LUND UNIVERSITY

Flint Daggers in Europe - A Case of Cultural Hybridization?

Apel, Jan

Published in:
Nicolay: arkeologisk tidsskrift

2015

Link to publication

Citation for published version (APA):
Apel, J. (2015). Flint Daggers in Europe - A Case of Cultural Hybridization? *Nicolay: arkeologisk tidsskrift*, (124), 23-30.

Total number of authors:
1

General rights
Unless other specific re-use rights are stated the following general rights apply:
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.
• Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
• You may not further distribute the material or use it for any profit-making activity or commercial gain
• You may freely distribute the URL identifying the publication in the public portal

Read more about Creative commons licenses: https://creativecommons.org/licenses/

Take down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

ARKEOLOGISK TIDSSKRIFT

Nicolay

Nicolay – Nr 124 • 2015
Løssalg kr 55,-

STEIN

Flint Daggers in Europe – A Case of Cultural Hybridization?

Jan Apel (Lund University)

The early Holocene and the development of sedentary, agriculturally based life allowed for an unprecedented accumulation of material goods (Bogucki 2011; Scarre 2005:191). This affected the organization and objectives of lithic technologies. In contrast to mobile hunter-gatherers, who mainly developed elaborate technologies in response to risk (Collard et al 2013; Torrence 2001) Neolithic societies tended to invest in products that were used to distinguish social ranking, religious or cosmological ideas, etc. The production of such "secondary features" (Steward 1955) was the result of an increased dynamic density and division of labour (Durkheim 1893, Apel 2001). This novel technological environment resulted in workshops where production-stages of certain artifacts were carried out by specialists, sometimes on different locations in the landscape (Pelegrin 2006; Apel 2008). For example, unfinished preforms for large flint tools such as axes and bifaces were distributed within large networks to be finished into ready-made tools far away from the original area of production (Apel 2001; Ihuel 2004). In this paper the circulation of flint and metal daggers in Europe during the third and second millennium BC will be discussed and related to some ideas of the transmission mechanisms of technologies and ideas.

Some aspects of material culture transmission

Culture can be defined as a shared flow of information among members of a sub group and between sub groups in a population, its representations in people's minds, and its expressions in their behavior and interactions (Sperber & Hirschfeld 2004:40). Archaeologists are especially concerned with externalized material culture that is preserved in the archaeological record as artifacts and features (Johansson 2003). There is an apparent paradox in the reproduction of culture among humans. On the one hand psychological experiments demonstrate the problem of a high degree of copying errors in cultural reproduction (Bartlett 1932). If cultural reproduction among humans only relied on copying it is clear that low fidelity copying would wash out any selection effects, especially in non-func-

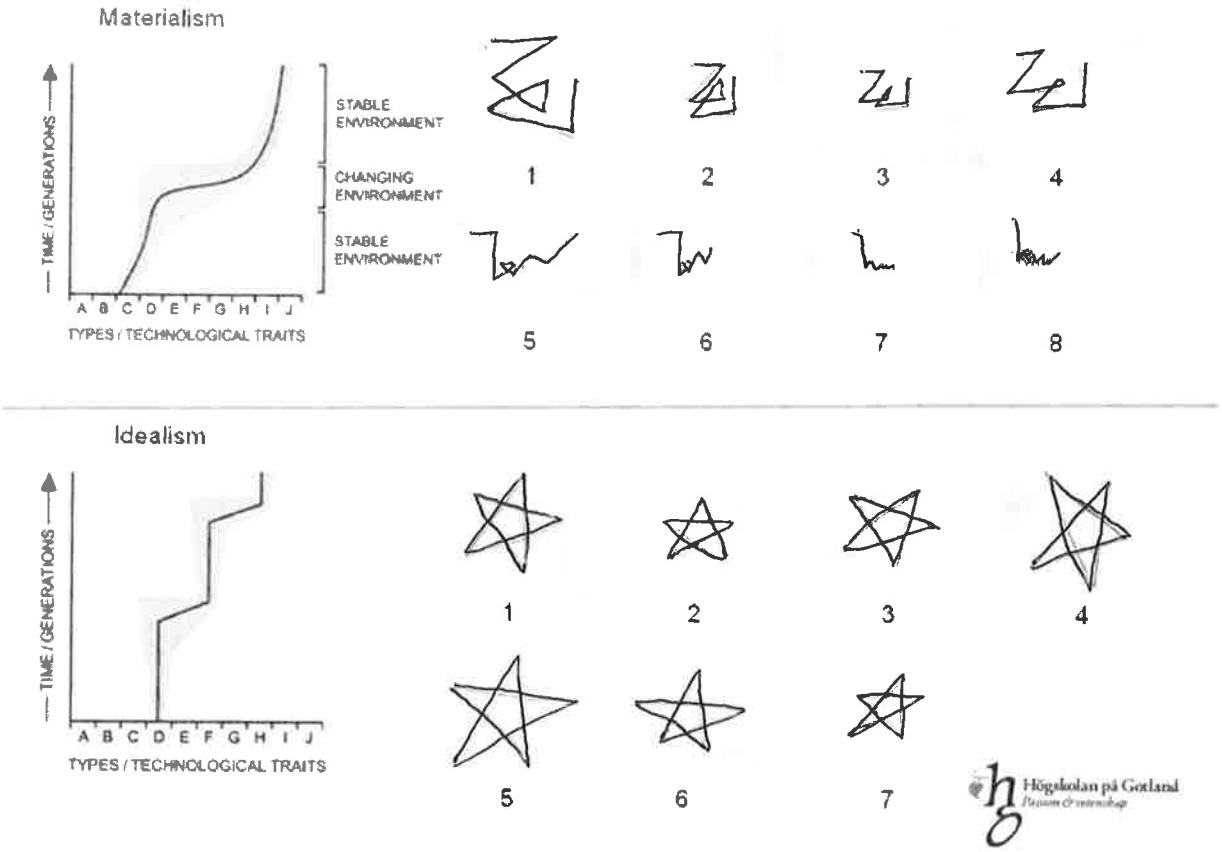

Figure 1. Copying experiments conducted with archaeology students at Gotland University College in 2011.

tional artifacts with primary decorative and symbolic meaning. On the other hand it is well known, not least among archaeologists, that humans are able to maintain cultural representations in what seems to be unchanged fashion for very long periods of time because of a developed working memory (Bartlett 1932). As soon as hominins were able to memorize a mental template or use an externalized template, these forms could be reproduced virtually unchanged between individuals and over generations. The difference between copying shape and sharing a collective mental template is illustrated in figure 1. Here, two groups of students were asked to reproduce two original drawing by copying the previous person. The drawings were of similar complexity, however, one had an arbitrary form and the other a known form. It is obvious that the arbitrary form is affected by severe cultural drift because after just five generations its shape has changed completely. Since the students were asked to copy each other and granted the low fidelity of cultural copying it is not surprising that the arbitrary drawing is changing continuously between each copying event. Thus, later on when they were asked to create a formal typology of the pictures it was easy for most students to sort the series in chronological order. However, the collection of five-pointed stars was not possible to sort in to a chronological series because of the fact that they are actually not the result of copying; Instead, they are the result of the

individual reproduction of a shared idea. This form of "weak" idealism has to be taken into account when discussing human cultural reproduction. In this paper I will look closer at the material representations of one such externalized cultural idea – the idea of the dagger – that was important, especially in the early agricultural societies of Neolithic Europe.

Flint Dagger Industries in Neolithic and Bronze Age Europe

The idea of the dagger has a long history in European archaeology (Skak-Nielsen 2009) and daggers are still objects that people can relate to: a knife-like object with two converging edges and a handle at the base. Thus, there is no need for analogical reasoning when daggers appear in archaeological contexts, they are instantly recognized because they are still part of our cultural repertoire. Dagger-like objects appear in various materials such as antler, wood, flint, copper and slate in hunter-gatherer contexts as early as the boreal period in northern Eurasia (Childe 1942; Forsberg 2010). There is general agreement that the early metal daggers of Neolithic Europe originated from the Near East (Vandkilde 2007) and were copies of pressure-flaked flint daggers, with elaborate handles such as those from Catalhöyük in Anatolia (Connolly 1999) dated to the seventh millennium BC (Fig 2a). The earliest metal daggers reached Europe in the tail end of the fourth millennium BC and in several areas of Northern and Western Europe these daggers were copied in local flint-like raw materials.

Grand Pressigny and western Europe

At around 3500 BC copper daggers made in the Orient reached central and Western Europe through far reaching exchange networks and copies were made in local flint materials. During an early phase that ended around 3000 BC, metal as well as flint daggers are known from Europe but compared to later periods they are scarce and usually in pristine condition. These daggers were probably prestige items with a high symbolic value (Honegger & de Montmollin 2010:139). Between 3000 and 2700 BC a specialization in the production of flint daggers developed in west Europe and as a result, flint daggers are more common in the archaeological record from this period. One area of production stands out in western Europe: Grand-Pressigny in Western France. During a 500 year period, between 3100 and 2400 Cal BC, flint daggers made of large flint blades that had been unifacially or bifacially flaked were made and consumed over large parts of western, central and northern Europe (Bailly 2001; Barfield 2001, Frieman 2012). These daggers were produced in a local, honey-coloured high-quality flint. This flint industry was first recognized in the late 19th century when so-called *Livre-de-buerre* (a pound of butter) flint cores were recovered at Grand-Pressigny and finished blade daggers in the same raw material were recovered at the Swiss Late Neolithic lake pile dwellings, and thus could be dendro-chronologically dated (Bailly 2001; Plisson & Beugnier 2007; Honegger & de Montmollin 2010).

The daggers were copied in different raw materials by local craftsmen who used cruder production methods. Thus, blade daggers with formal properties consistent with the originals but made in local raw materials and according to different recipes of action have been recovered in northern Germany and Denmark (Struve 1955; Vang Petersen 1993). The blanks for the Grand-Pressigny daggers were made of blade-like flakes released with indirect

technique from carefully prepared *Livre de beurre* blade cores (Kelterborn 1980; Mallet 1992; Ihuel 2004; Pelegrin 2006). In south-west France, several production sites have been found. Some of these have been interpreted as the result of the seasonal activities of one knapper or workshop tradition (Pelegrin 2006). However entire workshops might have existed.

Parallel to the production of Grand-Pressigny daggers, other regional industries were flint daggers were produced with different production methods appeared. In the Forcalquier area in southern France, flint daggers were made of large blades of flint struck from well-prepared cores in a similar way and were unifacially sharpened into daggers and hafted. During the same period flint daggers produced according to a slightly different concept were made in northern Italy parallel to the production of metal daggers (Mottes 2001). These daggers were produced with a bifacial core technology and were probably inspired by imported metal daggers from the southeast. Utzi the Ice man carried one of these daggers with him when he died (South Tyrol Museum of Archaeology 2013). Rock-carving panels that depict what appear to be metal daggers with triangular blades have been dated to ca. 2800-2400 BC (Kaul 2004:42). These daggers were most likely locally produced and it is interesting to note that the production of metal and flint daggers seem to have influenced each other in peculiar ways. The production of the first flint daggers of Europe was triggered by the presence of imported metal daggers from Asia via east Europe. Later on, the production of the earliest European flint daggers and Palmela Points was influenced by the local production of flint daggers in west Europe. The production of metal daggers and points in south-west Europe in turn influenced the local production of flint daggers in northern Europe, i.e. the southern parts of the British Isles.

This pattern is not possible to interpret as a straightforward evolutionary development towards more efficient daggers. On the contrary, daggers of flint and metal had different functional properties: metal daggers can be used for stabbing while flint daggers mainly are cutting tools. Thus, it seems as if function was not the only thing that was important with the daggers. The symbolic aspects of the daggers were probably at least as important.

The Scandinavian Flint Daggers

The Scandinavian flint daggers are dated to the Late Neolithic and Early Bronze Age (2350-1500 cal BC). They appear in six distinct types that have chronological as well as chorological relevance (Lomborg 1973; Apel 2001). During LN I 2350-1950 cal BC) daggers with lancet-shaped blades without pronounced hilts (Type I) were predominantly made around the Limfjord in northern Jutland while daggers with lancet-shaped blades with more pronounced hilts were made predominantly in an eastern production area including the east Danish Island and possibly Rügen and southwest Scania. The majority of the Scandinavian flint daggers were made of high-quality Senonian flint, although there are solitary examples made by other raw materials, such as quartzite (Scheen 1979) and Kristianstad flint (Apel 2001). Senonian flint occurs naturally in chalk cliffs on the Danish islands (southeastern Zealand, Mön, Lolland and Falster) and around the Limfjord in northern Jutland (Fig. 2). In southwest Skåne, ice-transported chalk with Senonian flint has been deposited at Sallerup and Kvarnby outside Malmö and on the western part of Järavallen, an ancient shoreline outside Malmö

(Becker 1980:190; Högberg 2006). The production of Flint Daggers in southern Scandinavia started around 2350 BC. One of the earliest sites with evidence of Dagger production, Myrhöj in Himmerland on Jylland is dated to this time. In earlier research it has been suggested that the British flint daggers inspired the production of lancet-shaped Scandinavian daggers (Lomborg 1973; Apel 2001). However, as we shall see below, new evidence suggests that it might indeed have been the other way around: that the inspiration for the initial production of flint daggers in Britain came from south Scandinavia, via the Netherlands. From c. 1950 BC daggers with fish-tailed hilts (Types IV and V) began to be produced. The Scandinavian flint dagger tradition differs from the contemporary daggers on the British Isles as well as in Eastern Europe in treatment of the blade. Because of the fact that many of these daggers were pressure flaked, the surfaces of the blade had to be convex in order to facilitate the pressure flakes.

The British Flint Daggers

Circa 2250 BC a regional production of bifacial flint daggers appeared in Britain (Frieman 2014:23). Frieman points out that there are no obvious British precursors for these flint daggers, although earlier bifacial knapping traditions exists, and suggests that the inspiration for the indigenous production of flint daggers in Britain came from the Scandianvian lancet-shaped daggers of southern Scandinavia via the Netherlands. There are at least 57 known Scandinavian flint daggers in the Netherlands. Of these, over 80% are of types I-III (Apel 2001:296), indicating that the connection between Scandinavia and the Netherlands was most active during LN I. Most of the Scandinavian flint daggers have been recovered in the province of Drenthe and

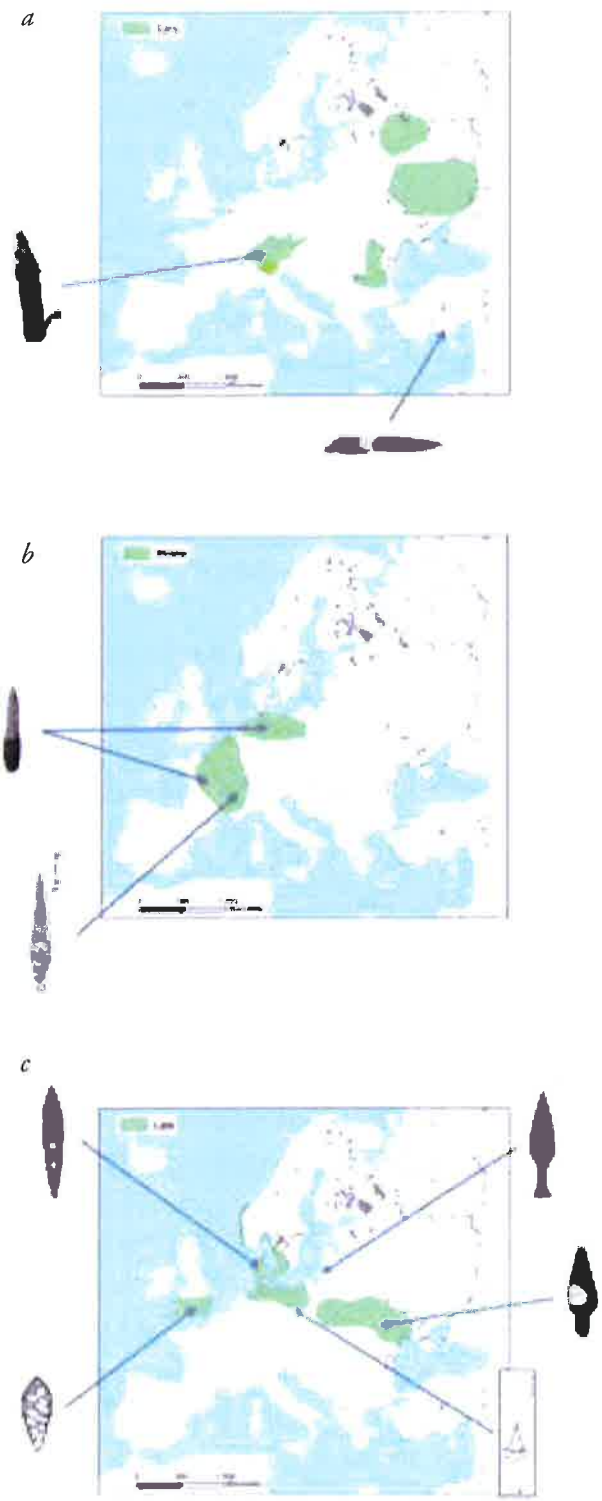

Figure 2 a-c. Neolithic and Bronze Age dagger traditions in Europe.

here, imported flint daggers made of red senonian flint from the Danish island of Helgoland have been noticed (Beuker 1988:13; Apel 2001). The geographical distribution of the British flint daggers indicates that the production took place mainly in the southwestern part of Britain (Frieman 2014:3) and this is also an area where imported Late Neolithic flint daggers with fishtailed handles (Type IV and V) have been recovered indicating contacts between the areas during LN II (1950-1700 BC cal).

The Volhynian and Yamnaia dagger traditions

In eastern Europe, daggers have been in evidence since at least 4000 cal BC, not counting slotted bone daggers and slate daggers of the boreal Mesolithic. In Russia, daggers made of copper from the fourth and third millennium BC, sometimes with elaborate hilts are known (Childe 1942). During the third millennium BC a tradition of making large bifacials in flint with direct as well as pressure techniques appear in present day eastern Poland and western Ukraine (Libera 2001; Klochko 2001). In the later part of the third millennium BC the Volhynian dagger tradition appear in the same area (Libera 2001) and also in southern Ukraine, in the form of bifacial daggers made within the Yamnaia culture (Razumov 2011). The Volhynian and Yamnaian dagger traditions are distinguished by their flat and wide blades which for the largest part is shaped with a direct, soft percussion technique (Fig. 2c). Since these blades are thin and wide they were not, as for instance the contemporary Scandinavian daggers, meant to be extensively pressure flaked. Daggers from this tradition are seldom found west of the Vistula river in central Poland, however in certain areas, such as for instance in Lithuania, the Scandinavian and the Volhynian daggers traditions are both known (Piliciauskas 2010).

Conclusion

The idea of the dagger has a longstanding history in Europe. One of the most interesting aspects of the flint and metal daggers of Europe that appear from the seventh millennium BC until the first millennium BC, is that the same general idea, albeit with radically different production techniques and recipes of action and in a variety of raw materials, is repeated and externalized in different, chronological, geographical and cultural settings. This indicates that the production was not driven purely by functional motives (Stensköld 2004). As opposed to a metal dagger, a flint dagger is not suitable as a stabbing weapon. On the other hand, if the bifacial edges are retouched in the correct way, a flint dagger will become a superb cutting tool.

The appearance of flint daggers over Europe cannot be understood as reflecting a straight evolutionary process whereby metal daggers are developed from flint daggers or vice versa. The dagger idea externalized in different raw materials by specialized craftsmen in different regions using a wide range of methods, raw-materials and techniques. Such copying has, for instance, been described in connection with the production of Late Neolithic/Early Bronze Age flint daggers in Scandinavia (Apel 2001 & 2008) and is also in relations to the Grand-Pressigny daggers (Ihuel 2004). The reproduction of Neolithic daggers in Europe is not the result of a shared raw material, a shared technology or a shared function. It is a result of a shared symbolic idea that was materialized in different ways.

(This article is based on a paper given at a session on Flint Daggers, arranged by Berit

Valentin Eriksen and Cate Frieman at the EEA meeting In Oslo 2011. Unfortunately I was not able to deliver a manuscript to the proceedings from the session and this article is a short, preliminary version of a text that originally was planned to be more ambitious. The figures are from 2011 and this means that new data has not been included. This pertains especially to new important work by Frieman (2014) on the distribution of the British flint dagger tradition and Razumov's (2011) work on the bifacial traditions of the northern Pontic area.)

LITTERATUR

Apel, J.
2001 *Daggers, Knowledge and Power.* Coast to Coast books. Uppsala.

2008 Knowledge, Know-how and Raw Material – The Production of late Neolithic Flint Daggers in Scandinavia. *Journal of Archaeological Method and Theory* 15(1):91-111.

Bailly, M.
2001 Stone tool production and use on bell Beaker domestic sites from eastern France and western Switzerland: from lithic technology towards patterns of social organization. Nicolis, F. (ed), *Bell beakers today: pottery, people, culture, symbols in prehistoric Europe.* Servizio Beni culturali della Provincia Autonoma di Trento. Trent.

Barfield, L. H.
2001. Beaker lithics in northern Italy. Nicolis, F. (ed), *Bell beakers today: pottery, people, culture, symbols in prehistoric Europe.* Servizio Beni culturali della Provincia Autonoma di Trento. Trent.

Bartlett, F. C.
1932. *Remembering. A study in experimental and social psychology.* Cambridge University Press. Cambridge.

Becker, K.-J.
1980. Hov, Gem, Sennels, Amt Thisted, Jutland. In: Weisgerber, G. (ed.), *5000 jahre feuersteinbergbau.* Deutsche Bergbau Museum, Bochen.

Beuker, J. R.
1988. De import van Helgoland-vuursteen in Drenthe. *Van Rendierjager tot Onginner* XXXI:3-27.

Bogucki, P.
2011. How Wealth Happened in Neolithic Central Europe. *Journal of World Prehistory* 24: 107-115.

Childe, V. G.
1942 Prehistory in the USSR II. The Copper Age in South Russia. *Man* 42:130-136.

Collard, M., Buchanan, B., O'Brien, M. and Scholnick, J.
2013. Risk, mobility or population size? Drivers of technological richness among contact-period western North American hunter-gatherers. *Philosophical Transactions of the Royal Society* B2013 368: 20120412, published 1 October 2013.

Connolly, J.
1999. *The Catalhöyük Flint and Obsidian Industry. Technology and Typology in Context.* BAR International Series 787. Oxford.

Durheim, E.
1984 (1893). *The Division of labour in Society.* Macmillan press. London.

Forsberg, L.
2010. The spread of new technologies in Early Fennoscandia – a view without borders, In: W. Østreng (ed): *Transference. Interdisciplinary Communications 2008/2009, CAS, Oslo.* (Internet publication, http://www.cas.uio.no/publications_/transference.php, ISBN: 978-82-996367-7-3)

Frieman, C. J.
2012. Flint daggers, copper daggers and technological innovation in Late Neolithic Scandinavia. European Journal of Archaeology 15(3):440-464.

Frieman, C. J.
2014. Double Edged Blades: Re-visiting the British (and irish) Flint Daggers. *Proceedings of the prehistoric society* 79: 1-33.

Högberg, A.
2006. Continuity of place: actions and narratives. In: Apel, J. & Knutsson, K. (eds), *Skilled production and social reproduction.* SAU. Uppsala.

Honegger, M. & de Montmollin, P.
2010. Flint daggers of the Late Neolithic in the Northern Alpine area. In: Eriksen, B. V. (ed), *Lithic Technology in Metal Using Societies.* Jutland Archaeological Society. Aarhus.

Ihuel, E.
2004. *La diffusion du silex du Grand-Pressigny dans le Massif Armoricain au néolithique.* Documents préhistorique 18. Paris.

Johansson, P.
2003. *The lure of origins.* Coast-to-coast books. Uppsala.

Kaul, F.
2004. Bronzealderens religion: Studier af den nordiske bronzealders ikonografi. Nordiska Fortidsminder Bd 22. Der Kunglige Nordiske oldeskriftselskab. Köpenhamn.

Kelterborn, P.
1980. Zur Frage des Livre de beurre. *Jahrbuch der Schweizerischen gesellschaft für ur- und frügeschichte* Vol 63: 5-24.

Klochko, V. I.
2001. *Weaponry of Societies of the Northern Pontic Culture Circle: 5000-700 BC.* Baltic Pontic Studies 10. Poznan.

Libera. J.
2001. *Krzemienne formy bifacjalne na terenach Polsi i zachodniej Ukrainy.* Uniwersytetu Marii Curie-Sklodowskiej. Lublin.

Lomborg, E.
1973. Die flintdolche Dänemarks. Universitetsförlaget. Köpenhamn.

Mallet, N.
1992. *Le Grand-Pressigny: ses relations avec la civilisation Saône-Rhône.* Supplement au Bulletin de la Société de Amis du Musée du grand-Pressigny 2.

LITTERATUR

Mottes, E.
2001. Bell Beakers and beyond: flint daggers of northern Italy between technology and Typology. In: Nicolis, F. (ed), *Bell beakers today: pottery, people, culture, symbols in prehistoric Europe.* Servizio Beni culturali della Provincia Autonoma di Trento. Trent.

Pelegrin, J.
2006. Long blade technology in the old world: an experimental approach and some archaeological results. In: Apel, J. & Knutsson, K. (eds), *Skilled production and social reproduction.* Societas Archaeologica Upsaliensis. Uppsala.

Piliciauskas, G.
2010. Echoes of the Dagger Period in Lithuania, 2350-1500 Cal BC. *Estonian Journal of Archaeology* 14: 3-21.

Plisson, H. & Beugnier, V.
2007. Technical Uses and Symbolic Values of Pressignian Daggers. *The Arkeotek Journal* Vol 1/2. www.thearkeotekjournal.org

Razumov, S. M.
2011. *Flint artifacts of northern Pontic populations of the early and middle Bronze Age.* Baltic-Pontic studies vol. 16. Poznan.

Scarre, C.
2005. The world transformed: From foragers and farmers to states and empires. In: Scarre, C. (ed), *The Human Past.* Thames and Hudson. London and New York.

Scheen, R.
1979. *De norske flintdolkene. En typologisk-kronologisk analyse.* MA-thesis in Nordic Archaeology at Oslo University. Oslo.

Skak-Nielsen, N. V.
2009. Flint and metal daggers in Scandinavia and other parts of Europe. A reinterpretation of their function in the Late Neolithic and Early Copper and Bronze Age. *Antiquity* 83(320):349-358.

South Tyrol Museum of Archaeology
2013. http://www.iceman.it/en/node/278

Sperber, D. & Hirschfeld, L.
2004. The cognitive foundations of cultural stability and diversity. *Trends in Cognitive Sciences* 8 (1):40-46.

Stensköld, E.
2004. *Att berätta en senneolitisk historia.* Stockholm Studies in Archaeology 34. Stockholm.

Steward, J.
1955. *Theory of culture change.* University of Illinois Press. Urbana.

Struve, K. W.
1955. *Die Einzelgrabkultur in Schleswig-Holstein und ihre kontinentalen Beziehungen.* Karl Wackholtz Verlag. Neumünster.

Torrence R.
2001. *Hunter–gatherer technology: macro- and microscale approaches. In* Panter-Brick, C., Layton, R. H. And Rowley-Conwy, P. (Eds). Hunter-gatherers: an interdisciplinary perspective. Cambridge University Press. Cambridge: 99-143.

Vandkilde, H.
2007. *Culture and Change in central European Prehistory.* Aarhus University Press. Aarhus.

Vang Petersen, P.
1993. *Flint fra Danmarks oldtid.* Forlaget Museerne.dk. Copenhagen.

ANNONSE

arkeologiutstyr.no

Hos meg får du alt utstyr arkeologen trenger.

Telefon 480 70 000

Mvh Arne Schau, Larvik