with a tremendous bibliography, and will be the starting point for future research. Most importantly, this chapter ends with a question mark over the standard dating of the main phase of Cosa's port and fishery development, suggesting it should be dated to after *c.*75 B.C., which would then impact upon the so-called destruction.

Other essays might not be expected in a volume on Cosa: a comparison of Hestia and Vesta (H. F. North); an Etruscan relief from Chiusi, in the American Academy collection, with banquet, funeral, and warrior-dance scene, a close match with another base in the DAI collection (L. Bonfante); an account of the Roman plaster in the American Academy collection (A. Laidlaw, with fine illustrations); and an account of the city planning of Alexandria (B. R. Brown). The volume is well produced, but inevitably suffers in comparison with E. Fentress (ed.), *Romanization and the City: Creation, Transformations, and Failures* (*JRA* Suppl. 38, Portsmouth, 2000), which not only reflects more deeply and sceptically on the roots of the modern picture of Cosa, but also contextualizes the artificiality of Cosa, and its economic success, within the wider Roman world.

University of St Andrews CHRISTOPHER SMITH

MEDICINE IN ROMAN AUSTRIA

R. BREITWIESER: *Medizin im römischen Österreich.* (Linzer archäologische Forschungen 26.) Pp. 177, 23 pls. Linz, 1998. Paper. ISBN: 3-85484-425-5.

The focus of B.'s monograph is 'Austria Romana', the territory corresponding to present-day Austria under Roman occupation (given the distribution of finds, practically exclusively the province of Noricum), but it also contains a brief overview of pre-Roman material. On the basis of palaeopathological material from sites in Austria, the average age, state of health, and mortality rates of the Bronze Age population and the Celts are discussed in some brief introductory chapters. In the Celtic period, it is in particular the presence of evidence for trepanation that is of interest, especially the only two skulls trepanned with the use of a drill to have been found in the Celtic world (Guntramsdorf and Katzelsdorf). For these, B. conjectures the possibility of 'technology transfer' connected with the Celtic invasion of Greece around 279 B.C. The find, near Munich, of a warrior's tomb containing surgical instruments may suggest that some Celtic doctors combined the two functions in the way of the doctors mentioned in the *Iliad*, but the absence of indigenous written sources makes it impossible to venture more than hypotheses.

The first, and longest, of the three central sections of the book deals with medical practice in Roman Austria: after brief outlines of the development of medicine in Rome and of medical services in the Roman army, the first topic to be discussed is that of military doctors in the area. The territory of what is now Austria was occupied under Tiberius and Drusus in 15 B.C., but trade connections between Rome and the kingdom of Noricum existed before that time, a particularly important article being *ferrum Noricum* (which Galen mentions as the best steel for scalpel blades). Apart from an inscription concerning a veterinary surgeon, only one piece of epigraphical evidence clearly relating to the army medical services has been found in Austria: the

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fragment of an altar from the legionary camp of Carnuntum (near Vienna) mentions *capsarii*, that is, medical orderlies.

B. explains the development and typical architecture of Roman army hospitals as an introduction to his discussion of the *valetudinaria* of Carnuntum (the legionary camp as well as the auxiliary fort), Vindobona (Vienna), and Lauriacum (Enns). Here, and elsewhere, B. is justly critical of the circumstances surrounding many excavations (not only in Austria), namely the short deadlines and resulting haste, leading to valuable information being irretrievably lost.

There is evidence also for civilian Roman doctors (mainly of Greek descent) practising in Austria, although it is not clear whether they were army doctors taking on private practice in their spare time, doctors who had completed their term of service with the army, or doctors who had settled in Noricum independently of the army. There are several finds containing what appear to be medical instruments, but as usual, the distinction between these and implements for other purposes is often problematic.

Another section examines the various healing deities and their sanctuaries. Along with the obvious choice, Asclepius, the most popular of these deities were Apollo Grannus and Sirona. The latter two were originally Celtic divinities assimilated into Roman belief, whose cult was always related to medicinal springs. This was often the case with local deities as well, especially nymphs such as the ones invoked in a votive inscription found at the spa of Aquae (Baden near Vienna).

The theme of the third of the main sections, focusing mainly on the palaeopathological investigation of cremations and burials, is disease and injury. These, B. points out, are also important sources for our knowledge of chronological sequences, the history of settlements, demography, and the reconstruction of social structure, and even for speculations about the religion of particular populations and their beliefs in an afterlife. A considerable amount of research of this kind has been done on prehistorical finds, but the application of these methods to material from Roman provinces is still very recent. B. discusses various individual necropoles—ranging from the first to the fifth centuries—excavated in Austria, with regards to the diseases and injuries of those buried there. A fact that surfaces repeatedly (from pre- to post-Roman times) is the presence of individuals who clearly had been disabled, but had nevertheless survived to average age or more, suggesting a social structure that made their survival possible.

Two epigraphical testimonies—of A.D. 182 and 184 respectively—appear to confirm the presence of the 'Antonine Plague' in Noricum. The latter, the largest Roman inscription found in Austria to date, records a service of mourning held for the death of five followers of Mithras from an epidemic (the first epigraphic use of *mortalitas* in that sense). B. suggests that perhaps the area from where the 'plague' originated was not Asia Minor but China, as it startled shortly after the return of a Roman delegation sent there.

The book concludes with a discussion of the transition between antiquity and the Middle Ages (including the miracles of Saint Severinus and the early *hospitia*), a bibliography, and twenty-three plates. This is the first monograph on the topic of medicine in *Austria Romana* in general rather than reports on individual archaeological sites, and for that reason alone should be of great interest to medical historians as well as archaeologists—not to speak of the wealth of information about fascinating material that had hitherto hardly been treated at all.

Department of History and Philosophy of Sciences, Cambridge C. F. SALAZAR

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