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450 POST LBK YEARS IN SOUTHERN BAVARIA

ABSTRACT: Southern Bavaria in post LBK times is a small area between three big cultural regions: In the west Hinkelstein-Großgartach-Rössen, in the east the Stroked Pottery culture and in the southeast the early Lengyel complex. It took a lot of impact from all regions, finding its own way, what we call today "Südostbayerisches Mittelneolithikum" (SOB). A non-interrupted transition from LBK to SOB still is not evident. By carrying on general LBK traditions, the SOB starts with a sudden reduction of pottery decoration. In SOB I it belongs to the European Stroked Pottery style, close to Bohemian phases II and III, with a few "special Bavarian" decoration aspects. In SOB II the first "Bavarian" pottery style emerges. The settlement area spreads out into other regions: Plzeň Basin, the Basin of Linz (Upper Austria) and towards Southwest Germany. A lot of cultural contact sure is focused on the Bavarian chert and the SOB region transfers influence from the Lengyel region to Southwest Germany. In SOB III things are going to get mixed up. A continuous change in pottery style and architecture can be sketched out for the whole SOB. But the most changes in cultural life – one of them is the introduction of the famous circular ditch enclosures – happen in phase SOB IIb with the first contact to the Lengyel complex. At the end the continuous transition towards the first Bavarian Copper Age culture Münchshöfen begins in the immediate contact area SOB-Lengyel (Moravian Painted Ware) in Upper Austria.

KEY WORDS: Southeastern Bavarian Middle Neolithic Period – Stroked Pottery Culture – Moravian Painted Ware – Cultural development and contact

PREFACE

"Southeastern Bavaria" or "Südostbayern" is no official geographical term. In non archeological context it's used only for a small part of Bavaria between the lake Chiemsee and Salzburg in Austria. Only archeologists use the term to subsume the administrative districts Upper Bavaria, Lower Bavaria and the southern part of Upper Palatinate and to distinguish from Franconia and Bavarian Swabia. In this archeological way it is used

here too. Within a geographical meaning the term "southern Bavaria" is preferred.

RESEARCH HISTORY

Regarding old and new literature, a lot of different terms can be found, all belonging to the post LBK development in southern Bavaria. Terms like "Bavarian Stroked Pottery", "Bavarian Rössen", "Munzingen

Pottery", "Unterisling Type", "Oberlauterbach Type", "Maging Kind" and "Oberlauterbach Group" (Nadler *et al.* 1994: 128). Why did so many terms appear? Because post LBK pottery in southern Bavaria is decorated with lines of punctures or with incised lines or with a combination of this two techniques in a wide range of variations. While Bayerlein (1985) focused on the pottery decorated with incisions defining his "Oberlauterbach Group", the exact relation to the stroked pottery found in the same region and on the same sites stayed doubtful for a long time. Bavarian researchers including myself did not notice that M. Zápotocká as early as 1970 sketched the typological pottery development in the Bavarian Danube region basically in a correct way, valid till today (Zápotocká 1970: 29).

Being discontent with this situation, a group of Bavarian archeologists met in the year 1993 and decided to call this period more general "Südostbayerisches Mittelneolithikum" or SOB, what can be translated in "Southeastern Bavarian Middle Neolithic Period" (Nadler *et al.* 1994). Here "Middle Neolithic" is used in a West German research tradition (Lüning 1996). After this time, Copper Age starts in Bavaria with Münchshöfen culture. A first subdivision in SOB old (SOB I), middle (SOB II) and young (SOB III) was defined by the help of pottery decoration and exemplary find complexes: SOB I are all Middle Neolithic finds in the southern Bavarian loess region that cannot be distinguished from early Bohemian Stroked Pottery (phase II and III after Zápotocká 1970). Therefore, in this period, southern Bavaria belongs to the settlement area of the Stroked Pottery culture. No striking Bavarian peculiarities can be described in pottery decoration or other cultural features. The typical find complex comes from Straubing-Lerchenhaid, excavation 1980–82 (Nadler *et al.* 1994: 132–136). SOB II begins – and that's the definition – with the emerging of an own Bavarian decoration tradition. That's the period when pottery decoration shows typical Bavarian peculiarities: Decoration bands and main motives are interrupted in multifarious patterns. In Bohemia bands with interrupted patterns are an exception and can be detected as Bavarian import. A good example is a pear-shaped vessel from Praha-Dejvice (Zápotocká 2013: 45, Fig. 15: 8). And in Bavaria both techniques – strokes and incisions – are used. The typical find complex is the pottery from the circular ditch enclosure Künzing-Unterberg, Lkr. Deggendorf. Different percentages of stroked and incised decorated ware in the lower and upper parts of the ditches show that strokes are slowly replaced by incisions (Nadler *et al.* 1994: 139–144). SOB III is the period, when old decoration rules seem to be no longer

important, while new decoration aspects appear, already announcing the next archeological period: the Copper Age. The typical find complex is the inventory of a huge settlement pit from Ergolding-LA 26, Lkr. Landshut (Nadler *et al.* 1994: 145–153). Since 1994 all researchers including myself entrusted with this typical find complexes did not manage to publish the important materials. A recently finished PhD work by Florian Eibl that focuses on settlement patterns, smaller excavated complexes and survey findings, burials and figurines brought back the discussion, whether parts of the southern Bavarian Middle Neolithic development should be regarded as an own archeological cultural group named "Gruppe Oberlauterbach" (Eibl 2009, 2011).

This paper is a preliminary research report about general results of my yet unfinished PhD work with the title 'Typologie und Chronologie des Südostbayerischen Mittelneolithikum unter besonderer Berücksichtigung der Fundplätze Straubing-Lerchenhaid, Stadt Straubing (Grabung 1980–82) und Geiselhöring-Süd, Lkr. Straubing-Bogen' at the University of Bern, Switzerland. Therefore it can't go into details. A critical few to formative and post-depositional circumstances of excavated finds and to the methodological background of this research work will be given in the finished PhD version. The work focuses on the typological study of pottery and the absolute dating of pottery complexes. Further studies on settlement features are outlined in a more general and additional way. The problems of mixed find complexes – most of the mentioned sites are settled at all neolithic periods – is one reason, why lithic material is not included to this work.

First results I sketched out 2006 (Engelhardt *et al.* 2006: 66, Abb. 25).

GEOGRAPHICAL AND CULTURAL PLACEMENT

Coexisting to the SOB in Bavaria we have in the west: the sequence Hinkelstein-Großgartach-Rössen (Spatz 1996, Engelhardt *et al.* 2006, Denaire 2009), in the east the Stroked Pottery culture (Zápotocká 1970, 2013) and in the southeast the early Lengyel complex (Pavúk 2007) (*Figure 1*).

MAIN SOURCES OF RESEARCH: POTTERY TYPOLOGY, ABSOLUTE DATING, AND CONTACT FINDS

The main sources of research are settlement finds (Eibl 2011: 81–82). Graves show a high rate of ritual

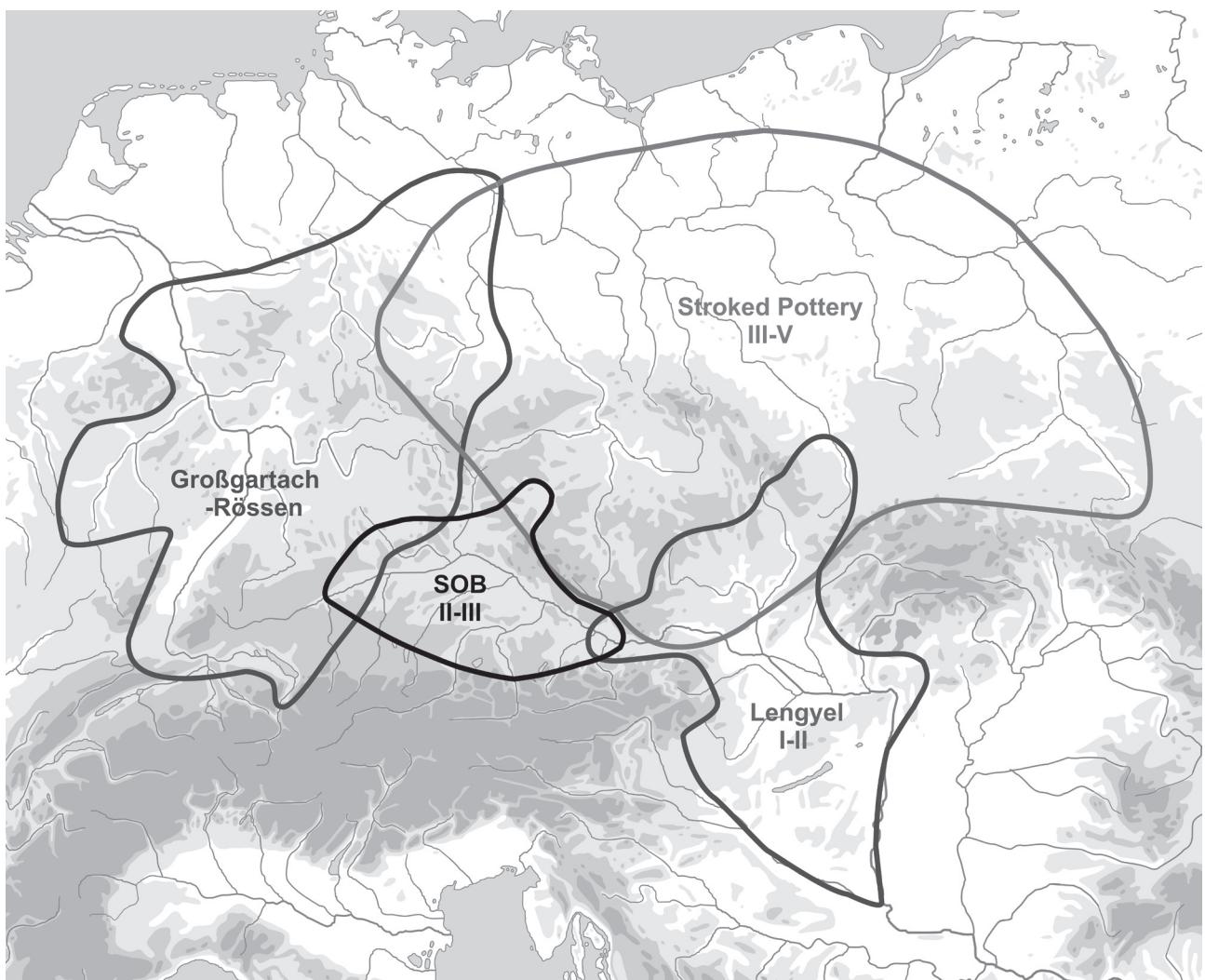


FIGURE 1. Maximum extension of the Southeastern Bavarian Middle Neolithic Period (SOB) and Neighbours (about 4800–4500 cal BC).

variation. The few known graves and small graveyards (Riedmeier-Fischer 1989, Eibl 2011: 91–95) allow to assume a continuous change in burial rituals with alternating influence from all cultural neighbours. Only a few SOB figurines are known, but they show a tradition reaching out from LBK as far as Münchshöfen (Engelhardt 2010), a slightly increased number of figurines – compared to the whole development – seem to appear in the first half of the Middle Neolithic period (Eibl 2009).

The time line (*Figure 2*) shows the sequencing of the SOB, attributing to my own pottery analysis and absolute dating. More than 50 conventional and AMS radiocarbon dates from different Bavarian sites and pottery complexes

confirm the typological and quantitative pottery analysis. The Bavarian absolute dates fit quite well to western German dates but they differ from dates from Austria (compare Riedhammer 2012, Gleser 2012, Städler *et al.* 2006, Stöckli 2002). Only the end of the LBK and the beginning of the SOB can't be fixed exactly with available absolute data at the moment. Extrapolating SOB dates and considering the latest LBK dates from Bavaria and elsewhere SOB must have started between 5000 and 4900 cal BC (Riedhammer 2012). This means it is unlikely that LBK and the early Middle Neolithic period are overlapping for a longer period in Bavaria. This contradicts to the general opinion that LBK and Hinkelstein are overlapping in western parts of Germany.

Above the time line (*Figure 2*) the settlements considered and their duration are represented as bars. A lot of contact finds from the western part of Germany as well as from the eastern Stroked Pottery culture and from the Moravian Painted Ware allows to draw parallels to this regions (*Figure 2*). The archeological parallelisation traces back to the work of several researchers (for example: Zápotocká 1993, 1998a, 2013: 52–55, Nadler *et al.* 1994: 156–163, Riedhammer *et al.* 1999: 36–43, Grömer 2001, 2009, Kazdová 2004, Poensgen 2009, Gleser 2012: 53–60, Spatz 1996: 529). The cultural contacts surely are focused on the Bavarian striped chert (Abensberg-Arnhofen and related) that is found everywhere around, from North Bohemia to the Alsace, from Hesse to Moravia.

POTTERY DECORATION AND IT'S DEVELOPMENT

How the SOB starts? It starts with typical Bohemian Stroked Pottery phase II after Zápotocká (1970). There are only a few finds, a few sherds like in Irlbach, Lkr. Landshut (Koch 2004) or a few pits at the edge of former big LBK settlements just like in Köfering-Kelleräcker, Lkr. Regensburg (Matuschik 1992). The well determinable finds are not only limited to the river

Danube region, they also occur in the river Isar valley. The biggest settlement so far is Straubing-Lerchenhaid excavation 1980–82 (Nadler *et al.* 1994: 132–136). Later excavations nearby show that the settlement existed at least until the middle phase of SOB, moving north-westwards (Husty 2007). The houses of the excavation 1980–82 (Nadler *et al.* 1994: 130, Abb. 1) show an impressive mixture of LBK and Middle Neolithic characteristics (compare *Figure 3*). They have got double post-hole rows, long pits following the long sides of the houses and some of them have northwestern corridors. All these are typical LBK features. But at the same time they show bulged or trapezoid shapes and a reduction of three-post-hole-rows inside the houses which are typical Middle Neolithic characteristics. The pottery found in Straubing-Lerchenhaid is mainly decorated with instruments with two points. With these instruments, alternating punctures were placed on the surface, forming the decoration built up of bands below the rim, vertical bands and more than one chevron band one over the other running around the vessels (Nadler *et al.* 1994: 134–136, Abb. 3–5). Decoration and vessel shapes coincide incredibly close with finds from the Stroked Pottery phase IIa graves from Praha-Bubeneč (Zápotocká 1998b: Taf. 32–39). In addition there are a few other characteristics. A small percentage of decorated pottery combines fine incised lines with the

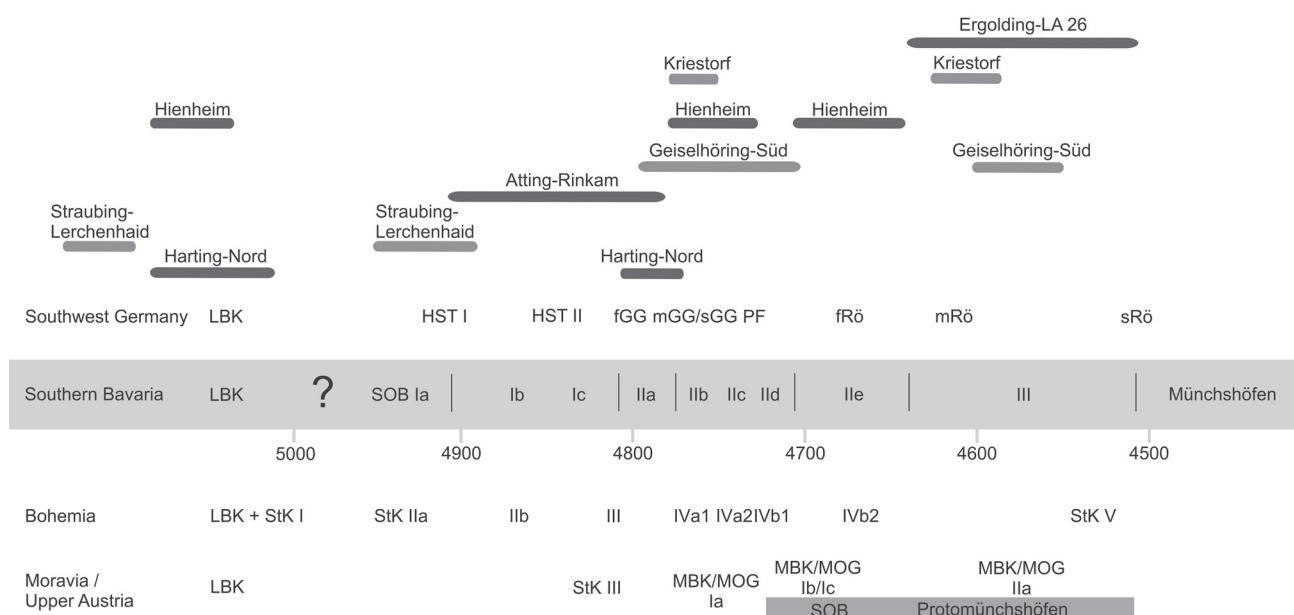


FIGURE 2. Timeline of the Southeastern Bavarian Middle Neolithic Period (SOB) and Neighbours. Settlements mentioned in the text and their durations presented as bars.

typical alternating strokes (Nadler *et al.* 1994: 134–135, Abb. 3: 23, 24; 4: 10) and instruments that had more than two points were used with "tremolo" movement (Nadler *et al.* 1994: 134–136, Abb. 3: 12, 22; 4: 20, 28; 5: 1, 40). In Bohemia this technique belongs to the middle phase of the Stroked Pottery culture. But in Straubing-Lerchenhaid the decorations made with these tools show the typical archaic system: More than one chevron band laid one over the other. This decoration aspects remind of some strange decoration aspects Zápotocká (1986) pointed out for the pottery of grave 2/64 from Vikletice in northern Bohemia. There small incised hanging triangles are combined with the typical Stroked Pottery phase II decoration. And one vessel is decorated with an instrument with 5 points in "tremolo" movement. Zápotocká connected Vikletice with western German Hinkelstein and the river Rhine LBK. So, the similarities in the pottery decoration of Straubing-Lerchenhaid and Vikletice can be understood as a strong hint that contacts between Hinkelstein people and Bohemian Stroked Pottery people went via southern Bavaria (compare Spatz 2002: 285–286).

But where do these strange decoration elements – strange for the Bohemian Stroked Pottery culture as well as strange for the Bavarian LBK – originally came from? Maybe a look back to one of the latest LBK settlements of Bavaria helps: Harting-Nord, Lkr. Regensburg (Herren 2003). Pechtl (2009) has proved that there are a lot of minor regional differences in the late Bavarian LBK decoration and that different decoration styles are used at the same time. This can be well recognized in Harting-Nord: Here we've got late Bavarian LBK with incised curvilinear decoration and pointed rows that

structure the decoration system in horizontal and vertical directions (for example Herren 2003: Taf. 13: L1165–L1166). Another style is made solely of strokes. This LBK pottery belongs to the Šárka horizon (for example Herren 2003: Taf. 12: L418–L420; Taf. 15: L646). In addition a few LBK vessels from Harting-Nord (Herren 2003: Taf. 11: L363; 22: L571) show decorations executed with tools with more than one point, the so-called "Kammstich" decoration, which is rather rare in southern Bavarian LBK and limited to its western part (Pechtl 2011: 59–60). The decoration system of these examples is made of slim bands that show a clear influence from northern Bavaria. Best analogies come from Upper Franconia (Kunkel 1955: Taf. 23–24, Bürger 2008: Taf. 1–5). So the idea to use instruments with more than one point seems to appear in southern Bavaria at the time of the late LBK by influence of northern Bavaria. A few sherds from Harting-Nord already remember the Stroked Pottery style (Herren, 2003: Taf. 4: S28.L70; 5: S47; 9: L1110; 17: S238; 23: S422; 27: S430.), but before the "phase II canonisation" (Link 2012: 281). The decoration doesn't look like the Stroked Pottery phase I from northern Bohemia (Zápotocká, Muška 2007) or the Dresden Valley (Link 2012), where parallel placed punctures made with instruments with two points prevail. In Harting-Nord occur decorations done with tools having from one to three points and were handled with and without an alternating or "tremolo" movement. This might be a first hint for an existing "Bavarian Stroked Pottery phase I style", but surely this kind of pottery decoration still is part of the late LBK. In this time people decorated pots with different styles (Pechtl 2011: 57) and just tried new things.

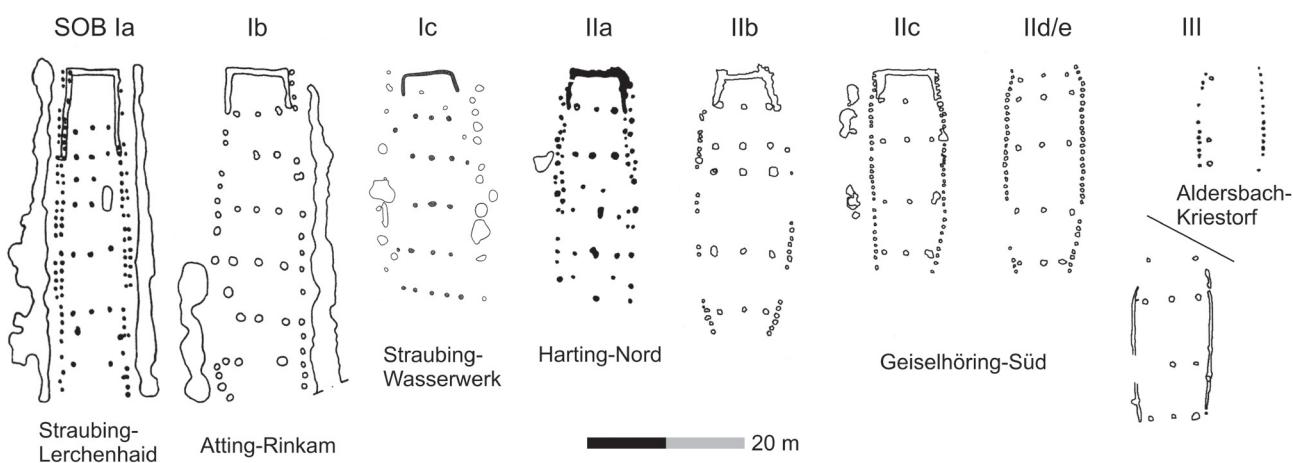


FIGURE 3. Houses (examples) and their development during the Southeastern Bavarian Middle Neolithic Period (SOB).

There is still no settlement or pottery complex to prove a not interrupted transition from LBK to the Middle Neolithic Period in southern Bavaria. Maybe we just did not find it till today, because most settlements are not excavated completely. In Harting-Nord, were Herren (2003) saw a transition phase, the settlement is interrupted at the excavated area, because too much is missing: Bohemian Stroked Pottery phase II after Zápotocká, how it was found in Straubing-Lerchenhaid and Atting-Rinkam, Lkr. Straubing-Bogen. The same situation we find in Hienheim, Lkr. Kelheim, were van de Velde (1979: 72) saw a not interrupted continuity from LBK to the Middle Neolithic period. But Bohemian Stroked Pottery phase II and III (SOB I) is missing completely in Hienheim.

Atting-Rinkam, Lkr. Straubing-Bogen, where we found four houses, one of them well preserved with fence (Riedhammer 2003: 472, Abb. 2) (*Figure 3*), shows how things are going on: In this small excavated area Bohemian Stroked Pottery phase IIb (Riedhammer 2003: 475, Abb. 5: 1–3) and III after Zápotocká (Riedhammer 2003: 478, Abb. 7) was found. And we've got examples of the first typical Bavarian decoration: short lines of double strokes interrupting and following the stroked bands – all this parallel to the bands (Riedhammer 2003: 475, Abb. 5: 5–6, 477, Abb. 6). And this first Bavarian decoration, coexisting with Bohemian Stroked Pottery phase III, is exactly what was found in Harting-Nord (for example Herren 2003: Taf. 8: S188, Taf. 9: S299). Atting-Rinkam gives the evidence that the transition from real Bohemian Stroked Pottery (SOB I) to an own Bavarian decoration style (SOB II) is a gentle one without necessity to change the settlement position during this process.

We are now in the middle phase of the SOB with an increasing number of settlements and a settled area spreading out into regions with other cultural backgrounds (*Figure 1*). It begins with the first "Bavarian" kind of stroked decoration, former known as "Munzingen Pottery". The site Nördlingen-Munzingen, Lkr. Donau-Ries did not deliver homogeneous pottery. Stroked decorated ware was found as well as incised ware and pottery decorated in the south-western German Middle Neolithic style (Nadler *et al.* 1994: 154, Dehn, Sangmeister 1954: 41, Taf. 6–8). This is the reason why the term "Munzingen" is not fitting for Bavarian stroked decorated ware in general.

There are some settlements that show us how things go on. Middle Neolithic settlement evidence in Geiselhöring-Süd begins with one sherd (SOB IIa) out of a roman pit. After that the different inventories of the Middle Neolithic pits show that the settled area in

Geiselhöring-Süd moves and spreads out during time from the west to the east (*Figure 4*). The same in Hienheim: The Middle Neolithic settled area here moves from southwest to northeast. The first pits from Geiselhöring-Süd and Hienheim contain pottery decorated only with strokes but now the interrupting short lines of strokes do no longer go parallel with the bands, but structure them diagonally (*Figure 5a*). In the next phase strong incisions appear and we've got it all: Vessels with solely strokes, vessels with only incisions and vessels decorated with both techniques (*Figure 5b*). Often the bands and main motives are incised while the interruptions inside the motives and the secondary motives are stroked. The decoration development goes on: The preference of techniques changes as well as the shape of decoration motives and the shape of the whole vessels. At the end of the SOB II period there are nearly no remaining strokes, with one exception: The southwest German kind of stroke, the "Großgartacher Doppelstich" or "Geißfußstich", also called "Rössen stroke" that first occurs in SOB IIb phase stays popular until its end. The percentages of the decoration techniques in the different pits of Geiselhöring-Süd change continuously. At the beginning strokes predominate, at the end incisions predominate. Instruments with two points predominate over the whole time. So the decoration change is just a question about how to handle the instrument.

At the end of the SOB development, rules how to decorate pottery seem to be no longer important and some vessels appear that show a mix between late SOB and following Münchshöfen style (see Bayerische Vorgeschichtsblätter 1988 Beiheft 2: 27, Taf. 22: 3, Meixner, Riedhammer 2009: 102–108, Abb. 8–11). Today we know that Münchshöfen already starts to emerge at the time of the late SOB II in the contact area of SOB and Lengyel in Upper Austria (Maurer 2013, Gleser 2012: 56–58, 77–78, Meixner *in press*).

HOUSES AND OTHER BUILDINGS

But how does it end in Bavaria? In Aldersbach-Kriestorf, Lkr. Passau, a cutout of a SOB settlement was excavated. Only one sunken floor house is published until now (Riedhammer *et al.* 1999), but finds from there and a view to the settlement structures (Riedhammer *et al.* 1999: 19, Abb. 2) let us suppose that at least two phases were excavated: SOB IIb pottery and houses with well-built northwestern parts and SOB III pottery and some very short and lightly built house structures out of bulged rows of small post holes. These seem to be the

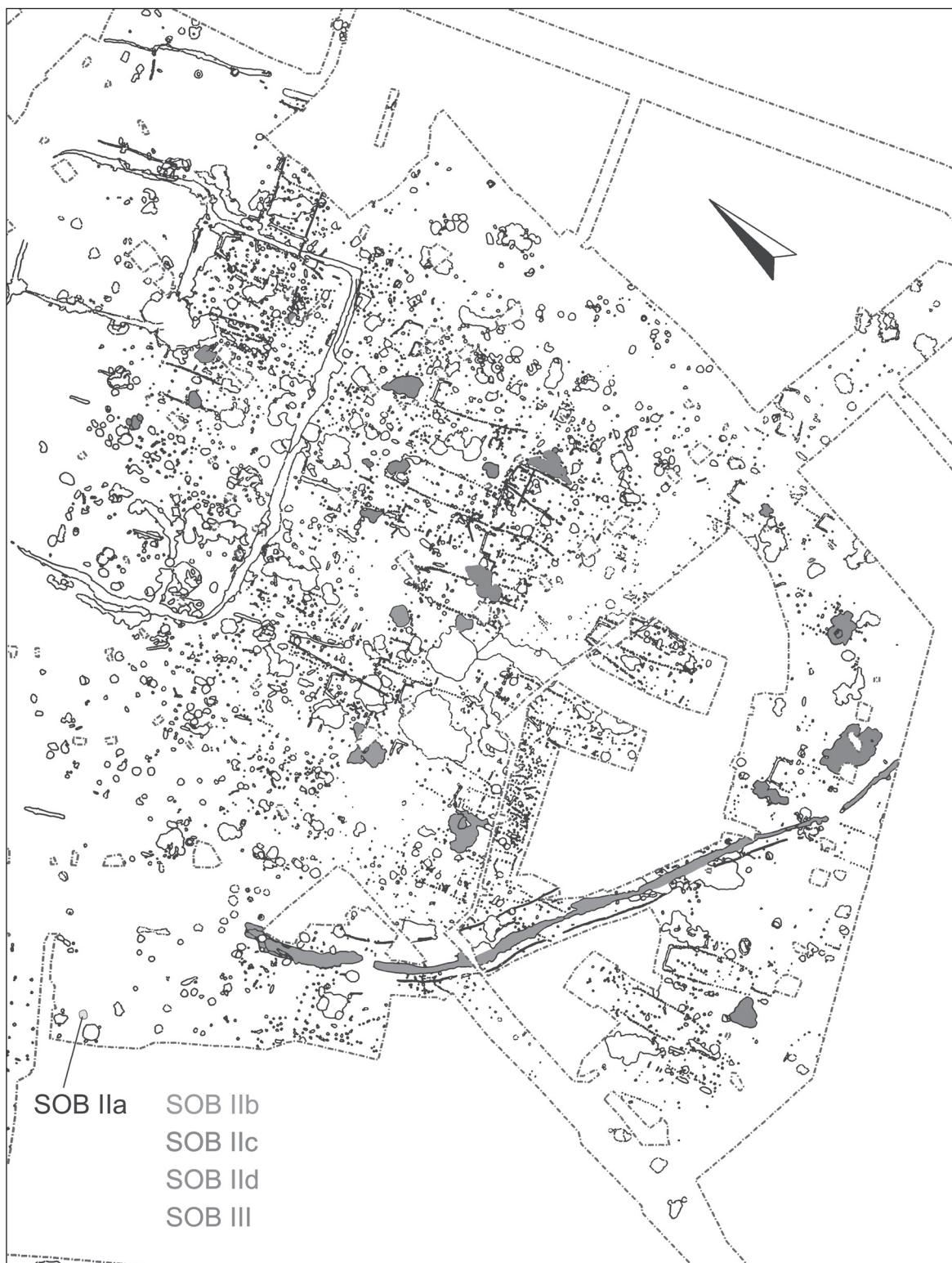


FIGURE 4. Geiselhöring-Süd, Ldkr. Straubing-Bogen. Middle Neolithic settlement and later features. Chronologically determinable Middle Neolithic pits are coloured.

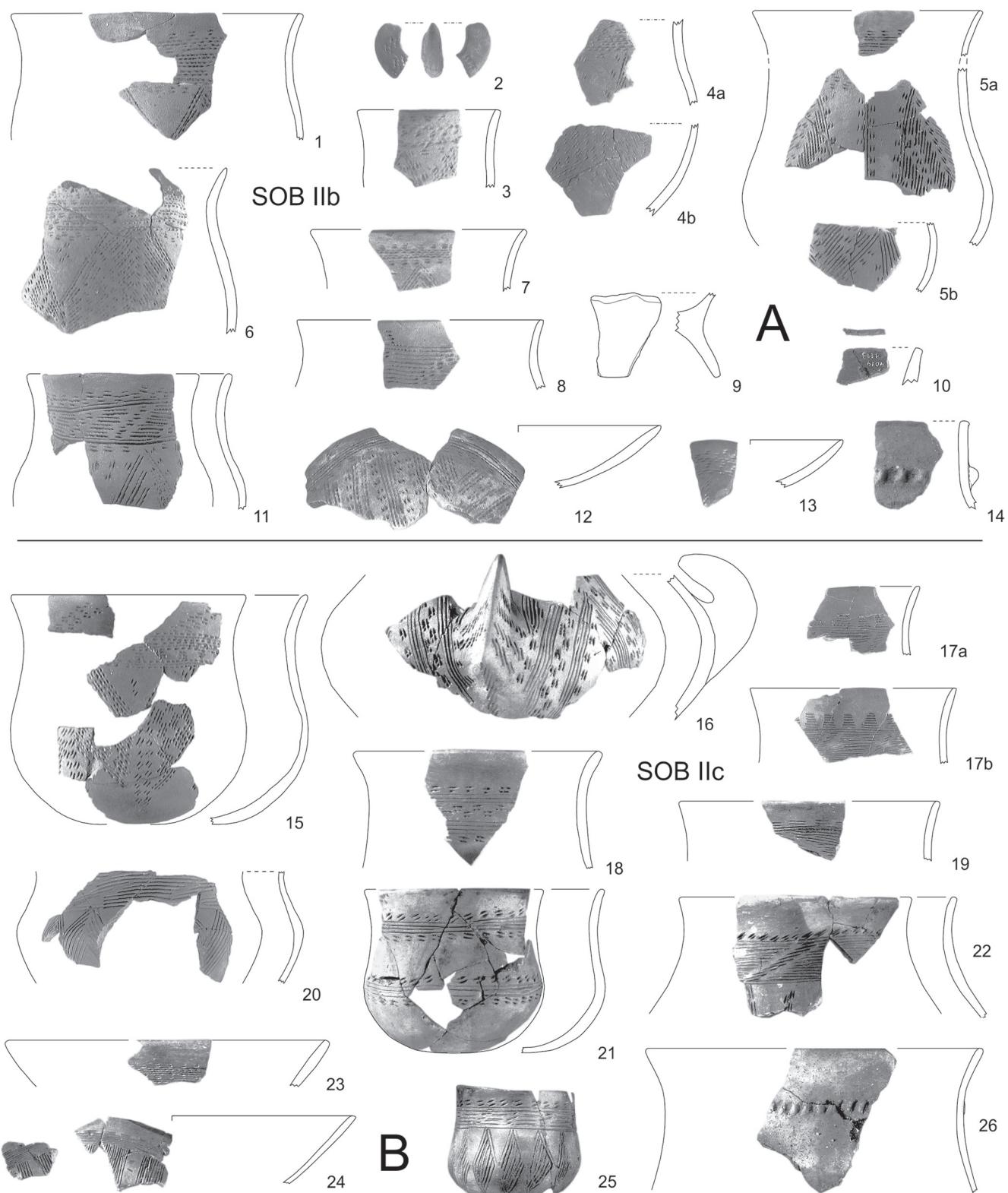


FIGURE 5. Geiselhöring-Süd, Ldkr. Straubing-Bogen. A, Pottery out of pit 1113 (SOB IIb); B, Pottery out of pit 552 (SOB IIc). M: 1 : 4.

last traces of houses before architecture in the Münchshöfen time uses completely different types of constructions (Ganslmeier 2009).

There is a lot of variability how to build a Middle Neolithic house in southern Bavaria (*Figure 3*) and it seems not to be very chronologically relevant whether houses have bulged, trapezoid or asymmetric shapes. Not every single house can be dated exactly, because not always dating pottery can be related with the house plans. But if one compares settlements with different ages – reliant on pottery and absolute dating – general trends for a continuous architectural development can be sketched out. These trends are as follows: In the course of time houses lose in length, the long pits following the long sides of the houses as well as the double post holes disappear, less and less tree-post-hole-rows can be found inside the houses and they lose their well-built northwestern parts. Without doubt, at the end of SOB houses are rather short, what is a contrary trend to the architectural development of the Rössen culture in western and northwestern Germany and of Brześć Kujawski houses in Poland (Friederich 2011: 425, Abb. 359). On the other side, examples of houses with continuous wall trenches from Geiselhöring-Süd (*Figure 3*) and Harting-Nord (Herren 2003: 183, 216–217) that – without dating pottery – may belong to the end of the development, emphasize a relation to Rössen and Brześć Kujawski house constructions (Hampel 1989: 80–81). The three-post-hole-rows in the tradition of LBK architecture persist during the whole SOB. For this reason, even late SOB houses can be connected more likely with Rössen architecture than with Lengyel architecture. Lengyel houses show a different kind of roof construction that differs clearly from the LBK tradition how to build houses and their roofs (Pavúk 2012).

Some other kinds of structures seem to occur first in phase SOB IIb: In Geiselhöring-Süd some examples of small adjoining buildings lay nearby normal sized houses. The preserved ground plans consist of L- or U-shaped northwestern wall trenches and some related post holes. These huts seem to imitate the construction of main buildings with some variation (Engelhardt *et al.* 2006: 72, Abb. 38). Polygonal adjoining buildings are known from Großgartach and Rössen culture in northwestern Germany (Hampel 1989: 72–74) as well. In contradiction to all ground floor houses the SOB sunken floor houses show a relation to the Lengyel architecture: The examples we know till today (Riedhammer *et al.* 1999, Husty, Obermaier 2006/2007) have got enough regular post holes to reconstruct not only cellars but also

above ground parts with floors. For this reason they are connected more likely with Lengyel sunken floor structures that have got multiple three-post-hole-rows (Pavúk 2012) than to Middle Neolithic sunken floor huts from other parts of Germany that are built only with sporadic post holes and can be reconstructed more likely with simple span roofs (Friederich 2011: 410–413).

Not only the way how to build houses changes. Also the structure of settlements undergoes a change. For SOB I, fences related to single houses are known (Riedhammer 2003), while settlement enclosures are related to the phase SOB II. Examples that can be dated convincingly are ditches in Geiselhöring-Schwimmbad (Langenstraß 1994), Tiefenbach-Ast, Lkr. Landshut (Dannhorn, Engelhardt 1992) and Vilsbiburg-Lerchenstraße, Lkr. Landshut (Steuber 1992). All of them are V-shaped in profile. In Geiselhöring-Süd (*Figure 4*), a ditch cuts off the triangular settlement area from the hinterland in the south-west, other settlement limitations are the edge of the terrace down to the river valley in north-western direction and a maybe former aquiferous landscape rim in the east. On both sides the ditch is attended by fences that cannot be dated by evidence. The generally D-shaped ditch differs in shape and direction about every 30 metres, maybe family groups were responsible for the construction of single sections. It is built in phase SOB IIb and it seems to have been given up quite early again in phase SOB IIc.

The famous circular ditch enclosures occur in phase SOB IIb together with the first Lengyel contact finds (Moravian Painted Ware Ia) in the center of Lower Bavaria (Nadler *et al.* 1994, Poensgen 2009). In cases where the finds from the ditches are known better we can suppose that this early "communal" buildings – built and used by more than one household – are given up again after a rather short time (Nadler *et al.* 1994, Husty 2009). The inner circular wooden enclosure inside the former ditch enclosure from Künzing-Unterberg is probably built about 100 years later, which corresponds with later Lengyel contact finds (Moravian Painted Ware Ib) (Petrusch 1990: 487, Poensgen 2009).

CONCLUSION

During 450 years the SOB undergoes a continuous development that, at the end, shows a fundamental change in all aspects of an archeological culture preparing the following Copper Age. After a quick change of the pottery style at the beginning, SOB pottery and the way how to build houses changes continuously. The most changes that

have to do with cultural life happen in phase IIb – the last phase with only stroked pottery decoration and the first phase with direct Lengyel contact. But influence comes from different directions and illustrates the connective role of the SOB region between greater cultural areas.

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