Review Notes

Richard III's Diet

A.L. Lamb, J.E. Evans, R. Buckley and J. Appleby, 'Multi-isotope analysis demonstrates significant lifestyle changes in King Richard III', *Journal of Archaeological Science*, volume 50 (2014), pages 559-65.

'He hardly touched his food, but talked … all the time'.

ANNE F. SUTTON AND LIVIA VISSER-FUCHS

This impressive and fascinating article reveals the recently discovered scientific facts about Richard III's diet and 'lifestyle' in so far as they can be deduced from the study of his bones. Unfortunately the media have already drawn their erroneous and sensation-seeking conclusions, which no serious historian would pay much attention to, but it is perhaps useful to publish some comments from students of the period and the life of Richard III – who, however, do not claim to be scientists. More consistent engagement with historians could perhaps have benefited the scientist-authors of the report and toned down its conclusions. The following comments are made in particular because the article claims to have 'applied multi element isotope techniques to reconstruct *a full life history*' (our italics) − no small claim.

Through analysis of two teeth the authors were able to establish that Richard spent his early years in the east of England, a fact consistent with his birth at Fotheringhay, but that he soon moved to the west, which is considered consistent with his living at Ludlow in 1459 and 1460. One year seems a very short period to draw conclusions from, but presumably it fell exactly within the 'formative' years of his adult teeth. He was sent across the Channel to the safety of the duke of Burgundy's sphere of influence very early in 1461, returning in June of the same year, a period that must be too short to leave any physical traces. If his stay in the 'west' is an undoubted fact according to the evidence of his teeth, then discussion with historians would have drawn the authors' attention to the fact that Richard's eldest brothers, Edward and Edmund, had been brought up in the west, in particular at their father's castle of Ludlow under the 'odious rule' of Richard Croft whom the boys bitterly complained of to their father.[1] It is likely that the same location, safely away from central politics, was chosen for York's younger children. If the formation of Richard's teeth provides any solid support for this as the locality of Richard's childhood years, this would be a very positive step forward.

Richard's whereabouts during the next twenty-two years are not known in detail, but it seems odd that this article does not even mention his prolonged

[1] C.L. Scofield, *The Life and Reign of Edward the Fourth*, 2 vols, London 1923, vol. 1, pp. 11, 16, 21.

stay in Yorkshire (1471-83), and excursions into Scotland (1481-82). These years are not dealt with at all by this article, presumably because the bones cannot provide evidence for this period of his life. The next point picked up in Richard's 'life history' by the report is his kingship (1483-85), when according to the scientific evidence he greatly *changed* (our italics) his lifestyle and starting eating lots of 'luxury foods' and consuming large quantities of wine. The evidence is found by comparing the data from the femur, which can provide evidence for the period at least ten years before death,[2] to the evidence of the rib bones, which apparently renew themselves in such a way that they provide evidence for the last two to five years of a person's life.[3]

In any anonymous skeleton this crucial change would apparently have been explained by the subject's move to another part of the country or even of the world, but in Richard's case, the authors say: 'The great advantage of knowing who the skeleton belongs too [*sic*] is we know for certain that this was not the case and thus there must be another explanation'. But is this correct? If the evidence from the ribs used for such analysis normally covers two to five years before death this could in Richard's case include 1480-1483 and take us back to the time he lived in the North and campaigned in Scotland, *and* include his sojourn in and around London once he was king *and* the ten months of his reign that he travelled around the country. This leaves about sixteen out of a possible sixty months for an undoubted presence in London.

It must be also stated that the food and drink available to the king of England were as easily available to the duke of Gloucester, though it is possible that Richard III, like heads of state through the ages, had to sit through more numerous elaborate meals and more receptions than he had been used to in his former life. The magnificence of his coronation banquet, however, cannot be adduced as proof of unusual gluttony – all over Europe state banquets were of this elaborate nature: they were status symbols, participants were more preoccupied with display, ceremony and hierarchy than with gorging themselves. Far more revealing is the only bit of historical/narrative evidence that we have about King Richard's eating habits: the story told by the Silesian knight Niclas von Poplau, who met the king at York on 1 May 1484 and was allowed to share the king's meal while seated very near him. They hardly ate, they talked all the time about a range of subjects that fascinated them both[4]. The coronation banquet may just as much have been an occasion for the king to talk as enthusiastically with his many guests.

Nobles did in general eat and drink well, and, as Professor Christopher Dyer has recently said, it is no surprise to historians that a nobleman such as Richard

[2] In *The Ricardian Bulletin*, December 2014, pp. 51-52, esp. 52, Prof. Evans, one of the co-authors of the report discussed here, has '10-15' years.

[3] In the same contribution to *The Ricardian Bulletin*, pp. 51-52, esp. 52, Prof. Evans has 'the last two to **three** years'. Which is right? Let us assume the original article is.

[4] See L. Visser-Fuchs, 'He hardly touched his food, but talked with me all the time': what Niclas von Popplau really wrote about Richard III, *The Ricardian*, vol. 11 (1997-99), pp. 525-30.

might have drunk the equivalent of a bottle of wine a day,[5] but the conclusion that he was bowled over by becoming king and surprised by the food put before him, gobbling it all up and washing it down with quantities of expensive wine, is far too simple.

Other questions might be asked: was a peacock dressed in his hackle for display and other such elaborate dishes ever eaten? How much was wine watered? Charles the Bold of Burgundy is said to have just 'coloured' his water with wine throughout most of his life. And we know that when Richard III was offered wine in a cup by the mayor of London at the coronation banquet, he was also offered water in an ewer with which to temper it.[6] The authors of the report also admit that the quality and alchohol level of medieval wine are unknown.

Richard III's reputation has been regularly taken apart over the years, and now the most intimate physical aspects of his personal life are being dissected scientifically, but the margins for error and conjecture are, it seems, just as wide as when only textual evidence was available. One can only reiterate that discussion between disciplines can be taken further and that scholars should not present their conclusions in a simplified form, thus giving the media more food for spreading black and white information. As Professor Evans, one of the report's authors, sensibly says in her summary of the evidence written up for *The Ricardin Bulletin*: 'to conclude that he over-indulged and suffered from this diet is unfounded'.[7]

Science Tempered by History

PETER W. HAMMOND

The discovery of bones in the ruins of the Greyfriars Priory in Leicester, subsequently shown to be the bones of Richard III, has initiated several scientific studies. The most recent of these, made using multi isotope analysis gives evidence of where Richard grew up and where he lived and broadly corresponds to what we know from the historical record. Generally speaking the carbon 14 and nitrogen 15 isotope values obtained from his bones are similar to those from other fifteenth century skeletons of comparable social status, reflecting a diet rich in meat and fish. For these tests small samples from a femur and one of the ribs were used. The femur changes very slowly and shows the lifestyle of the previous ten to fifteen years of life. The nitrogen and carbon isotope values in both the femur and ribs will show similar values if the

[5] Society of Antiquaries of London on-line newsletter, *Salon*, no. 326, pp. 22-24.

[6] *The Coronation of Richard III. The Extant* Documents, ed. A.F. Sutton and P. W. Hammond, Gloucester 1983, p. 288.

[7] *The Ricardian Bulletin*, pp. 51-52, esp. 52; she also says: 'Did the oxygen isotope results mean that this was not Richard?'

person did not move to another part of the country or change their diet. The rib which remodels itself more quickly will show a different isotope value to the femur if the person changes either diet or the place where they lived in the last two years or so of their life. Richard's rib does in fact show a higher value of the nitrogen isotope than that in the femur. The rib also shows a higher value for an oxygen isotope than expected. Both of these increases could show that Richard changed the area where he lived or that he changed his diet. We know that he spent a large part of his two year reign living in the south east so the authors of this paper interpret the difference as being caused by a change of diet after he became king.

It seems very unlikely that Richard's diet did change significantly. The authors make much of a suggestion that Richard would have experienced a considerable change in diet when he became king, citing his coronation banquet as the start of a period of being given elaborate banquets as he progressed around the country. There is no doubt that he would have been given elaborate meals as he travelled, what is in considerable doubt is whether Richard can reasonably be thought to have eaten and drunk more than he had done before he became king. Since he had been the brother of the king and his virtual viceroy in the north it seems very unlikely that what he ate and drank would have changed in a major way after he became king. The amount of food served in the coronation banquet can hardly be taken as evidence of later consumption. The authors do admit that such increases in nitrogen isotope value may not be due, or entirely due, to a change in diet, and since it appears that Richard's diet is unlikely to have changed to a very large extent, perhaps another explanation for the increased carbon and nitrogen isotope values should be sought.

The other major conclusion that this paper draws is from the fact that the rib bone showed a significant increase in the oxygen isotope value. This is attributed to an increase in the amount of wine he drank. As with the amount of food Richard ate this is open to question. The reason for suggesting that Richard may have drunk more is because the oxygen isotope value of the femur representing the years before he became king shows as expected a value typical of eastern England groundwater values. The oxygen comes mainly from water in the diet and the high value recorded from the rib would, if we did not know this was Richard, lead us to believe that this individual had moved to a high rainfall area, for example the west coast, in the last few years of his life. Since we know that Richard did not do this the article looks for other reasons for the increase in the oxygen isotope value. The authors' conclusion is that wine has a large water content derived from the area where the grape was grown therefore the oxygen increase might have been the result of drinking more wine. They calculate that the increase in oxygen content in Richard's rib could be accounted for by deriving twenty-six percent of his bone oxygen from wine and the rest from local water. How this figure converts to the amount of wine drunk is not explained. The problem with the calculation is that the formula the authors use to convert the phosphate in the bone (the oxygen is part of the

phosphate) to drinking water values is (they admit) subject to considerable uncertainty as is the rate at which the rib bone changes over time. They admit that these uncertainties result in a very crude approximation in the increase in the amount of wine drunk. We know that all nobles at the top of the social scale drank quite a lot of alcohol and beer. For example the earl of Northumberland in 1512 received a gallon of beer and a quart of wine as part of his daily livery.[8] Assuming that he did not drink any more of either wine or beer and did not drink a significant amount of water then fully twenty percent of his daily liquid intake was wine. This was not unusual for a nobleman of his status. In the face of this and of the doubt in the scientific results there seems no need to suppose that Richard drank a great deal more wine at the end of his life than he had done before he became king.

[8] Thomas Percy, *The Earl of Northumberland's Household Book*, London 1905, p. 96.