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## european journal of
## postclassicalarchaeologies

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## postclassicalarchaeologies

volume 4/2014

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**research**

# Uncultivated landscapes or wilderness? Early medieval land use in low mountain ranges and flood plains of Southern Germany

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There is a colonialist perspective on colonisation processes: colonised land in low moun-
tain ranges as well as in flood plains is often regarded as a previous uncultivated wilder-
ness, subdued to a process of civilisation by the authorities. It often neglects indigenous
settlers and non-agrarian land use strategies. Most 'uncultivated' landscapes were for
sure cultural landscapes. Looking at various landscapes in Southern Germany at the
Swabian Alb, the Black Forest and the Danube we learn of alternative narratives starting
with environmental history and the common man and his daily life.
**Keywords**: Southwest Germany, early medieval colonisation, colonialism, floodplains, low
mountain ranges

*Das Verständnis des Landesausbaus in Mittelgebirgs- und Sumpflandschaften als die or-
ganisierte Zivilisierung zuvor unbesiedelter Wildnis erweist sich als eine kolonialistische
Sicht. Es blendet häufig ältere Besiedlung und nicht-agrarische Landnutzungsformen aus.
Die meisten "Urlandschaften" sind in der Tat Kulturlandschaften. Ausgehend von Perspek-
tiven der Umwelt- und Alltagsgeschichte ergeben sich mit Blick auf ausgewählte Regionen
in Süddeutschland (auf der Schwäbischen Alb, im Schwarzwald und an der Donau) alter-
native Szenarien.*
***Schlüsselbegriffe****: Südwestdeutschland, frühmittelalterlicher Landesausbau, Kolonialis-
mus, Flußniederung, Mittelgebirge*

The archaeology of uncultivated landscapes is a difficult field: within
an uncultivated landscape we would not expect typical archaeological
sites of permanent agrarian villages or any infrastructure. Bio- and
geoarchaeological data should show little human impact. However, writ-
ten sources on wilderness as well as ideas of pristine forests are rather
suspicious. The main question for archaeology therefore is to determine
whether a landscape was in fact uncultivated. More precisely, we need

to ask for the interaction between 'nature' and 'culture' in these areas. Furthermore we need to deal with the ideas about these landscapes in the past and in modern research.

A comparative approach, which uses chronological and spatial differences, may help to understand the 'uncultivated' landscapes of the early Middle Ages. Inlands/outlands and processes of colonisation are therefore the main topic for an understanding of 'uncultivated' landscapes. Starting with some more general reflections on research paradigms related to uncultivated landscapes and processes of colonisation, we will use some examples from Southern Germany to deal with low mountain ranges and flood plains in the early Middle Ages.

## 1. Prologue — modern colonisation of "wilderness"

During the period of Enlightenment in the 18th century, landscape was more and more considered as the basis of the wealth of nations. Land was primarily seen as a resource to nourish people and to feed cavalry horses, as well as a source of various raw materials which gained in importance during a period of a proto-industrialisation (Sieferle 1990). The number of population became a matter of prestige for absolutist sovereigns, as pre-industrial manufactures as well as growing armies depended on human labour. In consequence there was great effort to cultivate unused 'wilderness' and to colonise the land.

The European colonisation of the Americas is the most prominent example of a modern frontier against 'uncultivated' landscapes, which also influenced the narratives of colonisation in Europe (Blackbourn 2007). In Northern America the "winning of the West" starting in the 17th century and lasting until 1860 was understood as a frontier of civilisation against wilderness, achieved by the migration of brave people to the west, making their fortune as cattle-breeders, farmers or gold panners and forming the modern American nation (Turner 1920). This narrative of a conquest of nature results in being oblivious against the cultural landscapes of indigenous people. In fact, the North American landscape was far from being a wilderness. It was a cultural landscape, formed by land use practices of native people. At the time when Europeans arrived, many regions were in a process of change, because of the introduction of Old World species like germs, horses or new varieties of grasses (Worster 1990; Sherow 1992). The history of Europeans and American Indians is predominantly seen as a story of hostile relationship resulting in Indian wars, escape and displacement or even genocide. This is true to an eminent de-

gree, but there was also a "middle ground", a field of cultural relationships consisting of cultural innovation, accommodation and confrontation. The middle ground only found historical attention a relative short time ago, giving a much more complex idea of the frontier (White 2005).

The Spanish and Portuguese conquista in South America since the 15th century, which was in some ways different from the situation in Northern America, also did not reach uncultivated wilderness. The Spanish mainly dealt with tropical environments, but as in Northern America, there was an important change of landscapes connected with the arrival of Europeans. Spaniards did not come, for example, to pristine rain forests; they rather entered cultural landscapes with a long-lasting pre-Columbian history. During the contact period there was a decline in population and a reforestation of landscapes, formerly used by specific strategies of agro-forestry. Colonial land-use, however, was coined by the European idea of large open fields and meadows. Despite of the problematic suitability of European grains and livestock to New World's environments, this cultural factor was an important complicacy for an adaptation of European land use practices. Recognizing the conquered landscapes as wilderness, alternative pre-Columbian land use strategies lost out. The introduction of European practices of land-use lead to remarkable reactions and transformations of the local ecosystem (Schreg in press a).

Similar frontiers existed in Russia, South Africa and Australia, closely connected to modern nation-building (Osterhammel 2010). In contrast to these large-scale colonisation processes, cultivation of wilderness in Central Europe was on a rather small scale. Nevertheless, these projects were important for the formation of modern states (Osterhammel 2010). Amongst the projects of that time are the cultivation of the Oderbruch (Blackbourn 2007, pp. 33-78, 138-178; Herrmann 2013, pp. 273-284), the drainage of the Donaumoos near Ingolstadt (Hoser 2011), or the valorisation of various regions of the Habsburg monarchy (Szücs 2010). Most of them were in the drainage of swamps or the regulation of rivers. They all were driven by political decisions, organised by state commissions – and they often struggled with technical and environmental challenges. Drainage of swamps affected the regional hydrology, the local flora and fauna, and struck the interests of various stakeholders. In the Donaumoos for example, previous rights of grazing were affected. A water mill at the runoff of the drained area was identified as an obstacle for the drainage quite soon (Hoser 2011, p. 228). Negotiations and conflicts lasted for generations. The water mill was only bought-out in the early 20th century and problems with drainage, drying-up and soil fertility still exist today.

In South and West Germany, early modern valorisation was mainly interested in the re-population of settlements deserted during the late Middle Ages or the 30years war. Settlers were often recruited from distant regions. They got privileges regarding their rights and taxes. The establishment of the infrastructure was supported by the sovereigns. For example, Waldensian refugees were settled in the 17th century in the low mountain ranges of Northern Hessia, in many cases at the site of an earlier medieval settlement. Local craftsmen built the village of Louisendorf according to regional traditions, but on a regular ground-plan (Zögner 1966). In many cases, agrarian production was only an additional income for families basically working as craftsmen.

Another example is represented by the small village of Oberböhringen, founded in 1793 by the free imperial town of Ulm. Situated at a remote plateau of the Swabian Alb, it was settled by 14 families from the neighbouring village of (Unter-)Böhringen. The new settlement was laid out on a rectangular plan with 7 farmsteads and 7 much smaller properties of crofters. Workers, usually responsible for the entrenchment of the town of Ulm, were commanded for the clearance of the forest. Due to the consequences of the French revolution, these settlers did not have a good start and especially the 'year without a summer' 1816 with extreme weather due to the Tambora eruption, was existence-threatening for many of the farms (Schmolz 1959).

These modern examples are certainly bound into their historical context of early modern states, a (proto-)industrialisation and a changing world-view due to the philosophical enlightenment and the development of modern sciences. They are far from being valid analogies for early medieval "landnam" processes. But they are important to reflect upon our own perspectives on the early Middle Ages.

## 2. Paradigms and questions

These early modern cases of colonisation of 'outlands' have a great impact on our ideas about colonisation of 'uncultivated' landscapes, as they set up specific narratives: colonisation processes concern previously uncultivated landscapes seen as a 'wilderness'; they are a conquest of nature – and indigenous people are seen as savages, who are rather part of the nature than of civilisation.

The German expansion to Eastern Europe during the Nazi regime was explicitly referring to the parallels with the American frontier. Slavonic people in Eastern Europe were seen as the Indians of Europe. The Nazi regime planned to transform Eastern Europe into a cultural landscape

and to realize a systematic settlement system based on Walter Christaller's model of centre and periphery and with a regular system of newly established settlements of soldier peasants (Blackbourn 2007, pp. 307-376). In this sense, a cultural landscape was something which had to be established in these regions in future, as they recognized Eastern Europe rather as an uncultivated region (Schenk 2002). The modern conquest was seen as a perfection of the medieval German colonisation. Up to the 1970s the medieval German eastward expansion was in fact seen as a national project, bringing civilisation, christianity and urbanism to the 'primitive' Slavonic people (comp. Schlesinger 1975). Even if German historical research – in contrast to other European regions (Berend 1999) – hesitated to pick up the frontier as an explicit theoretical concept, some of its paradigms nevertheless became an integrative part of the dominating perspective on uncultivated landscapes.

First of all, we need to get cautious against still existing 'colonialist' paradigms within modern research on early medieval 'landnam' processes. We learn about the idea of wilderness and a colonial perspective of conquest which is deeply rooted in modern times, neglecting or debasing indigenous people and not understanding cultural landscapes of pre-conquest periods. Colonisation is closely linked to agrarian land use-strategies of the more recent European tradition: Ploughed agrarian fields, large open meadows and forests are understood as clearly separated elements of a cultural landscape. Foresters were opposed to mixed forms of forest economy as for example wood pasture, which they rather recognized as a bad situation, which has to overcome (Küster 2003). Non-agrarian land-use is seen as backwardness and emphasizes the need for valorisation.

Therefore, the term 'uncultivated landscape' may be confusing, as it refers just to a specific point in time and should in no way be understood as the contrary of a cultural landscape. Originating from the Latin word "cultura", the term refers to agriculture. Therefore, an uncultivated landscape may be seen as the counterpart of the agrarian infield, the outland used by hunters, herders, miners or loggers (Andersson *et al.* 1998).

A second point we can learn from modern examples concerns the question of the relation of colonisation processes and power. Modern colonisation in the Americas, in Africa, Prussia or in the Ulm territory at the Swabian Alb are – independent from the extension of the colonised areas – closely connected with the interest of states to gain resources and land. In quite different ways, they regulate the colonisation within the territories they claim for their nation. In modern Europe, colonisation is organised by the authorities, regulated by laws and results in planned settlements and landscapes.

In order to check these paradigms, we need to understand early medieval uncultivated landscapes in the broader framework of human ecology. We need to have a closer look on the 'uncultivated' landscapes, in order to understand, how they have been used on the long term; we need to ask for the specific interaction between men and 'nature' including the ideas of people about these landscape, which can be seen as wilderness or as holy solitude.

## 3. Early medieval processes of colonisation in Southwest Germany

In Southern Germany the archaeological record of the early Middle Ages is determined by a huge number of burial grounds ('Reihengräberfelder'), mainly of the 6th and 7th century. Their distribution coincides with specific forms of toponyms, especially those ending with –ingen, as well as with specific forms of later settlements. These areas have been defined as the "Altsiedelland" – the early settled landscapes. These regions include the wide valley of the Rhine, the loess plains in the Neckar region as well as the pre-Alpine landscapes of Southern Bavaria. To the northeast, the distribution of Merovingian burial grounds clearly respects the Roman frontier line of the 3rd century, known as Obergermanisch-Rätischer Limes, even if there are some sites beyond this line. The territories north of the Danube and east of the Rhine, however, were vacated by Roman troops in the late 3rd century. Afterwards a population with cultural traditions from various regions east of the lower Rhine (rhein-weser-germanisch) and especially from the Elbe region in Eastern Germany and Bohemia (elbgermanisch) established in the former Roman territory. Even the architecture of their farmsteads shows these traditions – for example in three-aisled houses and pit houses with a hexagonal posts' arrangement. Though in many cases, the settlements of the late 3rd, 4th and early 5th century show close spatial relations to former Roman sites (Schreg 2012a).

Based on the chronology of the burial grounds and on specific toponyms (ending with –ingen, –heim and –stetten), in many landscapes a process of colonisation – starting during the Merovingian period – has been reconstructed. However, in the Carolingian period the documentary situation changes: the deceased did not get material goods within the grave any more. The large Reihengräberfelder were not continued and were replaced in a long-term process by Christian graveyards at the Parish churches. Archaeology looses its predominant source in the decades around 700 AD. Instead, written sources gain in importance.
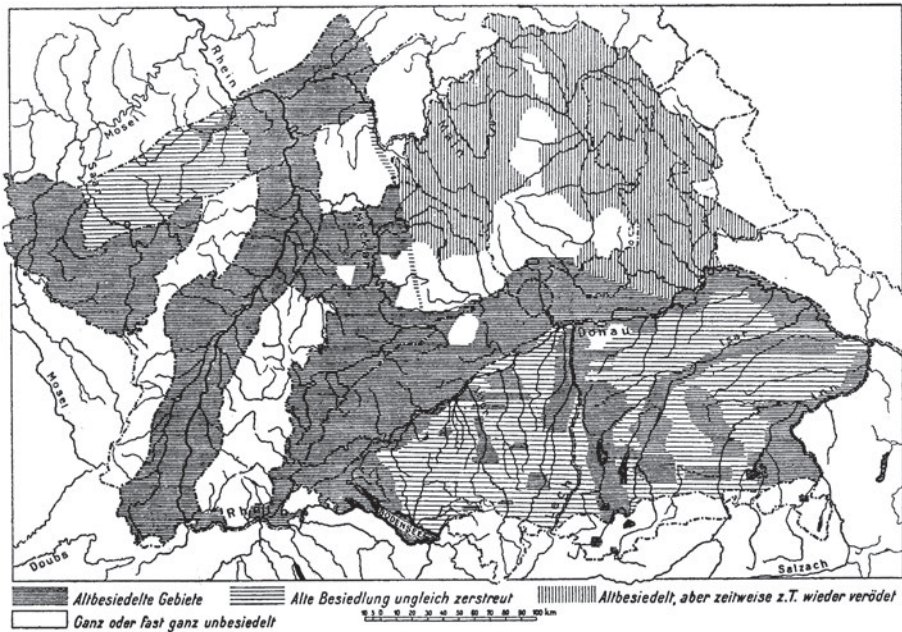
Fig. 1. "Altsiedelland" according to Robert Gradmann (Gradmann 1931). Unsettled landscapes in white. Notice the situation at the Black Forest, the Eastern Swabian Alb and the Donaumoos.

These early medieval written record highly depends on clerical institutions and is in many cases related to the estates of a somehow privileged class of population (Archäologisches Landesmuseum Baden-Württemberg 1997). The colonisation during the early Middle ages, however, is just the beginning of a long-term process, which accelerates at the beginning of the 2nd millennium and which lasts up to the 13th century. It is the early 10th century, the time period of the Hungarian raids, which may separate two phases of colonisation. Therefore we may distinguish landscapes, which have been settled already in the early Middle Ages — as the Swabian Alb — and others, which have been settled only in the 2nd millennium. As the Black forest they are often considered as unsettled and uncultivated landscapes during the Early Middle Ages.

Various studies of early medieval colonisation in Southwest Germany emphasized the important role of the Alamannic duke or the Carolingian kings. For example Hans Jänichen's study on the valley of the river Schlichem. The river originates within the Swabian Alb and takes its course to the northwest. The upper part of the valley is rather narrow
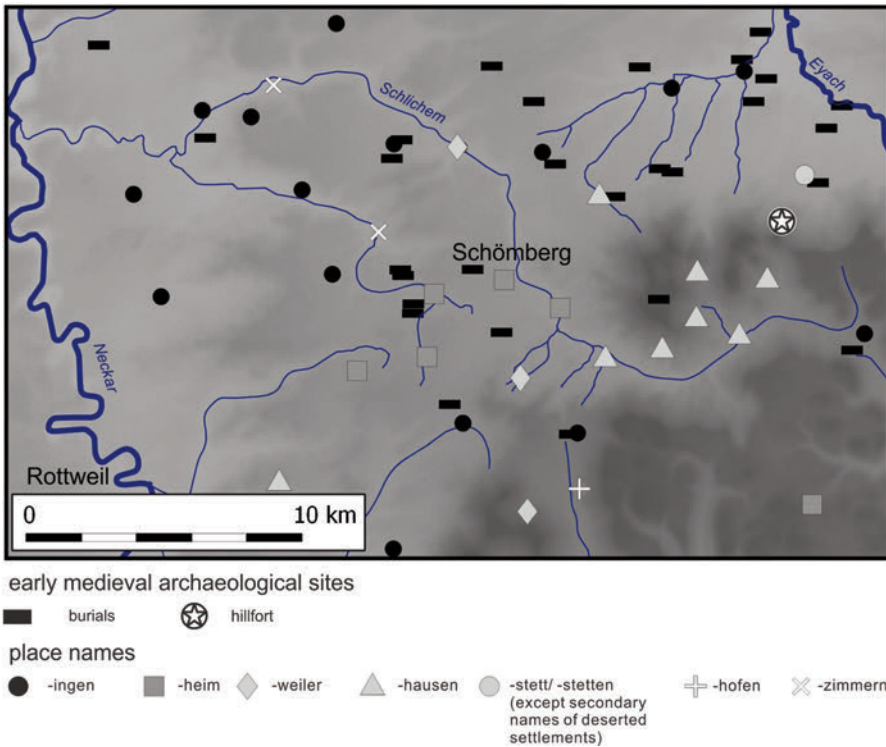
Fig. 2. Regional land occupation at the Northern escarpment of the Swabian Alb (Graphic R. Schreg, based on SRTM-data).

and lacks archaeological sites, which are well known from the surrounding hills. The lower part crosses the hilly landscape north of the bluff of the Swabian Alb and provides rather favourable conditions for agriculture. Merovingian burial sites as well as place names ending with –ingen are known from the lower part of the valley. Upstream there are five settlements named with –heim, most of them later abandoned, in the central part of the valley. The territory of these settlements forms a rectangular area, which seems to be cut from the surrounding land. Settlements ending with –hausen are situated in the upper part of the valley and even later names are found in small tributary valleys. The current interpretation of this landscape is that of an area systematically settled under the authority of the Frankish king and marking a feudal system ("Grundherrschaft") (Jänichen 1955; Zekorn 2008). There are only few written documents from the 8th c., representing tradition of land to the St. Gallen monastery south of lake Constance. Clear indications of royal possessions are missing. There is little discussion about the condition of

the landscape before the process of colonisation. Just some kilometres north of the valley exists a prominent hillfort at the Lochenstein mountain. There are some finds from the 5th century, but it remains unclear whether the site belongs to the category of migration period fortified central places like the Runde Berg near Urach (Morrissey 2008, p. 75).

What we find in the early Middle Ages in southern Germany are the same narratives of wilderness and state regulation as in modern times: The colonised landscapes of the early Middle Ages, in the East as well as in Southern Germany, are regarded as uncultivated areas or as wilderness, primarily consisting of dense forests. The geographic "Altlandschaftsforschung" ("research on ancient landscapes") for example reconstructed a linear process of clearance in central Europe, starting in the 7th and 8th century and lasting to the early modern period (Schlüter 1952; Schlüter 1953). It regarded the forests as pristine, uncultivated landscapes, neglecting earlier land use as well as periods of reforestation. The question of previous inhabitants and the status of the landscapes at the time of 'colonisation' still is, in most cases, of minor interest in research debates. Furthermore, colonisation is regarded as a centrally organised project, following a strategic planning. This is true for the occupation during the migration period as well as for the medieval colonisation (comp. e.g. Weller 1938). The question for the responsible authorities and their manifestation within the colonised landscapes has been an important topic of historical and archaeological research in marginal landscapes. Historical and geographical research has for a long time postulated an early medieval 'state colonisation', characterized by specific long stripped fields, specific place names and a special juridical position of the settlers ("Königsfreie": free peasants, only obligated against the king) (Nitz 1974).

In the light of the paradigms, created by modern colonisation processes, we need to be cautious against the emphasize of the role of authorities, the planned character of the opening of a by-than uncultivated and uninhabited landscape. We therefore need to ask for alternative scenarios of an opening, less understood as an event started by an authoritarian initiative, but as a process, which involves various agents, including lower social classes.

## 4. New perspectives

In recent years historical research questioned the existence of well organized early medieval states. Instead of centralised power, institutional authority and a stratified society there was a segmentary society with multiple, often inhomogeneous groups, in which social relations and
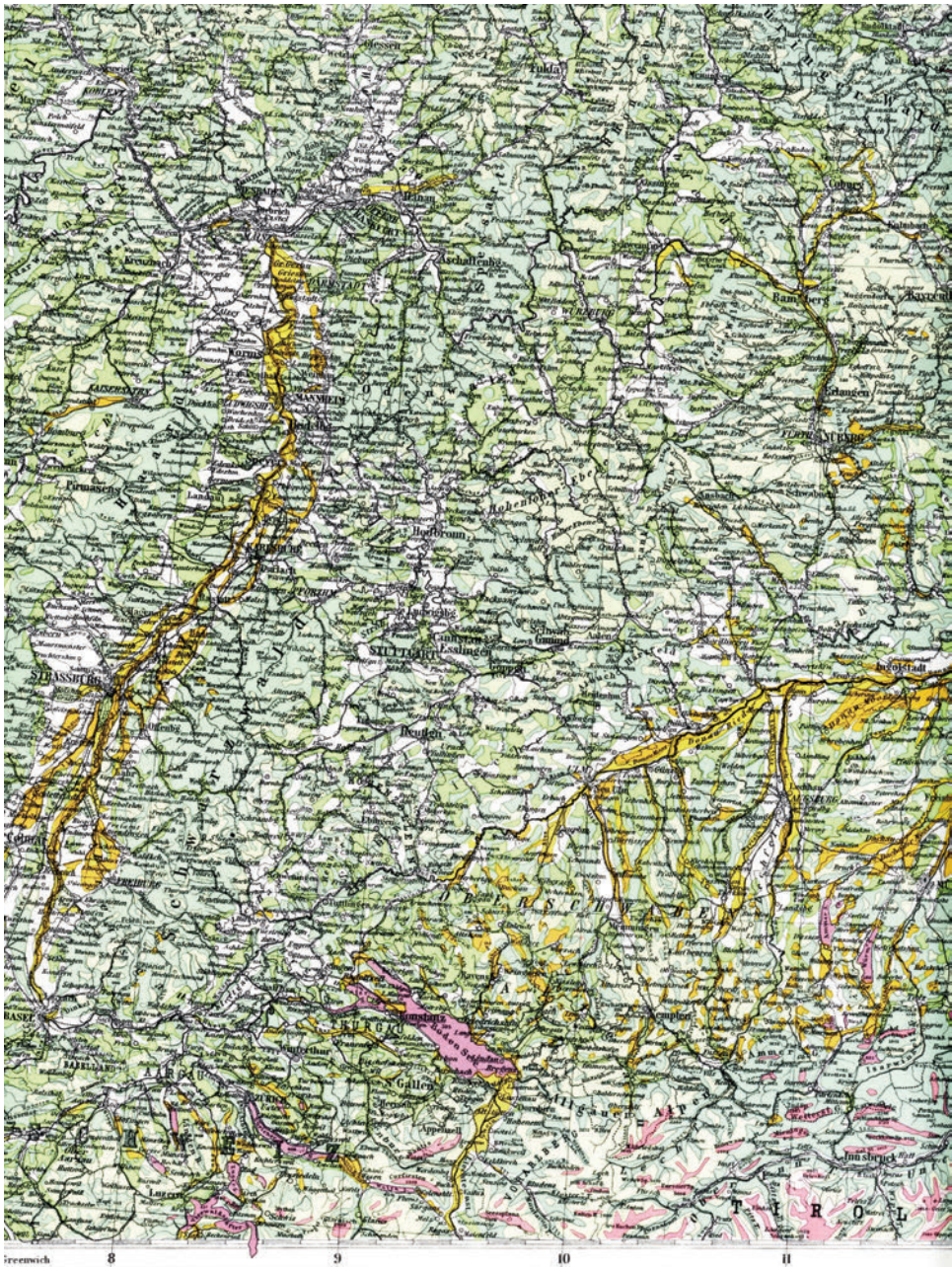
Fig. 3. Early medieval landscape and land occupation according to Otto Schlüter (Schlüter 1952). Floodplains in yellow, forests cleared during the middle ages in light green.

power had to be permanently negotiated, demanded, and demonstrated (Althoff 2012). The concept of feudal organisation also has been modified (Schreiner 2000; Rösener 2012). Instead of a rather political history there are approaches more interested in social and economic issues (e.g. Kohl 2010; Beck 2003). Furthermore, there is an increasing interest in environmental history. Until now however, research on early medieval Southern Germany has been little affected.

Archaeology on the other hand revealed many sites of early medieval settlements, changing our ideas about local settlement formations (Schreg 2006; Schreg 2012c). Initiatives towards landscape archaeology, however, were mostly developed in Northern Germany. Starting with some isolated rescue excavations already in the 1930s, it was only since the 1980s when large scale excavations were conducted in Southwest Germany (e.g. Stork 2010). Analyses of single landscapes are still quite occasional, as research is foremost driven by rescue excavations, not allowing the realisation of additional landscape research surrounding the threatened sites. Therefore, in Southwest Germany there are few palynological data for the medieval period (e.g. Smettan 1995; Smettan 2000; Rösch 2009), providing only very punctual information on the development of landscapes. As in many landscapes, they often show a reforestation during the migration period (Küster 2001).

German medieval archaeology stayed a-theoretical for a very long time. New perspectives offered by post-processual archaeology, by the cultural turn or simply by environmental history are by now of minor relevance within the archaeology of early medieval settlement landscapes of Southwest Germany. There are interesting studies from other European regions, showing the importance of analysing the experience of the cultural landscape, regional identity and social structure. In Scandinavia the contrast between outfield and infield has been recognized as the difference between the friendly, civilized homestead and the wild, dangerous and hostile home of trolls and other beings (Altenberg 2001; Holm 2002). There are similar tales in the German low mountain ranges, and even if we have little ideas about their age, they depict these landscapes as somehow wild and dangerous (Laschewski 2001). Even if they may be of rather recent times, they nevertheless form an important background for historical and archaeological research, regarding low mountain ranges as a rather uncultivated wilderness. There is, however, an early medieval written record which frequently refers to "terra inculta". In general it is not possible to decide, whether this refers to uncultivated wilderness or to temporary fallow ground, especially when the term is part of a standard text. In some cases we learn from a context of forest clearance (Gringmuth-Dallmer 1990, p. 18).

New perspectives for future archaeological research on uncultivated landscapes come from environmental history and human ecology (comp. Schreg 2014). They bring together 'natural' as well as 'social' aspects and they help to identify traditional paradigms.

## 5. River valleys and swamps

Danube and Rhine are the most important river valleys, which form some floodplains. In the past floodplains were even in Central Europe a pool for malaria (Wernsdorfer 2002). There is no direct evidence for malaria in the early Middle Ages. However, malaria may be one reason for an interesting pattern in the development of Merovingian burial places. In some regions they grew constantly and in others they remained approximately the same size. Looking into the region of the Eastern Swabian Alb and the adjacent Danube valley, we recognize growing burial places in the upland and a stagnation along the Danube valley between Ulm and Neuburg and in the southern tributary valleys. There is no reliable explanation, but malaria in the Danube valley may be a factor for these spatial differences (Schreg in press b).

However, even at the river Rhine, the river area is at a maximum five to six kilometres wide, early villages were close to the edge of the low terrace. The riverscape of the Rhine has a variable history in time (Dambeck 2005; Lechner 2005). Starting with a furcative, gravelly riverbed, there was an increasing dumping of sediments due to the rising agriculture since the Neolithic. However, the typical alluvial forest and the dead stream branches with stagnant water, mainly developed since the late Middle Ages, when people more and more started to regulate the riverbeds and to construct dams. It's the modern time regulation in the 19th century which corrected the stream to a rather linear course. Falling ground water changed the agricultural potential of the neighbouring land (Musall 1969; Volk 2006).

Lack of evidence is a special problem for understanding the early medieval river landscapes. At the end of the Roman period, however, we recognize some changes in the river valleys. During the Roman period, in the Danube and the Main valley, oaks have been eradicated and deposited by floods. Floods concerned an increasing area of the valley and by the end of the Roman period, the riverside woodlands were destroyed. The migration period was a period of regeneration, but during the 6th and 7th century, a new period of floods, sweeping away oak trees, started (Becker 1992).
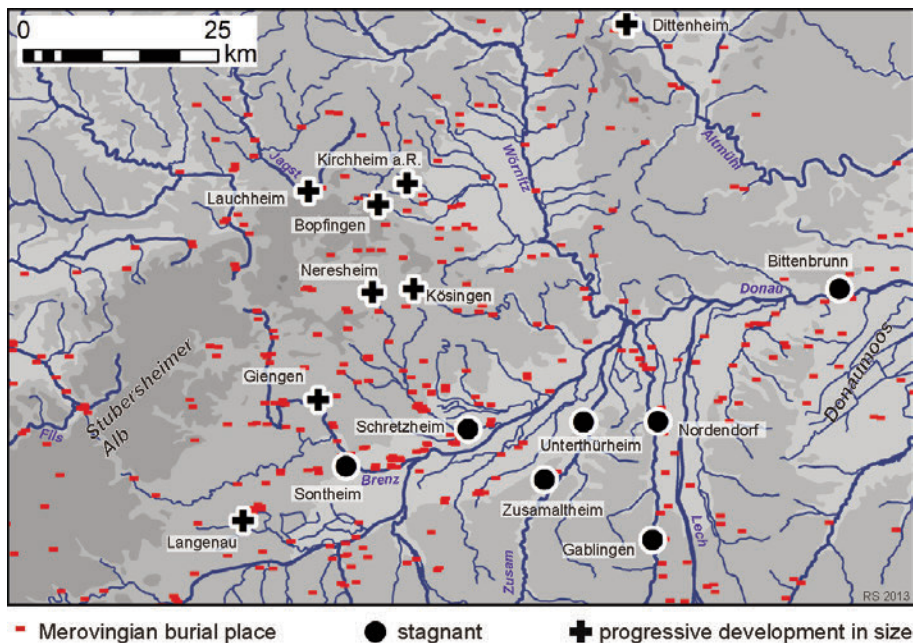
Fig. 4. Regional trends of burial places at the Eastern Swabian Alb and the adjacent Donau valley during the Merovingian period (Schreg in press).

Changing ground water levels affected the surrounding land. At the settlement of Merdingen, approximately 4,5 km from the bluff of the river Rhine, the water level rose during the 7th to the 11th century. Because of the resulting soil wetness, the land degraded and was in large parts not suitable for agrarian use any more (Lommerzheim 1988, p. 7). Rising ground water is a well known phenomenon at smaller rivers and creeks, caused by increasing soil erosion and mill ponds. Archaeological finds show the important role of mills during the early Middle Ages. At large rivers mills however were often constructed as ship mills, as for example the water mill from Gimbsheim, dendrochronologically dated to 600-655 AD (Höckmann 1997; Gräf 2006, pp. 141-144). Because they are part of the grain production, they are a phenomenon of already 'cultivated' landscapes.

The river, however, provided interesting possibilities for people, living on its banks.

In Main and Neckar a remarkable number of medieval log-boats and ships have been found due to some systematic research, but for the Rhine and Danube, we have less information (Kröger 2013 in press). The

important role of the Rhine as an axis of transport is well known from written sources as well as from archaeological evidence (Ellmers 1972). Ceramic finds for example show distributions along the river as well as crossing the river (Schreg 2012b; Châtelet 2002). A log-boat from Speyer dendrochronologically dated to the 6th century (Ellmers 1972) is a direct evidence for the usage of the Rhine for transportation. Material analysis of golden foil crosses, quite common in 6th and 7th century burials, indicate the use of Rhine gold (Hartmann, Wolf 1975). Since many gold objects in this period were made of secondary used gold, this is no reliable evidence of early medieval gold panning at the Rhine.

There are several excavations of early medieval settlements close to the Rhine and the Danube. Speyer-Vogelgesang (Bernhard 1982), Muffenheim (Damminger, Gross 2008) and Breisach-Hochstetten (Lommerzheim 1988) are some of the more prominent examples. The material culture of these settlements provides little evidence for fishery, boating or other specific economy connected with the river and its valley. There are only few archaeozoological data which do not allow any comparison between sites near the river and in the agrarian landscapes of adjacent high terraces.

At the Danube the situation is quite similar. Indications for a specific land-use of the riverscape are missing. However, lack of evidence is no proof for uncultivated landscapes. Remarkably, some fish-hooks were found in a Merovingian burial at Großprüfening near Regensburg. The grave belongs to a burial ground which does not fit the norm of Merovingian burials, but represents traditions well known in landscapes of Slavonic settlement northeast of the Danube (Eichinger, Losert 2003).

In contrast to the Rhine there are several swamps along the river, which do not result from back waters. The already mentioned Donaumoos, going back to the last glacial, results from dammed-up water. Early medieval sites omit the Donaumoos. There are many sites of iron smelting, mainly from the late Iron Age (Seitz 1937) and probably connected to the nearby oppidum of Manching. Slags from early medieval settlements in the surrounding area (e.g. Zuchering: Weid 2000) raise the suspicion, that swamp ore was also an economic factor of the early Middle Ages. Merovingian burial places are situated close to the Donaumoos and indicate some kind of land use in that swampy area. An interesting indication for another aspect of the marginal land of the Donaumoos comes from a hoard deposit, consisting of the sherds of a pot and 196 amber beads. This hoard most probably dates to the migration period and joins to some few other hoards of that time found in bogs (Maier 1986).
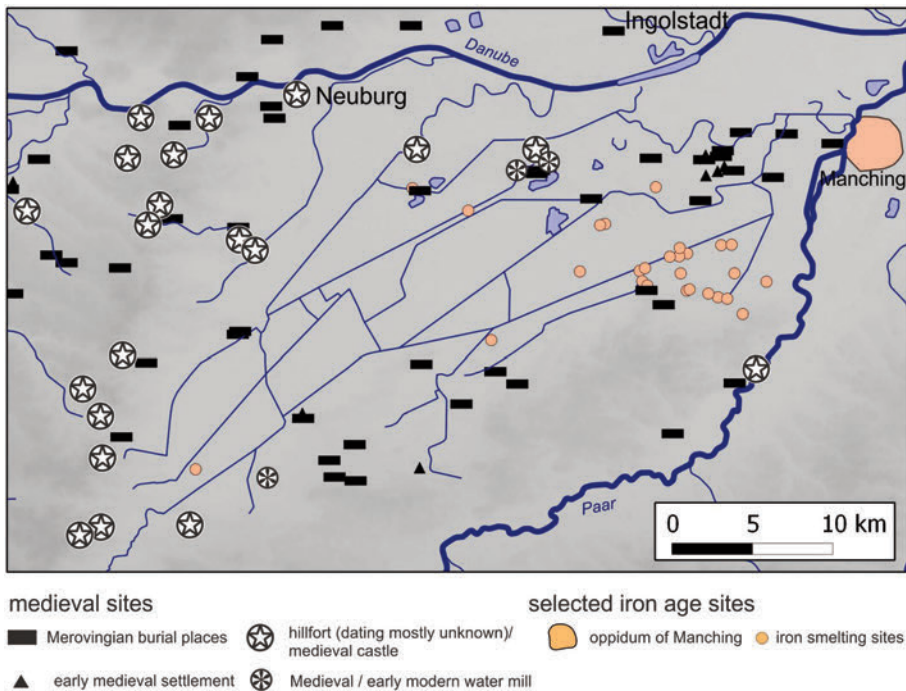
Fig. 5. Late iron Age and early medieval sites at the Donaumoos (data from Seitz 1937, Trier 2002 and BayernViewer Denkmal).

## 6. Low Mountain Ranges

Southern Germany is geographically characterised by several low mountain ranges. Some of them lack early medieval burial grounds as well as early place names, as the Black Forest, the württembergisch-fränkische Keuperland, the Palatinate mountains (and the adjacent French Vosges) as well as the Odenwald, the Spessart or the Ore Mountains. They were in general settled quite late mainly in the 11th–13th century and previous reconstructions of the "Urlandschaft" saw them as unsettled forested landscapes. These landscapes include altitudes close or above 1400 m asl, which were hardly suitable for agriculture. In contrast to several regions of the Swiss and Austrian Alps, where many scattered sites connected with a grazing economy are known (Meyer 1992; Geiser, Boscardin 1973; Hebert *et al.* 2007), there is little information on settlements at higher areas of the low mountain ranges.

Other landscapes within the German low mountain ranges are only at around 400-800 m asl and provide reasonable conditions for agriculture.

These landscapes, however, were often rangy with a rather cool climate and high precipitation. They were in fact vulnerable against climate changes, soil erosion and agrarian productivity was limited. Non-agrarian production and various resources were important factors for the occupation. Settlement occupation in several low mountain ranges shifted in altitudes during times (Christl 2004; Stadelbauer 1992). There are indications for an intensified occupation during the high and late Middle Ages, followed by a reduction of settlements during the 14th and 15th century. Possibly more suitable conditions during the medieval warm period favoured agrarian cultivation.

Archaeological research regarding the low mountain ranges concentrated in some landscapes, which have been researched over decades. This is especially true for the Northern periphery of the German low mountains ranges, where medieval rural settlements have been excavated already in the mid of the 20th century (Stephan, Tönsmeyer 2010; Stephan 1979; Grimm 1939; Janssen 1965). In many cases, as for example in the low mountain ranges of the Weser region, there are plenty of deserted villages, showing a high vulnerability of these settlement landscapes.

In Southern Germany's low mountain ranges there is comparable little archaeological evidence other than churches, monasteries and castles (Schreg 2009a). This may be due to formation processes, because preservation conditions for typical settlement sites are often quite poor and possibilities of archaeological surveys are restricted by steep sediments and modern forests. Stone architecture of monasteries, churches or late medieval castles however has higher chances of preservation than rural settlements. Therefore, the archaeological record is biased and shows a preference for top-down perspectives. In consequence archaeological and historical research assumed an organized colonisation, driven either by the ambition of some noble families to establish their own territory, by monasteries engaged in cultivation and sovereigns investing in mining. Recent research in several regions of low mountain ranges in Southern Germany challenges these ideas.

*6.1. Early medieval 'colonisation' at the Eastern Swabian Alb*

A valuable case study comes from the Eastern Swabian Alb, north of Ulm. The Stubersheimer Alb at around 680 m a.s.l. is situated at the southern periphery of an area, that has been considered as an unsettled landscape during the early Middle Ages (fig. 1). Merovingian burials are missing, but place names ending with –heim, –hausen, and –stetten
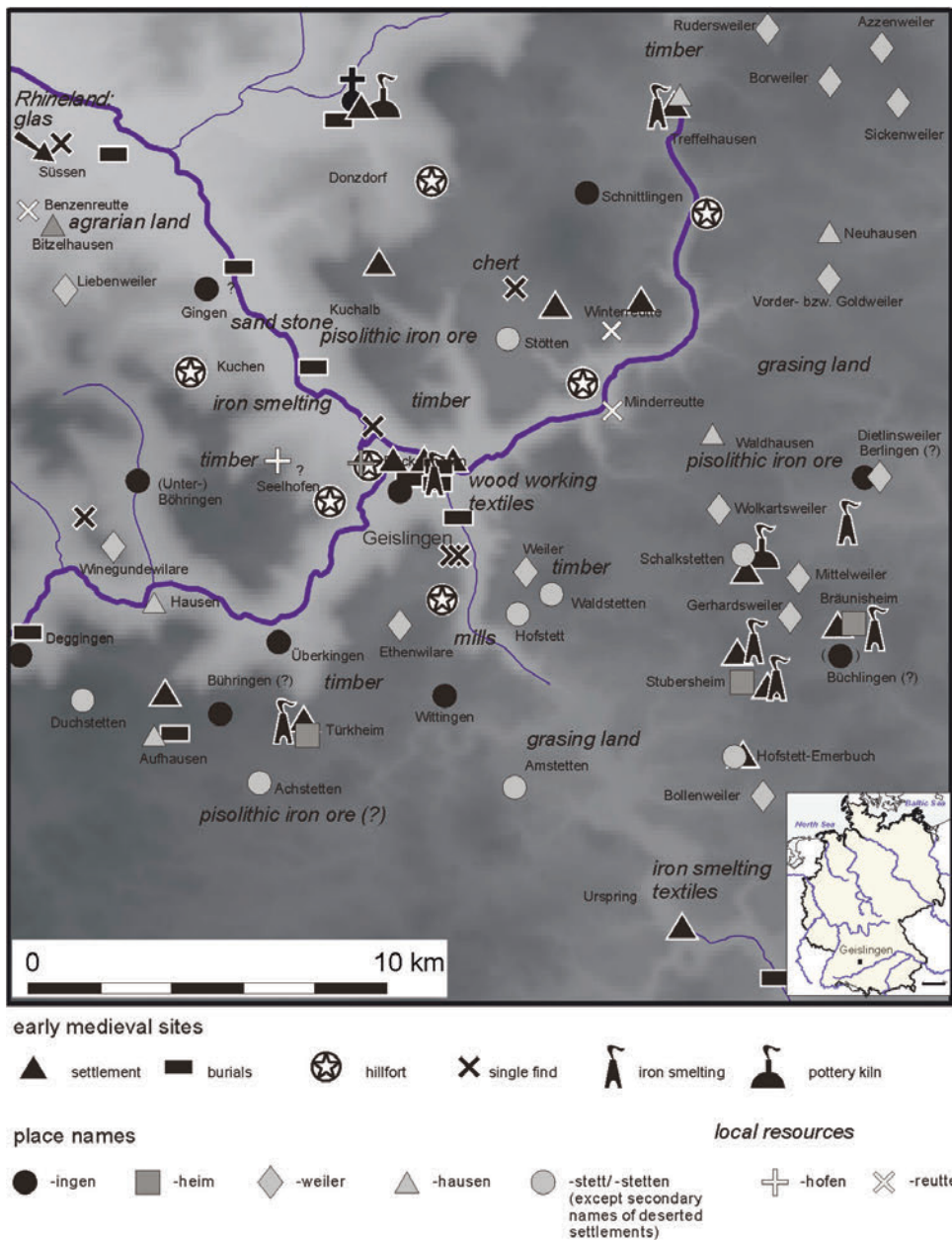
Fig. 6. Early medieval sites, place names and resources at the Stubersheimer Alb (graphics by R. Schreg).

were taken as an indication of a late Merovingian settlement, probably as a colonisation starting in the neighbouring Geislingen valley (Schreg 2009c). In contrast to many other areas there is a striking number of settlement sites grace to multi-annual surveys and a permanent surveillance of construction sites during many years (Kastowsky-Priglinger *et al.* 2013). There are several settlement sites dated by ceramics and radiocarbon samples to the 6th/7th century in the periphery of the late medieval villages. Slags of iron smelting are also known in large numbers from several locations, most of them close to the early medieval settlement sites. Previous studies in the area to the north showed evidence of extended early medieval iron smelting (Kempa 1995). Palynological studies at a small bog some kilometres to the north (Smettan 1995) showed little effects of settlements in pre-Roman times as well as during the Roman period. The increasing amount of birch pollen however indicates a shrubbery used for firewood. There is a first small peak on non-arboreal pollen during the migration period, followed by a second, somewhat more distinct peak during the early Middle Ages. This second peak correlates with the first evidence of settlements. The lowest amount of arboreal pollen dates to the late Middle Ages, followed by a reforestation, which probably reflects the numerous late medieval deserted settlements of the region (comp. Schreg 2013a).

Regarding the late medieval settlements, we learn of an important restructuring of the settlement sites. There is a concentration in the still existing villages, which first affects the early medieval sites and later on a number of late medieval hamlets. This late medieval villages are rather known from the written record than from archaeological evidence. There is, however, no indication, that iron smelting or other handcrafts played any important role within these communities. Even for the role of forestry, there is little evidence; just a place name indicates a log flume at the northern escarpment of the Alb.

It is quite clear from this example, that the 'colonisation' is a long term process, affecting landscapes far from being untouched or uncultivated. In a first phase resources as wood and iron ores were used, but later on the agrarian resources gained in importance. The settlement finds predate the common chronology of some of the place-names. Obviously, the foundation of settlements and their distinct naming belong to different stages of settlement history. It was probably only later, when an increasing interest in controlling these regions evolved. 'Colonisation' and 'cultivation' of these regions was not necessarily organised by some authorities, but may have been driven by local communities (Schreg 2008).
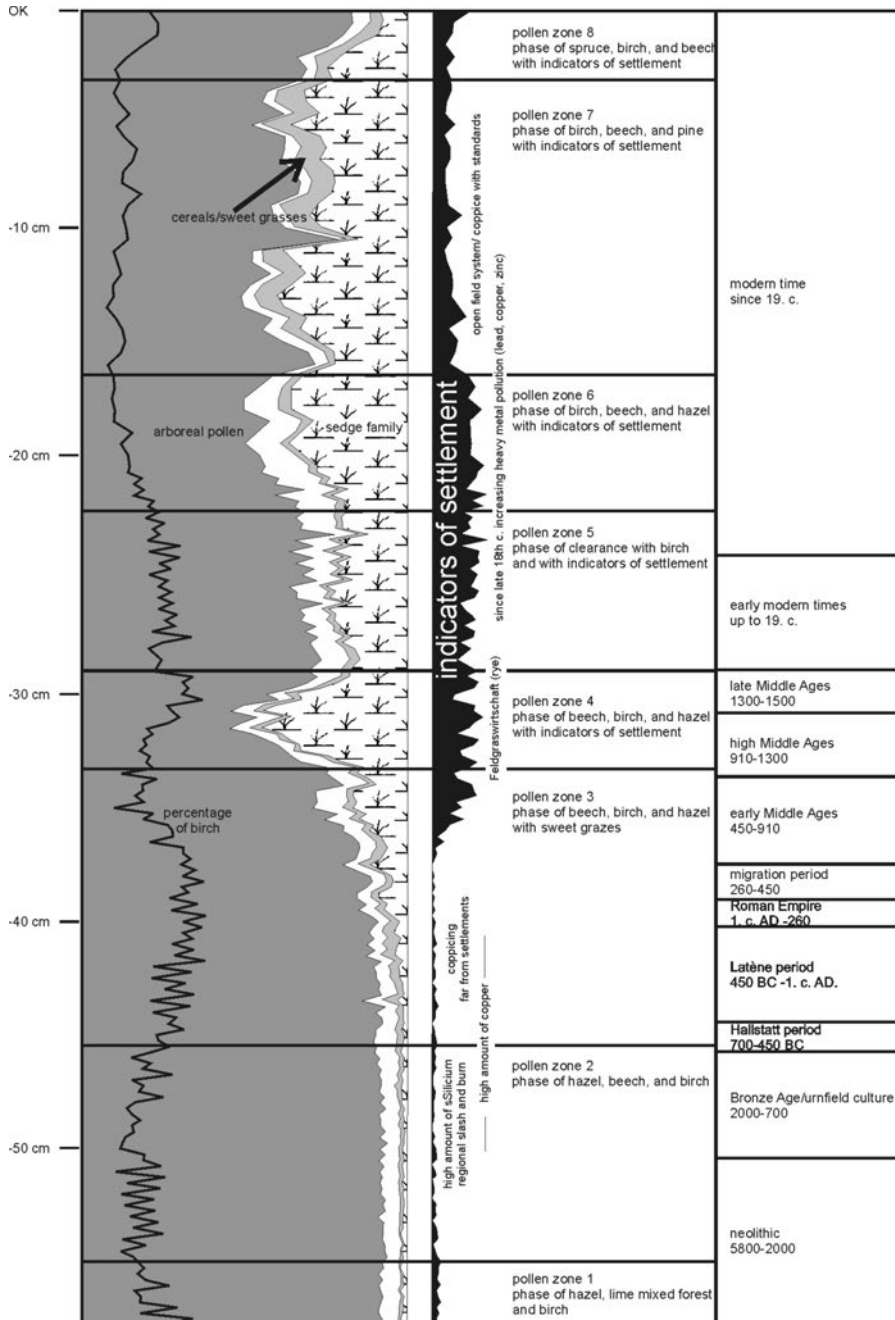
Fig. 7. Palynological studies at the Raue Wiese near Böhmenkirch (redrawn by the author, after Smettan 1995).
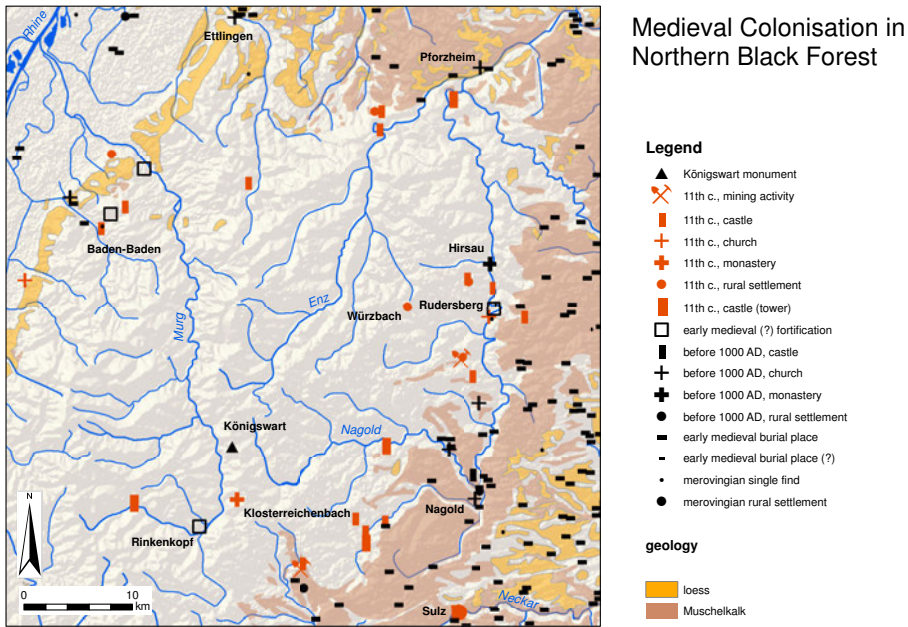
Fig. 8. Early medieval settlement in the Northern Black forest (graphic by the author).

## 6.2. 'Colonisation' and planned settlement in the Northern Black Forest

Another landscape of Southwest Germany, which has been seen as an uncultivated landscape is the Black Forest (comp. Lorenz 2001a; Schaab 2003). There are no archaeological sites, no early place names and no written documents, which could show an early medieval settlement activity. The only exception are the valleys of Nagold (Schreg 2009b), Breg (Klug-Treppe 2000) and Dreisam at the periphery of the mountains, restricted to some more fertile soils (Lengert *et al.* 2001). At Nagold there is evidence of a noble family since the second half of the 8th century, and there are graves going back to the 2nd half of the 5th century (Blaich 1999). Archaeological research revealed some medieval fortifications, churches and monasteries and in consequence developed the idea of a colonisation driven by feudal power. Castles have been understood according to Werner Meyer's theory of "Rodungsburgen" (Meyer 1979) as the centres of local territories of cultivation and resources exploitation (Lutz 1992). There are however several fortifications as the Rinkenkopf near Baiersbronn (Morrissey, Müller 2006), which have rather understood as refuge forts within an otherwise unsettled, remote landscape. In many cases, as for example in the nearby Southern Palatinate mountains

they have been linked to the Hungarian raids during the late 9th and early 10th century. Therefore their existence was rather taken as an indication for the uncultivated, remote character of these areas, rather than as an indication for some regional human activities (Pantermehl 2013).

The settlement of Oberwürzbach, abandoned at around AD 1400, situated in the northern Black Forest, 8 km west of Calw and directly south of Würzbach, allows for the first time some insights into rural settlements (Schreg 2009b; Schreg 2013b). Within a modern forest, the remains of around twenty farmsteads as well as the adjacent fossil fields are very well preserved. Research by methods of extensive archaeology show the typical form of a forest village, with long strip plots behind the farmsteads ('Waldhufendorf'), which have been understood as a phenomenon of a centrally organized colonization. There are, however, several indications for a complex genesis of this village. Stone alignments and dimensions of the plots preserved under forest are consistent with the field system of the still existing village of Würzbach, which is in itself a typical forest village. It is not quite clear if the abandoned settlement and the existing one were in existence at the same time or if the abandoned parts in the south were relocated to the existing village. Analysis of a 16th century rental, which lists all farmsteads of Würzbach (*Lagerbücher* 1958, pp. 127-129) shows the use of different surface measure systems in the western and eastern part of the village. This is an indication, that the settlement is not as homogenous as it may seem at the first glance. Either both parts are different in age or the once belonged to different authorities. Whatever, it becomes clear, that the formation of the regular plan of the Würzbach forest village is the result of some restructuring. Looking closer on the remains in the forest, we can identify two areas with the remains of small, block-shaped plots, which are by now undated. A nearby geoarchaeological test trench showed a huge deposit of colluvial sediments, 14C-dated to the late 7th to the early 11th century. This is a clear indication for intensive land use before the postulated 'colonisation' of that region, which has been connected with the authority either of the monastery of Hirsau or the counts of Calw (Lorenz 2001a).

Palynological studies in a peat bog appr. one kilometre northeast of Würzbach also indicated after an Iron Age settlement period a clearance in the early Middle Ages (Gassmann *et al.* 2006, pp. 298-300; Rösch 2009). At one profile (BRM 1), between the Roman period and the late Middle Ages there was a huge relocation of soils, bringing early Iron Age materials on the top of the Roman sediments. The second profile (BRM 4) provides more continuous data, showing pre-Roman and Roman activities as well as an opening of the landscape at latest in the 10th century.
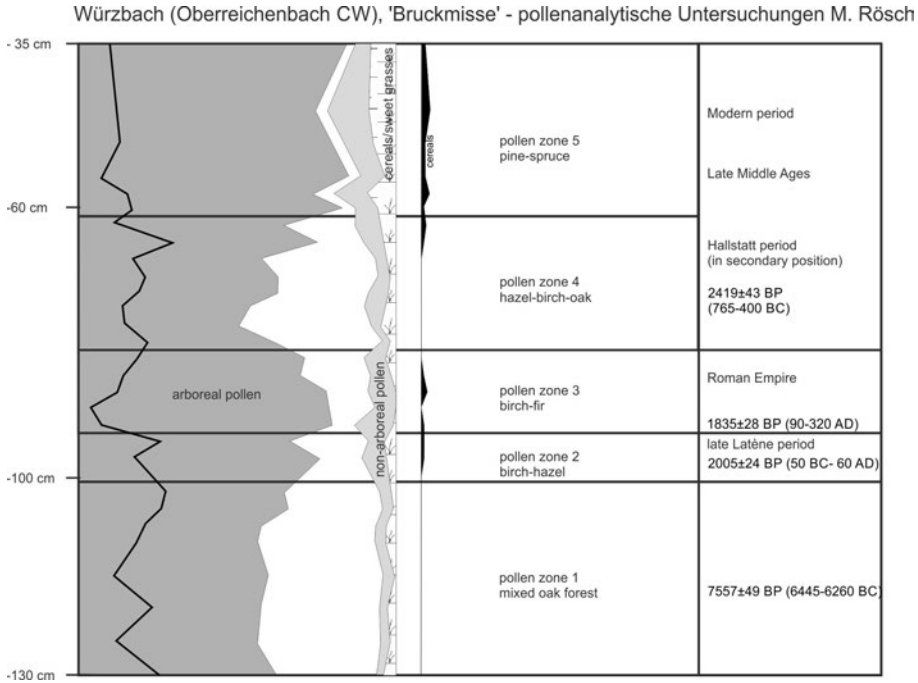
Fig. 9. Palynological studies at Bruckmisse 1 near Würzbach (redrawn by the author after Rösch 2009).

Hirsau monastery has been re-founded in 1069, but goes back to an earlier Carolingian foundation. Within the list of the original possession of the Carolingian monastery, only known from a later manuscript, Würzbach is mentioned, but historians filed this as a later interpolation.

As at the Swabian Alb, there are indications for some early medieval land use before a presumed colonisation of the landscape. Besides these indications of early medieval occupation we learned in recent years by new archaeological evidence of prehistoric iron smelting in the Nagold valley (Gassmann, Wieland 2007; Wieland 2009) and Roman presence in various valleys of the southern and central Black Forest (Wagner 2011). Similar observations have been made in other low mountain ranges in Southwest Germany. In most cases, it is geoarchaeology, which provides information on radiocarbon-dated soil erosion during the early medieval period in landscapes, which have been considered as un-inhabited or uncultivated at that time. Examples come from the South-ern Black Forest (Knopf *et al.* 2012) and the Pfälzerwald west of the Rhine (Pantermehl 2013).

early holocene sediments
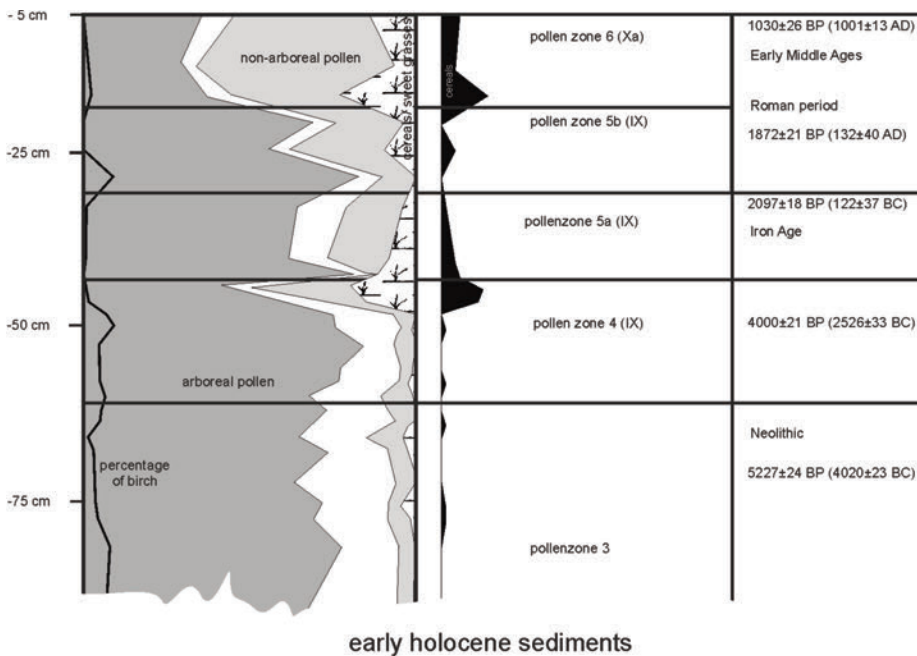
Fig. 10. Palynological studies at Bruckmisse 1 near Würzbach (drawn by the author, data from European Pollen Database, comp. Rösch 2009).

## 7. Outland use

The examples presented in the previous sections give important evidence, showing that the 'uncultivated' landscapes in the early Middle Ages were probably rather economic outlands than wilderness. Early medieval colonisation is in fact not the beginning of settlement activities, but rather a strengthening of agrarian grain production. In many cases rentals provide the most important written record. Because their main function is the administration of feuds and taxes, they concentrate on the farmsteads and their agrarian production, but provide little information on outland activities and handcraft. However, the fact that these activities were only present to a small degree within written sources, it may indicate an organisation at a local level or probably at the "middle ground".

To understand the character of the outland use, we have only a small archaeological database. The probably important role of grazing in the low mountain ranges as well as in the floodplains is therefore quite difficult to judge. In general it is assumed, that during the migration period

livestock breeding played a predominant role. The small number of bioar-chaeological studies does not allow the tracing of regional trends yet.

Other activities which were possibly important for the occupation of marginal landscapes are the metallurgical resources and the need for firewood. At the Stubersheimer Alb probably iron smelting was an impor-tant factor of the early migration period settlement phase. At the Donaumoos we have little modern research, but it is rather plausible that besides an important iron smelting of the Latène period, ores have also been extracted during the early Middle Ages. Within the Black for-est there is also the possibility of iron smelting, even if up to date only smelting places of the Iron Age have been identified (Gassmann, Rösch, Wieland 2006). The later medieval settlement probably in the Black for-est started in many cases with the production of glass, which can be identified archaeologically (Kneißler 2001; Jenisch 2001).

In the Pfälzerwald around 5 km northwest of the Cistercian monastery of Eußerthal, founded in 1148, there is a site of Carolingian tar production. The location is far from the early medieval agrarian land-scapes in the Rhine valley and at some plateaus some kilometers to the south. We have little information about the settlement itself, as excava-tions concentrated on some kilns. There is however, a huge quantity of high quality ceramics, which probably comes from either permanent or at least seasonal living areas (Pantermehl 2013).

## 8. Conclusions

We have little information how floodplains and low mountain land-scapes were in fact used during the early and high Middle Ages. There is enough evidence to state, that they were used in some ways in fact. It is better to talk of 'uncultivated' landscapes instead of 'natural' land-scapes, but nevertheless we must be aware, that during the early Mid-dle Ages 'uncultivated' landscapes were for sure cultural landscapes! The occupation of these marginal landscapes has been described as a coloni-sation. This has however some implications, which were unproven or even unadequate. Early medieval occupation in Southern Germany is not the conquest of a wilderness, it is the intensification of land use prac-tices, changing the landscapes from marginal outlands to agrarian in-lands. Furthermore, we have to question the role of the authorities, which have been emphasized according to the biased and selective writ-ten record. The important role of the rural lower classes for settlement changes has often been neglected (comp. Schreg 2013a).

Instead of the perspective on the politico-factual history we need a broader perspective, which takes the complex interaction of humans and their environment into account. Narratives of wilderness and their authoritarian organized colonisation have to be seriously re-evaluated. At least these concepts are much too simple to understand the complex interaction between environment and humans, which for an important part is coined by the ideas how landscape

## Acknowledgments

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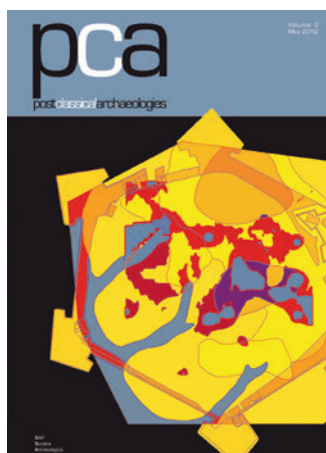
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# LE ORIGINI DELLA CITTÀ MEDIEVALE