

CHAPTER ONE

THE GEOGRAPHICAL, SOCIAL AND ECONOMIC BACKGROUND

GEOGRAPHY

The social and economic history of Kent has largely been shaped by its geography. The solid geology of the region dominates all other aspects of this study. The underlying geological beds run roughly from northwest to southeast, with the result that it is this vector which mainly influences settlement and communications within Kent. Uppermost is the London Clay which lies beneath the Thames estuary and much of southern Essex. Outcrops also occur in the Hoo peninsula and underlie most of the Isle of Sheppey and the Forest of Blean. Below the clay is a series of sands, principally the Thanet and Woolhaven beds. These run in a narrow band south of the clay from the Darenth area, beneath the Medway towns and form the high ground running towards Canterbury. The Chalk of the North Downs runs from London to Dover, with the River Medway cutting a significant breach through the downland. Further to the south is a band of Gault clay overlying the lower Greensand. A major feature of the Kentish hinterland is formed by the Wealden clay, virtually cutting the county off from southern Sussex.

The Thames, the Medway and the sea have been the principal agencies in determining the drift geology. The Thames deposited a series of gravel beds during various stages of glacial retreat. In geologically more recent times, it has backfilled its own channel with alluvium, which can reach 25m in depth. The Medway - arguably a tributary of the Thames - has behaved in a similar fashion (Evans, 1953, 109). Together with the Crouch and lesser tributaries, the rivers are responsible for large deltaic deposits which cover the area of the natural flood plain in Kent and Essex. The numerous sandbanks and the marshy islands such as Canvey and Foulness are part of this delta.

Four major natural phenomena are affecting the relative levels of land and sea in the Thames estuary. First there is the gradual rise in the land due to the relief of pressure following the last glacial retreat. Then there is the contrasting rise in general sea level due to post-glacial meltwater. The alluvial deposits, now lifted above sea level are drying out and compacting under their own weight. A final complicating factor is that the continental plate is tipping from west to east, causing a depression of the land along England's east coast (Evans, 1953, 105).

These phenomena have not been consistent, but their net effect has been to produce a general rise in sea level relative to the east coast since the last glaciation. Evidence suggests that the process has been erratic and has at times gone into reverse (Devoy, 1980, 140). The consequences have been that deep, periglacial rivers slowed as sea level rose, becoming wider and shallower and depositing the deltaic silt as noted above. Flooding and changes of course would be frequent and the formation of salt marshes along the banks occurred in a manner that is well understood (Steers, 1964, 516). Thornhill (1976, 121) has pointed out

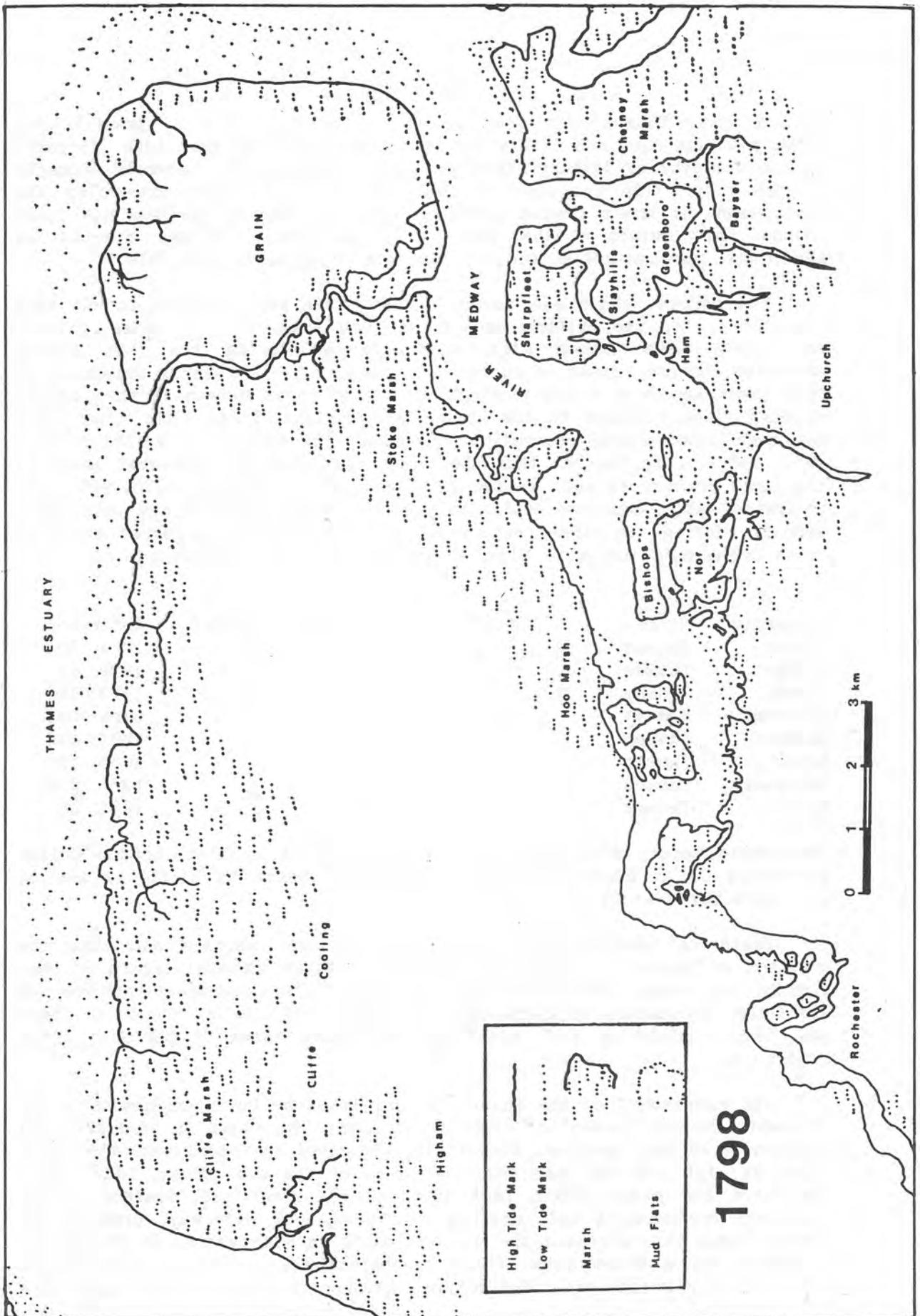


Fig. 3

that a River Thames only four metres lower would have a virtually dry estuary at low tide and if divided into rivulets, would have been fordable in the vicinity of Tilbury. This provides a setting for Caesar's crossing of the river (The Conquest of Gaul, V, 18). The clues concerning the environment of Roman London emerging from the work of the DUA and Inner London Unit reinforce the idea of a meandering Thames flanked by sandbanks, marshes and subsidiary channels (Southwark, 1978, 510),

The current shape and nature of the north Kent marshes is not that prevailing when the Britons were ruled from Rome. Many agencies, natural and human have caused significant changes during the last twenty centuries. Sources disagree on exact figures, but the general consensus is that there has been a net increase of two to three metres in the height of high tides relative to the Roman land surface. It is clear that there has been considerable aberration throughout the historical period (Devoy, 1980, 145); it is thought that the Roman sea level was somewhat lower in the first century AD than in the late Iron Age (Southwark, 1978, 510). The following table sets out estimates for sea levels (MHWST) and occupation deposits during the first century AD. The heights are in metres above or below Ordnance Datum, some older estimates having been metricated.

Authority	River	MHWST	Occupation	Change?	Reference
Steers	Thames		-.2 to +.7	+4.6	1964, 401
Linder	Thames		+1	+3.8	1939, 48
Evans	Medway	-1.5	0 to +.3	+3	1953, 129
Jackson	Medway	+1			pers. com
Bateman	Thames	+1			1983, 226
Devoy	Thames	-1 to +.3		•	1980, 136
Southwark	Thames	+ .5 to +1			1978, 510
Miles	Thames		+1		1975, 26

Comparable modern statistics put the MHWST at +4.1m OD at London Bridge and +3.1m OD at Rochester Bridge. Freshwater marsh at Cliffe is now at +3m. Salt marsh at Upchurch is at +3.1m.

Historical records note the growth of salt marshes and then the creation of islets as creeks cut into marsh banks. Several layers of peat visible in marsh banks at Upchurch and Cliffe represent periods of stability. Occupation is normally associated with one or other of these peat beds, indicating that advantage was being taken of periodic dryer conditions.

The embankment of the Thames, accomplished by Dutch engineers in the sixteenth century prevented flooding at high tide, which in turn arrested the growth of salt marshes. Restricting the river increased both the water depth at high tide and the scouring force of the ebb (Devoy, 1980, 146). The river has hence gouged back into its old river bed, destroying any ford and producing a well defined single channel waterway. Dredging in modern times has increased the minimum depth in mid-channel at Tilbury to 9 metres. Those Roman sites which lie beyond the sea wall are therefore being rapidly eroded by tidal action, whereas in former days they were

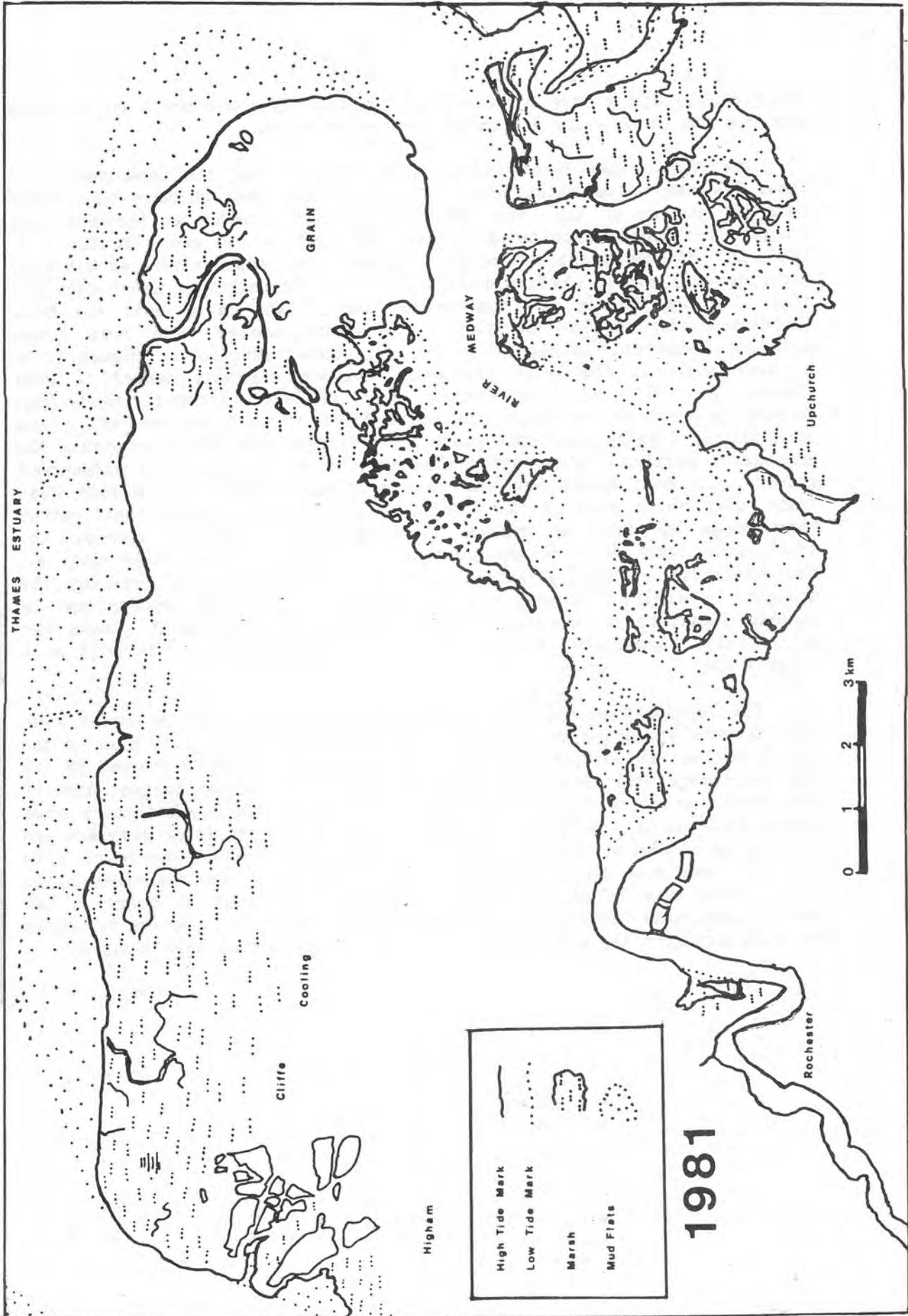


Fig. 4

being slowly and gently buried beneath marsh clay. One metre of alluvium protects the sites which lie under freshwater marsh.

The Medway has fared rather differently during the same period of time. The sea walls which were constructed had less success in holding back the waters of the river and the man-made freshwater marshes were frequently flooded, some being permanently lost to the sea (Woodruff, J, 1856, 18). The early innings produced a deep, restrained river, with a good scouring tide making Chatham a suitable choice for siting a naval dockyard (fig. 3). The erratic but inexorable rise of the river need not have threatened the marshes in itself; the major damage came from human activity. Commercial extraction of mud for cement manufacture commenced on a large scale in the later nineteenth century and only ceased in 1965 (Marsh, R, 1971, 42). Excavators seem to have ignored regulations forbidding them to dig below the water level or to break sea walls, and much illicit digging also took place. This allowed the sea to penetrate the freshwater marshes - lower-lying than salt marsh - and started widespread erosion. The salt marsh was cut by creeks and turned largely into mudflats, over which much of the tidal floodwater would expend itself rather than surge up-river as before. This encouraged silting, forming the treacherous ooze which covers most of the estuary at low tide (fig. 4). The Admiralty eventually became concerned that this was reducing the draught in their dockyards and put a stop to further excavation. In certain locations on the mud flats, one can now find marsh plants re-establishing themselves, but the process of regaining stability will be a lengthy one.

The implications for the archaeologist are that Roman sites at 0 to +2m OD, once protected by marsh are now exposed to erosion in plan on the mud flats, and in section in marsh banks. Many have been destroyed by the sea. Many more will have been scooped en *bloc* into cement barges. Most of the more impressive finds were made in the late nineteenth century when destruction was at its height (Monaghan 1983a). The resulting problems are that an incalculable number of sites have been lost and those which have survived have done so selectively. The exposure of sites continues apace over a wide area to which access is normally difficult. In short it has been a singularly unattractive area for archaeologists to operate in, which probably explains the neglect that the pottery industries have suffered.

ROMAN KENT

Land use in the Roman period can be estimated by examining the modern and mediaeval situation and extrapolating back. This is justified by the high level of continuity evident in Kentish agrarian history (Everitt 1976). Soil quality is determined largely by the drift geology and this in turn influences patterns of settlement. Some of the finest agricultural land in Britain overlies the sand beds which make up much of the Hoo peninsula as well as the strip of high ground that Watling Street follows to Canterbury. In modern times this has been used to grow all common crops, in particular hops and market garden produce. In the mediaeval period the area was conspicuously wealthy with a castle being constructed at Cooling. Hoo itself was once a Saxon cantonal capital. Woodland persists where uncleared and would have been a prominent feature of the region prior to the conquest, oak and beech being the major native species. Apart from the fertile river valleys and along the narrow band of Gault, the rest of the region had little to offer the ancient farmer. The London Clay and Greensand areas have limited agricultural potential. The chalk only carries a thin soil whilst the heavy clay-with-flints of the Weald has resulted in the region remaining wooded throughout recorded history.

Two Roman towns are known, Durovernum (Canterbury) and Durobrivae (Rochester). In addition, Iter II of the Antonine Itinerary (Rivet and Smith 1979, 14) lists settlements named Vagniacis (Springhead) and Durolevum (Bapchild-Sittingbourne-Ospringe). Essex has no known town within the area of interest with the possible exception of Chadwell St. Mary. Kentish settlement has traditionally been based on the small farm with a high degree of continuity of tenure (Everitt, 1976, 11). There is no evidence to suggest that the Roman situation was any different from the mediaeval, or indeed, that of the Iron Age. Roman Kent, as in all other periods of history, had a primarily agrarian economy and its wealthiest citizens would have been landowners. Caesar mentions that wheat was grown and that the Cantiaci led a lifestyle that was more Gallic than British. Oats and barley were also grown (Catherall 1983, 140). The villa and the small farmstead are the main features of Roman Kent. The villas are concentrated in the river valleys (Lullingstone, Darenth, Otford) and in the fertile zone along Watling St. (Hartlip, Boxted, Cobham).

Where undisturbed ground remains, there is abundant evidence of dense rural occupation of a humbler sort : ditches, pits and postholes are scattered over a wide area of the marshlands. The continuity of occupation noted across the Thames in the Mucking 'palimpsest' (Jones, 1973) should be regarded as the norm for the better part of the region under consideration. Population levels are difficult to assess: Philp (1963, 79) estimated a population of 2,500-3,000 for rural 'West Kent' during the first century AD, which compares well with the census of 1801 which reveals that 2,038 persons were resident in the Hoo peninsula. The population peaked during the late Middle Ages, but declined following Wat Tylers' rebellion and the onset of malarial mosquitoes encouraged by the inking of the marshes (MacDougal 1979).

Caesar relates that large numbers of cattle were herded by the Catuvellauni in southern Essex. One would expect an amount of husbandry to accompany any agricultural establishment especially to exploit poorer soils unsuitable for crops. This is particularly relevant to the marshland where the soil had very little potential compared to the nearby high ground. Cheese presses, sheep and goat bones are common finds, so it can be assumed that, as in mediaeval times, the Roman marshes were used as rough pasturage. Sedge and peat associated with Roman levels indicates that the vegetational covering was much the same as today. Daisy seeds found at Slayhills indicates the presence of local meadow land conditions, probably on the higher points (I. Jackson, pers. com.).

The Thames, Medway and Swale have historically been rich oyster-fishing grounds. The points where marsh creeks meet the main channels were particularly favoured by the shellfish, now largely unknown in the region due to human action (Goodsall 1965, 118). The area is possibly the source of the delicacies mentioned by Juvenal (*Satires*, iv, 141), Shells of the creatures are very common in Roman to post-mediaeval levels of estuary occupation sites. They also provide the temper for certain pottery fabrics in both the Roman and mediaeval periods.

The preservation of fish or the manufacture of fish sauces would partly explain the need for extensive salt-boiling activities which took place on the marshes. In common with similar areas, such as Poole Harbour in Dorset (Farrar 1975), the Medway-Thames marshes have been a salt-winning centre since the Iron Age. Many of the 150 or so known marshland sites in the region show some sign of salt boiling, often in addition to other activities such as farming or potting. Evidence for the industry in Kent has been summarised by Miles (1975) and has been considered a fully commercial concern. It is quite likely, however, that much of the observed activity was to serve the needs of the local farmers.

Communications relied principally on water transport, either on the rivers, along the coast or through the three natural channels of the Yantlet, Swale and Wantsum. Travel between Kent and Essex would therefore have been easier than between the coastal areas and the hinterland of each county. This explains the marked affinity of Thameside Kent with Thameside Essex; the river was a highway rather than a barrier. It is significant that most kiln sites in the region are adjacent to navigable creeks. On land, the major route was the track running from London to Canterbury, which the Romans converted to Watling Street and extended to their base at Richborough. Later this was diverted to Dover via Canterbury. The other known tracks were the 'Pilgrims Way' and the 'Shorne Ridgeway', the latter leading to the postulated ford at Higham. The major line of communication was therefore from Southeast to Northwest. Travel in other directions was, and still is, more difficult (Everitt, 1976, 14). The villas are placed close to either the roads or to the rivers, with the movement of agricultural surpluses in mind.

Continental trade would enter or leave Britain by sea, and therefore the objects of trade would remain seaborne for as much of their journey as possible to reduce handling costs and to avoid expensive overland

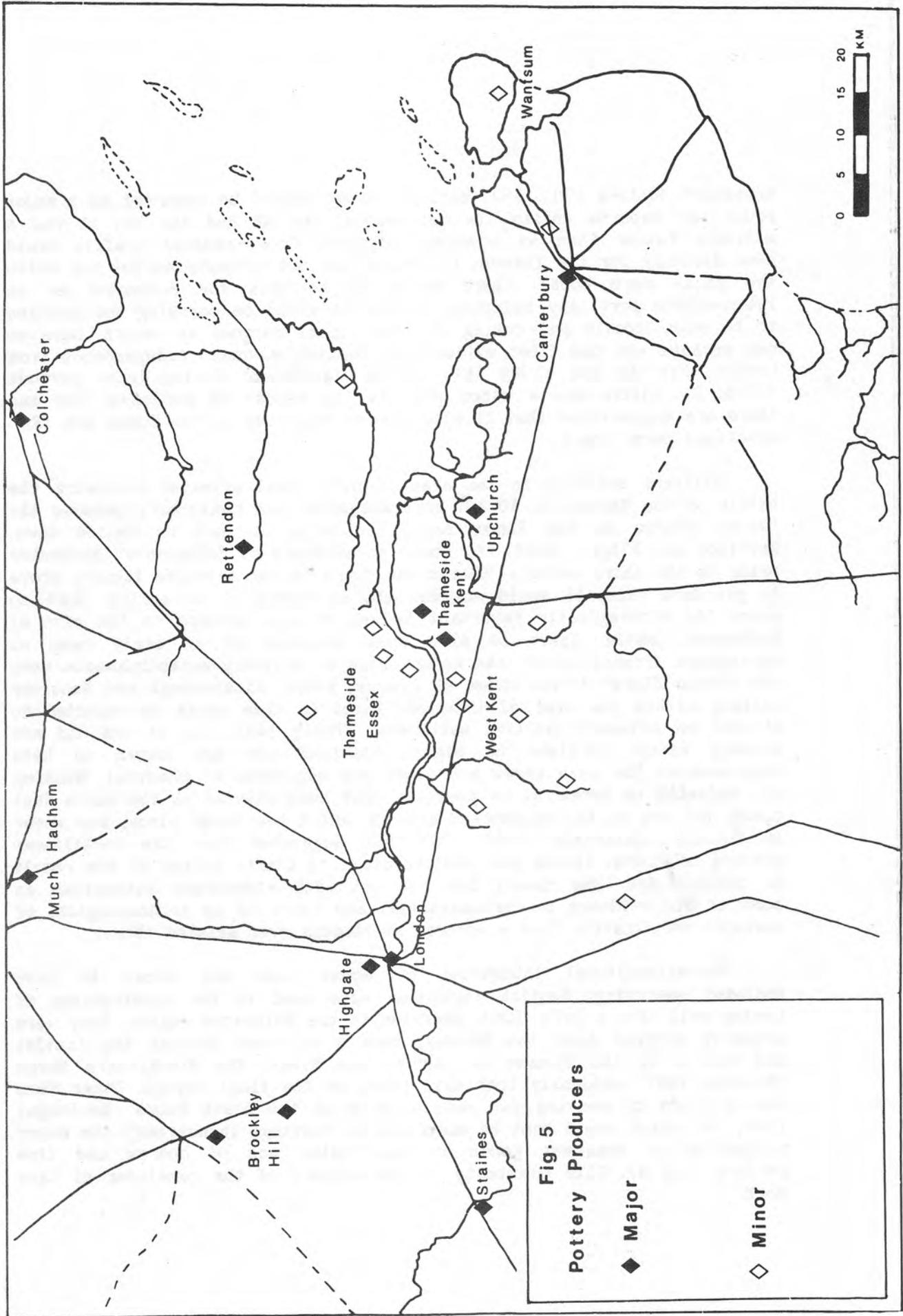


Fig. 5
Pottery Producers

◆ Major

◇ Minor

transport (Gillam 1981, 15). Watling Street cannot be regarded as a major route for imports unlike its successors, the A2 and the M2; it was a military rather than an economic highway. Cross-channel traffic would head directly for the Thames, if London was the ultimate market for which the goods were bound. There would be no role for Rochester as an intermediate port. Any shipping it handled would be carrying merchandise to be sold locally and taking on board local cargoes in return. Here we can perhaps see the first evidence of Kentish economic independence from London; Everitt has shown this to be significant during later periods (1976, 2). Cliffe was a minor port in the heyday of mediaeval Hoo and there are suggestions that it also played this role in the Roman era (R.F. Hutchings pers. com.).

Military activity in the area is quite well attested following the battle of the Medway in AD 43. Both Rochester and Canterbury possess the 'Duro-' prefix on the Roman name, indicating a fort or walled town. Harrison and Flight (1968, 76) found no evidence of defences at Rochester prior to the third century. Should the entry in the Antonine Itinerary prove to pre-date this, it would suggest the existence of an earlier fort to guard the strategically important Medway bridge, perhaps on the site of Rochester Castle. There is also some evidence of an early camp at Springhead (French 1984). The major chain of military establishments were the "Saxon Shore" forts, those at Lympne, Dover, Richborough and Reculver falling within the area of interest. Each, in time would be expected to attract an adjacent civilian settlement (Philp 1981, 11) if one did not already exist. Fortlets or signal stations are now known to have supplemented the main bases and these are suggested at Shadwell, Mucking and Hadleigh in Essex. It is possible that more existed on the north Kent coast, but due to the widespread erosion which has taken place, may never be found. Nightingale (1952, 150) has suggested that the rectilinear pattern of roads, fields and smallholdings in Cliffe parish is the result of centuriation. The theory has not met with widespread enthusiasm as most of his evidence is circumstantial and there is no archaeological or textual verification that a veteran settlement ever existed there.

Non-agricultural industries of Roman Kent are known to have included quarrying. Kentish ragstones were used in the construction of London wall (Frere 1978, 335). Quarried in the Maidstone region, they were probably shipped down the Medway, took a shortcut through the Yantlet and thence up the Thames as far as the Fleet. The Blackfriars Barge (Marsden 1967) evidently took this route on its final voyage. Other than chance finds of weaving and metalworking on the Black Shore (MacDougall 1980, 13) which would best be described as "cottage industries", the major production of consumer goods in the region was of coarse and fine pottery (fig 5). This commodity is the subject of the remainder of this work.