ARCHAEOLOGICAL RESEARCH PRIORITIES FOR HUMAN REMAINS FROM SOUTH-EAST ENGLAND (KENT, EAST AND WEST SUSSEX AND SURREY)

S.A. MAYS AND T. ANDERSON

The aim of this document is to outline the way in which the study of human remains can contribute to our understanding of the human past in Kent, Surrey, and East and West Sussex (hereafter referred to as the south-eastern counties or south-east England). It provides a brief overview of the range of information potentially available from the study of human remains. The factors which determine the value of a collection are outlined. There then follows a discussion giving the approximate quantity of material, broken down by period, available from the region. The additional assemblages, which are most needed to help understand earlier life-styles and to fulfil specific archaeological aims, are identified for each period.

1. INFORMATION AVAILABLE FROM THE STUDY OF HUMAN BONES

(a) Demography. The parameters of interest here are the age at death and the sex of the skeleton.

Age at death can be estimated in the immature skeleton using the growth and development of the bones and teeth (Scheuer *et al.* 1980; Workshop of European Anthropologists 1980). The older the child the more imprecise the estimate of age at death: the age of newborn infants can be assessed to within a few weeks, but by adolescence the margin of error is increased to 2–3 years.

Once growth has ceased, age at death may be estimated using various age-related changes in the skeleton, of which the most reliable for archaeological populations is probably wear on the teeth (Lovejoy *et al.* 1985; Brothwell 1981). These changes do not proceed in such a regular way as do skeletal growth and development, so age at death estimates are necessarily less precise than they are for immature individuals.

Most workers attempt no more than to classify adult skeletons as young adult (*c.* 18–30 years old), middle adult (*c.* 30–50) or older adult (*c.* 50+).

In adult skeletons, experienced osteologists can correctly assign sex in over 90 per cent of cases, if the pelvis and skull are available (Krogman 1978: 112). In other bones, sexual dimorphism is less strongly expressed and, in many cases, the degree of overlap limits their value for sexing. Methods presently available for determining the sex of children are of questionable reliability, thus most workers do not attempt to sex child skeletons.

Determination of sex and age at death from skeletal remains helps to provide evidence for longevity in the past, as well as illuminating burial ritual and other cultural practices. For instance, in the large assemblage from the deserted medieval village of Wharram Percy, North Yorkshire, it was found that nearly half the adult skeletons were aged over about 50 years at death, suggesting that once adulthood was attained these rural peasants had a reasonable life expectancy. At many Anglo-Saxon cemeteries, the lack of foetal or perinatal remains suggests that they were interred outside formal cemetery areas (Molleson 1991). In addition, detailed analysis of foetal and new-born infant skeletons may reveal whether or not infanticide was practised (Mays 1993). The age and sex of the deceased may influence treatment in death, including range of grave goods and place of burial within the cemetery. Demographic data also provide the essential background against which to interpret other anthropological information such as bone measurements or frequencies of skeletal pathologies.

(b) Normal variation in the human skeleton. The study of normal skeletal variation includes measurement of the bones and teeth and recording minor variations in skeletal form such as presence or absence of bony spurs, extensions to joint surfaces or the presence of small extra bones (ossicles) in the skull and at other sites (these minor variations are often collectively termed 'non-metric traits'). There is evidence that certain non-metric traits are largely inherited (Hauser and de Stefano 1989); thus, the distribution of these variants in a cemetery may enable groups of genetically related burials to be discerned. Other non-metric traits, for example the so-called squatting facets (extensions to joint surfaces in the foot and ankle bones), are largely developmental (Trinkaus 1975). Analysis of these variants may reveal something about activity patterns.

Comparison of cranial measurements may provide information on population movements (Brothwell and Krzanowski 1974), efficiency of skeletal growth (Angel 1982) and the influence of climate on the skeleton (Wolpoff 1968).

Another aspect of normal variation in the human skeleton is the chemical composition of the bones. If burial conditions are favourable, it may be possible to obtain dietary information from trace element (Aufderheide 1989) and stable isotope (Keegan 1989) analysis. The ability to extract molecular information from ancient bones may in future provide useful genetic data (Brown and Brown 1992).

(c) Abnormal skeletal variation: changes due to disease or injury. In antiquity the great killers were the acute infectious diseases. However, the diseases which leave traces on the skeleton tend to be the more chronic (long-lasting) ones. Therefore, contrary to popular belief, it is generally not possible to determine cause of death in an ancient skeleton. Although palaeopathology, the study of disease and injury in ancient bones, can tell us little of how people died, it may reveal a great deal about how they lived. Palaeopathological studies allow us to investigate aspects of diet, nutrition and general living conditions such as activity patterns, standards of hygiene and environmental conditions, and the effects of these factors on human health.

When combined with other archaeological data we can investigate how these aspects varied with subsistence strategy or settlement patterns, or with sex or social status. Palaeopathology also makes an important contribution to our knowledge of the history of the major diseases which manifest themselves on the skeleton. Indeed, recent work in Canterbury has revealed several diseases previously considered to be restricted to modern day populations. For example, an elderly male skeleton showing changes consistent with spread of cancer from a primary focus in the prostate gland has been found at St. Gregory's priory (Anderson, Wakely and Carter 1992; Wakely *et al.*, 1995). This is the first time a case of prostate cancer has been reported in British medieval remains.

If burial conditions are favourable, chemical analysis of the bones may reveal patterns of exposure to toxic elements, such as lead (Aufderheide *et al.* 1981). In the future, it may be possible successfully to identify diseases in ancient skeletons using immunological techniques or by detection of minute traces of DNA left in the bones by infecting micro-organisms (Roberts and Manchester 1995, 198–9).

(d) Study of burial practices. In addition to familial groupings, the study of human remains can shed light on other aspects of burial ritual. For example, the study of the distribution of disarticulated human bones deposited in Neolithic communal tombs, and the relative representation of different parts of the skeleton, aids the understanding of the ritual activities which occurred at the site (Thomas 1988).

The study of cremated bone may reveal data on funerary practices. For example the colour, and microscopic and spectroscopic properties of the bone fragments, may indicate the approximate temperature to which they have been exposed. In some cases differential firing of different parts of the body may suggest the position of the corpse on the pyre. The weight of bone recovered from intact cremation burials may provide a measure of the thoroughness with which the bone fragments were collected from the pyre for burial (Anderson and Fell 1995).

2. GENERAL FACTORS AFFECTING THE VALUE OF AN ASSEMBLAGE OF HUMAN BONES

Study of an assemblage of human remains from a site will potentially contribute to all four categories of information discussed above, but the nature of the site and the skeletal material may suggest an emphasis on some areas at the expense of others. Some aspects of a human bone assemblage, which affect the quantity and type of data potentially available from it, are discussed below.

(a) Size of assemblage. Large numbers of individuals (in the region of several hundred) are preferable for statistical comparisons (within or between sites) of data on demographic parameters, skeletal form or frequencies of bony pathologies. A large assemblage also serves as a baseline or type site with which other sites in the region, or sites of similar date, can be compared.

The need for large collections is accentuated by the fact that only a sub-sample of an assemblage will prove suitable for the study of a specific feature. For example cranial form: firstly comparisons are only generally useful for adults, secondly male and female adults need to be considered separately, and thirdly only some adults will have skulls sufficiently undamaged to permit measurements to be taken. Thus, the group of individuals suitable for a study of cranial form will be much smaller than the number of burials in the whole assemblage.

The size of a collection is thus a consideration of prime importance. However, decisions concerning priorities for study of human remains must be made against the background of existing work and the nature of assemblages from the period and region in question. For example, a handful of skeletons of Mesolithic date would be of great value given the general scarcity of British remains from this period. In some areas large cemeteries may not exist from certain periods due to the nature of ancient burial practices – for example the Bronze Age in south-east England. In such cases considerations of sample size do not apply in the same way as they would for periods where large cemeteries might be expected. Each site yielding but few individuals adds to the overall corpus of data, and data from more than one site need to be combined to permit statistical analyses. Furthermore, even small collections may be of great value for understanding ritual practices at a site.

An additional factor which might also be mentioned here is the question of whether or not the cemetery has been excavated in its entirety. It is rare for large cemeteries to be excavated to their full extent, although this may be the case for smaller, prehistoric, burial sites. Even if a cemetery is entirely excavated, the skeletal material rarely represents all interments which were made, as some burials have generally been destroyed by later activities at a site. Generally, the proportion of a cemetery which falls within the excavated area is not known with any accuracy. Although the value of an assemblage is increased somewhat if most or all of the cemetery area was excavated, it should not be thought of as a significant problem if this was not the case.

(b) Preservation and completeness of burials. The quantity and reliability of all classes of information which can be obtained is reduced if the bones are poorly preserved. Demographic data probably suffer least in this respect, bone measurement and pathological data the most. For very poorly preserved and incomplete burials a brief scan of the material in order to produce a short note on the state of the bone may be all that is merited in the way of specialist examination.

In some instances problems with the state of the material may be at least partially overcome if a suitable approach is adopted. For example at the Anglo-Saxon cemetery of Empingham II, Leicestershire, the bones were poorly preserved and highly fragmented, so it was decided to concentrate on a study of the teeth. Dental measurements, non-metric variants and pathologies were recorded. In this way useful data on demographic, metric and non-metric variation, and disease and dietary aspects could be gleaned even though the bones (as distinct from the teeth) did not merit extended study (Mays 1990).

(c) Articulated skeletons versus disarticulated bone. If the remains of several individuals become mixed together it is not generally possible to separate them into discrete skeletons. Anthropological data relate to individuals; reliable demographic and pathological information cannot normally be obtained from an isolated bone. The quantity and reliability of anthropological data are severely compromised for disarticulated material. Redeposited or stray bone from disturbed graves is of limited value – at most a brief scan for unusual features is all that is required by way of specialist study. Consequently, every effort should be made to ensure that no mixing of individuals occurs during the excavation or post-excavation stage.

Although the study of bones which have become disarticulated as a result of post-depositional disturbance is of low priority, the same does not apply to material deliberately deposited that way in antiquity. These bones are of value since they may reveal much about ancient burial practices.

(d) Dating. Clearly the closer the dating the better, but the minimum which is normally required is dating to an archaeological period (e.g. Bronze Age, Romano-British, Anglo-Saxon, etc.) and preferably to sub-period (e.g. middle Iron Age, late Saxon). Bone which is less closely dated than this is unlikely to be worthy of specialist study. Unless the graves contain distinctive grave goods, it is not always possible to date the burials with great precision. At larger cemeteries, where the burials can be split into phases, changes in anthropological data (e.g. measurements, frequencies of pathologies, etc.) over time can be investigated. This greatly increases the research potential of the material.

(e) Availability of supporting archaeological and historical data for the site or region. The value of an assemblage is increased if there is good settlement evidence available for that region and period. If the settlement(s) relating to the cemetery itself has been excavated then this is particularly useful. Food remains, such as animal and fish bones, and seeds and other plant remains, provide evidence against which to interpret diet–related pathological or other changes in the human bones. Excavation of cess pits and latrines may augment the information available from the human bones, by yielding evidence for parasitic infestations (Jones 1987). House forms and finds from settlements give clues as to the relative wealth of the community and perhaps information on potential disease loads. For example, if dwellings were shared with livestock, as they were at medieval Wharram Percy (Beresford and Hurst 1990), this might aid interpretation of any skeletal evidence suggestive of tuberculosis or brucellosis – infections which may be acquired from domestic stock via inhalation of the causative micro-organisms.

For the historical period, written sources may aid interpretation of the skeletal data. For example, documentary evidence relating to friaries or other religious foundations may include names of some of the individuals buried within the buildings. Such evidence may enable us to define more closely the social class to which the burials belong.

For the post-medieval period, skeletal remains for which biographical information such as name, age at death, etc., is available, in the form of grave markers or coffin plates, and can be associated with individual skeletons may be found. The value of such assemblages cannot be stressed too highly: the presence of biographical information aids the interpretation of the data from the skeletons, and collections of this type also enable human bone specialists to refine their existing methodologies and develop new ones.

More general historical evidence relating to the region can also provide useful pointers. For example in the churchyard at medieval Wharram Percy, male skeletons were found heavily to outnumber females. Documentary evidence from nearby urban centres such as York, suggests female-led immigration during the medieval period to work in domestic service and other occupations, particularly following the urban labour shortages caused by the Black Death. This suggests an interpretation for the sex imbalance observed in the Wharram Percy skeletons – perhaps women were migrating from this rural settlement to cities like York.

(f) The value of cremations versus inhumations. Due to the fragmentation and distortion undergone by cremated bone, the anthropological data which can be obtained from cremation burials is severely limited compared with those from inhumations. Generally speaking, no useful cranial or post-cranial measurement data can be obtained; systematic recording of non-metric variation is not merited and little useful data on skeletal pathology can be gleaned. Estimation of sex and age at death (at least separation of adult and sub-adult material) may be possible. However, as was discussed above, the study of burnt bone may reveal much about ancient cremation practices.

For periods where both cremation and inhumation were practised, the priority is for the latter, from which reliable anthropological data can be obtained. Cremations, however, should not be completely neglected – when both rituals were practised there is no reason to suppose that data from inhumations are representative of the population as a whole, and despite the difficulties, comparisons between contemporaneous inhumations and cremations are of interest. Cremated bone is much more resistant to destruction in the soil than is unburnt bone, hence cremated bone may be the only human remains to survive under some soil conditions. In addition, for certain periods cremation was the sole method of burial. In these circumstances cremations are clearly important as they constitute the only source of data.

(g) Special assemblages. Most cemetery assemblages are a result of the action of various causes of mortality on a population during a time span which may extend over several centuries. However, from medieval and post-medieval contexts, and sometimes from earlier periods, what may be termed 'catastrophe samples' may be recovered. These are individuals deriving from a very narrow time span, often sharing a common cause of death. Examples of 'catastrophe samples' include

plague pits, war cemeteries and shipping disasters, such as the 'Mary Rose'. The unusual nature of these collections lends them particular importance, as they may shed light on aspects which cannot be investigated using other cemetery material. For example, plague pit groups can be used to study the demographic profile of individuals dying of plague, and assemblages of individuals killed in combat may provide insights into techniques of warfare in antiquity.

Other types of bone assemblage requiring special consideration include those associated with leper hospitals. These can shed important light on this interesting disease.

Although the nature of the material is important, priorities for further work also depend upon the existing assemblages in a region and the work which has been done on them. In the following sections these aspects are discussed for the different periods in the south-east.

3. HUMAN REMAINS IN SOUTH-EAST ENGLAND

(a) General

The geology of the south-east of England (Fig. 1) is predominantly that of the Cretaceous period. The chalk bedrock of the North and South Downs dates to the Upper Cretaceous (70–100 million years ago). The Weald, located between the Downs, extends through Surrey, Sussex and most of Kent. The anticlinal strata are comprised of marine clay (Gault and Weald) and sand (Upper and Lower Greensand and the Hastings Beds). The well cemented Greensand is known as Ragstone or Kentish Rag. Dating to the Lower Cretaceous, the Wealdan geology is slightly older than the surrounding chalk. More recent, Tertiary marine clay is restricted to the North of Kent, including parts of Thanet, the Herne Bay and Whitstable region, as well as the Isle of Sheppey. This so-called London Clay extends as far north as Great Yarmouth, and typically presents as a uniform brown, dark-grey or bluish deposit.

The alkaline nature of the calcareous bedrock is, in theory, well suited to good bone preservation. Although the majority of bones from rural sites in east Kent are buried in chalk, they are very fragile. The bone surfaces are frequently eroded and often show root markings; the articular ends are often fragmented. It is possible that percolating rainwater contributes to this poor level of preservation. Bones buried in calcareous clay are generally well preserved, although they are dark in colour and often quite difficult to clean. Skeletons from Canterbury, buried in the Head Brickearth, also generally consist of firm and solid well-preserved bone. Some of the best preserved material (from Stonar,

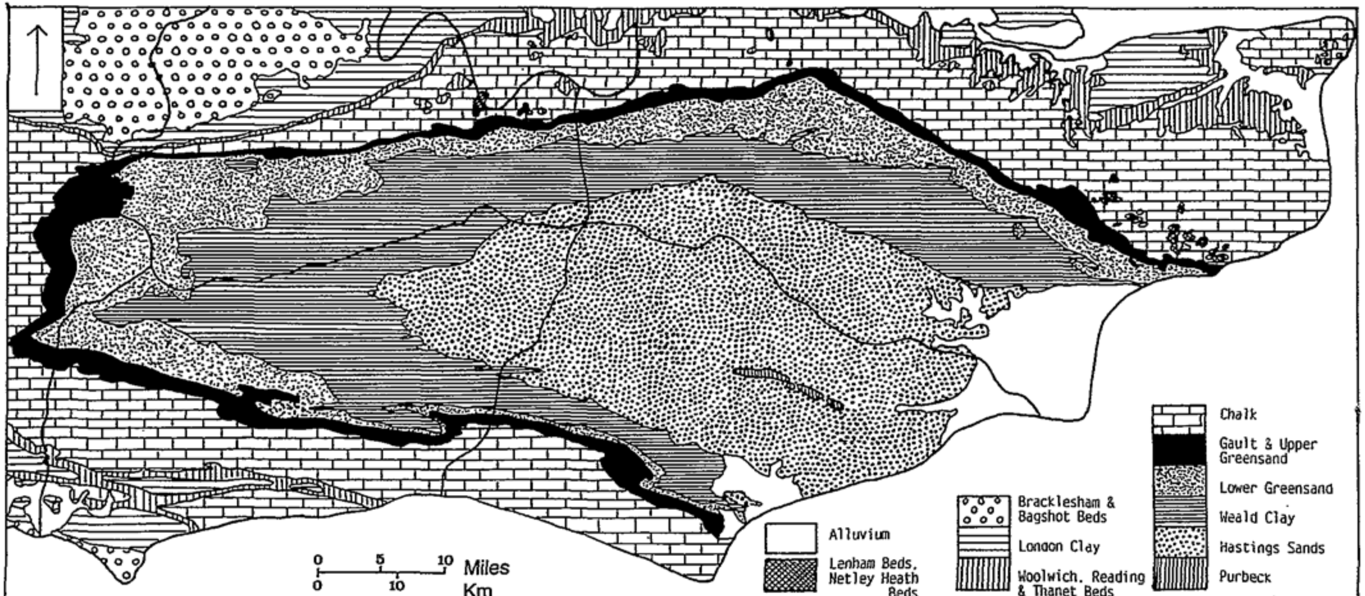

Fig. 1. Geological sketch map of the south-eastern counties (after Rayner 1976, Fig. 66).

Kent) was associated with an area of gravel extraction. The gravel being alkaline had contributed to the high standard of preservation.

In general, the poorest preservation occurs in the east of Kent, where the permeable chalk has lead to a loss of organic content. Consequently, the Anglo-Saxon burials in Thanet (Monkton and Sarre) and at Dover (Buckland) are poorly preserved when compared to other local skeletal series. The low acidity means that the majority of soils in the south-east, including clay, gravel and even sand, are potentially well suited to a good standard of bone preservation.

In the section below, priorities and research themes are discussed period by period. However, there are, in addition, some more general research themes which might be explored for human remains for the region. For example, the proximity of the south-eastern corner of England to continental Europe means that skeletons from the region are of importance in investigating anthropological evidence for the arrival of immigrants, particularly at periods of transition which have traditionally been associated with significant movement of peoples from continental Europe (for example at the Neolithic/Bronze Age transition or during the early Anglo-Saxon period).

For most periods, the peoples from the south-eastern counties might be expected to have more contact with populations from mainland Europe. It would, therefore, be of interest to compare skeletons from this region with contemporary ones further inland, to investigate any differences in diet, disease or mortality patterns.

(b) Specific periods. In this section approximate numbers of burials available from each period in the south-east are estimated. Those sites where bone survival is so poor that little anthropological data can be obtained have been excluded, as have those where there is no bone report and the skeletal remains have not been retained for study. Numbers of burials from each period are presented as bar charts, both for the south-east (Fig. 2), and, for comparison, the neighbouring regions of Wessex and East Anglia (Figs. 3 and 4).

Maps are appended showing the locations of the sites considered in the present paper (Figs. 5–11), as is a gazetteer of sites for which bone reports have been prepared.

(i) Palaeolithic and Mesolithic. The region contains two lower Palaeolithic sites of world importance, Swanscombe, Kent, and Boxgrove, West Sussex, which have produced human remains. The former has yielded the famous skull (Ovey 1964), the latter a tibia which is about 500,000 years old, and so is currently the oldest hominid bone known from the British Isles (Roberts *et al.* 1994). However, there are no further human remains of Palaeolithic or

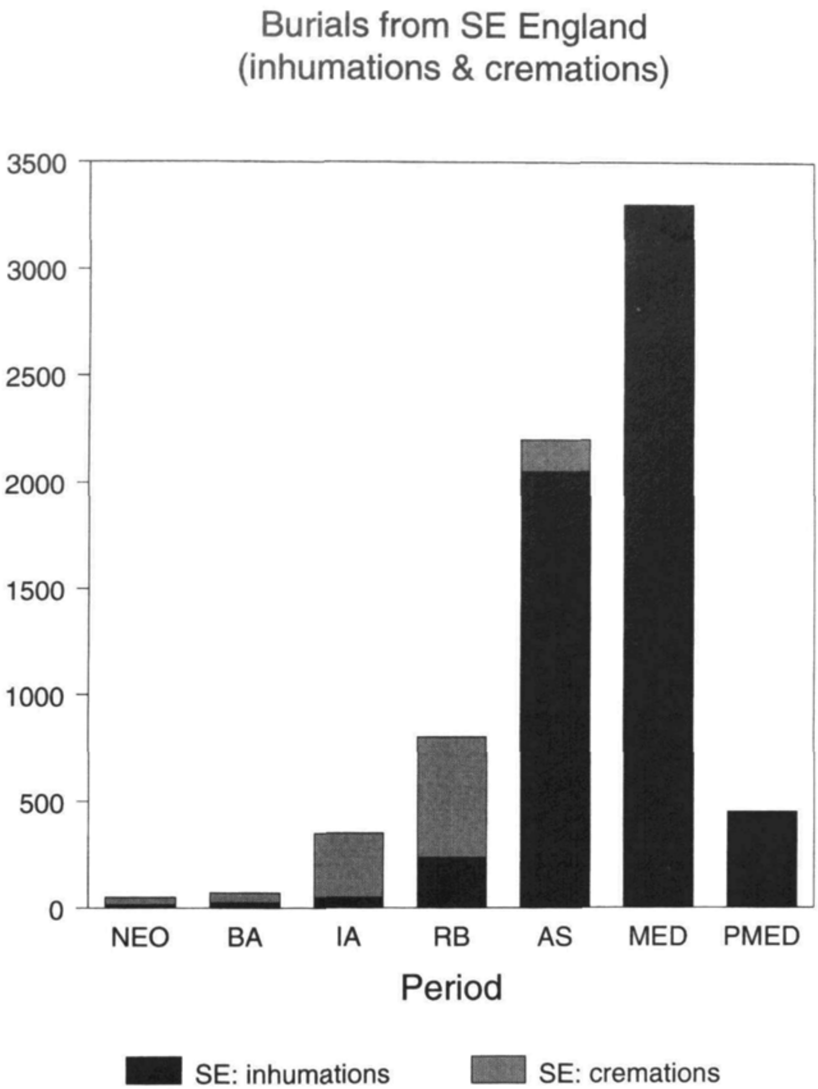

Fig. 2. Numbers of burials from different archaeological periods in the south-eastern counties of England.

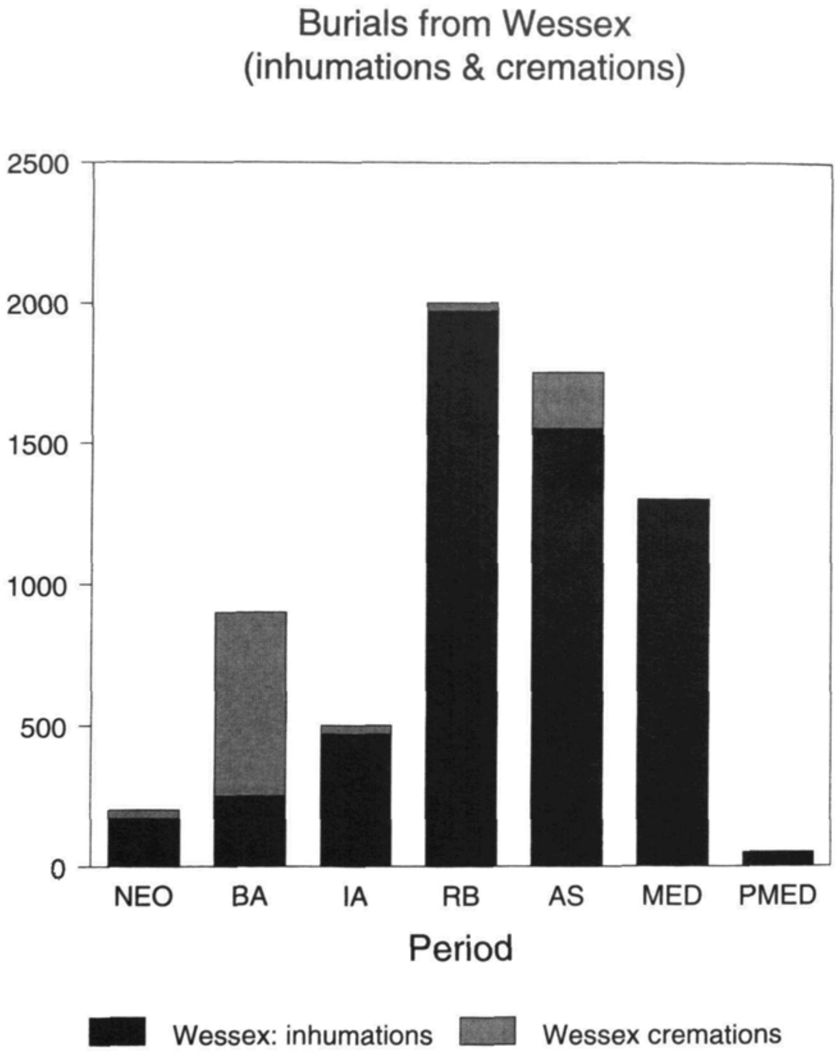

Fig. 3. Numbers of burials from different archaeological periods in Wessex.

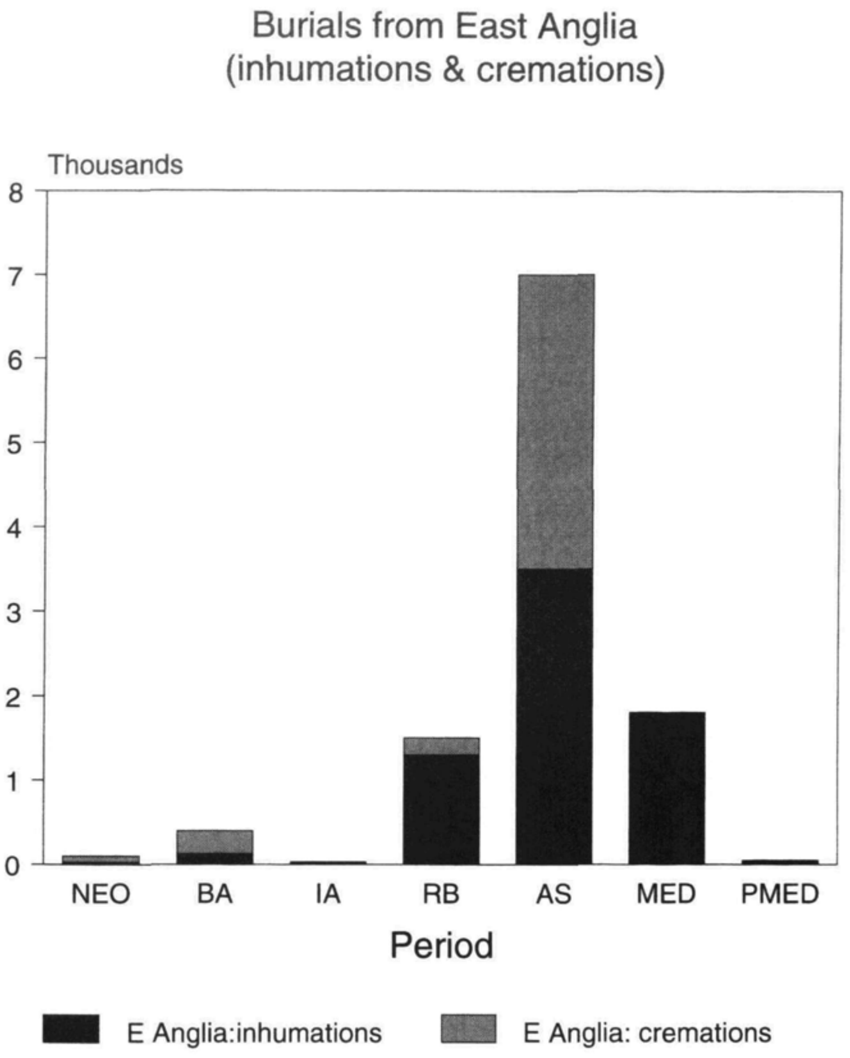

Fig. 4. Numbers of burials from different archaeological periods in East Anglia.

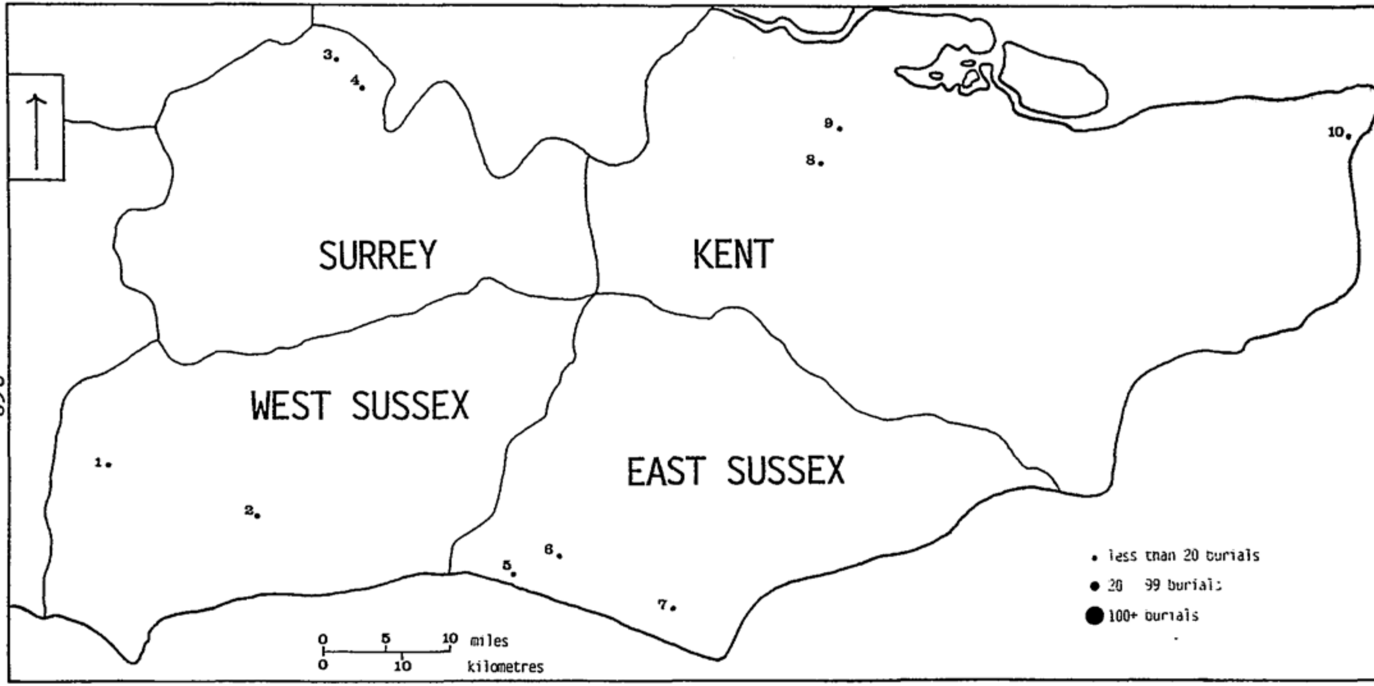

Fig. 5. Locations of some sites yielding Neolithic human remains in the south-east.

Key

1=North Marden. 2=Bury Hill. 3=Staines. 4=Shepperton, Staines Road Farm. 5=Whitehawk. 6=Offham Hill. 7=Alfriston. 8=Addington, Chestnuts Megalithic Tomb. 9=Halling. 10=Ramsgate, Nethercourt Farm

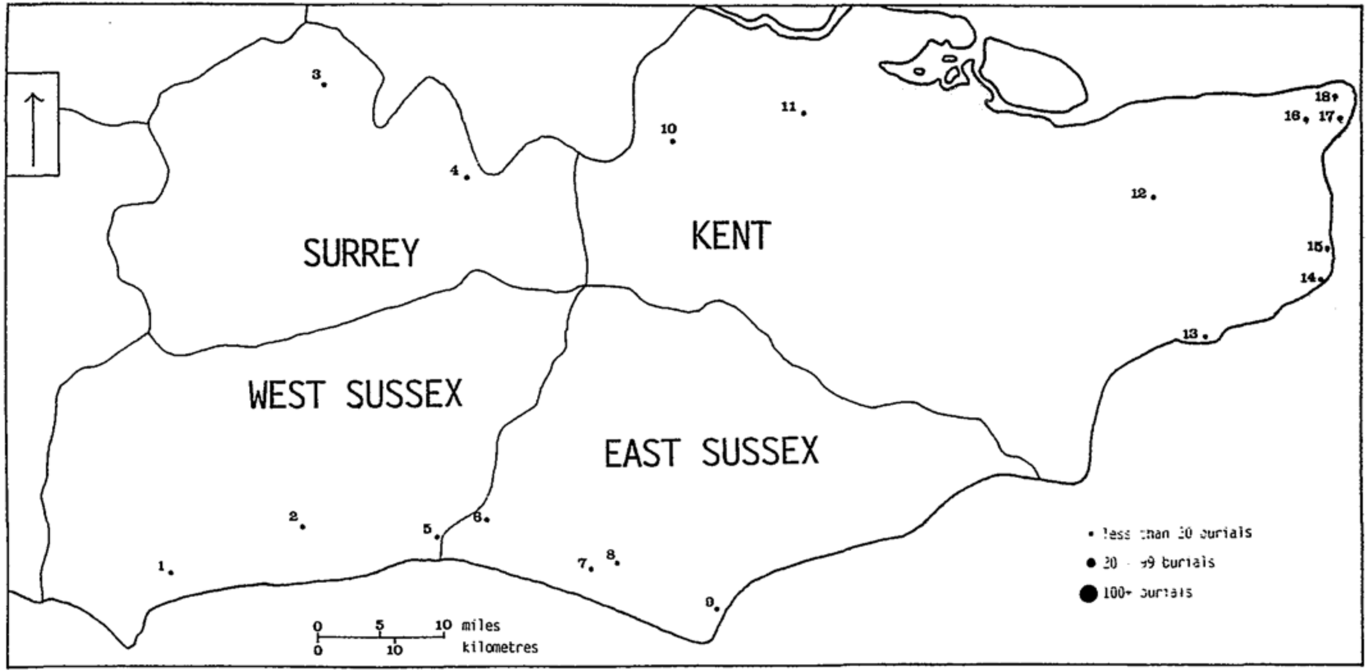

Fig. 6. Locations of some sites yielding Bronze Age human remains in the south-east.

Key

1=West Heath. 2=Burpham, Friday's Church. 3=Chertsey, Abbey Meads. 4=Gally Hills. 5=Mile Oak, Brighton By-Pass. 6=Pyecombe. 7=Itford Hill. 8=Black Patch. 9=Eastbourne, Cornish Farm. 10=Otford. 11=Upper Halling, Pring's Quarry. 12=Canterbury, Bridge By-Pass. 13=Folkestone, Cherry Garde Hill. 14=St. Margaret's Bay. 15=Walmer. 16=Manston. 17=Broadstairs, South Dumpton Down. 18=Margate, East Northdown

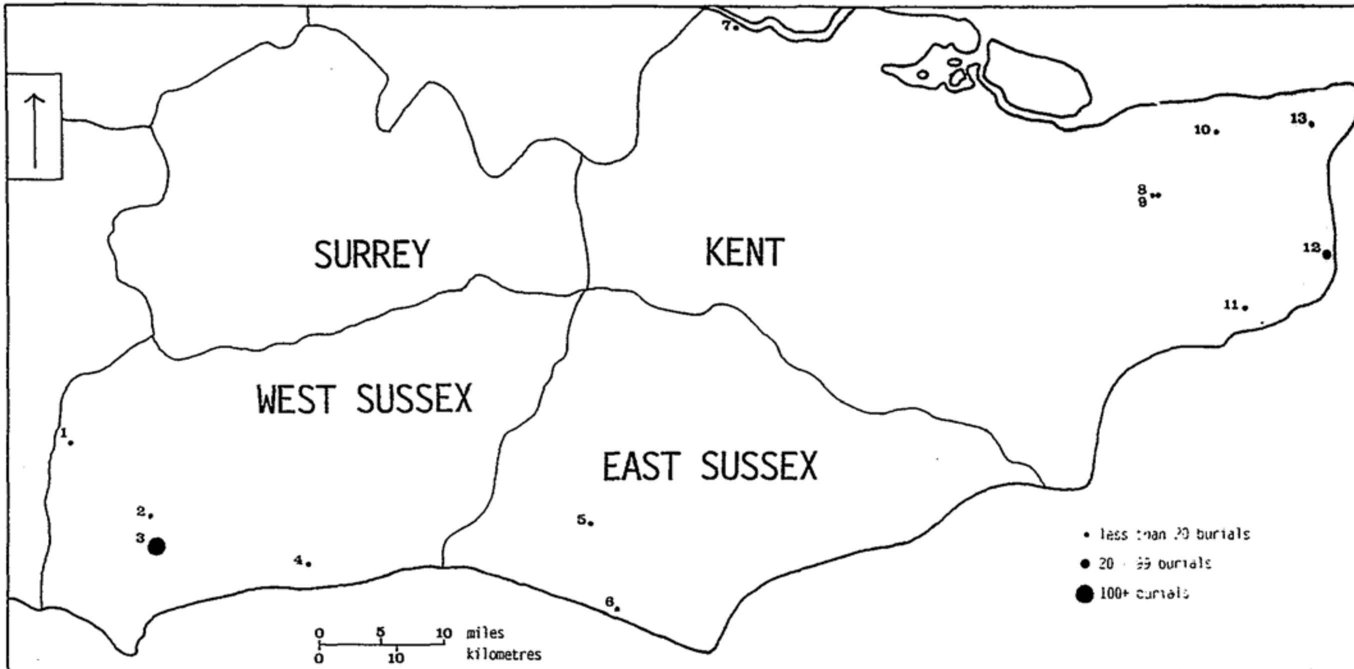

Fig. 7. Locations of some sites yielding Iron Age human remains in the south-east.

Key

1=Harting Beacon. 2=The Trundle. 3=Westhampnett. 4=Highdown Hill. 5=Glynde. 6-Bishopstone. 7=Stone. 8=Canterbury, St. John's Lane. 9=Canterbury, Marlowe Theatre. 10=Sarre. 11=Alkham. 12=Mill Hill, Deal. 13=Manston

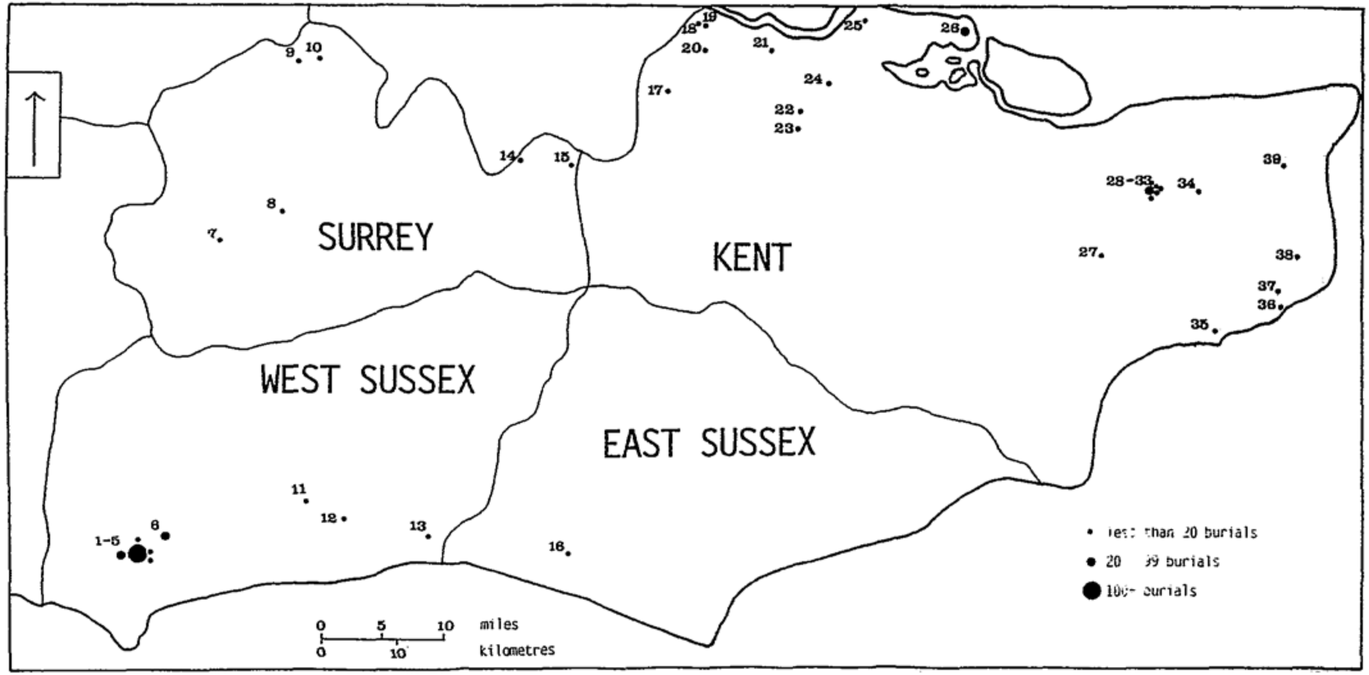

Fig. 8. Location of some sites yielding Romano-British human remains in the south-east.

Key

1=Chichester, Westgate. 2=Chichester, Northgate. 3=Chichester, St. Pancras. 4=Chichester, The Hornet. 5=Chichester Eastgate. 6=Westhampnett. 7=Eashing. 8=Merrow Down. 9=Egham, Thorpe Lea Nurseries. 10=Staines, Friends Burial Ground. 11=Wiggonholt. 12=Washington. 13=Slonk Hill. 14=Sanderstead. 15=Titsey, Tatfield Road. 16=Beddingham Roman Villa. 17=Lullingstone Roman Villa. 18=Dartford, East Hill. 19=Dartford, Spital Street. 20=Darenth Roman Villa. 21=Southfleet. 22=Holborough. 23=Snodland. 24=Rochester, George Lane. 25=Cliffe. 26=Isle of Grain, Clubb's Pit. 27=Crundale Limeworks. 28=Canterbury, Cranmer House. 29=Canterbury, New Street. 30=Canterbury, North Lane. 31=Canterbury, Diocesan House. 32=Canterbury, Adelaide House. 33=Canterbury, Rosemary Lane. 34=Ickham. 35=Hawkinge. 36=Dover, Southgate Street. 37=Whitfield. 38=Northbourne. 39=Richborough

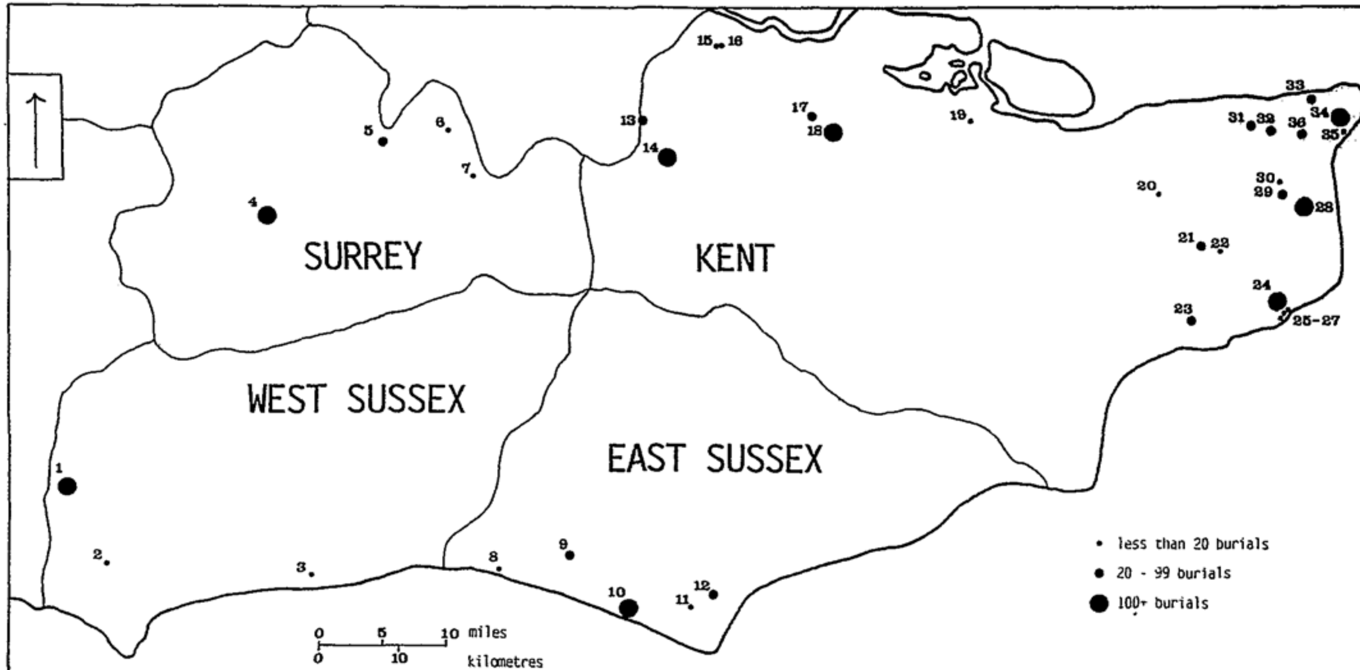

Fig. 9. Location of some sites yielding Anglo-Saxon human remains in the south-east.

Key

1=Apple Down, Compton. 2=Fishbourne Roman Palace. 3=Highdown Hill. 4=Guildown, Guildford. 5=Ashtead, former Goblin Works. 6=Banstead, Preston Hawe. 7=Gally Hills. 8=Brighton, Stafford Road. 9=Saxonbury, Lewes. 10=Bishopstone. 11=Jevington. 12=Ocklynge Hill, Eastbourne. 13=Orpington. 14=Polhill, Dunton Green. 15=Darenth TQ 565 721. 16=Darenth TQ 565 729. 17=Holborough. 18=Eccles. 19=Milton. 20=Canterbury, Stour Street. 21=Kingston Down. 22=Barham, Wick Wood. 23=Lyminge. 24=Dover Buckland. 25=Dover, Adrian Street. 26=Dover, Town Centre. 27=Dover, Albion Place. 28=Finglesham. 29=Eastry. 30=Coombe, Woodnesborough. 31=Sarre. 32=Monkton. 33=Margate, Half Mile Ride. 34=Ozengell. 35=Ramsgate. 36=Way

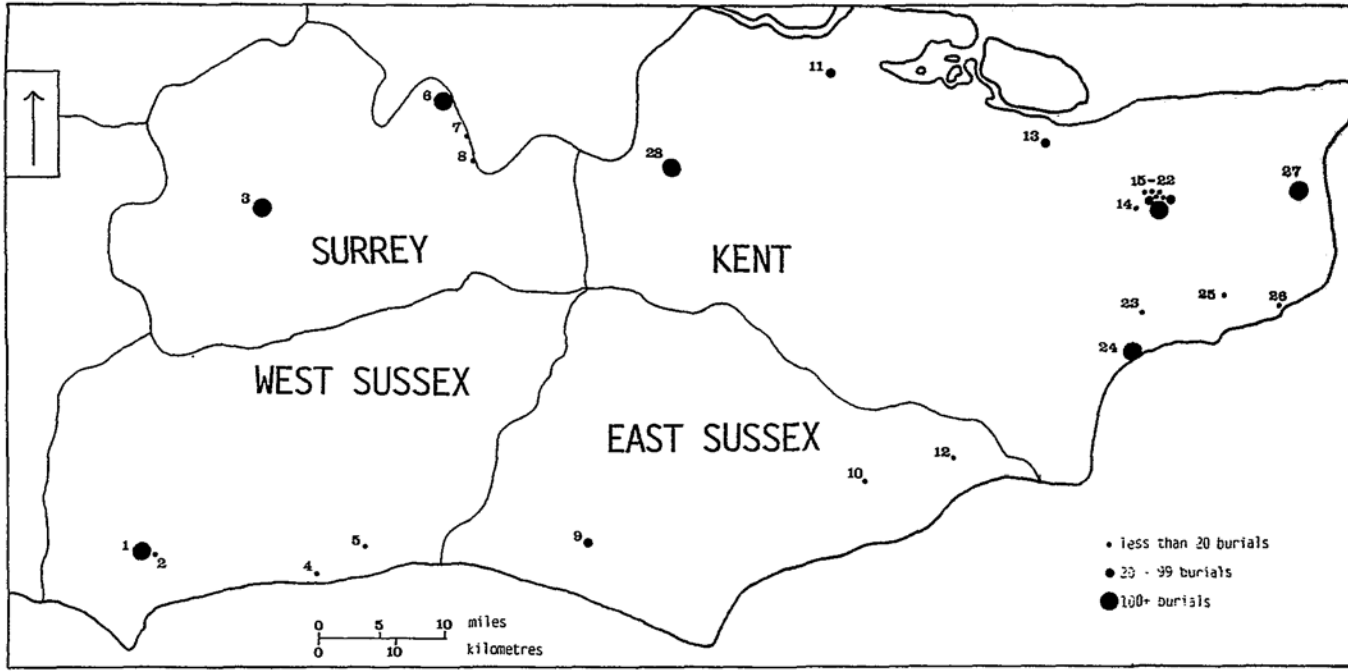

Fig. 10. Locations of some sites yielding medieval human remains in the south-east.

Key

1=Chichester, Hospital of St. John and St. Mary Magdalene. 2=Chichester, East Street. 3=Guildford Blackfriars. 4=Angmering, Church of St. Nicholas. 5=Bidlington, Hospital of St. Mary Magdalene. 6=Nonsuch Palace, Cheam (Cuddington Church). 7=Wallington, Burleigh Avenue. 8=Coulsdon, Church of St. John the Evangelist. 9=Lewes Greyfriars. 10=Battle Abbey. 11=Rochester Cathedral. 12=Rye Austin Friars. 13=Ospringe, Maison Deiu. 14=Thannington, St. Nicholas' Church. 15=Canterbury Cathedral. 16=Canterbury, St. Augustine's Abbey. 17=Canterbury, Austin Friars. 18=Canterbury, St. Peter's Methodist School. 19=Canterbury, St. Gregory's Priory. 20=Canterbury, North Lane. 21=Canterbury, St. Gabriel's. 22=Canterbury, St. Mary Bredin. 23=Lyminge. 24=Hythe, St. Leonard's Church. 25=Swingfield, St. John's Chapel. 26=Dover, St. Martin-le-Grand. 27=Stonar. 28=Sevenoaks, St. Nicholas' Church

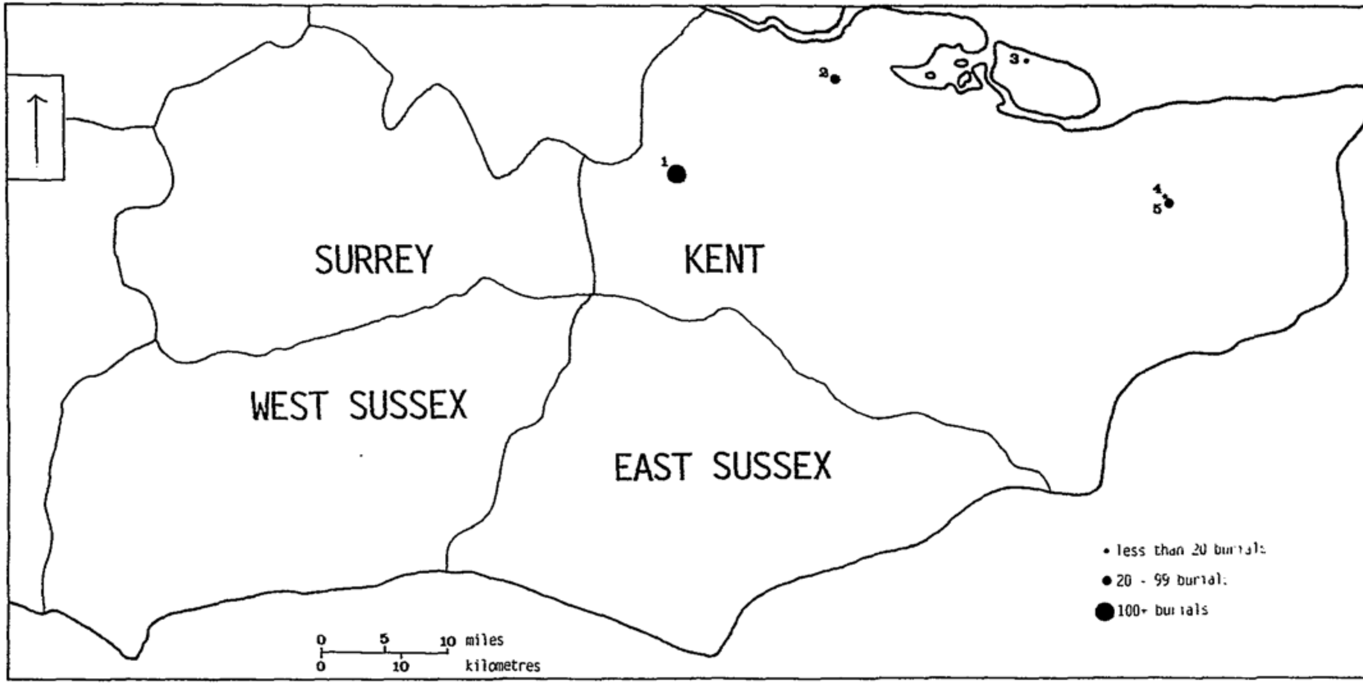

Fig. 11. Locations of some sites yielding post-medieval remains in the south-east.

Key

1=Sevenoaks, St. Nicholas' Church. 2=Rochester Cathedral. 3=Minster, Isle of Sheppey. 4=Canterbury, St. Dunstan's Church, The Roper Chantry. 5=Canterbury, St. George's Church

Notes to Figures 5–11: sites included here are those which appear in the gazetteer and also unpublished material known to the writers. Sites where the condition of the bones is so poor that little anthropological data can be gleaned are omitted, as are those where there is no bone report and the remains were not kept for study.

Mesolithic date from the region. The general scarcity of human remains from these periods from British sites, and the potential of those from the Palaeolithic for the study of human evolution and the arrival of the earliest human groups in Britain, mean that should further such material be encountered, it would be of great importance.

(ii) Neolithic. At present, remains of fewer than 50 individuals are known from Neolithic contexts in the south-east, of which about two-thirds are cremations. Much of the inhumed bone comes from causewayed enclosure ditches and, although there are some fairly complete articulated skeletons, many individuals are represented by only a few bone fragments, accentuating the paucity of material from this period.

(iii) Bronze Age. Remains from about 70 burials are known from Bronze Age contexts, of which about two-thirds are cremations. No more than a handful of inhumations are known from any one site, although there are a few sites yielding more cremations, for example Itford Hill barrow, East Sussex (12 cremations – Ratcliffe-Densham 1972). Perhaps uniquely for a Bronze Age barrow, a settlement site associated with it has been identified: a rim sherd recovered from the nearby settlement on Itford Hill was found to come from a partially intact vessel excavated from the barrow (Ellison 1972).

The corpus of Neolithic and Bronze Age burials is very small, compared not only with the wealth of prehistoric material from Wessex to the west, but also with the East Anglia region to the north (Figs. 2–4). Little analysis can be undertaken on such a small corpus – more burials from these periods are needed to investigate patterns of change over time or space. Neolithic and Bronze Age burials generally tend to be found either singly or in small groups. Although numbers of burials from each individual site excavated are likely to be few, the acquisition of further burials from these periods must be considered a priority.

(iv) Iron Age. About 350 burials have been obtained from Iron Age contexts of which the great majority are cremations. Most assemblages are small, by far the largest is that from Westhampnett, West Sussex. This site yielded about 240 cremations of late Iron Age date, and its importance is further increased by the discovery of probable pyre sites in the cemetery. Another important site is Mill Hill, Deal, Kent where 39 inhumations dating to the late Iron Age were recovered (Anderson 1995).

The number of burials from the Iron Age is markedly larger than that from earlier prehistoric periods, but the total is dominated by late Iron Age cremations – we need more inhumations, and early and middle Iron Age material.

(v) Romano-British. Remains from about 800 individuals are presently known from the south-eastern counties, of which about two-thirds are cremations. The only really large assemblage is Chichester St. Pancras, with 317 cremations and 9 inhumations, but only the inhumations have been the subject of a specialist report (Ginns 1971). Other important collections, for which bone reports have been prepared, include Chichester Westgate (35 inhumations – Foden 1993) and Canterbury, Cranmer House (53 cremations – Garrard 1987). Compared with the neighbouring regions, Wessex and East Anglia, Romano-British burials from the south-east are few. There are also proportionately much fewer inhumations in the corpus from the south-east (Figs. 2–4); this further restricts the osteological data available for the Romano-British period here.

(vi) Anglo-Saxon. About 2200 burials are known, of which the great majority are inhumations. Reports on major collections include Apple Down, Compton, West Sussex (126 inhumations, 56 cremations – Harman 1990) and Eccles, Kent (132 inhumations – Manchester 1984). Most material comes from early Saxon cemeteries. Despite the fairly large numbers of burials, some of the larger collections are either incompletely reported (e.g. Guildown, Surrey, 223 inhumations; Ozengell, Kent, 237 inhumations; Finglesham, Kent, 243 inhumations) or the condition of the bone is poor due to aggressive soil conditions (e.g. Dover Buckland, 160 inhumations – Powers and Cullen 1987). Special assemblages from this period include burials from Ashtead and Gally Hills (both Surrey), which seem to represent late Saxon execution sites (Waldron 1989, 1992; Waldron and Waldron 1988).

Despite the bias towards early Saxon material there is a paucity of cremation burials. The only site with large numbers of cremations is Apple Down, Compton, but even here little bone was recovered from most of them. When, as in the early Anglo-Saxon period, both cremation and inhumation were practised, it cannot be assumed that the inhumations are representative of burials as a whole in terms of demographic and other parameters. Although the anthropological information potentially available from cremations is more limited than that from inhumations, more cremations of Saxon date are needed.

Attempts have been made to investigate social organisation by analysing quality and range of grave goods on early Saxon sites. However, integration of the osteological and archaeological evidence has rarely been carried out. Such an approach might provide data on the way in which an individual's health, diet and lifestyle varied with social status.

It would also be of interest to investigate the effects of human health in relation to the trend towards nucleated settlements in the middle and later Anglo-Saxon period. In the south-eastern counties a priority must be for more burials from these periods, as relatively few are known at the present time.

(vii) Medieval. About 3300 burials are known from the medieval period in the south-eastern counties. Reports on major collections include the Guildford Blackfriars, Surrey (117 inhumations – Henderson 1984) and Stonar, Kent (160 inhumations – Eley and Bayley 1975).

Questions of relationships between settlements (large urban centres, smaller towns and villages) are of interest here, but most of the medieval bones from the south-east come from urban contexts (indeed about half the corpus comes from sites in Canterbury, with St. Gregory's Priory alone yielding more than 1300 skeletons). More bones from smaller settlements are needed to help address these questions. Another area of interest is comparisons between individuals from different social classes; for example, the graves of well-to-do benefactors buried in a religious foundation might be compared with those of the poorer classes buried elsewhere.

An important special collection from this period comes from the leper hospital of St. James and St. Mary Magdalene, Chichester, where over 400 skeletons have been recovered. Due to the segregation of lepers in the medieval period, skeletons with leprosy are fairly rare finds in most cemeteries. This assemblage has considerable potential for shedding light on the disease in medieval times. It is large enough for patterns of skeletal involvement to be discerned and for other investigations such as the study of demographic parameters of leper hospital internees, etc. At the time of writing a full bone report has yet to be published on this material, but some general discussions of the site and the bones have appeared (Magilton and Lee 1989; Lee and Magilton 1989). Limited excavations have also taken place at a leper hospital in Bidlington, West Sussex, which revealed 9 skeletons (Ratcliffe-Densham 1964).

The figure of approximately 3300 medieval burials given above excludes the collection of disarticulated bone from St. Leonard's Church, Hythe, Kent. This consists of charnel which has been exhumed from the churchyard of St. Leonard's and possibly other local churchyards. The collection seems to represent at least 4000 individuals and probably dates mainly to the medieval period. Although it consists of disarticulated remains and its provenance is somewhat vague, the size of the assemblage means that it is an important collection. Studies of some of the skulls have been published (Parsons 1908; Stoesinger and Morant 1932), although little work has been done on the collection recently.

(viii) Post-medieval. Approximately 400–500 post-medieval burials are available from the south-eastern counties, reports on important collections include Anderson (1990) on 35 inhumations from Rochester Cathedral and Anderson (1991, forthcoming) on 92 inhumations from St. George's Church, Canterbury. The largest post-medieval assemblage currently known from the region is probably that from St Nicholas' Church, Sevenoaks. Approximately 400 medieval/post-medieval burials were recovered from this site, and although at the time of writing phasing and dating of the remains has not yet been finalised, it appears that more than 100 burials are likely to date from the post-medieval period.

The highest priority for this period is for skeletal remains for which biographical information such as name, age at death, etc., is available in the form of grave markers or coffin plates and can be associated with individual skeletons. About 25 such burials have been recovered from St. Nicholas' Church, Sevenoaks, but many more are needed. As stated above such assemblages aid the development of anthropological methodologies, and they also provide osteological information for a period for which the study of human remains has often been rather neglected.

Anderson (1990) found evidence for a reduction in adult stature in the post-medieval period among some skeletons from Rochester Cathedral, a pattern which may have been indicative of poorer nutrition in this period than in medieval times. Consistent with this, studies of bone disease in remains from Canterbury (Anderson 1991) seem to suggest that health may have deteriorated during the post-medieval period compared with preceding medieval times. However, these conclusions are tentative, based as they are on analysis of fairly small numbers of post-medieval burials; it would be useful to investigate further the possibility of a deterioration in health and/or nutrition in post-medieval urban centres.

4. SUMMARY

Burials from the Neolithic and Bronze Ages are few; more bones are needed to permit meaningful analysis of anthropological data from these periods. More burials are available from the Iron Age, but the majority are cremations. The priority for this period is the acquisition of further inhumations.

In comparison with neighbouring regions, burials from Romano-British sites are few and the corpus is dominated by cremations; more material is needed, particularly inhumations.

Material is more plentiful from Anglo-Saxon contexts, but the corpus is heavily biased towards the early Saxon period (although there are few early Saxon cremations). There is a need for more burials from middle and late Saxon sites and, to a lesser extent, for cremations from the early Saxon period.

Remains from the medieval period are fairly plentiful, both compared with other regions and with other periods in the south-east. However, the corpus is biased towards urban sites, with about half the total coming from excavations in Canterbury. The priority is for material from smaller settlements.

As is the case in most areas of England, less work has been done on post-medieval human remains than for bones from the other historical periods, although there are some important post-medieval collections from the region. A particular priority for this period is for material in which biographical information such as name and age at death are known (from coffin plates) and can be associated with individual skeletons.

In the section on quality of assemblage the value of large, well preserved assemblages of inhumations was stressed; the need for these for all periods for which they are likely to be found (i.e. from the Romano-British period onwards) is great; less than 30 well excavated, reasonably well preserved collections of more than 300 inhumations are known nationally outside London, and still fewer have been adequately reported on.

5. GAZETTEER OF SITES IN THE SE FOR WHICH HUMAN BONE REPORTS HAVE BEEN PREPARED

PALAEOLITHIC

Boxgrove; West Sussex; single tibia; Roberts *et al.* (1994)
Swanscombe; Kent; single skull; Ovey (1964).

NEOLITHIC

Addington, Chestnuts megalithic tomb; Kent; **11 Crem**; Barfield, L. (1961) AC 76: 1–57
Alfriston; East Sussex; **1 Inh**; O'Connor, T.P. (1975) PPS 41: 119–142
Halling TQ 705 644; Kent; **1 Inh**; Oakley, K. *et al.* (1967) AC 82: 218–220
North Marden; West Sussex; **2 Inh**; Browne, S. (1986) PPS 52; 31–51
Offham Hill; East Sussex; **3 Inh**; O'Connor, T.P. (1977) PPS 43: 201–241
Ramsgate, Nethercourt Farm; Kent; **2 Inh**; Wells, C. (1966) AJ 66:24
Shepperton, Staines Road Farm; Surrey; **2 Inh**; Mays, S.A. and Steele, J. (1992) AML 62/92

Staines TQ 024 726; Surrey; **1 Inh**; **1 Crem**; Camps, F.E., Chandra, H. and Dawes, J.D. (1987) PPS 53: 23–128
Whitehawk TQ 331 048; East Sussex; **8 Inh**; Tildesley, M.L. (1934) AJ 14: 99–113

BRONZE AGE

Black Patch; East Sussex; **1 Inh**; **3 Crem**; O'Connor, T.P. (1982) PPS 48: 321–400
Burpham, Friday's Church; West Sussex; **1 Inh**; **1 Crem**; Ratcliffe-Densham, R.H.B. (1980) SAC 118: 171–182
Canterbury, Bridge by-pass; Kent; **13 Crem**; O'Connor, T.P. (1975) AML 1921
Chertsey, Abbey Meads; Surrey; **1 Inh**; Henderson, J. (1988) AML 70/88
Eastbourne, Cornish Farm; East Sussex; **1 Inh**; Drewett, P. (1992) SAC 130: 237 (brief notes on bones)
Folkestone, Cherry Garde Hill; Kent; **1 Inh**; Cave, A.J.E. (1943) AC 66: 28–33
Gally Hills; Surrey; **1 Inh**; Price-Williams, D. and Barford, J. (1974) LA 2: 127–130 (notes on bones)
Itford Hill, Beddingham TQ 4467 0541; East Sussex; **12 Crem**; Ratcliffe-Densham, H.B.A. (1972) SAC 110: 70–117
Manston; Kent; **1 Inh**; Perkins, D. and Gibson, A. (1990) AC 108: 11–27 (notes on bones)
Margate East Northdown TR 3850 7045; Kent; **2 Inh**; Henderson, J. (1987) AC 104: 237–289
Otford TQ 5335 6005; Kent; **1 Crem**; Zivanovic, S. (1975) AC 91: 185–187
Pyecombe TQ 2834 1185; West Sussex; **1 Inh**; Sanderson, E. (1991) SAC 129: 18–20
Upper Halling, Pring's Quarry TQ 696 648; Kent; **2 Inh**; Gretton, S. (1985) AC 102: 129–133
Walmer TR 3740 5005; Kent; **1 Inh**; Willson, J. (1984) KAR 26–30 (brief notes on bones)
West Heath; West Sussex; **6 Crem**; Wilkinson, L. (1985) SAC 123: 35–60

IRON AGE

Bishopstone; East Sussex; **3 Inh**; Wilkinson, P.F. and Concannon, R. (1977) SAC 115: 1–299
Glynde; East Sussex; **2 Inh**; Burstow, G.P. (1962) Notes on file in Sussex Archaeological Society Library, Lewes
Harting Beacon; West Sussex; **2 Inh**; Bedwin, O. (1979) SAC 117: 21–26 (notes on bones), see also SAC 116 (1978): 240
Highdown Hill; West Sussex; **1 Inh**; Trevor, J.C. (1940) SAC 81: 173–203
Manston; Kent; **1 Inh**; Perkins, D. and Gibson, A. (1990) AC 108: 11–27 (notes on bones)
Stone; Kent; **2 Crem**; Cotton, M.A. and Richardson, K.M. (1941) PPS 7: 134–141 (notes on bones)
The Trundle; West Sussex; **2 Inh**; Parsons, F.G. (1929) SAC 70: 32–85

IRON AGE/ROMANO-BRITISH

Farningham; Kent; **1 Crem**; Osborne, C. (1988) AML 109/88

ROMANO-BRITISH

Canterbury, Cranmer House, London Road; Kent; **1 Inh**; **53 Crem**; Garrard (1987)
Canterbury, 8 New Street; Kent; **3 Inh**; Garrard, P. (1978) AC 114: 149–51
Canterbury, North Lane; Kent; **2 Inh**; **1 Crem**; Anderson, T. in Canterbury Archaeological Trust (1991)
Chichester Eastgate; West Sussex; **13 Inh**; Barnes, H. in Down (1981)
Chichester, St. Pancras; West Sussex; **9 Inh**; **317 Crem**; Ginns 1971 (report on inhumations only)
Chichester Westgate; West Sussex; **35 Inh**; Foden (1993)
Crundale Limeworks; Kent; **8 Crem**; Mays, S.A. (1989) AML 68/89 and Osborne, C. (1988) 99/88
Darenth Roman Villa; Kent; **2 Inh**; Harman, M. and Keepax, C. in Philip (1973)
Eashing; Surrey; **7 Inh**; Winbolt, S.E. (1931) SyAC 40: 118–120 (notes on bones)
Holborough, Snodland; Kent; **1 Inh**; **3 Crem**; Whillis, J. and Shuttleworth, C.W.T. (1954) AC 68: 1–61
Ickham; Kent; **2 Inh**; Bayley, J. and Keepax, C. (1974) AML 1663.
Isle of Grain, Clubb's Pit; Kent; **42 Inh**; **1 Crem**; Cameron, A. (1985) report on file at AML
Lullingstone TQ 5465; Kent; **5 Inh**; Cave, A. and Simpson, K. in Meates, G.W. (1987)
Merrow Down, Guildford; Surrey; **1 Inh**; Keith, A. (1912) SyAC 25: 139–140
Northbourne TR 329 527; Kent; **11 Inh**; **3 Crem**; Harman, M. (1978) KAR 52: 41–43
Richborough, Roman Fort; Kent; **1 Inh**; Morant, G.M. and Humphreys, J. in Bushe-Fox (1932)
Rochester, George Lane; Kent; **1 Inh**; Hayes, J.P. (1981) AC 97: 95–136
Slonk Hill, Shoreham TQ 226 065; West Sussex; **3 Inh**; Shepherd, P. (1978) SAC 116: 69–141
Snodland; Kent; **1 Inh**; Keith, A. and Ward, G. (1934) AC 46: 202–203
Southfleet; Kent; **1 Inh**; Williams, P.A.O. (1956) AC 70: 206
Staines, Friends Burial Ground; Surrey; **1 Inh**; Chapman, J., Wolfe, S. and Woodadge, W. in Crouch, K. and Shanks, S.A. (1984)
Wiggonholt TQ 0646 1802; West Sussex; **2 Crem**; Ratcliffe-Densham, H.B.A. (1974) SAC 112: 97–151

ANGLO-SAXON

Apple Down, Compton; West Sussex; **126 Inh**; **56 Crem**; Harman, M. (1990)
Ashtead, former Goblin Works TQ 182 567; Surrey; **36 Inh**; Waldron, T. (1989, 1992) SyAC 79: 67–99, 81: 1–18
Banstead, Preston Hawe; Surrey; **1 Inh**; Cullen, R. report on file at AML

Barham, Wick Wood TR 2235 4915; Kent; **3 Inh**; Harman, M. (1984) KAR 77: 169
Bishopstone; East Sussex; **118 Inh**; **6 Crem**; Wilkinson, P.F. and Concannon, R. (1977) SAC 115: 1–299 (brief notes on 83 of the burials only)
Brighton, Stafford Road; East Sussex; **3 Inh**; Armitage, P. (1988) SAC 126: 31–52
Darenth TQ 565 721; Kent; **3 Inh**; Cheetham, H.D. (1980) AC 96: 305–320
Darenth TQ 565 729; Kent; **7 Inh**; Cameron, A. (1990) AC 108: 35–63
Dover, Albany Place; Kent; **4 Inh**; Osborne, C. (1988) AML 101/88
Dover Buckland; Kent; **160 Inh**; Powers and Cullen (1987)
Dover, Town Centre; Kent; **7 Inh**; Osborne, C. (1988) AMLs 102/88 & 103/88
Gally Hills; Surrey; **2 Inh**; Waldron, T. and Waldron, G. (1988) LA 5: 443–445
Eastry; Kent; **34 Inh**; Rega, E. (1994) Report on file at Dept. of Prehistory and Archaeology, Univ. of Sheffield
Eccles TQ 722 605; Kent; **132 Inh**; Manchester (1984); Shaw (1994)
Finglesham TR 3256 5343; Kent; **243 Inh**; Dunning, G.C. (1958) MA 2: 1–71 (summary report on 38 skeletons)
Fishbourne Roman Palace; West Sussex; **4 Inh**; Cunliffe (1971) (notes on bones)
Guildown, Guildford; Surrey; **223 Inh**; Keith, A. (1931) SyAC 34: 1–50 (very brief notes on bones)
Highdown Hill; West Sussex; **1 Inh**; Trevor, J.C. (1940) SAC 81: 173–203
Holborough; Kent; **36 Inh**; Denston, C.B. and Noble, H.W. (1956) AC 70: 84–141
Jevington TQ 5665 0315; East Sussex; **8 Inh**; Ratcliffe-Densham, H.B.A. (1969) SAC 107: 126–134
Lyminge; Kent; **44 Inh**; Joseph, J. (1955) AC 69: 1–40
Margate, Half Mile Ride; Kent; **20 Inh**; Perkins, D.R.J. (1987) AC 104; 219–236 (notes on bones)
Monkton TR 2910 6550; Kent; **34 Inh**; Denston, C.B. (1974) AC 84: 49–89 (report on 22 skeletons), AC 101: 83–114 (notes on rest)
Ocklynge Hill, Eastbourne TV 595 068; East Sussex; **28 Inh**; O'Connor, T.P. (1980) SAC 118: 231–244
Orpington; Kent; **29 Inh**; **16 Crem**; Glynn, B.D. and Carter, C. (1968) AC 83: 125–150
Polhill, Dunton Green TQ 5504 1590; Kent; **125 Inh**; Miles, A.E.W. *et al.* in Philp (1973) (125 burials); Cameron, A. (1985) AML 4535 (5 burials), Rega, E. (1994) re-examination of 44 burials report on file at Dept. of Prehistory and Archaeology, University of Sheffield.
Ramsgate TR 355 651; Kent; **2 Inh**; Millard, L. (1969) AC 84; 9–30
Sarre; Kent; **20 Inh**; Barnacle, R., Gibbs, J. and Hammond, L. (1992) AC 110: 101–106

MEDIEVAL

Angmering, Church of St. Nicholas; West Sussex; **14 Inh**; O'Connor, T.P. (1975) SAC 113: 16–34
Battle Abbey; Sussex; **8 Inh**; Bayley, J. (1979, 1981) AML 2907 and AML 3249

Bidlington, St. Mary Magdalene TQ 178 103; West Sussex; **9 Inh**; Ratcliffe-Densham (1964)
Canterbury Cathedral; Kent; **1 Inh**; Cave, A.J.E. and Trevor, J.C. (1951) AC 64: 112–115
Canterbury, St. Augustine's Abbey; Kent; **51 Inh**; Thorn, J.C. in Sherlock and Woods (1988); Bayley, J. (1977, 1979) AMLs 2175, 2883 & 2884; Powell, F. (1979) AML 2901
Canterbury, St. George's Street, Austin Friars; Kent; **4 Inh**; Roberts, D.F. in Frere and Stow (1983)
Canterbury, St. Peter's Methodist School; Kent; **12 Inh**; Anderson, T. in Canterbury Archaeological Trust (1991)
Chichester, Leper Hospital of St. James and St. Mary Magdalene; West Sussex; **400 Inh**; full bone report yet to appear but see Magilton and Lee (1989); Lee, F. and Magilton, J. (1989)
Coulsdon, Church of St. John the Evangelist; Surrey; **2 Inh**; Shepherd, M. and Cripp, N. (1977) SyAC 71: 101–110
Guildford Blackfriars; Surrey; **117 Inh**; Henderson (1984)
Lewes Greyfriars; East Sussex; **55 Inh**; Browne, S. (1994) SAC
Nonsuch Palace, Cheam (Cuddington Church); Surrey; **108 Inh**; James, P.M.C. and Miller, W.A. BDJ 128: 391–6 (report on teeth of 23 children only)
Ospringe, Maison Dieu; Kent; **21 Inh**; Bailey, J. (1979) AC 105: 81–184
Rochester Cathedral; Kent; **25 Inh**; Anderson, T. (1990) AC 108: 91–151
Rye, Austin Friars; East Sussex; **10 Inh**; Gallanaugh, S.C. and Howard, R.D. in Clements, J. (1991)
Stonar, Sandwich; Kent; **147 Inh**; Bayley, J. and Eley, J. (1975) AML 1903
Swingfield, St. John's Chapel; Kent; **3 Inh**; Martin-Hoogewerf, A. (1978) AML 2547
Thannington, St. Nicholas' Church; Kent; **3 Inh**; Anderson, T. (1991) AC 109: 308–311
Wallington, 32 Burleigh Avenue TQ 2852 6501; Surrey; **2 Inh**; Powers, R., Molleson, T.I. and Price, J.L. (1980) SyAC 72: 77–82

MEDIEVAL/POST-MEDIEVAL

Hythe, St. Leonard's; Kent; **4000 Inh**; Parsons (1908); Stoesinger and Morant (1932) (mainly craniometric data)
Rochester Cathedral; Kent; **3 Inh**; Anderson, T. (1990) AC 108: 91–151.

POST-MEDIEVAL

Canterbury, St. Dunstan's Church – the Roper Chantry; Kent; **8 Inh**; Garrard, P.H. (1980) AJ 60(2):227–246
Canterbury, St. George's Church; Kent; **92 Inh**; Anderson, T. in Canterbury Archaeological Trust (1991) and forthcoming
Rochester Cathedral; Kent; **35 Inh**; Anderson, T. (1990) AC 108: 91–151.

UNCERTAIN DATE

Strood, Newark Yard; Kent; **4 Inh**; Powers, R. report on file at AML

Notes: information appears in the following order – site, county, number of burials (Inh=inhumations, Crem=cremations), author of bone report, (where the words 'notes on bones' appear following the reference to the report no specialist is credited with examining the bones. In such cases the name which appears is the general author of the site report), reference to report. When a report appears in a periodical the year of publication, journal title, volume and page numbers are given in the gazetteer entry. The following abbreviations are used for journal titles: A=*Archaeologia*; AC=*Archaeologia Cantiana*; AJ=*The Antiquaries Journal*; AML=Ancient Monuments Laboratory Reports; BDJ=*British Dental Journal*; KAR=*Kent Archaeological Review*; LA=*London Archaeologist*; MA=*Medieval Archaeology*; PPS=*Proceedings of the Prehistoric Society*; SAC=*Sussex Archaeological Collections*; SyAC=*Surrey Archaeological Collections.*
Page references are generally those of the entire excavation report, not those of the bone report.
When the bone report appears in an edited volume or monograph, or if it has already been referred to in the main body of the text, then it is cited in the gazetteer and the full reference appears in the bibliography.

ACKNOWLEDGEMENTS

Thanks are due to the archaeological units and museums who provided information on skeletal remains in their care. Thanks are also due to Amanda Chadburn and Sebastian Payne for comments on earlier drafts of this paper.

REFERENCES

Angel 1982 — J.L. Angel, 'A New Measure of Growth Efficiency: Skull Base Height'. *American Journal of Physical Anthropology*, 58 (1982), 297–305.

Anderson 1990 — T. Anderson, 'The Human Bones'. In A. Ward and T. Anderson, 'Excavations at Rochester Cathedral', *Arch. Cant.*, cviii (1990), 91–151.

1991 — T. Anderson, 'Human Bone Studies: St George's Church', in *Canterbury's Archaeology. Canterbury Archaeological Trust 15th Annual Report* (1991), 57–61.

1995 — T. Anderson, 'The Human Bones', in K. Parfitt, *The Iron Age Burials from Mill Hill, Deal, Kent.* British Museum Press, London (1995), 114–44.

(forthcoming) — T. Anderson, 'The Human Skeletons', in A. Ward, '*Excavation at the Church of St. George the Martyr, Canterbury*', *The Archaeology of Canterbury*, (forthcoming).

Anderson and Fell 1995 — T. Anderson and C. Fell, 'Analysis of Roman cremation vessels by computerised tomography'. *Journal of Archaeological Science* 22 (1995), 609–17.

Anderson, Wakely and Carter 1994 — T. Anderson, J. Wakely and A. Carter, 'A Medieval Example of metastatic carcinoma: A dry bone, radiological and SEM study'. *American Journal of Physical Anthropology*, 89 (1994), 309–23.

Aufderheide 1989 — A.C. Aufderheide, 'Chemical analysis of skeletal remains', in (Eds.) M.Y. İscan and K.A.R. Kennedy, '*Reconstruction of Life from the Skeleton*', New York (1989), 237–60.

Aufderheide *et al.* 1981 — A.C. Aufderheide, F.D. Neiman, L.E. Wittmers, J.R. Rapp and G. Rapp, 'Lead in bone II: Skeletal-lead content as an indicator of lifetime lead ingestation and the social correlates in an archeological population'. *American Journal of Physical Anthropology*, 55 (1981), 285–91.

Beresford and Hurst 1990 — M. Beresford and J. Hurst, '*Wharram Percy Deserted Mediaeval Village*', London, (1990).

Brothwell (1981) — D.R. Brothwell, '*Digging up Bones*', 3rd edition, London (1981).

Brothwell and Krzanowski 1974 — D.R. Brothwell and W. Krzanowski, 'Evidence of biological differences between British populations from Neolithic to Medieval times, as revealed by eleven commonly available cranial vault measurements', *Journal of Archaeological Science*, 1 (1974), 249–60.

Brown and Brown 1992 — T.A. Brown and K.A. Brown, 'Ancient DNA and the Archaeologist', *Antiquity*, lxvi (1992), 10–23.

Bushe-Fox 1932 — '*Third Report on the Excavations of the Roman Fort at Richborough, Kent*', Society of Antiquaries, London (1932).

Canterbury Archaeological Trust 1994 — '*Canterbury's Archaeology*'. Canterbury Archaeological Trust, 14th Annual Report (1994).

Clements 1991 — J. Clements, '*The Monastery at Rye*'. Hastings Area Archaeological Research Group Publication (1991).

Crouch and Shanks 1984 — K. Crouch and Shanks, T.A., '*Excavations in Staines: The Friends Burial Ground*'. London and Middlesex Archaeological Society and Surrey Archaeological Society Joint Publication No. 2 (1984).

Cunliffe 1971 — B. Cunliffe, '*Excavations at Fishbourne 1961–69. Volume 1: The Site*'. Society of Antiquaries, London (1971).

Down 1981 — A. Down, *Chichester Excavations Volume 5*, Chichester Excavation Committee (1981).

Ellison 1972 — A. Ellison, 'The Bronze Age Pottery', in E.W. Holden, 'A Bronze Age Cemetery Barrow on Itford Hill, Beddington, Sussex', *Sussex Archaeological Collections*, (1972), 70–117.

Eley and Bayley 1975 — J. Eley and J. Bayley, '*Stonar Human Bones*'. Ancient Monuments Laboratory Report No. 1903, English Heritage, London (1975).

Foden 1993 — R.D. Foden, 'A Report on the Human Skeletal Remains', in A. Down and J. Magilton, *Chichester Excavations Volume 8*, Chichester District Council (1993), 89–94.

Frere and Stow 1983 — S.S. Frere and S. Stow, '*Excavations in the St George's Street and Burgate Street Areas*', *The Archaeology of Canterbury* VIII, Maidstone (1983).

Garrard 1987 — P.H. Garrard, 'The Cremated Human Bone', in S.S. Frere, P. Bennett, J. Rady and S. Stow, '*Canterbury Excavations: Intra- and Extra- Mural Sites 1949–55 and 1980–84*', *The Archaeology of Canterbury*, VIII, Maidstone (1987), 263–71.

Ginns 1971 — H. Ginns, 'The Skeletons Found in the Cemetery', in A. Down and M. Rule, *Chichester Excavations 1*. Chichester Civic Society Excavations Committee (1971), 122–24.

Harman 1990 — M. Harman, 'The Human Remains', in A. Down and M. Welch, '*The Excavation of the Anglo-Saxon Cemeteries at Apple Down, Compton, West Sussex, 1982–87*', *Chichester Excavations 7*, Chichester Excavation Committee (1990), 183–88.

Hauser and de Stefano 1989 — G. Hauser and G.F. de Stefano, '*Epigenetic variants of the Human Skull*'. (E. Shweizerbart'sche Verlagsbuchhandlung) Stuttgart (1989).

Henderson 1984 — J. Henderson, 'The Human Bones', in R. Poulton and H. Woods, '*Excavations on the Site of the Dominican Friary at Guildford in 1974 & 1978*', Research Volume of the Surrey Archaeological Society No 9, Guildford (1984), 58–67.

Jones 1987 — A. Jones, 'Intestinal parasite ova from archaeological deposits: evidence of widespread faecal contamination of 9–12th century occupational layers in York', in (Eds.) V. Capecchi and E. Rabino Massa, '*Proceedings of the Fifth European Meeting of the Paleopathological Association, Siena 1984*'. Siena (1987), 183–98.

Keegan 1989 — W.F. Keegan, 'Stable isotope analysis of prehistoric diets', in (Eds.) M.Y. Iscan and K.A.R. Kennedy, '*Reconstruction of Life from the Skeleton*', New York (1989), 105–19.

Krogman 1978 — W.M. Krogman, '*The Human Skeleton in Forensic Medicine*', Springfield (1978).

Lee and Magilton 1989 — F. Lee and J. Magilton, 'The Cemetery of the Hospital of St. James and St. Mary Magdalene, Chichester – A Case Study'. *World Archaeology*, 21(2) (1989), 273–82.

Lovejoy *et al.* 1985 — C.O. Lovejoy, R.S. Meindl, T.R. Pryzbeck and P. Mensforth, 'Chronological metamorphosis of the auricular surface of the ilium: a new method for the determination of adult skeletal age', *American Journal of Physical Anthropology*, 68 (1985), 15–28.

Magilton and Lee 1989	J. Magilton and F. Lee, 'The Leper Hospital of St. James and St. Mary Magdalene, Chichester', in (Eds.) C.A. Roberts, F. Lee and J. Bintliff, '*Burial Archaeology*', BAR (British Series), No. 211 (1989), 249–65.
Manchester 1984	K. Manchester, '*Eccles Skeletal Report*', Report on File at the Department of Archaeological Sciences, University of Bradford (1984).
Mays 1990	S. Mays, '*The Human Remains from Empingham II, Leicestershire*', Ancient Monuments Laboratory Report 61/90, London (1990).
Mays 1993	'Infanticide in Roman Britain', *Antiquity*, lxvii (1993), 883–8.
Meates 1987	G.W. Meates, '*The Roman Villa at Lullingstone, Kent*', Maidstone (1987).
Molleson 1991	T. Molleson, 'Demographic Implications of the Age Structure of Early English Cemetery Samples', *Actes des 5e Journées Anthropologiques* (Dossier de Documentation Archéologique No. 14) (1991), 113–22.
Ovey 1964	(Ed.) C.D. Ovey, '*The Swanscombe Skull: A Survey of Research on a Pleistocene Site*'. Royal Anthropological Institute Occasional Paper No. 20 (1964).
Parsons 1908	F.G. Parsons, 'Report on the Hythe Crania'. *Journal of the Royal Anthropological Institute*, 38 (1908), 419–450.
Philp 1973	B. Philp, '*Excavations in West Kent 1960–1970*', Dover (1973).
Powers and Cullen 1987	R. Powers and R. Cullen, 'The Human Bones', in V.I. Evison, '*Dover:Buckland Anglo-Saxon Cemetery*', London (1987), 123–78.
Ratcliffe-Densham 1964	H.B.A. Ratcliffe-Densham, 'Notes on the Human Bones', in G.D. Lewis, 'Excavations at Bidlington', *Sussex Archaeological Collections*, cii (1964), 1–8.
Ratcliffe-Densham 1972	H.B.A. Ratcliffe-Densham, 'The Human Bones', in E.W. Holden, 'A Bronze Age Cemetery Barrow on Itford Hill, Beddingham, Sussex', *Sussex Archaeological Collections*, cx (1972), 70–117.
Rayner 1976	'*The Stratigraphy of the British Isles*', Cambridge (1976).
Roberts *et al.* 1994	M.B. Roberts, C.B. Stringer and S.A. Parfitt, 'A Hominid Tibia From Middle Pleistocene Sediments at Boxgrove, UK', *Nature*, 369 (1994), 311–13.
Roberts and Manchester 1995	C. Roberts and K.M. Manchester, *The Archaeology of Disease*, 2nd edn., Stroud (1987).
Scheuer *et al.* 1980	J.L. Scheuer, J.H. Musgrave and S.P. Evans, 'Estimation of Foetal and Late Perinatal Age From Limb Bone Length by Linear and Logarithmic Regression', *Annals of Human Biology*, 7 (1980), 257–65.

Shaw 1994	R. Shaw, 'The Anglo-Saxon cemetery at Eccles: A preliminary report', *Arch Cant.*, cxiv (1994), 165–88.
Sherlock and Woods 1988	D. Sherlock and H. Woods, *St Augustine's Abbey: Report on excavations 1960–78*, Maidstone (1988).
Stoesinger and Morant 1932	B.N. Stoesinger and G.M. Morant, 'A Study of the Crania in the Vaulted Ambulatory of St. Leonard's Church, Hythe', *Biometrika*, 24 (1932), 135–203.
Thomas 1988	J. Thomas, 'The Social Significance of Cotswold-Severn Burial Practices', *Man*, 23 (1988), 540–59.
Trinkaus 1975	E. Trinkaus, 'Squatting Among the Neandertals: A Problem in the Behavioral Interpretation of Skeletal Morphology', *Journal of Archaeological Science*, 2 (1975), 327–51.
Wakely *et al.* 1995	J. Wakely, T.A. Anderson and A. Carter, 'A Multidisciplinary Study of Prostatic(?) Carcinoma From Mediaeval Canterbury', *Journal of Archaeological Science*, 22 (1995), 469–77.
Waldron 1989	A. Waldron, 'The Human Bones', in R. Poulton, 'Rescue Excavation on an Early Saxon Cemetery Site and a Later (Probably Late Saxon) Execution Site at the Former Goblin Works, Ashtead, Near Leatherhead', *Surrey Archaeological Collections*, lxxix (1989), 67–97.
1992	A Waldron, 'The Human Remains', in G.N. Hayman, 'Further Excavations at The Former Goblin Works (TQ 182 567)', *Surrey Archaeological Collections*, lxxxi (1992), 1–18.
Waldron and Waldron 1988	A. Waldron and G. Waldron, 'Two Felons From Surrey', *London Archaeologist*, 5 (1988), 443–5.
Wolpoff 1968	M.H. Wolpoff, 'Climatic Influence on the Skeletal Nasal Aperture', *American Journal of Physical Anthropology*, 29 (1968), 405–24.
Workshop of European Anthropologists 1980	Workshop of European Anthropologists, 'Recommendations for age and sex diagnoses of skeletons', *Journal of Human Evolution* 9 (1980), 517–49.