

ably if evidence could be obtained from e.g. the examination of skeletal material from the final TRB and the earliest SGC in Jutland, this would be sure enough, but as everyone knows the lime-poor soil is the reason why not a single properly preserved skeleton has been found from either the stone packing graves of the TRB or the earliest Single Graves. For the same reason it is not possible to study the economy of either group properly. Animal bones are absent from the few known settlements. Impressions of cultivated plants (or carbonised material) are still too scarce for any definite conclusions. It may be noted in parentheses that the common view that the cereal crops of the TRB were wheat and barley, but the SGC only had barley, is not correct, as also wheat impressions are found in the pottery of this group (Rostholm 1986a, 231). Finally, it is still unclear whether ¹⁴C dating can answer this particular question. As well as the familiar margin of uncertainty, continued research on calibration curves seems to reduce the possibilities especially at this point of time. What about new systematic excavations? Perhaps, but archaeologists with field experience know how little chance even the best prepared project would have with our present knowledge.

The problems surrounding the immigration theory must not be laid aside, they must be capable of a final solution. We must be optimistic and allow ourselves to await one of the surprises that are one of archaeology's most charming aspects.

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REFERENCES

Most references are to works cited by Kristiansen. The following may be added:

- BECKER, C.J. 1954a: Die mittelneolitischen Kulturen in Südschweden. *Acta Archaeologica* XXV (reprinted privately 1971).
- 1954b: Stenaldertbebyggelsen ved Store Valby i Vestsjælland. *Aarbøger for nordisk Oldkyndighed og Historie*.
- 1973: Studien zu neolitischen Flintbeilen. *Acta Archaeologica* 33, 125 ff.
- BRØNDSTED, JOHANNES 1938: *Danmarks Oldtid*. I. *Stenaldert*. Copenhagen.
- 1957: *Danmarks Oldtid*. I. *Stenaldert*. 2. edition. Copenhagen (reprinted without changes 1966).
- ÅBERG, NILS 1937: *Kulturmotsättningar i Danmarks stenålder*. Kungs. Vitterhets Historie och Antikvitets Akademiens Handlingar 42:4. Stockholm.
- 1949: *Nordisk befolkningshistoria under stenåldern*. *ibid.* 70:1. Stockholm.

Reviews

O.M.C. HAEX, H.H. CURVERS & P.M.M.G. AKKERMANS (eds.): *To the Euphrates and Beyond. Archaeological Studies in Honour of Maurits N. van Loon*. A.A. Balkema Publishers, Rotterdam/Brookfield 1989. 304 pp, 10 diagrams, 41 figures, 5 plates.

This *Festschrift* to Maurits N. van Loon, professor of Near Eastern archaeology in Amsterdam, contains 20 articles and a bibliography of van Loon's publications written by colleagues from his excavations in Eastern Anatolia and Syria and by his former students at the Oriental Institute in Chicago and at the University of Amsterdam. The composition of the book reflects his broad knowledge and interests in prehistory and historic archaeology, in linguistics, palaeography, and iconography, in the collaboration between archaeology and the natural sciences, and in archaeological theory, methods, and techniques. On this background it is understandable that the topics of the articles vary from typological studies of a single group of artifacts to wide-ranging considerations or reviews of archaeological problems, often with a starting-point in van Loon's own excavations at Korucutepe, Tell Selenkahiye, Mureybit, Bouqras, or Tell Hammam et Turkman.

We are led from detailed studies of Neolithic figurines (Erik Lohof), crescent-shaped axes (Friedrich Lüth) animal headed cups at Mari (Sally Dunham), and the seal used by the god Tispak to kill Mušhuššu, the dragon (F.A.M. Wiggermann) – through surveys on the origin and early development of ceramics (Marie le Mière), mortuary practices in the Halaf period (Peter Akkermans), and the beginning of the third millennium in Syria (Hans H. Curves) – to an intriguing reconstruction of the famous battle at Qadesh, outlining step by step the positions and movements of the various units of the Hittite army and the Egyptians under the command of the Pharaoh Ramesses II (M.J. de Bruyn).

Of particular interest for Danish archaeologists are perhaps a microwear analysis of borers from an Early Neolithic site in the Jordan Valley published by Johannes Bueller and three studies with a wider methodological perspective.

In the first of these studies, entitled "Ground plans and archaeologists: On similarities and comparisons", D.J. Meijer explores the criteria used by archeologists, and the conclusions they draw, when they compare the lay-out of an architectural complex or the plans of houses from sites that are sometimes far from each other in time and space. The main question regarding similarity is obviously the extent of the identity of buildings, i.e. in this case of plans. Do we require congruence or a simple superficial likeness? Do we compare measurements? In his introduction Meijer states that in his opinion there are four aspects involved in an analytical classification: form, location, utilitarian function, and symbolic function. Any priority of one of these aspects or variables depends on the particular theory with which one approaches the ancient buildings. In his study he shows how archaeological comparisons often – and for obvious reasons – depend on the form of houses, as represented by

ground plans. Through an interesting selection of small case studies he demonstrates what this may lead to, like e.g. theories of ethnic movements, exemplified by a recent attempt to identify simple rectangular buildings with T-shaped internal partitions as a typically Hittite architectural concept. In his analysis of this particular problem Meijer comes to the modest conclusion that it is preferable to interpret these house plans as chronologically and culturally independent, local solutions to problems of restricted means and space.

In two other articles the authors make an attempt to combine archaeological and literary sources towards the identification of historical peoples. In the Near East a number of scholars, including Sahlins, Spooner, Adams, Nissen, Mortensen, and Khazanov, have described the development of pastoral nomadism as a result of a close symbiotic relationship between settled agricultural communities and people living in the marginal areas. More specifically, many have associated pastoral nomadism with the advent of urbanism and the spread of irrigation agriculture in the late 5th and 4th millennia B.C. But in his study of "Jebel Bishri and the Amorite homeland: The PPNB phase" Juris Zarins argues for a much earlier origin related to the PPNB villages of the 7th millennium B.C. in Palestine and Syria with a slightly later spread across the Jazirah into Northern Iraq. He then continues with an attempt to bridge the gap between the 7th and the 3rd millennia B.C., concluding in an identification of these early pastoral nomads with the predecessors of the Amorites, a tribe of Semitic nomads attested for the first time in the literary sources of the mid-third millennium B.C. in the area around Akkad in Southern Mesopotamia.

It is very stimulating to read this bold and rather provocative study, written by an American, in conjunction with another article in the book, also written by an American archaeologist. Glenn M. Schwartz' study on "The origins of the Aramaeans in Syria and northern Mesopotamia: Research problems and potential strategies" is an attempt to establish the archaeological identity of a population usually distinguished by its ethnolinguistic components. But although the methodological problems are similar, the discussion in this case is more safely limited in time within a few hundred years around 1000 B.C.

In conclusion it may be said that the editors of the book have succeeded in creating a *Festschrift* with a number of well presented studies that will appeal to the interest of a wide range of archaeologists – as well as to Maurits N. van Loon himself.

Peder Mortensen

MAGDALENA TEMPELMANN-MACZYŃSKA: Die Perlen der römischen Kaiserzeit und der frühen Phase der Völkerwanderungszeit im mitteleuropäischen Barbaricum. Römisch-Germanische Forschungen, Band 43. Mainz 1985. 339 pages, 24 figures, 16 tables, 14 coloured plates, 66 other plates, 3 appendices.

Beads have hitherto been unevenly dealt with in archaeological writing. Although a number of systems of classification have been put forward, they have generally been described subjectively by the different authors. Apart from certain characteristic types, that are treated separately, beads seem not to have been regarded as very important. In recent years however there

has been increasing interest for their study, not least owing to finds of important Later Germanic and Viking production sites where beads were made.

Tempelmann-Maczyńska's work is an important contribution to this subject, and will make it easier to treat beads of the Roman period in the same way as other archaeological finds. Subjective description may with practical advantage be replaced by reference to types, and in some cases types are datable within chronological limits. The aim of the work has been the wish for a separate treatment of beads of the Roman period, where glass beads are regarded as an independent group under Roman imports. The book is based on a thesis written in 1970–74 at the Jagiellon University in Kraków. It may be noted that only limited use is made of literature from after 1975.

The material studied covers beads from the Roman Iron Age and the earliest phase of the Migration Period (Eggers' phases B, C, and D), i.e. from the beginning of the 1st century until ca. A.D. 450. The geographical term "mitteleuropäische Barbaricum" covers in some degree the so-called *Germania libera*. The extensive catalogue includes finds from Western Germany and West Berlin, East Germany, Austria, Czechoslovakia, Poland, and the Soviet Union.

Altogether about 56,000 beads have been recorded. Glass beads are the largest group with 35,000. As the greatest part of these are assumed to be imported, they are after coins the most numerous group within Roman finds. In addition there are 14,000 amber beads, and a smaller number of other materials: clay, bone, stone, rock crystal, bronze, zinc, tin, lead, and iron. Gold and silver beads are not included, as they are placed in the category, jewelry and decorative art, and are dealt with separately in several other works.

One of the main aims of the authors was to devise a system of classification that takes account of material and method of production. Beads are divided into groups, types, and variants. It should be possible to insert new types or variants into the system.

Glass beads have individual traits reflecting method of manufacture – dealt with in a separate chapter. Despite production in large numbers, not only of monochrome but of richly decorated beads, only a few are completely alike, and many of the polychrome beads are represented by only a single example. The 29 groups and 387 types with their variants demonstrate the great differences existing between glass beads, and the special features of their production. Among the amber beads distinction is made between hand-made and turned types; decoration, if present, is subordinated to form.

The positions of the beads in undisturbed inhumation burials and their combination with other chain elements in cremations, shows that they were worn primarily around the neck. Chains with beads of the same type occur relatively seldom, and when do it is often in the form of very long strings with over 100 monochrome or goldfoil glass beads, or short strings of figure-eight shaped amber breloques. No strings are known with polychrome beads of the same type. The commonest combination is glass and amber beads with the former in the majority. Sometimes a deliberate colour combination can be seen. No two identically composed strings occurred in the material studied, but in some areas there were strings with certain similarities.

Glass beads were probably not bought as whole chains, except perhaps those with identical bead types, but were obtained on different occasions. As time passed new beads were added or replaced existing beads in the chain. There were no significant differences in the combinations of beads in strings to go around the neck in the material studied, and there is no basic typical form of central European string of beads.

C. 45,000 beads could be dated, most of them from graves. The chronology set up is based on occurrences in closed finds with datable objects, mainly fibulae. With the exception of certain characteristic types there were no leading forms. Most types were in use for a long period, but some were confined to a couple of phases. The earliest appearances of certain types that show differences between cultural areas are of interest. The greatest frequency of beads begins in late period B2 and culminates in the later Roman period and in period D. From B2 onward there is an increase in the number of new types, and after C2 there are fewer new types. The greatest type variation is found in C1b and C2. The largest number of new types is in B2 and C1a.

The occurrence of beads in the separate phases shows that in the early Roman period there were few beads and the only clear concentration was in Samland. In the later Roman period there are concentrations of beads in the Saale area and on the right bank of the lower Elbe. Other accumulations are seen at the mouth of the Vistula and in the area of the West Baltic Culture. Though beads are the commonest type of ornament in graves from period D, the number of finds is smaller (partly because there are fewer sites). In this phase a concentration can be seen especially in the area of the Niemberg group.

If the frequency of glass beads is compared with that of other Roman imports, it is seen that the influx of beads into mid-European Barbaricum largely agrees with that of glass vessels, whose import begins in B1. In B2/C1 there is a clear increase in the glass vessels, but the majority of the finds are from D. Both forms, beads and vessels, appear the most frequently in the later Roman period and the early part of the Migration period.

The distribution of the beads provides a basis for a reconstruction of trade routes between the Roman Empire and the barbarian areas. Amber was exported to the Roman Empire from the Baltic coast, and the route makes itself clearly seen. Mapping the different types of beads shows no significant local concentrations, although some types are clearly locally restricted. Beads are on the whole supra-regional, but an analysis of the finds from different cultural areas shows certain main tendencies.

Lack of information about production sites makes it difficult to trace the origin of the separate types. In the case of the glass beads we may assume that many Roman and provincial Roman workshops were in simultaneous use. We may suppose there were two categories of glass factories – those that made vessels and those that made beads. The reason for this distinction is the different colour combinations and different production techniques and tools. Polychrome beads with complex decoration

were made in highly specialized workshops, while simple and monochrome beads could be made as by-products in workshops for glass vessels. One could imagine that melon beads were made in factories for ribbed bowls, and polyhedral beads were made in factories for ground glass vessels.

Little is known of sites producing beads within the Roman area. Written sources mention Alexandria as a centre for making mosaic beads. Glass was widely produced in Syria and Palestine. Around the year 0 glass factories began in Italy. In the Argonne in Gaul beads have been found together with glass mosaic rods. Cologne and Trier were centres for making glass, and in Trier there is evidence of bead manufacture in several periods. Some of the late types from this town are clearly made in Teutonic taste. A few glass workshops are known from the barbarian areas, for instance Komakov on the Dniestr, where beakers with ground ovals and applied threads were produced in the later Roman period. Probably opaque red glass beads were made in the settlement of Abidnia in White Russia, and some of the beads in the Černiachov culture appear to have been made locally. In the whole period it was possible to import raw materials from the Roman Empire, so simple beads could have been made locally. Despite the lack of evidence one may regard local production as probable at the end of the Roman and beginning of the Migration periods.

In the case of amber beads it is likely that turned beads were produced in the Wielbark culture starting in period B2. Only a few barbarian amber working sites are known, some in Kujavy, two near Warsaw, and one at Świlcga near Rzeszów.

Concentrations of particular types in particular areas have led to hypotheses about the way they were brought. Goldfoil glass beads near the south Baltic coast might have come by sea from the northwest, for which their occurrence also in Denmark and southern Sweden argues. However a simultaneous influx from the southeast cannot be excluded. Several polychrome types in early cemeteries of the Wielbark and West Baltic cultures are remarkably similar to beads from the north coast of the Black Sea. The largest number of finds is from Pomerania, and there are large concentrations by the lower Vistula and in Samland. The route from the Black Sea *via* the Dniestr to the mouth of the Vistula played an important role from period B2 onwards, and the same route was probably in use in the later Roman period, when face-beads and beads with special chequerboard patterns were imported. Melon beads of faience may have come from as far away as Egypt. Other types also reveal a common origin – for instance some small types of bead in the Niemberg group. They may have come from Trier or Cologne, or even been made within the barbarian area.

The 56,000 beads recorded make up only a fraction of the original number. They indicate an extensive trade. Beads were easy to transport and probably cheap to buy. Their distribution is wide, and barter between the barbarians often scattered them far away from the trade routes. [Translated by David Liver- sage].

Birgit Lind.