

Environmental Aspects of London's Past

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THE ENVIRONMENTAL aspects of London's past are seemingly scarce when one scans the historical and archaeological literature, but this is perhaps more apparent than real, for by comparison with other urban centres there is a certain body of information. We know, for example, that certain exotic fruits, to include oranges and lemons, were imported in the medieval period, while pigs and kites filled the niche which today is occupied by the Corporation dustmen. Botanists have made records of wild plants growing in the City since the 16th century: London Rocket and the alien Canadian Fleabane are notable examples. More recently such eminent authorities as E. M. Reid and A. Kennard¹ have analyzed plant and mollusca remains from Roman deposits.

More specific information about the natural history of the City is now being made available by the analysis of organic remains associated with archaeological features. Environmental interpretation of remains from urban sites has to be treated with a certain scientific caution. However, it would seem suitable in an article of this kind to generalise to some extent.

Archaeology along the river Thames, both in the City and Southwark, combined with information from temporary sections, has proved useful in reconstructing the history of the river. Pre-Roman London was characterized by a river far less affected by tides than today. The flood-level of the Thames in the City at the beginning of the Roman period could not have been much above Ordnance Datum (i.e., about 4m. below present high tide level)². Since the Roman period the lower reaches of the river have been progressively flooded by the sea causing the high tide level to rise on average perhaps as much as 20cms. per century, necessitating continued heightening of the embankments — a process which is still going on today. Immediately prior to the Roman period the river would not have been much larger than that seen at low tide today, and perhaps only marginally tidal. Areas to the east and south of the City would

have been marshy, while the river terraces were presumably wooded.

As a location for Roman settlement the Taplow terrace provided two relatively well-drained defensive hillocks coming down steeply to a stable clay bank at the river's edge. The raised area to the south in Southwark provided a stable landing for those fording the river, and possibly later a dry bridge-head area.

Clearance and possibly removal of turf in some areas must have occurred at the time of primary settlement. Further stabilization of the north bank by construction of massive oak quays took place; their alignment just to the south of Thames Street has emerged from recent excavation, while the southern bank has been lost to erosion³ suggesting it was in a more northerly position than the present embankment. In the area immediately east of where the Fleet used to flow into the Thames analysis of plant and molluscan remains from early Roman deposits has shown that periodic flood waters covered areas 100 metres north of the present embankment.⁴

Analysis of botanical remains from a variety of sites has shown that the Romans brought with them plants and foodstuffs more at home in the Mediterranean region than the British Isles. As early as the second century the City was beautified by the introduction of Mulberry trees and possibly Stone Pine. Other ornamentals may have included violets, roses and box. Imported foodstuffs included olives, figs, grapes, dill and coriander. Southwark was possibly an area of market gardening, where varieties of cabbage, carrot, apples, blackberries, peaches, raspberries, cucumbers, cherries and plums were cultivated. Lentils and cereals may also have been imported. With some plants remains, in this case fig and grape, it is not possible at this stage to distinguish between imported products and those grown locally. Some fig seeds recovered in the City may be of the parthenogenic variety⁵ and hence

1. E. M. Reid, Appendix to "Some recent Excavations in London," by F. Lambert, *Archaeologia* 71 (1921) 111, and A. Kennard and S. H. Warren, "On a section of the Thames alluvium in Bermondsey," *Geol. Mag.* 10 (1903) 455-460.
2. A. V. Akeroyd, "Archaeological and Historical evidence for subsidence in Southern Britain," *Phil. Trans. Roy. Soc. London* 272 (1972) 151-169.

G. H. Willcox, "Problems and possible conclusions re-

lated to the archaeology and history of the Thames," *Trans. London and Middlesex Arch. Soc.*, 26 (1975) 285-292.

3. H. Sheldon, "Excavations at Toppings Wharf," *London Archaeol.* 1 No. 11 (1971) 252-254.
4. G. H. Willcox, *Trans. London and Middlesex Arch. Soc.* forthcoming.
5. D. S. Hill "Wasps and Figs," *New Scientist*, Feb. 1971, 144-6.

local; grapes, too, may have been grown locally. Given slightly better climatic conditions which probably prevailed at this time, these plants could have been economically viable, though equally, farmers may have been less conscious of a reliable yearly return from their land.

Animal bones are giving further evidence of diet during the Roman period. A wide variety of fish from marine, estuarine and freshwater habitats have been identified⁶. These include Eel, Flatfish, Haddock, Mackerel and members of the *Cyprinidae* which are exclusively freshwater. Bones of cattle, sheep and pig are common. Domestic dog and cat also occur while finds such as house-mouse, hare, frog and lizard are of intrinsic zoological interest. Bird bones, which also occur, may, like the bones of deer, tell us something of the natural history of south-east England at this time.

The sub-Roman period must have seen an expansion of weeds and shrubs in the City. Mollusca indicating shaded conditions, have been recovered from two localities. The Thames by this time had risen inundating the Roman quays and eroding the southern defensive wall near the Mermaid Theatre. It was presumably at its broadest at this time, but became increasingly constricted due to encroachments by wharves and embankments in the medieval and later periods.

Mulberry, fig and grape were still being eaten in London, together with a large variety of fish, including Pike, Eel, Cod, Salmon, Gunard, Herring, Whiting and Flatfish (Plaice or Flounder) and, of course, Lamprey, though we have no archaeological evidence for the latter. The sawn off rostrum of the lesser rorqual (*Balaenoptera acutorostrata* — this species of whale grows to a length of about nine metres) was found in 15th century deposits near the river. The 'little climatic optimum' of the early Medieval period was favourable to certain farming practices, e.g., viticulture, though it may also have stimulated plagues and pestilence. This, combined

with increased density of urban living, culminated in the pandemic of the mid-fourteenth century which it has been estimated caused a fall in population from 3.8 million to 2.1 million in Britain between 1348 and 1374⁷. The outbreak of black death, it has been suggested, resulted from the spread of the black rat which appears to be a twelfth century introduction, while its subsidence has been attributed to the introduction of the larger brown rat which supposedly killed off the former. Although this theory is unconvincing, the archaeological data from rodent remains is of special interest. There are many gaps in our knowledge of the history of wild animals during the past 2000 years in Britain, but with the help of finds from archaeological sites we may eventually know a little more about the fauna of different periods.

Many weeds from Medieval sites have been identified from their resistant seeds. Some, e.g., Corncockle and Corn Marigold, were common in wheat fields in the past, but today are rather more rare. In general, the assemblage of weeds is very mixed, some having been introduced by horse traffic⁸ or other animals, some by wind. Bracken and moss were brought in for packing or bedding. Reeds were, no doubt, brought in for thatch. Much of this evidence has come from sites by the river, where the occurrence of organic remains owes as much to the waterlogged conditions as to the hive of activity on and around the wharves. Even some of the river deposits themselves are rich in organic remains, where they are found mixed with material brought in by river action, including the snail, *Lymnaea truncatula* which is the specific intermediate host of the liver fluke (*Fasciola hepatica*).

The importance in gaining an understanding of London's natural past as an integral part of historical reconstruction cannot be overstressed. The archaeological, historical and environmental data are inseparable. Together they can help form a more complete picture of the past.

6. P. Spencer, "St. Thomas Street Environmental Work interim report," *London Archaeol* 2, no. 11 (1975) 273-274.

7. W. L. Langer, "The Black Death," *Scientific American*, 210 no. 2 (1964) 114-121.

8. R. S. Fitter, *London's Natural History* (1945).

Local Societies — amendments (see also p. 398)

The fourth list of amendments to the list of local societies published in Vol. 2, No. 9, is as follows:

Beddington, Carshalton and Wallington Archaeological Society; Sec. R. C. Collett, 12 Ingleby Way, Wallington, Surrey.

Brockley Hill Excavation and Field-work Group; delete from list.

Croydon Natural History and Scientific Society, Archaeology Section; Sec. R. Savage, 14 Deepfield Way, Coulsdon, Surrey CR3 2SY.

Islington Archaeology and History Society; Sec. Malcolm Tucker, 91 Hornsey Lane, N.6.

Kingston-upon-Thames Archaeological Society; Sec. Mrs. P. Nicolaysen, 295 West Barnes Lane, New Malden, Surrey.

London and Middlesex Archaeological Society; Sec. J. Clark, Museum of London, Kensington Palace, W.8.

Richmond Society, Historical and Archaeological Section; Editor, Mrs. Sally Albrecht, 42 Lancaster Park, Richmond, Surrey.

Southwark and Lambeth Archaeological Society; Sec. R. J. Buchanan, 79 Ashridge Crescent, S.E.18 3EA.

Spelthorne Archaeological Field Group; Sec. W. E. Woodage, 5 Fifehead Close, Ashford, Middlesex TW15 3SD.