each. It had a great gate and a postern, a great chamber for the king, a chapel with a royal pew, and a long house containing chambers of office including a kitchen, larder, granary, and stables. In 1362–5 a new hall and other houses were erected at Hatheburgh at a cost of over £85 (Allen-Brown *et al* 1963, 985). The whereabouts of three of those

listed are known: Studley remains as an earthwork within Islands Thorns Inclosure, south of the later Franchises Lodge; de Parco lay within Lyndhurst Park, but no earthwork remains have been found; and the earthwork enclosure of Hatheburgh (Bolderwood) lies at SU 244082, immediately south of the later Bolderwood Lodge (Roberts 1993). A similar earthwork enclosure at Church Place, Ashurst was also found to be littered with fragments of Cornish slate, while at Church Place Ashurst, Church Place Denny, and another unidentified site, fragments of brick and mortar are said to have been found in about 1807 (Wise 1863). Indications of a previously unknown 14th-century hunting lodge have also been noted in an Inclosure on the eastern side of the Forest by the New Forest Section. There are no earthwork remains, but a surface scatter of slate (Pasmore 1982, 29). A further scatter of West Country slate is to be found in flowerbeds at Queen's House, Lyndhurst, indicating that the original royal manor house there came from the same early phase of development (A Pasmore, pers comm). More hunting lodge sites surviving as earthwork enclosures probably remain to be discovered in the New Forest, since further examples are documented as having been repaired. Placenames, such as 'Church Moor' (SU 198029), and 'Church Green' (SU 225150) may provide clues to their existence.

At Writtle, Essex, the layout of a hunting lodge built for king John in 1211 has been recovered by excavation (Allen-Brown *et al* 1963, 83) and, with slight variations, may be regarded as a typical hunting lodge of the smaller type. This site, unlike the New Forest examples, was defined by a moat 20 m wide, but contained similar accommodation to that outlined above at Hathburgh.

Most of the New Forest hunting lodges were maintained into the 15th century, with later examples becoming more elaborate. A Commission of 1428 listed the king's lodges then ruinous, among which was Queen Bower (SU 20 SE 16; SU 287004) (Fig. 16F). This site is larger than the Church Place earthworks and is situated, unusually, in a low-lying position beside Highland Water, its ditches probably originally being water-filled. Numerous fragments of slate, possibly from Devon, have been found in a 19th-century drainage cutting across the site. A further hunting lodge site

has been suggested by the Ordnance Survey (SU 21 SW 16) at SU 21091400, although the sub-square earthwork enclosure there defines a much larger area than both the Church Place enclosures and Queen Bower.

The function of lodges changed from game-keepers' to woodmen's lodges as the management of the royal forest changed over time. It is probably for this reason that New Forest hunting lodge sites often lie adjacent to coppice enclosures, for example at Sloden and Queen Bower. The presence of early hunting lodges close to later woodmen's or keeper's lodges is also evident, for example at Ashurst, Hatheburgh/Bolderwood, and Denny. The Lord Warden appointed master keepers of the nine New Forest bailiwicks which had perquisites of lodge, land, and forest rights. Keepers under them had inferior lodges. The king's house at Lyndhurst provided a residence for the warden or surveyor of the forest (or a deputy) and an occasional lodging for the king. Keepers' lodges can be found at many places in the New Forest woodland. Sites include: Burley (SU 238056), where a lodge is known to have existed by 1486; Malwood (SU 273119), where a lodge existed by 1634 within the former hillfort enclosure; Eyeworth (SU 226145) and Whitley Ridge (SU 315030) where lodges existed by 1632 (Stagg 1983); and Holmesley (SU 221010) where a lodge existed by 1609 (Roberts 1993). Eleven forest lodges are mentioned in documents of c. 1635 (Stagg 1983, 79) and sixteen are shown on Richardson, King, and Driver's map of 1789. Bolderwood lodge used to be a residence occupied by a 'master keeper' without salary or duties, his work being done by 'groom keepers' who had a lesser lodge nearby. In 1627 Bolderwood Lodge consisted of two sleeping chambers, a hall, kitchen, and buttery. Evidence of habitation exists over a wide area of the site (Roberts 1993). By 1789 the cost of repairing lodges was a matter of concern and from 1806 steps were taken to end privileges of master keepers. By 1833 none held lodges (Stagg 1989, 140).

These later New Forest lodges have outer enclosures which are referred to as 'rails' (Fig. 12). Such enclosures are known elsewhere; for example, Bagden Lodge, Savernake, lay within a sub-circular enclosure c. 1 mile in diameter, bounded by earthworks (Crawford 1954, 193). The bounda-

ries of New Forest 'rails' enclosures survive as earthworks at a number of sites. Denny Lodge 'rails' are clearly defined by a bank c. 2 m wide by 0.3 m high, with an external ditch c. 1.5 m wide by 0.2 m deep. A northern continuation of the earthworks is more substantial, the bank up to 1.3 m high from the ditch bottom, and the ditch 0.7 m deep. The profile of the earthworks is angular, suggesting later use. Some of the present fences around the lodge also stand on similar earthworks. Further north, 15 m beyond the present day enclosures, the 'rails' boundary resumes as a more denuded bank 1.5 m wide by 0.2 m high with an external ditch 1 m wide by 0.2 m deep. The 'rails' of Holmsley Lodge, depicted by Richardson, King, and Driver, are also still defined by an earthen bank, very denuded in places, 3.5 m wide by 0.2 m high, which becomes far more substantial as it continues north and east from the lodge. There the bank is 2.5 m wide by 0.8 m high and the ditch 1.5 m wide by 0.3 m deep. Burley lodge rails boundary, which continues in use as a boundary today, appears as a bank, 3 m wide by 0.7 m high surmounted by a wire-and-post fence, and an external ditch 2 m wide by 0.5 m deep. Its fresh cut and angular profile is similar to that of statutory enclosures, probably due to continuous maintenance, whereas eroded rails boundaries and coppice enclosure earthworks are virtually impossible to differentiate from each other by their appearance. In 1251 Sir Richard de Burley held the office of Bailiff of Burley, which was the largest of nine bailiwicks in the New Forest. The whereabouts of the original bailiff's residence is unknown, but it may be on the present Burley Lodge estate (Hardcastle 1987, 27). Burley Lodge was first mentioned in 1487. The oval plan of the enclosure rails surrounding Burley Lodge is interesting. It may be significant that, in an Extent of the New Forest of c.1300 (Stagg 1979, 141), the *Rent of Vaccaries* lists Richard de Burley paying 30/- for 30 cows, suggesting that it may have developed from an early vaccary.

The function of rails enclosures seems to have varied. In 1624 profits of Burley Bailiwick included pasture within Burley Rayles and there are documentary references to keepers assarting land within lodge rails for cultivation (Stagg 1983), while in 1670 'pasture of feeding within Burley

Railes' was claimed by Bailiff John Neale. Whether the Rails were originally enclosures for feeding deer, or growing crops on which to winter them, or merely recognised pasture lands which went with the official residence of the Bailiff is uncertain. Whatever various uses rails enclosures were put to, harbouring deer seems to have been their main purpose.

Deer Parks

Deer parks, like royal forests, were a creation of the Norman kings of England and their followers. They were sanctuaries for wild animals held by subjects under licence from the king. Red and roe deer were usually hunted on horseback across the open forest, chase, and warren, but as their numbers began to decline during the 13th century fallow deer were increasingly reared in parks (Bond 1994). In forests the king hunted deer released from the park onto the open forest (Cantor & Wilson 1961). The main expense involved in the creation of parks was to construct and maintain a deer-proof boundary, so they were usually a compact oval in plan and natural features were sometimes utilised as part of the enclosure to reduce costs. Most parks lay in wooded areas, and were enclosed by a substantial earthen bank surmounted by a wooden paling fence (or later a quickset hedge or stone wall) and a ditch. The bank was often broad with narrow water-filled ditches on either side. In early examples the ditch is often inside the bank to keep animals inside. Two types of medieval park are defined by Rackham (1980, 157): 'wood pasture', consisting of pollarded trees in grassland; and 'compartmental', with grassland separated from fenced coppice-with-standards. The peak of deer parks was around 1300, when there were about 3200 in England (Rackham 1980, 152). From 1350 onwards the purpose of parks became increasingly ornamental and so they ceased to be enclosed by high banks.

The best-documented deer park known within the New Forest is that at Lyndhurst (SU 30 NW 6) (SU 32000665). Lyndhurst was one of five royal estates completely afforested and a pre-Conquest hunting ground may have existed there. The park, which was held by the king, was created some



Fig. 15 The 'Bishop's Ditch', a probable medieval deer park boundary

time prior to 1291, when the first known reference to it occurs. It was listed in an Extent for that year, when its circuit was estimated at three leagues, but it was not valued because the profit from it was 'scarcely sufficient for enclosing the same' (Stagg 1979, 136). From 1359 it was leased. Frequent entries for fencing and repair suggest that the enclosure was well maintained until 1389, but by 1428 the ruinous condition of the park, its lodge, enclosure boundary, and pond is described (Sumner 1917). The park pale survives as a substantial earthwork boundary up to 9 m in overall width, comprising an internal ditch, and a bank 1.2 m high. Two circuits of such pale earthworks define the boundary along the northern, eastern, and southern sides, but the whereabouts of the western side is uncertain. This double circuit, measuring less than two leagues, encloses an apparent U-shaped area which is unlikely to represent the true

plan of the park. The double lines of the pale to the north and east may represent successive boundaries as it was extended eastwards. That this was the case is further confirmed by the presence of an internal ditch, suggestive of early emparkment, on the western line of the pale. The value of the extended park was described as 'in covert 200 acres, the pannage worth annually 34s 3d; honey in the same park worth 2s; also the pasture is able to sustain 40 animals and 20 colts and is worth 23s 4d; also the park contains 300 acres of heath and open land worth 20s' (Stagg 1979, 145–6). This would suggest that it was not compartmented at that date and also shows that it was much larger than the approximate 350 acres of the present U-shaped area.

Another possible hunting park enclosure is defined by an earthwork known as the 'Bishop's Dyke' or 'Bishop's Ditch' (SU 30 NW 22; SU

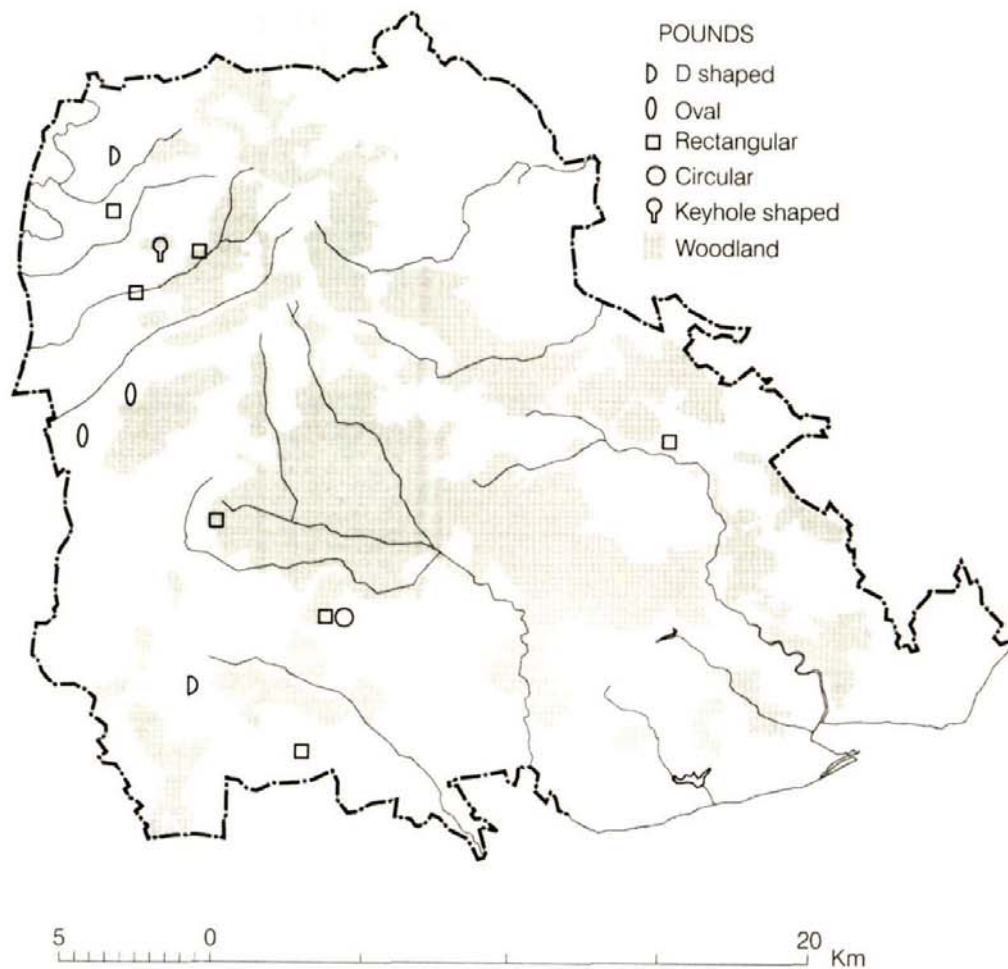


Fig. 16 Distribution of earthwork pounds in the New Forest

350050) (Fig. 15). In 1284 John de Pontoise, Bishop of Winchester, obtained a grant of Bishop's Ditch (Sumner 1923). It was held by Winchester until at least 1636. It is a curiously-shaped enclosure, of approximately 202 ha defined by a bank *c.* 4 m wide and *c.* 1 m high between two ditches which vary in size, the outer generally the greater. Its plan can be partly accounted for by the fact that it follows the ground contours for sections of its circuit, enclosing the valley and lower slopes at the head of Shepton Water. The enclosure now lies on open heathland

and includes a large area of bog. Sumner (*ibid.*) suggests that the area may have become boggier since it was enclosed, possibly due to later damming of the Beaulieu River.

Further medieval parks may have existed within the New Forest. Although royal parks needed no licence, it was usually necessary to obtain permission to enclose a park and many emparking licences were enrolled in the Pipe Rolls and Close Rolls. In practice there were large numbers of unlicensed parks. Such a park boundary may have been the function of a linear earthwork

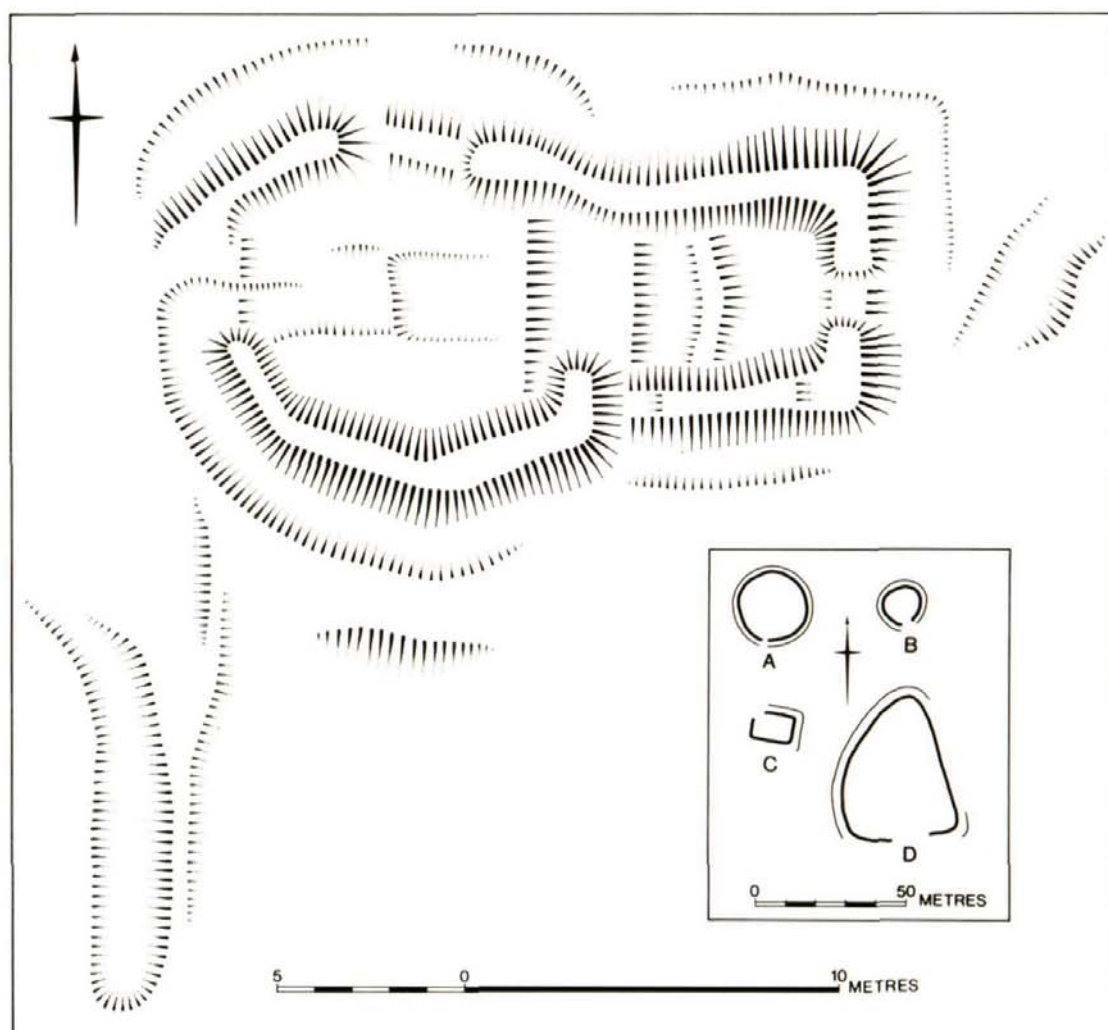


Fig. 17 New Forest 'pig pound' at Sloden Wood. Inset: A. NMR SU20NW11; B. NMR SU20NW10; C. NMR SU21SW06; D. enclosure on Goatspen Plain

(NMR Linear 20) situated at SU 358018. This earthwork comprises a bank *c.* 1.5 m high by *c.* 4 m wide, with ditches on both sides *c.* 0.5 m deep by *c.* 2 m wide. Crawford (1952) associated it with further earthworks as part of a postulated early medieval defensive line known as 'Cerdic's Enclave', but the theory that 'Cerdic's Enclave' existed is extremely tenuous. It is based upon the hypothetical extension of a few relatively short

lengths of bank and ditch across large areas. The postulated circuit, which seems somewhat arbitrary, is almost completely devoid of enclosing earthworks and lacks substantial natural obstacles. Sumner, on the other hand, believed the earthwork to represent a medieval encroachment on the Forest by Beaulieu Abbey (Sumner 1917, 71). It is very likely that the Abbots of Beaulieu would have held a deer park, of which this earth-

work may be part. Why the remainder of the circuit was devoid of earthworks is, however, unexplained.

Towards the end of the 15th century there was a fresh phase of park creation in general (Stamper 1988). In the New Forest New Park (SU 297045) is mentioned for the first time in 1484 (Page 1911, 626). In that year a presentment notes that it had recently been enclosed with a 'double rail of about 9 ft high ... which said rail had consumed a great number of timber trees and wood' (Stagg 1983, 237). A large earthwork boundary along the western edge of the park today consists of a flat-topped bank c. 2 m wide by c. 1 m high with a re-cut external ditch c. 1 m wide by c. 1 m deep. A slighter inner circuit of a double bank and medial ditch is also present.

Later parks were not deer parks, but newly designed landscapes with numerous intersecting avenues laid out around country houses. A number existed within the Forest, some of which are shown by Richardson, King, and Driver (1789). They included examples at Pylewell (SZ 355960), Brockenhurst (SU 308018), and Hale (SU 180185) (HBMC 1984).

Stag Parks

Stag parks survive in the New Forest today as sub-rectangular enclosures, approximately 150 m by 100 m, defined by very straight banks and external ditches with sharply angled corners. They lie in woodland, near streams, and in close proximity to keepers' lodges. Three are known to have been in existence in the New Forest in 1789, when they are depicted on Richardson, King, and Driver's map. The first (SU 20 SE 35) is situated at SU 262043, adjacent to a spring and close to the former site of Rhinefield Lodge. The second (SU 20 NE 19) now falls within Highland Water Inclosure, and is situated at SU 253090, close to Highland Water and the former site of Bolderwood Lodge. The earthwork circuits of these survive partially. The third, at SU 337062, survives as a complete earthwork enclosure in a boggy area on the edge of woodland. The site is clear of trees and the earthworks carry a vegetation cover of grass and bracken. The enclosure is formed by a flat-topped

bank 2 m wide by 0.5 m high and an external ditch 1 m wide by 0.2 m deep. Some of the bank is tree-lined, probably representing the remains of a hedge. The earthwork circuit is broken and grass-covered where it crosses the bog. It has been suggested that stag parks date from 1670 when Charles II ordered land adjoining New Park to be enclosed with pales for the preservation of deer newly arrived from France (Sumner 1917, 127–8), but no similar earthwork enclosures are known near New Park, which was probably just extended. The presence of a further stag park is indicated by the name 'Stag Park Wood' at SU 204051. From their association with keepers' lodges stag parks are likely to have been managed by forest keepers. Their earthwork morphology and their depiction on 18th-century maps certainly supports the view that they date from the post-medieval period, although their exact purpose is unclear.

Pounds

A number of small enclosures surviving as earthworks today are usually interpreted as pounds. These small enclosures come in a variety of forms, with entrances mostly on the southern side. Most examples known lie on high ground on the western edge of the New Forest (Fig. 16).

New Forest 'pig pounds' (Fig. 17) generally occur in old deciduous woodland, are of slight construction, very denuded, and have oval or rectangular plans. Numerous New Forest holdings carry the right to turn out pigs onto the open waste during the autumn pannage season, when acorns and beech mast provide food. Pigs were certainly confined in enclosures on the open forest, for in the 1670 Register of Claims there is a reference to an alleged right of a family to 'make ditches, hedges, and houses in the Forest every year for their hogs and pigs' (Pasmore 1974). An unusual 'keyhole-shaped pound' in Sloden Wood (SU 21 SW 30; SU 21681255) was surveyed by the RCHME. The enclosure consists of a bank, up to 2.5 m wide by 0.3 m high with traces of an external ditch, which defines an enclosure formed by a sub-circular western half, and sub-square eastern half, possibly for a pen and adjacent shelter. Excavations of the earthwork in 1972–4, by

the New Forest Section, dated it to the late medieval or early post-medieval period on the basis of two 'small and entirely featureless' pottery fragments. It was interpreted as a pound, probably for the night folding of pigs during the pannage season (Pasmore 1974). Further small enclosures have been interpreted as pig pounds, their classification largely based upon Heywood Sumner's speculation about a site in Pinnick Wood (1917). Although this interpretation seems very plausible, in the absence of further information, it is difficult to be certain as to whether it is correct.

Small D-shaped enclosures (Fig. 16) are also known in the New Forest. At SU 22450182 (SU 20 SW 10) there is an earthwork of D-shaped plan enclosing an area of approximately 45 m by 38 m, defined by a bank approximately 0.9 m high by 3 m wide and a faint external ditch approximately 2 m wide by 0.2 m deep. A break in its south-eastern side probably represents the entrance, but the enclosure is very disturbed at this point, where there is a mound containing concrete and asbestos. This enclosure (Fig. 17D) lies within an area known, from at least 1759, as 'Goatspen Plain'. 'Gotespendhill' was also mentioned in a court roll of 1635 (Tubbs 1986, 52). This has led to the suggestion that the enclosure was a pound for goats. Goats, however, are not commonable animals on the Forest, and anyway could be tethered rather than penned. Goatspen may therefore be a corruption of a personal name as suggested by Hardcastle (1987, 190). This leaves the date and purpose of the enclosure uncertain.

A number of small rectilinear enclosures in the New Forest (Fig. 16) have been interpreted as animal pounds. They are also largely to be found in the western part of the New Forest and close to rivers. They differ from hunting lodge enclosures in that they are generally smaller in area, some as small as 15 m square, compared with the hunting lodges which are at least 45 m square. Entrances also tend to be in the eastern side, rather than the apparent random orientation found in hunting lodges. Their earthworks are also generally more sharply defined, although less substantial, than those of hunting lodges. One such enclosure (SU 21 SW 15) lying within Alder Hill Inclosure, above the Latchmore Brook, at SU 20451339, measures 10 m by 7 m, defined by a wasted bank

and ditch of 4 m total width and 0.4 m high, with an entrance gap in the south-eastern side. Excavations at the site by the New Forest Section in 1961 recovered Romano-British and medieval pottery, and the enclosure was attributed to the medieval period (Pasmore 1967, 25). At Amberwood a further small sub-rectangular enclosure on a gentle slope at SU 21071390 (SU 21 SW 10) and about 90 m south of a larger earthwork (SU 21 SW 16) was excavated by the New Forest Section and Hampshire Museum Service. It was defined by a very slight bank and external ditch, and measured approximately 24 m by 18 m, with a probable entrance on the southern side. A layer of clay, charcoal, and pottery in its north-eastern corner was part overlain by probable collapsed bank material. This is thought to represent occupation associated with the enclosure, which was interpreted as a probable late Roman stock pound (Devenish 1974).

Such small enclosures may well represent stock pounds, perhaps used seasonally as part of a transhumance cycle or connected with longer distance stock droving. The distribution map of pounds shows that they cluster around the margins of the high ground in the west of the Forest, which is capped with infertile Plateau Gravel. Woodland may similarly have been linked in a system of transhumance. In Kent, it provided pasture used seasonally by riverine and coastal estates (Hooke 1989). Such links seem to have been founded upon utilization of woodland for herds of swine, though cattle, horses, goats, and even sheep could also be pastured in woodland. On the western fringe of the New Forest numerous drove-ways led into the Forest from settlements in the Avon Valley, and from the coastal strip 'Summer Lane' still runs north from Exbury to rough grazing on Beaulieu Hilltop. Further suggestive place-names are 'Summerlug Hill' (SU 166096) and 'Summer-gates' (SU 162001).

After the creation of the royal forest, common rights – especially those of grazing and fuel, were attached to most of the early landholdings in and around the New Forest. For some lands, such as former monastic lands, the rights are known to originate from later grants and charters, but for most their origin is unknown (Stagg 1989, 136). Following the creation of the royal forest, forest

law provided for the removal of domestic stock during the 'fence month' – when the deer gave birth (28 days around midsummer day), and during the winter 'heyning' – when there was least forage (from around the end of November to the beginning of May). Pigs could be turned out for two months in the autumn. By the late 13th century payments were made in lieu of removing domestic stock in the fence month, and by 1537 manors within the Forest paid no dues except 'month money' and grazed animals throughout the year. Manors outside the Forest that claimed grazing rights, paid for summer and winter grazing, and month money (Tubbs 1986, 68–9). Drifts were held twice a year in order to control the number of beasts commoned and check the grazing rights of their owners. All the animals were driven into convenient pounds and their owners had to claim them from officials. The pounds described above are too small to have been used for collecting stock during drifts. For this, long run-ins and large secure catching places are necessary (A Pasmore pers comm). Such Forest drift pounds depicted by Richardson, King, and Driver (1789) at Canterton, Ipley, and Linwood, are wide areas within established track-ways, which could be closed off when required.

The earthwork profiles of most pounds would indicate that they are no earlier than the medieval period, and Tubbs (1986, 51–2) believed most to be of fairly recent origin. Caution must be exercised in assuming pastoral use for all such enclosures. In the past archaeological remains have been assigned this purpose on the basis of a lack of diagnostic earthwork features to suggest other uses, and more particularly in the absence of finds from a limited number of excavations.

Encroachment Enclosures

One distinctive type of New Forest enclosure is the forest-edge encroachment, many examples of which cluster along the boundary of Beaulieu Abbey's land and along the boundaries of other manors, for example Brockenhurst. The margins of the New Forest are marked by linear villages, which originated as squatter settlements illegally cutting into the forest boundaries. The earthwork remains of abandoned rectilinear enclosures are

often found adjacent to these settlements, marking the former limits of their expansion. Successive lines of encroachment can sometimes be seen within the plans of the settlements themselves, with some enclosures in use today also demarcated by banks and ditches. Abandoned fields are similar in form to those still in use, though their earthworks are more wasted. They are typically banks approximately 2 m wide by 0.5 m high, with external ditches facing the heath, approximately 1.5 m wide by 0.3 m deep. Building platforms are not generally found amongst them, indicating that they represent agricultural, rather than population, expansion. A series of enclosures, associated with a squatter settlement known as 'Beaulieu Rails', from its position aligned along the boundary of Beaulieu Abbey lands, was surveyed by the RCHME (SZ 367990; SZ 39 NE 22) (Fig. 18). This forms a southern continuation of East Boldre village, also a linear settlement along Beaulieu's boundary, and aptly named 'Long Town' in 1789 (Richardson *et al* 1789). At Beaulieu Rails a complex series of earthworks lies on open heathland to the west of the road from East Boldre to Lymington. The earthworks include at least nine small rectangular enclosures, defined by banks with external ditches. Five enclosures lie beyond the present settlement boundary and extend to a common line of encroachment. A further enclosure, partly defined by a bank and external ditch, abuts the southern extent of these, enclosing an area around a gully or stream in Horsebush Bottom. Their plan suggests linear expansion onto waste, with the enclosures probably of similar function to those noted in Breckland, where in the Middle Ages, especially when the climate was warmer between 1100 and 1250, marginal land was brought into cultivation. Close to each village were the 'in-fields', further away were the 'out-fields', and further still were the 'brecks' – stretches of heathland broken up for cropping for a few years and then allowed to revert back to heathland. Stock also roamed the heath by day and were brought back to the homestead at night, where their droppings made the land fertile enough to grow a few crops (Mason & McClelland 1994). A possible continuation of the Beaulieu Rails fields lies to the east of Norleywood, comprising two fields, c. 50 m square, defined by

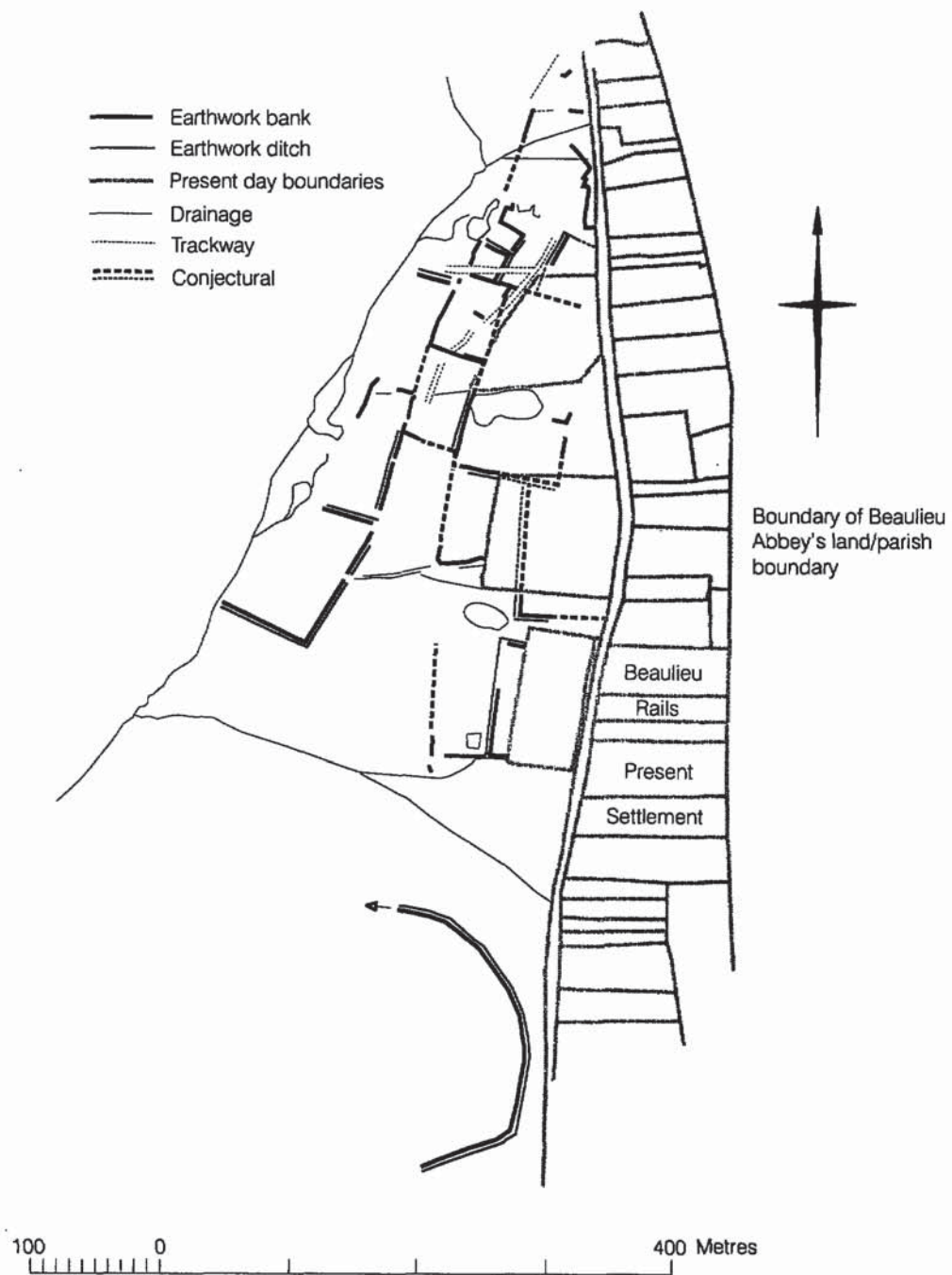


Fig. 18 'Beaulieu Rails', a typical linear settlement along the margins of the New Forest

banks c. 2.5 m wide by c. 0.6 m high and external ditches c. 1.5 m wide by 0.3 m deep.

Another complex of sub-rectangular earthwork enclosures (SU 366026; SU 30 SE 45) was surveyed adjacent to the present day settlement north of Hatchet Gate. These enclosures, which formed only part of a more extensive field system now covered in gorse, represent larger encroachments defined by earthworks of varying profile. The banks on heathland stand up to 0.8 m high and 2.8 m to 4 m wide, with external ditches 1 m wide by 0.3 m deep. The banks on grassland are no more than 0.5 m high and 1.8 m wide, with an external ditch 0.2 m deep by 1 m wide, suggesting that they have been wasted by later activity. Indeed, a 0.6 m high lynchet at the lower boundary of the fields indicates former cultivation, and narrow ridge-and-furrow is visible within two of the enclosures, confirming their later medieval or post-medieval arable use.

Encroachment was known before the 17th century and earlier, but gathered pace in the 18th century. The 1789 *Report of the Commissioners* refers to 902 acres of encroachments on the New Forest, mostly cottages, gardens, and small fields on the edge of Crown lands. 1789–1819 has been identified as a time of particularly active encroachment coinciding with high prices for farm products during the Napoleonic Wars (Tubbs & Dimbleby 1965), and some of the heathland enclosures were probably cultivated at this time. Many others clearly pre-date this period. At the Swainmote Court in 1749–52, the Crown's rights to a large number of existing encroachments were asserted (Tubbs & Dimbleby 1965). Richardson, King, and Driver's survey (1789) also shows a large number already in existence. Encroachment was difficult to prevent because the legal process of eviction cost more than the value of the land. However, the 1819 *Report of Commissioners* said that encroachment on the New Forest had been completely checked. It was further prevented by the *Deer Removal Act* of 1851, which empowered the Attorney General to try the title to any piece of land in the county court. Some of the encroachment enclosures survive incompletely on early Ordnance Survey maps.

The field evidence for these enclosures – the sharp profile and lack of erosion or silting displayed by their earthworks, their angular and

straight-sided plans, and the presence of narrow ridge-and-furrow in some – would support a late medieval or post-medieval date for many. Gorse is also commonly found in association with them. It is not known how long this persists on a site, but prehistoric or medieval earthworks seldom carry gorse unless they have been disturbed. A study of gorse distribution in relation to former land-use in the New Forest (Tubbs & Jones 1963) showed it to be concentrated adjacent to existing settlements, mostly on recently disturbed ground, including well-drained banks, and in a belt fringing settlements where paths were used by stock.

Isolated Enclosure Complexes

In addition to creeping encroachment by settlement expansion, some New Forest enclosure complexes, or 'field systems', are to be found remote from centres of habitation. Some of these enclosures are small-scale, possibly representing encroachment made by the poorest people in extra-parochial places where it would not easily be discovered. Others are extensive, with regular layout, presumably made by large estates such as monastic houses and manors. Tubbs and Dimbleby (1965) note that many have more wasted banks and ditches than the forest edge encroachments, but most are still well defined.

The RCHME carried out surveys of three such isolated field systems. The first was located at Dur Hill (SU 196011; SU 10 SE 31). Here a series of banks, with slight external ditches, partially define two large rectangular enclosures. These large enclosures lacking sub-divisions may represent medieval annexing of forest waste by a large estate. Large rectilinear enclosures of similar type lie on Setley Plain. A pollen spectrum studied by Tubbs and Dimbleby (1965) indicated a historic date for construction of the Setley Plain earthworks, and there was no evidence of cultivation. Their suggestion that the enclosures represent annexation of Forest waste by an adjacent manor during the medieval period seems very plausible.

The second earthwork complex surveyed was part of a multi-period field system to the south of Lucy Hill, at SU 226040 (SU 20 SW 47) (Fig. 19) the earthworks of which are cut on their eastern side by the boundary of Burley New Inclosure,

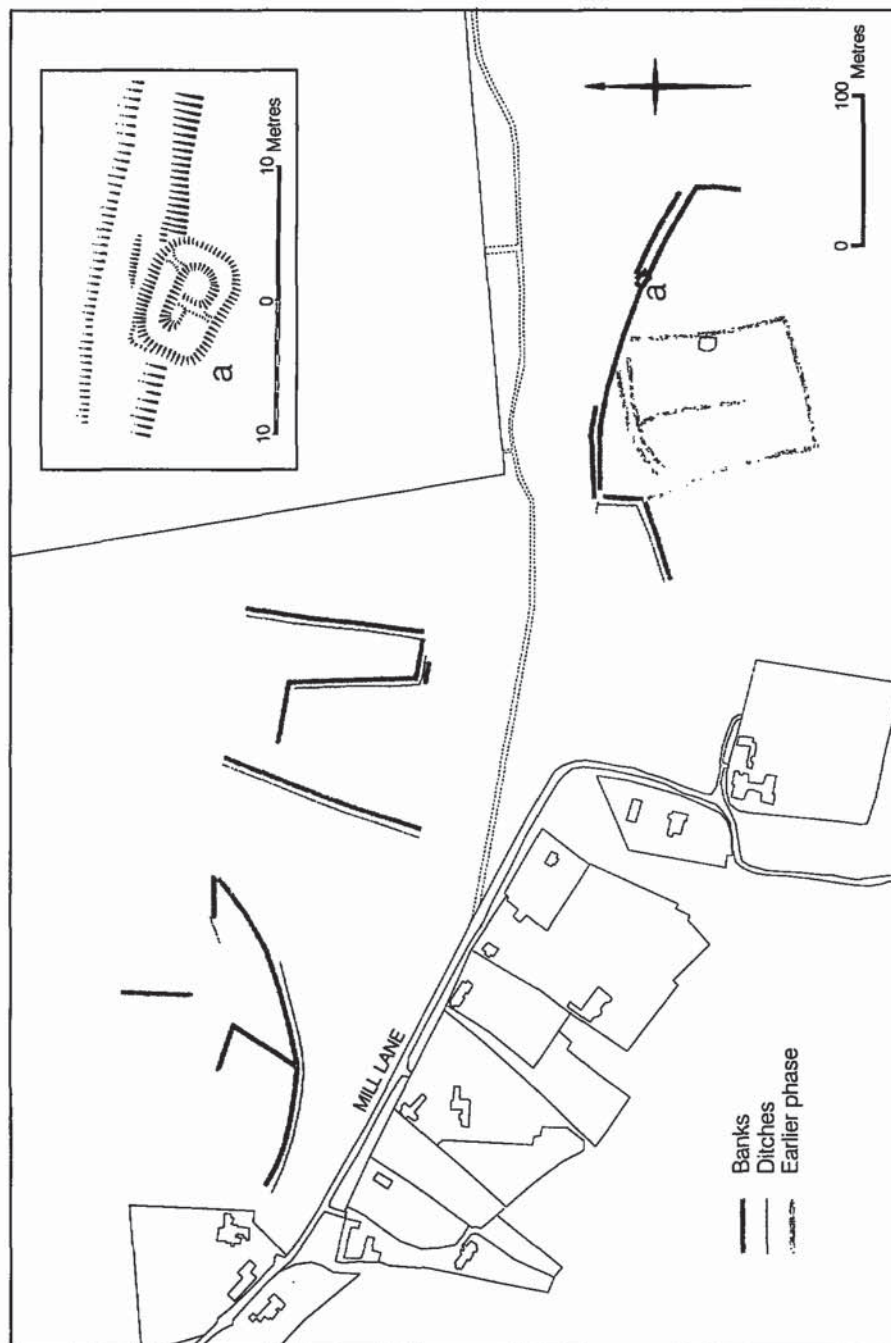


Fig. 19 Earthworks of former field systems at Lucy Hill

created in 1810. These enclosures form part of a more extensive complex of fields which continue south to Mill Lawn. Their precise date and function are uncertain, but they may mark the former extents of agricultural expansion associated with a manorial site to the north of Burley. In 1802 Burley Manor attempted to claim a large area of open forest by virtue of long usage and custom. This claim was rejected by the Crown, who confined Burley Manor to the 539a then enclosed (Hardcastle 1987). Alternatively, the enclosures may mark piece-meal encroachment. The Records of the Swainmote Court show that ditched and hedged encroachment enclosures for cereal cultivation and pasture had been created near Burley prior to 1635 (Stagg 1983, 86).

The third isolated field system (SU 30 NW 67) lies to the west of the Southampton to Bournemouth railway embankment. It consists of at least three rectangular enclosures. No continuation of the complex was seen to the east of the railway embankment, which truncated the earthworks. From their small size and the presence of ponds, these fields appear to represent former paddocks.

No definite evidence for occupation was seen at any of the sites surveyed, although a small building platform with an internal sub-division overlies a field boundary at Lucy Hill. The building platform, by its isolated position and association with the field systems is probably the remains of a herdsman's hut or a small sheepcote, but it could be a small medieval house platform.

A number of isolated New Forest enclosures may be sheep enclosures dating from the medieval period. At the Crockford Complex, Crockford B consists of about six sub-rectangular enclosures on a common north-south alignment, though not all joined. These enclosures are partially defined by banks 3.5 m wide by 1 m high with external ditches 2.5 m wide by 0.5 m deep. The regular layout, large scale, and proximity of these enclosures to Beaulieu Abbey has led to the suggestion that they may represent lands enclosed under licence by Beaulieu Abbey, although no documentary evidence has been found to support this. The name 'Shipton Holmes', which falls within the complex, has also been taken to indicate sheep husbandry (Tubbs & Dimbleby 1965), but the soil inside the enclosures was said to be brown earth,

with mixing of the top 4" by ploughing, in contrast to peaty gley or humus iron podzol outside. The pollen profile showed the site to be open and cereal pollen and weeds of cultivation appeared consistently, indicating arable use. One suggestion (Tubbs & Jones 1963) is that Crockford B represents legal enclosure of 16th or 17th century date, to grow fodder for New Forest deer. Although no medieval building platforms were apparent at the site, 'Peter le Crock of Crockford' was named as a venison offender in the *Pleas of the Forest* of 1280 (Stagg 1979, 105), suggesting possible medieval habitation at the site.

An example of possible sheep enclosures was surveyed by the RCHME to the south of Culverley Farm, at SU 373045 (SU 30 SE 47). The enclosures form the later part of a two-phase field system defined by earthworks (Fig. 10), covering an area of approximately 4 ha and may represent a disused extension of present enclosures immediately to the east, named 'Gurnet Fields'. Use of the area for sheep rearing is suggested by the name 'Shepton Water', a stream running along the southern side of the site, and the fact that it lies immediately adjacent to lands formerly held by Beaulieu Abbey may indicate a medieval date for the enclosures.

Sheep husbandry and wool processing was the Cistercian speciality and Beaulieu's grant gave them common of pasture for their sheep on the open wastes of the Forest. The biggest graziers in the New Forest during the medieval period were the monastic houses of Beaulieu, Christchurch, and Breamore. Some former monastic manors later had common of pasture for sheep. These included Beaulieu, Boldre, Brockenhurst, Fordingbridge, Cadland, and Fawley (Hardcastle 1987). Beaulieu and Cadland manors claimed sheep grazing rights in 1670 for lands formerly in the possession of the Cistercian houses at Beaulieu and Netley. In 1551 Nicholas Bailey and Widow Gregory, both of the Liberty of Beaulieu, are mentioned in presentments for depasturing 200 sheep within the New Forest at most times of the year 'which they and many others of that liberty do under pretence of their charter' (Stagg 1983, 237). Sheep were clearly grazed elsewhere judging from names found, for example at Burley, where Hardcastle records 'Sheeps Close Coppice' on a mano-

rial map of c. 1715, 'Shappen', the 'Sheep Sleight', 'Sheep Close', and 'sheepwash'. Further indications of sheep rearing in the New Forest can be seen in names such as: 'Sheepwash Ford' at SU 44200520, which was shown on Richardson, King, and Driver's map, and is mentioned in the New Forest perambulation of 1670; 'Shepherd's Gutter' at SU 27031420 (OS 1:10000 1992); 'Sheepwash Green' at SU 256155 (OS 6" 1968); and 'Herdsman' or 'Flock' barrow at SU 19471918.

Ground evidence for cultivation of New Forest fields is found at a small number of sites with characteristic late medieval or post-medieval narrow ridge-and-furrow, consisting of straight furrows no more than about 2 m apart. Narrow ridge-and-furrow was surveyed within one of the enclosures at Hatchet Gate, and more was observed amongst the gorse. On Beaulieu Heath East regular undulations, particularly clear at SU 405045, were observed by OGS Crawford (1925), who recorded strip cultivation in the area. Tubbs and Jones (1963), and Dimpleby, noticed regular undulations in the same place as Crawford, and in another area near Sway. Two areas of very recent ridge-and-furrow are a notable curiosity. These are at Wootton (SZ 248985) and Black Knowl (SU 288035), where ground conditions proved too wet for arable cultivation as part of the New Forest Pastoral Development Scheme. In 1947 both areas were ploughed in ridge-and-furrow style to improve drainage, and re-seeded as pasture (Browning, 1951). Ridge-and-furrow of classic medieval type is, however, rare in Hampshire generally and so it may be inappropriate to expect to find it in the New Forest.

Other features found within the Forest superficially resemble the remains of early cultivation. Seepage steps, commonly occurring on steep slopes, are one such feature. They arise through seepage of ground water above impermeable strata, most commonly Barton Sand overlying Barton Clay. They follow the contours of valleys cut into the higher terraces in the north and west of the Forest, and are found on the sides of the lower terraces (Tuckfield 1973). Visible as contour-following terraces, some have the superficial appearance of strip lynchets, but the fact that they are usually found singly and the presence of mire

at the foot of their scarps, distinguishes them from former cultivation remains. Some of the steepest terraces also have scarps produced by landslips. These are almost continuous along the north-east facing scarp of the Forest and in several other locations. Landslip terraces are crescentic, with concave profiles and, in contrast to seepage steps, which are characteristically open and have remained active, they are generally wooded (Tuckfield 1968; Tubbs 1986, 27–40).

Woodland Enclosure

Medieval wood boundaries are of rambling alignment, possibly from having to pass around big trees, or zig-zag, possibly because they follow the boundaries of pre-existing farmland. Later woodbanks are progressively smaller and more acute in profile (Fig. 20). From the 18th century onwards they usually run in straight lines. Short lengths of bank are found in large numbers throughout the New Forest, most in deciduous woodland, but some on adjacent heathland. The majority are probably coppice enclosure earthworks of the 15th to 17th centuries.

Documentary evidence for coppicing in the New Forest is good and comprehensive studies of New Forest coppice enclosures have been carried out. The earliest formal account of wood production in the New Forest is to be found in the account book of Beaulieu Abbey 1269–70 (Rackham 1980, 140). In 1563 John Tavener's *Book of Survey* of royal forests south of the Trent referred to ten coppices in and around the New Forest, and an account of 1609 by John Norden (transcribed by Sumner 1929) referred to fourteen, of which he included sketch plans. Lascelles (1915) outlined early silvicultural methods. Tubbs (1964) listed all known early coppice sites in the New Forest and described their management. In 1974–5 more documents were found by Flower in the Public Record Office, resulting in a list of thirty-one former coppices, most of which were located (Flower 1980).

The areas enclosed were very variable, ranging from 73 ha at Wootton (SZ 242997) to 5.7 ha at Beaulieu Thorns (SU 335020) (Flower 1980). Methods of enclosure documented by Norden were either a fence surmounting a bank with an external ditch, a fence alone, or a quickset hedge.

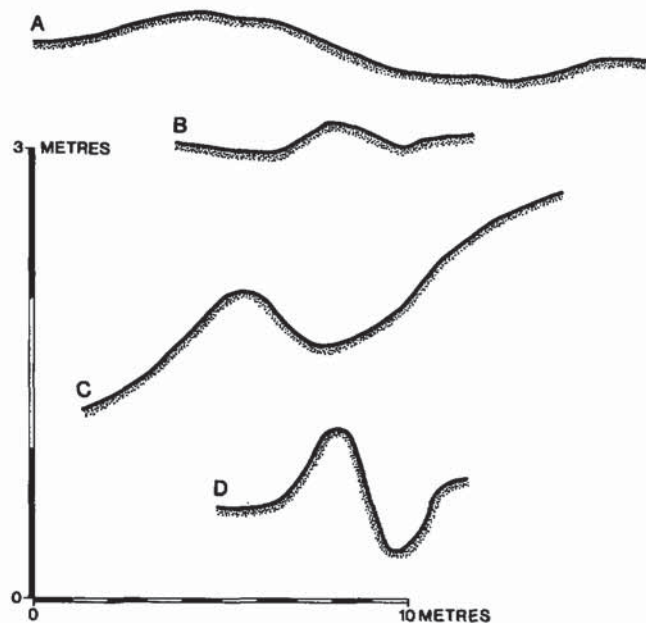


Fig. 20 Woodland enclosure, profiles of earthworks of different periods at Sloden Wood (see Fig. 6 above for plan) A. Iron Age enclosure B. Coppice enclosure C. and D. Timber plantation enclosures of 1768 and 1864

Deer can jump 8 feet (2.4 m) high so banks are broad and flat-topped, and the ditch narrow to prevent deer from standing in it to jump over the bank. Such earthworks were also effective in excluding domestic stock from coppices.

The best-preserved New Forest coppice enclosure earthworks generally comprise a bank $\approx$ 3 m wide by $\approx$ 0.6 m high with an external ditch approximately 2 m wide by 0.3 m deep. A particularly fine example can be seen at Sloden (SU 215127) (Figs 6b & 20B) where, despite the earthwork having lain within a sequence of timber plantations since the 18th century, it is remarkably well-preserved. The RCHME carried out a survey here to record earthwork remains which included a sequence of at least three phases of silvicultural enclosure. The earliest phase, the coppice enclosure, is visible as a denuded bank and external ditch, enclosing an area of approximately 24 ha on a Plateau Gravel summit. The bank measures an average of 3.3 m wide and 0.8 m high from the bottom of the ditch. The ditch is generally 1.2 m wide, and although very silted, can be traced more or less continuously. Considerable damage by

land drainage for timber cultivation has occurred to the earthwork's northern boundary, while quarrying has taken place on its southern boundary. The *Calendar of Patent Rolls* for 1232–47 makes reference to a grant of land made in 1243 to John, son of Geoffrey, and his heirs, to enclose 60 acres of heath in the vale of Sloudon with a dyke and hedge (Stagg 1991). This reference cannot definitely be linked with the earthwork enclosure, but the coppice bank at Sloden is known to date from at least 1572 (Flower 1980, 188). Its plan, clearly that of the earthworks visible on the ground today, is sketched by John Norden in 1609 (Sumner 1929). Excavation of the earthwork, by the New Forest Section in 1989 and 1992, revealed the original V-shaped profile of the ditch (Pasmore 1994).

Complete coppice enclosure circuits are extremely rare in the New Forest, but another example survives at Ridley Wood (SU 202060). Here the earthwork enclosure (Fig. 9) survives as a bank 2.5 m wide by 0.7 m high with an external ditch 1.5 m wide by 0.5 m deep. The first known documentary reference to this coppice is in 1590

(Flower 1980, 188). At Bolderwood Walk (SU 248115) a further complete circuit was traced during the course of RCHME fieldwork, which may represent that of 45 acres at Hocknoll listed in documents of 1565 (Flower 1980, 188).

Some further coppice enclosure circuits survive, whose earthworks have been re-used to form the boundaries of later timber plantations. North and South Bentley coppices (SU 240133 and SU 233129) have been re-enclosed as silvicultural enclosures, but they still display approximately the same curvilinear plans shown by Norden. The enclosing earthwork of Ashurst coppice, first recorded in 1575, can also be followed all the way round, but its southern and eastern banks now form the bounds of the Church Place Inclosure of 1810 (Flower 1980, 191).

Timber Plantations

18th- and 19th-century timber plantation enclosures are very different from the earlier coppice enclosures. They are rectilinear in plan with sharp angled corners, and are defined by very substantial earthen banks and ditches laid out along rigidly straight lines. The first timber plantations in the New Forest seem to have been created soon after 1669, when Treasury records contain an order to enclose 100 acres (40.47 ha) at Priors Acre, 10 acres (4.05 ha) at Dunstan Heath, and 100 acres at Holm Hill. The enclosing was to be with a double ditch and a medial bank carrying a hedge. By 1789, the 5th *Report of Commissioners* stated that enclosure fences had not been kept up and three were used by the keepers to breed rabbits. The earthwork boundaries of timber plantations which we see today are not necessarily those first documented, since some areas have been re-planted at a later date. Prior's Acre, for example, was enclosed again in the early days of Queen Anne, and Pitts Wood, Aldridge Hill, and Holiday's Hill have been enclosed and planted at least twice since 1671 (Sumner 1923; Doubleday & Page 1903, 451).

The RCHME Sloden area survey (Fig. 6) shows two phases of silvicultural enclosure post-dating the coppice enclosure. A timber plantation enclosure, forming the outer boundary of Sloden Wood (Figs 6c, 20C), was attributed by Sumner to

1775 (1931, 174–5), but Stagg gives an approximate date of 1768 (1989, 143). Its bank is up to 0.75 m high from the bottom of an external ditch and it has a much sharper profile than the coppice enclosure earthwork (Figs 6b, 20B), which it cuts. A later timber enclosure of 1864, which cuts both the coppice boundary and the enclosure of 1768, is even more clearly defined by a prominent bank (Figs 6e, 20D) surmounted by a post-and-wire fence. The bank stands up to 3.3 m high, from the bottom of an external ditch. All thus have earthwork forms and clear relationships to show a relative chronology consistent with the dates documented.

Many timber plantation enclosures remain in use and their banks are surmounted by post-and-wire fencing. Land-use within the enclosures varies. Up until the mid 19th century most wood grown was hardwood, but the first planting of Scots pine, and later Douglas Fir, required thorough drainage (Pasmore 1967). Land drains, of characteristic herringbone plan, cover extensive areas within some plantations, and have proved very destructive to archaeological remains. This is clear in Sloden, where such drains have virtually obliterated parts of the coppice enclosure, and concentrations of New Forest ware found in the drains indicate that they also cut through several Roman pottery kiln sites.

Holmsley Ridge Type Enclosures and 'Bee gardens'

One type of enclosure to have made far less impact on the New Forest landscape, and which is indeed difficult to locate, is the 'Holmsley Ridge' type enclosure. Such enclosures are small sub-square, or sub-rectangular, embanked enclosures found in isolation on heathland (Fig. 21). They have been so named from the type site at Holmsley Ridge (SU 212011), where over sixty examples have been recorded (SU 20 SW 29, 59). The New Forest Section observed the destruction of several when a gravel pit was established there in 1969, and archaeological excavations were carried out in 1975 and 1980 (Pasmore 1981; 1983). The excavation results were largely negative. No definite post-holes were noted, and no internal features, burning, or any small finds were discovered. The ditch was seen as the primary feature of each site. The up-cast from it would have formed

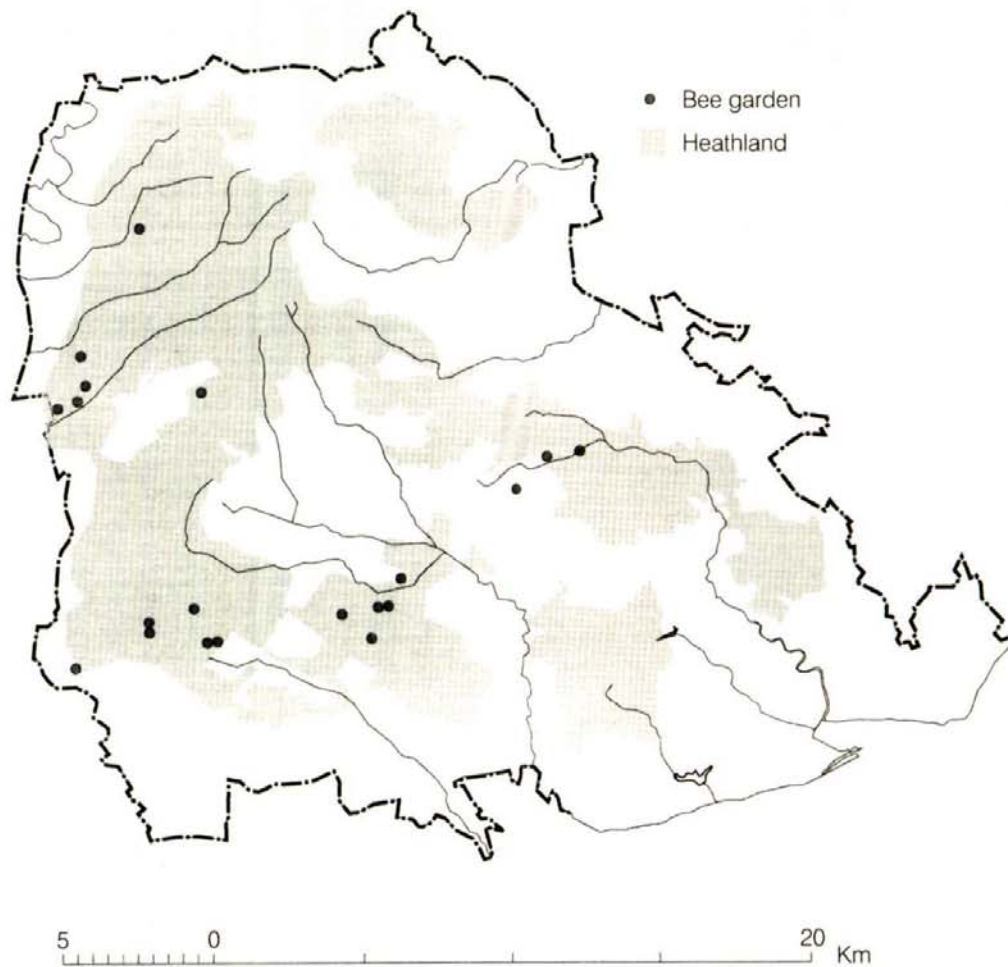


Fig. 21 Distribution of 'bee garden' enclosures in the New Forest

a low bank which might have served as a base for temporary wattle or post-and-rail fencing. The distribution of the enclosures was apparently random, but none overlapped. No firm conclusions were reached as to the age or origin of the Holmsley Ridge enclosures, but they resemble alleged 'bee gardens' described by Sumner (1923) in which straw skeps were kept by local bee keepers for protection against stock. The Court of Swainmote of 1635 gave fines for many offences of creating small hedged enclosures on the open forest for keeping beehives (Stagg 1983, 102–109). The practice is said to have continued until the

beginning of the 19th century. Since bees were put onto the Forest to take advantage of the heather in bloom, the enclosures are invariably situated on heathland, and 'hive', 'garden' or 'garn' place-names point to their presence.

The RCHME carried out a survey of a group of Holmsley Ridge type enclosures near Brockenhurst (Fig. 22), discovered by Chris Read of the New Forest Section in 1991. Over twenty small enclosures survive as earthworks at the site, with traces of further examples largely destroyed by trackways. As with the enclosures on Holmsley Ridge, they apparently respected each other, since

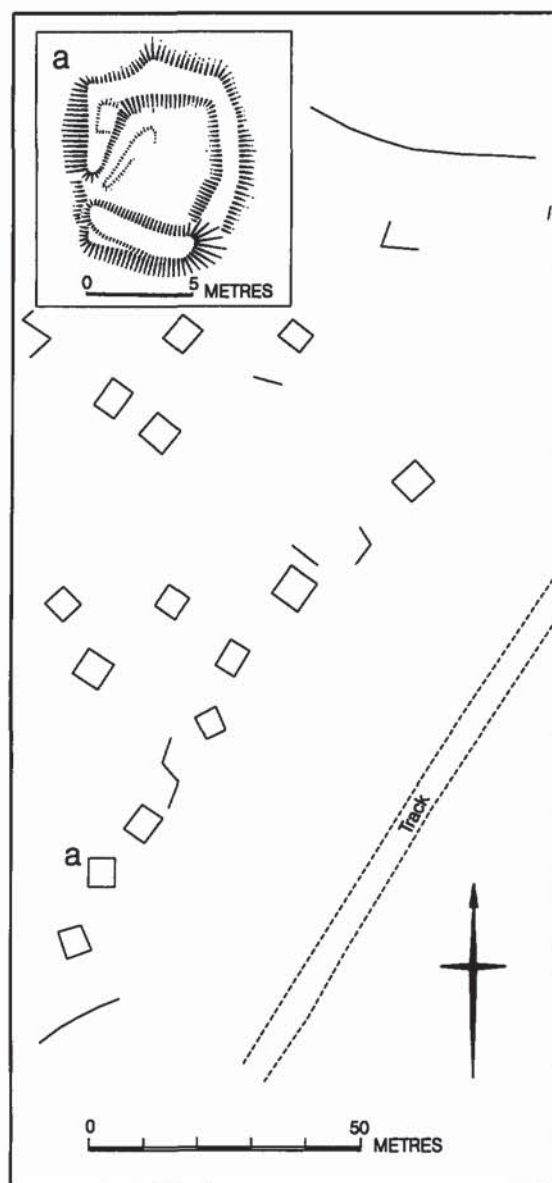


Fig. 22 'Holmsley Ridge' type bee garden enclosures near Brockenhurst

none overlapped. Although no rigid layout was apparent, they were arranged in rows rather than the random arrangement recorded at Holmsley Ridge. One row skirted a woodland strip fringing the east of the site, but a ground check of the wooded area revealed no further examples, supporting the view that their distribution is confined to heathland.

Another series of small enclosures which are similar in size and earthwork profile to the Holmsley Ridge enclosures, but of circular plan, are also to be found in the New Forest. They occur as very slight earthworks only visible under good vegetation conditions and characteristically lack entrances. They may occur singly, but often appear in groups. Two such enclosures were discovered during RCHME fieldwork on Dur Hill Down, at approximately SU 194011 (SU 10 SE 35), adjacent to earthwork banks representing the remains of a former field system. Both are of almost perfectly circular plan, approximately 10 m in diameter, defined by low banks approximately 1 m wide by 0.2 m high. Two out of about seventy similar circular enclosures on Sopley Common in Dorset (SU 131973) were excavated by P J Woodward and the general impression was that they were of recent origin and were constructed for some forestry or horticultural purpose (Woodward 1978).

Miscellaneous Enclosure

In addition to the enclosures found within the core of the New Forest, there are some enclosures which, because of their rarity or peripheral location, may be just mentioned very briefly here. These include the bounds of former monastic lands. Within the New Forest these were delimited in places by earthwork boundaries which can still be seen today. The boundary earthwork enclosing Beaulieu's demesne land can be traced to the east of Beaulieu Rails at SZ 369990, where it survives as an earthwork now marking the parish boundary. At SZ 370967 it consists of a bank c. 2.5 m wide by c. 0.8 m high and an external ditch c. 2 m wide and c. 0.8 m deep.

Military remains, surviving as earthwork enclosures, are another category to be found within the New Forest. The most notable of those encountered during the course of the RCHME fieldwork

lie in two areas near Mogshade Hill and Fritham Cross, at SU 23950930 and SU 23851050 respectively. At Mogshade Hill a series of irregular curvilinear enclosures are defined by banks formed of loose gravel standing to a maximum of 1.5 m high by 2.5 m wide with either external ditches or track-ways. The bank material is rapidly becoming weathered and consolidated and the interiors of the enclosures are now heather- and bracken-covered. Adjacent to these enclosures are several sub-circular embanked hollows with a characteristic 'cross' cut in their centre. Their purpose is uncertain, but they may represent machine gun pits (M Anderton, pers comm). By their freshly constructed appearance and their proximity to the former Canadian World War II camp, all these earthworks almost certainly result from training exercises in advance of D-Day, although the Duke of Connaught's manoeuvres of 1895 also used the same area (HRO Pkt 7m75). Another military enclosure earthwork was encountered during RCHME fieldwork on Coopers Hill (SU 209148). It encloses an area of approximately 20 acres, defined by a bank approximately 0.7 m high by 2.2 m wide and an external ditch approximately 0.4 m deep by 1 m wide. This enclosure has clearly been cut in recent times and is known to have been used as a test site for fragmentation bombs during World War II, when it fell within Ashley Bombing Range (Parker & Pasmore 1995). An enigmatic earthwork on Fritham Plain, at SU 218132, was discovered and surveyed by the RCHME. This is a perfectly circular enclosure, of 18 m diameter, well defined by a bank 2 m wide by 0.2 m high and an internal ditch 1 m wide by 0.1 m deep, with no entrance. Quantities of burnt flint visible in its bank material and its proximity to barrows could indicate a prehistoric date, but it lies within an area of intensive World War II activity.

CHANGING LAND-USE

Palaeolithic and Mesolithic Land-use

The impact of Palaeolithic man on the landscape was minimal, but oscillating sea levels, intermittent uplift of land, and erosion by wind and water have

altered the landscape beyond recognition since the Palaeolithic period (Wymer 1996). Palaeolithic settlement appears to have focussed on the coast and large rivers, but a lack of known sites with organic deposits means few basic questions can be answered. Human presence is known within the project area from scattered finds which include large numbers of Palaeolithic artefacts recovered from gravel of the former Solent River and its tributaries. Their distribution can be seen in volume 1 of the Southern Rivers Palaeolithic Survey (Wessex Archaeology 1991-2) and summaries for Hampshire have been published by Shackley (1981) and Wymer (1996).

For most of Hampshire, evidence for the Mesolithic period is diffuse, being derived almost entirely from surface collections of stone artefacts, some of which have been discovered in the New Forest (Jacobi 1981). Most have come from open heath between Godshill and Denny Lodge, with concentrations north of Lymington and on heathland south of Brockenhurst. During this period the sea level rose dramatically, resulting in the submergence of many artefacts which have been recovered in fishermen's nets. In the area between Pitts Deep and the Lymington River local fisherman Michael White has trawled up about sixty Palaeolithic, Mesolithic, and Neolithic worked flint pieces in his oyster dredge (Momber *et al* 1994). At no point along the Hampshire coast, however, has any shellfish accumulation been identified nor are there any records of artefacts which can be linked to coastal exploitation. Findspots are often loosely provenanced, but tend to be concentrated at the backs of present harbours or on the highest points of the drowned valleys, towards a series of fresh-water springs (Jacobi 1981).

Woodland was extensive during the Mesolithic, and hunter-gatherers exploited a wide range of resources. Dimbleby (1962) suggested that small-scale expansion of heathland at the expense of woodland took place in many areas of southern Britain during this period and a connection has been drawn between the presence of Mesolithic man and finds of charcoal and vegetational change, which may have occurred under the impact of fire and grazing animals. The evidence for the Mesolithic influence upon the landscape and its mechanisms is, however, controversial and

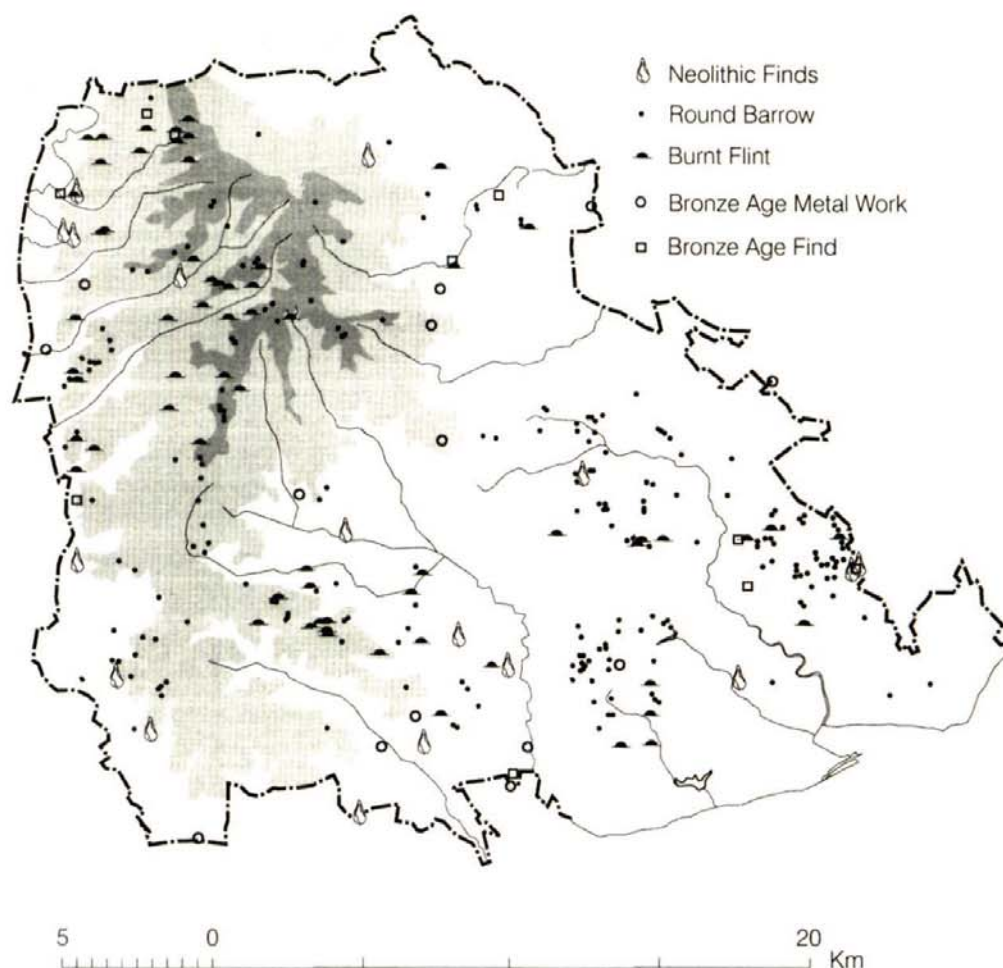


Fig. 23 Neolithic and Bronze Age monuments and artefacts

while Rackham (1980, 103) argues that British woodlands would have been very difficult to burn this is disputed by Moore (1997).

Neolithic Land-use

In Hampshire as a whole Neolithic long barrows are all concentrated on the chalkland, and no later Neolithic 'ritual' monuments have been discovered anywhere in the county (Fasham & Schadla-Hall 1981). The New Forest has no known long barrows or later Neolithic 'ritual'

monuments and only a few Neolithic finds have been recovered. The lack of arable land in the New Forest has prevented much systematic flint collection, but in other parts of Hampshire stray finds indicate less intensive use of non-chalkland areas (Gardiner 1996, 8). Most of the finds which have been recovered in the New Forest lay along the western fringe, on the periphery of the Avon valley (Fig. 23), where settlements have been defined by dense flint scatters (Light *et al* 1994). In excavations for New Dock, Southampton in the 19th century, relics of Neolithic man, flora, and

fauna, were found 20–40 feet below estuarine silt uncovered at low tide, with evidence that a non-tidal river flowed through lowlands and marshes now under Southampton Water (Sumner 1926; Shore 1889).

Neolithic communities are generally recorded as having clear-felled areas for settlement or cultivation and some changes in the composition of woodland, such as the decline in elm and lime, are attributed to their impact (Scaife 1988). Landnam clearance (tilling of small temporary clearings which were soon abandoned) in conjunction with elm bark beetle (Girling 1988) may have caused the Neolithic elm decline, around 3350 BC in southern England. Selective felling and creation of temporary woodland clearings is also thought to have altered woodland composition during these periods. In the New Forest, reinvestigation of Cranes Moor under modern techniques (Barber & Clarke 1987) gave nine radiocarbon dates for vegetation changes. A sharp peak of herb pollens associated with a fall in oak may result from late Mesolithic or earliest Neolithic clearances, and a pronounced elm and lime decline occurred. Further evidence for deforestation during the Neolithic or later periods comes from boreholes between Hythe and Fawley, which show erosion of hill-slopes on the south-western side of Southampton Water (Hodson & West 1972).

Bronze Age Expansion

The earliest archaeological earthwork remains known in the New Forest are Bronze Age burial mounds, mostly bowl barrows, dating from the early-middle Bronze Age. Their distribution (Fig. 23) is generally confined to heathland, although a few now lie within forestry plantations. In the east of the Forest notable concentrations lie around heads of river systems on Beaulieu Heath West at the head of the Crockford Stream (SZ 345998), at the head of Beaulieu River (SU 355075), and on Beaulieu Heath East at the head of Dark Water (SU 420043). In the west of the New Forest round barrows are more widely scattered, but tend to be sited on the edges of high ground, most lying above 50 m OD and a large number lying on the Plateau Gravel above 100 m OD. Many have

been dug, but the few which have been the subject of archaeological investigation have not yielded rich finds and have been dated by their cinerary urns. The comparative absence of rich graves could be interpreted as evidence of a 'poorer' society than on chalkland, alternatively coupled with the lack of large scale Neolithic monuments it may reflect a different social, economic, or political basis for society which is continued into the Bronze Age.

Burnt mounds are also frequently found in the New Forest. They lie beside streams and their distribution is weighted towards the northern and western areas of the Forest (Fig. 23). Excavations of a burnt mound (SU 21 NW 13) at Deadman Bottom, in 1967, unearthed coarse black pottery, thought to date from the late Bronze Age (Pasmore & Pallister 1967). The original function of burnt mounds is still not fully understood and various interpretations have been put forward, from sites of ancient cooking troughs to early saunas, but they do not seem to have been directly associated with settlement and are not the result of normal domestic activity. Their presence might suggest use of the area for hunting and possibly transhumance.

From the large number of barrows and burnt mounds recorded, Bronze Age activity in the New Forest must have been extensive, but evidence for settlement contemporary with these barrows and burnt mounds is elusive. Bronze Age communities may have used the area for burial, and possibly ritual activity, with settlement located elsewhere, perhaps in the adjacent river valleys or along the coast. Excavations in advance of gravel extraction at Hucklesbrook and Ellingham show that valleys were a focus for settlement, and the Blackwater has recently produced a Bronze Age wooden jetty or causeway with a bronze rapier driven into underlying silts, and remains of a sea-going boat (Light *et al* 1994). Bronze Age artefacts were also recovered from a multi-period settlement site discovered during topsoil stripping prior to gravel extraction at Rockford (SU 16970825; SU10 NE 26). Many settlement sites undoubtedly remain to be found by archaeologists. Bronze Age settlement is difficult to locate by surface observation, being, with a few exceptions, unenclosed and leaving little in the way of earthworks or surface finds.

Non-intensive, small-scale, and shifting occupation and agriculture, such as that proposed for the Purbeck heath (Cox & Hearne 1991) would leave few remains and even permanent settlements are unlikely to be visible through vegetation cover. Occupation remains situated in valleys may be buried by alluvium, colluvium, and mire deposits. Occupation in prime locations may be destroyed or masked by later settlement. At Buckland Rings, for example, a small hearth and flint flakes found below the turf line on which the rampart was built indicated prehistoric occupation prior to the period of the earthworks (Hawkes 1936, 135–6).

The appearance of so many round barrows in the New Forest after the complete absence of Neolithic monuments could indicate Bronze Age movement into the area possibly linked with agricultural over exploitation of the adjacent chalk downland resulting in expansion onto poorer soils. This idea has been put forward for the Purbeck Eocene Basin where a marked expansion of heathland during the early-middle Bronze Age seems to have been related to human activity and woodland clearance (Cox & Hearne 1991) and the same has been suggested for the New Forest (Fasham & Schadla-Hall 1981). The Bronze Age is generally regarded as the period in which the first major human impact on the landscape occurs. Dimbleby (1962) argued that creation and expansion of heathland was essentially due to human action, woodland clearance and agriculture leading to a classic soil degradation sequence of brown earth to podzol. However, podzols do exist in some undisturbed woodland soils in the New Forest (Dimbleby & Gill 1955). It has further been suggested (Tubbs 1986, 59) that woodland clearance and primitive farming, during and after the Bronze Age, triggered erosion which removed topsoil now seen as basal deposits and bands of fine loamy or sandy material widely distributed in New Forest valleys. At Noad's Bog (SU 395062) two charcoal bands were found associated with weed and heather pollen, and a wedge of bleached sand marked the beginning of an increase in heather pollen. The pollen profile also showed weeds of cultivation, and cereals, but precise dating was not possible (Barber 1981, 93; Tubbs 1986, 59). Further studies of New Forest valleys (Reynolds & Catt 1987) have also proved inconclu-

sive in determining precise dates, or causes, of colluviation. The almost exclusively heathland distribution of burnt mounds and barrows, and the presence of heathland vegetation beneath those barrows studied indicates that New Forest heathland was established before the middle Bronze Age.

In the late middle Bronze Age a major expansion occurred in the quantity of Bronze metalwork produced and circulated in southern Britain. Hampshire and east Dorset have been identified as part of a major industrial province along the south coast at this time. Palstave hoards with a riverine and coastal distribution, suggesting possible connections with northern France, are a particular feature of the industry (Rowlands 1976). Several Bronze Age metalwork hoards of this period have been discovered in the New Forest (Fig. 23). In 1926 a hoard of twelve unused palstaves, dated to around 1200 BC, eleven from the same mould, was found in the face of a gravel pit at Shappen near Burley, about 2 feet below the surface (Sumner 1927b, 92–3; Hardcastle 1987, 22). On Clay Hill eight palstaves were found by metal detecting (SU 21 SE 23). Middle Bronze Age metalwork which may represent a dispersed hoard has also been found in Anderwood Inclosure, where three palstaves of a type dated to c1300–1100BC and concentrated mainly in coastal hoards from Sussex to Dorset, were unearthed during construction of a new track in 1961 and 1984 (Tubbs 1985). Other metal pieces found nearby included two bracelet fragments (SU 20 NW 27). These hoards may be utilitarian in nature, since they were all deposited in dry land and were obviously retrievable, but in the absence of information on their position *in situ* their votive significance cannot be ruled out.

The later Bronze Age is marked by a period of general climatic deterioration, in which peat growth resumed in many bogs in Britain. The earthwork evidence for this period in the New Forest again differs from the chalkland in the absence of linear ditch systems which appeared there at this time. This could indicate a retreat from the New Forest, as a marginal area, but it is impossible to draw any firm conclusions since evidence for occupation in the preceding periods is scarce and burial becomes less visible everywhere in the late Bronze Age.

Iron Age Activity

The beginning of the Iron Age marks a change in the nature of New Forest earthwork remains from funerary monuments to embanked enclosures. Several hillforts, mostly univallate, command major rivers on the periphery of the Forest, while a number of lesser univallate enclosures are to be found in the present-day Forest's woodland core (Fig. 24). This pattern differs greatly from the chalkland, where we have 'developed' hillforts situated within a landscape divided by linear ditches and extensive field systems. The reasons for the absence of land division and field systems in the New Forest are uncertain. It may have been simply because the area was agriculturally less valuable than the chalkland, but perhaps the nature of social organisation differed from that of the chalkland communities. Problems in locating settlement sites in the New Forest can also be applied to the Iron Age period, although excavations have successfully recovered evidence for a few non-earthwork settlements. At Church Green (SU 21 NW 24; SU 22321498), excavations between 1976 and 1986, revealed a probable extensive Iron Age and Romano-British settlement (Pasmore & Fortescue 1977-83), with few surface features remaining. At Armsley (SU 11 NE 10; SU 16501609) an Iron Age to late Roman settlement was discovered during excavations in 1921-5 (Edwardes 1926). Iron Age pottery was also found when a group of barrows in Millersford Plantation was destroyed in 1960 (SU 21 NW 39; A Pasmore, pers comm). One curious find was that of a postulated cart burial of Hallstatt type in a small barrow (SU 30 SE 17) on Beaulieu Heath excavated by Piggott (1953), although its interpretation was based only upon the presence of wood fragments. During the later Iron Age growing cross-Channel trade meant that New Forest rivers formed vital access routes to the Solent coastline, and it is probably in this context that the major New Forest hillforts may be explained.

Land-use in the Roman and Early Medieval Periods

The most obvious signs of Roman activity in the New Forest to be seen today are the sites of pottery kilns (Fig. 24) which operated in the area mainly during the 3rd and 4th centuries AD and

whose products were traded as far afield as Chester, Brittany, and Normandy (Fulford 1996, 33). The New Forest provided important raw materials needed for pottery production - clay, sand for tempering and kiln smothering during the cooling stage, turves and heathstone for kiln construction, and wood for fuel (Lyne & Jefferies 1979; Fulford 1996). The scale of the industry and the population involved with it are uncertain. Excavators observed that some kilns had been rebuilt on the same spot several times, and so kilns in a group may represent intermittent occupation widely spaced in time, possibly reflecting abandonment of individual kilns as each became unworkable, and perhaps seasonal reoccupation. This would imply a relatively unsophisticated industry with production on any site limited to one or two potters using, at most, two kilns, Crock Hill and Ashley Rails kilns being exceptions. Contemporary Oxfordshire and Nene Valley kilns have associated structures interpreted as potting sheds, drying sheds, and drying kilns, but these have not yet been found in the New Forest despite trial trenching over a wide area in Amberwood (Fulford 1975). During the RCHME fieldwork at Crock Hill, however, very slight earthwork platforms c. 5-6 m in diameter, which may represent hut sites, were seen on a south-facing slope scattered with pottery (M Corney, pers comm).

There is a notable absence of towns, villa sites, field systems or evidence for cultivation in the New Forest during the Roman period. Several Roman roads (Fig. 24) have been identified, but evidence for Roman settlement within the project area is restricted. Church Green was occupied until the 4th century AD, and 4th-century and earlier pottery has been found at New Copse (Tubbs 1986, 46; A Pasmore, pers comm). Further Roman settlement sites lie in Bignell Wood and near Rufus Stone (A Pasmore, pers comm), while an important iron-working site was excavated at Armsley (SU 11 NE 10). Outside the project area, at Crystal Hollow, Godshill, a sequence of Roman structures has also been found alongside a road leading towards potteries in open forest woodland (Walker & Davies 1996). It appears that the area lacked the arable agricultural economy based on villa estates seen over much of southern England during this period. Settlement sites may remain to

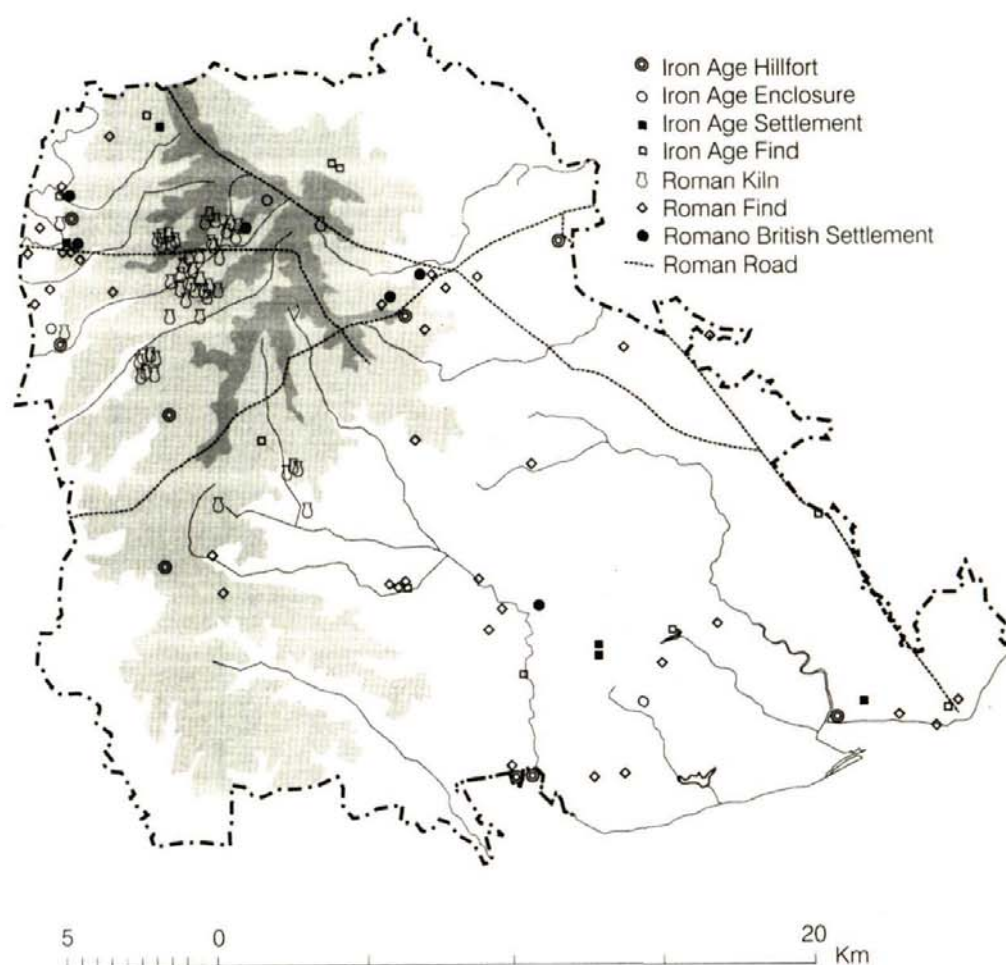


Fig. 24 Iron Age and Romano-British monuments and artefacts

be found in the vicinities of the kilns themselves, and the industry may have links with settlements on the fringes of the New Forest.

As in most other parts of England, archaeological evidence for the post-Roman period is sparse in the New Forest. The Roman pottery kilns had ceased production by the 5th century AD. The earliest evidence for post-Roman occupation in the county dates to the 5th century AD and includes pottery found 400 m west of Hucklesbrook Farm near South Gorley (SU 158107), and pottery found 500 m south-east of Lymington church (Lewis 1996, 16). The pattern of Saxon and Jutish inva-

sion is not clear, but New Forest place-names are largely of Germanic origin. The open forest possibly became recognisable as a separate entity in this period, since as late as the 12th century it is referred to as 'Ytene', meaning 'of the Jutes' (Walker & Davies 1996). Jutish domination over the New Forest and southern shores of Hampshire ended with their annexation by Wessex in the late 7th century AD.

By the 11th century the Hampshire landscape appears to have consisted of an evolving pattern of nucleated villages and possibly dispersed farms or hamlets, set in an expanding agricultural land-

scape (Hughes 1984, 77). Many New Forest settlements are known, from the Domesday Book, to have been in existence by this time, but only a few of them are archaeologically attested (Hinton 1996, 40) and Brockenhurst church is the only church in the area mentioned. Pannage for pigs was clearly important, as charters and Domesday Book demonstrate. Domesday assessments state the number of hogs for which there is pannage but give no mention of the size of woods and rarely of the type of timber growing in them. Placenames ending in -hyrst and -leah, may lead us to secondary sites or wooded settings with possible implications of seasonal use for swine pasture (Fox 1996, 13).

The Royal Forest and Medieval Land-use

The New Forest was created as a royal forest by William the Conqueror sometime between 1066 and 1079. As with most forests it had crown estates at its core, but also included private land. The purpose of royal forests was to provide a hunting reserve for the king and a supply of fresh meat for court. The king appointed officers to enforce forest law, primarily concerned with the preservation and protection of vert (timber and undergrowth) and venison (all beasts of forest or chase, not just deer). Almost without exception forest bounds were defined with reference to pre-existing features – hills, streams, roads, bridges, park and wood boundaries, barrows and other ancient features. Henry II, Richard I, and John greatly enlarged the royal forests, but John was forced to make concessions at Runnymede. In 1217 Henry III's *Charter of the Forest* further redressed the balance and Edward I confirmed it. Its first article disafforested lands afforested by Henry II, Richard I, and John. These lands became known as the 'purlieus' and were subject to special laws. A number existed around the edge of crown lands in the New Forest, marking the area disafforested at this time.

The effect of the creation of the royal hunting forest upon the settlement pattern of the New Forest has long been debated. Early chroniclers describe the depopulation of numerous villages and the destruction of churches by William I, but later views have ameliorated the extent of depopu-

lation. Stagg (1974) deduced that nineteen 'lost' holdings resulted from the creation of the Cistercian estate of Beaulieu rather than afforestation. Domesday shows that the modern settlement pattern of south-west Hampshire was well established 900 years ago. Within the Forest the present settlements of Lyndhurst, Burley, Minstead, Boldre, and Brockenhurst were represented by small manors. There was a scatter of holdings immediately inland of the Solent. Of the larger enclaves of enclosed land only Fritham and Linwood cannot be certainly identified in Domesday (Tubbs 1986, 47). Despite ground searches of several locations listed in Domesday, which today exist as isolated farmsteads, no evidence for depopulation or shrinkage was located during the RCHME fieldwork, suggesting that they had always been small and dispersed settlements or farmsteads rather than nucleated villages.

After afforestation, forest law prohibited enclosure, making cultivation difficult, and by 1086 the New Forest contained little arable. Brockenhurst had 3.5 ploughs, six bordars, and a value of 80/-. The only other arable holdings left in the main forest were one virgate held by a forester at Lyndhurst, half a hide and four bordars at Minstead, half a virgate held by a forester at Battramsley, and less than one hide at Fawley. Nevertheless, cultivation of New Forest fields in the historic period, particularly during times of shortage, is well attested. Medieval documentation is full of references to land being cleared and enclosed. The best documented involved religious houses. The *Charter of the Forest* established a legal framework for enclosure and cultivation of private lands in royal forests under licence from the Crown, and legalised existing assarts. Revenue was raised from fines for assarting (reducing land to cultivation), and making purprestures (usually smaller land encroachments), both of which were licensed retrospectively and gave rise to later annual rentals. The Crown also made substantial grants of land (Tubbs 1986, 71). By the medieval period rye, which thrives on dry acid soils, was clearly a major crop on the nearby Purbeck heath (Cox & Hearne 1991, 219) and could have been grown on reclaimed heathland in the New Forest. Some ancient manorial demesne lands were also disafforested in 1279 and 1300 and gradually came

under cultivation. With the onset of economic depression and plague in the mid 14th to 15th centuries, arable fields were probably soon abandoned. Pastoral use of the area was continued by the Crown and by the exercise of commoners' rights of grazing and pannage. Innovations in animal husbandry saw the establishment of royal vaccaries in the New Forest and Beaulieu Abbey's 'Bergerie', which specialised in wool processing. Deer parks were also established for more intensive rearing of deer.

Initially the woodlands of the New Forest were valued primarily for cover for deer and pannage for swine rather than silviculture. The earliest known reference to the existence of coppices in the New Forest is an order of 1389 to sell 109 acres in various coppices (Flower 1980, 189), but most probably date from the 15th and 16th centuries, when the Crown's interest in the New Forest changed from hunting to timber production. Medieval silviculture, as practised in the New Forest, was a coppice-with-standards system. A group of trees was enclosed in order to permit natural regeneration by protection from grazing animals. Underwood was cut for fuel, wattle, fencing, and charcoal production. Standard trees, usually oak, provided structural materials. Coppices were generally leased out, with the Crown collecting revenue and retaining rights to the timber, while the lessee took the underwood. The heyday of coppicing was short-lived, so that by the end of the 16th century coppices were often neglected and their enclosures were frequently used to keep stock. *The Act for the Increase and Preservation of Timber on the New Forest*, 1698, marked the end of the coppice system. It outlawed the ancient practice of pollarding and ordered that timber plantations be established within which no underwood should be grown.

From the early 13th century until the Dissolution monastic houses played a significant part in the land-use of the New Forest. In 1204 King John granted c. 10,000 acres or more of Forest land to found the Cistercian Abbey at Beaulieu and the abbey subsequently acquired further lands in and around the Forest. Local protest against the enclosure under royal licence of Beaulieu abbey's lands by dykes and hedges is recorded in the Close and Patent Rolls, as well as the Beaulieu Cartulary

(Hockey 1974). The agricultural regime of Beaulieu Abbey was based on six granges – Holbury, Sowley, St Leonards, Beufre, Hartford, and Otterwood, all of which were administered on similar lines, delivering produce to the abbey and receiving food from the monastic bake-house and brewery. They formed a compact unit undisturbed by villages and without any local clergy. By 1269 half of Beaulieu's estate of 3,500 ha was under tillage (Information from Beaulieu Abbey). The granges on the more fertile lands in the south of the New Forest – Beufre, Sowley, and St Leonards – were the most productive. They produced chiefly wheat and oats, but the Abbey's main source of revenue from its foundation was wool, which was washed, graded, and packed for market at Bergerie (SZ 393978). Wool from other granges such as Faringdon, Oxfordshire, was also carted to Beaulieu. At first sight the names Beufre and Bergerie would seem to indicate centres of stock and sheep breeding, but Bergerie is not included amongst the granges, and there is nothing in the account of Beufre to differentiate it from the other granges (Hockey 1975). Beaulieu Abbey also carefully managed its woodland. In 1269–70 the monks drew up a schedule of products, which included firewood, faggots, vine-stakes, and charcoal, to be expected from an acre of coppice of 20 years growth (Rackham 1983, 62–3).

In addition to Beaulieu, Christchurch Priory, Breamore Priory, the Bishopric of Winchester, Titchfield Abbey, Mottisfont Priory, Quarr Abbey, and Netley Abbey all held lands or grazing rights in the New Forest. In 1280 it was reported that the Abbot of Beaulieu and the Priors of Christchurch and Breamore had an excess of livestock grazing in the New Forest, damaging the pasture of the king's deer (Stagg 1979, 191). Later in the Middle Ages Forest administration became lax and, around 1300, the Abbot of Beaulieu had 50 pigs, and the Abbot of Netley had 40 pigs in the New Forest (ibid.). Cattle were also allowed to graze; in around 1300 the Abbot of Beaulieu had 200 and Netley had 60 in the Forest. Sheep, by contrast, were generally excluded under forest law because it was believed their grazing habits placed them in direct competition with the deer. Despite this, in around 1300 Beaulieu had 1300 sheep and Netley had 300 sheep in the New Forest (Stagg

1979, 405–6). Documentary sources also show that monastic houses were active in appropriating and illegally enclosing New Forest land (Stagg 1979, 117, 197–8).

Later Land-use

Following the Dissolution, monastic lands in the New Forest reverted to the Crown, and many were sold into private ownership. New agricultural techniques of the 18th century made large-scale cultivation possible on poor soils for the first time, but forest law still restricted cultivation in the New Forest.

The most significant enclosure to affect the New Forest landscape from the 18th century onwards has been the creation of timber plantations over large areas of former wood pasture and heathland. *The Act for the Increase and Preservation of Timber in the New Forest*, provided for the enclosure and planting of 2000 acres (810 ha) with oak and the subsequent enclosure of 200 acres (81 ha) annually for 20 years. Between 1700 and 1871 some 17,680 acres (7,155 ha) of common land in the New Forest was enclosed for these silvicultural plantations, created by Acts of Parliament and referred to as 'statutory enclosures'. They are free of common rights as long as they are fenced, and can only be used for silviculture. It has usually been thought that the reason for the plantations was the need for naval timber, but Stagg believes more fundamental reasons were the general movement towards the 'improvement' of commons and waste lands, and the need to increase the revenues of the crown (Stagg 1989, 135–6).

The 19th century saw an intensification of timber production in the New Forest. In 1808 the *Act for the Preservation of Timber in Dean and the New Forest* confirmed enclosures already made and provided for an additional 2029 ha which could be fenced at one time. The *Deer Removal Act* of 1851 further increased the area of timber inclosures and legalised the planting of conifers (Stagg 1973, 7). The *New Forest Act* of 1877 largely halted the enclosure but an Act of 1949 permitted the enclosure of 367 ha within existing woods and, in the late 1950s and early 1960s, 814 ha of open heathland were enclosed. These enclosures were of two distinct types – the Verderers' Inclosures, which were true

timber plantations, and the Ancient and Ornamental plots, which were temporary protection for regeneration and have now gone (A Pasmore, pers comm).

The New Forest is the only forest in Britain today to survive as an institution in something like its medieval form. Forestry and heathland management have continued under the auspices of the Forestry Commission since 1923, alongside the continuing exercise of rights by commoners, which were first officially registered between 1851 and 1858. Rights of pasture and mast are the only common rights of major economic importance in the New Forest today (Pasmore 1969). The Court of Verderers, consisting of appointed representatives of public authorities and elected commoners, regulates the exercise of common rights and controls development on the open Forest. The Forestry Commission represents the Crown's interests.

DISCUSSION

The archaeological remains of the New Forest are very different from those of surrounding areas. We know that from the medieval period onwards this was largely due to the designation of the area as a royal hunting forest by William I and more recently the historic landscape has been carefully maintained by conservation policies. The archaeological remains encountered during the RCHME fieldwork suggest that during the prehistoric and Roman periods the area also had a distinctive character and its land-use seems to have differed from that of adjacent areas from an early date. Despite the high survival rate and specialised nature of some remains, the New Forest is not a 'rich' early archaeological landscape in terms of the density, variety, or complexity of sites when compared with the adjacent chalklands. Its lack of Neolithic monuments and Roman villa sites, and its scarcity of complex multivallate hillforts, and prehistoric field systems, set the area apart and indicate that it was never exploited intensively for agriculture and never densely settled.

The archaeological earthwork remains of the New Forest reflect a very different land-use and development to those of the much-studied chalk-

land. Artefact scatters suggest that during the early prehistoric period the area was used by hunter-gather groups. The absence of Neolithic monuments and the few Neolithic artefacts found in the New Forest indicates that, in contrast to the chalkland, activity was not focused upon the area, but may have been concentrated in the river valleys close to which most stray finds have been recovered. During the Bronze Age, when many round barrows and burnt mounds were constructed, but little else, the area appears to have been sparsely used but for particular purposes – especially funerary – and probably also for hunting and summer grazing. The development of heathland at the expense of woodland seems to have accelerated at this time and by the Iron Age earthwork remains are largely absent from New Forest heathland. In this period hillforts overlook river valleys and there are a few smaller enclosures which may be farmsteads, but could be something different. There are possibly some small field systems away from these enclosures, but no indication of intensive agriculture. Again the field evidence points to the area being sparsely populated. During the Roman period the New Forest became well-known for its pottery production, which appears to have consisted largely of small-scale operations and in terms of agricultural production and settlement the area continued to be little used. The almost total absence of early medieval activity makes one wonder whether William I confirmed a *de facto* hunting ground by his creation of the royal forest in the 11th century. The establishment of the royal forest inhibited enclosure, and probably also minor industry (Stamper 1988). The area continued to be used for grazing stock, but economic pressures for cultivable land, particularly at the time of general population expansion in the early 14th century and at the time of food shortage during the Napoleonic Wars, are reflected in a large number of assarts, purprestures, and encroachments. As the Crown's interests changed due to economic and military pressures, the land-use of the New Forest changed to silviculture. Woodland became of paramount importance to the Crown, and areas of wood pasture were enclosed as coppices. The increasing desire for revenue generation from the production of timber from the early post-medieval

period onwards resulted in increasingly large areas being enclosed for timber plantations, prior to the ascendancy of tourism as the major land-use in recent years.

Much further work remains to be done before the reasons for the New Forest's distinctive landscape can be fully understood, and many avenues for future research emerged during the course of the project. The striking differences between prehistoric earthwork remains of the New Forest and those of the chalkland require explanation. The field remains of New Forest woodland and extractive industries have been little investigated, and would form worthwhile research topics. The communications network of the Forest has also received little attention. During the RCHME fieldwork numerous hollow-ways were seen which have never been recorded: their courses are uncharted and their dates unknown. Further hollow-ways are visible on aerial photographs, while cartographic sources show roads representing local access ways, salt-ways, drove roads, transhumance routes, and smugglers' routes. Such roads are important for the history and prehistory of the area, and form links that may help to explain past land-use more fully. Our knowledge of some individual monument types characteristic of the New Forest is also slight; these include burnt mounds, 'bee gardens', 'rails' enclosures, and hunting lodges. The RCHME project was unable to look in detail at the coastal area, which differs very much from the New Forest 'core' and has its own earthwork remains which include coastal salterns, sea defences and land reclamation features.

The New Forest is a special and well-preserved landscape whose history and prehistory is visible all around in its scenery as a whole, and in its ancient earthwork remains in particular. The pre- and post-medieval patterns of earthworks undoubtedly survive in something approaching their original form despite the destruction of remains in selected areas in the face of military needs. Damage to some earthwork features was seen during the RCHME fieldwork but most previously recorded earthworks investigated survived intact. Damage currently occurring results from erosion by human and animal traffic, ground disturbance by heavy vehicles during forestry operations, and

natural agencies such as stream erosion, burrowing animals, and tree roots.

The RCHME project has aimed to contribute to the wider understanding of the New Forest's earthwork remains. The survey work resulted in a number of archaeological features being accurately mapped for the first time. Detailed surveys were carried out of a sample of the characteristic earthwork types to be found within the Forest. As a result of the project, 99 new site records were added to the NMR database, and over 200 records were updated. Information from the survey work, and many other disparate sources, was finally brought together and, through the NMR, provides an up-to-date database of the earthwork remains of all periods to be found in the area.

Methodology

The measured surveys were carried out using a Wild Leitz TC 2000 Total Station theodolite and a Wild Leitz 200 Global Positioning System. Additional detail was added using taped offsets. The numbers in brackets are the National Monuments Record numbers for sites mentioned throughout the text. Further information on these sites and on the project as a whole may be obtained from the National Monuments Record Centre, Kemble Drive, Swindon SN2

2GZ. Telephone 01793 414600. Fax 01793 414606. E-mail info@rchme.gov.uk.

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Author: Nicola Smith, English Heritage, National Monuments Record Centre, Great Western Village, Kemble Drive, Swindon, SN2 2GZ.