Lithic technology in metal using societies

Proceedings of a UISPP Workshop, Lisbon, September 2006

Edited by Berit Valentin Eriksen

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Contents

Flint daggers of the Late Neolithic in the Northern Alpine area

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With the collaboration of Jehanne Affolter & Céline Bressy

Abstract

The goal of this article is to re-evaluate the chronology of flint daggers of the Late Neolithic in the Northern Alpine region, specifically of Western Switzerland (around the lakes of Neuchâtel and Morat). Additionally, the links that might have existed between stone and copper production will be examined.

The oldest daggers are copper examples that appeared during the 4th millennium. These were followed by long flint blades with distant origins that preceded the Grand-Pressigny imports by a few centuries. The latter were produced in abundance from the 27th century BC onward, concurrent to a net increase of copper daggers. It is also during this period that a series of new phenomena occurred: recycling of flint daggers, stone imitation of copper models, and the development of bifacial retouch. These practices seem to result from the growing interest in metals, which would, among other things, lead to the transposition of procedures used in metallurgy into the realm of stone.

It has long been known that the production of flint daggers in Western Europe developed during the Late Neolithic, between 3500 and 2500 BC, at the time when the first copper daggers make their appearance. The origin of this phenomenon appears to be oriental and associated with the symbolism of war which, as attested by funerary customs, stelae, and rock art found in the alpine arc and the southern half of France, honours the status of certain men and their weapons (dagger, bow, arrows, axe). The study of daggers is therefore interesting on more than one score: not only does it open the possibility of identifying the interactions between the lithic industry and the new metal industry, but it also allows us to reconstruct trade networks, and to reflect on the symbolic value of a socially prized object. In order to address these questions today, a precise chronological framework that facilitates the ordering of phenomena throughout the ages is needed. However, daggers are most often discovered in contexts that are difficult to date, such as deposits or mass burials. In this regard, the Northern Alps offer ideal find contexts thanks to the numerous Late Neolithic lake-dwelling settlements dated by dendrochronology. Not only can daggers now be placed in a very specific chronological bracket, they can also be the object of quantitative studies. Our study focuses on Western Switzerland, where the lithic industry offers a much larger sample of daggers than Eastern Switzerland (figure 1). This difference is due to an important cultural

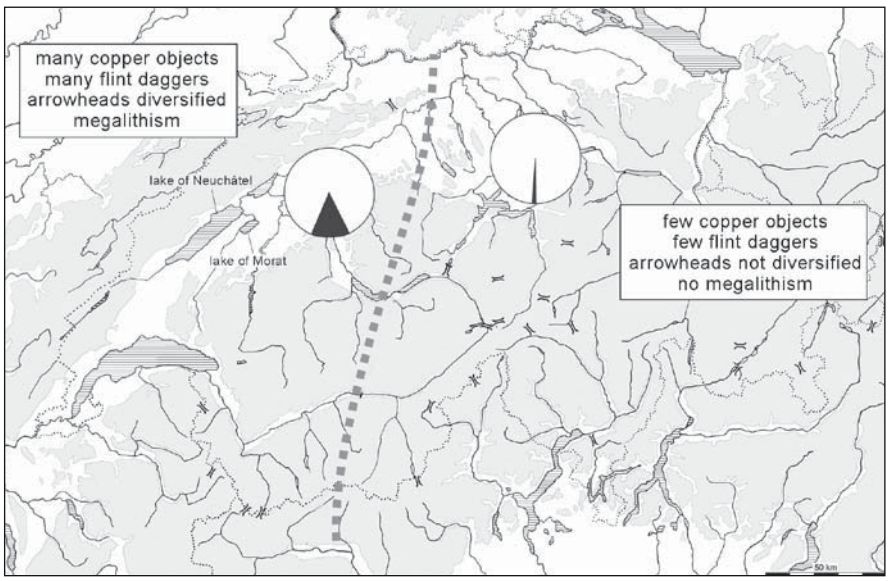


Figure 1. Map of Switzerland showing the divide between the eastern and western sections of the territory based on the proportion of flint daggers. These are calculated in connection with the number of tools with regular retouch and present an average for several sites. Other characteristics that denote different cultural traditions are included.

divide between these two regions. Being exposed to influences from the south and the west, the megalithic phenomenon appears in Western Switzerland as early as 3000 BC, together with a growing number of copper tools and diversified arrowheads in abundant quantity. On the other hand, Eastern Switzerland is influenced by Central Europe and only individual burials, in which copper objects are rare and arrowheads are scarce and unvaried, have been uncovered.

First, we shall present an overview of studies since the 1960s. Then, we will draw up an inventory of flint daggers found at lake-dwelling sites of the lakes of Neuchâtel and Morat, concentrating on the lesser-known production groups – those not made from Grand-Pressigny flint. The description of each dagger type includes its petrographic origin, morphology, and technology. Finally, the chronological evolution of the different production groups is presented and compared to the development of copper metallurgy, which had a certain influence on lithic technology.

Overview of previous studies

For the longest time, studies of daggers were limited to descriptive inventories focusing on morphological attributes (dimensions) and, more rarely, on technological characteristics (regularity of the blade, refinement of secondary working). In Western Switzerland, the first study proposing an actual interpretation of the flint dagger phenomenon is more than 40 years old (Strahm 1961-1962). The author supposed that copper daggers were older than those of stone, and thought that the latter were mere imitations of the former. His principal arguments were based on the similarity of colour between the flint of Grand-Pressigny and copper, and in the flint imitation of examples first produced in copper (Strahm 1961-1962:463ff). In general, these results are still relevant, but dendrochronological dating could not confirm the detailed schematic evolution proposed at the time (Honegger 2006). It also cannot be demonstrated today that, in their turn, flint models influenced metal blade productions.

It is only in the last 15 years that petrographic studies allowed the development of research into themes such as the origin and diffusion of these remarkable objects. At first, studies focused on the famed production of daggers from Grand-Pressigny (Mallet 1992), successive inventories of which now attempt to list all long blades having originated in Touraine (Mallet 2000).

Since then, increasing knowledge of flint deposits has allowed the study of lesser-known production groups (see Affolter 2002). The most important among these are long blades from Forcalquier and bifacial daggers from Northern Italy (figure 2). The former are currently the object of a collective research programme in France, aiming

to define the distribution of this production, to locate the main workshops, and to define the different knapping technologies used (Renault 1998; Plisson 2004). These technologies are being studied petrographically and typologically in order to locate their main production centres and define their distribution area. These studies are taking place both in Northern Italy, where bifacial daggers traditionally associated with the Remedello culture were produced (Mottes 2001; Borello & Mottes 2002), and in the Northern Alps, where these production groups are found in terrestrial (Tillmann 1993) or lacustrian contexts (Honegger 2002; Schlichtherle 2003).

With regards to Western Switzerland, a recent study of chipped lithic industries based on several thousands of pieces allowed the identification of daggers originating from regions other than Grand-Pressigny (Honegger 2001). The preliminary study of these pieces and their local or distant origins led to the first proposal for the chronology of the diffusion of these prestige objects. It also led to a reflection on the possible interactions between flint and metal (Honegger 2006).

Inventory of daggers found on the banks of the lakes of Neuchâtel and Morat

While creating the inventory of non-pressignian flint daggers from the lakes of Neuchâtel and Morat, it was necessary to consult every Neolithic collection available in museums and archaeological services in this region. Each item was described, photographed, and drawn before petroarchaeologists could determine the origin of the source material.[1] In order to propose a chronology of imports, we attempted to date each item. Those discovered in stratigraphic contexts during

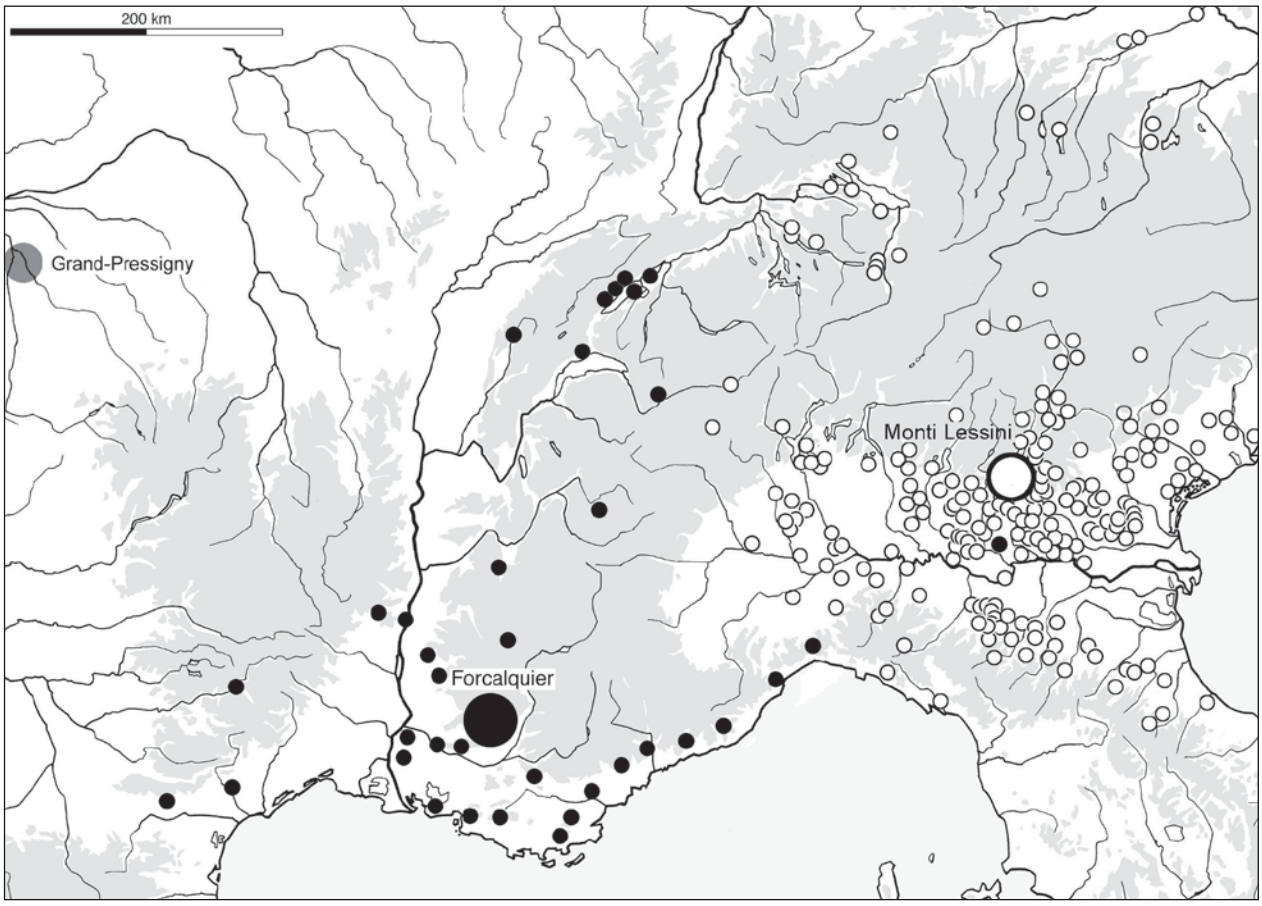


Figure 2. Distribution in Western Europe of a few Forcalquier daggers and others from Northern Italy (after Honegger 2002; Mottes 2001).

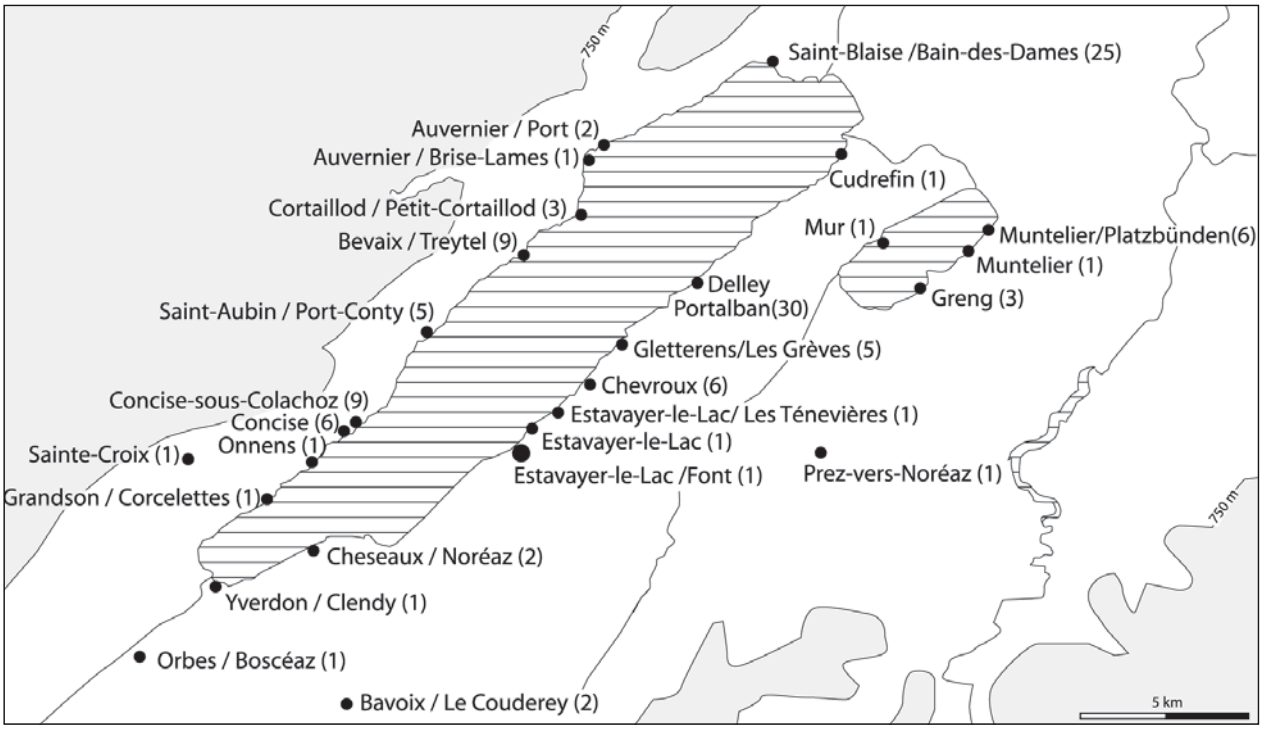


Figure 3. Map of the lakes of Neuchâtel and Morat with location of sites where daggers and long blades made from non-pressignian flint were brought to light. The number within brackets indicates the number of items at each site.

modern excavations are particularly interesting when it comes to dating, because the archaeological levels to which they belong were precisely dated with dendrochronology. On the other hand, items from excavations or collected on the lake banks during the late 19th or early 20th century lack information regarding their discovery context. In sum, we were able to identify 141 daggers, whole or fragmented, originating from 27 sites (figure 3). In three cases, very long unsharpened blades which are considered unretouched daggers were incorporated into the inventory.

Source of raw material

Amongst the 141 items comprised in the corpus, the source of flint was determined for 101 daggers. For 19 items, the source of flint could not be equated with any known deposit, while the alterations (fire, patina) on 21 pieces were too large to allow the identification of raw material characteristics. The sources of flint are mostly allochthonous (figure 4) and the production of daggers therefore supposes the existence of raw material adequate in quality and dimensions to allow the knapping of long blades. Local or regional deposits, however, contain flint of either mediocre quality or nodules often too small to permit the production of long blades. These deposits were to be exploited later, on a very small scale.

Daggers were imported as finished products or could have been shaped from a long blade or a flint plate (i.e., tabular slab). In the brief inventory presented here, the products are listed according to the number in each group.

Mont-les-Etrelles (Haute-Saône, France)

41 pieces were created from flint originating in Mont-les-Etrelles (figure 5)(Cupillard *et al.* 1995). This flint can be found in the form of fine plates or nodules, the colour of which varies from black to pale grey with, in rare cases, stripes. Daggers are generally fashioned by the bifacial retouch of plates varying in thickness (0.8-1.6 cm), the exterior surface of which is covered with cortex (30 items). These bifacials are medium-sized (length: 8.3-14.3 cm) and relatively wide (width: 2.6-4.3 cm). The secondary work, which varies from short to semi-covering, is obtained by direct per-

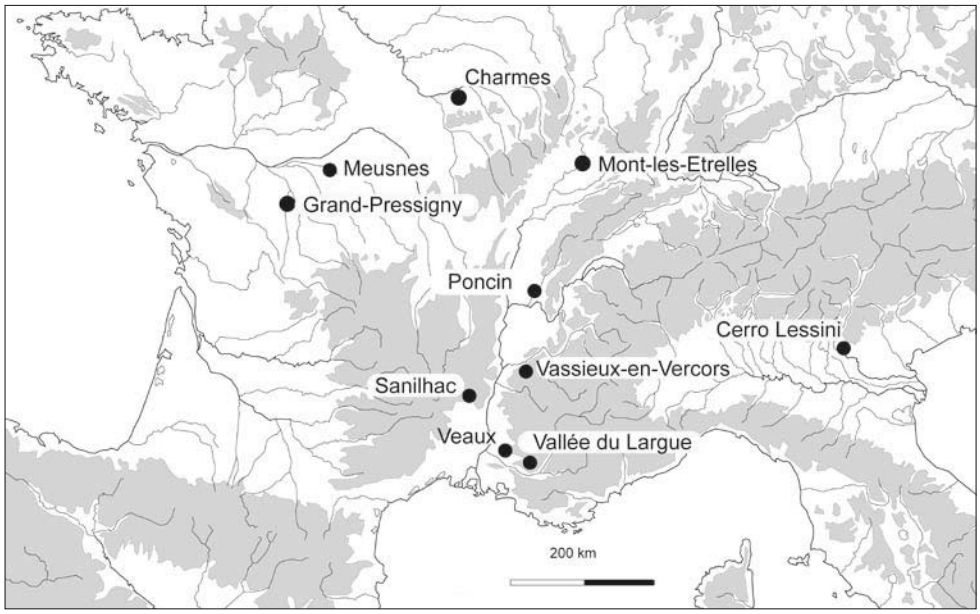


Figure 4. Location of the main flint deposits from which the daggers and/or long blades found on the banks of the lakes of Neuchâtel and Morat originated.

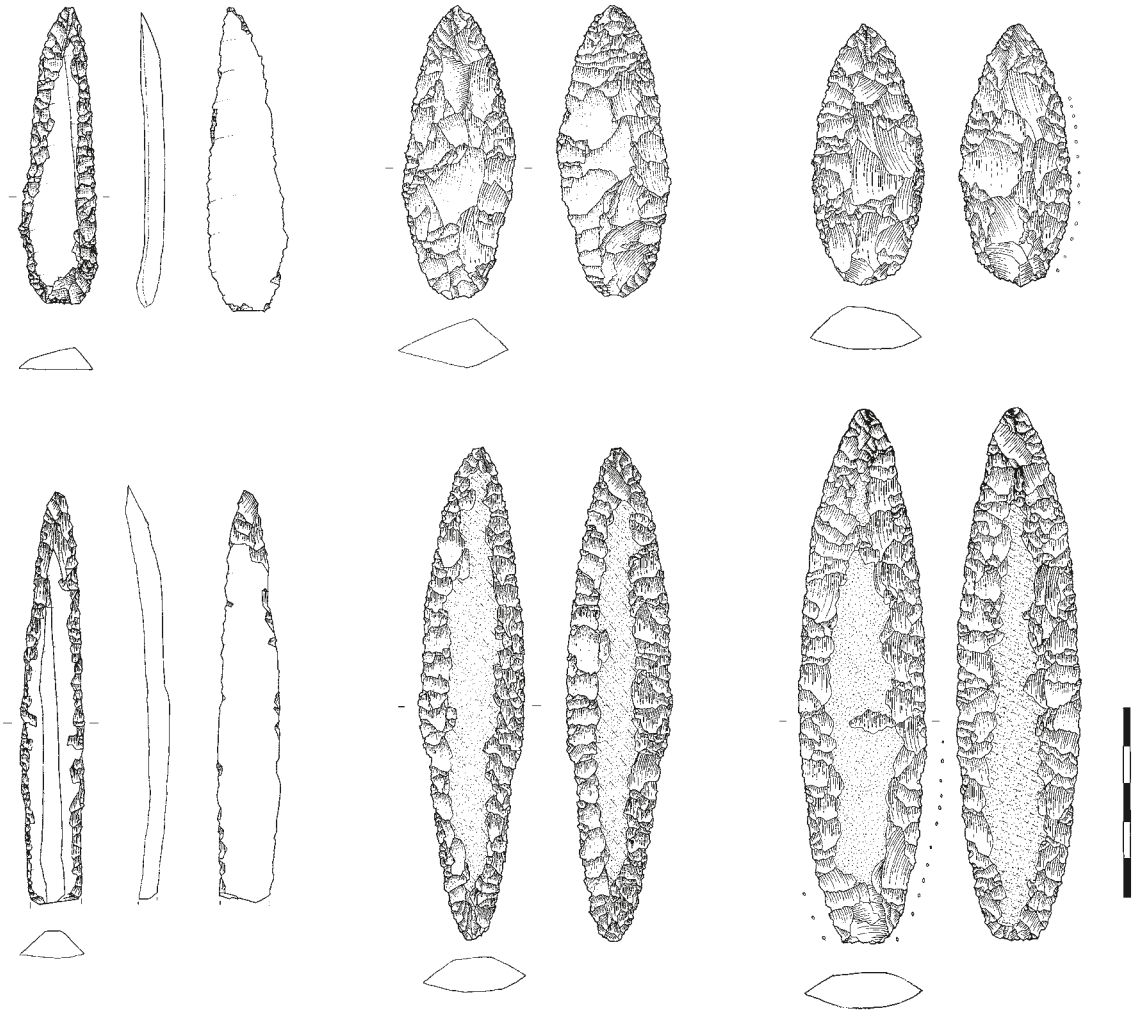


Figure 5. Flint daggers from Mont-les-Etrelles (Haute-Saône, France).

cussion and covers the entire contour of the piece. A second retouching, this time by pressure flaking, finishes the pieces. The cortex, present on both surfaces, is almost always scraped smooth or even entirely polished. The morphology of these pieces does not vary much; the distal edge is sharpened, and the base is lanceolate or occasionally squared. Rare examples have a tang or notches.

At raw material source sites, the presence of nodules made possible the production of daggers from blades. These pieces, which are fewer in number than the previously mentioned ones (11 items), were obtained from regular blades of medium length (8.8-13.5 cm) that are relatively thick. These are only fashioned by direct retouch.

Vallée du Largue/Forcalquier (Alpes-de-Haute-Provence, France)

Flint from the Vallée du Largue (figure 6) is found in the form of nodules up to 50 cm in size, which are brown and striped. These were knapped into long blades (occasionally more than 30 cm (Plisson 2004)). The number of pieces in this group is important because, with 31 specimens, it represents the second largest flint type. Among these artefacts, four long blades, with a length between 21.6 cm and 27.9 cm, have the following characteristics: a thickness between 0.6 and 0.9 cm, a straight platform angle (*angle de chasse*), and a quasi-rectilinear, ribbed upper surface. Technological and traceological studies performed on similar pieces have revealed that they were knapped by lever pressure, using a copper compressor (Renault 1998). At the moment, the workshops of Forcalquier are among the few in Western Europe where the lever pressure technique is recognised. It was known that some of the long blades of Varna in Bulgaria were made using this technique (Manolakakis 2005), and its usage in Corsica came to light recently (Costa & Pelegrin 2004). Future studies will most likely allow the identification of this particular technique in other regions, notably around the Mediterranean.

The same regularity is not found on smaller pieces (6.2-13.3 cm); these were probably created by indirect percussion. The contour of the upper surface was fashioned by direct retouch and the occasional superposition in the retouching sequence indicates a prolonged usage. A study of these pieces reveals that almost half show traces of polishing, performed before and/or after retouching.

Flint of Arces-Dilo/Charmes (Yonne, France)

The flint from the Yonne Basin (figure 7) is translucent and shiny, and is found in nodules that were knapped into irregular blades. Daggers obtained from such blades (12 items) are of medium size (8.9 to 16.2 cm in length) and fairly thin (0.8 to 1.14 cm). These daggers were fashioned by direct retouching, in short strokes. A rhomboidal bifacial dagger showing great regularity stands out from this group; it resembles the models known from Northern Italy.

The comparison of sizes (width/thickness) of daggers fashioned from the three best represented groups of raw materials shows that the productions can be distinguished based on the various forms of raw materials (nodules of different sizes, plates) and distinctive knapping techniques (figure 8). While pieces fashioned from flint plates from Mont-les-Etrelles are wide and thick, the daggers, created by pressure flaking the nuclei from Vallée du Largue, are characterised by extreme thinness (0.6-0.8 cm) and exceptional length (21.6 cm-27.9 cm).

Other sources of raw material

Several source materials can be described as marginal compared to the three previously mentioned, simply because each group comprises only a few daggers (figure 9).

Five pieces made from flint originating from Meusnes/Vignes-vers-Couffi (Loir-et-Cher, France) were knapped from small blades, often thin and irregular. These daggers were fashioned by direct retouch, in short and often discontinued strokes. The work was executed rather carelessly.

In contrast, certain pieces were the object of intense technological work, such as a dagger

Figure 6. Flint daggers from the Vallée du Largue/Forcalquier (Alpes-de-Haute-Provence, France).

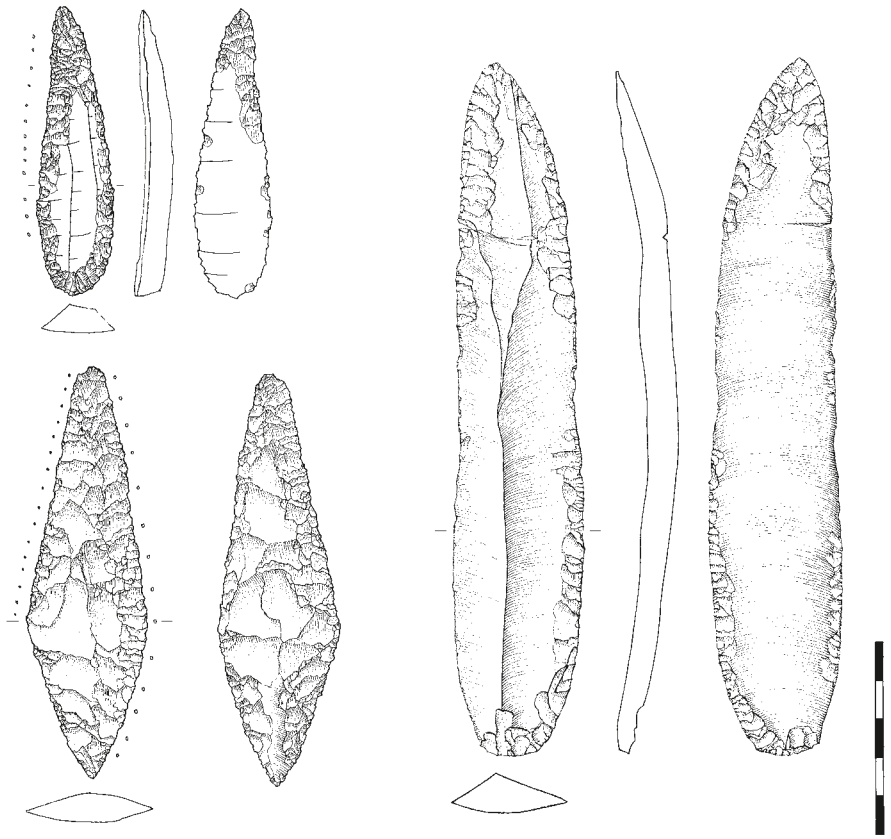


Figure 7. Flint daggers from Arces-Dilo/Charmes (Yonne, France).

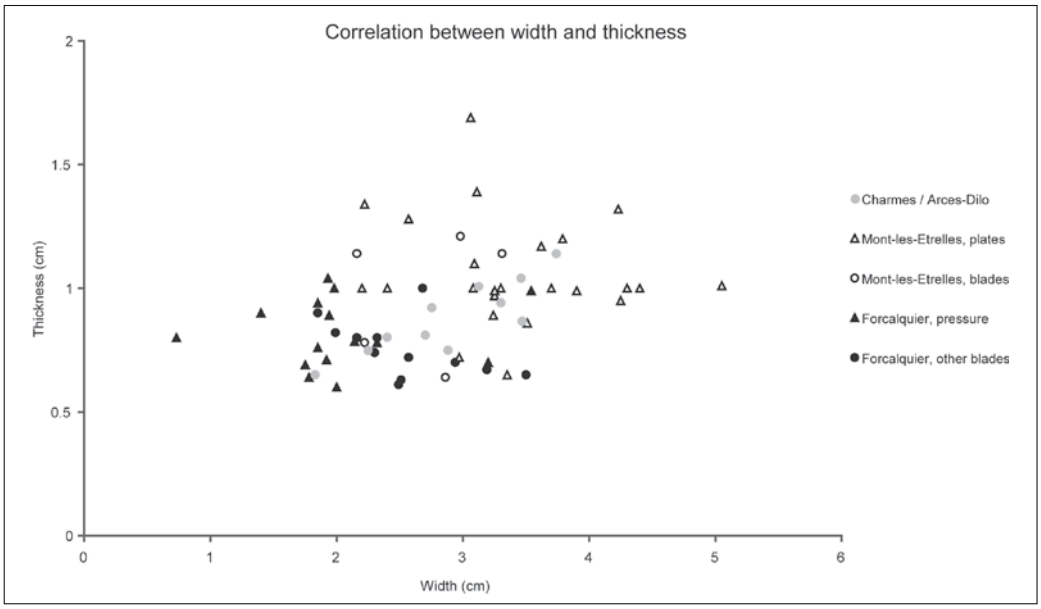
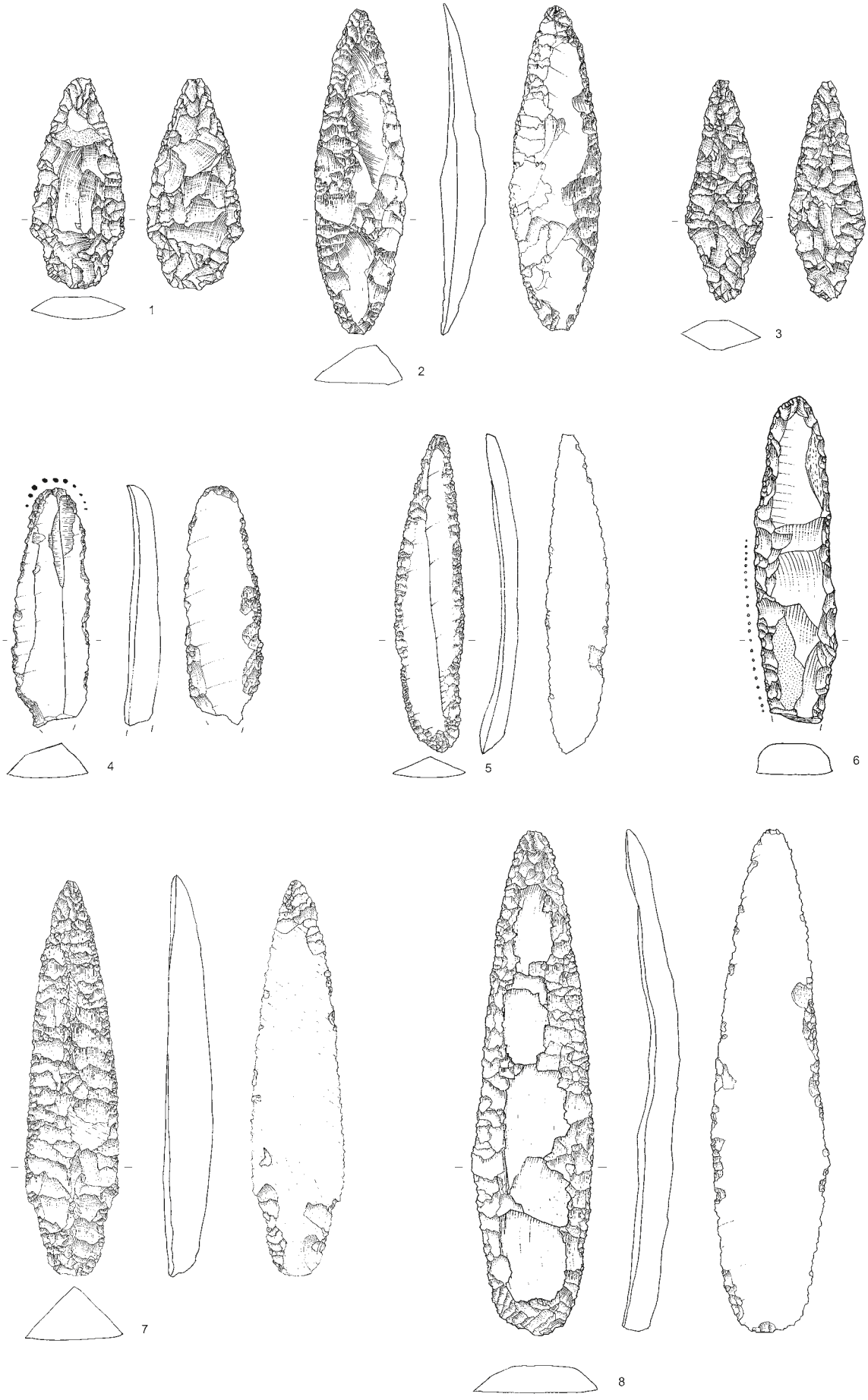


Figure 8. Comparison of the dimensions of the three principal production groups: Vallée du Largue/Forcalquier, Mont-les-Etrelles and Charmes.

Page 137: Figure 9. Marginal products originating from various regions in France (F), Italy (I) and Switzerland (CH): 1. Cerro / Lessini (Trentin, Haute-Adige, I), 2.Sanilhac/La Lauzas (Ardèche, F), 3. radiolarite, local (CH), 4. Poncin / Saint-Alban (Ain, F), 5. Meusnes /Vignes-vers-Couffi (Loir-et-Cher, F), 6. local flint (CH), 7. Veaux / Malaucène (Vaucluse, F), 8. Vassieux-en-Vercors (Drôme, F).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from Estavayer-le-Lac/Font (Fribourg). It was knapped from a particularly thick blade (1.65 cm) of baremo-bedoulian flint, from the region of Veaux/Malaucène (Vaucluse, France). This dagger shows an ill-defined tang and subparallel retouching that covers the upper surface, the upper face of which was entirely polished (as was the lower surface). Other pieces displaying the same technological and morphological features are noted in Southern France at sites relatively near production zones. In this case, it appears that there is a correlation between source material, style, and technology.

Also notable is a long blade obtained by the "livre de beurre" technique, which was used for the majority of the Grand-Pressigny daggers (Mallet 1992). This sharp blade, however, does not come from the workshops of Touraine, but from Vassieux-en-Vercors (Drôme, France), where the pressignian technique was also used (Riche 1998). With the exception of an exemplar found in a dolmen in Brittany, this Western Swiss dagger is the item found furthest away from its point of origin.

The bifacial daggers of Northern Italy – the majority originating from Monti Lessini – are found in the Pô Plain, Austria, Southern Germany, and Eastern Switzerland (Borello & Mottes 2002). The small short-tang dagger discovered at Estavayer/Les Tenevières (Fribourg) is the only known example found in Western Switzerland.

Finally, a few additional flint deposit sites were identified, such as Sanhilac/La Lauzas (Ardèche, France) or even nearer the lakes of Neuchâtel and Morat, Poncin/Saint-Alban (Ain, France). During a later phase of the Late Neolithic, a few irregular and thick blades, generally fragmentary, probably served as blanks for daggers. Created from regional or local flints, these may be clumsy imitations of more prestigious models with distant origins.

Chronology of stone daggers and interactions between copper and flint

Within the present corpus, only 39 items could be dated by dendrochronology. These originate from the three most important stratified sites around the lakes of Neuchâtel: Delley/Portalban (Fribourg), Saint-Blaise/Bains-des-Dames (Neuchâtel) and Concise-sous-Colachoz (Vaud).

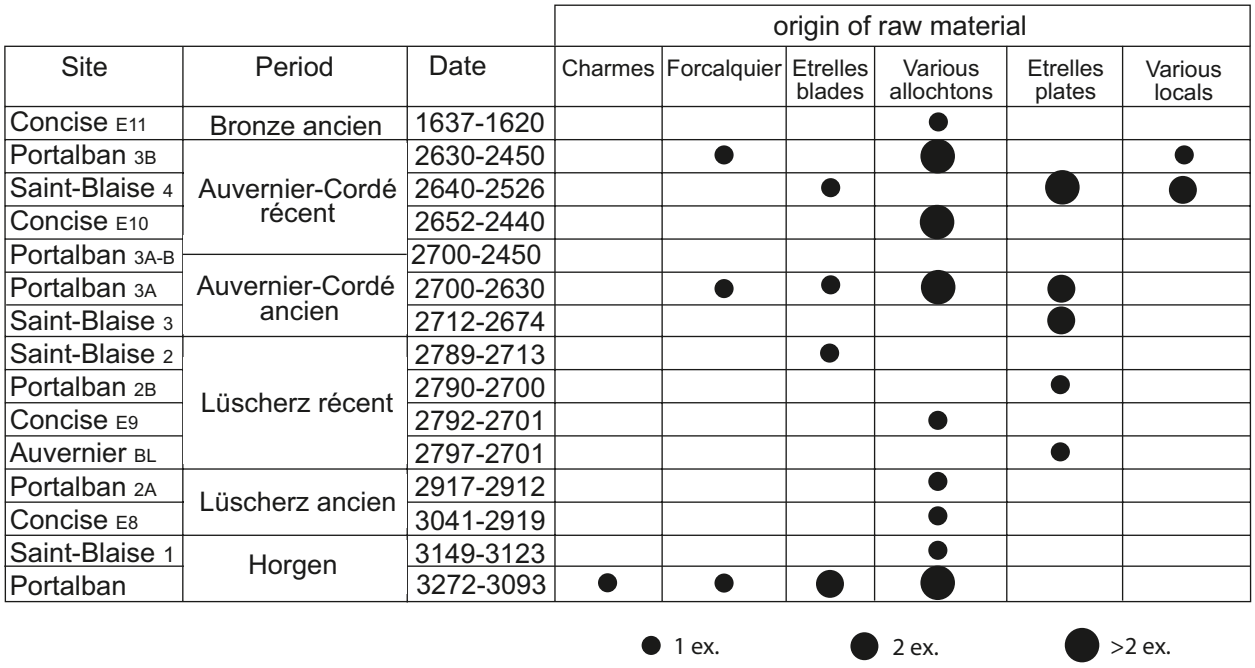

Figure 10. Chronology of imported daggers made from non-pressignian flint found on the banks of the lakes of Neuchâtel and Morat.

The first flint daggers appeared in Western Switzerland in the 33rd century BC (in Horgen culture contexts), two centuries before the appearance of the first Grand-Pressigny models (figure 10). These take the shape of a long blade with very little secondary working, made from flint originating from Meusnes/Vigne-vers-Couffi, Charmes/Arces-Dilo or the Vallée du Largue/Forcalquier. In general, the quantity of imported items remains rather limited until the 28th century (in Lüscherz culture contexts). Daggers from Mont-les-Etrelles first appear at the end of the 31st century as pieces made from blades. They were to become more numerous during the 27th-25th centuries (in contexts of the culture of Auvernier-Cordé); but, in this later period, they were fashioned through bifacial retouch of flint plates.

It is fruitful to compare the evolution of non-pressignian daggers with the famous imports of Grand-Pressigny, as well as with a few copper models. Unfortunately, as far as relative proportions are concerned, it is rather difficult to quantify results with any degree of precision for a number of reasons, among others, the different excavation techniques employed at different sites and the possibility of recycling copper tools. Therefore, we simply decided to quantify the results in three distinct categories: rare (1-3 items), frequent (4-10 items) and abundant (more than 10 items; figure 11). In other respects, we have taken into consideration two phenomena characterising lithic industries of the Late Neolithic: the increased development of foliate pieces (bifacial retouch, covering to invasive) and the recycling of daggers into other tools (scrapers, arrowheads, etc.) which we see as an indication that flint tools were progressively losing their prestige status. The comparison of all these phenomena allows us to propose three distinct phases of an evolution of daggers from Western Switzerland (Honegger 2006).

The first phase, called the "pioneer phase", corresponds with the appearance of the first daggers in copper, and later in flint. It takes place at the beginning of the Late Neolithic, between 3500 and 3000 BC. Daggers from this phase are rare and always have distant origins. Generally, they are complete with little secondary retouch and no evidence for recycling. These objects were socially prized and can all be considered prestige items. They likely affirmed the status of certain individuals within a group.

The second phase is identified as the "stone phase" because it is characterised by the development of flint daggers imports, notably those from Grand-Pressigny. This phase lasted approximately three centuries, from 3000 to 2700/2670

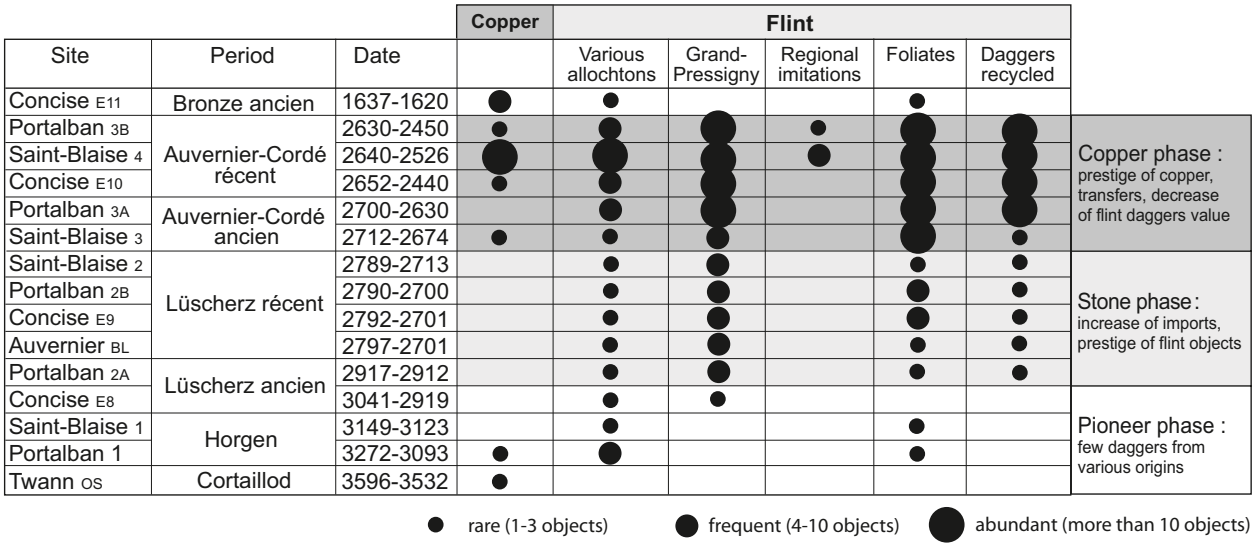

Figure 11. Chronological chart showing the evolution of imports of flint daggers compared to the increase in the number of copper daggers in Western Switzerland. Other phenomena, such as the increase in the recycling of flint daggers and the development of foliate pieces are also compared.

BC. At this time, copper objects are still rare and the daggers from Touraine increase in number; though they do not supplant items made from other flint types, and the number of other flints in use remains stable.[2] Finally, there is a notable increase in the number of foliate pieces at this time. Their presence indicates an increase in the use of bifacial retouch which is no longer limited to the production of arrowheads and other rare tools as in earlier periods. During this phase, it denotes a new category of stone tools. The recycling of daggers also starts during the "stone phase".

The third phase is labelled the "copper phase". Indeed, it is from Auvernier-Cordé, as early as 2700/2670 BC, that an increase in copper objects is noted at lake-dwelling settlements, notably those of Saint-Blaise/Bains-des-Dames (Neuchâtel) and Vinelz/Strandboden (Berne). More than 100 metal objects were discovered at each site (Girardbille 1990). Paradoxically, this phase coincides with the peak of pressignian imports. The number of daggers made from other flint types also increases and local imitations made from lesser quality flint appear.[3] At this time, systematic recycling of flint appears, the number of foliate pieces increases, and flint daggers imitate the shapes of metal models. We believe that these phenomena are linked, and that during the last evolution phase, stone daggers lose their prestige status to copper daggers. The intensive recycling, the local imitations, and the stone copies of metal prototypes lead one to believe that there is now a focus on copper models. A consequence of this focus is the transfer of certain metallurgical techniques to the sphere of stone working. The increase in recycling and the intense bifacial fashioning would be the result of such transposition. The recycling of flint tools would correspond to the practice of copper recycling: casting, tempering, and particularly hammering. High quality flint would almost become a re-usable, or even malleable, material. Along the same line, bifacial retouch, which is widespread at this time, might be thought of as the equivalent of hammering, but applied to stone (Barfield 1999). Bifacial retouching allows the possibility of modifying the shape of tools made from various blanks including flakes, plates, or blades. It is not necessary to make stereotyped knapped products (blades) anymore as this technique creates more flexibility in the final fashioning stages of knapping. The trend at the end of the Neolithic in Western Switzerland is a progressive loss of regional expertise in blade knapping at the time when bifacial retouching is growing in importance. This behavioural change could very well be linked to the new importance given to metals.

Acknowledgments

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Notes

1. Petrographic identifications of flint from the Vallée du Largue/Forcalquier were undertaken by Céline Bressy (UMR 6636 of the CNRS), while the other types of flint were studied by Jehanne Affolter (Laténium, Neuchâtel). The detailed results of their studies will be the subject of a future publication.
2. Among the various industries studied, Grand-Pressigny daggers represent approximately 5% of the total of regular retouched tools, while an average of 1% is noted for models created from other siliceous flint varieties.
3. During this phase, pressignian daggers represent 10-20% of the total number of tools with regular retouch, compared to 1-3% for daggers fashioned from other flints.

Bibliography

Affolter, J. 2002: *Provenance des silex préhistoriques du Jura et des régions limitrophes*, Neuchâtel: Service et Musée d'archéologie (Archéologie neuchâteloise 28).

Barfield, H. 1999: Neolithic and Copper Age flint exploitation in Northern Italy. In: P. Della Casa (ed.): *Prehis-*

toric alpine environment, society and economy, p. 245-252. International Colloquium (Zurich, 3-6 September 1997, Universitätsforschungen zur prähistorischen Archäologie 55. Bonn: Rudolf Habelt.

Borello, A. & E. Mottes 2002: La circulation des silex d'origine nord-italienne en Suisse au néolithique, note préliminaire. In: C. Billard (ed.): *Internéo 4*, Journée d'information (Paris, 16 novembre 2002), p. 85-98. Paris: Société préhistorique française.

Bressy, C. 2006: Caractérisation géochimique des silex tertiaires: contribution à l'identification des matières premières diffusées au Néolithique final. In: F. Briois & J. Vaquer (eds.): *La fin de l'Age de Pierre en Europe du Sud*: *Matériaux et productions lithiques taillées remarquables dans le Néolithique et le Chalcolithique européen: diffusion et usages (6e-3e millénaires av. J.-C.).* Table ronde (Carcassonne, 5-6 septembre 2003) p. 221-232. Toulouse: Edition des "Archives d'Ecologie Préhistorique".

Costa, L.J. & J. Pelegrin 2004: Une production de grandes lames par pression à la fin du Néolithique, dans le nord de la Sardaigne (Contraguda, Perfugas). *Bulletin de la Société préhistorique française* 101, 4, p. 867-873.

Cupillard, C., J. Affolter, M. Campy, D. Contini & H. Richard 1995: La minière de silex néolithique de Blanc-Saule à Etrelles-et-la-Montbleuse (70) et l'exploitation du silex lacustre Oligocène inférieur de Haute-Saône durant le Néolithique. In: J. Pelegrin & A. Richard (eds.): *Les mines de silex au Néolithique en Europe: avancées récentes, table ronde internationale (Vesoul, 18-19 oct. 1991)*, p. 178-240. Documents préhistoriques 7. Paris: Editions du CTHS.

Girardbille, O. 1990: *Saint-Blaise/Bains-des-Dames: le matériel en cuivre*. Neuchâtel: Service cantonal d'archéologie (unpublished report).

Honegger, M. 2001: *L'industrie lithique taillée du Néolithique moyen et final de Suisse*. Monographie du Centre de recherches archéologiques; 24. Paris: CNRS Editions .

Honegger, M. 2002: Les influences méridionales dans les industries lithiques du Néolithique suisse. In: M. Bailly, R. Furestier & Th. Perrin (eds.): *Les industries lithiques taillées holocènes du Bassin rhodanien: problèmes et actualités*. p. 135-147. Actes de la table ronde (Lyon, 8-9 décembre 2000). Montagnac: Mergoil.

Honegger, M. 2006: Grandes lames et poignards dans le Néolithique final du nord des Alpes. In: F. Briois & J. Vaquer (eds.): *La fin de l'Age de Pierre en Europe du Sud*: *Matériaux et productions lithiques taillées remarquables dans le Néolithique et le Chalcolithique européen: diffusion et usages (6e-3e millénaires av. J.-C.).* Table ronde (Carcassonne, 5-6 septembre 2003), p. 43-56. Toulouse: Edition des "Archives d'Ecologie Préhistorique".

Mallet, N. 1992: *Le Grand-Pressigny: ses relations avec la civilisation Saône-Rhône.* Supplement of the Bulletin de la Société des amis du musée du Grand-Pressigny. Argenton-sur-Creuse: CRRA

Mallet, N. 2000: La diffusion des silex du Grand-Pressigny au néolithique final; état actuel de l'inventaire. *Bulletin des amis du Musée de Préhistoire du Grand-Pressigny, 51*, p. 27-31.

Manolakakis, L. 2005: *Les industries lithiques enéolithiques de Bulgarie*. Internationale Archäologie 88. Rahden/ Westfalen: Leidorf

Mottes, M. 2001: Bell Beakers and beyond: flint daggers of northern Italy between technology and typology. In: F. Nicolis (ed.): *Bell Beakers today: pottery, people, culture, symbols in prehistoric Europe, Proceedings of the international colloquium, Riva del Garda (Trento, 11-16 may 1998,* p. 519-545. Trento: Servizio Beni culturali della Provincia Autonoma di Trento.

Plisson, H. (coord.) 2004: *Productions laminaires remarquables du Midi de la France (fin du Néolithique, début de l'Age des métaux).* Programme collectif de recherche: Rapport d'activité 2003 (unpublished report).

Renault, S. 1998: Economie de la matière première: l'exemple de la production au Néolithique final en Provence, de grandes lames en silex zoné oligocène du bassin de Forcalquier (Alpes-de-Haute-Provence). In: A. D'Anna & D. Binder (eds.): *Production et identité culturelle, 2èmes Rencontres de préhistoire récente (Arles, 8-9 novembre 1996),* p. 145-161. Antibes: éd. APDCA.

Riche, C. 1998: *Les ateliers de silex de Vassieux: exploitation des gîtes et diffusion des produits*. Paris: Université de Paris X-Nanterre (unpublished doctoral thesis).

Schlichtherle, H. 2003: Remedellodolch in fremdem Griff? Ein geschäfteter Feuersteindolch aus der endneolithischen Ufersiedlung Allensbach-Strandbad am Untersee/Bodensee. *Nachrichtenblatt Arbeitkreis Unterwasserarchäologie*, 19, p. 77-85.

Strahm, C. 1961-1962: Geschäftete Dolchklingen des Spätestneolithikums. *Jahrbuch des Bernischen Historischen Museums*, 41/42, p. 447-477.

Tillmann, A. 1993: Gastgeschenke aus dem Süden? Zur Frage einer Süd-Nord-Verbindung zwischen Südbayern und Oberitalien im späten Jungneolithikum. *Archäologisches Korrespondenzblatt*, 23, p. 453-460.