

Foreign Elements in South-West German Lake-Dwellings: transalpine Relations in the Late Neolithic and Early Bronze Ages¹

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ABSTRACT - There are many finds hailing from the lake-dwellings of South West Germany, with its regions of Upper Swabia and the West side of Lake Constance, which are alien to the Early Neolithic and Early Bronze Age context of the region. Most of these objects have recognisable connections with the area surrounding Lake Garda in Northern Italy. Besides the Brenner Pass, the most popular route across the Alps seems to have run via the Alpine Rhine valley, the Julier and Reschen Passes to Upper Etschtal. This transalpine axis continues North via Schussental through Upper Swabia (Federsee) to the Danube. This prehistoric route through the Central Alps foreshadows the course of the Roman road.

Key words: Late Neolithic, Eneolithic, Early Bronze Age, Transalpine Relations, Pintaderas

Parole chiave: Neolitico tardo, Eneolitico, Prima Età del Bronzo, Relazioni transalpine, Pintadere

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1. INTRODUCTION

During the last eighteen years, we, from the Baden-Württemberg County Preservation Office with the support of the German Research Association, have once more been carrying out intensive research into lake-shore settlements in the area of Southern Germany between Lake Constance and the Federsee. In the course of our research, we have time and again made finds with links to the south towards the inner Alps and Northern Italy. Opening at the east end of Lake Constance is an immense gateway to the Alpine Rhine valley - an ideal corridor and entrance for crossing the Central Alps.

2. FOREIGN ELEMENTS IN THE LATE AND ENEOLITHIC AGES IN SOUTH WEST GERMANY

The existence of a sherd of definite South German derivation (GUT & STROBEL, 1996:197, fig.12:11)

is revealed at Barfield's excavations at Rocca di Rivoli near Verona (BARFIELD, 1966:44, fig.15:11). The new Gut and Strobel index (GUT & STROBEL, 1996:200, fig.14) shows directly comparable vessels (Pilzschultergefäße) with arrow-tip indentations (Pfeilstichzier) distributed in the area of the Aichbühl and west Münchshöfen cultures. The Münchshöfen finds have also recently become known in Inntal (KRAUß & HUIJSMANS, 1996:43ff, p.47 fig.4:3-5, p.48 fig.5). Therefore, the vessel could also have reached Northern Italy via the Brenner Pass in ca. 4300-4200 BC.

New finds of so-called Lutzengütlekeramik have been recorded at the Federsee and near Ruprechtruck in Upper Swabia (MÜLLER, 1994:224, fig.7:1-5). Ruprechtruck and the eponymous excavation area seem to mark a cultural core in the Schussental-Alpine Rhine valley axis, whereas all the other shards, e.g. also the finds in Hornstaad (DIECKMANN, 1989:64, fig.36), seem to appear in foreign cultural surroundings. The ceramics are remarkable for the carved decoration on hard clay, Graffitotechnique, which is typical of Mediterranean cultures such as Bocca Quadrata and La-

gozza. It is highly improbable that this technique was adopted from the West as it is hardly represented in Cortaillod especially in the area around Lake Zürich. We consider the element as evidence of direct contact with Northern Italy ca. 4000-3900 BC.

We recorded clay loom weights (Fig.1:2,4,5A) (SCHLICHTERLE, 1995:80, p.81 fig.67:17,20) similar to the Lagozza Reniformi in the period between 3750 and 3650 BC. These are also seldom found North of the Alps, although very common in the mediterranean region from the Neolithic to the Iron Age.

They appear in settlements of the Pfyn-Altheim Group in Upper Swabia (SCHLICHTERLE, 1995). This group demonstrates recognisable links with the Pfyn Culture of the Alpine Rhine valley. The similarities that the ceramics bear to the sites of Lutzengüttele (SCHLICHTERLE, 1995:79) and Chur-Welschdörfli (RAGETH, 1993:15ff) are far greater than those to the Pfyn ceramics of the area West of Lake Constance. The indexing of a single artefact, namely the indented knob handles (eingedellte Knubben) (Fig.1:1,4,6-7C) as common in Altheim (DRIEHAUS, 1960, tab.921; PETRASCH, 1985:86:53, fig.19:7), but not to be found in Pfyn, is further clear evidence of the Schussental-Alpine Rhine valley axis.

The imported flint finds in the Pfyn-Altheim settlements in Upper Swabia, are more likely from the Lessinian Alps North of Verona (Fig.5:A,e). The presence of this raw material identified by TILLMANN (1993, tab.454) also in the Altheim settlement of Pestenacker in the Northern Alpine foothills illuminates possible motives for the connection to North Italy. The Lessinian flint is of excellent quality compared to the deposits of raw material in South Germany.

Further evidence of foreign elements in the context of the South German Late Neolithic Age are clay stamps (Pintaderas) (KÖNINGER, 1994:62, fig.3). One of these clay stamps (Fig.1:3B) originates from the layer of a Pfyn-Altheim settlement, some meters below the waterlevel of the Steeger See near Aulendorf in Upper Swabia. A fragment of a seemingly identical piece originates from the contemporary neighbouring settlement of Reute Schorrenried (Fig.1:4B). Both settlements are dated at ca. 3735 BC (BILLAMBOZ, 1998:162, tab.I, p.165). The existence of these 'Pintaderas' is evident from the Aegean to Northern Italy, but also in the mid Danube region. Late Neolithic artefacts are distributed mainly here and on the South rim of the Alps from Kärnten to Northern Italy (Fig.5:A,b). The stamps from Spilamberto (Emilia Romagna) (BAGOLINI, 1980:205, fig.4), from Grotta Pollera (Liguria) and Cazzago Brabbia (Lombardy) are comparable to the Upper Swabian finds (CORNAGGIA CASTIGLIONI & CALEGARI, 1978: 21-22,24) due to matching rhombi patterns (CORNAGGIA CASTIGLIONI & CALEGARI, 1978, tab.IV:10) named "zoomorphic" by the Italian researchers. Objects re-

sembling these can also be found in the context of Baden-Boleráz, one example, the stamp from Vrbové in Slovakia comes from a similar pit of this culture (NEMEIKOVÁ-PAVŮKOVÁ, 1979:389). The stamps of the Vrbové-Basaharc type (RUTKAY, 1993-94:226) have conical handles, in contrast to those from Upper Swabia. With the exception of the grave finds of Basaharc they all come from settlements. The Lasinja-Kanzianiberg group on the South-East edge of the Alps (RUTKAY, 1993-94:235, fig.7) is another area with similar but less comparable stamps. Therefore, the Upper Swabian stamps may originate just as well from the mid Danube region as directly from Northern Italy. Professor H. Hagn, Munich, concluded after an examination of the clay that it was probably produced in Upper Swabia. So it was not the objects that arrived here but the idea.

New petrographical examinations show that nearly all so called nephrite finds in Lake Constance are really pieces of high-grade serpentine. The first traces of this raw material date from the times of the mid Horgen culture, where it was usually used as axe blades slotted into antler sleeves. They exist as index fossils in the late Horgen Culture between ca. 3000-2800 BC and in the Goldberg III group. There is no trace of the raw material in the foothills of the Alps. Serpentine only survives short stretches of river transport and is also rare in glacial deposits. Scree analysis in Upper Swabia and the Lake Constance area indexes 0-0.5% regular serpentine and no high-grade serpentine (GEIGER, 1969:136ff., tab.3). The work of Petrequin on aphanite (JEUDY *et al.*, 1995:241ff.) motivated us to follow pebbles up the Alpine Rhine. Serpentine becomes more abundant in the Hinterrhein area. High-grade serpentine appears first in the exposed stream bed deposits just below Piz Platta. There are a great number of serpentine deposits in the Alps, which does not, of course, mark this as the place of origin. Of greater significance is the existence of an Eneolithic site on the Petrushügel near Cazis in Hinterrheintal. Margerita PRIMAS (1985:51ff.) has already disclosed its importance for the making of serpentine tools in the monographical presentation, hundreds of sawing boards and sawn objects are represented. The distance from here to the developments in Oberhalbstein is only 30km (see PRIMAS' map, 1985:98, fig.69). The majority of the material is identical to our high-grade serpentine. Further sites of high-grade serpentine artefacts and workpieces skirt the Alpine Rhine: Tamins-Crestis, Schellenberg-Borscht and Eschen-Lutzengüttele. We convinced ourselves of the identity of the raw material with the aid of the original finds on site.

The existence of deposits of textile-decorated ware at Petrushügel (PRIMAS, 1985, fig.67:47-52) confirm our supposition, that we are dealing with stations or trade centres here. It is interesting to note that a com-

parable textile-decorated vessel turned up at Rocca di Rivoli (PRIMAS, 1982:578, tab.1:1). It is an example of the surface roughening technique (*Mattenrauhung*) (Fig.2:1,3) specifically created by rolling a bound cord, which was used in Goldberg III (BERSU, 1937, tab.32, fig.18,21; SCHLICHTERLE, 1989:60, fig.34) Wartberg group (SCHWELLNUS, 1979, tab.22) and Cham (MATUSCHIK, 1992:215) but not in the Horgen culture. High-grade serpentine is distributed up to the Danube, with one piece also being found at Goldberg, but no finds in the Neckar basin. This successfully marks the North-South axis also in the Eneolithic Age (Fig.5: A,a).

The Eneolithic Beaker Folk, Corded Ware and Bell Beakers provided no evidence at Lake Constance to suggest extensive relations across the Alps. Bell Beaker cultures are rare in the working area. The Corded Ware Culture has as yet not been intensively examined. The fragility of the material may be at least part of the reason for the lack of evidence here.

3. EARLY BRONZE AGE EVIDENCE

Not until the Early Bronze Age are transalpine contacts again to be recorded. Evidence comes principally from the lake-dwellings of Bodman-Schachen I which are to be found on the western edge of Überlinger See. The settlement lies far out into the lake at the former mouth of a small river. Several diving sondages were carried out here from 1982 until 1986 (KÖNINGER, 1996).

In small areas a three layered stratigraphy could be uncovered. They ranged from the early to the late Early Bronze Age. In the deepest layer, Stratum A dated ca. 1900 BC, we discovered pile grating constructions (KÖNINGER, 1997:33, fig.37:1). Posts of hazel were embedded in hewn out piles of ash and oak, these in turn were placed under two further slats of hazel. The whole construction being held together with tendrils of clematis (Fig.3:1). The pile grating was intended to prevent the posts sinking further into the soft bed of the lake. This method of securing piles is exceptional in the Lake Constance/North East Switzerland area. Similar constructions are present, however, in the lake-dwellings of Fiavé in Trentino (PERINI, 1984:112, fig.89, p.113 fig.90). Here too bored piles were tied together with an underlay of slats. Far more frequent are perforated base plates, the so called 'Flecklinge' which also serve as a method of securing piles (Fig.3:2). Their application was common in the Lake Constance area and in East Switzerland during the Early Bronze Age within the framework of the Arbon culture (KÖNINGER, 1996:48ff). A comparably larger number of these holed boards come, however, from the Lake Garda area

(comp. BALISTA & LEONARDI, 1996:199ff.). Here too the picture of dissemination (Fig.5:B,i) should underlie intensive contacts in the sense of technological exchanges.

The remaining two layers, Stratum B and C (HUCHLI *et al.*, 1994:272ff.), dendrochronologically dated at 1640 and 1610 BC represent the scope of activity of the widespread Arbon culture of the late Early Bronze Age (KÖNINGER, 1997:30). Stratum C supplied a rich inventory of decorated pottery, typical are bi-conical handled cups decorated with incised horizontal patterns (KÖNINGER, 1997:31, fig.35). Stratum B, however, has few incised decorations. Here pointillé-decorated fragments, solid rim profiles and groove decorated handled cups with pierced groove ends (KÖNINGER, 1997:31, fig.34) can be submitted as representative. The ceramics, thereby, show clear influences of the neighbouring Straubing culture.

Both ceramic groups are spread deep into the Alpine Rhine valley (KÖNINGER, 1996:146, fig.91-92). Straubinger groove decorated handled cups are documented up to the Oberhalbstein area (BILL, 1976:88, fig.10). Alpine copper mining possibly explain this image of dissemination. The North-South axis from the Danube via Schussental into the Alpine Rhine area, conspicuous already in the Neolithic Age, is marked also for the Early Bronze Age by an Unterwölbling pitcher from Veitsberg in Ravensburg (RADEMACHER, 1993:44ff, tab.23:1).

Contacts from beyond the Alps are demonstrated by items from stratum C. A 24cm. long globe-headed needle, cast on a clay-core, with triangular markings on the head comes from here (Fig.4:1). The majority of such incise-decorated, clay-core needles come from the Lake Garda area (Fig.5:B,h), where at least the production of their prototype can be accepted.

A tub shaped casting crucible with pouring lip also comes from stratum C, a further unstratified casting crucible (Fig.4:7) from Bodman-Schachen I is in the process of being ratified. The unstratified crucible has on its underside two ribs, by which it could be held in a heated state when jammed between green wood - as illustrated by this Egyptian mural from a Theban grave (EBERT, 1925, tab.67a). The only other ribbed crucible to be found comes from Troy and is thought to originate from the strata of the tertiary settlement phase. Different dating approaches of the Trojan crucible present a direct connection to the Middle European specimens as improbable. The origin of the allied casting technique from the East Aegean can still be intimated.

Numerous comparable casting crucibles come from the settlement to the North of Lake Garda at Lago di Ledro (RAGETH, 1975:175, tab.91), far more seldom is evidence in the context of Polada culture from the Lake Garda area (FASANI, 1984:497, fig1:1; ASPES,

1992:80, fig.10; SIMEONI, 1992:57, fig.5:3) and the settlements of the Arbon culture to the North of the Alps, although studying the ceramic blowtube tips (*tuyères*) and casting moulds one can assume that bronze casting also took place in these settlements. The selective appearance of the casting crucible in the Polada and Arbon settlements suggests possible direct contacts between the individual settlements North and South of the Alps.

A further Early Bronze Age group which amongst other things supply evidence of contacts beyond the Alps is the so called loaf-of-bread idols (*Brotlaibidole*) (Fig.5B:f). They come from the surface (Fig.4:3) and from Layer C (Fig.4:2) from Bodman-Schachen I and are decorated with incised lines and perforations.

Three further patterned clay objects come from neighbouring Hegau. On top of the old find from Singen (Fig.4:6) published by GARSCHA (1929-32:325, fig.125k) are to be added two newer discoveries from the sondages of Dieckmann from Hilzingen (Fig.4:4) (DIECKMANN, 1988:56, fig.37). They are decorated in a similar fashion by imprints of square shaped objects. These objects differ, however, from the loaf shapes typical of the '*Brotlaibidole*'. Their dating in the Early to Middle Bronze Age is presumed by the pottery found with them.

The patterns on the objects from Hegau are pri-

marily to be found in Upper Italy but also in the Tyrol (KÖNINGER, 1998:432ff, p.445 fig.8). A fragment of a handle with a small fixture (Fig.4:5) discovered together with the objects from Singen also suggests, likewise, transalpine influences to artefacts found there. (At this stage I would like to thank R. Krause for placing the illustrations of the Singen artefacts at our disposal).

The badly fired '*Brotlaibidole*' from Bodman-Schachen I speak out against, at least in this case, the transport of the artefacts themselves. It appears to be, also here, the idea itself that found its way across the Alps.

Indexing of the aforementioned artefacts substantiates, as far as the Lake Constance settlements are concerned, contacts above all into the Lake Garda region (Fig.5). The Alpine traverse used thereby runs from the Alpine Rhine valley over the Reschen and Julier passes into the Etschtal and from there into the Lake Garda area. In contrast to the Neolithic Age the inner alpine area was also being settled probably as a result of copper mining (USLAR, 1991:93ff.). As a result of this long range communication was evolving, also along the vallies running East-West. The intensification of trans-alpine contacts must have been the consequence.

NOTES

1 - Translated by Jamie McIntosh

SUMMARY - The culture groups of the Lake Constance area and Upper Swabia between the fourth and second millennium BC extend to deep into the Alpine Rhine valley. In fact, from the Late Neolithic Age to the Early Bronze Age, much distinct evidence has been produced of long range relations beyond the Alps. Evidence of this grows stronger during the course of the Neolithic Age. The communication axis, depicted here, runs from the Danube and Federsee via Schussental to the Alpine Rhine valley. The Western Lake Constance area and East Switzerland lie clearly off the path. Also towards the end of the Neolithic Age this axis is maintained or once more established. The western area of Lake Constance is now better integrated in the communication system. Stronger relations to Upper Italy are realized in the Early Bronze Age. The now established massive settlement of the inner Alps area should have favoured an intensification of relations, while during the Neolithic Age, above all chains of settlements along the main traffic arteries and raw material trade routes, become more evident. The passes, over which objects and ideas from the Alps arrived, are recognisable in the distribution of artefacts. In the examined period the preferred route was evidently the Reschen Pass which ran via the Alpine Rhine valley, Lenzerheide, Reschen and Julier Passes into the Etsch valley and from there to the Gardasee area. At any rate most of the contacts, which cross the Alps to the north into the Lake Constance area and Upper Swabia, come from here. Evidence of the utilization of the shorter Spülgen Pass route, Alpine Rhine valley directly south, is noticeably scarce. So the reconstructible Alpine transverse antedates the course of the Roman route, which ran from South West Germany via the Reschen and Julier Passes to Trentino. Artefacts in the Lech and Inn vallies, that we have not pursued in detail here, also indicate the importance of the Brenner route. The depicted Alpine transverse does not proclaim final consequences. It should encourage reconsideration of the Upper Italian and South West German cultural framework. So one can, for instance, now more precisely ask, whether Neolithic perforated ceramics south of the Alps, e.g. 'white ware', can be attributed to a South West German-Swiss Eneolithic association and also whether already at that time a cultural network was developed which lasted well into the Early Bronze Age. The evidence indicates far more than occasional or casual contact. One must also give some thought to what is really behind it all. Common sources of raw materials and transhumance are terms that will maybe help.

RIASSUNTO - Esistono numerosi ritrovamenti provenienti dai siti palafitticoli del sud-ovest della Germania, in particolare nella parte alta della Swabia e dal lato ovest del lago di Costanza, che risultano intrusivi nel contesto regionale relativo al Neolitico antico e alla prima Età del Bronzo. La maggior parte di questi oggetti presentano chiari collegamenti con la area circostante il lago di Garda in Italia settentrionale. Oltre al Brennero, il passaggio più comune attraverso le Alpi può essere identificato nella parte montana della valle del Reno, in particolare con il passo Julier e il passo Reschen. Questo asse transalpino continua verso Nord grazie alla valle di Schussen attraversando l'Alta Swabia fino al Danubio. La successiva strada romana ricalcherà questa rotta preistorica attraverso le Alpi centrali.

REFERENCES

- ASPES A., 1992 - La Quercia di Lazise, le ricerche e i materiali. In: C'Era una Volta Lazise, p.72-81
- BAGOLINI B. (ed), 1980 - Il Neolitico e l'Éta del Rame: Ricecra a Spilamberto e S. Cesario 1977-1980. Vignola
- BALISTA C. & LEONARDI G., 1996 - Gli abitati di ambiente umido nel Bronzo Antico. In: C.Cocchi Genick (ed), L'Antica Éta del Bronzo in Italia, Atti di Congresso di Viareggio, p.199-228
- BARFIELD L.H., 1966 - Excavations on the Rocca di Rivoli (Verona) 1963 and the prehistoric sequence in the Rivoli basin. *Mem. Mus. Civ. Stor. Naturale Verona* 14
- BERSU G., 1937 - Altheimer Wohnhäuser vom Goldberg, OA. Neresheim, Württemberg, Germania, 21:149-167
- BILL J., 1976 - Beiträge zur Frühbronzezeitforschung in der Schweiz. *Zeitschrift für Archäologie und Kunstgeschichte* 33:77-90
- BILLAMBOZ A., 1998 - Die jungneolithischen Dendrodaten der Pfahlbausiedlungen Südwestdeutschlands als Zeitrahmen für die Einflüsse der Michelsberger Kultur in ihrem südlichen Randgebiet. In: J.Biel, H.Schlichtherle, M.Strobel & A.Zeeb (eds), Die Michelsberger Kultur und ihre Randgebiete - Probleme der Entstehung, Chronologie und des Siedlungswesens, Materialhefte. *Archäologie in Baden-Württemberg* 43:159-168
- DIECKMANN B., 1988 - Eine Siedlung der ausgehenden Frühbronzezeit bei Hilzingen, Kreis Konstanz. *Arch. Ausgrabungen in Baden-Württemberg*, p.53-58
- DIECKMANN B., 1989 - Die neolithischen Ufersiedlungen von Hornstaad-Hörnle am Bodensee, Kreis Konstanz. *Arch. Ausgrabungen in Baden-Württemberg*, p.63-69
- DRIEHAUS J., 1960 - Die Altheimer Gruppe und das Jungneolithikum in Mitteleuropa. Mainz
- EBERT M., 1925 - Reallexikon der Vorgeschichte 2. Berlin
- FASANI L., 1984 - L'Età del Bronzo in Europa e nella Penisola Italiana. In: A.Aspes (ed), Il Veneto nell'Antichità: Preistoria e Protoistoria, vol.2:479-517
- GARSCHA FR., 1929-32 - Hockergräber und Siedlung. *Badische Fundberichte* 2:312-331
- GUT A. & STROBEL M., 1996 - Neue Erkenntnisse aus einer alten Ausgrabung. Die Untersuchungen des Biberacher Zahnartzes Heinrich Forschner in Aichbühl (Lkr. Biberach), *Fundberichte aus Baden-Württemberg* 21:179-212
- HOCHULI ST., KÖNINGER J. & RUOFF U., 1994 - Der absolutchronologische Rahmen der Frühbronzezeit in der Ostschweiz und in Südwestdeutschland. *Arch. Korrespondenzblatt* 24,3:269-282
- JEUDY F., JEUNESSE CH., MONNIER J.-L., PELEGRIN J., PÉTREQUIN A.-M., PÉTREQUIN P. & PRAUD I., 1995 - Les carrières Néolithiques de Plancher-les-Mines (Haute Saône): exemples d'une approche intégrée. *Documents préhistoriques* 7:241-280
- KÖNINGER J., 1994 - Die Tauchsondagen 1991-1994 im Steeger See (Aulendorf, Kr. Ravensburg). *Plattform* 4:60-64
- KÖNINGER J., 1996 - Die frühbronzezeitlichen Ufersiedlungen von Bodman-Schachen I. Befunde und Funde aus den Tauchsondagen 1982-1984 und 1986, Vorabdruck, Freiburg.
- KÖNINGER J., 1997 - Gemusterte Tonobjekte aus der Ufersiedlung Bodman-Schachen I. Zur Verbreitung und Chronologie der sogenannten „Oggetti enigmatici“. In: B.Fritsch, M.Maute, L.Matuschik, J.Müller & C.Wolf (eds), Tradition und Innovation, Festschrift für Christian Strahm, Internationale Archäologie, *Studia honoraria* 3:429-467
- KÖNINGER J., 1997 - Ufersiedlungen der frühen Bronzezeit am Bodensee. In: H.Schlichtherle (ed), Pfahlbauten rund um die Alpen, *Archäologie in Deutschland, Sonderheft* 7:29-35
- KRAUß R. & HUIJSMANS M., 1996 - Die erste Fundstelle der Münchshöfener Kultur in Nordtirol. *Ein Vorbericht. Arch. Korrespondenzblatt* 26,1:43-52
- MATUSCHIK I., 1992 - Die Chamer Kultur Bayerns und ihre Synchronisation mit den östlich und südöstlich benachbarten Kulturen. *Studia Praehistorica* 11-12:200-220
- MÜLLER K., 1994 - Der Fundplatz Henauhof I (Bad Buchau Kr. Biberach) im südlichen Federseemoor: Eine Station am Übergang vom Mittel- zum Jungneolithikum. In: H.J.Beier (ed), Der Rössener Horizont in Mitteleuropa, *Beitr. Ur- u. Frühgesch. Mitteleuropas* 6:215-232
- NĚMEJCOVÁ-PAVŮKOVÁ V., 1979 - Funde der Boleraz-Gruppe aus Vrbové. *Arch. Rozhledy* 31:385-396
- PERINI R., 1984 - Scavi archeologici nella zona Palafitticola di Fiavé-Carera, Parte I, Campagne 1969-1976. *Patrimonio Storico e Artistico del Trentino* 8. Trento
- PETRASCH J., 1985-86 - Das Altheimer Erdwerk bei Alkofen Gem. Bad Abbach, Lkr. Kehlheim. *Berichte Bayerische Bodendenkmalpflege* 26-27:33-53
- PRIMAS M., 1982 - Lago di Garda-Lago di Constanza: rapporti interregionali di età neolitica superiore ed eneolitica. *Studi in onore di Ferrante Rittatore Vonwiller*, vol.II:571ff.
- PRIMAS M., 1985 - Cazis-Petrushügel in Graubünden:

- Neolithikum, Bronzezeit, Spätmittelalter. *Zürcher Studien zur Archäologie*. Zürich
- RADEMACHER R., 1993 - Die vorgeschichtliche Besiedlung des Veitsbergs. In: R.Rademacher & D.Ade-Rademacher (eds), *Der Veitsberg bei Ravensburg, Forschungen und Berichte der Archäologie des Mittelalters in Baden-Württemberg* 18:18-57
- RAGETH J., 1975 - Der Lago di Ledro im Trentino, Ber. *RGK* 55:73-259
- RAGETH J., 1993 - Ur- und Frühgeschichte. *Churer Stadtgeschichte, Bd. 1*:14-135
- RUTTKAY E., 1993-94 - Neue Tonstempel der Kanzianiberg-Lasinja-Gruppe. *Mitteilungen der Anthropologischen Gesellschaft in Wien* 123-124:221-238
- SCHLICHTERLE H., 1995 - Ödenahlen: eine jungneolithische Siedlung der „Pfyn-Altheimer Gruppe Oberschwabens“ im nördlichen Federseeried. *Archäologische Untersuchungen 1981-1986*, in *Die neolithische Moorsiedlung Ödenahlen, Siedlungsarchäologie im Alpenvorland III, Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* 46:9-128
- SCHLICHTERLE H. - Neue Fundstellen im Federseemoor bei Bad Buchau, Oggelshausen, Alleshausen und Seekirch, Kreis Biberach. *Arch. Ausgrabungen in Baden-Württemberg* 57-62
- SCHWELLNUS W., 1979 - Wartberg-Gruppe und hessische Megalithik. *Materialien zur Vor- und Frühgeschichte von Hessen* 4. Wiesbaden
- SIMEONI B., 1992 - Bor di Pacengo. In: *C'Era una Volta Lazise*, p.53-61
- TILLMANN A., 1993 - Gastgeschenke aus dem Süden? Zur Frage einer Süd- Nordverbindung zwischen Südbayern und Oberitalien im späten Jungneolithikum. *Arch. Korrespondenzblatt* 23,4:453-460
- USLAR R., 1991 - Vorgeschichtliche Fundkarten der Alpen. *Römisch-Germanische Forschungen* 48. Mainz.

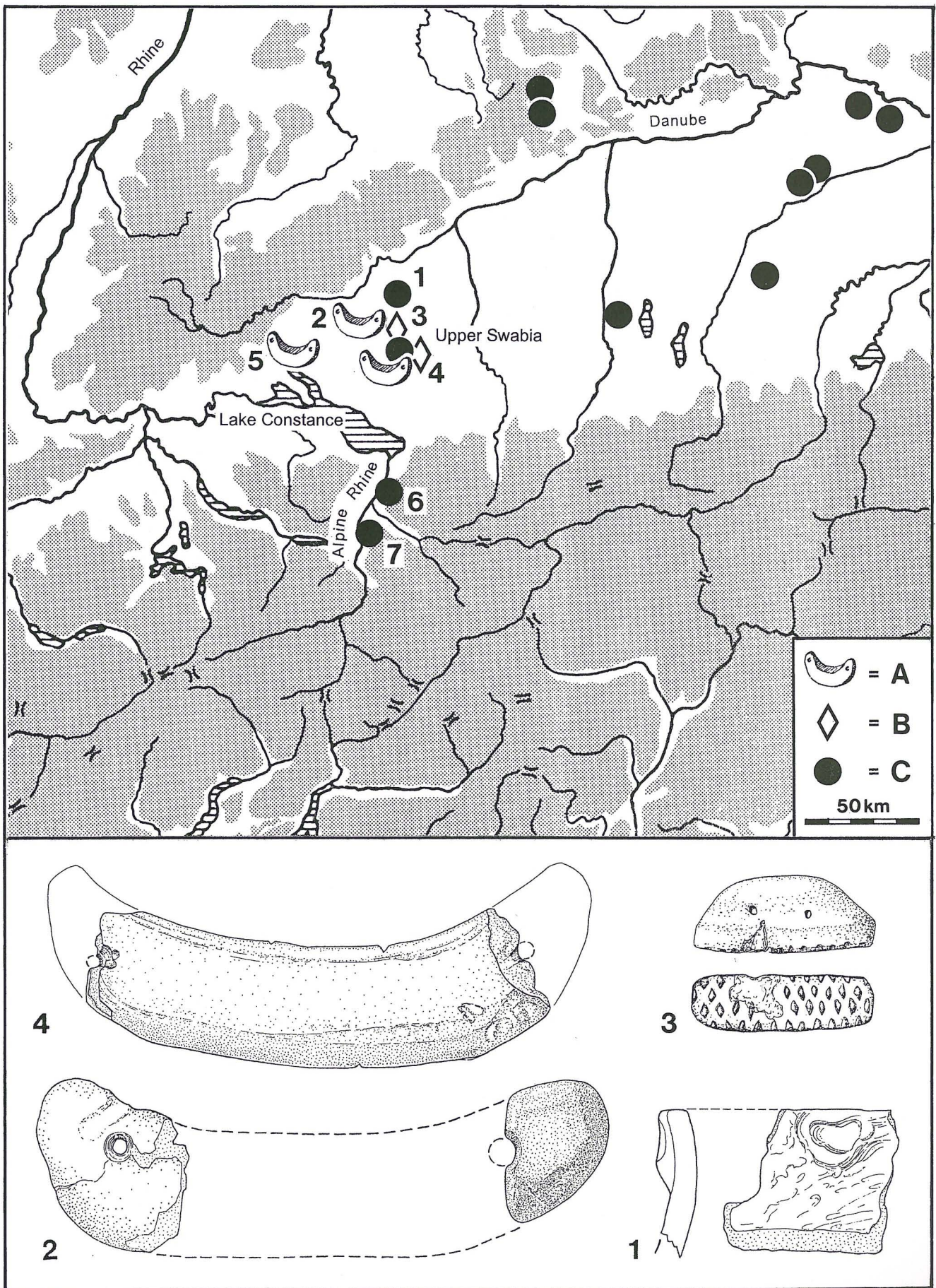


Fig. 1 - Original finds and dissemination of kidney-shaped clay loom weights: (A), pintaderas with zoomorphic patterns; (B), indented knob handles on vessels of the Pfyn and Altheim culture (C). 1- Ödenahlen; 2- Musbach-Seewiesen; 3- Aulendorf-Steeger See; 4- Bad Waldsee, Reute-Schorrenried; 5- Bodman-Weiler I; 6- Koblach-Kadel; 7- Eschen-Lutzengüetle.

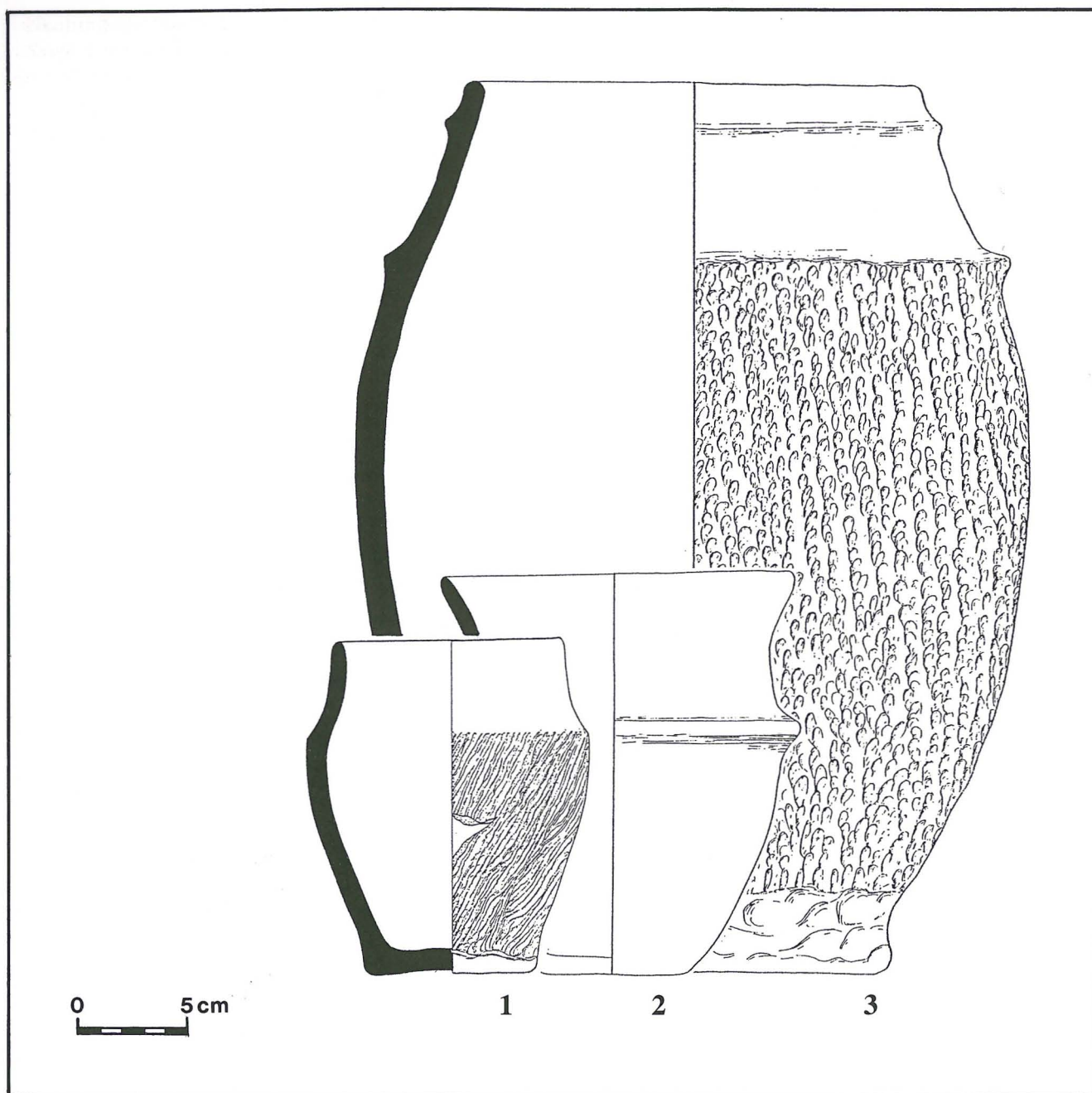


Fig. 2 - 1,3) Textile-decorated pottery (mattengeraucht): from the eneolithic peatbog-dwelling at Seekirch-Aachwiesen in Northern Federseeried (Goldberg III-group). Roughening was achieved by rolling a bound cord over the surface.

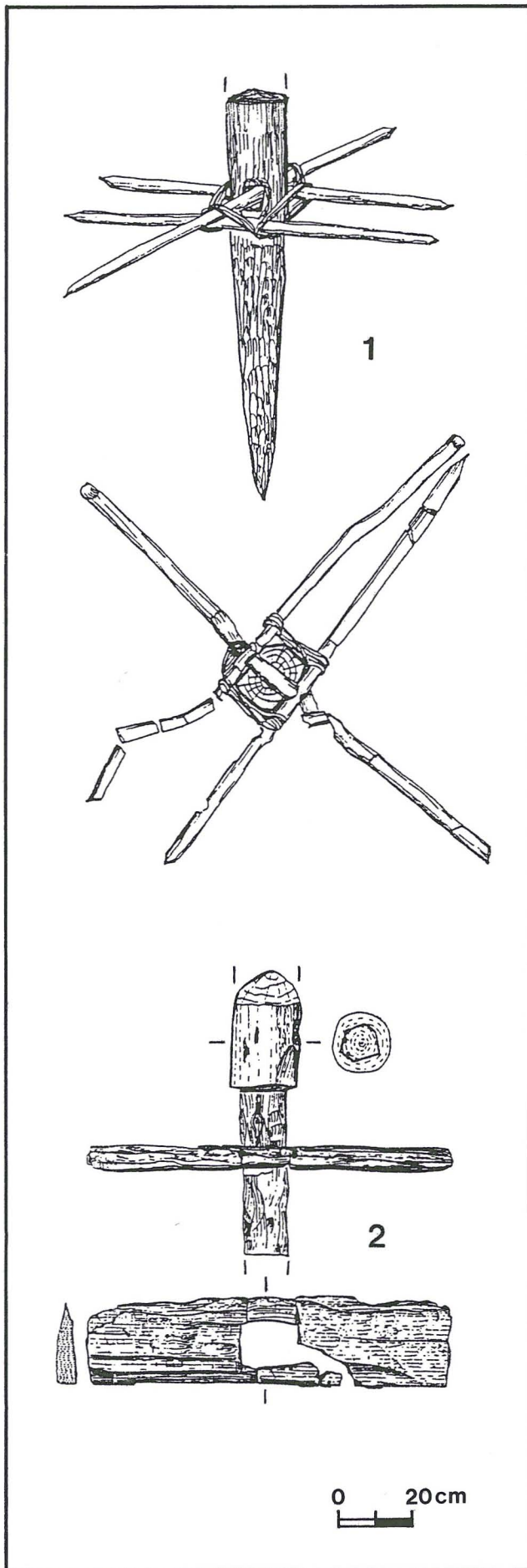


Fig. 3 - Wooden architectural components from the Early Bronze Age lake-dwelling Bodman-Schachen I, Western Lake Constance. 1) Pile grating, stratum A (below: top view, above: perspective reconstruction, not to scale); 2) Perforated base plate (Flecking) with appropriate post, stratum B.

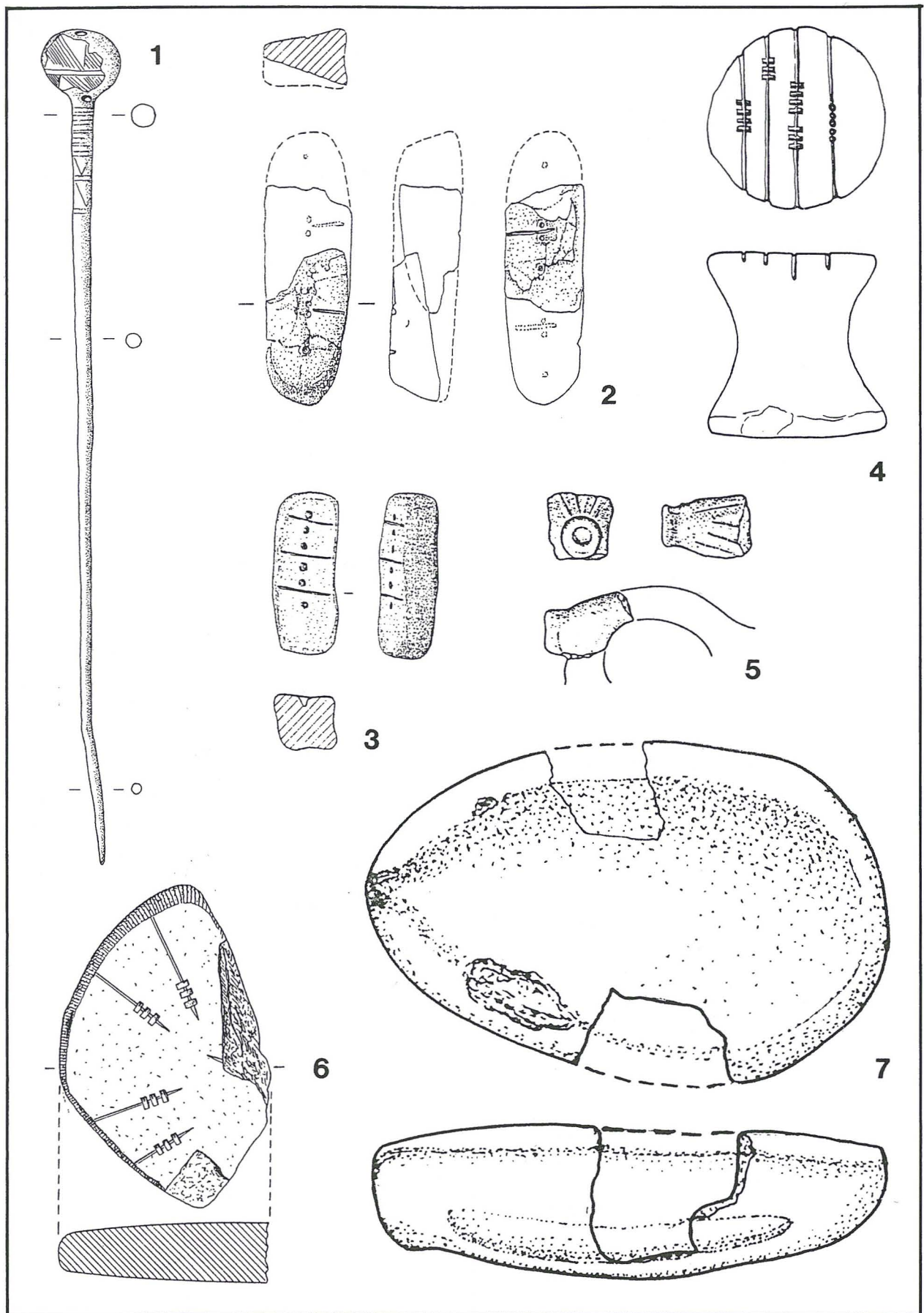


Fig. 4 – 1) Globe-headed needle cast on a clay-core; 2-4,6) loaf-of-bread idols (Brotlaibidole) and similar decorated objects; 7) casting crucible; 5) handle fragment with fixture, from Western Lake Constance area and neighbouring Hegau. 1.2 Bodman-Schachen I (stratum C), 3.7 Bodman-Schachen I (unstratified), 4 Hilzingen, 5.6 Singen „Auf d. Rain ob den Reben“.

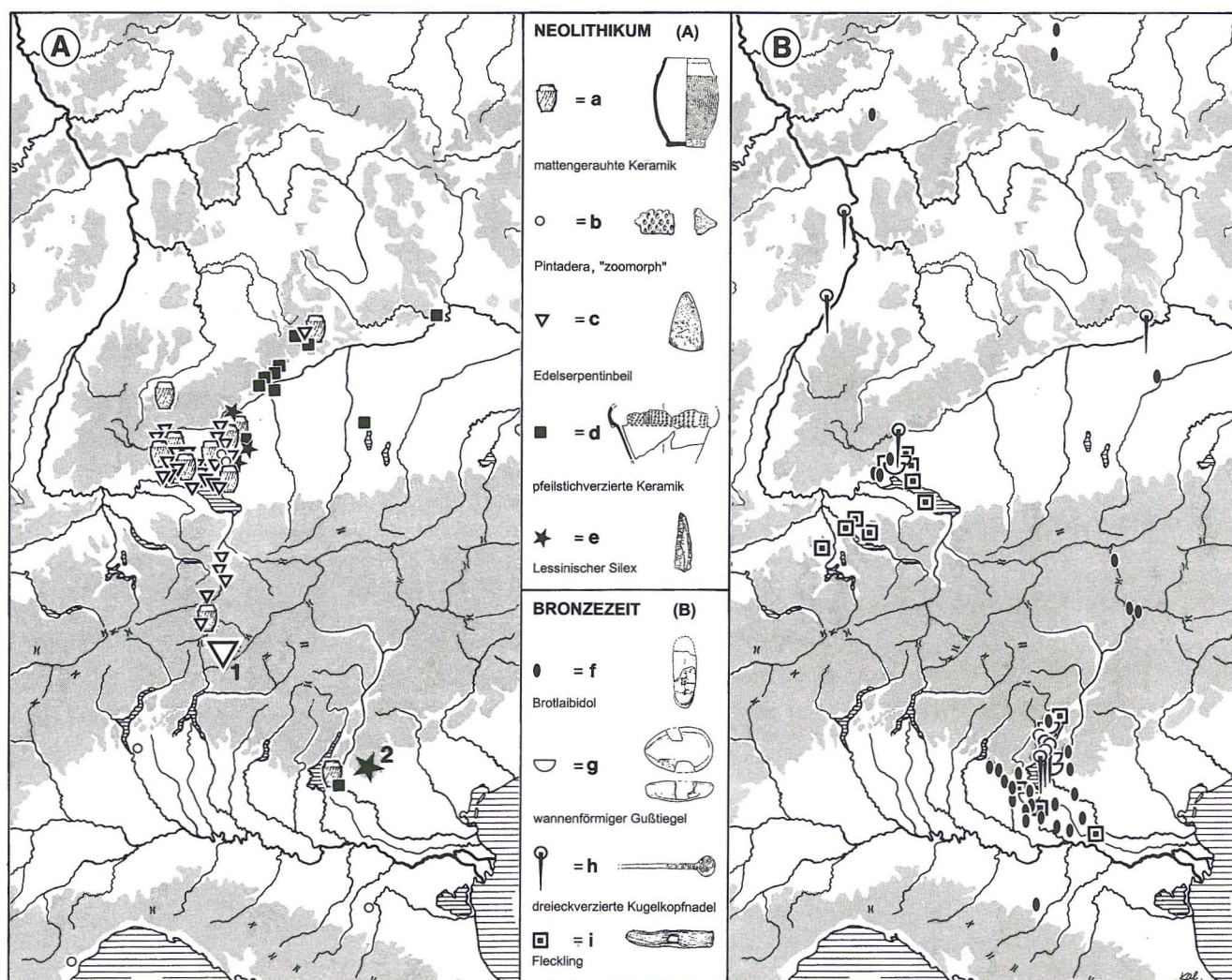


Fig. 5 - Dissemination maps of Neolithic (A) and Bronze Age (B) finds North and South of the Alps. Raw material sources of high-grade serpentine in the Piz Platta region (1) and from Lessinian flint (2). a) Textile-decorated earthenware (Mattengerauhte Ware); b) Pintadera; c) high-grade serpentine axe; d) arrow-tip decorated pottery (Pfeilstichzier); e) Lessinian flint; f) Loaf-of-bread Idol (Brotlaibidol); g) tub-shaped crucible; h) globe headed needle (Kugelkopfnadel), decorated with triangles; i) Perforated base plate (Fleckling).