12. Hillforts and *oppida*: some thoughts on fortified settlements in southern Germany

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Abstract

Bronze and Iron Age hillforts of various kinds have long been a focus of settlement archaeology in Germany. These often-impressive sites on prominent hills have attracted the attention of archaeologists since at least the 19th century. As a result, knowledge about Iron Age settlements is dominated by the information derived from excavations (very often restricted to the fortifications) of hillforts and *oppida*. Nevertheless most of these sites are still not fully understood as they are not uniform in their appearance, development or their decline. Environmental factors and regional cultural differences demonstrate that sites from different regions with different chronologies cannot be lumped together simply because they belong to the large and diverse category of hillforts. But even within a single group, such as the *Fürstensitze* (princely seats), regional and cultural differences make it impossible to find a single model to account for these prestigious sites – each site has its own history and meaning, embedded within the social and cultural history of its era.

Although their fortification systems have long been interpreted as defensive structures, walls and ditches might also have meaning as symbols of power, or could have functioned as social or ritual borders. Their construction may have been a collaborative social project. Although hillforts and *oppida* have been investigated for over 150 years in southern Germany, it is clear that intensive further research work is needed.

Keywords: hillforts; *oppida*; princely seats; urbanisation; settlement archaeology; southern Germany

Introduction

Hillforts are amongst the most visible types of archaeological sites of the Iron Age and hence have been the focus of archaeological research in Germany since at least the 19th century. As a by-product of the very different landscapes present in northern and southern Germany hillforts are mainly known from the more undulating areas south of the Mittelgebirge in the southern half of the country. Hillfort sites of the Bronze and especially the Iron Ages have a long tradition of archaeological investigation; numerous sites have been at least partly excavated and various site types have been distinguished. This paper gives a broad overview of different hillfort types in southern Germany with a specific focus on the so-called princely seats (*Fürstensitze*) of the early Iron Age (late Hallstatt and early La Tène periods) and the *oppida* of the late Iron Age (late La Tène period). As these archaeological phenomena are rather diverse even within Germany and as the number of hillforts, *oppida* and the like is rather high, especially in southern Germany, this paper will only highlight some specific examples to show the variability of these sites. Particular emphasis is directed to the early Celtic *Fürstensitz* of Glauberg in Hesse and the discussion of the meaning and development of this specific kind of hillfort, which has been intensively investigated in a large scale research programme, funded by the German Research Foundation from 2004 to 2010.

A consideration of urbanisation – mainly connected initially with the late Celtic *oppida* (described as the 'first towns in Europe') – has been extended in recent years to describe the development of the importance of the early Iron Age *Fürstensitze*; this paper also discusses whether or not this approach is a useful model that can be applied to settlements like the Heuneburg and similar sites. Knowledge of Iron Age settlements in southern Germany is mainly based on a number of rather large fortified, and hence very visible sites. Unenclosed sites have only rarely been excavated during large-scale research projects: for the late Iron Age, the settlement of Berching-Pollanten in Bavaria is an exception which provided important insights into this kind of settlement and the material culture they contain (e.g. Schäfer 2010). Contrastingly hillforts, princely seats and *oppida* have attracted substantial interest and thus been the subject of a number of longer and very intensive investigations. As a result, our overall knowledge of the different types of settlement is rather uneven.

This paper focuses on examples of enclosed sites from Bavaria, Baden-Württemberg and Hesse where most of the fortified settlements of this period are situated; a significant number of other important sites are of course also found in Rhineland-Palatinate (e.g. Heidenmauer near Bad Dürkheim; Donnersberg; Altburg near Bundenbach), Thuringia (e.g. Steinsburg), North Rhine-Westphalia (e.g. Grotenburg, Wittekindsburg), Lower Saxony (e.g. Schnippenburg), Saarland (e.g. Hunnenring near Otzenhausen), and indeed in other regions (Figure 12.1). A broader overview (not one solely restricted to hillforts) is possible for some regions by making use of data collections and publication series published by several federal states (e.g. *Atlas archäologischer*
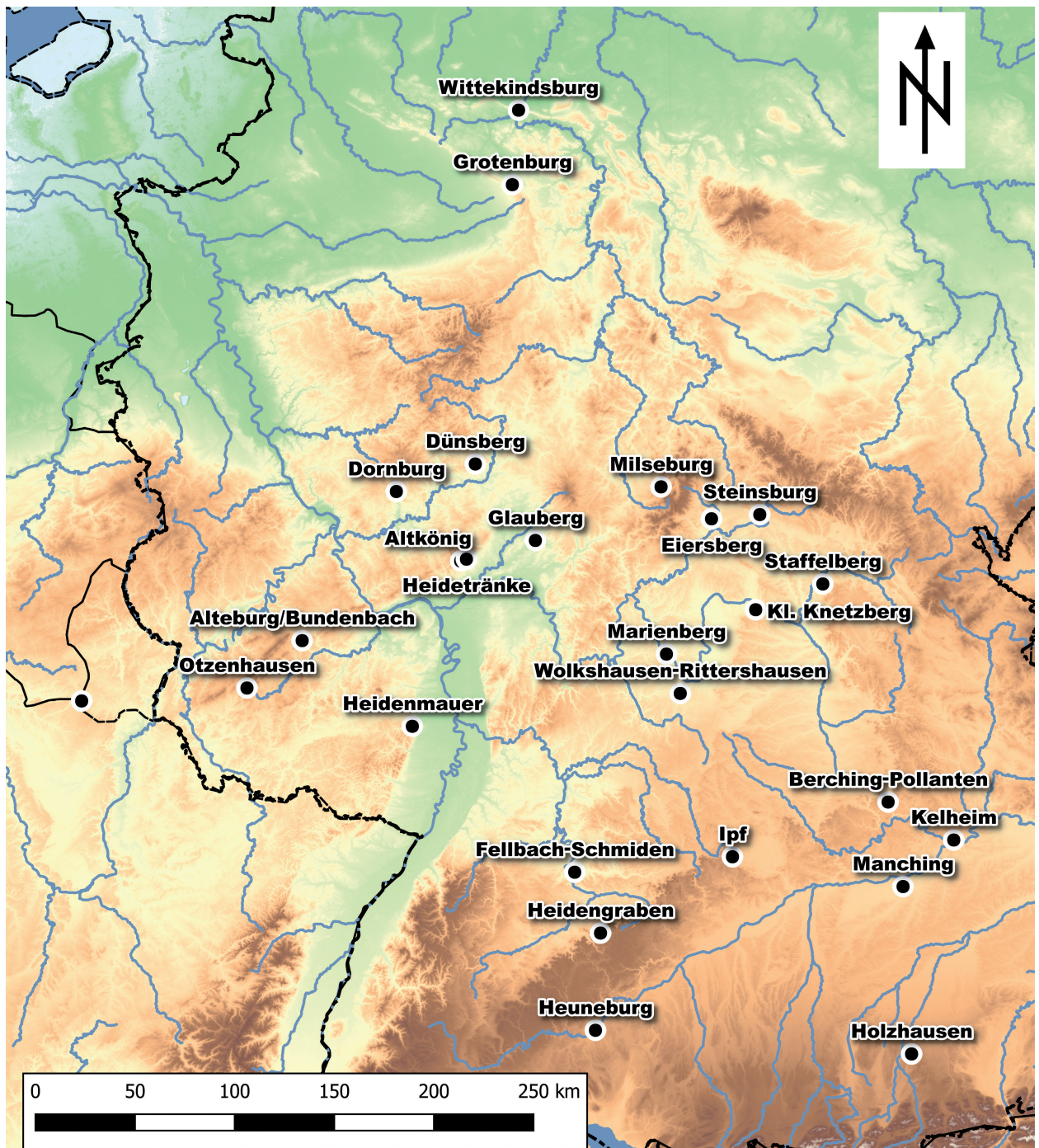
Figure 12.1 Sites and places mentioned in the text
(graphic: A. G. Posluschny; SRTM; USGS-authored or reproduced data and information are in the public domain).

Geländedenkmäler in Baden-Württemberg; *Vor- und Frühgeschichtliche Befestigungen (Baden-Württemberg)*; *Materialhefte zur Bayerischen Vorgeschichte* (especially *Series B: Inventare der Geländedenkmäler*); *Archäologische Denkmäler in Hessen*; *Frühe Burgen in Westfalen*). Unfortunately these works are in some cases now out of date, and updated volumes have been published only in a few states in recent years.

The legal background

To understand the situation of archaeological research and heritage management in Germany it is important to take a closer look at the political and legal background. When the Federal Republic of Germany was established in 1949, the Allies decided to group together various regions based on their perceived 'cultural similarities', thus creating a series of federal states which developed different state laws concerning all aspects of culture

Figure 12.2 Map of the Federal States of Germany superimposed on a Digital Terrain Model (graphic: A. G. Posluschny; SRTM; USGS-authored or reproduced data and information are in the public domain).

and education (Figure 12.2). Archaeology and cultural heritage in general are the responsibility of each federal state. All federal states have their own heritage protection legislation, heritage status, databases and heritage agencies (North Rhine-Westphalia even has three: one for its northern part [Westphalia], one for its southern part [Rhineland] and one for the city of Cologne [within which the environs of the famous Cologne cathedral are under the responsibility of the Archdiocese of Cologne]). As there is no federal law superior to the state laws and regulations, there are rather different policy protection strategies and research agendas being pursued in the different states. Intensive, broader-scale collaboration in terms of joint research work is often restricted to universities, museums and research institutes while a number of state heritage organisations cannot carry out major archaeological research programmes, mainly due to

financial restrictions. Their focus is on documenting and protecting sites, with a strong emphasis on land-use planning, applications for construction permits and rescue excavations. After the fall of the Iron Curtain, the states in the eastern parts of Germany, the former German Democratic Republic, (Mecklenburg-West Pomerania, Brandenburg, Saxony-Anhalt, Thuringia and Saxony) were reunified with their western neighbours. The five new federal states inherited the system of cultural hegemony documented above.

As a result of the devolution of responsibility to state level there is no common database holding information on all sites for the whole of Germany – which has of course an important impact on the research and understanding of Iron Age hillforts. A number of attempts have been made to at least enable the exchange of digital site data in a common and widely accepted format (Göldner *et al.* 2013[1]), but with different data retrieval strategies, using different thesauri and ontologies it has so far not proved easy to obtain a quick, easy overview of all the hillfort sites in the country as a whole.

Cultural and natural diversity

Germany is both naturally and culturally a diverse country with differing landscapes, traditions and customs. Ever since the Palaeolithic period, there is evidence for different archaeological cultures (and chronological developments) to the north and south of the Mittelgebirge, a mountainous area that stretches more or less east to west across the centre of the country (Figure 12.2). In the later Iron Age, the southern area is considered to have been inhabited by Celtic tribes (leaving aside here the details of the definition of this very heterogeneous term 'Celtic'; cf. Collis 2003; Farley and Hunter 2015) until the Roman occupation while the northern sector displays a material culture that in many cases better matches the finds of what is later understood as 'Germanic' culture. The Mittelgebirge itself has always been a transitional zone, combining cultural aspects of both the northern and southern cultural packages. The hilly terrain of this region, as well as parts of southern Germany, have supported the construction and use of hillforts since Neolithic times, witnessing a significant increase of such sites in the Bronze Age.

Iron Age hillforts are concentrated in the central and the southern areas of Germany, within which they display different regional densities and different chronologies and characteristics. Traditionally, there has been a strong focus on hillfort research in states such as Hesse,

Bavaria, Baden-Württemberg and Thuringia, very often underpinned by the individual interests of key personnel responsible for archaeological research there. This has led to some unevenness in our knowledge, with a small number of extensively examined sites compared to the larger bulk of sites, which have attracted considerably less attention; state-wide systematic surveys with underpinning research have only been undertaken to a limited degree in Bavaria and Baden-Württemberg. Our main knowledge about Iron Age hillforts is thus more or less based on a small number of sites – which may or may not be representative of the range of settlement structures within their region and beyond.

Fortifications of the early Iron Age – *Herrenhöfe, Fürstensitze* and regular hillforts

At the beginning of the early Iron Age (Hallstatt C period; for a chronological overview see Table 12.1) hillforts attributed to the late Bronze Age Urnfield Culture seem mostly to have been abandoned. In parts of Bavaria and eastern Baden-Württemberg (Nördlinger Ries) smaller enclosed settlements that do not occur on hilltops, plateaux or in promontory situations are found in large numbers. Rectangular in plan, they have been fortified with (sometimes multiple) ditches, in some instances accompanied by palisades running parallel to them. These so-called *Herrenhöfe* (Herr meaning master or lord in German; the term *Herrenhof*, plural *Herrenhöfe*, is used here as a technical term only) are distinctive rectangular ditched enclosures of the Hallstatt Iron Age which seem only rarely to have continued in use into the beginning of the early La Tène period (cf. Berg-Hobohm 2003; Schier 1998). A distributional overlap between settlements of the *Fürstensitz* and *Herrenhof* types (Figure 12.3) can meantime only be observed

Years BC	Periods		Culture
80 – 25/15	Lt D	D2	Late Latène
150 – 80		D1	
200 – 150	Lt C	C2	Middle Latène
275 – 200		C1	
325 – 275	Lt B	B2	Early Latène
375 – 325		B1	
475 – 375	Lt A		
525 – 475	Ha D	D3	Late Hallstatt
550 – 525		D2	
650 – 550		D1	
800 – 650	Ha C		Early Hallstatt

Table 12.1. The chronological scheme for the Iron Age in southern Germany. The grey background indicates the area of the appearance of the *Fürstensitze* (based on Rieckhoff and Biel 2001:21). The early La Tène period is referred to here as early Iron Age since the *Fürstensitz* phenomenon occurs both in the late Hallstatt and early La Tène periods. All dates BC are approximations.

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[1] a short English-language introduction is available at http://www.landesarchaeologen.de/fileadmin/Dokumente/Dokumente_Kommissionen/Dokumente_Archaeologie-Informationssysteme/Dokumente_AIS_ADeX/ADeX-Poster_en.pdf (accessed September 2018)
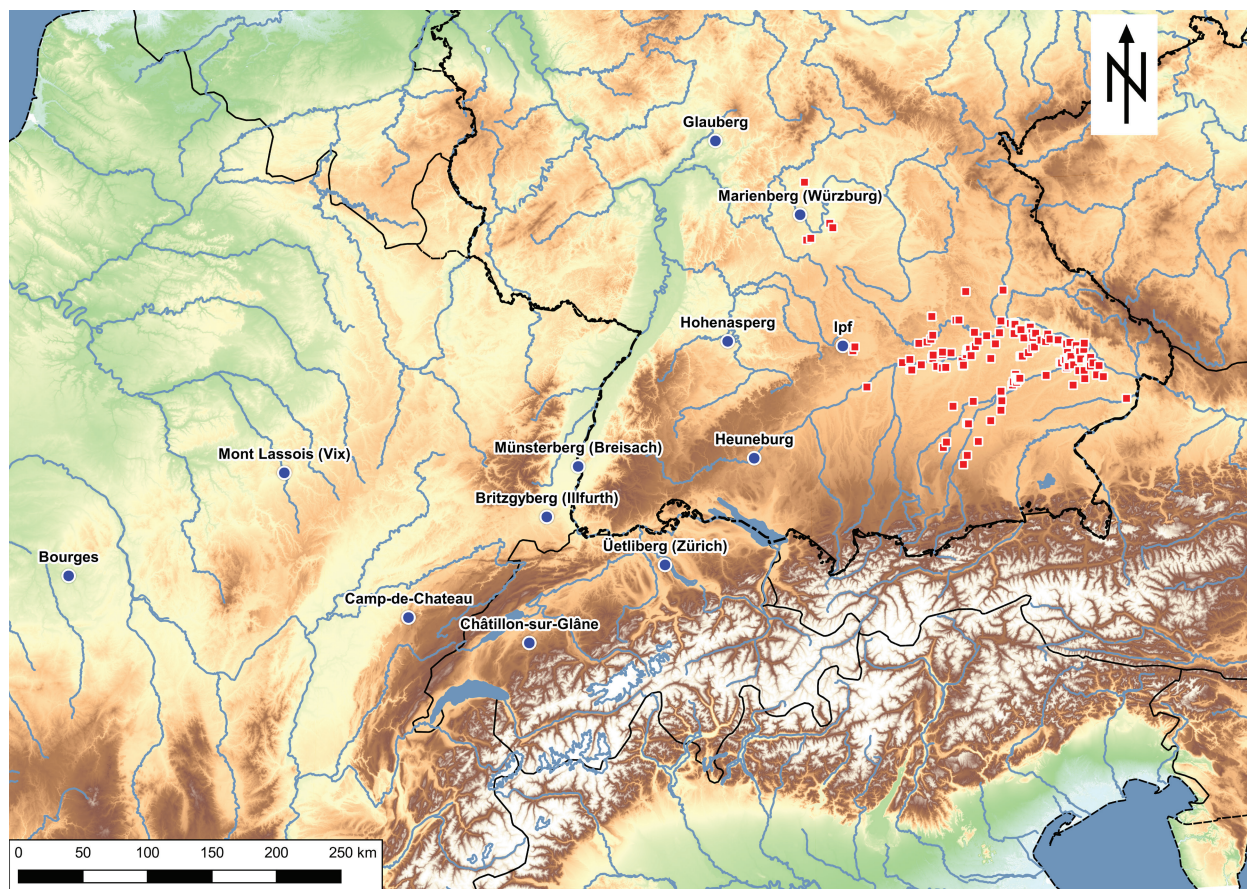
Figure 12.3 The distribution of early Iron Age *Fürstensitze* (blue dots) and sites of *Herrenhof* type (red squares) (graphic: A. G. Posluschny; SRTM; USGS-authored or reproduced data and information are in the public domain).

in Lower Franconia (e.g. the Marienberg *Fürstensitz* and a number of *Herrenhöfe* such as Wolkshausen-Rittershausen) and in the Nördlinger Ries area of eastern Baden-Württemberg (e.g. the Ipf *Fürstensitz* and a few *Herrenhöfe* such as the sites of Bugfeld and of Zaunäcker set directly on the middle slopes of the Ipf).

Wolkshausen-Rittershausen

Wolkshausen-Rittershausen is an excellent example of this specific type of fortified settlement, and merits being mentioned here although it is not classed as a hillfort (Posluschny 2002: 36–41, plates 1–7, 20C–56). The site is positioned on a flat spur 6.5 km south of the river Main and 21 km south of the Marienberg *Fürstensitz* which is located within the city of Würzburg. Excavations carried out from 1983 to 1985 revealed the remains of a settlement of approximately 1 ha, surrounded by a 3.50 m wide ditch (Figure 12.4). A palisade defined an area of 55 m by 53 m in the centre of the settlement. The finds recovered date to a very early phase within the Hallstatt period (Ha C1 – Ha D1), and still showed traits characteristic of the preceding late Bronze Age Urnfield Culture (Posluschny 2002: 40).

The fortified area of this site makes it one of the largest of the early Iron Age *Herrenhof* series, but it remains unclear whether the area around the fortification was also used for settlement. Nevertheless the quality of the pottery recovered here matches that found at a number of other types of fortified and unfortified sites in Bavaria. The normal range of finds and features seems to be typical for most of the *Herrenhöfe* so far examined, apart from a very small number of extraordinary sites like the two examples on the outskirts of the Ipf *Fürstensitz*, where excavations have revealed a large number of very rich finds, more particularly including pottery from the Mediterranean world (Böhr 2014; Maggetti 2014). At least one of the two ditched enclosures examined here – that at Bugfeld – seems to have had a ritual or religious meaning (Posluschny 2017: 21–22; Krause 2014b: 34–37).

The initial archaeological interpretation of the *Herrenhof* type of site saw these settlements as a specific, regional (mainly Bavarian) variant on the rich hillforts identified further west. They were envisaged as having a social status comparable to that of the *Fürstensitze*, but manifested on a more local or regional level. The moderate quality and quantity of the finds from most *Herrenhöfe*, in conjunction with their smaller size and
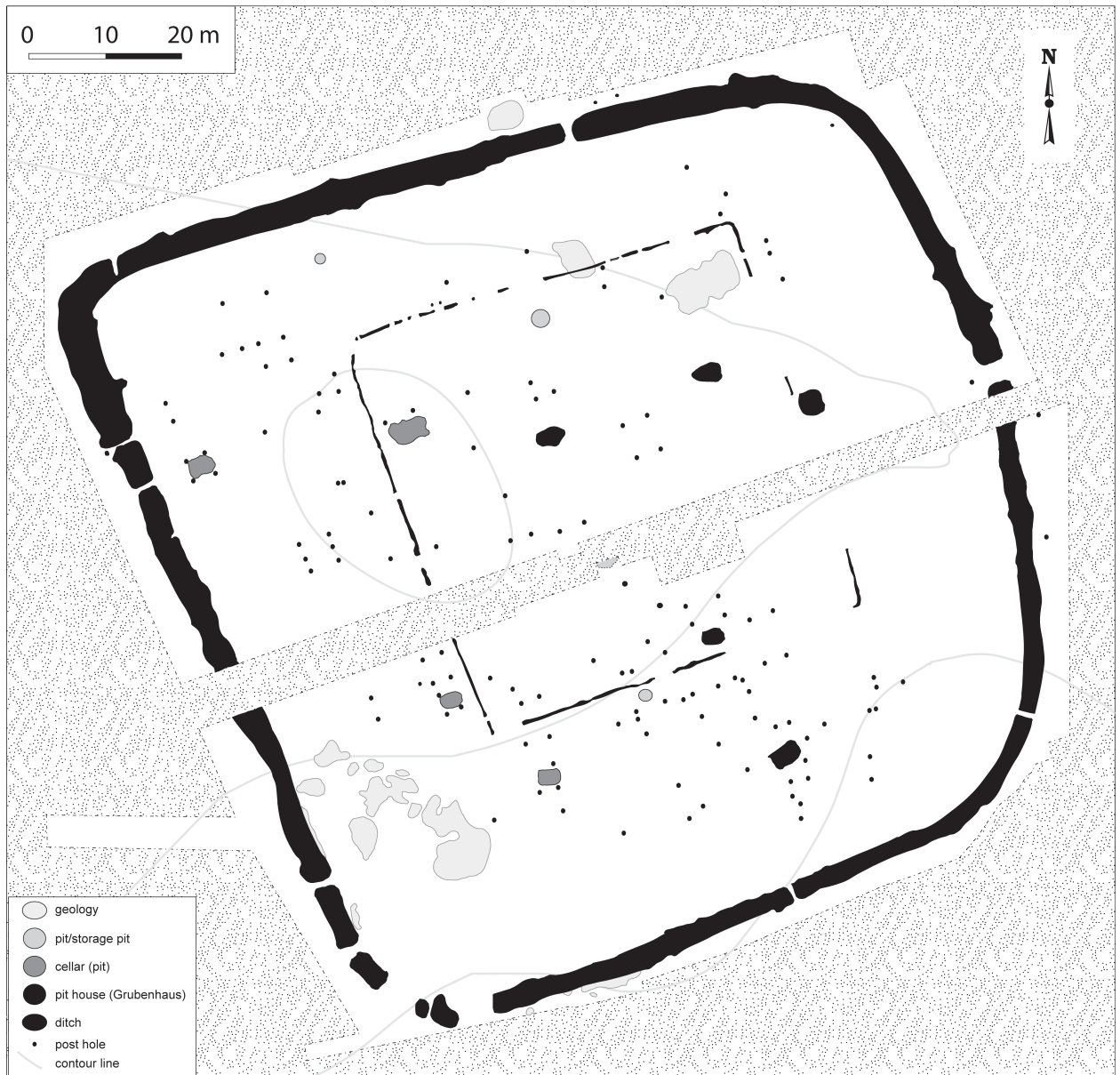
Figure 12.4 Plan of the early Hallstatt *Herrenhof* site at Wolkshausen-Rittershausen
(graphic: A. G. Posluschny).

the significantly smaller effort that was needed to build their fortifications, make it more likely that these settlements should not be directly compared with the *Fürstensitze*; and that their fortification was designed more as an attempt to demarcate and highlight their boundaries visually than actually to serve defensively. Furthermore, there is an absence of extremely rich burials in their surroundings, again forming a marked contrast with the distribution of graves in Baden-Württemberg, Hesse, Switzerland and eastern France. The question why fortifications of this series did not extend further west amongst the settlements of the Hallstatt province still remains unsolved.

Hillforts of the early Iron Age

Most hillforts in southern Germany however were mainly in use at the beginning of the late Hallstatt phase (Hallstatt D) and it is during this period that a very few of these sites developed into the more significant and generally larger *Fürstensitze*. Some such sites, like the Eiersberg in northern Bavaria (Gerlach 1995), were placed in rather remote situations such that its wealth was highly dependent on the surrounding landscape and the options it offered. While much of the evidence from the Eiersberg shares characteristics that are known from most contemporary hillfort sites in southern Germany (e.g. in terms of finds, and the layout of the fortification and the settlement) it is
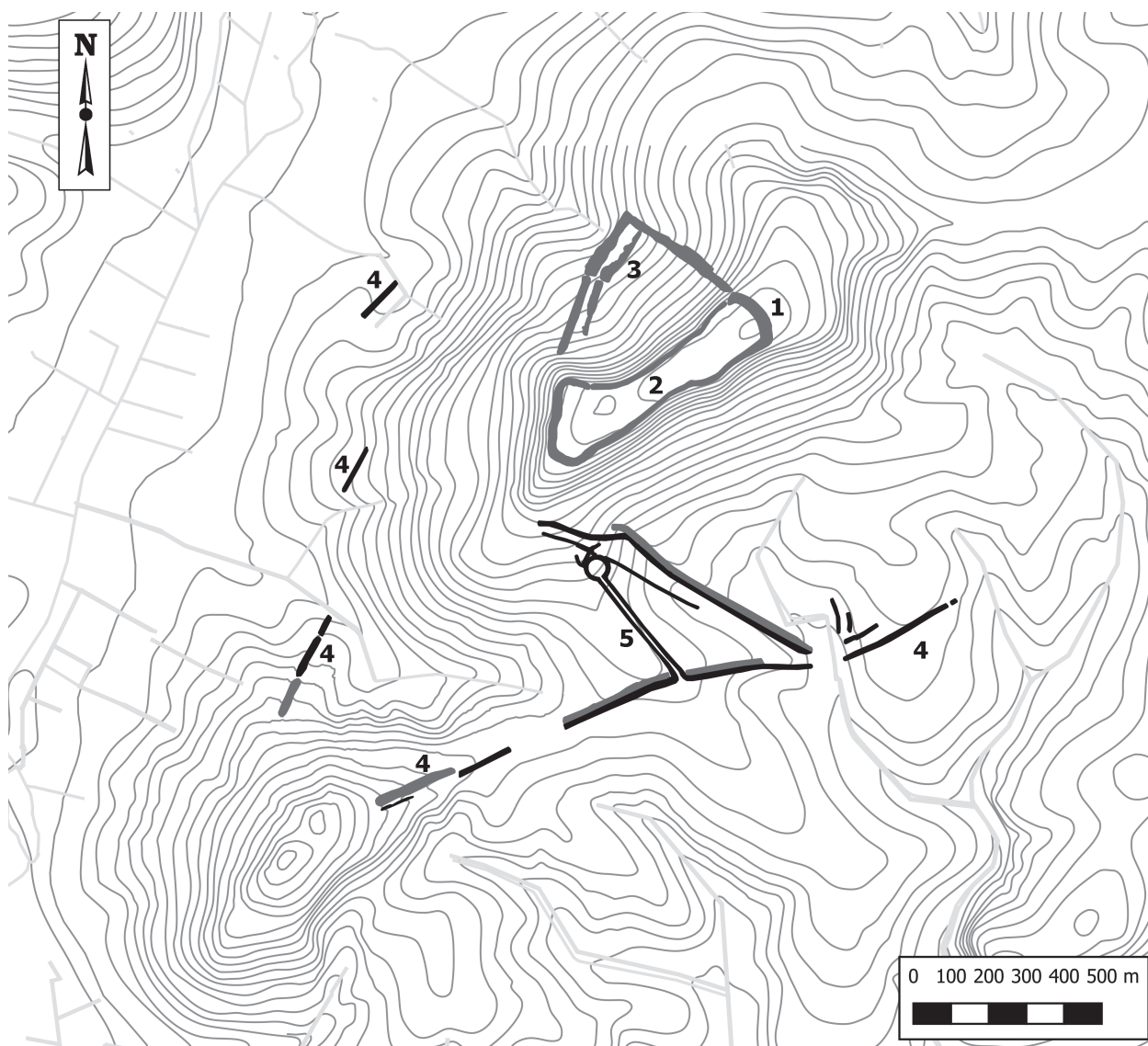
Figure 12.5 Plan of the fortification system surrounding the Glauberg. 1. Urnfield Culture promontory wall, reused in later phases. 2. Early Iron Age (late Hallstatt and early La Tène) wall surrounding the plateau, also reused in later phases. 3. Annexe wall incorporating a potential reservoir for water. 4. Large early Iron Age (early La Tène) ditch-and-rampart system, partially surrounding the Glauberg hill. 5. The 'processional avenue'
(graphic: A. G. Posluschny; isolines courtesy of V. Grünwald, Mainz University).

noteworthy that the excavated animal bones include an exceptionally high proportion of game (Wachter and Kerth 1993). This might be interpreted as a very specific regional aspect of the settlement: the surrounding landscape was agriculturally less than ideal, such that crop farming and cattle breeding were possibly not sufficiently productive to provide enough food for the inhabitants so that their diet had to be supplemented by a higher proportion of game than was usual in other settlements (both fortified and unfortified) of this period.

The supply of food and the provision of water have of course played a major role in the nature of hillforts, and not only during the early Iron Age. Sources of water were not always available on hilltops and

plateaux, where such sites are positioned. It seems that substantial effort was expended to secure the availability of water, especially from the early La Tène period (Hansen and Pare 2008: 73–80). According to Hansen and Pare (2016: 121) a number of hillforts were enhanced during the early La Tène period by the addition of walled annexes. These include the Glauberg in Hesse (Figure 12.5.3; see also Posluschny in press), the Altkönig, Dornburg and Ipf in Baden-Württemberg, the Staffelberg and the Kleine Knetzberg in Bavaria and the Steinsburg in Thuringia. Other fortifications which were constructed at the transition from the early to the middle La Tène periods (LT B2/C1) seem to have been built from the outset to include a walled annexe incorporating a spring. Discussion continues as to whether the expansion of the fortified area of

these sites by the addition of an annexe that included a source of water during the early La Tène period (or at its end) intimates troubled times, during which larger groups of people (and possibly their cattle) had to be protected. It is however important to note that in many cases the annexes substantially increase the overall size of the hillfort. For example, in the case of the Glauberg the fortified summit plateau covers 8 ha (Figure 12.5.2), while the annexe to its north adds another 12 ha (Figure 12.5.3). The relationship, in terms of cause and effect, between the enlargement of these forts to hold a larger population and the inclusion of a water supply, is unclear.

The dating evidence for many hillforts attributed to the early Iron Age is still rather vague, often being restricted to a few artefact finds which do not necessarily date either the fortification or specific internal features. Moreover, in the case of sites which have been the subject of slightly fuller examination, neither the finds nor the excavated features suggest that these sites were either assaulted or besieged. It may be suggested that their fortifications had less to do with hostilities than with the wish or even the need to mark the settlement limits in a prestigious way, with the aim of impressing people from their own and from neighbouring groups.

Late Hallstatt and early La Tène *Fürstensitze*

An exceptional and controversial phenomenon of the early Iron Age is the emergence of the *Fürstensitze* (*Fürst* is the German word for prince; the term *Fürstensitz*, plural *Fürstensitze*, is used here as a technical term only). These are a specific kind of hillfort which Wolfgang Kimmig described in 1969 as places of outstanding significance with evidence for a hierarchical social organisation (Kimmig 1969). Kimmig defined four main criteria which were necessary for any site to qualify as a *Fürstensitz*: the fortified settlement should be set on a prominent hill; finds of imported goods from the Mediterranean (e.g. Greek tableware and transport amphorae) should be known (representing the wide-ranging political connections of the ruling class); the settlement should be associated with rich graves in its surroundings; and it should be divided into an 'acropolis' and a '*suburbium*'.

Kimmig understood these sites (Figure 12.3) to have acted as the seats of a reigning aristocracy, comparable in many ways to a medieval nobility of dynastic princes. Without a deeper understanding of the social structures of early Iron Age societies in the Late Hallstatt period (c. 600-480 BC) Kimmig's model – especially the dynastic aspect of his interpretation – provoked discussion for many years (Eggert 1989; Veit 2000; Eggert 2006; Schier 2010). Multiple interpretations of the *Fürstensitz* type of settlement have been proposed: as princely residences, seats of the nobility, central places, proto-urban centres,

early towns, or key locations for (long-distance) trade and these are still rather debatable or contentious in many cases – as they are strongly dependant on the definition of terms for a range of site categories which are not sufficiently distinctive.

In order to enhance understanding of the meaning and development of the *Fürstensitze*, the German Research Foundation (DFG) funded a large scale research programme (SPP1171; 2004—2010), which aimed to investigate the *Fürstensitze* and specifically their meaning, status, development and decline (Krausse and Beilharz 2010; Posluschny 2010; Posluschny 2012). Various projects were included under the umbrella of SPP1171: the excavation of sites and their surroundings was carried out, landscapes were analysed, and environmental research including archaeo-botanical and archaeo-zoological work was taken forward (Krausse and Beilharz 2010). Most research was directed at well-known sites like Glauberg (e.g. Baitinger and Pinsker 2002; Baitinger 2010; Hansen and Pare 2016), Heuneburg (e.g. Krausse *et al.* 2015), and Ipf (e.g. Krause 2014b), but other work dealt with regions which lack *Fürstensitze* but include hillforts of different types, such as Franconia (Schussmann 2012).

As a result of this six-year project it became clear that the homogenous picture that Kimmig had envisaged, based on the evidence available in his time, does not adequately capture the rather diverse situation that can be reconstructed from the evidence from southern Germany (and beyond) in the late Hallstatt and the early La Tène periods. The late Hallstatt *Fürstensitze* are mainly a phenomenon of Baden-Württemberg, Burgundy and parts of Switzerland, whereas comparable sites of the early La Tène period are less frequently encountered and their distributions seem to be predominantly to the north of the core area of the late Hallstatt period. Moreover, the sites themselves seem to be the culmination of local or regional processes, based on a shared social, economic and possibly religious macro-regional background; in each case, however, the development of the site follows its own dynamics and its wealth and importance can be seen to have been underpinned by a variety of factors which could be, amongst other things, economic, religious or political (Posluschny 2010; 2012; 2017).

The Heuneburg and the urbanisation of early Iron Age *Fürstensitze*

The Heuneburg on the Upper Danube is the classic model of a *Fürstensitz* with a fortification, clear evidence for contacts to the Mediterranean world, and rich burials in its vicinity. It possesses both an 'acropolis' and an extensive outer settlement (*suburbium*) – though the latter was discovered for the most part after Kimmig had already described his *Fürstensitz* model. The

archaeological evidence which underpinned Kimmig's model (1969) drew primarily on the evidence recovered during the earlier excavations at the Heuneburg and its comparators, and on information from a number of rich burials in Baden-Württemberg (Krausse *et al.* 2015). However, our understanding of the site (in its surrounding landscape) has been radically transformed by a large number of unexpected new finds at or around the site (e.g. the discovery of an enormous external settlement and discoveries made at the nearby promontory fort at Alte Burg; cf. Krausse *et al.* 2015). The site has been exceptionally well investigated, with long-term excavations of the hillfort itself until the 1980s resulting in a large series of publications. Further excavations have been carried out in the *suburbium* area outside the central hillfort on its plateau during the *Fürstensitze* project some years ago (2004–2010; see above). Currently the state heritage authorities for Baden-Württemberg are again at work on this site, while also carrying out excavations in its vicinity.

The latest interpretation of the Heuneburg as the 'first city north of the Alps' (Fernández-Götz and Krausse 2012) has renewed discussion of its status, especially as the deployment of terms such as 'city' or 'urban centre' is highly debatable in an early Iron Age context (e.g. Scharringhausen 2015; Jung 2017 on various methodological aspects of this interpretation). One of the main problems is the definition of the term 'city' – depending on how this is defined it may be considered rather easy to describe any large settlement with a number of central functions as a city. The approach used by Fernández-Götz and Krausse (2013; repeated by Krausse *et al.* 2015) is based on Smith's definition of urban settlements as "centres whose activities and institutions – whether economic, administrative, or religious – affect a larger hinterland" (2007: 4). Smith applied this concept only to "Mediterranean cities before the sixth century B.C. and cities in other parts of the world prior to European conquest and/or industrialization" (Smith 2007: 4). Thus the descriptor may not be applicable to the major settlements of the early Iron Age north of the Alps. However, the downplaying of the "dichotomy between planned and unplanned" (Smith 2007: 5) is a valuable approach, as the planned (or seemingly planned) layout of a settlement does not necessarily define it as a city nor does the lack of a planned layout determine that a settlement cannot be described as a city. Smith's approach, with its stress on the identification of the functions of sites, is not new; similar approaches have been taken at various other sites in order to define their specific status (e.g. Hänsel 1996; Kolb 2007). Smith (2007: 5) prefers this means of definition amongst other reasons because it allows "the classification of a wider range of non-western settlements as urban". It is highly debatable whether a classification should be preferable merely for its wider scope, but even more important criticism

seems to arise from Smith's lack of a clear definition as to what affecting "a larger hinterland" (2007: 4) means – and how this may be recognized in the archaeological record. Referring again to Fernández-Götz and Krausse (2013), who do not mention this aspect in their further interpretation and discussion, it seems important to understand why the potential scale of impact on the hinterland should only be apparent in the case of the Heuneburg and not for some, or certainly all, of the other *Fürstensitze* (Posluschny 2010 *passim*); it is also possible that other important early Iron Age hillforts clearly had an impact on their hinterlands without being considered as *Fürstensitze.*

In the final analysis, it can be concluded that the description of a settlement in specific terms such as city, urban centre, or proto-urban centre is only helpful where the definition of these terms is a widely-held one that is by-and-large shared by the research community – which is hardly the case for the term 'city'. However, the key questions related to the early Iron Age *Fürstensitze* are those dealing with the understanding of the increasing importance of some sites, starting at the end of the Hallstatt period. This increased importance can be noted for places like the Heuneburg, Ipf, Glauberg and others (including of course at a later date the late Iron Age *oppida*), but the reasons for this development (as well as for the later decline of these sites) still remain for the most part unclear. This is also true for many of the social, political, economic and environmental implications of the rise and fall of the *Fürstensitze* in their local, regional and inter-regional settings. Though the work of the DFG research programme SPP1171 has produced important new information and exciting interpretations, there is still much work to be done to fully understand the processes underlying the increasing complexity of certain settlements during the 6th and 5th centuries BC.

The Glauberg – why a fortification was not necessarily defensive

The Glauberg in Hesse, lying some 40 km north-east of Frankfurt am Main, is one of the hillforts of outstanding importance during the late Hallstatt and early La Tène periods (Posluschny 2017). It has been described as a *Fürstensitz*, although it does not fulfil Kimmig's definition as it lacks clear evidence for Mediterranean finds. However, the use of coral for a number of decorative elements on artefacts from the rich burials set below the fort (Fürst *et al.* 2015) and the use of kermes to dye some of the clothes in the same graves (Balzer *et al.* 2014) indicate trading contacts with the Mediterranean area. Moreover, the indications of wealth in the early La Tène burials discovered on the Glauberg's southern slopes clearly demonstrate that the place must have had some significance at least during this phase of its occupation.

The hillfort started with a late Bronze Age (Urnfield Culture) fortification that cut off the plateau across the gentler slopes on its north-east side (Figure 12.5.1). During the late Hallstatt period, the plateau was fortified with a surrounding wall that delimited the 8 ha of the summit entirely (Figure 12.5.2). Most likely at the end of this period this wall burned down in an enormous fire which destroyed the internal settlement as well as this enclosing wall, in large parts of which the constructional stones have been vitrified (Kresten 2010: 141–142; Wagner and Wagner 2010: 143–144). This wall was replaced by a similar construction shortly after its destruction, at some point over the transition from the late Hallstatt to the early La Tène period. An annexe wall running across the slope to the north of the plateau fortified a further 12 ha, incorporating an area that most likely was used as an enormous reservoir for water (Figure 12.5.3). During La Tène A the three famous rich burials known from the site were interred in two mounds directly on the southern slopes of the Glauberg hill. The ditch, dug to surround the larger of the two mounds was extended towards the south-east, edging an avenue oriented towards the Major Southern Lunar Standstill, thereby creating a landscape calendar (Deiss 2008; Posluschny 2017: 20–21). This so-called 'processional avenue' (Figure 12.5.5) turns to the west and east respectively at its southern end, thus forming the starting points for a massive ditch system, Figure 12.5.4 (Posluschny 2018; 2019; Posluschny and Röder 2018), that was apparently never completed but which runs across the landscape to the south of the Glauberg itself. This ditch (Figure 12.5.4, black) was in some areas accompanied by a rampart (Figure 12.5.4, grey).

At least one gap in this linear system (Figure 12.6.5) has until recently been suggested as having intentionally been left open to respect older, Hallstatt period, burials in that area. The identification of a small burial mound at the end of a rampart, built parallel to the ditch and using the upcast from it, Figure 12.6.3, (Hansen and Pare 2016: 30) sheds some doubt on this hypothesis although it was the discovery of a female skeleton buried directly
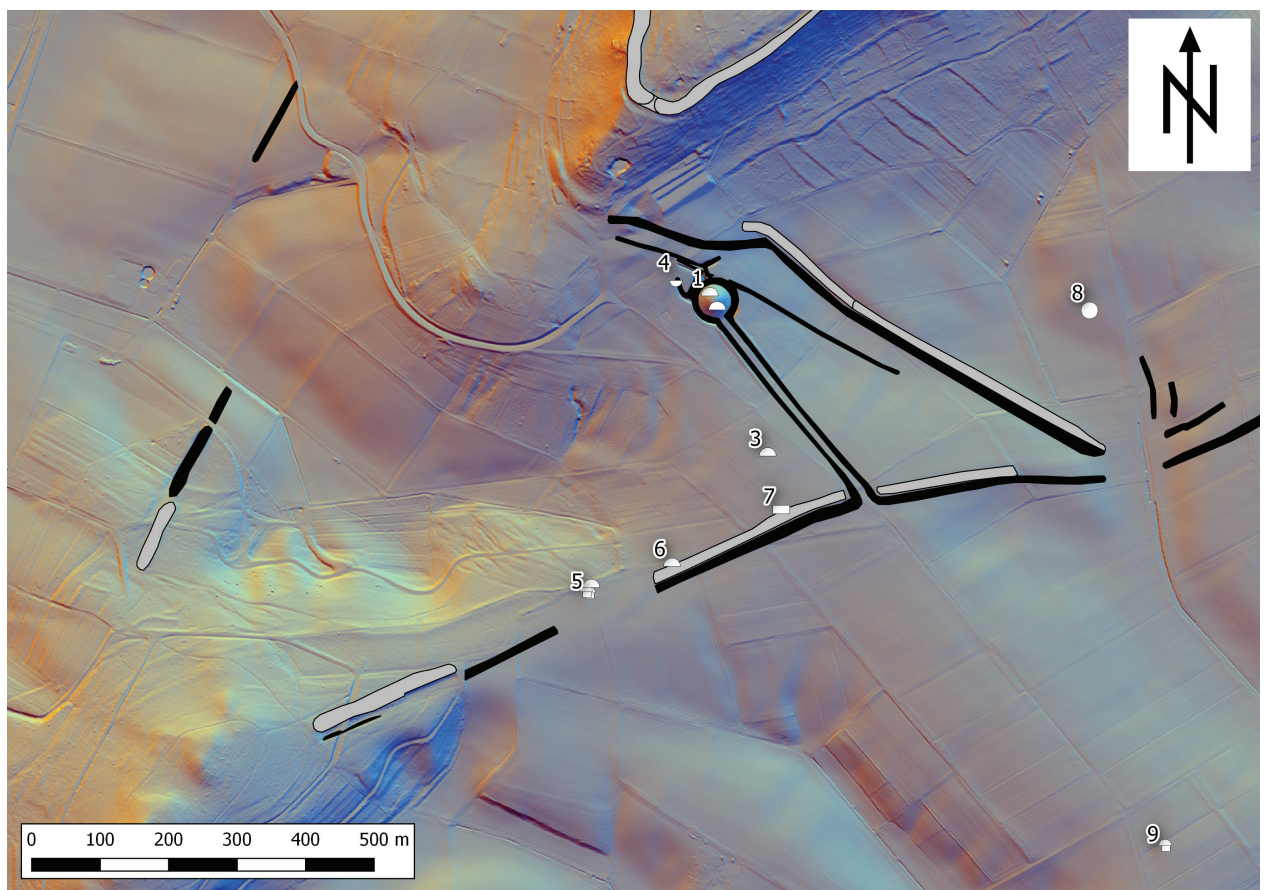

Figure 12.6 Map of the Glauberg and the various burials within its vicinity,
1. Early La Tène grave 1 (Mound 1) and early La Tène grave 2 (Mound 1). 3. Early La Tène grave 3 (Mound 2). 4. Early La Tène female and child burials in the ditch around Mound 1. 5. Hallstatt cremation burials. 6. Hallstatt/early La Tène burial with the remains of a smaller mound and ring-ditch. 7. Early La Tène female burial from the 2017 excavation. 8. Early La Tène burials in storage pits. 9. Late Bronze Age Urnfield Culture cemetery, (graphic: A. G. Posluschny; based on multiple directional hillshading of LiDAR data [courtesy of Hessisches Landesamt für Bodenmanagement und Geoinformationen]).

underneath the same rampart, and dating to the La Tène A period as did the rampart itself (Posluschny 2018: 461–462), that finally made it clear that the gaps in the external ditch and rampart system had not been left out of respect for the burials of the ancestors there.

It seems far more likely that this ditch-and-rampart system was built not in its entirety in a single episode but in different phases, at different times, possibly bringing together people from a wider community who worked together in some kind of communal labour, thus strengthening the society or at least the social interactions and connections within the group; such shared labour was potentially followed by feasting activities. This ditch-and-rampart system could not have served as a defensive structure (Posluschny, in press) – which might also have been the case for a number of other monumental earthworks surrounding prehistoric hillforts – but could instead have formed a means of strengthening the society. At the same time this construction would have produced a monumental sign in the landscape marking both the immediate sphere of interest or control of the Glauberg and its inhabitants while also indicating the dichotomous representation of the areas for the living and the dead there. The placing of the main burial mound and the processional avenue associated with it served both to separate and to unite these sectors (for a more detailed discussion of this aspect cf. Posluschny 2017: 20–21 with figure 2.11).

As has already been noted, leaving aside the coral and the red dye, Glauberg lacks the Mediterranean imports that are a main criterion of the Kimmig (1969) model for acceptance of this enclosure as an Early Iron Age *Fürstensitz*. The aspect of prominence in the landscape is rather debatable for Glauberg, and indeed many sites of the *Fürstensitz* type, as Kimmig did not really define objectively what he intended by it (see also Posluschny 2017: 16–18). Nevertheless, despite reservations about its prominence and the limited imports so far recorded from it, it seems indisputable that the Glauberg was of great importance at this time, most likely not just for people in its immediate surroundings but for the population over a wider area. The scale of the massive external ditch-and-rampart system and the conspicuous wealth of the princely burials at Glauberg were visible signs of the role of its inhabitants or at least of its ruling class, demonstrating that the Glauberg fulfilled certain central functions (e.g. long-distance trade, cult and/or religion, the concentration of wealth and possibly of power).

It has become clear that the *Fürstensitz* category originally defined by Kimmig, based on the archaeological knowledge of his time, has to be refined as a consequence of both new finds and new ideas. The original simple model, like any simple model, does not fit what is now known of the rather diverse development of many hillfort sites in southern Germany in the middle of the first millennium BC. Complex and diverse communities and societies created different responses to societal, environmental, economic and ecological challenges at this time. As a consequence, the *Fürstensitze* display considerable diversity, mirroring the differing landscapes within which they occur and the culturally diverse regions that surrounded them.

Late Iron Age hillforts and *oppida*

The early Iron Age (Hallstatt and early La Tène periods) seems to be characterized by rather hierarchical societies with small groups or even a few individuals at their apex. The succeeding era of the middle and late La Tène period does not provide evidence of such a hierarchy in its burial record. Only at the very end of the late La Tène period do very rich graves seem to appear again more frequently in western Germany, Luxemburg (e.g. Göblingen-Nospelt: Metzler 1984) and France, possibly under the influence of the late Roman Republic and early Roman Empire. Numerically, the main bulk of settlements from these periods are still small, unfortified villages, while in Bavaria and Baden-Württemberg there are also a large number of so-called *Viereckschanzen* (rectangular enclosures). These sites are characterized by a rampart more or less quadrangular in plan surrounding internal structures such as houses and wells. The initial interpretation of these at the end of the 19th and in the early 20th century was as military structures, based on the interpretation of the rampart as a fortification and taking into account assumed similarities with Roman examples. From the 1930s on, these sites were interpreted as cult places, in which some of the internal structures were interpreted as temple buildings and deep shafts were considered to have been for offering sacrifices (e.g. Holzhausen near Munich: Schwarz 1962). Newer excavations and analyses have changed the interpretation again (e.g. Fellbach-Schmiden in Baden-Württemberg where the shafts have been shown to have functioned as wells: Wieland 2017) and *Viereckschanzen* are now seen as multifunctional fortified settlements with evidence for trading, ritual perhaps associated with older burial mounds, dwelling and other functional dimensions (Wieland 2017: 55–57). This interpretation, as well as their general layout, rather assimilates them with the aforementioned *Herrenhöfe*, although no continuity between these two series of settlements is visible in the archaeological record.

The best-known type of settlement of the middle and late La Tène periods are of course the *oppida*. Use of the term *oppida* in relation to the Iron Age in continental Europe is ultimately based on Caesar's *De Bello Gallico*, where it is used to describe the main large fortified settlements principally in Gaul which had a city-like

appearance. They were often associated with specific tribes, being their fortified capitals. When conquered and within the Roman Empire, however, they usually had no city rights (and were thus to be distinguished from settlements designated as *municipium, colonia* or *civitas*). In German archaeological terminology many late Iron Age sites are described as *oppida* (even when the historic name of the site is unknown as is the case for the Manching *oppidum*) if they were fortified (with a wall of *murus gallicus* type in western Germany as in Gaul, or with a *Pfostenschlitzmauer* (wall with posts set vertically in the external wall face) as in south-eastern Germany, Bohemia and further east), and had a dense and regular internal settlement structure. *Oppida* should also be part of a long-distance trading system. They are often associated with a sanctuary; and specialised craftsmanship is visible in the differentiated use of the enclosed settlement space for specific activities. *Oppida* were not necessarily situated on hilltops with some examples (like Manching) placed on level terrain near water courses.

Quite a number of the larger late Iron Age hillforts and *oppida* have been investigated in Germany over recent decades. In fact, excavations have focused on both *Viereckschanzen* and especially on hilltop *oppida* like the Dünsberg (Rittershofer 2002), the Heidetränke (Maier 1993), Steinsburg (Peschel 1986), Kelheim (Tuschwitz 2014), Heidengraben (Stegmaier 2009), Milseburg (Söder and Zeiler 2012) and many others. Systematic excavations of larger lowland sites like the Manching *oppidum* (Eller *et al.* 2012) and the unenclosed site at Berching-Pollanten (Schäfer 2010) are rather rare. Furthermore, no large-scale joint research programme to investigate the late Iron Age hillforts or *oppida* has so far been developed, but at least collaboration and exchange between the investigators of individual sites are well-established. Currently only a very few of these sites are under investigation, usually at a rather small scale relative to their total areas. This can be attributed to the costs of larger research projects on sites which often occupy dozens of hectares in size.

One site that has been relatively intensively investigated is the Dünsberg *oppidum* in Hesse. This site is situated around the summit of a steep hill; it covers at least 90 ha, and is fortified by at least three main rampart or wall systems punctuated by 14 or more gates (Figure
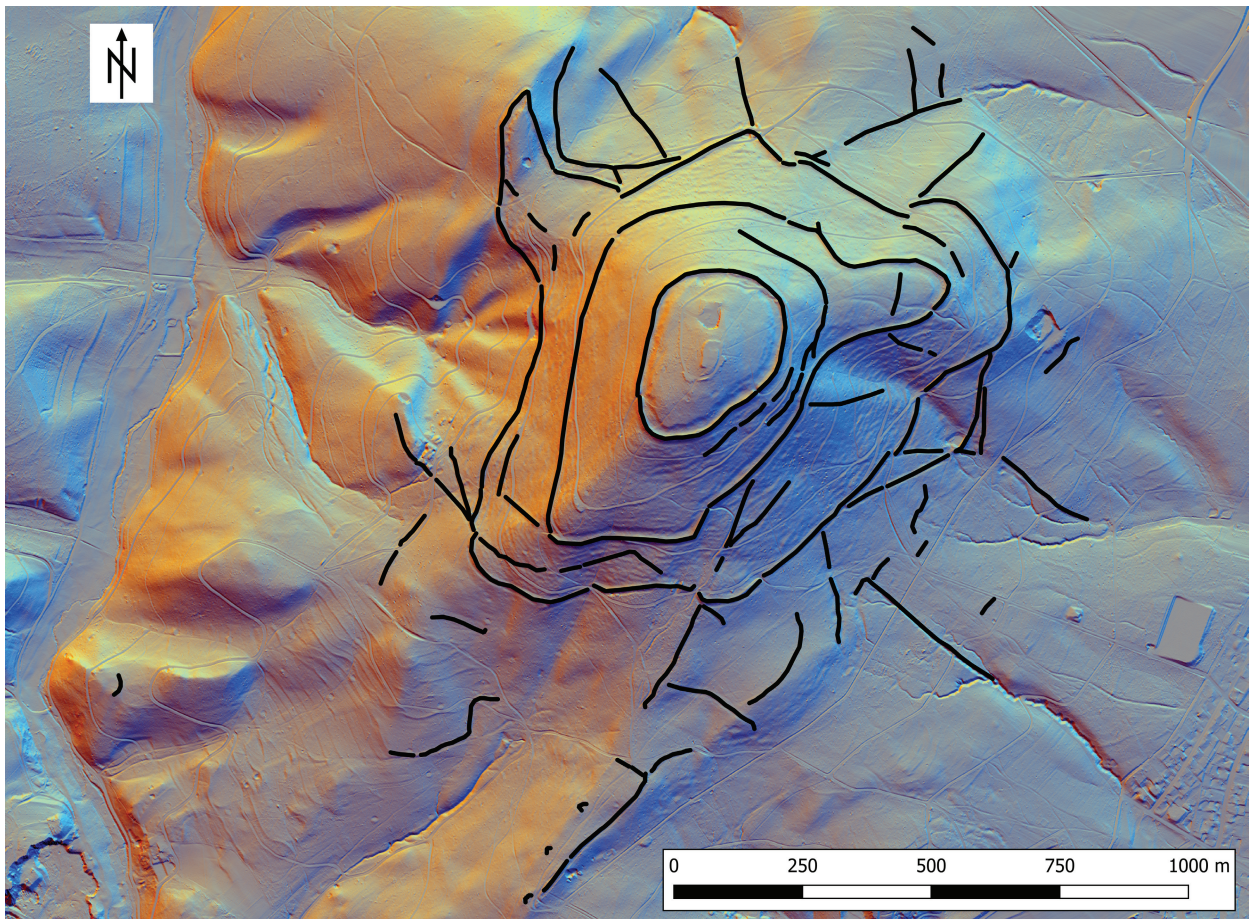

Figure 12.7 Plan of the fortifications and potential fortifications on the Dünsberg in Hesse based on multiple directional hillshading of LiDAR data [courtesy of Hessisches Landesamt für Bodenmanagement und Geoinformationen]. The highlighted remains do not necessarily all date to the late Iron Age use of the Dünsberg (graphic: A. G. Posluschny).

12.7). The inner wall is the earliest fortification here and is attributable to the late Bronze Age Urnfield Culture but the main occupation of the Dünsberg clearly dates to the late Iron Age with a climax in the 3rd century BC and the outer walls dating to 120/100 BC (based on dendrochronological evidence). Further dendrochronological data have been obtained from wooden tanks found on the slopes of this mountain, which date different building phases here from 200-165 BC through to 86-73 BC (Rittershofer 2002: 29-33). The site seems to have probably been abandoned around 20 BC. It is still not clear whether its abandonment is related to a possible battlefield or sanctuary from the Augustan period identified on the southern slopes of the Dünsberg, and which may be related to Roman camps nearby (Rittershofer 2002: 25-28). The site seems to have had a certain supra-regional significance and its classification as an *oppidum* is based amongst other evidence on the potential production of Celtic coins of the Dancing Man type ('Tanzendes Männlein'; Schulze-Forster 2005).

By far the best known and intensively investigated *oppidum* in southern Germany is Manching near Ingolstadt in Bavaria (Sievers 2003; Eller *et al.* 2012), first excavated as early as the 1890s. The construction of an airfield in the 1930s resulted in the more-or-less undocumented loss of features and finds, and further sectors of the site were destroyed when the airfield was bombed during WW II. The Romano-Germanic Commission of the German Archaeological Institute undertook various excavations as part of a long-term research project at Manching from 1955 to 2015. All in all, 30 ha of the enclosed area totalling 380 ha within the *oppidum* have been excavated and a further 90 ha have been investigated through a geomagnetic survey programme (Eller *et al.* 2012: 303).

The *oppidum* is situated on a lowland plain near the confluence of the rivers Paar and Danube. It is surrounded by a wall which is nearly circular in plan; parts of it are still visible in the landscape today. Settlement began here in the 3rd century BC and had its climax in the second half of the 2nd century BC when it attained its maximum size of 380 ha within its single rampart; its end (the reason for which is still a matter of debate) was probably around 20 BC when the settlement was finally deserted. Its decline from around the middle of the 1st century BC was supposedly due to an economic setback as a result of the Caesarean occupation of Gaul. Especially during the second half of the 2nd century BC the site was intensively settled, with a dense layout of buildings separated by streets. Finds of human corpses and of bones within the enclosed area may relate to burial practices that did not include all members of society (late La Tène period cemeteries in general seem only to represent small groups within society).

A temple or sanctuary, the origins of which might date back to the end of the 4th century BC, was in use until the 2nd or 1st century BC; and finds of hoards like the golden 'cult tree' (Maier 1990) as well as of bones of small children and babies in the vicinity may relate to cult practices. Parts of the surrounding fortification (first erected at the beginning of the 2nd century BC) have been excavated, most notably the east gate and sectors of the adjacent wall. This demonstrated that the first building phase of Manching's defences was one of the most easterly *muri gallici*, which was subsequently replaced by a *Pfostenschlitzmauer*, with an external drystone wall-face separated by individual slots for vertical posts.

Conclusion

Trying to obtain a concise overview of the hillforts of southern Germany is a difficult task. The variation in sizes, shapes, topographical situations (including promontory and hilltop sites, the latter with contour forts), layouts, internal features and chronology, is noteworthy. Also of relevance is the varying intensity of research conducted in the past which is sufficiently wide to allow the compilation of a general picture that would fit all the regions, landscapes and archaeological cultures under consideration only with difficulty. If one does not define the term 'hillfort' too narrowly, its range can also be extended to include fortified sites that are not situated on hilltops (e.g. *Herrenhöfe*, *Viereckschanzen*, and some of the *oppida*) but which nevertheless show all the main characteristics of hillforts including their often extensive fortifications, the spectrum of internal features and their artefact finds.

The social implications (or reasons) behind the fortification of these settlements also vary. In the later Iron Age period, it seems possible to describe the *oppida* as early towns, whereas this classification still seems contentious for even the more elaborate of the early Iron Age enclosed sites. Classification of sites according to their size and importance in relation to the chronology of the different sites seems only to work on a broad-scale, regional level as the very variable environments around individual sites as well as the regional pattern of cultural development seem to have played an important role in their evolution. Though the number of datable finds, especially pottery, recovered on Iron Age sites in southern Germany is much higher compared to the situation especially in the north of the British Isles, many of the multi-phased south German fortifications, sometimes with multiple lines of enclosure, have not been securely dated as the stray finds picked up within them and used for this purpose cannot in most cases be set into a stratigraphic relationship with the surrounding fortifications. This makes it extremely difficult to understand the potential chronological development of most of the

sites, especially those where no large-scale excavations have ever been carried out.

If we want to sketch the main currents of the development of the Iron Age settlements in southern Germany (Table 12.1) one of the major tendencies that is apparent seems to be the increasing size of the enclosed areas within sites in use around the late Hallstatt/early La Tène transition (Hansen and Pare 2008). The provision of an adequate water supply has always been crucial for the sustainable occupation of any hillfort site. With the rise in population inferred from the increasing sizes of the settlements, demand for water would also have increased, often resulting in the construction of new ramparts around annexes to incorporate wells or other water sources. However, the dating of the rampart systems – which are the basis for the idea of the expanding size of many sites – is not always very clear.

The hillforts of the late Bronze Age Urnfield Culture are often characterized as large sites possibly with 'central' functions that also occur during the early Iron Age Hallstatt period. At this time, and complemented by a number of smaller hillforts, the first *Fürstensitze* appear. In (mainly southern) Bavaria and eastern Baden-Württemberg, *Herrenhöfe* become part of the spectrum of settlement sites. Some of the *Fürstensitze* were also in use in the following, early La Tène period; the same pattern of use extending into this period holds true for a limited number of other hillforts, including both smaller and larger examples. In the following middle and late La Tène periods of the late Iron Age the large *oppida* (established both on hills and in lowland settings) appear, but very rarely were smaller hillforts in use. In some parts of lowland Bavaria and Baden-Württemberg, however, small enclosed sites of *Viereckschanzen* type became frequent. Some enclosed sites display continuous occupation from the late Bronze Age to the early Iron Age, but very few show continuity into the late Iron Age. The reasons for this hiatus or discontinuity are still under discussion but one explanation could be a significant cultural and/or social change at the beginning, and even more so at the end, of the early Iron Age.

Research is of course still ongoing. Even though a small number of sites such as the Heuneburg, Manching and a few others have been intensively investigated for many decades, new and often more extensive investigations are still needed as they can significantly sharpen our understanding of each site, or even completely change it. New sites still await discovery (the deployment of LiDAR has brought exciting and surprising new discoveries of enclosed sites), raising the possibility of changed understandings of individual sites and different settlement types, as well as, beyond these, the uses of landscapes and the changing nature of the

occupation of hillforts during various periods. Moving beyond detailed knowledge of some individual hillforts and settlements towards a broader comprehension of Iron Age settlements in general in the various regions and landscapes, is – despite the substantial progress of research work over recent decades – one of the main future tasks for Iron Age archaeology in southern Germany.

Acknowledgments

References

Baitinger, H. 2010. *Der Glauberg – ein Fürstensitz der Späthallstatt-/Frühlatènezeit in Hessen.* Wiesbaden: Landesamt für Denkmalpflege. Materialien zur Vor- und Frühgeschichte von Hessen 26 = Glaubergstudien 1.

Baitinger H. and B. Pinsker (eds) 2002. *Das Rätsel der Kelten vom Glauberg: Glaube – Mythos – Wirklichkeit. Ausstellung des Landes Hessen in der Schirn-Kunsthalle Frankfurt, 24. Mai bis 1. September 2002.* Stuttgart: Theiss.

Balzer, I., C. Peek and I. Vanden Berghe 2014. Neue Untersuchungen an den eisenzeitlichen Textilfunden der 'Fürstengräber' vom Glauberg, *Denkmalpflege und Kulturgeschichte* 2014/3, 2–8.

Berg-Hobohm, S. 2003. Umfriedete Höfe der Hallstattzeit in Bayern. Aktueller Forschungsstand zu den Herrenhöfen und den zeitgleichen rechteckigen Grabenwerken, *Berichte der Bayerischen Bodendenkmalpflege* 43/44 (2002/03), 161–189.

Böhr, E. 2014. Fragmente griechischer schwarzfiguriger Keramik vom Ipf, in R. Krause (ed.) *Neue Forschungen zum Frühkeltischen Fürstensitz auf dem Ipf*: 105–121. Bonn: Habelt. Frankfurter Archäologische Schriften 24 = Ipf-Forschungen 1.

Collis, J. 2003. *The Celts: Origins, Myths and Inventions.* Stroud: Tempus.

Deiss, B. 2008. Zur Struktur und astronomischen Orientierung der Grabensysteme um die Fürstengrabhügel am Glauberg, in B. Pinsker, B. and A. Zeeb (eds*), Der Glauberg in keltischer Zeit. Zum neuesten Stand der Forschung. Symposium Darmstadt 14.–16.9.2006:,* 279–294. Wiesbaden: Landesamt für Denkmalpflege Hessen. Fundberichte aus Hessen, Beiheft 6.

Eller, M., S. Sievers, H. Wendling and K. Winger 2012. Zentralisierung und Urbanisierung – Manchings Entwicklung zur spätkeltischen Stadt, in S.Sievers and M. Schönfelder (eds) *La Question de La Proto-Urbanisation á l'âge du Fer. Die Frage der Protourbanisation in der Eisenzeit. Akten des 34.*

Internationalen Kolloquiums der AFEAF vom 13.–16. Mai 2010 in Aschaffenburg: 303–318. Bonn: Habelt. Kolloquien zur Vor- und Frühgeschichte 16.

Eggert. M. K. H. 1989. Die „Fürstensitze" der Späthallstattzeit. Bemerkungen zu einem archäologischen Konstrukt, *Hammaburg* NF 9: 53–66. Festschrift Hübener.

Eggert. M. K. H 2006. Wirtschaft und Gesellschaft im früheisenzeitlichen Mitteleuropa: Überlegungen zum „Fürstenphänomen", in *4. Teilkolloquium DFG- Schwerpunktprogramm „Fürstensitz, Stadt, Komplexes Zentrum: Terminologie Und Archäologischer Nachweis von Zentralität" (SPP 1171), Bad Herrenalb, März 2006*: 255–302. Fundberichte Baden-Württemberg 29.

Farley, J. and F. Hunter 2015. *Celts: Art and Identity*. London: British Museum Press.

Fernández-Götz, M. and D. Krausse.2012. Heuneburg. First city north of the Alps, *World Archaeology*: 55, 28–34.

Fürst, S., I. Reiche, K. Müller, L. Bellot-Gurlet and C. Paris 2015. Rot oder weiß? – Analyse mutmaßlicher Korallen vom Glauberg, *hessenARCHÄOLOGIE* 2015: 45–49.

Gerlach, S. 1995. *Der Eiersberg: Eine Höhensiedlung der Vorrömischen Eisenzeit und ihre Stellung in der Siedlungslandschaft zwischen Rhön und Thüringer Wald.* Kallmünz/Opf: M. Lassleben. Materialhefte zur Bayerischen Vorgeschichte A 69.

Göldner, R., U. Himmelmann, T. Poelmann, A. Posluschny, T. Richter, M. Schlapke, R. Wanninger, B. Weidner and O. M. Wilbertz, 2013. ADeX® Version 2.0 – Standard für den Austausch archäologischer Fachdaten, in S. Winghart (ed.) *Archäologie Und Informationssysteme. Vom Umgang Mit Archäologischen Fachdaten in Denkmalpflege Und Forschung*, Hannover: Arbeitshefte zur Denkmalpflege in Niedersachsen.

Hänsel, B. 1996. Bronzezeitliche Siedlungssysteme und Gesellschaftsformen in Südosteuropa: vorstädtische Entwicklungen und Ansätze zur Stadtwerdung, in C. Belardelli and R. Peroni (eds) *The Bronze Age in Europe and the Mediterranean*: 241–251. Forlì: Colloquia XIII International Congress for Prehistoric and Protohistoric Sciences 11.

Hansen, L. and C. F. E. Pare 2008. Der Glauberg in seinem mikro- und makroregionalen Kontext, in D. Krausse (Hrsg.) *Frühe Zentralisierungs- und Urbanisierungsprozesse. Zur Genese und Entwicklung frühkeltischer Fürstensitze und ihres territorialen Umlandes. Kolloquium des DFG-Schwerpunktprogramms 1171. Blaubeuren, 9.–11.10.2006*: 57–95. Wiesbaden: Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 101.

Hansen L. and C. F. E. Pare 2016. *Untersuchungen Im Umland Des Glaubergs. Zur Genese und Entwicklung eines frühlatènezeitlichen Fürstensitzes in der östlichen Wetterau.* Wiesbaden: Materialien zur Vor- und Frühgeschichte von Hessen 28 = Glauberg-Studien 2.

Jung, M. 2017. Zwischen Quellenkritik und Marketing – zur Identifizierung der Heuneburg mit der „Polis Pyrene", in R. Karl and J. Leskovar (Hrsg.) *Interpretierte Eisenzeiten. Fallstudien, Methoden, Theorie. Tagungsbeiträge der 7. Linzer Gespräche zur interpretativen Eisenzeitarchäologie*, 19–26. Linz: Oberösterreichisches Landesmuseum. Studien zur Kulturgeschichte von Oberösterreich 47.

Kimmig, W. 1969. Zum Problem späthallstättischer Adelssitze, in K.-H. Otto and J. Herrmann (Hrsg.), *Siedlung, Burg und Stadt. Studien zu ihren Anfängen*: 95–113. Berlin: Deutsche Akademie der Wissenschaften zu Berlin. Schriften der Sektion der Vor- und Frühgeschichte, 25. Festschrift Peter Grimm.

Kolb, F. 2007. Zur Bedeutung von Begriffsdefinitionen für die Interpretation am Beispiel des Stadtbegriffes, in *4. Teilkolloquium DFG- Schwerpunktprogramm „Fürstensitz, Stadt, Komplexes Zentrum: Terminologie Und Archäologischer Nachweis von Zentralität" (SPP 1171), Bad Herrenalb, März 2006*: 303–310. Stuttgart: Fundberichte aus Baden-Württemberg 29.

Krause, R. (ed.), 2014a. *Neue Forschungen zum Frühkeltischen Fürstensitz auf dem Ipf.* Bonn: Habelt. Frankfurter Archäologische Schriften 24 = Ipf-Forschungen 1.

Krause, R. 2014b. Zum Stand der Forschung auf dem Ipf und den Perspektiven aus dem Schwerpunktprogramm der Deutschen Forschungsgemeinschaft 2004-2010, in R. Krause 2014a: 1–49.

Krausse D. and D. Beilharz (Hrsg) 2010. *„Fürstensitze" Und Zentralorte Der Frühen Kelten. Abschlusskolloquium Des DFG-Schwerpunktprogramms 1171 in Stuttgart, 12.–15. Oktober 2009.* Stuttgart: Konrad Theiss. Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 120. 2 vols.

Krausse, D., I. Kretschmer, L. Hansen and M. Fernández-Götz 2015. *Die Heuneburg – Keltischer Fürstensitz an der Oberen Donau.* Darmstadt: Konrad Theiss. Führer zu archäologischen Denkmälern in Baden-Württemberg 28.

Kresten, P. 2010. Die Gesteinsschmelzen des Glaubergs, in Baitinger 2010: 141–142.

Maggetti, M. 2014. Naturwissenschaftliche Untersuchungen von Amphoren vom Ipf und den Rechteckhöfen, in R. Krause 2014a: 123–143.

Maier, F. 1990. Das Kultbäumchen von Manching. Ein Zeugnis hellenistischer und keltischer Goldschmiedekunst aus dem 3. Jahrhundert v. Chr. *Germania* 68: 129–165.

Maier, F. 1993. *Das Keltische Heidetränk-Oppidum bei Oberursel im Taunus. Führungsblatt zu der befestigten Siedlung der Jüngeren Eisenzeit im Hohemarkwald, Gde. Oberursel-Oberstedten, Hochtaunuskreis.* Wiesbaden: Landesamt für Denkmalpflege Hessen. 2 edn. Archäologische Denkmäler in Hessen 10.

Metzler, J. 1984. Treverische Reitergräber von Goeblingen-Nospel, in *Trier – Augustusstadt der*

Treverer: 87–99. Mainz: Rheinisches Landesmuseum Trier.

Peschel, K. 1986. Höhensiedlungen Thüringens im Wandel von der Urnenfelder- zur Hallstattzeit. Steinsburg – Dohlenstein – Hasenburg: in *Siedlung, Wirtschaft und Gesellschaft während der Jüngeren Bronze- und Hallstattzeit in Mitteleuropa. Internationales Symposium Potsdam 1983*, 29–48. Potsdam: Veröffentlichungen des Museums für Ur- und Frühgeschichte Potsdam 20.

Posluschny, A. 2002. *Die Hallstattzeitliche Besiedlung im Maindreieck: GIS-Gestützte Fundstellenanalysen* Oxford: British Archaeological Reports International Series 1077.

Posluschny, A. 2010. 'Fürstensitze', Zentralität und Hinterland: Erste Aspekte einer Synthese aus Sicht des Projektes 'Fürstensitze' und Umland, in D. Krause and D. Beilharz (eds) *„Fürstensitze" und Zentralorte der Frühen Kelten. Abschlusskolloquium des DFG-Schwerpunktprogramms 1171 in Stuttgart, 12.–15. Oktober 2009*: 359–374. Stuttgart: Konrad Theiss. Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 120. 2 vols.

Posluschny, A. 2012. Keltische 'Fürstensitze' – Orte der Herrschaft? in F. Arnold, A. Busch, R. Haensch and U. Wulf-Rheidt. *Orte Der Herrschaft - Charakteristika von Antiken Machtzentren*, 19–31. Rahden/Westfalen: Verlag Marie Leidorf. Menschen – Kulturen – Traditionen. Forschungscluster 3: Politische Räume 3.

Posluschny, A. G. 2017. Early Iron Age Fürstensitze – some thoughts on a not-so-uniform phenomenon, in S. Stoddart (ed.) *Delicate Urbanism in Context: Settlement Nucleation in Pre-Roman Germany. The DAAD Cambridge Symposium*, 9–26. Cambridge: McDonald Institute for Archaeological Research. McDonald Institute Conversations. PDF available at https://www.arch.cam.ac.uk/iron_age/Stoddart_2017.pdf/ (accessed October 2018).

Posluschny, A. G. 2018. Kein Ende in Sicht – Aufgaben und Perspektiven der Glaubergforschung, in U. Recker and V. Rupp (eds) *Die 'Fürstengräber' Vom Glauberg: Bergung - Restaurierung - Textilforschung*, 463–469. Wiesbaden: Materialien zur Vor- und Frühgeschichte von Hessen 29 = Glauberg-Studien 3.

Posluschny, A. G. 2019. Eine Drainage gegen nasse Füße. Überraschende Befunde vom keltischen Wall/Grabensystem um den Glauberg. *hessenARCHÄOLOGIE* 2018, in press.

Posluschny, A. G. in press. Does fortified always equate to defensive? Some thoughts on the fortification systems of the Glauberg hillfort, in Romankiewicz, T., Fernández-Götz, M, Lock, G, and Büchsenschütz, O. (eds) *Enclosing Space, Opening New Ground: Iron Age Studies from Scotland to Mainland Europe*. Oxford: Archaeopress.

Posluschny, A. G. and C. Röder 2018. Respekt vor den Ahnen? – Überraschendes vom Glauberg.

Wetteraukreis: Die Ausgrabungen des Forschungszentrums der Keltenwelt am Glauberg, *hessenARCHÄOLOGIE* 2017: 72–75.

Rieckhoff, S. and J. Biel 2001. *Die Kelten in Deutschland*. Stuttgart: Konrad Theiss.

Rittershofer, K.-F. 2002. Ausgrabungen 1999 bis 2003 am keltischen Oppidum auf dem Dünsberg bei Gießen, *Berichte der Römischen-Germanischen Kommission* 85: 7–36.

Schäfer, A. 2010. *Die Kleinfunde der jüngerlatènezeitlichen Siedlung von Berching-Pollanten, Lkr. Neumarkt i. d. Oberpfalz* Rahden/Westfalen: Verlag Marie Leidorf. Marburger Studien zur Vor- und Frühgeschichte 24.

Scharringhausen, K. D. 2015. The urban start-up of the Heuneburg: A dialogue – Part 1: Review, *Kleos – Amsterdam Bulletin of Ancient Studies and Archaeology* 1: 59–72.

Schier, W. 1998. Fürsten, Herren, Händler? Bemerkungen zu Wirtschaft und Gesellschaft der westlichen Hallstattkultur, in H. Küster, Lang and P. Schauer (eds) *Archäologische Forschungen in Urgeschichtlichen Siedlungslandschaften*: 493–514. Bonn: Regensburger Beiträge zur Prähistorischen Archäologie 5. Festschrift für Georg Kossack.

Schier, W. 2010. Soziale und politische Strukturen der Hallstattzeit, in. D. Krause and D. Beilharz 2010, 375–405.

Schulze-Forster, J. 2005. Der Dünsberg und die jüngsten keltischen Münzen in Hessen, in J. Metzler and D. Wigg-Wolf (eds) *Die Kelten Und Rom. Neue Numismatische Forschungen. Fond de Gras Titelberg, Luxemburg, 30.4.–3.5.1998*: 155-178. Mainz: Philipp von Zabern. = Studien zu Fundmünzen der Antike 19.

Schussmann, M. 2012. *Siedlungshierarchien und Zentralisierungsprozesse in der südlichen Frankenalb zwischen dem 9. und 4. Jh. v. Chr.* Rahden/Westfalen: Verlag Marie Leidorf. = Berliner Archäologische Forschungen 11.

Schwarz, K. 1962. Zum Stand der Ausgrabungen in der spätkeltischen Viereckschanze von Holzhausen. *Jahresbericht der Bayerischen Bodendenkmalpflege* 1962: 22–77.

Sievers, S. 2003. *Manching – Die Keltenstadt* Stuttgart: Konrad Theiss. Führer zu archäologischen Denkmälern in Bayern: Oberbayern 3.

Smith, M. E. 2007. Form and Meaning in the Earliest Cities: A New Approach to Ancient Urban Planning. *Journal of Planning History* 6: 3–47.

Söder, U. and M. Zeiler, 2012. *Die Milseburg.* Marburg: Vorgeschichtliches Seminar der Philipps-Universität Marburg. Oppida Celtica 1.

Stegmaier, G. 2009. Stadt – Land – Fluss: Überlegungen zum Wirtschafts- und Besiedlungsgefüge des spätkeltischen Oppidums Heidengraben und seines weiteren Umlands, in R. Karl and J. Leskovar (eds) *Interpretierte Eisenzeiten. Fallstudien, Methoden, Theorie. Tagungsbeiträge 3. Linzer Gespräche zur*

interpretativen Eisenzeitarchäologie: 253–264. Linz: Oberösterreichisches Landesmuseum. Studien zur Kulturgeschichte Oberösterreichs 22.

Tuschwitz, A. 2014. *Das Oppidum von Kelheim* Marburg: Vorgeschichtliches Seminar der Philipps-Universität Marburg. Oppida Celtica 2.

Veit, U. 2000. König und Hohepriester? Zur These einer sakralen Gründung der Herrschaft in der Hallstattzeit. *Archäologisches Korrespondenzblatt* 30: 549–568.

Wachter N. and K. Kerth, 1993. Die Tierknochenfunde aus drei nordbayerischen Siedlungen der Hallstatt- und Frühlatènezeit, *Bayerische Vorgeschichtsblätter* 58: 61–77.

Wagner, I. M. and G. A. Wagner (2010) *Thermolumineszenz-Datierung am Ringwall auf dem Glauberg bei Büdingen,* in Baitinger 2010: 143–144.

Wieland, G. 2017. The rural contribution to urbanism: late La Téne Viereckschanzen in southwest Germany, in S. Stoddart (ed.) *Delicate Urbanism in Context: Settlement Nucleation in Pre-Roman Germany. The DAAD Cambridge Symposium*, 51–59. Cambridge: McDonald Institute for Archaeological Research. McDonald Institute Conversations. PDF available at https://www.arch.cam.ac.uk/iron_age/Stoddart_2017.pdf/ (accessed October 2018).